

ALMANAC XL TRANSITS OF MOON IN CE

The almanac XL contains a list of transits of Moon from the 1st millennium CE to the 125th millennium CE.

During the period of 250 000 years, the total number of transits of Moon is 120 496 transits of Moon (3 399 transits of Moon visible from Mars, 23 635 transits of Moon visible from Jupiter, 28 360 transits of Moon visible from Saturn, 29 380 transits of Moon visible from Uranus, 33 172 transits of Moon visible from Neptune, 2 550 transits of Moon visible from Pluto).

1ST MILLENNIUM CE

This is a list of transits of Moon in the 1st millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|------------------|---|------------|------------|------------|--------|--------|---|
| | TRANSIT | | | | | | | |
| | TIME | | | | | | | |
| Saturn | 3-01-03 17:31 J | | 1722156.19 | 1722156.23 | 1722156.27 | 0.0292 | 0.0287 | |
| Uranus | 12-11-11 13:55 J | | 1725755.94 | 1725756.08 | 1725756.24 | 0.0138 | 0.0110 | |
| Uranus | 13-11-15 18:43 J | | 1726125.10 | 1726125.28 | 1726125.48 | 0.0139 | 0.0091 | |
| Uranus | 14-11-20 13:26 J | | 1726494.84 | 1726495.06 | 1726495.29 | 0.0139 | 0.0054 | |
| Jupiter | 15-06-07 17:45 J | | 1726694.09 | 1726694.24 | 1726694.39 | 0.0514 | 0.0402 | |
| Uranus | 15-11-24 20:09 J | | 1726864.09 | 1726864.34 | 1726864.59 | 0.0140 | 0.0021 | |
| Uranus | 16-11-28 16:04 J | | 1727233.92 | 1727234.17 | 1727234.41 | 0.0140 | 0.0005 | |
| Uranus | 17-12-03 00:43 J | | 1727603.29 | 1727603.53 | 1727603.77 | 0.0141 | 0.0049 | |
| Saturn | 18-07-06 19:26 J | | 1727819.19 | 1727819.31 | 1727819.45 | 0.0269 | 0.0229 | |
| Uranus | 18-12-07 20:52 J | | 1727973.17 | 1727973.37 | 1727973.60 | 0.0141 | 0.0068 | |
| Uranus | 19-12-12 08:24 J | | 1728342.70 | 1728342.85 | 1728343.01 | 0.0142 | 0.0112 | |
| Uranus | 20-12-16 04:47 J | | 1728712.67 | 1728712.70 | 1728712.76 | 0.0142 | 0.0139 | |
| Neptune | 26-07-09 13:55 J | | 1730743.95 | 1730744.08 | 1730744.26 | 0.0089 | 0.0072 | |
| Jupiter | 27-06-12 11:16 J | | 1731081.75 | 1731081.97 | 1731082.19 | 0.0515 | 0.0159 | |
| Neptune | 27-07-11 20:38 J | | 1731111.18 | 1731111.36 | 1731111.59 | 0.0089 | 0.0053 | |
| Neptune | 28-07-13 15:07 J | | 1731478.87 | 1731479.13 | 1731479.40 | 0.0089 | 0.0020 | |
| Neptune | 29-07-16 00:57 J | | 1731846.29 | 1731846.54 | 1731846.80 | 0.0089 | 0.0002 | |
| Neptune | 30-07-18 14:24 J | | 1732213.86 | 1732214.10 | 1732214.36 | 0.0089 | 0.0033 | |
| Neptune | 31-07-21 05:31 J | | 1732581.53 | 1732581.73 | 1732581.94 | 0.0089 | 0.0052 | |
| Saturn | 31-12-28 19:26 J | | 1732742.07 | 1732742.31 | 1732742.56 | 0.0293 | 0.0043 | |
| Neptune | 32-07-22 14:38 J | | 1732949.05 | 1732949.11 | 1732949.20 | 0.0089 | 0.0085 | |
| Jupiter | 32-12-07 18:43 J | | 1733087.13 | 1733087.28 | 1733087.45 | 0.0513 | 0.0354 | |
| Pluto | 38-06-17 15:50 J | | 1735105.06 | 1735105.16 | 1735105.33 | 0.0079 | 0.0070 | |
| Jupiter | 39-06-17 13:40 J | | 1735469.83 | 1735470.07 | 1735470.30 | 0.0517 | 0.0092 | |
| Jupiter | 44-12-12 11:45 J | | 1737474.76 | 1737474.99 | 1737475.22 | 0.0511 | 0.0065 | |
| Saturn | 47-07-01 17:16 J | | 1738405.97 | 1738406.22 | 1738406.46 | 0.0268 | 0.0022 | |

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| Jupiter | 51-06-22 05:31 J | 1739857.59 | 1739857.73 | 1739857.88 | 0.0519 | 0.0416 |
| Uranus | 52-05-10 23:31 J | 1740181.38 | 1740181.48 | 1740181.59 | 0.0140 | 0.0126 |
| Uranus | 53-05-16 02:52 J | 1740551.44 | 1740551.62 | 1740551.82 | 0.0140 | 0.0092 |
| Uranus | 54-05-20 15:50 J | 1740920.93 | 1740921.16 | 1740921.42 | 0.0139 | 0.0053 |
| Uranus | 55-05-25 17:16 J | 1741290.97 | 1741291.22 | 1741291.46 | 0.0139 | 0.0031 |
| Uranus | 56-05-29 06:28 J | 1741660.51 | 1741660.77 | 1741661.03 | 0.0138 | 0.0015 |
| Jupiter | 56-12-16 17:31 J | 1741862.03 | 1741862.23 | 1741862.43 | 0.0509 | 0.0228 |
| Uranus | 57-06-03 04:33 J | 1742030.46 | 1742030.69 | 1742030.94 | 0.0138 | 0.0036 |
| Uranus | 58-06-07 17:45 J | 1742400.03 | 1742400.24 | 1742400.48 | 0.0137 | 0.0072 |
| Uranus | 59-06-12 13:12 J | 1742769.89 | 1742770.05 | 1742770.22 | 0.0137 | 0.0103 |
| Uranus | 60-06-16 02:24 J | 1743139.51 | 1743139.60 | 1743139.72 | 0.0136 | 0.0126 |
| Jupiter | 68-12-21 11:45 J | 1746249.91 | 1746249.99 | 1746250.08 | 0.0507 | 0.0467 |
| Mars | 75-04-29 09:21 J | 1748569.76 | 1748569.89 | 1748570.03 | 0.1780 | 0.1336 |
| Saturn | 90-12-30 10:47 J | 1754293.71 | 1754293.95 | 1754294.18 | 0.0293 | 0.0059 |
| Uranus | 95-11-08 04:33 J | 1756067.66 | 1756067.69 | 1756067.77 | 0.0138 | 0.0134 |
| Uranus | 96-11-11 22:47 J | 1756437.34 | 1756437.45 | 1756437.59 | 0.0138 | 0.0120 |
| Uranus | 97-11-16 03:50 J | 1756806.45 | 1756806.66 | 1756806.87 | 0.0139 | 0.0077 |
| Jupiter | 98-06-06 10:19 J | 1757008.84 | 1757008.93 | 1757009.03 | 0.0512 | 0.0461 |
| Uranus | 98-11-20 22:47 J | 1757176.23 | 1757176.45 | 1757176.69 | 0.0139 | 0.0053 |
| Uranus | 99-11-25 05:02 J | 1757545.46 | 1757545.71 | 1757545.96 | 0.0140 | 0.0021 |
| Uranus | 100-11-29 00:57 J | 1757915.30 | 1757915.54 | 1757915.79 | 0.0140 | 0.0019 |
| Uranus | 101-12-03 08:38 J | 1758284.63 | 1758284.86 | 1758285.12 | 0.0141 | 0.0040 |
| Uranus | 102-12-08 05:45 J | 1758654.56 | 1758654.74 | 1758654.95 | 0.0141 | 0.0086 |
| Uranus | 103-12-12 15:50 J | 1759024.01 | 1759024.16 | 1759024.35 | 0.0142 | 0.0106 |
| Saturn | 106-07-03 08:24 J | 1759957.62 | 1759957.85 | 1759958.09 | 0.0268 | 0.0062 |
| Neptune | 108-01-06 18:28 J | 1760510.12 | 1760510.27 | 1760510.45 | 0.0089 | 0.0068 |
| Neptune | 109-01-07 23:16 J | 1760877.27 | 1760877.47 | 1760877.70 | 0.0089 | 0.0045 |
| Neptune | 110-01-10 13:26 J | 1761244.82 | 1761245.06 | 1761245.33 | 0.0089 | 0.0019 |
| Jupiter | 110-06-11 13:26 J | 1761396.85 | 1761397.06 | 1761397.28 | 0.0514 | 0.0225 |
| Neptune | 111-01-12 22:19 J | 1761612.19 | 1761612.43 | 1761612.68 | 0.0089 | 0.0007 |

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| Neptune | 112-01-15 07:12 J | 1761979.55 | 1761979.80 | 1761980.04 | 0.0089 | 0.0033 |
| Neptune | 113-01-16 20:24 J | 1762347.18 | 1762347.35 | 1762347.55 | 0.0089 | 0.0058 |
| Neptune | 114-01-19 01:12 J | 1762714.49 | 1762714.55 | 1762714.66 | 0.0089 | 0.0084 |
| Jupiter | 115-12-08 00:14 J | 1763402.38 | 1763402.51 | 1763402.66 | 0.0514 | 0.0409 |
| Saturn | 119-12-25 04:33 J | 1764880.57 | 1764880.69 | 1764880.81 | 0.0294 | 0.0254 |
| Jupiter | 122-06-16 04:19 J | 1765784.45 | 1765784.68 | 1765784.92 | 0.0517 | 0.0034 |
| Jupiter | 127-12-12 08:09 J | 1767789.62 | 1767789.84 | 1767790.06 | 0.0511 | 0.0117 |
| Jupiter | 134-06-21 11:16 J | 1770172.81 | 1770172.97 | 1770173.13 | 0.0519 | 0.0369 |
| Saturn | 135-06-28 04:33 J | 1770544.52 | 1770544.69 | 1770544.87 | 0.0267 | 0.0197 |
| Uranus | 136-05-11 06:00 J | 1770862.63 | 1770862.75 | 1770862.92 | 0.0140 | 0.0116 |
| Uranus | 137-05-16 10:04 J | 1771232.74 | 1771232.92 | 1771233.14 | 0.0140 | 0.0087 |
| Uranus | 138-05-20 23:02 J | 1771602.24 | 1771602.46 | 1771602.71 | 0.0139 | 0.0058 |
| Uranus | 139-05-26 00:57 J | 1771972.29 | 1771972.54 | 1771972.80 | 0.0139 | 0.0014 |
| Jupiter | 139-12-17 01:12 J | 1772177.34 | 1772177.55 | 1772177.77 | 0.0510 | 0.0176 |
| Uranus | 140-05-29 13:12 J | 1772341.79 | 1772342.05 | 1772342.32 | 0.0138 | 0.0005 |
| Uranus | 141-06-03 12:14 J | 1772711.78 | 1772712.01 | 1772712.26 | 0.0138 | 0.0049 |
| Uranus | 142-06-08 00:00 J | 1773081.28 | 1773081.50 | 1773081.73 | 0.0137 | 0.0071 |
| Uranus | 143-06-12 20:38 J | 1773451.21 | 1773451.36 | 1773451.53 | 0.0137 | 0.0103 |
| Saturn | 150-01-01 06:43 J | 1775845.59 | 1775845.78 | 1775845.97 | 0.0293 | 0.0162 |
| Jupiter | 151-12-21 05:31 J | 1776564.59 | 1776564.73 | 1776564.87 | 0.0508 | 0.0405 |
| Saturn | 165-07-04 23:02 J | 1781509.26 | 1781509.46 | 1781509.67 | 0.0269 | 0.0145 |
| Mars | 175-10-28 17:02 J | 1785277.03 | 1785277.21 | 1785277.38 | 0.1759 | 0.0836 |
| Saturn | 178-12-26 19:55 J | 1786432.11 | 1786432.33 | 1786432.54 | 0.0294 | 0.0148 |
| Uranus | 180-11-12 07:40 J | 1787118.66 | 1787118.82 | 1787119.00 | 0.0138 | 0.0102 |
| Uranus | 181-11-16 12:00 J | 1787487.82 | 1787488.00 | 1787488.22 | 0.0139 | 0.0085 |
| Uranus | 182-11-21 07:26 J | 1787857.58 | 1787857.81 | 1787858.05 | 0.0139 | 0.0046 |
| Uranus | 183-11-25 13:12 J | 1788226.81 | 1788227.05 | 1788227.31 | 0.0140 | 0.0015 |
| Uranus | 184-11-29 10:04 J | 1788596.67 | 1788596.92 | 1788597.17 | 0.0140 | 0.0013 |
| Uranus | 185-12-03 17:31 J | 1788966.01 | 1788966.23 | 1788966.47 | 0.0141 | 0.0057 |
| Uranus | 186-12-08 15:21 J | 1789335.94 | 1789336.14 | 1789336.36 | 0.0141 | 0.0075 |

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| Uranus | 187-12-13 00:57 J | 1789705.42 | 1789705.54 | 1789705.68 | 0.0142 | 0.0121 |
| Neptune | 190-07-08 16:33 J | 1790644.14 | 1790644.19 | 1790644.29 | 0.0089 | 0.0085 |
| Neptune | 191-07-11 09:50 J | 1791011.76 | 1791011.91 | 1791012.12 | 0.0089 | 0.0066 |
| Neptune | 192-07-12 21:50 J | 1791379.18 | 1791379.41 | 1791379.65 | 0.0089 | 0.0033 |
| Jupiter | 193-06-10 05:02 J | 1791711.51 | 1791711.71 | 1791711.91 | 0.0514 | 0.0286 |
| Neptune | 193-07-15 10:33 J | 1791746.68 | 1791746.94 | 1791747.21 | 0.0089 | 0.0013 |
| Saturn | 194-06-29 13:12 J | 1792095.83 | 1792096.05 | 1792096.28 | 0.0267 | 0.0116 |
| Neptune | 194-07-18 02:09 J | 1792114.36 | 1792114.59 | 1792114.85 | 0.0089 | 0.0020 |
| Neptune | 195-07-20 10:19 J | 1792481.71 | 1792481.93 | 1792482.18 | 0.0089 | 0.0039 |
| Neptune | 196-07-22 05:31 J | 1792849.60 | 1792849.73 | 1792849.91 | 0.0089 | 0.0071 |
| Pluto | 197-12-17 12:14 J | 1793362.79 | 1793363.01 | 1793363.26 | 0.0065 | 0.0023 |
| Jupiter | 198-12-06 18:57 J | 1793717.21 | 1793717.29 | 1793717.40 | 0.0514 | 0.0465 |
| Jupiter | 205-06-15 11:02 J | 1796099.73 | 1796099.96 | 1796100.19 | 0.0516 | 0.0016 |
| Saturn | 209-01-03 02:52 J | 1797397.54 | 1797397.62 | 1797397.73 | 0.0292 | 0.0266 |
| Jupiter | 210-12-11 14:09 J | 1798104.88 | 1798105.09 | 1798105.31 | 0.0512 | 0.0166 |
| Jupiter | 217-06-20 04:33 J | 1800487.50 | 1800487.69 | 1800487.89 | 0.0517 | 0.0302 |
| Uranus | 220-05-11 12:57 J | 1801543.92 | 1801544.04 | 1801544.17 | 0.0140 | 0.0121 |
| Uranus | 221-05-16 16:19 J | 1801913.99 | 1801914.18 | 1801914.40 | 0.0140 | 0.0084 |
| Uranus | 222-05-21 04:47 J | 1802283.47 | 1802283.70 | 1802283.95 | 0.0139 | 0.0047 |
| Jupiter | 222-12-15 18:28 J | 1802492.04 | 1802492.27 | 1802492.50 | 0.0511 | 0.0117 |
| Uranus | 223-05-26 07:12 J | 1802653.55 | 1802653.80 | 1802654.06 | 0.0139 | 0.0024 |
| Uranus | 224-05-29 18:57 J | 1803023.04 | 1803023.29 | 1803023.56 | 0.0138 | 0.0023 |
| Saturn | 224-07-06 07:55 J | 1803060.70 | 1803060.83 | 1803060.97 | 0.0269 | 0.0227 |
| Uranus | 225-06-03 19:26 J | 1803393.07 | 1803393.31 | 1803393.55 | 0.0138 | 0.0041 |
| Uranus | 226-06-08 06:43 J | 1803762.57 | 1803762.78 | 1803763.00 | 0.0137 | 0.0081 |
| Uranus | 227-06-13 04:33 J | 1804132.55 | 1804132.69 | 1804132.86 | 0.0137 | 0.0109 |
| Uranus | 228-06-16 15:35 J | 1804502.12 | 1804502.15 | 1804502.22 | 0.0136 | 0.0134 |
| Jupiter | 234-12-20 11:31 J | 1806879.82 | 1806879.98 | 1806880.15 | 0.0509 | 0.0346 |
| Saturn | 237-12-28 09:21 J | 1807983.66 | 1807983.89 | 1807984.14 | 0.0293 | 0.0047 |
| Saturn | 253-07-01 01:40 J | 1813647.33 | 1813647.57 | 1813647.81 | 0.0267 | 0.0035 |

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| Mars | 254-10-31 14:24 J | 1814134.96 | 1814135.10 | 1814135.24 | 0.1753 | 0.1251 |
| Uranus | 263-11-08 23:31 J | 1817430.38 | 1817430.48 | 1817430.57 | 0.0138 | 0.0126 |
| Uranus | 264-11-12 17:02 J | 1817800.07 | 1817800.21 | 1817800.36 | 0.0138 | 0.0112 |
| Uranus | 265-11-16 21:50 J | 1818169.20 | 1818169.41 | 1818169.64 | 0.0139 | 0.0069 |
| Uranus | 266-11-21 17:02 J | 1818538.98 | 1818539.21 | 1818539.46 | 0.0139 | 0.0047 |
| Uranus | 267-11-25 23:02 J | 1818908.22 | 1818908.46 | 1818908.72 | 0.0140 | 0.0012 |
| Uranus | 268-11-29 19:40 J | 1819278.08 | 1819278.32 | 1819278.57 | 0.0140 | 0.0027 |
| Uranus | 269-12-04 03:07 J | 1819647.40 | 1819647.63 | 1819647.87 | 0.0141 | 0.0048 |
| Uranus | 270-12-09 00:57 J | 1820017.37 | 1820017.54 | 1820017.73 | 0.0141 | 0.0094 |
| Uranus | 271-12-13 09:35 J | 1820386.77 | 1820386.90 | 1820387.07 | 0.0142 | 0.0113 |
| Neptune | 272-01-06 00:57 J | 1820410.51 | 1820410.54 | 1820410.63 | 0.0089 | 0.0086 |
| Neptune | 273-01-07 14:24 J | 1820777.91 | 1820778.10 | 1820778.33 | 0.0089 | 0.0052 |
| Neptune | 274-01-10 00:28 J | 1821145.30 | 1821145.52 | 1821145.75 | 0.0089 | 0.0035 |
| Neptune | 275-01-12 09:07 J | 1821512.61 | 1821512.88 | 1821513.14 | 0.0089 | 0.0002 |
| Neptune | 276-01-14 23:31 J | 1821880.24 | 1821880.48 | 1821880.73 | 0.0089 | 0.0016 |
| Jupiter | 276-06-09 11:31 J | 1822026.82 | 1822026.98 | 1822027.16 | 0.0513 | 0.0348 |
| Neptune | 277-01-16 04:04 J | 1822247.46 | 1822247.67 | 1822247.88 | 0.0089 | 0.0049 |
| Neptune | 278-01-18 20:52 J | 1822615.21 | 1822615.37 | 1822615.55 | 0.0089 | 0.0065 |
| Mars | 280-04-26 08:24 J | 1823443.68 | 1823443.85 | 1823444.02 | 0.1767 | 0.0824 |
| Jupiter | 288-06-14 03:50 J | 1826414.42 | 1826414.66 | 1826414.91 | 0.0515 | 0.0078 |
| Jupiter | 293-12-10 08:52 J | 1828419.66 | 1828419.87 | 1828420.09 | 0.0513 | 0.0218 |
| Saturn | 296-12-30 02:09 J | 1829535.36 | 1829535.59 | 1829535.82 | 0.0293 | 0.0051 |
| Jupiter | 300-06-19 01:55 J | 1830802.38 | 1830802.58 | 1830802.79 | 0.0517 | 0.0239 |
| Uranus | 304-05-11 19:12 J | 1832225.15 | 1832225.30 | 1832225.48 | 0.0140 | 0.0107 |
| Uranus | 305-05-16 22:33 J | 1832595.24 | 1832595.44 | 1832595.67 | 0.0140 | 0.0081 |
| Jupiter | 305-12-15 04:47 J | 1832807.48 | 1832807.70 | 1832807.93 | 0.0511 | 0.0073 |
| Uranus | 306-05-21 11:31 J | 1832964.74 | 1832964.98 | 1832965.23 | 0.0139 | 0.0049 |
| Uranus | 307-05-26 14:09 J | 1833334.83 | 1833335.09 | 1833335.35 | 0.0139 | 0.0007 |
| Uranus | 308-05-30 01:26 J | 1833704.30 | 1833704.56 | 1833704.82 | 0.0138 | 0.0012 |
| Uranus | 309-06-04 02:09 J | 1834074.36 | 1834074.59 | 1834074.82 | 0.0138 | 0.0057 |

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| Uranus | 310-06-08 12:14 J | 1834443.80 | 1834444.01 | 1834444.24 | 0.0137 | 0.0077 |
| Uranus | 311-06-13 11:02 J | 1834813.83 | 1834813.96 | 1834814.12 | 0.0137 | 0.0112 |
| Saturn | 312-07-02 14:38 J | 1835198.88 | 1835199.11 | 1835199.36 | 0.0267 | 0.0043 |
| Jupiter | 317-12-19 12:57 J | 1837194.84 | 1837195.04 | 1837195.23 | 0.0509 | 0.0295 |
| Saturn | 341-06-27 11:31 J | 1845785.84 | 1845785.98 | 1845786.15 | 0.0267 | 0.0211 |
| Uranus | 347-11-09 09:07 J | 1848111.86 | 1848111.88 | 1848111.94 | 0.0138 | 0.0136 |
| Uranus | 348-11-13 02:24 J | 1848481.43 | 1848481.60 | 1848481.80 | 0.0138 | 0.0093 |
| Uranus | 349-11-17 07:55 J | 1848850.63 | 1848850.83 | 1848851.04 | 0.0139 | 0.0076 |
| Uranus | 350-11-22 02:38 J | 1849220.37 | 1849220.61 | 1849220.86 | 0.0139 | 0.0035 |
| Uranus | 351-11-26 08:52 J | 1849589.63 | 1849589.87 | 1849590.12 | 0.0140 | 0.0007 |
| Uranus | 352-11-30 05:45 J | 1849959.49 | 1849959.74 | 1849959.99 | 0.0140 | 0.0023 |
| Uranus | 353-12-04 13:12 J | 1850328.84 | 1850329.05 | 1850329.28 | 0.0141 | 0.0066 |
| Uranus | 354-12-09 11:16 J | 1850698.78 | 1850698.97 | 1850699.18 | 0.0141 | 0.0084 |
| Neptune | 355-07-10 18:28 J | 1850912.15 | 1850912.27 | 1850912.44 | 0.0089 | 0.0072 |
| Uranus | 355-12-13 19:55 J | 1851068.26 | 1851068.33 | 1851068.45 | 0.0142 | 0.0131 |
| Saturn | 356-01-01 16:47 J | 1851086.99 | 1851087.20 | 1851087.41 | 0.0293 | 0.0136 |
| Neptune | 356-07-12 06:00 J | 1851279.53 | 1851279.75 | 1851279.98 | 0.0089 | 0.0050 |
| Neptune | 357-07-14 23:02 J | 1851647.22 | 1851647.46 | 1851647.71 | 0.0089 | 0.0020 |
| Neptune | 358-07-17 06:43 J | 1852014.51 | 1852014.78 | 1852015.04 | 0.0089 | 0.0001 |
| Mars | 359-04-29 19:26 J | 1852301.21 | 1852301.31 | 1852301.41 | 0.1773 | 0.1454 |
| Jupiter | 359-06-09 03:07 J | 1852341.49 | 1852341.63 | 1852341.78 | 0.0513 | 0.0409 |
| Neptune | 359-07-20 02:24 J | 1852382.37 | 1852382.60 | 1852382.86 | 0.0089 | 0.0032 |
| Neptune | 360-07-21 08:09 J | 1852749.66 | 1852749.84 | 1852750.08 | 0.0089 | 0.0052 |
| Neptune | 361-07-24 04:04 J | 1853117.61 | 1853117.67 | 1853117.78 | 0.0089 | 0.0084 |
| Jupiter | 371-06-14 06:00 J | 1856729.53 | 1856729.75 | 1856729.97 | 0.0515 | 0.0131 |
| Saturn | 371-07-04 22:33 J | 1856750.21 | 1856750.44 | 1856750.67 | 0.0267 | 0.0113 |
| Jupiter | 376-12-09 20:38 J | 1858735.17 | 1858735.36 | 1858735.56 | 0.0513 | 0.0250 |
| Jupiter | 383-06-19 08:24 J | 1861117.63 | 1861117.85 | 1861118.08 | 0.0517 | 0.0201 |
| Saturn | 384-12-25 09:21 J | 1861672.73 | 1861672.89 | 1861673.06 | 0.0295 | 0.0217 |
| Uranus | 387-05-08 12:28 J | 1862536.94 | 1862537.02 | 1862537.11 | 0.0141 | 0.0132 |

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| Uranus | 388-05-12 03:35 J | 1862906.52 | 1862906.65 | 1862906.81 | 0.0140 | 0.0113 |
| Jupiter | 388-12-14 06:00 J | 1863122.51 | 1863122.75 | 1863122.99 | 0.0511 | 0.0025 |
| Uranus | 389-05-17 06:00 J | 1863276.55 | 1863276.75 | 1863276.99 | 0.0140 | 0.0074 |
| Uranus | 390-05-21 18:57 J | 1863646.06 | 1863646.29 | 1863646.55 | 0.0139 | 0.0040 |
| Uranus | 391-05-26 21:21 J | 1864016.14 | 1864016.39 | 1864016.66 | 0.0139 | 0.0015 |
| Uranus | 392-05-30 08:52 J | 1864385.62 | 1864385.87 | 1864386.12 | 0.0138 | 0.0031 |
| Uranus | 393-06-04 09:50 J | 1864755.68 | 1864755.91 | 1864756.16 | 0.0138 | 0.0049 |
| Uranus | 394-06-08 19:55 J | 1865125.15 | 1865125.33 | 1865125.54 | 0.0137 | 0.0091 |
| Uranus | 395-06-13 19:55 J | 1865495.20 | 1865495.33 | 1865495.47 | 0.0137 | 0.0115 |
| Jupiter | 395-06-24 03:50 J | 1865505.58 | 1865505.66 | 1865505.74 | 0.0519 | 0.0483 |
| Saturn | 400-06-28 14:38 J | 1867336.91 | 1867337.11 | 1867337.32 | 0.0267 | 0.0144 |
| Jupiter | 400-12-18 16:33 J | 1867510.00 | 1867510.19 | 1867510.39 | 0.0510 | 0.0243 |
| Jupiter | 412-12-23 08:38 J | 1871897.78 | 1871897.86 | 1871897.96 | 0.0508 | 0.0470 |
| Saturn | 415-01-02 23:31 J | 1872638.32 | 1872638.48 | 1872638.65 | 0.0293 | 0.0212 |
| Saturn | 430-07-05 22:04 J | 1878301.24 | 1878301.42 | 1878301.62 | 0.0267 | 0.0182 |
| Uranus | 431-11-09 18:43 J | 1878793.17 | 1878793.28 | 1878793.42 | 0.0138 | 0.0118 |
| Uranus | 432-11-13 11:16 J | 1879162.82 | 1879162.97 | 1879163.16 | 0.0138 | 0.0103 |
| Uranus | 433-11-17 17:45 J | 1879532.03 | 1879532.24 | 1879532.48 | 0.0139 | 0.0059 |
| Uranus | 434-11-22 12:28 J | 1879901.79 | 1879902.02 | 1879902.28 | 0.0139 | 0.0038 |
| Uranus | 435-11-26 19:40 J | 1880271.08 | 1880271.32 | 1880271.57 | 0.0140 | 0.0002 |
| Uranus | 436-11-30 16:04 J | 1880640.93 | 1880641.17 | 1880641.42 | 0.0140 | 0.0035 |
| Neptune | 437-01-07 03:07 J | 1880678.47 | 1880678.63 | 1880678.80 | 0.0089 | 0.0066 |
| Uranus | 437-12-04 23:31 J | 1881010.27 | 1881010.48 | 1881010.72 | 0.0141 | 0.0059 |
| Neptune | 438-01-09 10:04 J | 1881045.72 | 1881045.92 | 1881046.17 | 0.0089 | 0.0045 |
| Uranus | 438-12-09 21:07 J | 1881380.23 | 1881380.38 | 1881380.57 | 0.0141 | 0.0105 |
| Neptune | 439-01-12 01:26 J | 1881413.32 | 1881413.56 | 1881413.81 | 0.0089 | 0.0017 |
| Uranus | 439-12-14 05:45 J | 1881749.64 | 1881749.74 | 1881749.89 | 0.0142 | 0.0122 |
| Neptune | 440-01-14 05:31 J | 1881780.48 | 1881780.73 | 1881780.99 | 0.0089 | 0.0005 |
| Neptune | 441-01-15 22:47 J | 1882148.22 | 1882148.45 | 1882148.69 | 0.0089 | 0.0033 |
| Neptune | 442-01-18 02:24 J | 1882515.41 | 1882515.60 | 1882515.79 | 0.0089 | 0.0056 |

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| Jupiter | 442-06-08 13:12 J | 1882656.95 | 1882657.05 | 1882657.17 | 0.0513 | 0.0447 |
| Neptune | 443-01-20 17:45 J | 1882883.17 | 1882883.24 | 1882883.35 | 0.0089 | 0.0083 |
| Saturn | 443-12-27 12:28 J | 1883223.82 | 1883224.02 | 1883224.23 | 0.0295 | 0.0145 |
| Pluto | 444-12-18 12:00 J | 1883580.81 | 1883581.00 | 1883581.24 | 0.0065 | 0.0035 |
| Pluto | 445-12-20 06:00 J | 1883947.66 | 1883947.75 | 1883947.91 | 0.0065 | 0.0058 |
| Jupiter | 454-06-13 12:57 J | 1887044.81 | 1887045.04 | 1887045.28 | 0.0515 | 0.0164 |
| Saturn | 459-06-30 20:24 J | 1888888.13 | 1888888.35 | 1888888.59 | 0.0267 | 0.0080 |
| Mars | 459-10-29 09:50 J | 1889008.73 | 1889008.91 | 1889009.08 | 0.1766 | 0.0448 |
| Jupiter | 459-12-09 22:19 J | 1889050.24 | 1889050.43 | 1889050.63 | 0.0514 | 0.0293 |
| Jupiter | 466-06-18 07:40 J | 1891432.60 | 1891432.82 | 1891433.04 | 0.0516 | 0.0158 |
| Jupiter | 471-12-14 13:26 J | 1893437.84 | 1893438.06 | 1893438.28 | 0.0512 | 0.0020 |
| Uranus | 472-05-12 12:43 J | 1893587.87 | 1893588.03 | 1893588.23 | 0.0140 | 0.0097 |
| Uranus | 473-05-17 14:52 J | 1893957.90 | 1893958.12 | 1893958.35 | 0.0140 | 0.0072 |
| Saturn | 474-01-03 21:50 J | 1894189.34 | 1894189.41 | 1894189.50 | 0.0293 | 0.0277 |
| Uranus | 474-05-22 04:33 J | 1894327.45 | 1894327.69 | 1894327.94 | 0.0139 | 0.0038 |
| Uranus | 475-05-27 06:43 J | 1894697.52 | 1894697.78 | 1894698.04 | 0.0139 | 0.0002 |
| Uranus | 476-05-30 18:00 J | 1895067.00 | 1895067.25 | 1895067.51 | 0.0138 | 0.0022 |
| Uranus | 477-06-04 18:57 J | 1895437.07 | 1895437.29 | 1895437.52 | 0.0138 | 0.0067 |
| Uranus | 478-06-09 04:33 J | 1895806.50 | 1895806.69 | 1895806.91 | 0.0137 | 0.0086 |
| Jupiter | 478-06-23 10:04 J | 1895820.79 | 1895820.92 | 1895821.06 | 0.0518 | 0.0423 |
| Uranus | 479-06-14 04:19 J | 1896176.58 | 1896176.68 | 1896176.81 | 0.0137 | 0.0122 |
| Jupiter | 483-12-19 08:24 J | 1897825.63 | 1897825.85 | 1897826.06 | 0.0510 | 0.0203 |
| Saturn | 489-07-06 19:55 J | 1899852.25 | 1899852.33 | 1899852.44 | 0.0267 | 0.0247 |
| Jupiter | 495-12-23 13:26 J | 1902212.95 | 1902213.06 | 1902213.18 | 0.0508 | 0.0441 |
| Saturn | 502-12-28 16:33 J | 1904774.97 | 1904775.19 | 1904775.41 | 0.0295 | 0.0084 |
| Uranus | 515-11-10 04:47 J | 1909474.62 | 1909474.70 | 1909474.81 | 0.0138 | 0.0126 |
| Uranus | 516-11-13 20:24 J | 1909844.16 | 1909844.35 | 1909844.57 | 0.0138 | 0.0084 |
| Uranus | 517-11-18 03:35 J | 1910213.44 | 1910213.65 | 1910213.87 | 0.0139 | 0.0067 |
| Saturn | 518-07-01 23:31 J | 1910439.23 | 1910439.48 | 1910439.73 | 0.0267 | 0.0019 |
| Uranus | 518-11-22 21:21 J | 1910583.14 | 1910583.39 | 1910583.65 | 0.0139 | 0.0025 |

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| Neptune | 519-07-10 02:24 J | 1910812.52 | 1910812.60 | 1910812.73 | 0.0089 | 0.0082 |
| Uranus | 519-11-27 05:02 J | 1910952.46 | 1910952.71 | 1910952.95 | 0.0140 | 0.0003 |
| Neptune | 520-07-11 20:24 J | 1911180.20 | 1911180.35 | 1911180.54 | 0.0089 | 0.0065 |
| Uranus | 520-12-01 00:28 J | 1911322.29 | 1911322.52 | 1911322.78 | 0.0140 | 0.0035 |
| Neptune | 521-07-14 03:21 J | 1911547.40 | 1911547.64 | 1911547.89 | 0.0089 | 0.0031 |
| Uranus | 521-12-05 08:52 J | 1911691.67 | 1911691.87 | 1911692.09 | 0.0141 | 0.0075 |
| Neptune | 522-07-16 23:31 J | 1911915.23 | 1911915.48 | 1911915.74 | 0.0089 | 0.0013 |
| Uranus | 522-12-10 06:43 J | 1912061.60 | 1912061.78 | 1912061.97 | 0.0141 | 0.0093 |
| Neptune | 523-07-19 05:31 J | 1912282.49 | 1912282.73 | 1912282.99 | 0.0089 | 0.0021 |
| Uranus | 523-12-14 15:50 J | 1912431.13 | 1912431.16 | 1912431.20 | 0.0142 | 0.0140 |
| Neptune | 524-07-21 00:28 J | 1912650.29 | 1912650.52 | 1912650.77 | 0.0089 | 0.0039 |
| Jupiter | 525-06-07 19:40 J | 1912972.24 | 1912972.32 | 1912972.40 | 0.0512 | 0.0481 |
| Neptune | 525-07-23 08:38 J | 1913017.73 | 1913017.86 | 1913018.03 | 0.0089 | 0.0071 |
| Pluto | 533-06-21 14:38 J | 1915907.91 | 1915908.11 | 1915908.36 | 0.0079 | 0.0038 |
| Jupiter | 537-06-12 10:04 J | 1917359.71 | 1917359.92 | 1917360.13 | 0.0514 | 0.0209 |
| Mars | 538-10-31 18:28 J | 1917866.16 | 1917866.27 | 1917866.39 | 0.1761 | 0.1397 |
| Jupiter | 542-12-09 12:14 J | 1919365.84 | 1919366.01 | 1919366.19 | 0.0514 | 0.0311 |
| Jupiter | 549-06-17 17:16 J | 1921747.99 | 1921748.22 | 1921748.45 | 0.0516 | 0.0120 |
| Jupiter | 554-12-14 05:31 J | 1923753.50 | 1923753.73 | 1923753.97 | 0.0512 | 0.0051 |
| Uranus | 555-05-09 06:28 J | 1923899.66 | 1923899.77 | 1923899.91 | 0.0140 | 0.0123 |
| Uranus | 556-05-12 23:31 J | 1924269.33 | 1924269.48 | 1924269.67 | 0.0140 | 0.0104 |
| Uranus | 557-05-18 00:28 J | 1924639.29 | 1924639.52 | 1924639.77 | 0.0139 | 0.0062 |
| Uranus | 558-05-22 14:52 J | 1925008.88 | 1925009.12 | 1925009.37 | 0.0139 | 0.0031 |
| Uranus | 559-05-27 16:04 J | 1925378.91 | 1925379.17 | 1925379.43 | 0.0139 | 0.0003 |
| Uranus | 560-05-31 03:50 J | 1925748.42 | 1925748.66 | 1925748.91 | 0.0138 | 0.0041 |
| Uranus | 561-06-05 04:33 J | 1926118.46 | 1926118.69 | 1926118.93 | 0.0138 | 0.0058 |
| Jupiter | 561-06-22 12:43 J | 1926135.87 | 1926136.03 | 1926136.18 | 0.0518 | 0.0391 |
| Saturn | 561-12-29 17:02 J | 1926325.97 | 1926326.21 | 1926326.45 | 0.0295 | 0.0029 |
| Uranus | 562-06-09 14:52 J | 1926487.95 | 1926488.12 | 1926488.29 | 0.0137 | 0.0101 |
| Uranus | 563-06-14 14:09 J | 1926858.00 | 1926858.09 | 1926858.22 | 0.0137 | 0.0124 |

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| Mars | 564-04-26 04:47 J | 1927174.50 | 1927174.70 | 1927174.89 | 0.1759 | 0.0680 |
| Jupiter | 566-12-18 12:00 J | 1928140.78 | 1928141.00 | 1928141.21 | 0.0510 | 0.0164 |
| Saturn | 577-07-02 18:57 J | 1931990.04 | 1931990.29 | 1931990.55 | 0.0267 | 0.0038 |
| Jupiter | 578-12-23 05:45 J | 1932528.61 | 1932528.74 | 1932528.87 | 0.0508 | 0.0408 |
| Uranus | 599-11-10 13:12 J | 1940155.92 | 1940156.05 | 1940156.21 | 0.0138 | 0.0111 |
| Uranus | 600-11-14 04:04 J | 1940525.49 | 1940525.67 | 1940525.87 | 0.0138 | 0.0094 |
| Neptune | 601-01-06 12:14 J | 1940578.92 | 1940579.01 | 1940579.10 | 0.0089 | 0.0083 |
| Uranus | 601-11-18 12:28 J | 1940894.81 | 1940895.02 | 1940895.26 | 0.0139 | 0.0050 |
| Neptune | 602-01-09 03:50 J | 1940946.47 | 1940946.66 | 1940946.88 | 0.0089 | 0.0051 |
| Uranus | 602-11-23 05:31 J | 1941264.49 | 1941264.73 | 1941264.99 | 0.0139 | 0.0030 |
| Neptune | 603-01-11 07:26 J | 1941313.60 | 1941313.81 | 1941314.07 | 0.0089 | 0.0035 |
| Uranus | 603-11-27 14:24 J | 1941633.86 | 1941634.10 | 1941634.34 | 0.0140 | 0.0010 |
| Neptune | 604-01-14 01:26 J | 1941681.30 | 1941681.56 | 1941681.81 | 0.0089 | 0.0001 |
| Uranus | 604-12-01 09:21 J | 1942003.64 | 1942003.89 | 1942004.13 | 0.0140 | 0.0043 |
| Neptune | 605-01-15 05:16 J | 1942048.48 | 1942048.72 | 1942048.98 | 0.0089 | 0.0016 |
| Uranus | 605-12-05 18:00 J | 1942373.04 | 1942373.25 | 1942373.46 | 0.0141 | 0.0068 |
| Neptune | 606-01-17 20:24 J | 1942416.15 | 1942416.35 | 1942416.58 | 0.0089 | 0.0049 |
| Saturn | 606-06-27 16:04 J | 1942577.05 | 1942577.17 | 1942577.31 | 0.0265 | 0.0221 |
| Uranus | 606-12-10 14:24 J | 1942742.97 | 1942743.10 | 1942743.27 | 0.0141 | 0.0112 |
| Neptune | 607-01-20 03:50 J | 1942783.50 | 1942783.66 | 1942783.83 | 0.0089 | 0.0065 |
| Uranus | 607-12-14 23:45 J | 1943112.41 | 1943112.49 | 1943112.60 | 0.0142 | 0.0130 |
| Jupiter | 620-06-12 03:07 J | 1947675.42 | 1947675.63 | 1947675.85 | 0.0514 | 0.0220 |
| Saturn | 620-12-30 09:50 J | 1947876.66 | 1947876.91 | 1947877.16 | 0.0295 | 0.0020 |
| Jupiter | 625-12-09 02:24 J | 1949681.42 | 1949681.60 | 1949681.78 | 0.0514 | 0.0331 |
| Jupiter | 632-06-16 20:38 J | 1952063.12 | 1952063.36 | 1952063.59 | 0.0516 | 0.0094 |
| Saturn | 636-07-03 12:57 J | 1953540.81 | 1953541.04 | 1953541.28 | 0.0267 | 0.0094 |
| Jupiter | 637-12-13 08:09 J | 1954068.62 | 1954068.84 | 1954069.06 | 0.0512 | 0.0092 |
| Uranus | 639-05-09 13:55 J | 1954581.01 | 1954581.08 | 1954581.18 | 0.0140 | 0.0133 |
| Uranus | 640-05-13 08:38 J | 1954950.68 | 1954950.86 | 1954951.07 | 0.0140 | 0.0088 |
| Uranus | 641-05-18 08:52 J | 1955320.64 | 1955320.87 | 1955321.11 | 0.0139 | 0.0064 |

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| Uranus | 642-05-23 00:28 J | 1955690.28 | 1955690.52 | 1955690.78 | 0.0139 | 0.0028 |
| Mars | 643-04-30 08:24 J | 1956032.78 | 1956032.85 | 1956032.91 | 0.1765 | 0.1661 |
| Uranus | 643-05-28 01:12 J | 1956060.29 | 1956060.55 | 1956060.82 | 0.0139 | 0.0010 |
| Uranus | 644-05-31 13:40 J | 1956429.83 | 1956430.07 | 1956430.32 | 0.0138 | 0.0032 |
| Jupiter | 644-06-22 03:07 J | 1956451.46 | 1956451.63 | 1956451.80 | 0.0518 | 0.0352 |
| Uranus | 645-06-05 13:26 J | 1956799.86 | 1956800.06 | 1956800.30 | 0.0138 | 0.0077 |
| Uranus | 646-06-09 23:45 J | 1957169.32 | 1957169.49 | 1957169.69 | 0.0137 | 0.0094 |
| Uranus | 647-06-14 22:47 J | 1957539.40 | 1957539.45 | 1957539.54 | 0.0137 | 0.0132 |
| Jupiter | 649-12-18 06:00 J | 1958456.53 | 1958456.75 | 1958456.97 | 0.0511 | 0.0130 |
| Jupiter | 661-12-22 13:40 J | 1962843.93 | 1962844.07 | 1962844.22 | 0.0509 | 0.0390 |
| Mars | 664-10-26 12:57 J | 1963882.97 | 1963883.04 | 1963883.11 | 0.1779 | 0.1657 |
| Saturn | 665-06-28 19:12 J | 1964128.12 | 1964128.30 | 1964128.50 | 0.0265 | 0.0165 |
| Saturn | 680-01-01 02:24 J | 1969427.36 | 1969427.60 | 1969427.83 | 0.0294 | 0.0071 |
| Uranus | 683-11-10 22:33 J | 1970837.33 | 1970837.44 | 1970837.57 | 0.0138 | 0.0118 |
| Neptune | 684-07-10 23:16 J | 1971080.34 | 1971080.47 | 1971080.65 | 0.0089 | 0.0071 |
| Uranus | 684-11-14 12:00 J | 1971206.79 | 1971207.00 | 1971207.22 | 0.0138 | 0.0077 |
| Neptune | 685-07-13 19:40 J | 1971448.12 | 1971448.32 | 1971448.56 | 0.0089 | 0.0049 |
| Uranus | 685-11-18 21:21 J | 1971576.17 | 1971576.39 | 1971576.61 | 0.0139 | 0.0060 |
| Neptune | 686-07-16 02:09 J | 1971815.35 | 1971815.59 | 1971815.86 | 0.0089 | 0.0020 |
| Uranus | 686-11-23 12:43 J | 1971945.78 | 1971946.03 | 1971946.29 | 0.0139 | 0.0016 |
| Neptune | 687-07-18 21:07 J | 1972183.11 | 1972183.38 | 1972183.65 | 0.0089 | 0.0002 |
| Uranus | 687-11-27 22:19 J | 1972315.19 | 1972315.43 | 1972315.67 | 0.0140 | 0.0009 |
| Neptune | 688-07-20 06:28 J | 1972550.54 | 1972550.77 | 1972551.01 | 0.0089 | 0.0031 |
| Uranus | 688-12-01 15:50 J | 1972684.92 | 1972685.16 | 1972685.41 | 0.0140 | 0.0043 |
| Neptune | 689-07-22 20:38 J | 1972918.17 | 1972918.36 | 1972918.60 | 0.0089 | 0.0052 |
| Uranus | 689-12-06 01:40 J | 1973054.38 | 1973054.57 | 1973054.77 | 0.0141 | 0.0081 |
| Neptune | 690-07-25 10:19 J | 1973285.87 | 1973285.93 | 1973286.05 | 0.0089 | 0.0083 |
| Uranus | 690-12-10 21:35 J | 1973424.23 | 1973424.40 | 1973424.59 | 0.0141 | 0.0101 |
| Pluto | 692-12-21 02:38 J | 1974165.40 | 1974165.61 | 1974165.87 | 0.0065 | 0.0026 |
| Saturn | 695-07-05 12:43 J | 1975091.84 | 1975092.03 | 1975092.24 | 0.0267 | 0.0150 |

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| Jupiter | 703-06-12 04:04 J | 1977990.47 | 1977990.67 | 1977990.88 | 0.0513 | 0.0248 |
| Jupiter | 708-12-08 05:45 J | 1979996.58 | 1979996.74 | 1979996.90 | 0.0515 | 0.0362 |
| Saturn | 708-12-25 11:16 J | 1980013.88 | 1980013.97 | 1980014.07 | 0.0295 | 0.0269 |
| Jupiter | 715-06-17 05:16 J | 1982378.49 | 1982378.72 | 1982378.95 | 0.0515 | 0.0048 |
| Jupiter | 720-12-13 05:16 J | 1984384.50 | 1984384.72 | 1984384.94 | 0.0513 | 0.0119 |
| Uranus | 723-05-09 20:52 J | 1985262.24 | 1985262.37 | 1985262.54 | 0.0140 | 0.0116 |
| Uranus | 724-05-13 17:02 J | 1985632.05 | 1985632.21 | 1985632.40 | 0.0140 | 0.0097 |
| Saturn | 724-06-29 19:12 J | 1985679.07 | 1985679.30 | 1985679.54 | 0.0266 | 0.0106 |
| Uranus | 725-05-18 15:50 J | 1986001.91 | 1986002.16 | 1986002.41 | 0.0139 | 0.0053 |
| Uranus | 726-05-23 08:38 J | 1986371.61 | 1986371.86 | 1986372.11 | 0.0139 | 0.0024 |
| Uranus | 727-05-28 07:40 J | 1986741.56 | 1986741.82 | 1986742.09 | 0.0139 | 0.0006 |
| Jupiter | 727-06-22 00:43 J | 1986766.34 | 1986766.53 | 1986766.73 | 0.0517 | 0.0301 |
| Uranus | 728-05-31 21:21 J | 1987111.16 | 1987111.39 | 1987111.63 | 0.0138 | 0.0048 |
| Uranus | 729-06-05 20:38 J | 1987481.14 | 1987481.36 | 1987481.60 | 0.0138 | 0.0066 |
| Uranus | 730-06-10 07:40 J | 1987850.68 | 1987850.82 | 1987850.99 | 0.0137 | 0.0110 |
| Uranus | 731-06-15 06:28 J | 1988220.71 | 1988220.77 | 1988220.87 | 0.0137 | 0.0130 |
| Jupiter | 732-12-17 12:00 J | 1988771.77 | 1988772.00 | 1988772.23 | 0.0511 | 0.0103 |
| Saturn | 739-01-02 02:24 J | 1990978.39 | 1990978.60 | 1990978.81 | 0.0294 | 0.0129 |
| Mars | 743-10-30 08:52 J | 1992740.68 | 1992740.87 | 1992741.06 | 0.1773 | 0.0048 |
| Jupiter | 744-12-22 05:16 J | 1993159.57 | 1993159.72 | 1993159.87 | 0.0509 | 0.0370 |
| Saturn | 754-07-06 17:45 J | 1996643.09 | 1996643.24 | 1996643.39 | 0.0267 | 0.0211 |
| Neptune | 766-01-08 09:21 J | 2000846.74 | 2000846.89 | 2000847.09 | 0.0089 | 0.0064 |
| Neptune | 767-01-11 02:24 J | 2001214.40 | 2001214.60 | 2001214.85 | 0.0089 | 0.0044 |
| Uranus | 767-11-11 07:26 J | 2001518.66 | 2001518.81 | 2001518.97 | 0.0138 | 0.0105 |
| Saturn | 767-12-27 07:40 J | 2001564.65 | 2001564.82 | 2001565.00 | 0.0295 | 0.0208 |
| Neptune | 768-01-13 06:57 J | 2001581.56 | 2001581.79 | 2001582.05 | 0.0089 | 0.0016 |
| Uranus | 768-11-14 19:12 J | 2001888.11 | 2001888.30 | 2001888.52 | 0.0138 | 0.0086 |
| Neptune | 769-01-14 21:35 J | 2001949.14 | 2001949.40 | 2001949.67 | 0.0089 | 0.0006 |
| Uranus | 769-11-19 06:14 J | 2002257.55 | 2002257.76 | 2002258.00 | 0.0139 | 0.0043 |
| Neptune | 770-01-17 05:45 J | 2002316.52 | 2002316.74 | 2002316.98 | 0.0089 | 0.0034 |

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| Uranus | 770-11-23 20:38 J | 2002627.11 | 2002627.36 | 2002627.62 | 0.0139 | 0.0023 |
| Neptune | 771-01-19 15:50 J | 2002683.97 | 2002684.16 | 2002684.38 | 0.0089 | 0.0055 |
| Uranus | 771-11-28 07:26 J | 2002996.58 | 2002996.81 | 2002997.06 | 0.0140 | 0.0019 |
| Neptune | 772-01-22 04:47 J | 2003051.65 | 2003051.70 | 2003051.81 | 0.0089 | 0.0084 |
| Uranus | 772-12-01 23:45 J | 2003366.26 | 2003366.49 | 2003366.74 | 0.0140 | 0.0049 |
| Uranus | 773-12-06 10:47 J | 2003735.75 | 2003735.95 | 2003736.15 | 0.0141 | 0.0076 |
| Uranus | 774-12-11 05:02 J | 2004105.59 | 2004105.71 | 2004105.87 | 0.0141 | 0.0118 |
| Uranus | 775-12-15 16:04 J | 2004475.13 | 2004475.17 | 2004475.25 | 0.0142 | 0.0137 |
| Pluto | 780-06-22 01:40 J | 2006125.34 | 2006125.57 | 2006125.83 | 0.0079 | 0.0025 |
| Saturn | 783-07-01 16:04 J | 2007229.91 | 2007230.17 | 2007230.42 | 0.0266 | 0.0041 |
| Jupiter | 786-06-11 13:26 J | 2008305.87 | 2008306.06 | 2008306.26 | 0.0513 | 0.0288 |
| Jupiter | 791-12-09 00:00 J | 2010312.35 | 2010312.50 | 2010312.65 | 0.0515 | 0.0387 |
| Saturn | 798-01-03 07:55 J | 2012529.66 | 2012529.83 | 2012530.01 | 0.0294 | 0.0196 |
| Jupiter | 798-06-16 08:09 J | 2012693.60 | 2012693.84 | 2012694.09 | 0.0515 | 0.0016 |
| Jupiter | 803-12-13 07:26 J | 2014699.59 | 2014699.81 | 2014700.04 | 0.0513 | 0.0154 |
| Uranus | 807-05-10 01:55 J | 2015943.49 | 2015943.58 | 2015943.72 | 0.0140 | 0.0126 |
| Uranus | 808-05-14 00:14 J | 2016313.32 | 2016313.51 | 2016313.73 | 0.0140 | 0.0080 |
| Uranus | 809-05-18 21:50 J | 2016683.17 | 2016683.41 | 2016683.65 | 0.0139 | 0.0058 |
| Uranus | 810-05-23 16:19 J | 2017052.94 | 2017053.18 | 2017053.43 | 0.0139 | 0.0019 |
| Jupiter | 810-06-21 11:02 J | 2017081.76 | 2017081.96 | 2017082.16 | 0.0517 | 0.0258 |
| Uranus | 811-05-28 14:24 J | 2017422.84 | 2017423.10 | 2017423.37 | 0.0139 | 0.0016 |
| Uranus | 812-06-01 05:16 J | 2017792.48 | 2017792.72 | 2017792.96 | 0.0138 | 0.0040 |
| Uranus | 813-06-06 03:07 J | 2018162.44 | 2018162.63 | 2018162.86 | 0.0138 | 0.0084 |
| Uranus | 814-06-10 15:07 J | 2018531.97 | 2018532.13 | 2018532.31 | 0.0137 | 0.0101 |
| Jupiter | 815-12-18 00:00 J | 2019087.28 | 2019087.50 | 2019087.72 | 0.0511 | 0.0066 |
| Jupiter | 822-06-26 14:38 J | 2021470.07 | 2021470.11 | 2021470.15 | 0.0519 | 0.0511 |
| Mars | 822-11-01 17:45 J | 2021598.21 | 2021598.24 | 2021598.27 | 0.1767 | 0.1741 |
| Saturn | 826-12-28 05:31 J | 2023115.52 | 2023115.73 | 2023115.95 | 0.0295 | 0.0142 |
| Jupiter | 827-12-22 11:16 J | 2023474.80 | 2023474.97 | 2023475.15 | 0.0510 | 0.0340 |
| Saturn | 842-07-02 18:14 J | 2028781.02 | 2028781.26 | 2028781.51 | 0.0266 | 0.0027 |

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| Mars | 848-04-26 06:43 J | 2030905.60 | 2030905.78 | 2030905.96 | 0.1751 | 0.0433 |
| Neptune | 848-07-10 16:47 J | 2030981.10 | 2030981.20 | 2030981.33 | 0.0089 | 0.0079 |
| Neptune | 849-07-13 00:14 J | 2031348.33 | 2031348.51 | 2031348.69 | 0.0089 | 0.0063 |
| Neptune | 850-07-15 17:31 J | 2031715.99 | 2031716.23 | 2031716.50 | 0.0089 | 0.0030 |
| Uranus | 850-11-07 04:47 J | 2031830.67 | 2031830.70 | 2031830.79 | 0.0137 | 0.0134 |
| Neptune | 851-07-18 03:50 J | 2032083.41 | 2032083.66 | 2032083.91 | 0.0089 | 0.0013 |
| Uranus | 851-11-11 17:31 J | 2032200.09 | 2032200.23 | 2032200.38 | 0.0138 | 0.0109 |
| Neptune | 852-07-19 16:47 J | 2032450.94 | 2032451.20 | 2032451.47 | 0.0089 | 0.0021 |
| Uranus | 852-11-15 03:50 J | 2032569.44 | 2032569.66 | 2032569.89 | 0.0138 | 0.0070 |
| Neptune | 853-07-22 08:09 J | 2032818.61 | 2032818.84 | 2032819.07 | 0.0089 | 0.0038 |
| Uranus | 853-11-19 15:50 J | 2032938.94 | 2032939.16 | 2032939.39 | 0.0139 | 0.0052 |
| Neptune | 854-07-24 16:47 J | 2033186.06 | 2033186.20 | 2033186.37 | 0.0089 | 0.0071 |
| Uranus | 854-11-24 04:19 J | 2033308.42 | 2033308.68 | 2033308.94 | 0.0139 | 0.0008 |
| Neptune | 855-07-27 11:31 J | 2033553.97 | 2033553.98 | 2033554.04 | 0.0089 | 0.0088 |
| Uranus | 855-11-28 16:19 J | 2033677.95 | 2033678.18 | 2033678.43 | 0.0140 | 0.0016 |
| Uranus | 856-12-02 07:12 J | 2034047.57 | 2034047.80 | 2034048.05 | 0.0140 | 0.0052 |
| Saturn | 857-01-04 12:57 J | 2034080.95 | 2034081.04 | 2034081.14 | 0.0294 | 0.0270 |
| Uranus | 857-12-06 19:40 J | 2034417.14 | 2034417.32 | 2034417.52 | 0.0141 | 0.0087 |
| Uranus | 858-12-11 13:12 J | 2034786.91 | 2034787.05 | 2034787.23 | 0.0141 | 0.0109 |
| Jupiter | 869-06-10 14:38 J | 2038620.92 | 2038621.11 | 2038621.30 | 0.0512 | 0.0321 |
| Saturn | 871-06-27 20:38 J | 2039368.25 | 2039368.36 | 2039368.47 | 0.0266 | 0.0237 |
| Jupiter | 874-12-07 21:35 J | 2040627.28 | 2040627.40 | 2040627.53 | 0.0516 | 0.0430 |
| Jupiter | 881-06-15 15:35 J | 2043008.92 | 2043009.15 | 2043009.38 | 0.0514 | 0.0031 |
| Saturn | 885-12-29 12:00 J | 2044666.78 | 2044667.00 | 2044667.24 | 0.0294 | 0.0064 |
| Jupiter | 886-12-12 17:16 J | 2045015.02 | 2045015.22 | 2045015.42 | 0.0514 | 0.0202 |
| Uranus | 891-05-10 09:21 J | 2046624.74 | 2046624.89 | 2046625.08 | 0.0140 | 0.0108 |
| Uranus | 892-05-14 08:52 J | 2046994.69 | 2046994.87 | 2046995.07 | 0.0140 | 0.0089 |
| Uranus | 893-05-19 04:19 J | 2047364.44 | 2047364.68 | 2047364.95 | 0.0140 | 0.0044 |
| Jupiter | 893-06-20 12:28 J | 2047396.79 | 2047397.02 | 2047397.24 | 0.0516 | 0.0193 |
| Uranus | 894-05-24 00:14 J | 2047734.27 | 2047734.51 | 2047734.76 | 0.0139 | 0.0017 |

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|---------|-------------------|------------|------------|------------|--------|--------|
| Uranus | 895-05-28 20:24 J | 2048104.08 | 2048104.35 | 2048104.62 | 0.0139 | 0.0016 |
| Uranus | 896-06-01 12:28 J | 2048473.80 | 2048474.02 | 2048474.26 | 0.0138 | 0.0055 |
| Uranus | 897-06-06 09:07 J | 2048843.67 | 2048843.88 | 2048844.12 | 0.0138 | 0.0074 |
| Uranus | 898-06-10 22:33 J | 2049213.32 | 2049213.44 | 2049213.58 | 0.0137 | 0.0117 |
| Jupiter | 898-12-17 05:16 J | 2049402.48 | 2049402.72 | 2049402.96 | 0.0512 | 0.0028 |
| Uranus | 899-06-15 19:12 J | 2049583.29 | 2049583.30 | 2049583.36 | 0.0137 | 0.0136 |
| Saturn | 901-07-04 04:04 J | 2050332.46 | 2050332.67 | 2050332.90 | 0.0267 | 0.0099 |
| Jupiter | 905-06-25 05:31 J | 2051784.62 | 2051784.73 | 2051784.85 | 0.0518 | 0.0450 |
| Jupiter | 910-12-21 15:50 J | 2053789.99 | 2053790.16 | 2053790.34 | 0.0510 | 0.0309 |
| Mars | 927-04-29 23:02 J | 2059763.34 | 2059763.46 | 2059763.58 | 0.1756 | 0.1406 |
| Neptune | 930-01-08 04:19 J | 2060747.61 | 2060747.68 | 2060747.81 | 0.0089 | 0.0082 |
| Saturn | 930-06-28 23:45 J | 2060919.30 | 2060919.49 | 2060919.70 | 0.0266 | 0.0165 |
| Neptune | 931-01-10 09:35 J | 2061114.71 | 2061114.90 | 2061115.11 | 0.0089 | 0.0050 |
| Neptune | 932-01-12 23:16 J | 2061482.25 | 2061482.47 | 2061482.73 | 0.0089 | 0.0034 |
| Neptune | 933-01-14 08:38 J | 2061849.62 | 2061849.86 | 2061850.11 | 0.0089 | 0.0001 |
| Neptune | 934-01-16 17:31 J | 2062216.97 | 2062217.23 | 2062217.49 | 0.0089 | 0.0016 |
| Uranus | 934-11-07 13:40 J | 2062511.98 | 2062512.07 | 2062512.16 | 0.0137 | 0.0129 |
| Neptune | 935-01-19 06:43 J | 2062584.59 | 2062584.78 | 2062585.01 | 0.0089 | 0.0049 |
| Uranus | 935-11-12 02:52 J | 2062881.47 | 2062881.62 | 2062881.80 | 0.0138 | 0.0098 |
| Neptune | 936-01-21 11:31 J | 2062951.83 | 2062951.98 | 2062952.18 | 0.0089 | 0.0065 |
| Uranus | 936-11-15 12:14 J | 2063250.80 | 2063251.01 | 2063251.23 | 0.0138 | 0.0077 |
| Uranus | 937-11-20 01:55 J | 2063620.35 | 2063620.58 | 2063620.82 | 0.0139 | 0.0034 |
| Uranus | 938-11-24 13:26 J | 2063989.81 | 2063990.06 | 2063990.32 | 0.0139 | 0.0015 |
| Uranus | 939-11-29 03:07 J | 2064359.39 | 2064359.63 | 2064359.87 | 0.0140 | 0.0028 |
| Pluto | 939-12-22 21:07 J | 2064383.13 | 2064383.38 | 2064383.63 | 0.0065 | 0.0006 |
| Uranus | 940-12-02 16:33 J | 2064728.97 | 2064729.19 | 2064729.44 | 0.0140 | 0.0055 |
| Uranus | 941-12-07 06:00 J | 2065098.57 | 2065098.75 | 2065098.95 | 0.0141 | 0.0086 |
| Uranus | 942-12-11 22:19 J | 2065468.33 | 2065468.43 | 2065468.56 | 0.0141 | 0.0125 |
| Saturn | 944-12-31 02:09 J | 2066218.36 | 2066218.59 | 2066218.82 | 0.0294 | 0.0023 |
| Mars | 948-10-26 14:38 J | 2067614.07 | 2067614.11 | 2067614.15 | 0.1787 | 0.1734 |

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| Jupiter | 952-06-09 17:02 J | 2068936.06 | 2068936.21 | 2068936.37 | 0.0511 | 0.0370 |
| Jupiter | 957-12-07 06:00 J | 2070942.67 | 2070942.75 | 2070942.83 | 0.0517 | 0.0482 |
| Saturn | 960-07-05 15:21 J | 2071883.96 | 2071884.14 | 2071884.34 | 0.0267 | 0.0174 |
| Jupiter | 964-06-14 14:09 J | 2073323.85 | 2073324.09 | 2073324.34 | 0.0513 | 0.0091 |
| Jupiter | 969-12-11 18:43 J | 2075330.08 | 2075330.28 | 2075330.49 | 0.0515 | 0.0257 |
| Uranus | 974-05-06 00:14 J | 2076936.48 | 2076936.51 | 2076936.55 | 0.0141 | 0.0139 |
| Uranus | 975-05-10 17:02 J | 2077306.08 | 2077306.21 | 2077306.38 | 0.0140 | 0.0116 |
| Uranus | 976-05-14 18:14 J | 2077676.05 | 2077676.26 | 2077676.48 | 0.0140 | 0.0070 |
| Jupiter | 976-06-19 07:26 J | 2077711.59 | 2077711.81 | 2077712.04 | 0.0515 | 0.0139 |
| Uranus | 977-05-19 12:28 J | 2078045.78 | 2078046.02 | 2078046.27 | 0.0140 | 0.0050 |
| Uranus | 978-05-24 09:50 J | 2078415.66 | 2078415.91 | 2078416.16 | 0.0139 | 0.0008 |
| Uranus | 979-05-29 04:33 J | 2078785.43 | 2078785.69 | 2078785.96 | 0.0139 | 0.0024 |
| Uranus | 980-06-01 22:04 J | 2079155.20 | 2079155.42 | 2079155.66 | 0.0138 | 0.0050 |
| Uranus | 981-06-06 17:16 J | 2079525.03 | 2079525.22 | 2079525.43 | 0.0138 | 0.0092 |
| Jupiter | 981-12-16 07:26 J | 2079717.59 | 2079717.81 | 2079718.03 | 0.0513 | 0.0019 |
| Uranus | 982-06-11 07:26 J | 2079894.67 | 2079894.81 | 2079894.98 | 0.0137 | 0.0109 |
| Jupiter | 988-06-24 15:50 J | 2082100.01 | 2082100.16 | 2082100.31 | 0.0518 | 0.0402 |
| Saturn | 989-06-30 05:31 J | 2082470.50 | 2082470.73 | 2082470.97 | 0.0266 | 0.0088 |
| Jupiter | 993-12-20 23:16 J | 2084105.27 | 2084105.47 | 2084105.67 | 0.0511 | 0.0264 |

2ND MILLENNIUM CE

This is a list of transits of Moon in the 2nd millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|------|---------|---|-------|-----|-----|--------|-------|---|
| | TRANSIT | | | | | | | |
| | TIME | | | | | | | |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Saturn | 1004-01-02 18:28 J | 2087770.06 | 2087770.27 | 2087770.50 | 0.0294 | 0.0118 |
| Neptune | 1013-07-12 12:14 J | 2091248.86 | 2091249.01 | 2091249.20 | 0.0089 | 0.0070 |
| Neptune | 1014-07-15 00:28 J | 2091616.32 | 2091616.52 | 2091616.75 | 0.0089 | 0.0047 |
| Neptune | 1015-07-17 12:43 J | 2091983.78 | 2091984.03 | 2091984.31 | 0.0089 | 0.0020 |
| Neptune | 1016-07-19 05:31 J | 2092351.48 | 2092351.73 | 2092351.99 | 0.0089 | 0.0003 |
| Neptune | 1017-07-21 12:57 J | 2092718.80 | 2092719.04 | 2092719.31 | 0.0089 | 0.0031 |
| Neptune | 1018-07-24 08:24 J | 2093086.65 | 2093086.85 | 2093087.07 | 0.0089 | 0.0052 |
| Uranus | 1018-11-07 22:33 J | 2093193.34 | 2093193.44 | 2093193.55 | 0.0138 | 0.0126 |
| Saturn | 1019-07-08 00:00 J | 2093435.42 | 2093435.50 | 2093435.59 | 0.0268 | 0.0250 |
| Neptune | 1019-07-26 13:55 J | 2093454.00 | 2093454.08 | 2093454.22 | 0.0089 | 0.0081 |
| Uranus | 1019-11-12 12:57 J | 2093562.88 | 2093563.04 | 2093563.22 | 0.0138 | 0.0099 |
| Uranus | 1020-11-15 20:38 J | 2093932.14 | 2093932.36 | 2093932.61 | 0.0138 | 0.0062 |
| Uranus | 1021-11-20 11:16 J | 2094301.75 | 2094301.97 | 2094302.21 | 0.0139 | 0.0043 |
| Uranus | 1022-11-24 21:21 J | 2094671.14 | 2094671.39 | 2094671.65 | 0.0139 | 0.0004 |
| Uranus | 1023-11-29 12:14 J | 2095040.78 | 2095041.01 | 2095041.26 | 0.0140 | 0.0024 |
| Uranus | 1024-12-03 00:28 J | 2095410.31 | 2095410.52 | 2095410.77 | 0.0140 | 0.0063 |
| Uranus | 1025-12-07 15:35 J | 2095779.99 | 2095780.15 | 2095780.35 | 0.0141 | 0.0095 |
| Uranus | 1026-12-12 07:40 J | 2096149.68 | 2096149.82 | 2096149.96 | 0.0141 | 0.0119 |
| Mars | 1027-10-30 09:50 J | 2096471.70 | 2096471.91 | 2096472.11 | 0.1781 | 0.0233 |
| Pluto | 1028-06-24 12:57 J | 2096709.95 | 2096710.04 | 2096710.18 | 0.0079 | 0.0071 |
| Saturn | 1032-12-26 21:35 J | 2098356.24 | 2098356.40 | 2098356.58 | 0.0294 | 0.0201 |
| Jupiter | 1035-06-09 15:50 J | 2099251.02 | 2099251.16 | 2099251.30 | 0.0511 | 0.0415 |
| Jupiter | 1047-06-14 10:19 J | 2103638.71 | 2103638.93 | 2103639.15 | 0.0513 | 0.0143 |
| Saturn | 1048-07-01 17:02 J | 2104021.96 | 2104022.21 | 2104022.45 | 0.0266 | 0.0011 |
| Jupiter | 1052-12-10 18:14 J | 2105645.09 | 2105645.26 | 2105645.44 | 0.0515 | 0.0319 |
| Uranus | 1058-05-06 11:16 J | 2107617.97 | 2107617.97 | 2107618.03 | 0.0141 | 0.0140 |
| Uranus | 1059-05-11 03:50 J | 2107987.49 | 2107987.66 | 2107987.86 | 0.0140 | 0.0099 |
| Jupiter | 1059-06-19 15:50 J | 2108026.92 | 2108027.16 | 2108027.39 | 0.0515 | 0.0086 |
| Uranus | 1060-05-15 05:16 J | 2108357.53 | 2108357.72 | 2108357.94 | 0.0140 | 0.0079 |
| Uranus | 1061-05-19 21:50 J | 2108727.16 | 2108727.41 | 2108727.69 | 0.0140 | 0.0033 |

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| Uranus | 1062-05-24 20:09 J | 2109097.10 | 2109097.34 | 2109097.60 | 0.0139 | 0.0009 |
| Saturn | 1063-01-04 08:24 J | 2109321.70 | 2109321.85 | 2109322.02 | 0.0293 | 0.0220 |
| Uranus | 1063-05-29 13:11 J | 2109466.79 | 2109467.05 | 2109467.32 | 0.0139 | 0.0028 |
| Uranus | 1064-06-02 07:55 J | 2109836.62 | 2109836.83 | 2109837.06 | 0.0138 | 0.0064 |
| Jupiter | 1064-12-15 12:00 J | 2110032.77 | 2110033.00 | 2110033.23 | 0.0513 | 0.0075 |
| Uranus | 1065-06-07 01:40 J | 2110206.38 | 2110206.57 | 2110206.80 | 0.0138 | 0.0084 |
| Uranus | 1066-06-11 17:45 J | 2110576.15 | 2110576.24 | 2110576.33 | 0.0137 | 0.0127 |
| Jupiter | 1071-06-24 04:04 J | 2112414.50 | 2112414.67 | 2112414.86 | 0.0516 | 0.0338 |
| Jupiter | 1076-12-19 16:33 J | 2114419.99 | 2114420.19 | 2114420.40 | 0.0512 | 0.0205 |
| Saturn | 1077-06-27 04:19 J | 2114609.60 | 2114609.68 | 2114609.76 | 0.0266 | 0.0252 |
| Jupiter | 1088-12-24 12:28 J | 2118807.95 | 2118808.02 | 2118808.10 | 0.0510 | 0.0480 |
| Saturn | 1091-12-29 19:11 J | 2119908.08 | 2119908.30 | 2119908.52 | 0.0294 | 0.0093 |
| Neptune | 1095-01-10 00:14 J | 2121015.36 | 2121015.51 | 2121015.73 | 0.0089 | 0.0063 |
| Neptune | 1096-01-12 10:04 J | 2121382.73 | 2121382.92 | 2121383.15 | 0.0089 | 0.0044 |
| Neptune | 1097-01-13 18:43 J | 2121750.02 | 2121750.28 | 2121750.54 | 0.0089 | 0.0014 |
| Neptune | 1098-01-16 09:21 J | 2122117.65 | 2122117.89 | 2122118.14 | 0.0089 | 0.0005 |
| Neptune | 1099-01-18 13:40 J | 2122484.84 | 2122485.07 | 2122485.32 | 0.0089 | 0.0034 |
| Neptune | 1100-01-21 06:43 J | 2122852.59 | 2122852.78 | 2122852.99 | 0.0089 | 0.0053 |
| Neptune | 1101-01-22 09:50 J | 2123219.85 | 2123219.91 | 2123220.03 | 0.0089 | 0.0083 |
| Uranus | 1102-11-08 06:00 J | 2123874.65 | 2123874.75 | 2123874.90 | 0.0138 | 0.0120 |
| Uranus | 1103-11-12 22:04 J | 2124244.25 | 2124244.42 | 2124244.62 | 0.0138 | 0.0090 |
| Uranus | 1104-11-16 04:48 J | 2124613.49 | 2124613.70 | 2124613.94 | 0.0138 | 0.0068 |
| Uranus | 1105-11-20 21:21 J | 2124983.15 | 2124983.39 | 2124983.63 | 0.0139 | 0.0025 |
| Uranus | 1106-11-25 06:14 J | 2125352.51 | 2125352.76 | 2125353.02 | 0.0139 | 0.0007 |
| Saturn | 1107-07-04 08:09 J | 2125573.62 | 2125573.84 | 2125574.08 | 0.0267 | 0.0074 |
| Uranus | 1107-11-29 22:33 J | 2125722.21 | 2125722.44 | 2125722.67 | 0.0140 | 0.0038 |
| Uranus | 1108-12-03 09:35 J | 2126091.68 | 2126091.90 | 2126092.14 | 0.0140 | 0.0062 |
| Uranus | 1109-12-08 01:55 J | 2126461.41 | 2126461.58 | 2126461.77 | 0.0141 | 0.0096 |
| Uranus | 1110-12-12 16:04 J | 2126831.08 | 2126831.17 | 2126831.25 | 0.0141 | 0.0133 |
| Jupiter | 1118-06-08 13:40 J | 2129565.97 | 2129566.07 | 2129566.17 | 0.0511 | 0.0458 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Jupiter | 1130-06-13 15:35 J | 2133953.93 | 2133954.15 | 2133954.37 | 0.0512 | 0.0197 |
| Mars | 1132-04-27 02:52 J | 2134637.43 | 2134637.62 | 2134637.81 | 0.1744 | 0.0023 |
| Jupiter | 1135-12-10 20:52 J | 2135960.22 | 2135960.37 | 2135960.54 | 0.0516 | 0.0384 |
| Saturn | 1136-06-28 09:21 J | 2136160.70 | 2136160.89 | 2136161.10 | 0.0266 | 0.0170 |
| Uranus | 1142-05-06 22:48 J | 2138299.35 | 2138299.45 | 2138299.54 | 0.0141 | 0.0130 |
| Jupiter | 1142-06-18 03:50 J | 2138341.43 | 2138341.66 | 2138341.90 | 0.0514 | 0.0026 |
| Uranus | 1143-05-11 13:26 J | 2138668.91 | 2138669.06 | 2138669.26 | 0.0140 | 0.0106 |
| Uranus | 1144-05-15 16:19 J | 2139038.97 | 2139039.18 | 2139039.42 | 0.0140 | 0.0060 |
| Uranus | 1145-05-20 08:09 J | 2139408.59 | 2139408.84 | 2139409.10 | 0.0140 | 0.0040 |
| Uranus | 1146-05-25 07:40 J | 2139778.57 | 2139778.82 | 2139779.07 | 0.0139 | 0.0004 |
| Uranus | 1147-05-29 23:31 J | 2140148.23 | 2140148.48 | 2140148.75 | 0.0139 | 0.0033 |
| Jupiter | 1147-12-15 05:16 J | 2140347.50 | 2140347.72 | 2140347.94 | 0.0514 | 0.0137 |
| Uranus | 1148-06-02 19:26 J | 2140518.10 | 2140518.31 | 2140518.55 | 0.0138 | 0.0061 |
| Uranus | 1149-06-07 11:45 J | 2140887.83 | 2140887.99 | 2140888.19 | 0.0138 | 0.0101 |
| Uranus | 1150-06-12 04:19 J | 2141257.58 | 2141257.68 | 2141257.83 | 0.0137 | 0.0118 |
| Saturn | 1150-12-31 16:33 J | 2141459.96 | 2141460.19 | 2141460.43 | 0.0294 | 0.0016 |
| Jupiter | 1154-06-23 06:57 J | 2142729.60 | 2142729.79 | 2142729.99 | 0.0516 | 0.0281 |
| Jupiter | 1159-12-20 03:35 J | 2144735.43 | 2144735.65 | 2144735.87 | 0.0512 | 0.0162 |
| Saturn | 1166-07-05 20:38 J | 2147125.17 | 2147125.36 | 2147125.58 | 0.0267 | 0.0155 |
| Jupiter | 1171-12-24 07:40 J | 2149122.69 | 2149122.82 | 2149122.95 | 0.0510 | 0.0425 |
| Neptune | 1177-07-11 20:52 J | 2151149.27 | 2151149.37 | 2151149.51 | 0.0089 | 0.0078 |
| Neptune | 1178-07-14 07:11 J | 2151516.63 | 2151516.80 | 2151517.02 | 0.0089 | 0.0062 |
| Neptune | 1179-07-17 01:11 J | 2151884.32 | 2151884.55 | 2151884.80 | 0.0089 | 0.0029 |
| Neptune | 1180-07-18 08:38 J | 2152251.60 | 2152251.86 | 2152252.13 | 0.0089 | 0.0013 |
| Neptune | 1181-07-21 04:48 J | 2152619.45 | 2152619.70 | 2152619.96 | 0.0089 | 0.0021 |
| Neptune | 1182-07-23 10:48 J | 2152986.72 | 2152986.95 | 2152987.19 | 0.0089 | 0.0037 |
| Neptune | 1183-07-26 06:00 J | 2153354.61 | 2153354.75 | 2153354.93 | 0.0089 | 0.0071 |
| Neptune | 1184-07-27 13:55 J | 2153722.06 | 2153722.08 | 2153722.16 | 0.0089 | 0.0087 |
| Uranus | 1186-11-08 14:38 J | 2154555.99 | 2154556.11 | 2154556.23 | 0.0138 | 0.0120 |
| Pluto | 1186-12-23 11:02 J | 2154600.88 | 2154600.96 | 2154601.08 | 0.0065 | 0.0059 |

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| Uranus | 1187-11-13 06:57 J | 2154925.61 | 2154925.79 | 2154925.98 | 0.0138 | 0.0090 |
| Pluto | 1187-12-24 16:04 J | 2154966.98 | 2154967.17 | 2154967.40 | 0.0065 | 0.0039 |
| Uranus | 1188-11-16 12:43 J | 2155294.79 | 2155295.03 | 2155295.26 | 0.0138 | 0.0055 |
| Uranus | 1189-11-21 05:31 J | 2155664.50 | 2155664.73 | 2155664.97 | 0.0139 | 0.0035 |
| Uranus | 1190-11-25 12:57 J | 2156033.79 | 2156034.04 | 2156034.30 | 0.0139 | 0.0011 |
| Uranus | 1191-11-30 06:28 J | 2156403.54 | 2156403.77 | 2156404.01 | 0.0140 | 0.0031 |
| Uranus | 1192-12-03 16:04 J | 2156772.97 | 2156773.17 | 2156773.41 | 0.0140 | 0.0073 |
| Uranus | 1193-12-08 10:33 J | 2157142.78 | 2157142.94 | 2157143.11 | 0.0141 | 0.0101 |
| Uranus | 1194-12-12 23:02 J | 2157512.38 | 2157512.46 | 2157512.59 | 0.0141 | 0.0129 |
| Saturn | 1195-06-30 17:31 J | 2157712.00 | 2157712.23 | 2157712.47 | 0.0267 | 0.0090 |
| Jupiter | 1201-06-07 18:14 J | 2159881.23 | 2159881.26 | 2159881.30 | 0.0509 | 0.0503 |
| Saturn | 1210-01-02 08:24 J | 2163011.63 | 2163011.85 | 2163012.08 | 0.0294 | 0.0113 |
| Mars | 1211-04-30 11:45 J | 2163494.92 | 2163494.99 | 2163495.06 | 0.1749 | 0.1618 |
| Jupiter | 1213-06-12 03:35 J | 2164268.45 | 2164268.65 | 2164268.85 | 0.0512 | 0.0258 |
| Jupiter | 1218-12-09 19:11 J | 2166275.18 | 2166275.30 | 2166275.42 | 0.0516 | 0.0431 |
| Jupiter | 1225-06-17 09:50 J | 2168656.68 | 2168656.91 | 2168657.15 | 0.0514 | 0.0036 |
| Saturn | 1225-07-07 02:09 J | 2168676.48 | 2168676.59 | 2168676.73 | 0.0267 | 0.0233 |
| Uranus | 1226-05-07 08:24 J | 2168980.78 | 2168980.85 | 2168980.97 | 0.0141 | 0.0130 |
| Uranus | 1227-05-11 23:31 J | 2169350.29 | 2169350.48 | 2169350.69 | 0.0140 | 0.0091 |
| Uranus | 1228-05-16 02:38 J | 2169720.40 | 2169720.61 | 2169720.84 | 0.0140 | 0.0070 |
| Uranus | 1229-05-20 17:02 J | 2170089.96 | 2170090.21 | 2170090.48 | 0.0140 | 0.0023 |
| Uranus | 1230-05-25 17:31 J | 2170459.98 | 2170460.23 | 2170460.48 | 0.0139 | 0.0000 |
| Jupiter | 1230-12-14 16:19 J | 2170662.96 | 2170663.18 | 2170663.39 | 0.0514 | 0.0178 |
| Uranus | 1231-05-30 08:09 J | 2170829.59 | 2170829.84 | 2170830.10 | 0.0139 | 0.0038 |
| Uranus | 1232-06-03 05:16 J | 2171199.52 | 2171199.72 | 2171199.95 | 0.0138 | 0.0072 |
| Mars | 1232-10-27 12:00 J | 2171345.89 | 2171346.00 | 2171346.11 | 0.1794 | 0.1434 |
| Uranus | 1233-06-07 20:38 J | 2171569.18 | 2171569.36 | 2171569.57 | 0.0138 | 0.0093 |
| Uranus | 1234-06-12 14:38 J | 2171939.11 | 2171939.11 | 2171939.17 | 0.0137 | 0.0137 |
| Jupiter | 1237-06-22 04:48 J | 2173044.48 | 2173044.70 | 2173044.92 | 0.0516 | 0.0237 |
| Saturn | 1238-12-27 02:09 J | 2173597.45 | 2173597.59 | 2173597.74 | 0.0295 | 0.0234 |

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| Jupiter | 1242-12-18 21:50 J | 2175050.18 | 2175050.41 | 2175050.64 | 0.0512 | 0.0112 |
| Saturn | 1254-07-02 04:48 J | 2179263.46 | 2179263.70 | 2179263.94 | 0.0266 | 0.0016 |
| Jupiter | 1254-12-23 13:11 J | 2179437.90 | 2179438.05 | 2179438.20 | 0.0511 | 0.0370 |
| Neptune | 1259-01-09 12:28 J | 2180915.93 | 2180916.02 | 2180916.14 | 0.0089 | 0.0080 |
| Neptune | 1260-01-11 19:40 J | 2181283.12 | 2181283.32 | 2181283.56 | 0.0089 | 0.0050 |
| Neptune | 1261-01-13 10:48 J | 2181650.73 | 2181650.95 | 2181651.19 | 0.0089 | 0.0033 |
| Neptune | 1262-01-15 14:52 J | 2182017.87 | 2182018.12 | 2182018.38 | 0.0089 | 0.0002 |
| Neptune | 1263-01-18 07:55 J | 2182385.58 | 2182385.83 | 2182386.08 | 0.0089 | 0.0015 |
| Neptune | 1264-01-20 11:02 J | 2182752.76 | 2182752.96 | 2182753.19 | 0.0089 | 0.0047 |
| Neptune | 1265-01-22 02:24 J | 2183120.44 | 2183120.60 | 2183120.81 | 0.0089 | 0.0064 |
| Saturn | 1269-01-03 17:16 J | 2184563.05 | 2184563.22 | 2184563.40 | 0.0294 | 0.0206 |
| Uranus | 1270-11-08 22:04 J | 2185237.29 | 2185237.42 | 2185237.59 | 0.0137 | 0.0112 |
| Uranus | 1271-11-13 15:21 J | 2185606.96 | 2185607.14 | 2185607.35 | 0.0138 | 0.0085 |
| Uranus | 1272-11-16 20:24 J | 2185976.13 | 2185976.35 | 2185976.59 | 0.0138 | 0.0060 |
| Uranus | 1273-11-21 14:38 J | 2186345.87 | 2186346.11 | 2186346.36 | 0.0139 | 0.0018 |
| Uranus | 1274-11-25 21:35 J | 2186715.15 | 2186715.40 | 2186715.66 | 0.0139 | 0.0002 |
| Pluto | 1275-06-25 18:00 J | 2186926.99 | 2186927.25 | 2186927.52 | 0.0079 | 0.0018 |
| Uranus | 1275-11-30 15:50 J | 2187084.94 | 2187085.16 | 2187085.40 | 0.0140 | 0.0047 |
| Uranus | 1276-12-04 00:43 J | 2187454.32 | 2187454.53 | 2187454.77 | 0.0140 | 0.0069 |
| Uranus | 1277-12-08 19:40 J | 2187824.18 | 2187824.32 | 2187824.50 | 0.0141 | 0.0105 |
| Uranus | 1278-12-13 06:57 J | 2188193.76 | 2188193.79 | 2188193.85 | 0.0141 | 0.0139 |
| Jupiter | 1296-06-11 15:50 J | 2194583.97 | 2194584.16 | 2194584.35 | 0.0511 | 0.0301 |
| Saturn | 1297-12-28 16:19 J | 2195148.98 | 2195149.18 | 2195149.38 | 0.0295 | 0.0145 |
| Jupiter | 1301-12-09 05:45 J | 2196590.65 | 2196590.74 | 2196590.82 | 0.0517 | 0.0477 |
| Jupiter | 1308-06-16 08:09 J | 2198971.60 | 2198971.84 | 2198972.08 | 0.0513 | 0.0083 |
| Uranus | 1310-05-07 16:33 J | 2199662.09 | 2199662.19 | 2199662.33 | 0.0141 | 0.0124 |
| Uranus | 1311-05-12 06:57 J | 2200031.62 | 2200031.79 | 2200031.99 | 0.0141 | 0.0097 |
| Mars | 1311-10-30 20:09 J | 2200203.17 | 2200203.34 | 2200203.51 | 0.1789 | 0.0592 |
| Uranus | 1312-05-16 11:02 J | 2200401.73 | 2200401.96 | 2200402.20 | 0.0140 | 0.0052 |
| Uranus | 1313-05-21 00:57 J | 2200771.29 | 2200771.54 | 2200771.80 | 0.0140 | 0.0033 |

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| Saturn | 1313-07-03 13:55 J | 2200814.84 | 2200815.08 | 2200815.32 | 0.0266 | 0.0055 |
| Jupiter | 1313-12-13 10:33 J | 2200977.73 | 2200977.94 | 2200978.15 | 0.0515 | 0.0229 |
| Uranus | 1314-05-26 02:38 J | 2201141.36 | 2201141.61 | 2201141.86 | 0.0139 | 0.0013 |
| Uranus | 1315-05-30 16:33 J | 2201510.94 | 2201511.19 | 2201511.45 | 0.0139 | 0.0039 |
| Uranus | 1316-06-03 15:07 J | 2201880.93 | 2201881.13 | 2201881.36 | 0.0138 | 0.0070 |
| Uranus | 1317-06-08 04:48 J | 2202250.55 | 2202250.70 | 2202250.88 | 0.0138 | 0.0108 |
| Uranus | 1318-06-13 00:28 J | 2202620.44 | 2202620.52 | 2202620.64 | 0.0137 | 0.0126 |
| Jupiter | 1320-06-21 07:40 J | 2203359.61 | 2203359.82 | 2203360.03 | 0.0515 | 0.0191 |
| Jupiter | 1325-12-18 06:57 J | 2205365.57 | 2205365.79 | 2205366.01 | 0.0513 | 0.0073 |
| Saturn | 1328-01-05 21:35 J | 2206114.36 | 2206114.40 | 2206114.46 | 0.0294 | 0.0287 |
| Jupiter | 1332-06-26 04:19 J | 2207747.61 | 2207747.68 | 2207747.76 | 0.0517 | 0.0492 |
| Jupiter | 1337-12-22 20:38 J | 2209753.19 | 2209753.36 | 2209753.55 | 0.0511 | 0.0332 |
| Saturn | 1342-06-28 07:26 J | 2211401.64 | 2211401.81 | 2211401.98 | 0.0265 | 0.0198 |
| Neptune | 1342-07-13 20:24 J | 2211417.23 | 2211417.35 | 2211417.54 | 0.0089 | 0.0071 |
| Neptune | 1343-07-16 03:21 J | 2211784.43 | 2211784.64 | 2211784.89 | 0.0089 | 0.0046 |
| Neptune | 1344-07-18 00:00 J | 2212152.25 | 2212152.50 | 2212152.76 | 0.0089 | 0.0020 |
| Neptune | 1345-07-20 06:28 J | 2212519.52 | 2212519.77 | 2212520.03 | 0.0089 | 0.0005 |
| Neptune | 1346-07-23 01:26 J | 2212887.32 | 2212887.56 | 2212887.82 | 0.0089 | 0.0030 |
| Neptune | 1347-07-25 10:04 J | 2213254.74 | 2213254.92 | 2213255.14 | 0.0089 | 0.0053 |
| Neptune | 1348-07-27 01:11 J | 2213622.43 | 2213622.55 | 2213622.69 | 0.0089 | 0.0078 |
| Uranus | 1353-11-05 03:21 J | 2215549.61 | 2215549.64 | 2215549.72 | 0.0137 | 0.0134 |
| Uranus | 1354-11-09 06:43 J | 2215918.66 | 2215918.78 | 2215918.94 | 0.0137 | 0.0115 |
| Uranus | 1355-11-14 00:28 J | 2216288.33 | 2216288.52 | 2216288.73 | 0.0138 | 0.0082 |
| Uranus | 1356-11-17 04:48 J | 2216657.48 | 2216657.70 | 2216657.95 | 0.0138 | 0.0049 |
| Saturn | 1356-12-30 00:43 J | 2216700.30 | 2216700.53 | 2216700.77 | 0.0295 | 0.0067 |
| Uranus | 1357-11-21 23:16 J | 2217027.24 | 2217027.47 | 2217027.72 | 0.0139 | 0.0028 |
| Uranus | 1358-11-26 05:16 J | 2217396.47 | 2217396.72 | 2217396.98 | 0.0139 | 0.0018 |
| Uranus | 1359-12-01 00:43 J | 2217766.29 | 2217766.53 | 2217766.77 | 0.0140 | 0.0037 |
| Uranus | 1360-12-04 08:38 J | 2218135.66 | 2218135.86 | 2218136.08 | 0.0140 | 0.0081 |
| Uranus | 1361-12-09 04:48 J | 2218505.55 | 2218505.70 | 2218505.87 | 0.0141 | 0.0107 |

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| Uranus | 1362-12-13 15:21 J | 2218875.09 | 2218875.14 | 2218875.21 | 0.0141 | 0.0136 |
| Saturn | 1372-07-04 16:19 J | 2222365.95 | 2222366.18 | 2222366.41 | 0.0266 | 0.0118 |
| Jupiter | 1379-06-11 13:40 J | 2224898.89 | 2224899.07 | 2224899.25 | 0.0511 | 0.0347 |
| Jupiter | 1391-06-16 09:35 J | 2229286.68 | 2229286.90 | 2229287.12 | 0.0513 | 0.0139 |
| Uranus | 1394-05-08 01:26 J | 2230343.43 | 2230343.56 | 2230343.69 | 0.0141 | 0.0120 |
| Uranus | 1395-05-12 15:35 J | 2230712.95 | 2230713.15 | 2230713.37 | 0.0141 | 0.0084 |
| Uranus | 1396-05-16 19:40 J | 2231083.10 | 2231083.32 | 2231083.56 | 0.0140 | 0.0062 |
| Jupiter | 1396-12-13 02:38 J | 2231293.42 | 2231293.61 | 2231293.81 | 0.0515 | 0.0246 |
| Uranus | 1397-05-21 08:52 J | 2231452.61 | 2231452.87 | 2231453.13 | 0.0140 | 0.0014 |
| Uranus | 1398-05-26 11:02 J | 2231822.71 | 2231822.96 | 2231823.21 | 0.0139 | 0.0007 |
| Uranus | 1399-05-30 23:31 J | 2232192.25 | 2232192.48 | 2232192.75 | 0.0139 | 0.0048 |
| Uranus | 1400-06-03 23:31 J | 2232562.28 | 2232562.48 | 2232562.70 | 0.0138 | 0.0078 |
| Uranus | 1401-06-08 12:28 J | 2232931.86 | 2232932.02 | 2232932.21 | 0.0138 | 0.0102 |
| Saturn | 1401-06-29 11:16 J | 2232952.77 | 2232952.97 | 2232953.19 | 0.0265 | 0.0134 |
| Jupiter | 1403-06-21 10:04 J | 2233674.68 | 2233674.92 | 2233675.15 | 0.0515 | 0.0145 |
| Jupiter | 1408-12-17 15:35 J | 2235680.91 | 2235681.15 | 2235681.38 | 0.0513 | 0.0051 |
| Jupiter | 1415-06-26 07:40 J | 2238062.73 | 2238062.82 | 2238062.93 | 0.0517 | 0.0462 |
| Saturn | 1415-12-31 22:48 J | 2238251.21 | 2238251.45 | 2238251.70 | 0.0295 | 0.0007 |
| Mars | 1416-04-27 06:00 J | 2238368.54 | 2238368.75 | 2238368.96 | 0.1736 | 0.0305 |
| Jupiter | 1420-12-22 03:07 J | 2240068.45 | 2240068.63 | 2240068.81 | 0.0511 | 0.0295 |
| Neptune | 1424-01-11 11:45 J | 2241183.84 | 2241183.99 | 2241184.19 | 0.0089 | 0.0062 |
| Neptune | 1425-01-12 15:50 J | 2241550.95 | 2241551.16 | 2241551.39 | 0.0089 | 0.0044 |
| Neptune | 1426-01-15 08:52 J | 2241918.63 | 2241918.87 | 2241919.13 | 0.0089 | 0.0014 |
| Neptune | 1427-01-17 13:11 J | 2242285.80 | 2242286.05 | 2242286.30 | 0.0089 | 0.0004 |
| Neptune | 1428-01-20 04:19 J | 2242653.44 | 2242653.68 | 2242653.92 | 0.0089 | 0.0033 |
| Neptune | 1429-01-21 11:31 J | 2243020.79 | 2243020.98 | 2243021.19 | 0.0089 | 0.0051 |
| Neptune | 1430-01-23 21:07 J | 2243388.30 | 2243388.38 | 2243388.52 | 0.0089 | 0.0081 |
| Saturn | 1431-07-06 12:57 J | 2243916.86 | 2243917.04 | 2243917.24 | 0.0266 | 0.0179 |
| Jupiter | 1432-12-26 17:31 J | 2244456.18 | 2244456.23 | 2244456.30 | 0.0510 | 0.0491 |
| Pluto | 1434-12-25 05:16 J | 2245184.48 | 2245184.72 | 2245184.98 | 0.0065 | 0.0016 |

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| Uranus | 1438-11-09 16:33 J | 2246600.04 | 2246600.19 | 2246600.37 | 0.0137 | 0.0103 |
| Uranus | 1439-11-14 10:19 J | 2246969.74 | 2246969.93 | 2246970.15 | 0.0138 | 0.0078 |
| Uranus | 1440-11-17 14:38 J | 2247338.89 | 2247339.11 | 2247339.35 | 0.0138 | 0.0050 |
| Uranus | 1441-11-22 09:50 J | 2247708.66 | 2247708.91 | 2247709.16 | 0.0139 | 0.0011 |
| Uranus | 1442-11-26 15:50 J | 2248077.90 | 2248078.16 | 2248078.41 | 0.0139 | 0.0009 |
| Uranus | 1443-12-01 11:16 J | 2248447.76 | 2248447.97 | 2248448.21 | 0.0140 | 0.0056 |
| Uranus | 1444-12-04 18:57 J | 2248817.09 | 2248817.29 | 2248817.52 | 0.0140 | 0.0075 |
| Uranus | 1445-12-09 15:35 J | 2249187.02 | 2249187.15 | 2249187.31 | 0.0141 | 0.0114 |
| Saturn | 1460-06-30 17:16 J | 2254503.99 | 2254504.22 | 2254504.46 | 0.0265 | 0.0072 |
| Jupiter | 1462-06-10 19:40 J | 2255214.18 | 2255214.32 | 2255214.46 | 0.0510 | 0.0398 |
| Jupiter | 1474-06-15 19:26 J | 2259602.08 | 2259602.31 | 2259602.54 | 0.0513 | 0.0169 |
| Saturn | 1475-01-01 18:00 J | 2259802.02 | 2259802.25 | 2259802.49 | 0.0295 | 0.0070 |
| Uranus | 1478-05-08 09:35 J | 2261024.77 | 2261024.90 | 2261025.06 | 0.0141 | 0.0116 |
| Uranus | 1479-05-13 00:00 J | 2261394.31 | 2261394.50 | 2261394.72 | 0.0141 | 0.0087 |
| Jupiter | 1479-12-13 10:19 J | 2261608.73 | 2261608.93 | 2261609.13 | 0.0516 | 0.0268 |
| Uranus | 1480-05-17 04:33 J | 2261764.44 | 2261764.69 | 2261764.93 | 0.0140 | 0.0044 |
| Uranus | 1481-05-21 17:16 J | 2262133.98 | 2262134.22 | 2262134.49 | 0.0140 | 0.0025 |
| Uranus | 1482-05-26 20:24 J | 2262504.10 | 2262504.35 | 2262504.61 | 0.0139 | 0.0023 |
| Uranus | 1483-05-31 08:38 J | 2262873.63 | 2262873.86 | 2262874.12 | 0.0139 | 0.0047 |
| Uranus | 1484-06-04 09:21 J | 2263243.70 | 2263243.89 | 2263244.11 | 0.0138 | 0.0080 |
| Uranus | 1485-06-08 21:07 J | 2263613.26 | 2263613.38 | 2263613.55 | 0.0138 | 0.0116 |
| Uranus | 1486-06-13 19:40 J | 2263983.28 | 2263983.32 | 2263983.38 | 0.0137 | 0.0134 |
| Jupiter | 1486-06-20 16:04 J | 2263989.95 | 2263990.17 | 2263990.40 | 0.0514 | 0.0119 |
| Saturn | 1490-07-07 11:16 J | 2265467.87 | 2265467.97 | 2265468.09 | 0.0266 | 0.0236 |
| Jupiter | 1491-12-17 21:07 J | 2265996.16 | 2265996.38 | 2265996.61 | 0.0514 | 0.0017 |
| Jupiter | 1498-06-25 21:07 J | 2268378.25 | 2268378.38 | 2268378.51 | 0.0516 | 0.0428 |
| Jupiter | 1503-12-22 16:19 J | 2270383.98 | 2270384.18 | 2270384.39 | 0.0512 | 0.0256 |
| Saturn | 1503-12-27 03:21 J | 2270388.55 | 2270388.64 | 2270388.74 | 0.0295 | 0.0270 |
| Neptune | 1506-07-12 21:50 J | 2271317.29 | 2271317.41 | 2271317.55 | 0.0089 | 0.0077 |
| Neptune | 1507-07-15 17:45 J | 2271685.07 | 2271685.24 | 2271685.45 | 0.0089 | 0.0062 |

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| Neptune | 1508-07-17 00:43 J | 2272052.30 | 2272052.53 | 2272052.78 | 0.0089 | 0.0029 |
| Neptune | 1509-07-19 18:43 J | 2272420.03 | 2272420.28 | 2272420.56 | 0.0089 | 0.0014 |
| Neptune | 1510-07-22 05:31 J | 2272787.49 | 2272787.73 | 2272787.98 | 0.0089 | 0.0020 |
| Neptune | 1511-07-24 19:11 J | 2273155.07 | 2273155.30 | 2273155.57 | 0.0089 | 0.0036 |
| Neptune | 1512-07-26 10:04 J | 2273522.78 | 2273522.92 | 2273523.10 | 0.0089 | 0.0069 |
| Neptune | 1513-07-28 19:11 J | 2273890.23 | 2273890.30 | 2273890.40 | 0.0089 | 0.0084 |
| Jupiter | 1515-12-27 01:55 J | 2274771.49 | 2274771.58 | 2274771.67 | 0.0510 | 0.0465 |
| Mars | 1516-10-27 20:24 J | 2275077.21 | 2275077.35 | 2275077.49 | 0.1802 | 0.1292 |
| Saturn | 1519-07-02 18:43 J | 2276055.03 | 2276055.28 | 2276055.54 | 0.0265 | 0.0014 |
| Uranus | 1521-11-05 23:02 J | 2276912.37 | 2276912.46 | 2276912.58 | 0.0137 | 0.0124 |
| Uranus | 1522-11-10 02:24 J | 2277281.46 | 2277281.60 | 2277281.77 | 0.0137 | 0.0107 |
| Pluto | 1523-06-27 20:38 J | 2277511.16 | 2277511.36 | 2277511.59 | 0.0079 | 0.0042 |
| Uranus | 1523-11-14 20:24 J | 2277651.14 | 2277651.35 | 2277651.57 | 0.0138 | 0.0072 |
| Uranus | 1524-11-18 00:57 J | 2278020.30 | 2278020.54 | 2278020.78 | 0.0138 | 0.0041 |
| Uranus | 1525-11-22 19:55 J | 2278390.09 | 2278390.33 | 2278390.58 | 0.0139 | 0.0017 |
| Uranus | 1526-11-27 01:26 J | 2278759.32 | 2278759.56 | 2278759.81 | 0.0139 | 0.0028 |
| Uranus | 1527-12-01 21:35 J | 2279129.17 | 2279129.40 | 2279129.64 | 0.0140 | 0.0046 |
| Uranus | 1528-12-05 05:02 J | 2279498.52 | 2279498.71 | 2279498.90 | 0.0140 | 0.0091 |
| Uranus | 1529-12-10 01:55 J | 2279868.45 | 2279868.58 | 2279868.73 | 0.0141 | 0.0115 |
| Saturn | 1534-01-02 16:33 J | 2281352.99 | 2281353.19 | 2281353.41 | 0.0295 | 0.0129 |
| Jupiter | 1545-06-10 06:28 J | 2285529.65 | 2285529.77 | 2285529.91 | 0.0510 | 0.0426 |
| Jupiter | 1557-06-15 00:57 J | 2289917.33 | 2289917.54 | 2289917.75 | 0.0512 | 0.0200 |
| Uranus | 1562-05-08 20:38 J | 2291706.21 | 2291706.36 | 2291706.54 | 0.0141 | 0.0109 |
| Jupiter | 1562-12-12 17:45 J | 2291924.06 | 2291924.24 | 2291924.42 | 0.0516 | 0.0298 |
| Saturn | 1562-12-27 22:04 J | 2291939.25 | 2291939.42 | 2291939.59 | 0.0295 | 0.0213 |
| Uranus | 1563-05-13 11:31 J | 2292075.78 | 2292075.98 | 2292076.21 | 0.0141 | 0.0075 |
| Uranus | 1564-05-17 15:21 J | 2292445.91 | 2292446.14 | 2292446.39 | 0.0140 | 0.0052 |
| Uranus | 1565-05-22 04:33 J | 2292815.43 | 2292815.69 | 2292815.95 | 0.0140 | 0.0004 |
| Uranus | 1566-05-27 07:26 J | 2293185.56 | 2293185.81 | 2293186.06 | 0.0139 | 0.0016 |
| Uranus | 1567-05-31 19:11 J | 2293555.07 | 2293555.30 | 2293555.54 | 0.0139 | 0.0059 |

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| Uranus | 1568-06-04 20:09 J | 2293925.16 | 2293925.34 | 2293925.55 | 0.0138 | 0.0088 |
| Uranus | 1569-06-09 07:26 J | 2294294.68 | 2294294.81 | 2294294.98 | 0.0138 | 0.0113 |
| Jupiter | 1569-06-19 23:45 J | 2294305.25 | 2294305.49 | 2294305.73 | 0.0514 | 0.0081 |
| Jupiter | 1574-12-17 15:21 J | 2296311.91 | 2296312.14 | 2296312.38 | 0.0515 | 0.0005 |
| Saturn | 1578-07-03 13:11 J | 2297605.80 | 2297606.05 | 2297606.31 | 0.0265 | 0.0040 |
| Jupiter | 1581-06-24 16:33 J | 2298693.03 | 2298693.19 | 2298693.35 | 0.0516 | 0.0384 |
| Jupiter | 1586-12-31 23:45 G | 2300699.29 | 2300699.49 | 2300699.70 | 0.0512 | 0.0226 |
| Neptune | 1588-01-20 15:50 G | 2301084.06 | 2301084.16 | 2301084.29 | 0.0089 | 0.0079 |
| Neptune | 1589-01-22 08:52 G | 2301451.68 | 2301451.87 | 2301452.10 | 0.0089 | 0.0050 |
| Neptune | 1590-01-24 13:40 G | 2301818.84 | 2301819.07 | 2301819.30 | 0.0089 | 0.0032 |
| Neptune | 1591-01-27 03:35 G | 2302186.39 | 2302186.65 | 2302186.92 | 0.0089 | 0.0004 |
| Neptune | 1592-01-29 11:45 G | 2302553.76 | 2302553.99 | 2302554.24 | 0.0089 | 0.0015 |
| Saturn | 1593-01-13 17:31 G | 2302904.05 | 2302904.23 | 2302904.41 | 0.0295 | 0.0188 |
| Neptune | 1593-01-30 21:21 G | 2302921.17 | 2302921.39 | 2302921.63 | 0.0089 | 0.0044 |
| Neptune | 1594-02-02 10:19 G | 2303288.78 | 2303288.93 | 2303289.13 | 0.0089 | 0.0063 |
| Mars | 1595-11-10 18:14 G | 2303935.11 | 2303935.26 | 2303935.41 | 0.1796 | 0.1049 |
| Jupiter | 1599-01-05 19:40 G | 2305087.21 | 2305087.32 | 2305087.44 | 0.0510 | 0.0433 |
| Uranus | 1605-11-16 09:35 G | 2307593.86 | 2307593.90 | 2307593.98 | 0.0137 | 0.0133 |
| Uranus | 1606-11-20 13:26 G | 2307962.88 | 2307963.06 | 2307963.25 | 0.0137 | 0.0093 |
| Saturn | 1607-07-08 09:07 G | 2308192.75 | 2308192.88 | 2308193.01 | 0.0265 | 0.0222 |
| Uranus | 1607-11-25 06:57 G | 2308332.58 | 2308332.79 | 2308333.02 | 0.0138 | 0.0069 |
| Uranus | 1608-11-28 11:45 G | 2308701.76 | 2308701.99 | 2308702.23 | 0.0138 | 0.0040 |
| Uranus | 1609-12-03 06:57 G | 2309071.54 | 2309071.79 | 2309072.04 | 0.0139 | 0.0002 |
| Uranus | 1610-12-07 12:43 G | 2309440.79 | 2309441.03 | 2309441.28 | 0.0139 | 0.0019 |
| Uranus | 1611-12-12 09:07 G | 2309810.67 | 2309810.88 | 2309811.11 | 0.0140 | 0.0066 |
| Uranus | 1612-12-15 16:04 G | 2310179.98 | 2310180.17 | 2310180.37 | 0.0140 | 0.0085 |
| Uranus | 1613-12-20 13:11 G | 2310549.96 | 2310550.05 | 2310550.18 | 0.0141 | 0.0125 |
| Mars | 1621-05-05 06:14 G | 2313242.64 | 2313242.76 | 2313242.88 | 0.1724 | 0.1286 |
| Saturn | 1622-01-07 13:40 G | 2313489.87 | 2313490.07 | 2313490.28 | 0.0295 | 0.0154 |
| Jupiter | 1628-06-19 06:57 G | 2315844.71 | 2315844.79 | 2315844.88 | 0.0509 | 0.0469 |

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| Saturn | 1637-07-14 09:50 G | 2319156.69 | 2319156.91 | 2319157.15 | 0.0266 | 0.0095 |
| Jupiter | 1640-06-24 09:35 G | 2320232.69 | 2320232.90 | 2320233.11 | 0.0511 | 0.0237 |
| Uranus | 1645-05-14 05:16 G | 2322017.64 | 2322017.72 | 2322017.81 | 0.0142 | 0.0133 |
| Jupiter | 1645-12-22 10:48 G | 2322239.77 | 2322239.95 | 2322240.14 | 0.0517 | 0.0312 |
| Uranus | 1646-05-19 08:24 G | 2322387.69 | 2322387.85 | 2322388.04 | 0.0141 | 0.0106 |
| Uranus | 1647-05-23 23:45 G | 2322757.28 | 2322757.49 | 2322757.71 | 0.0141 | 0.0075 |
| Uranus | 1648-05-28 03:07 G | 2323127.38 | 2323127.63 | 2323127.89 | 0.0140 | 0.0033 |
| Uranus | 1649-06-01 16:33 G | 2323496.94 | 2323497.19 | 2323497.45 | 0.0140 | 0.0013 |
| Uranus | 1650-06-06 19:40 G | 2323867.07 | 2323867.32 | 2323867.58 | 0.0139 | 0.0035 |
| Uranus | 1651-06-11 07:26 G | 2324236.58 | 2324236.81 | 2324237.06 | 0.0139 | 0.0057 |
| Saturn | 1652-01-15 16:19 G | 2324455.04 | 2324455.18 | 2324455.31 | 0.0294 | 0.0246 |
| Uranus | 1652-06-15 09:07 G | 2324606.70 | 2324606.88 | 2324607.08 | 0.0138 | 0.0092 |
| Jupiter | 1652-06-29 02:24 G | 2324620.36 | 2324620.60 | 2324620.84 | 0.0514 | 0.0060 |
| Uranus | 1653-06-19 19:26 G | 2324976.23 | 2324976.31 | 2324976.44 | 0.0138 | 0.0126 |
| Jupiter | 1657-12-26 19:40 G | 2326627.10 | 2326627.32 | 2326627.55 | 0.0515 | 0.0032 |
| Jupiter | 1664-07-04 09:35 G | 2329008.74 | 2329008.90 | 2329009.07 | 0.0515 | 0.0358 |
| Saturn | 1666-07-09 11:02 G | 2329743.77 | 2329743.96 | 2329744.15 | 0.0265 | 0.0166 |
| Jupiter | 1669-12-31 14:38 G | 2331014.91 | 2331015.11 | 2331015.33 | 0.0513 | 0.0182 |
| Neptune | 1671-07-24 19:55 G | 2331585.18 | 2331585.33 | 2331585.48 | 0.0089 | 0.0071 |
| Neptune | 1672-07-26 12:14 G | 2331952.80 | 2331953.01 | 2331953.26 | 0.0089 | 0.0046 |
| Neptune | 1673-07-28 23:45 G | 2332320.26 | 2332320.49 | 2332320.75 | 0.0089 | 0.0023 |
| Neptune | 1674-07-31 12:14 G | 2332687.74 | 2332688.01 | 2332688.28 | 0.0089 | 0.0004 |
| Neptune | 1675-08-03 04:04 G | 2333055.44 | 2333055.67 | 2333055.92 | 0.0089 | 0.0027 |
| Neptune | 1676-08-04 12:00 G | 2333422.81 | 2333423.00 | 2333423.24 | 0.0089 | 0.0052 |
| Neptune | 1677-08-07 07:55 G | 2333790.72 | 2333790.83 | 2333790.99 | 0.0089 | 0.0075 |
| Saturn | 1681-01-08 12:00 G | 2335040.78 | 2335041.00 | 2335041.22 | 0.0295 | 0.0093 |
| Jupiter | 1682-01-04 22:33 G | 2335402.30 | 2335402.44 | 2335402.60 | 0.0511 | 0.0397 |
| Pluto | 1683-01-06 08:52 G | 2335768.63 | 2335768.87 | 2335769.13 | 0.0065 | 0.0014 |
| Uranus | 1689-11-16 18:57 G | 2338275.16 | 2338275.29 | 2338275.43 | 0.0137 | 0.0115 |
| Uranus | 1690-11-20 23:16 G | 2338644.32 | 2338644.47 | 2338644.66 | 0.0137 | 0.0099 |

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| Uranus | 1691-11-25 16:33 G | 2339013.98 | 2339014.19 | 2339014.43 | 0.0138 | 0.0062 |
| Uranus | 1692-11-28 21:50 G | 2339383.18 | 2339383.41 | 2339383.66 | 0.0138 | 0.0033 |
| Uranus | 1693-12-03 16:48 G | 2339752.95 | 2339753.20 | 2339753.45 | 0.0139 | 0.0007 |
| Uranus | 1694-12-07 22:19 G | 2340122.20 | 2340122.43 | 2340122.68 | 0.0139 | 0.0038 |
| Uranus | 1695-12-12 18:28 G | 2340492.05 | 2340492.27 | 2340492.51 | 0.0140 | 0.0056 |
| Saturn | 1696-07-15 13:40 G | 2340707.88 | 2340708.07 | 2340708.27 | 0.0266 | 0.0150 |
| Uranus | 1696-12-16 01:11 G | 2340861.39 | 2340861.55 | 2340861.73 | 0.0140 | 0.0101 |
| Uranus | 1697-12-20 23:02 G | 2341231.34 | 2341231.46 | 2341231.58 | 0.0141 | 0.0123 |
| Mars | 1700-05-08 12:14 G | 2342099.84 | 2342100.01 | 2342100.19 | 0.1729 | 0.0621 |
| Jupiter | 1711-06-20 20:52 G | 2346160.33 | 2346160.37 | 2346160.41 | 0.0509 | 0.0501 |
| Jupiter | 1723-06-25 12:00 G | 2350547.81 | 2350548.00 | 2350548.21 | 0.0511 | 0.0266 |
| Saturn | 1725-07-11 09:21 G | 2351294.66 | 2351294.89 | 2351295.13 | 0.0265 | 0.0109 |
| Jupiter | 1728-12-22 11:02 G | 2352554.80 | 2352554.96 | 2352555.13 | 0.0517 | 0.0347 |
| Uranus | 1729-05-15 18:00 G | 2352699.21 | 2352699.25 | 2352699.30 | 0.0142 | 0.0139 |
| Uranus | 1730-05-20 20:52 G | 2353069.19 | 2353069.37 | 2353069.57 | 0.0141 | 0.0098 |
| Uranus | 1731-05-25 13:11 G | 2353438.83 | 2353439.05 | 2353439.28 | 0.0141 | 0.0065 |
| Uranus | 1732-05-29 16:04 G | 2353808.93 | 2353809.17 | 2353809.43 | 0.0140 | 0.0040 |
| Uranus | 1733-06-03 06:00 G | 2354178.50 | 2354178.75 | 2354179.01 | 0.0140 | 0.0008 |
| Uranus | 1734-06-08 08:38 G | 2354548.61 | 2354548.86 | 2354549.12 | 0.0139 | 0.0027 |
| Uranus | 1735-06-12 20:09 G | 2354918.13 | 2354918.34 | 2354918.58 | 0.0139 | 0.0071 |
| Jupiter | 1735-06-30 16:48 G | 2354935.97 | 2354936.20 | 2354936.43 | 0.0513 | 0.0038 |
| Uranus | 1736-06-16 21:21 G | 2355288.23 | 2355288.39 | 2355288.60 | 0.0138 | 0.0099 |
| Uranus | 1737-06-21 08:24 G | 2355657.74 | 2355657.85 | 2355657.97 | 0.0138 | 0.0124 |
| Saturn | 1740-01-11 17:45 G | 2356592.01 | 2356592.24 | 2356592.47 | 0.0295 | 0.0023 |
| Jupiter | 1740-12-27 09:21 G | 2356942.67 | 2356942.89 | 2356943.12 | 0.0515 | 0.0071 |
| Jupiter | 1747-07-05 05:31 G | 2359323.54 | 2359323.73 | 2359323.93 | 0.0514 | 0.0305 |
| Jupiter | 1752-12-31 18:43 G | 2361330.05 | 2361330.28 | 2361330.50 | 0.0514 | 0.0144 |
| Neptune | 1753-01-22 13:11 G | 2361351.89 | 2361352.05 | 2361352.24 | 0.0089 | 0.0062 |
| Neptune | 1754-01-25 02:52 G | 2361719.41 | 2361719.62 | 2361719.86 | 0.0089 | 0.0046 |
| Neptune | 1755-01-27 12:43 G | 2362086.79 | 2362087.03 | 2362087.28 | 0.0089 | 0.0015 |

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| Saturn | 1755-07-18 19:55 G | 2362259.18 | 2362259.33 | 2362259.48 | 0.0266 | 0.0211 |
| Neptune | 1756-01-29 21:21 G | 2362454.13 | 2362454.39 | 2362454.66 | 0.0089 | 0.0002 |
| Neptune | 1757-01-31 10:48 G | 2362821.73 | 2362821.95 | 2362822.20 | 0.0089 | 0.0033 |
| Neptune | 1758-02-02 14:52 G | 2363188.93 | 2363189.12 | 2363189.36 | 0.0089 | 0.0048 |
| Neptune | 1759-02-05 08:24 G | 2363556.73 | 2363556.85 | 2363556.96 | 0.0089 | 0.0078 |
| Jupiter | 1765-01-05 12:28 G | 2365717.87 | 2365718.02 | 2365718.18 | 0.0511 | 0.0368 |
| Pluto | 1770-07-08 14:52 G | 2367728.09 | 2367728.12 | 2367728.20 | 0.0079 | 0.0078 |
| Uranus | 1773-11-18 05:16 G | 2368956.63 | 2368956.72 | 2368956.84 | 0.0137 | 0.0125 |
| Uranus | 1774-11-22 10:33 G | 2369325.75 | 2369325.94 | 2369326.14 | 0.0137 | 0.0084 |
| Uranus | 1775-11-27 02:38 G | 2369695.40 | 2369695.61 | 2369695.86 | 0.0138 | 0.0062 |
| Uranus | 1776-11-30 08:38 G | 2370064.63 | 2370064.86 | 2370065.11 | 0.0138 | 0.0030 |
| Uranus | 1777-12-05 02:52 G | 2370434.36 | 2370434.62 | 2370434.87 | 0.0139 | 0.0007 |
| Uranus | 1778-12-09 09:07 G | 2370803.64 | 2370803.88 | 2370804.13 | 0.0139 | 0.0029 |
| Uranus | 1779-12-14 04:48 G | 2371173.50 | 2371173.70 | 2371173.93 | 0.0140 | 0.0075 |
| Uranus | 1780-12-17 11:45 G | 2371542.82 | 2371542.99 | 2371543.19 | 0.0140 | 0.0093 |
| Uranus | 1781-12-22 09:21 G | 2371912.82 | 2371912.89 | 2371912.97 | 0.0141 | 0.0134 |
| Saturn | 1784-07-12 08:24 G | 2372845.60 | 2372845.85 | 2372846.10 | 0.0265 | 0.0046 |
| Saturn | 1799-01-13 00:57 G | 2378143.30 | 2378143.54 | 2378143.78 | 0.0295 | 0.0056 |
| Mars | 1800-11-08 16:48 G | 2378808.09 | 2378808.20 | 2378808.31 | 0.1810 | 0.1455 |
| Jupiter | 1806-06-25 20:38 G | 2380863.18 | 2380863.36 | 2380863.55 | 0.0510 | 0.0307 |
| Jupiter | 1811-12-24 00:00 G | 2382870.35 | 2382870.50 | 2382870.66 | 0.0518 | 0.0377 |
| Uranus | 1813-05-17 05:31 G | 2383380.63 | 2383380.73 | 2383380.86 | 0.0142 | 0.0124 |
| Uranus | 1814-05-22 06:57 G | 2383750.62 | 2383750.79 | 2383751.01 | 0.0141 | 0.0099 |
| Uranus | 1815-05-27 00:14 G | 2384120.30 | 2384120.51 | 2384120.75 | 0.0141 | 0.0065 |
| Uranus | 1816-05-31 02:52 G | 2384490.36 | 2384490.62 | 2384490.88 | 0.0140 | 0.0023 |
| Uranus | 1817-06-04 17:31 G | 2384859.98 | 2384860.23 | 2384860.49 | 0.0140 | 0.0002 |
| Uranus | 1818-06-09 20:09 G | 2385230.10 | 2385230.34 | 2385230.59 | 0.0139 | 0.0045 |
| Jupiter | 1818-06-30 11:16 G | 2385250.73 | 2385250.97 | 2385251.22 | 0.0512 | 0.0013 |
| Uranus | 1819-06-14 08:09 G | 2385599.62 | 2385599.84 | 2385600.07 | 0.0139 | 0.0067 |
| Uranus | 1820-06-18 10:04 G | 2385969.75 | 2385969.92 | 2385970.10 | 0.0138 | 0.0103 |

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| Uranus | 1821-06-22 20:24 G | 2386339.31 | 2386339.35 | 2386339.40 | 0.0138 | 0.0135 |
| Jupiter | 1823-12-28 10:04 G | 2387257.69 | 2387257.92 | 2387258.15 | 0.0516 | 0.0113 |
| Saturn | 1828-01-07 21:35 G | 2388729.32 | 2388729.40 | 2388729.48 | 0.0295 | 0.0276 |
| Jupiter | 1830-07-05 12:14 G | 2389638.82 | 2389639.01 | 2389639.21 | 0.0514 | 0.0262 |
| Neptune | 1835-07-26 04:04 G | 2391485.55 | 2391485.67 | 2391485.81 | 0.0089 | 0.0078 |
| Jupiter | 1836-01-02 05:16 G | 2391645.51 | 2391645.72 | 2391645.94 | 0.0514 | 0.0102 |
| Neptune | 1836-07-27 17:02 G | 2391853.05 | 2391853.21 | 2391853.41 | 0.0089 | 0.0063 |
| Neptune | 1837-07-30 04:04 G | 2392220.44 | 2392220.67 | 2392220.95 | 0.0089 | 0.0031 |
| Neptune | 1838-08-01 22:04 G | 2392588.17 | 2392588.42 | 2392588.67 | 0.0089 | 0.0015 |
| Neptune | 1839-08-04 05:02 G | 2392955.46 | 2392955.71 | 2392955.98 | 0.0089 | 0.0018 |
| Neptune | 1840-08-06 00:57 G | 2393323.31 | 2393323.54 | 2393323.80 | 0.0089 | 0.0033 |
| Neptune | 1841-08-08 06:57 G | 2393690.64 | 2393690.79 | 2393690.99 | 0.0089 | 0.0066 |
| Jupiter | 1842-07-10 14:09 G | 2394027.02 | 2394027.09 | 2394027.18 | 0.0516 | 0.0484 |
| Neptune | 1842-08-11 02:24 G | 2394058.52 | 2394058.60 | 2394058.74 | 0.0089 | 0.0081 |
| Saturn | 1843-07-15 14:24 G | 2394396.86 | 2394397.10 | 2394397.35 | 0.0266 | 0.0022 |
| Jupiter | 1848-01-06 15:21 G | 2396032.97 | 2396033.14 | 2396033.33 | 0.0512 | 0.0324 |
| Uranus | 1857-11-19 14:38 G | 2399637.96 | 2399638.11 | 2399638.28 | 0.0137 | 0.0107 |
| Saturn | 1858-01-15 06:28 G | 2399694.55 | 2399694.77 | 2399694.99 | 0.0294 | 0.0141 |
| Uranus | 1858-11-23 21:07 G | 2400007.20 | 2400007.38 | 2400007.57 | 0.0137 | 0.0091 |
| Uranus | 1859-11-28 12:28 G | 2400376.80 | 2400377.02 | 2400377.27 | 0.0138 | 0.0053 |
| Uranus | 1860-12-01 19:11 G | 2400746.06 | 2400746.30 | 2400746.55 | 0.0138 | 0.0025 |
| Uranus | 1861-12-06 12:28 G | 2401115.76 | 2401116.02 | 2401116.27 | 0.0139 | 0.0003 |
| Uranus | 1862-12-10 18:57 G | 2401485.06 | 2401485.29 | 2401485.53 | 0.0139 | 0.0045 |
| Uranus | 1863-12-15 13:40 G | 2401854.85 | 2401855.07 | 2401855.31 | 0.0140 | 0.0064 |
| Uranus | 1864-12-18 20:52 G | 2402224.23 | 2402224.37 | 2402224.54 | 0.0140 | 0.0110 |
| Uranus | 1865-12-23 18:00 G | 2402594.16 | 2402594.25 | 2402594.35 | 0.0141 | 0.0130 |
| Saturn | 1872-07-10 02:09 G | 2404984.44 | 2404984.59 | 2404984.74 | 0.0266 | 0.0211 |
| Mars | 1879-11-12 17:31 G | 2407666.08 | 2407666.23 | 2407666.39 | 0.1804 | 0.1162 |
| Saturn | 1887-01-09 13:55 G | 2410280.91 | 2410281.08 | 2410281.27 | 0.0295 | 0.0183 |
| Jupiter | 1889-06-24 16:33 G | 2411178.01 | 2411178.19 | 2411178.37 | 0.0510 | 0.0352 |

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| Jupiter | 1894-12-22 22:33 G | 2413185.31 | 2413185.44 | 2413185.59 | 0.0519 | 0.0415 |
| Uranus | 1897-05-17 16:33 G | 2414062.11 | 2414062.19 | 2414062.29 | 0.0142 | 0.0131 |
| Uranus | 1898-05-22 17:16 G | 2414432.03 | 2414432.22 | 2414432.45 | 0.0141 | 0.0089 |
| Uranus | 1899-05-27 12:00 G | 2414801.78 | 2414802.00 | 2414802.24 | 0.0141 | 0.0057 |
| Uranus | 1900-06-01 13:55 G | 2415171.83 | 2415172.08 | 2415172.34 | 0.0140 | 0.0029 |
| Uranus | 1901-06-06 05:16 G | 2415541.48 | 2415541.72 | 2415541.98 | 0.0140 | 0.0017 |
| Jupiter | 1901-06-30 18:00 G | 2415566.02 | 2415566.25 | 2415566.48 | 0.0512 | 0.0054 |
| Uranus | 1902-06-11 07:11 G | 2415911.55 | 2415911.80 | 2415912.05 | 0.0139 | 0.0037 |
| Saturn | 1902-07-18 03:07 G | 2415948.41 | 2415948.63 | 2415948.86 | 0.0266 | 0.0093 |
| Uranus | 1903-06-15 19:26 G | 2416281.11 | 2416281.31 | 2416281.52 | 0.0139 | 0.0081 |
| Uranus | 1904-06-19 20:38 G | 2416651.21 | 2416651.36 | 2416651.53 | 0.0138 | 0.0106 |
| Mars | 1905-05-09 01:55 G | 2416974.41 | 2416974.58 | 2416974.75 | 0.1718 | 0.0901 |
| Uranus | 1905-06-24 06:43 G | 2417020.75 | 2417020.78 | 2417020.86 | 0.0138 | 0.0135 |
| Jupiter | 1906-12-28 16:33 G | 2417572.99 | 2417573.19 | 2417573.41 | 0.0516 | 0.0163 |
| Jupiter | 1913-07-05 15:50 G | 2419953.94 | 2419954.16 | 2419954.39 | 0.0514 | 0.0213 |
| Saturn | 1917-01-17 15:21 G | 2421246.00 | 2421246.14 | 2421246.29 | 0.0294 | 0.0235 |
| Neptune | 1917-01-24 01:11 G | 2421252.45 | 2421252.55 | 2421252.68 | 0.0089 | 0.0079 |
| Neptune | 1918-01-26 11:02 G | 2421619.79 | 2421619.96 | 2421620.19 | 0.0089 | 0.0053 |
| Jupiter | 1919-01-02 05:02 G | 2421960.47 | 2421960.71 | 2421960.95 | 0.0515 | 0.0048 |
| Neptune | 1919-01-28 18:57 G | 2421987.06 | 2421987.29 | 2421987.55 | 0.0089 | 0.0033 |
| Neptune | 1920-01-31 10:19 G | 2422354.68 | 2422354.93 | 2422355.18 | 0.0089 | 0.0006 |
| Neptune | 1921-02-01 14:38 G | 2422721.85 | 2422722.11 | 2422722.36 | 0.0089 | 0.0013 |
| Neptune | 1922-02-04 07:26 G | 2423089.60 | 2423089.81 | 2423090.05 | 0.0089 | 0.0041 |
| Neptune | 1923-02-06 10:48 G | 2423456.79 | 2423456.95 | 2423457.16 | 0.0089 | 0.0060 |
| Neptune | 1924-02-09 02:24 G | 2423824.59 | 2423824.60 | 2423824.68 | 0.0089 | 0.0088 |
| Jupiter | 1925-07-10 06:57 G | 2424341.66 | 2424341.79 | 2424341.92 | 0.0515 | 0.0420 |
| Pluto | 1930-01-09 14:52 G | 2425986.07 | 2425986.12 | 2425986.22 | 0.0065 | 0.0062 |
| Jupiter | 1931-01-06 15:50 G | 2426347.98 | 2426348.16 | 2426348.35 | 0.0513 | 0.0279 |
| Pluto | 1931-01-10 19:40 G | 2426352.12 | 2426352.32 | 2426352.57 | 0.0065 | 0.0032 |
| Saturn | 1931-07-13 06:00 G | 2426535.53 | 2426535.75 | 2426535.97 | 0.0266 | 0.0140 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Uranus | 1940-11-16 13:40 G | 2429950.03 | 2429950.07 | 2429950.14 | 0.0136 | 0.0133 |
| Uranus | 1941-11-21 02:24 G | 2430319.47 | 2430319.60 | 2430319.74 | 0.0137 | 0.0116 |
| Uranus | 1942-11-25 09:21 G | 2430688.69 | 2430688.89 | 2430689.10 | 0.0137 | 0.0074 |
| Uranus | 1943-11-29 23:31 G | 2431058.25 | 2431058.48 | 2431058.73 | 0.0138 | 0.0054 |
| Uranus | 1944-12-03 06:43 G | 2431427.55 | 2431427.78 | 2431428.03 | 0.0138 | 0.0020 |
| Uranus | 1945-12-07 23:02 G | 2431797.20 | 2431797.46 | 2431797.72 | 0.0139 | 0.0015 |
| Saturn | 1946-01-12 08:52 G | 2431832.64 | 2431832.87 | 2431833.10 | 0.0294 | 0.0081 |
| Uranus | 1946-12-12 06:28 G | 2432166.55 | 2432166.77 | 2432167.02 | 0.0139 | 0.0039 |
| Uranus | 1947-12-17 01:11 G | 2432536.34 | 2432536.55 | 2432536.75 | 0.0140 | 0.0083 |
| Uranus | 1948-12-20 08:52 G | 2432905.72 | 2432905.87 | 2432906.05 | 0.0140 | 0.0101 |
| Saturn | 1961-07-19 14:38 G | 2437499.93 | 2437500.11 | 2437500.32 | 0.0266 | 0.0168 |
| Jupiter | 1972-06-24 23:02 G | 2441493.31 | 2441493.46 | 2441493.60 | 0.0509 | 0.0392 |
| Jupiter | 1977-12-23 02:09 G | 2443500.50 | 2443500.59 | 2443500.69 | 0.0519 | 0.0467 |
| Uranus | 1981-05-19 03:35 G | 2444743.52 | 2444743.65 | 2444743.81 | 0.0142 | 0.0114 |
| Uranus | 1982-05-24 03:07 G | 2445113.44 | 2445113.63 | 2445113.85 | 0.0141 | 0.0089 |
| Uranus | 1983-05-28 22:33 G | 2445483.23 | 2445483.44 | 2445483.69 | 0.0141 | 0.0054 |
| Mars | 1984-05-11 14:09 G | 2445831.95 | 2445832.09 | 2445832.22 | 0.1723 | 0.1141 |
| Uranus | 1984-06-01 23:31 G | 2445853.22 | 2445853.48 | 2445853.75 | 0.0140 | 0.0014 |
| Jupiter | 1984-06-29 16:33 G | 2445880.95 | 2445881.19 | 2445881.43 | 0.0510 | 0.0105 |
| Uranus | 1985-06-06 15:50 G | 2446222.92 | 2446223.16 | 2446223.42 | 0.0140 | 0.0009 |
| Uranus | 1986-06-11 17:02 G | 2446592.97 | 2446593.21 | 2446593.46 | 0.0139 | 0.0056 |
| Uranus | 1987-06-16 06:28 G | 2446962.56 | 2446962.77 | 2446962.98 | 0.0139 | 0.0076 |
| Uranus | 1988-06-20 07:11 G | 2447332.67 | 2447332.80 | 2447332.96 | 0.0138 | 0.0113 |
| Jupiter | 1989-12-27 13:26 G | 2447887.85 | 2447888.06 | 2447888.28 | 0.0518 | 0.0222 |
| Saturn | 1990-07-14 13:55 G | 2448086.84 | 2448087.08 | 2448087.32 | 0.0266 | 0.0064 |
| Jupiter | 1996-07-04 08:52 G | 2450268.65 | 2450268.87 | 2450269.09 | 0.0512 | 0.0148 |
| Neptune | 2000-07-27 19:40 G | 2451753.19 | 2451753.32 | 2451753.49 | 0.0089 | 0.0074 |

3RD MILLENNIUM CE

This is a list of transits of Moon in the 3rd millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Neptune | 2001-07-30 13:55 | G | 2452120.89 | 2452121.08 | 2452121.32 | 0.0089 | 0.0047 | |
| Jupiter | 2002-01-01 04:19 | G | 2452275.46 | 2452275.68 | 2452275.90 | 0.0516 | 0.0013 | |
| Neptune | 2002-08-01 20:38 | G | 2452488.12 | 2452488.36 | 2452488.62 | 0.0089 | 0.0027 | |
| Neptune | 2003-08-04 17:16 | G | 2452855.95 | 2452856.22 | 2452856.48 | 0.0089 | 0.0002 | |
| Neptune | 2004-08-05 23:02 | G | 2453223.23 | 2453223.46 | 2453223.73 | 0.0089 | 0.0023 | |
| Saturn | 2005-01-14 01:40 | G | 2453384.32 | 2453384.57 | 2453384.81 | 0.0294 | 0.0022 | |
| Neptune | 2005-08-08 17:45 | G | 2453591.04 | 2453591.24 | 2453591.49 | 0.0089 | 0.0049 | |
| Neptune | 2006-08-11 03:07 | G | 2453958.50 | 2453958.63 | 2453958.81 | 0.0089 | 0.0070 | |
| Jupiter | 2008-07-09 11:31 | G | 2454656.81 | 2454656.98 | 2454657.15 | 0.0515 | 0.0357 | |
| Jupiter | 2014-01-06 00:14 | G | 2456663.30 | 2456663.51 | 2456663.72 | 0.0513 | 0.0235 | |
| Pluto | 2018-07-12 08:38 | G | 2458311.68 | 2458311.86 | 2458312.09 | 0.0079 | 0.0053 | |
| Saturn | 2020-07-20 22:04 | G | 2459051.33 | 2459051.42 | 2459051.54 | 0.0266 | 0.0243 | |
| Uranus | 2025-11-21 12:57 | G | 2461000.86 | 2461001.04 | 2461001.23 | 0.0137 | 0.0097 | |
| Jupiter | 2026-01-10 04:33 | G | 2461050.68 | 2461050.69 | 2461050.70 | 0.0511 | 0.0510 | |
| Uranus | 2026-11-25 21:07 | G | 2461370.20 | 2461370.38 | 2461370.59 | 0.0137 | 0.0081 | |
| Uranus | 2027-11-30 10:33 | G | 2461739.70 | 2461739.94 | 2461740.20 | 0.0138 | 0.0042 | |
| Uranus | 2028-12-03 18:57 | G | 2462109.05 | 2462109.29 | 2462109.53 | 0.0138 | 0.0016 | |
| Uranus | 2029-12-08 10:04 | G | 2462478.66 | 2462478.92 | 2462479.18 | 0.0139 | 0.0014 | |
| Uranus | 2030-12-12 18:14 | G | 2462848.05 | 2462848.26 | 2462848.49 | 0.0139 | 0.0055 | |
| Uranus | 2031-12-17 11:16 | G | 2463217.76 | 2463217.97 | 2463218.20 | 0.0140 | 0.0074 | |
| Uranus | 2032-12-20 20:09 | G | 2463587.22 | 2463587.34 | 2463587.47 | 0.0140 | 0.0120 | |
| Uranus | 2033-12-25 15:21 | G | 2463957.12 | 2463957.14 | 2463957.20 | 0.0141 | 0.0139 | |

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| Saturn | 2049-07-16 02:52 G | 2469638.38 | 2469638.62 | 2469638.86 | 0.0266 | 0.0013 |
| Jupiter | 2055-06-24 19:26 G | 2471808.19 | 2471808.31 | 2471808.43 | 0.0508 | 0.0440 |
| Saturn | 2064-01-16 15:21 G | 2474935.92 | 2474936.14 | 2474936.37 | 0.0294 | 0.0127 |
| Uranus | 2064-05-14 15:21 G | 2475055.11 | 2475055.14 | 2475055.19 | 0.0142 | 0.0140 |
| Uranus | 2065-05-19 16:04 G | 2475425.05 | 2475425.17 | 2475425.31 | 0.0142 | 0.0121 |
| Uranus | 2066-05-24 14:38 G | 2475794.90 | 2475795.11 | 2475795.35 | 0.0141 | 0.0076 |
| Uranus | 2067-05-29 11:45 G | 2476164.76 | 2476164.99 | 2476165.23 | 0.0141 | 0.0047 |
| Jupiter | 2067-06-29 10:04 G | 2476195.71 | 2476195.92 | 2476196.14 | 0.0510 | 0.0160 |
| Uranus | 2068-06-02 11:31 G | 2476534.72 | 2476534.98 | 2476535.25 | 0.0140 | 0.0017 |
| Uranus | 2069-06-07 04:48 G | 2476904.46 | 2476904.70 | 2476904.95 | 0.0140 | 0.0028 |
| Uranus | 2070-06-12 04:48 G | 2477274.45 | 2477274.70 | 2477274.95 | 0.0139 | 0.0047 |
| Uranus | 2071-06-16 18:14 G | 2477644.10 | 2477644.26 | 2477644.47 | 0.0139 | 0.0093 |
| Uranus | 2072-06-20 18:57 G | 2478014.15 | 2478014.29 | 2478014.43 | 0.0138 | 0.0116 |
| Jupiter | 2072-12-26 16:19 G | 2478203.00 | 2478203.18 | 2478203.37 | 0.0518 | 0.0274 |
| Saturn | 2078-07-11 04:48 G | 2480225.59 | 2480225.70 | 2480225.84 | 0.0265 | 0.0230 |
| Jupiter | 2079-07-04 13:40 G | 2480583.84 | 2480584.07 | 2480584.31 | 0.0512 | 0.0091 |
| Neptune | 2082-01-25 17:16 G | 2481520.06 | 2481520.22 | 2481520.43 | 0.0089 | 0.0063 |
| Neptune | 2083-01-28 08:52 G | 2481887.68 | 2481887.87 | 2481888.09 | 0.0089 | 0.0049 |
| Neptune | 2084-01-30 12:28 G | 2482254.78 | 2482255.02 | 2482255.28 | 0.0089 | 0.0017 |
| Mars | 2084-11-10 09:21 G | 2482539.76 | 2482539.89 | 2482540.03 | 0.1818 | 0.1174 |
| Jupiter | 2084-12-31 10:33 G | 2482590.70 | 2482590.94 | 2482591.17 | 0.0516 | 0.0067 |
| Neptune | 2085-02-01 05:45 G | 2482622.49 | 2482622.74 | 2482623.00 | 0.0089 | 0.0002 |
| Neptune | 2086-02-03 09:21 G | 2482989.67 | 2482989.89 | 2482990.14 | 0.0089 | 0.0030 |
| Neptune | 2087-02-06 00:28 G | 2483357.30 | 2483357.52 | 2483357.75 | 0.0089 | 0.0044 |
| Neptune | 2088-02-08 07:26 G | 2483724.70 | 2483724.81 | 2483724.96 | 0.0089 | 0.0075 |
| Jupiter | 2091-07-09 04:33 G | 2484971.51 | 2484971.69 | 2484971.89 | 0.0514 | 0.0309 |
| Saturn | 2093-01-09 19:55 G | 2485522.18 | 2485522.33 | 2485522.50 | 0.0295 | 0.0211 |
| Jupiter | 2097-01-04 16:48 G | 2486977.99 | 2486978.20 | 2486978.42 | 0.0514 | 0.0180 |
| Saturn | 2108-07-18 16:04 G | 2491189.95 | 2491190.17 | 2491190.41 | 0.0266 | 0.0090 |
| Uranus | 2108-11-18 15:21 G | 2491313.05 | 2491313.14 | 2491313.26 | 0.0136 | 0.0123 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Jupiter | 2109-01-10 11:16 G | 2491365.88 | 2491365.97 | 2491366.08 | 0.0512 | 0.0457 |
| Uranus | 2109-11-23 01:26 G | 2491682.41 | 2491682.56 | 2491682.74 | 0.0137 | 0.0106 |
| Uranus | 2110-11-27 10:48 G | 2492051.74 | 2492051.95 | 2492052.17 | 0.0137 | 0.0063 |
| Uranus | 2111-12-01 22:33 G | 2492421.20 | 2492421.44 | 2492421.70 | 0.0138 | 0.0044 |
| Uranus | 2112-12-05 07:55 G | 2492790.59 | 2492790.83 | 2492791.08 | 0.0138 | 0.0008 |
| Uranus | 2113-12-09 22:04 G | 2493160.17 | 2493160.42 | 2493160.68 | 0.0139 | 0.0025 |
| Uranus | 2114-12-14 07:40 G | 2493529.60 | 2493529.82 | 2493530.05 | 0.0139 | 0.0050 |
| Uranus | 2115-12-19 00:00 G | 2493899.33 | 2493899.50 | 2493899.71 | 0.0140 | 0.0094 |
| Uranus | 2116-12-22 10:04 G | 2494268.78 | 2494268.92 | 2494269.07 | 0.0140 | 0.0112 |
| Saturn | 2123-01-19 04:48 G | 2496487.56 | 2496487.70 | 2496487.86 | 0.0294 | 0.0228 |
| Saturn | 2137-07-13 10:33 G | 2501776.73 | 2501776.94 | 2501777.15 | 0.0265 | 0.0154 |
| Jupiter | 2138-06-24 16:19 G | 2502123.13 | 2502123.18 | 2502123.25 | 0.0508 | 0.0488 |
| Uranus | 2149-05-21 06:14 G | 2506106.60 | 2506106.76 | 2506106.95 | 0.0142 | 0.0102 |
| Uranus | 2150-05-26 03:21 G | 2506476.43 | 2506476.64 | 2506476.87 | 0.0141 | 0.0078 |
| Jupiter | 2150-06-29 18:14 G | 2506511.04 | 2506511.26 | 2506511.49 | 0.0510 | 0.0193 |
| Uranus | 2151-05-31 01:11 G | 2506846.32 | 2506846.55 | 2506846.80 | 0.0141 | 0.0041 |
| Saturn | 2152-01-13 12:14 G | 2507073.79 | 2507074.01 | 2507074.23 | 0.0295 | 0.0112 |
| Uranus | 2152-06-03 23:45 G | 2507216.22 | 2507216.49 | 2507216.76 | 0.0140 | 0.0003 |
| Uranus | 2153-06-08 18:00 G | 2507586.00 | 2507586.25 | 2507586.50 | 0.0140 | 0.0021 |
| Uranus | 2154-06-13 17:02 G | 2507955.98 | 2507956.21 | 2507956.45 | 0.0139 | 0.0068 |
| Uranus | 2155-06-18 07:40 G | 2508325.64 | 2508325.82 | 2508326.03 | 0.0139 | 0.0088 |
| Jupiter | 2155-12-27 20:24 G | 2508518.17 | 2508518.35 | 2508518.54 | 0.0518 | 0.0330 |
| Uranus | 2156-06-22 07:11 G | 2508695.71 | 2508695.80 | 2508695.93 | 0.0138 | 0.0126 |
| Jupiter | 2162-07-04 07:26 G | 2510898.57 | 2510898.81 | 2510899.05 | 0.0511 | 0.0042 |
| Mars | 2163-11-14 21:21 G | 2511397.27 | 2511397.39 | 2511397.51 | 0.1812 | 0.1345 |
| Neptune | 2164-07-28 05:02 G | 2511653.64 | 2511653.71 | 2511653.84 | 0.0088 | 0.0082 |
| Neptune | 2165-07-30 11:45 G | 2512020.82 | 2512020.99 | 2512021.18 | 0.0089 | 0.0065 |
| Neptune | 2166-08-02 07:55 G | 2512388.60 | 2512388.83 | 2512389.09 | 0.0089 | 0.0034 |
| Saturn | 2167-07-21 00:28 G | 2512741.32 | 2512741.52 | 2512741.73 | 0.0266 | 0.0161 |
| Neptune | 2167-08-04 15:21 G | 2512755.89 | 2512756.14 | 2512756.39 | 0.0089 | 0.0018 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Jupiter | 2168-01-01 02:38 G | 2512905.39 | 2512905.61 | 2512905.83 | 0.0517 | 0.0129 |
| Neptune | 2168-08-06 08:52 G | 2513123.62 | 2513123.87 | 2513124.15 | 0.0089 | 0.0014 |
| Neptune | 2169-08-08 19:11 G | 2513491.07 | 2513491.30 | 2513491.55 | 0.0089 | 0.0029 |
| Neptune | 2170-08-11 07:55 G | 2513858.65 | 2513858.83 | 2513859.05 | 0.0089 | 0.0060 |
| Neptune | 2171-08-13 23:16 G | 2514226.36 | 2514226.47 | 2514226.62 | 0.0089 | 0.0076 |
| Jupiter | 2174-07-09 11:16 G | 2515286.77 | 2515286.97 | 2515287.17 | 0.0513 | 0.0255 |
| Pluto | 2178-01-11 23:02 G | 2516569.31 | 2516569.46 | 2516569.64 | 0.0065 | 0.0050 |
| Pluto | 2179-01-13 17:16 G | 2516936.01 | 2516936.22 | 2516936.44 | 0.0065 | 0.0037 |
| Jupiter | 2180-01-06 01:40 G | 2517293.35 | 2517293.57 | 2517293.79 | 0.0515 | 0.0130 |
| Jupiter | 2186-07-13 23:45 G | 2519674.45 | 2519674.49 | 2519674.54 | 0.0516 | 0.0506 |
| Mars | 2189-05-10 04:48 G | 2520705.52 | 2520705.70 | 2520705.88 | 0.1710 | 0.0695 |
| Jupiter | 2192-01-10 10:33 G | 2521680.81 | 2521680.94 | 2521681.08 | 0.0512 | 0.0415 |
| Uranus | 2192-11-19 03:21 G | 2521994.59 | 2521994.64 | 2521994.74 | 0.0136 | 0.0130 |
| Uranus | 2193-11-23 12:43 G | 2522363.85 | 2522364.03 | 2522364.25 | 0.0137 | 0.0087 |
| Uranus | 2194-11-27 23:16 G | 2522733.27 | 2522733.47 | 2522733.69 | 0.0137 | 0.0071 |
| Uranus | 2195-12-02 10:19 G | 2523102.68 | 2523102.93 | 2523103.19 | 0.0138 | 0.0030 |
| Saturn | 2196-07-14 19:11 G | 2523328.07 | 2523328.30 | 2523328.53 | 0.0265 | 0.0083 |
| Uranus | 2196-12-05 20:52 G | 2523472.12 | 2523472.37 | 2523472.61 | 0.0138 | 0.0006 |
| Uranus | 2197-12-10 09:35 G | 2523841.65 | 2523841.90 | 2523842.16 | 0.0139 | 0.0026 |
| Uranus | 2198-12-14 19:55 G | 2524211.13 | 2524211.33 | 2524211.56 | 0.0139 | 0.0065 |
| Uranus | 2199-12-19 11:16 G | 2524580.77 | 2524580.97 | 2524581.17 | 0.0140 | 0.0085 |
| Uranus | 2200-12-23 21:35 G | 2524950.34 | 2524950.40 | 2524950.50 | 0.0140 | 0.0131 |
| Saturn | 2211-01-15 19:11 G | 2528625.05 | 2528625.30 | 2528625.55 | 0.0295 | 0.0025 |
| Saturn | 2226-07-23 01:40 G | 2534292.45 | 2534292.57 | 2534292.72 | 0.0266 | 0.0225 |
| Uranus | 2232-05-17 18:28 G | 2536418.18 | 2536418.27 | 2536418.40 | 0.0142 | 0.0129 |
| Uranus | 2233-05-22 21:21 G | 2536788.24 | 2536788.39 | 2536788.56 | 0.0142 | 0.0109 |
| Jupiter | 2233-06-29 12:43 G | 2536825.82 | 2536826.03 | 2536826.24 | 0.0509 | 0.0237 |
| Uranus | 2234-05-27 17:45 G | 2537158.01 | 2537158.24 | 2537158.49 | 0.0141 | 0.0064 |
| Uranus | 2235-06-01 17:02 G | 2537527.97 | 2537528.21 | 2537528.45 | 0.0141 | 0.0035 |
| Uranus | 2236-06-05 14:24 G | 2537897.84 | 2537898.10 | 2537898.37 | 0.0140 | 0.0004 |

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| Uranus | 2237-06-10 09:35 G | 2538267.66 | 2538267.90 | 2538268.14 | 0.0140 | 0.0040 |
| Uranus | 2238-06-15 07:11 G | 2538637.57 | 2538637.80 | 2538638.05 | 0.0139 | 0.0060 |
| Jupiter | 2238-12-27 15:50 G | 2538833.02 | 2538833.16 | 2538833.32 | 0.0519 | 0.0387 |
| Uranus | 2239-06-19 22:48 G | 2539007.30 | 2539007.45 | 2539007.63 | 0.0139 | 0.0105 |
| Uranus | 2240-06-23 20:52 G | 2539377.29 | 2539377.37 | 2539377.50 | 0.0138 | 0.0128 |
| Jupiter | 2245-07-04 12:28 G | 2541213.78 | 2541214.02 | 2541214.25 | 0.0511 | 0.0012 |
| Neptune | 2246-01-27 06:43 G | 2541420.70 | 2541420.78 | 2541420.91 | 0.0089 | 0.0081 |
| Neptune | 2247-01-29 10:19 G | 2541787.75 | 2541787.93 | 2541788.14 | 0.0089 | 0.0056 |
| Neptune | 2248-02-01 03:07 G | 2542155.41 | 2542155.63 | 2542155.89 | 0.0089 | 0.0035 |
| Neptune | 2249-02-02 07:55 G | 2542522.59 | 2542522.83 | 2542523.08 | 0.0089 | 0.0010 |
| Neptune | 2250-02-04 22:19 G | 2542890.17 | 2542890.43 | 2542890.69 | 0.0089 | 0.0010 |
| Jupiter | 2251-01-01 18:14 G | 2543221.05 | 2543221.26 | 2543221.48 | 0.0517 | 0.0164 |
| Neptune | 2251-02-07 06:28 G | 2543257.56 | 2543257.77 | 2543258.01 | 0.0089 | 0.0036 |
| Neptune | 2252-02-09 15:50 G | 2543624.97 | 2543625.16 | 2543625.38 | 0.0089 | 0.0056 |
| Neptune | 2253-02-11 04:33 G | 2543992.63 | 2543992.69 | 2543992.82 | 0.0089 | 0.0082 |
| Saturn | 2255-07-18 06:00 G | 2544879.51 | 2544879.75 | 2544879.99 | 0.0265 | 0.0017 |
| Jupiter | 2257-07-09 04:04 G | 2545601.45 | 2545601.67 | 2545601.90 | 0.0513 | 0.0204 |
| Jupiter | 2263-01-06 02:09 G | 2547608.36 | 2547608.59 | 2547608.82 | 0.0515 | 0.0096 |
| Pluto | 2266-07-16 01:26 G | 2548895.35 | 2548895.56 | 2548895.79 | 0.0079 | 0.0039 |
| Mars | 2268-05-14 00:28 G | 2549563.41 | 2549563.52 | 2549563.63 | 0.1716 | 0.1459 |
| Jupiter | 2269-07-14 07:40 G | 2549989.75 | 2549989.82 | 2549989.91 | 0.0515 | 0.0481 |
| Saturn | 2270-01-16 23:02 G | 2550176.22 | 2550176.46 | 2550176.70 | 0.0295 | 0.0055 |
| Jupiter | 2275-01-10 20:24 G | 2551996.21 | 2551996.35 | 2551996.50 | 0.0513 | 0.0380 |
| Uranus | 2276-11-20 17:16 G | 2552676.11 | 2552676.22 | 2552676.38 | 0.0136 | 0.0114 |
| Uranus | 2277-11-25 01:26 G | 2553045.38 | 2553045.56 | 2553045.75 | 0.0137 | 0.0095 |
| Uranus | 2278-11-29 12:43 G | 2553414.81 | 2553415.03 | 2553415.26 | 0.0137 | 0.0053 |
| Uranus | 2279-12-03 22:04 G | 2553784.17 | 2553784.42 | 2553784.68 | 0.0138 | 0.0034 |
| Uranus | 2280-12-07 09:50 G | 2554153.66 | 2554153.91 | 2554154.15 | 0.0138 | 0.0005 |
| Uranus | 2281-12-11 21:21 G | 2554523.15 | 2554523.39 | 2554523.65 | 0.0139 | 0.0035 |
| Uranus | 2282-12-16 09:21 G | 2554892.68 | 2554892.89 | 2554893.11 | 0.0139 | 0.0061 |

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| Uranus | 2283-12-20 23:31 G | 2555262.33 | 2555262.48 | 2555262.67 | 0.0140 | 0.0104 |
| Saturn | 2284-07-12 01:26 G | 2555466.54 | 2555466.56 | 2555466.62 | 0.0265 | 0.0263 |
| Uranus | 2284-12-24 11:45 G | 2555631.89 | 2555631.99 | 2555632.12 | 0.0140 | 0.0123 |
| Saturn | 2299-01-11 12:43 G | 2560762.95 | 2560763.03 | 2560763.14 | 0.0295 | 0.0268 |
| Saturn | 2314-07-20 12:00 G | 2566430.75 | 2566431.00 | 2566431.25 | 0.0265 | 0.0044 |
| Uranus | 2316-05-19 08:38 G | 2567099.81 | 2567099.86 | 2567099.94 | 0.0142 | 0.0138 |
| Jupiter | 2316-06-29 21:21 G | 2567141.20 | 2567141.39 | 2567141.59 | 0.0509 | 0.0279 |
| Uranus | 2317-05-24 12:00 G | 2567469.82 | 2567470.00 | 2567470.21 | 0.0142 | 0.0090 |
| Uranus | 2318-05-29 06:57 G | 2567839.57 | 2567839.79 | 2567840.04 | 0.0141 | 0.0068 |
| Uranus | 2319-06-03 07:11 G | 2568209.56 | 2568209.80 | 2568210.05 | 0.0141 | 0.0028 |
| Uranus | 2320-06-07 03:21 G | 2568579.38 | 2568579.64 | 2568579.91 | 0.0140 | 0.0009 |
| Uranus | 2321-06-11 23:31 G | 2568949.24 | 2568949.48 | 2568949.73 | 0.0140 | 0.0034 |
| Jupiter | 2321-12-28 09:07 G | 2569148.75 | 2569148.88 | 2569149.02 | 0.0519 | 0.0419 |
| Uranus | 2322-06-16 20:38 G | 2569319.15 | 2569319.36 | 2569319.59 | 0.0139 | 0.0080 |
| Uranus | 2323-06-21 13:40 G | 2569688.90 | 2569689.07 | 2569689.25 | 0.0139 | 0.0099 |
| Uranus | 2324-06-25 11:31 G | 2570058.96 | 2570058.98 | 2570059.01 | 0.0138 | 0.0138 |
| Jupiter | 2328-07-04 12:57 G | 2571528.80 | 2571529.04 | 2571529.28 | 0.0511 | 0.0047 |
| Saturn | 2329-01-19 03:50 G | 2571727.45 | 2571727.66 | 2571727.87 | 0.0295 | 0.0124 |
| Neptune | 2329-07-31 20:52 G | 2571921.27 | 2571921.37 | 2571921.53 | 0.0088 | 0.0078 |
| Neptune | 2330-08-03 05:16 G | 2572288.52 | 2572288.72 | 2572288.94 | 0.0089 | 0.0049 |
| Neptune | 2331-08-05 21:35 G | 2572656.16 | 2572656.40 | 2572656.67 | 0.0089 | 0.0032 |
| Neptune | 2332-08-07 10:19 G | 2573023.67 | 2573023.93 | 2573024.18 | 0.0089 | 0.0003 |
| Neptune | 2333-08-09 21:50 G | 2573391.16 | 2573391.41 | 2573391.69 | 0.0089 | 0.0016 |
| Jupiter | 2334-01-01 17:31 G | 2573536.02 | 2573536.23 | 2573536.45 | 0.0517 | 0.0201 |
| Neptune | 2334-08-12 14:38 G | 2573758.91 | 2573759.11 | 2573759.35 | 0.0089 | 0.0045 |
| Neptune | 2335-08-14 21:50 G | 2574126.25 | 2574126.41 | 2574126.63 | 0.0089 | 0.0063 |
| Jupiter | 2340-07-09 15:35 G | 2575916.93 | 2575917.15 | 2575917.36 | 0.0513 | 0.0168 |
| Saturn | 2343-07-15 01:40 G | 2577017.43 | 2577017.57 | 2577017.75 | 0.0265 | 0.0205 |
| Jupiter | 2346-01-06 11:45 G | 2577923.77 | 2577923.99 | 2577924.21 | 0.0515 | 0.0062 |
| Jupiter | 2352-07-14 13:55 G | 2580304.97 | 2580305.08 | 2580305.21 | 0.0515 | 0.0445 |

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| Jupiter | 2358-01-11 01:26 G | 2582311.39 | 2582311.56 | 2582311.74 | 0.0514 | 0.0344 |
| Saturn | 2358-01-13 13:11 G | 2582313.87 | 2582314.05 | 2582314.24 | 0.0295 | 0.0201 |
| Uranus | 2360-11-22 05:31 G | 2583357.64 | 2583357.73 | 2583357.87 | 0.0136 | 0.0120 |
| Uranus | 2361-11-26 12:28 G | 2583726.82 | 2583727.02 | 2583727.25 | 0.0137 | 0.0078 |
| Uranus | 2362-12-01 01:11 G | 2584096.33 | 2584096.55 | 2584096.77 | 0.0137 | 0.0061 |
| Uranus | 2363-12-05 09:35 G | 2584465.65 | 2584465.90 | 2584466.16 | 0.0138 | 0.0019 |
| Uranus | 2364-12-08 22:19 G | 2584835.19 | 2584835.43 | 2584835.67 | 0.0138 | 0.0004 |
| Uranus | 2365-12-13 08:24 G | 2585204.61 | 2585204.85 | 2585205.11 | 0.0139 | 0.0038 |
| Uranus | 2366-12-17 21:21 G | 2585574.19 | 2585574.39 | 2585574.60 | 0.0139 | 0.0074 |
| Uranus | 2367-12-22 09:50 G | 2585943.74 | 2585943.91 | 2585944.11 | 0.0140 | 0.0096 |
| Mars | 2368-11-13 12:57 G | 2586270.87 | 2586271.04 | 2586271.21 | 0.1826 | 0.1090 |
| Saturn | 2373-07-21 10:48 G | 2587981.71 | 2587981.95 | 2587982.19 | 0.0265 | 0.0099 |
| Saturn | 2388-01-21 08:09 G | 2593278.66 | 2593278.84 | 2593279.02 | 0.0295 | 0.0187 |
| Mars | 2394-05-10 21:35 G | 2595580.28 | 2595580.40 | 2595580.53 | 0.1700 | 0.1225 |
| Jupiter | 2399-06-30 00:00 G | 2597456.31 | 2597456.50 | 2597456.70 | 0.0508 | 0.0306 |
| Uranus | 2400-05-19 20:09 G | 2597781.21 | 2597781.34 | 2597781.49 | 0.0142 | 0.0120 |
| Uranus | 2401-05-25 00:43 G | 2598151.36 | 2598151.53 | 2598151.72 | 0.0142 | 0.0099 |
| Uranus | 2402-05-29 19:11 G | 2598521.06 | 2598521.30 | 2598521.56 | 0.0141 | 0.0052 |
| Saturn | 2402-07-16 05:16 G | 2598568.53 | 2598568.72 | 2598568.92 | 0.0265 | 0.0150 |
| Uranus | 2403-06-03 20:52 G | 2598891.12 | 2598891.37 | 2598891.61 | 0.0141 | 0.0025 |
| Uranus | 2404-06-07 16:04 G | 2599260.90 | 2599261.17 | 2599261.44 | 0.0140 | 0.0008 |
| Jupiter | 2404-12-27 06:57 G | 2599463.69 | 2599463.79 | 2599463.91 | 0.0520 | 0.0458 |
| Uranus | 2405-06-12 13:11 G | 2599630.83 | 2599631.05 | 2599631.30 | 0.0140 | 0.0051 |
| Uranus | 2406-06-17 09:35 G | 2600000.67 | 2600000.90 | 2600001.13 | 0.0139 | 0.0071 |
| Uranus | 2407-06-22 03:21 G | 2600370.51 | 2600370.64 | 2600370.78 | 0.0139 | 0.0116 |
| Uranus | 2408-06-25 23:45 G | 2600740.48 | 2600740.49 | 2600740.54 | 0.0138 | 0.0138 |
| Neptune | 2411-01-30 00:28 G | 2601688.36 | 2601688.52 | 2601688.72 | 0.0089 | 0.0065 |
| Jupiter | 2411-07-05 00:43 G | 2601844.30 | 2601844.53 | 2601844.75 | 0.0510 | 0.0089 |
| Neptune | 2412-02-01 05:31 G | 2602055.55 | 2602055.73 | 2602055.95 | 0.0089 | 0.0052 |
| Neptune | 2413-02-02 18:43 G | 2602423.03 | 2602423.28 | 2602423.55 | 0.0089 | 0.0021 |

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| Neptune | 2414-02-05 03:50 G | 2602790.42 | 2602790.66 | 2602790.91 | 0.0089 | 0.0007 |
| Neptune | 2415-02-07 11:45 G | 2603157.76 | 2603157.99 | 2603158.26 | 0.0089 | 0.0026 |
| Neptune | 2416-02-10 02:38 G | 2603525.39 | 2603525.61 | 2603525.83 | 0.0089 | 0.0039 |
| Jupiter | 2417-01-01 06:14 G | 2603851.56 | 2603851.76 | 2603851.96 | 0.0518 | 0.0234 |
| Saturn | 2417-01-14 06:57 G | 2603864.57 | 2603864.79 | 2603865.01 | 0.0295 | 0.0141 |
| Neptune | 2417-02-11 06:28 G | 2603892.64 | 2603892.77 | 2603892.95 | 0.0089 | 0.0071 |
| Neptune | 2418-02-13 23:31 G | 2604260.42 | 2604260.48 | 2604260.59 | 0.0089 | 0.0084 |
| Jupiter | 2423-07-09 16:33 G | 2606231.95 | 2606232.19 | 2606232.43 | 0.0512 | 0.0119 |
| Pluto | 2426-01-15 17:31 G | 2607153.10 | 2607153.23 | 2607153.41 | 0.0064 | 0.0052 |
| Pluto | 2427-01-16 23:16 G | 2607519.28 | 2607519.47 | 2607519.68 | 0.0065 | 0.0039 |
| Jupiter | 2429-01-05 22:48 G | 2608239.22 | 2608239.45 | 2608239.69 | 0.0516 | 0.0052 |
| Saturn | 2432-07-22 07:40 G | 2609532.62 | 2609532.82 | 2609533.04 | 0.0265 | 0.0153 |
| Jupiter | 2435-07-14 12:00 G | 2610619.86 | 2610620.00 | 2610620.14 | 0.0514 | 0.0403 |
| Jupiter | 2441-01-10 12:14 G | 2612626.84 | 2612627.01 | 2612627.18 | 0.0514 | 0.0326 |
| Uranus | 2444-11-22 19:40 G | 2614039.18 | 2614039.32 | 2614039.50 | 0.0136 | 0.0105 |
| Uranus | 2445-11-27 01:11 G | 2614408.36 | 2614408.55 | 2614408.76 | 0.0137 | 0.0086 |
| Uranus | 2446-12-01 14:24 G | 2614777.88 | 2614778.10 | 2614778.34 | 0.0137 | 0.0043 |
| Saturn | 2447-01-22 07:40 G | 2614829.68 | 2614829.82 | 2614829.95 | 0.0295 | 0.0245 |
| Mars | 2447-11-17 14:24 G | 2615129.02 | 2615129.10 | 2615129.18 | 0.1820 | 0.1618 |
| Uranus | 2447-12-05 21:35 G | 2615147.15 | 2615147.40 | 2615147.66 | 0.0138 | 0.0025 |
| Uranus | 2448-12-09 11:16 G | 2615516.73 | 2615516.97 | 2615517.22 | 0.0138 | 0.0014 |
| Uranus | 2449-12-13 20:52 G | 2615886.13 | 2615886.37 | 2615886.62 | 0.0138 | 0.0043 |
| Uranus | 2450-12-18 10:48 G | 2616255.76 | 2616255.95 | 2616256.17 | 0.0139 | 0.0072 |
| Uranus | 2451-12-22 23:02 G | 2616625.32 | 2616625.46 | 2616625.62 | 0.0139 | 0.0113 |
| Uranus | 2452-12-26 13:11 G | 2616994.99 | 2616995.05 | 2616995.15 | 0.0140 | 0.0132 |
| Saturn | 2461-07-17 08:38 G | 2620119.64 | 2620119.86 | 2620120.10 | 0.0265 | 0.0097 |
| Mars | 2473-05-13 01:26 G | 2624437.38 | 2624437.56 | 2624437.74 | 0.1704 | 0.0224 |
| Saturn | 2476-01-16 03:35 G | 2625415.43 | 2625415.65 | 2625415.88 | 0.0295 | 0.0087 |
| Jupiter | 2482-06-29 07:55 G | 2627771.67 | 2627771.83 | 2627772.00 | 0.0508 | 0.0347 |
| Uranus | 2484-05-20 07:55 G | 2628462.73 | 2628462.83 | 2628462.96 | 0.0142 | 0.0128 |

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| Uranus | 2485-05-25 12:57 G | 2628832.85 | 2628833.04 | 2628833.26 | 0.0142 | 0.0080 |
| Uranus | 2486-05-30 06:14 G | 2629202.53 | 2629202.76 | 2629203.01 | 0.0142 | 0.0059 |
| Uranus | 2487-06-04 08:38 G | 2629572.62 | 2629572.86 | 2629573.11 | 0.0141 | 0.0017 |
| Jupiter | 2487-12-28 00:43 G | 2629779.47 | 2629779.53 | 2629779.62 | 0.0521 | 0.0489 |
| Uranus | 2488-06-08 02:38 G | 2629942.35 | 2629942.61 | 2629942.88 | 0.0141 | 0.0018 |
| Uranus | 2489-06-13 01:26 G | 2630312.33 | 2630312.56 | 2630312.80 | 0.0140 | 0.0045 |
| Uranus | 2490-06-17 20:38 G | 2630682.16 | 2630682.36 | 2630682.57 | 0.0139 | 0.0090 |
| Uranus | 2491-06-22 16:19 G | 2631052.03 | 2631052.18 | 2631052.34 | 0.0139 | 0.0109 |
| Saturn | 2491-07-24 09:07 G | 2631083.73 | 2631083.88 | 2631084.03 | 0.0265 | 0.0207 |
| Neptune | 2493-07-30 18:57 G | 2631821.27 | 2631821.29 | 2631821.38 | 0.0088 | 0.0087 |
| Jupiter | 2494-07-04 03:21 G | 2632159.40 | 2632159.64 | 2632159.88 | 0.0510 | 0.0136 |
| Neptune | 2494-08-02 10:19 G | 2632188.77 | 2632188.93 | 2632189.12 | 0.0088 | 0.0068 |
| Neptune | 2495-08-05 00:14 G | 2632556.30 | 2632556.51 | 2632556.75 | 0.0089 | 0.0040 |
| Neptune | 2496-08-06 10:04 G | 2632923.67 | 2632923.92 | 2632924.20 | 0.0089 | 0.0022 |
| Neptune | 2497-08-09 04:33 G | 2633291.44 | 2633291.69 | 2633291.95 | 0.0089 | 0.0008 |
| Neptune | 2498-08-11 11:31 G | 2633658.73 | 2633658.98 | 2633659.24 | 0.0089 | 0.0024 |
| Neptune | 2499-08-14 07:26 G | 2634026.62 | 2634026.81 | 2634027.04 | 0.0089 | 0.0054 |
| Jupiter | 2500-01-01 17:16 G | 2634167.01 | 2634167.22 | 2634167.43 | 0.0518 | 0.0253 |
| Neptune | 2500-08-16 13:11 G | 2634393.92 | 2634394.05 | 2634394.24 | 0.0089 | 0.0070 |
| Jupiter | 2506-07-09 23:16 G | 2636547.24 | 2636547.47 | 2636547.70 | 0.0512 | 0.0091 |
| Jupiter | 2512-01-07 07:26 G | 2638554.59 | 2638554.81 | 2638555.03 | 0.0516 | 0.0033 |
| Pluto | 2514-07-19 03:35 G | 2639478.46 | 2639478.65 | 2639478.89 | 0.0079 | 0.0047 |
| Jupiter | 2518-07-15 05:31 G | 2640935.58 | 2640935.73 | 2640935.89 | 0.0514 | 0.0382 |
| Saturn | 2520-07-19 06:57 G | 2641670.54 | 2641670.79 | 2641671.05 | 0.0265 | 0.0047 |
| Jupiter | 2524-01-12 01:26 G | 2642942.37 | 2642942.56 | 2642942.76 | 0.0514 | 0.0294 |
| Uranus | 2527-11-20 18:57 G | 2644351.24 | 2644351.29 | 2644351.37 | 0.0136 | 0.0131 |
| Uranus | 2528-11-24 09:07 G | 2644720.74 | 2644720.88 | 2644721.03 | 0.0136 | 0.0108 |
| Uranus | 2529-11-28 13:40 G | 2645089.86 | 2645090.07 | 2645090.30 | 0.0136 | 0.0068 |
| Uranus | 2530-12-03 03:50 G | 2645459.45 | 2645459.66 | 2645459.90 | 0.0137 | 0.0052 |
| Uranus | 2531-12-07 10:33 G | 2645828.68 | 2645828.94 | 2645829.20 | 0.0137 | 0.0009 |

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| Uranus | 2532-12-11 01:11 G | 2646198.31 | 2646198.55 | 2646198.79 | 0.0138 | 0.0013 |
| Uranus | 2533-12-15 09:07 G | 2646567.65 | 2646567.88 | 2646568.13 | 0.0138 | 0.0049 |
| Uranus | 2534-12-20 00:00 G | 2646937.32 | 2646937.50 | 2646937.71 | 0.0139 | 0.0084 |
| Saturn | 2535-01-18 05:02 G | 2646966.48 | 2646966.71 | 2646966.94 | 0.0295 | 0.0035 |
| Uranus | 2535-12-24 10:19 G | 2647306.79 | 2647306.93 | 2647307.12 | 0.0139 | 0.0107 |
| Jupiter | 2536-01-16 09:21 G | 2647329.86 | 2647329.89 | 2647329.93 | 0.0512 | 0.0504 |
| Saturn | 2550-07-26 13:11 G | 2652635.00 | 2652635.05 | 2652635.11 | 0.0266 | 0.0258 |
| Jupiter | 2565-06-29 16:19 G | 2658087.02 | 2658087.18 | 2658087.35 | 0.0507 | 0.0374 |
| Uranus | 2568-05-21 18:28 G | 2659144.11 | 2659144.27 | 2659144.44 | 0.0143 | 0.0110 |
| Uranus | 2569-05-27 00:14 G | 2659514.33 | 2659514.51 | 2659514.72 | 0.0142 | 0.0089 |
| Uranus | 2570-05-31 17:31 G | 2659883.98 | 2659884.23 | 2659884.48 | 0.0142 | 0.0041 |
| Uranus | 2571-06-05 20:52 G | 2660254.12 | 2660254.37 | 2660254.62 | 0.0141 | 0.0016 |
| Uranus | 2572-06-09 13:55 G | 2660623.82 | 2660624.08 | 2660624.35 | 0.0141 | 0.0020 |
| Uranus | 2573-06-14 14:09 G | 2660993.87 | 2660994.09 | 2660994.32 | 0.0140 | 0.0061 |
| Uranus | 2574-06-19 07:55 G | 2661363.62 | 2661363.83 | 2661364.06 | 0.0140 | 0.0082 |
| Neptune | 2575-01-30 03:07 G | 2661588.54 | 2661588.63 | 2661588.72 | 0.0089 | 0.0082 |
| Uranus | 2575-06-24 04:33 G | 2661733.60 | 2661733.69 | 2661733.80 | 0.0139 | 0.0127 |
| Neptune | 2576-02-01 15:07 G | 2661955.96 | 2661956.13 | 2661956.34 | 0.0089 | 0.0060 |
| Neptune | 2577-02-03 01:55 G | 2662323.37 | 2662323.58 | 2662323.82 | 0.0089 | 0.0037 |
| Jupiter | 2577-07-04 11:16 G | 2662474.76 | 2662474.97 | 2662475.19 | 0.0509 | 0.0168 |
| Neptune | 2578-02-05 09:21 G | 2662690.64 | 2662690.89 | 2662691.15 | 0.0089 | 0.0015 |
| Neptune | 2579-02-08 00:14 G | 2663058.27 | 2663058.51 | 2663058.76 | 0.0089 | 0.0008 |
| Saturn | 2579-07-21 01:26 G | 2663221.31 | 2663221.56 | 2663221.82 | 0.0265 | 0.0004 |
| Neptune | 2580-02-10 03:50 G | 2663425.42 | 2663425.66 | 2663425.91 | 0.0089 | 0.0029 |
| Neptune | 2581-02-11 20:52 G | 2663793.17 | 2663793.37 | 2663793.58 | 0.0089 | 0.0051 |
| Neptune | 2582-02-14 00:00 G | 2664160.38 | 2664160.50 | 2664160.65 | 0.0089 | 0.0074 |
| Jupiter | 2583-01-01 22:33 G | 2664482.26 | 2664482.44 | 2664482.63 | 0.0519 | 0.0288 |
| Jupiter | 2589-07-09 14:09 G | 2666862.85 | 2666863.09 | 2666863.33 | 0.0511 | 0.0063 |
| Saturn | 2594-01-19 04:33 G | 2668517.44 | 2668517.69 | 2668517.93 | 0.0295 | 0.0019 |
| Jupiter | 2595-01-06 20:38 G | 2668870.12 | 2668870.36 | 2668870.59 | 0.0517 | 0.0010 |

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| Jupiter | 2601-07-14 23:45 G | 2671250.32 | 2671250.49 | 2671250.67 | 0.0513 | 0.0338 |
| Jupiter | 2607-01-12 06:00 G | 2673257.56 | 2673257.75 | 2673257.95 | 0.0515 | 0.0266 |
| Saturn | 2608-07-16 09:50 G | 2673808.81 | 2673808.91 | 2673809.04 | 0.0265 | 0.0232 |
| Uranus | 2611-11-22 09:07 G | 2675032.82 | 2675032.88 | 2675032.99 | 0.0136 | 0.0129 |
| Uranus | 2612-11-26 00:14 G | 2675402.33 | 2675402.51 | 2675402.69 | 0.0136 | 0.0094 |
| Uranus | 2613-11-30 03:35 G | 2675771.45 | 2675771.65 | 2675771.88 | 0.0137 | 0.0075 |
| Uranus | 2614-12-04 18:28 G | 2676141.04 | 2676141.27 | 2676141.52 | 0.0137 | 0.0032 |
| Uranus | 2615-12-09 00:00 G | 2676510.25 | 2676510.50 | 2676510.76 | 0.0137 | 0.0015 |
| Uranus | 2616-12-12 15:35 G | 2676879.91 | 2676880.15 | 2676880.39 | 0.0138 | 0.0026 |
| Uranus | 2617-12-16 23:16 G | 2677249.24 | 2677249.47 | 2677249.71 | 0.0138 | 0.0054 |
| Uranus | 2618-12-21 15:07 G | 2677618.95 | 2677619.13 | 2677619.34 | 0.0139 | 0.0084 |
| Jupiter | 2619-01-17 04:19 G | 2677645.60 | 2677645.68 | 2677645.78 | 0.0513 | 0.0468 |
| Uranus | 2619-12-26 00:57 G | 2677988.44 | 2677988.54 | 2677988.67 | 0.0139 | 0.0124 |
| Saturn | 2638-07-23 01:26 G | 2684772.33 | 2684772.56 | 2684772.81 | 0.0265 | 0.0054 |
| Jupiter | 2648-06-29 22:48 G | 2688402.32 | 2688402.45 | 2688402.59 | 0.0507 | 0.0404 |
| Uranus | 2651-05-19 15:21 G | 2689456.13 | 2689456.14 | 2689456.18 | 0.0143 | 0.0142 |
| Uranus | 2652-05-23 07:26 G | 2689825.68 | 2689825.81 | 2689825.98 | 0.0143 | 0.0117 |
| Mars | 2652-11-15 02:24 G | 2690001.46 | 2690001.60 | 2690001.75 | 0.1835 | 0.1249 |
| Saturn | 2653-01-21 01:11 G | 2690068.31 | 2690068.55 | 2690068.80 | 0.0295 | 0.0077 |
| Uranus | 2653-05-28 13:55 G | 2690195.87 | 2690196.08 | 2690196.31 | 0.0142 | 0.0068 |
| Uranus | 2654-06-02 06:00 G | 2690565.51 | 2690565.75 | 2690566.00 | 0.0142 | 0.0048 |
| Uranus | 2655-06-07 09:50 G | 2690935.66 | 2690935.91 | 2690936.17 | 0.0141 | 0.0005 |
| Uranus | 2656-06-11 01:55 G | 2691305.33 | 2691305.58 | 2691305.85 | 0.0141 | 0.0029 |
| Uranus | 2657-06-16 03:07 G | 2691675.42 | 2691675.63 | 2691675.88 | 0.0140 | 0.0058 |
| Uranus | 2658-06-20 20:09 G | 2692045.18 | 2692045.34 | 2692045.54 | 0.0140 | 0.0102 |
| Neptune | 2658-08-03 13:11 G | 2692088.98 | 2692089.05 | 2692089.15 | 0.0088 | 0.0083 |
| Uranus | 2659-06-25 18:43 G | 2692415.16 | 2692415.28 | 2692415.41 | 0.0139 | 0.0120 |
| Neptune | 2659-08-05 22:04 G | 2692456.21 | 2692456.42 | 2692456.64 | 0.0088 | 0.0052 |
| Jupiter | 2660-07-04 19:55 G | 2692790.12 | 2692790.33 | 2692790.56 | 0.0508 | 0.0211 |
| Neptune | 2660-08-07 17:16 G | 2692824.00 | 2692824.22 | 2692824.47 | 0.0089 | 0.0038 |

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| Neptune | 2661-08-10 00:00 G | 2693191.24 | 2693191.50 | 2693191.77 | 0.0089 | 0.0007 |
| Neptune | 2662-08-12 20:38 G | 2693559.10 | 2693559.36 | 2693559.62 | 0.0089 | 0.0009 |
| Neptune | 2663-08-15 02:52 G | 2693926.42 | 2693926.62 | 2693926.87 | 0.0089 | 0.0040 |
| Neptune | 2664-08-16 21:35 G | 2694294.19 | 2694294.40 | 2694294.61 | 0.0089 | 0.0055 |
| Neptune | 2665-08-19 06:57 G | 2694661.74 | 2694661.79 | 2694661.89 | 0.0089 | 0.0085 |
| Jupiter | 2666-01-02 12:14 G | 2694797.83 | 2694798.01 | 2694798.20 | 0.0520 | 0.0317 |
| Saturn | 2667-07-18 11:45 G | 2695359.81 | 2695359.99 | 2695360.19 | 0.0266 | 0.0176 |
| Jupiter | 2672-07-09 08:38 G | 2697177.63 | 2697177.86 | 2697178.10 | 0.0510 | 0.0021 |
| Pluto | 2675-01-20 11:16 G | 2698102.76 | 2698102.97 | 2698103.22 | 0.0065 | 0.0032 |
| Jupiter | 2678-01-06 22:48 G | 2699185.22 | 2699185.45 | 2699185.68 | 0.0518 | 0.0029 |
| Mars | 2678-05-13 08:38 G | 2699311.68 | 2699311.86 | 2699312.04 | 0.1693 | 0.0872 |
| Saturn | 2682-01-15 01:55 G | 2700654.48 | 2700654.58 | 2700654.70 | 0.0295 | 0.0257 |
| Jupiter | 2684-07-14 13:40 G | 2701565.89 | 2701566.07 | 2701566.26 | 0.0513 | 0.0315 |
| Jupiter | 2690-01-11 22:19 G | 2703573.23 | 2703573.43 | 2703573.63 | 0.0515 | 0.0229 |
| Uranus | 2695-11-22 22:48 G | 2705714.35 | 2705714.45 | 2705714.58 | 0.0136 | 0.0121 |
| Uranus | 2696-11-26 13:55 G | 2706083.92 | 2706084.08 | 2706084.27 | 0.0136 | 0.0097 |
| Saturn | 2697-07-24 08:24 G | 2706323.64 | 2706323.85 | 2706324.08 | 0.0266 | 0.0112 |
| Uranus | 2697-11-30 17:31 G | 2706453.00 | 2706453.23 | 2706453.47 | 0.0136 | 0.0056 |
| Uranus | 2698-12-05 09:07 G | 2706822.66 | 2706822.88 | 2706823.13 | 0.0137 | 0.0040 |
| Uranus | 2699-12-09 14:24 G | 2707191.84 | 2707192.10 | 2707192.36 | 0.0137 | 0.0004 |
| Uranus | 2700-12-14 06:43 G | 2707561.54 | 2707561.78 | 2707562.02 | 0.0138 | 0.0025 |
| Uranus | 2701-12-18 12:57 G | 2707930.82 | 2707931.04 | 2707931.28 | 0.0138 | 0.0062 |
| Jupiter | 2702-01-17 04:33 G | 2707960.57 | 2707960.69 | 2707960.83 | 0.0513 | 0.0420 |
| Uranus | 2702-12-23 06:00 G | 2708300.57 | 2708300.75 | 2708300.92 | 0.0139 | 0.0095 |
| Uranus | 2703-12-27 14:09 G | 2708669.97 | 2708670.09 | 2708670.24 | 0.0139 | 0.0119 |
| Saturn | 2712-01-24 01:55 G | 2711619.37 | 2711619.58 | 2711619.79 | 0.0294 | 0.0144 |
| Saturn | 2726-07-20 10:48 G | 2716910.72 | 2716910.95 | 2716911.19 | 0.0266 | 0.0118 |
| Jupiter | 2731-07-01 06:14 G | 2718717.66 | 2718717.76 | 2718717.89 | 0.0506 | 0.0443 |
| Mars | 2731-11-20 07:11 G | 2718859.67 | 2718859.80 | 2718859.94 | 0.1829 | 0.1401 |
| Uranus | 2735-05-21 04:19 G | 2720137.67 | 2720137.68 | 2720137.71 | 0.0143 | 0.0143 |

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| Uranus | 2736-05-24 20:52 G | 2720507.19 | 2720507.37 | 2720507.56 | 0.0143 | 0.0099 |
| Uranus | 2737-05-30 03:21 G | 2720877.43 | 2720877.64 | 2720877.86 | 0.0142 | 0.0078 |
| Uranus | 2738-06-03 19:26 G | 2721247.06 | 2721247.31 | 2721247.57 | 0.0142 | 0.0029 |
| Uranus | 2739-06-09 00:14 G | 2721617.26 | 2721617.51 | 2721617.77 | 0.0141 | 0.0004 |
| Neptune | 2740-02-02 22:48 G | 2721856.30 | 2721856.45 | 2721856.61 | 0.0089 | 0.0068 |
| Uranus | 2740-06-12 15:50 G | 2721986.91 | 2721987.16 | 2721987.42 | 0.0141 | 0.0033 |
| Saturn | 2741-01-17 12:43 G | 2722205.85 | 2722206.03 | 2722206.23 | 0.0294 | 0.0175 |
| Neptune | 2741-02-04 04:33 G | 2722223.50 | 2722223.69 | 2722223.91 | 0.0089 | 0.0055 |
| Uranus | 2741-06-17 18:00 G | 2722357.04 | 2722357.25 | 2722357.47 | 0.0140 | 0.0073 |
| Neptune | 2742-02-06 20:38 G | 2722591.13 | 2722591.36 | 2722591.61 | 0.0089 | 0.0024 |
| Uranus | 2742-06-22 10:04 G | 2722726.73 | 2722726.92 | 2722727.12 | 0.0140 | 0.0094 |
| Neptune | 2743-02-09 00:28 G | 2722958.27 | 2722958.52 | 2722958.77 | 0.0089 | 0.0011 |
| Jupiter | 2743-07-05 17:45 G | 2723105.04 | 2723105.24 | 2723105.45 | 0.0508 | 0.0251 |
| Neptune | 2744-02-11 17:16 G | 2723325.98 | 2723326.22 | 2723326.48 | 0.0089 | 0.0021 |
| Neptune | 2745-02-12 21:21 G | 2723693.17 | 2723693.39 | 2723693.63 | 0.0089 | 0.0034 |
| Neptune | 2746-02-15 11:45 G | 2724060.84 | 2724060.99 | 2724061.19 | 0.0089 | 0.0065 |
| Neptune | 2747-02-17 20:09 G | 2724428.23 | 2724428.34 | 2724428.46 | 0.0089 | 0.0078 |
| Jupiter | 2749-01-02 12:28 G | 2725112.86 | 2725113.02 | 2725113.19 | 0.0520 | 0.0355 |
| Jupiter | 2755-07-10 22:19 G | 2727493.20 | 2727493.43 | 2727493.66 | 0.0510 | 0.0009 |
| Saturn | 2756-07-26 15:07 G | 2727874.95 | 2727875.13 | 2727875.32 | 0.0266 | 0.0174 |
| Mars | 2757-05-17 01:26 G | 2728169.37 | 2728169.56 | 2728169.75 | 0.1698 | 0.0239 |
| Jupiter | 2761-01-07 10:33 G | 2729500.72 | 2729500.94 | 2729501.17 | 0.0518 | 0.0065 |
| Pluto | 2762-07-22 14:24 G | 2730061.97 | 2730062.10 | 2730062.24 | 0.0079 | 0.0067 |
| Jupiter | 2767-07-15 13:55 G | 2731880.88 | 2731881.08 | 2731881.29 | 0.0512 | 0.0281 |
| Saturn | 2771-01-25 11:16 G | 2733170.83 | 2733170.97 | 2733171.13 | 0.0294 | 0.0225 |
| Jupiter | 2773-01-11 19:26 G | 2733888.09 | 2733888.31 | 2733888.54 | 0.0516 | 0.0180 |
| Uranus | 2779-11-24 13:40 G | 2736395.95 | 2736396.07 | 2736396.20 | 0.0136 | 0.0117 |
| Uranus | 2780-11-28 05:02 G | 2736765.53 | 2736765.71 | 2736765.92 | 0.0136 | 0.0083 |
| Uranus | 2781-12-02 07:40 G | 2737134.61 | 2737134.82 | 2737135.06 | 0.0136 | 0.0063 |
| Uranus | 2782-12-07 00:00 G | 2737504.26 | 2737504.50 | 2737504.75 | 0.0137 | 0.0020 |

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| Uranus | 2783-12-11 04:33 G | 2737873.43 | 2737873.69 | 2737873.94 | 0.0137 | 0.0004 |
| Uranus | 2784-12-14 21:07 G | 2738243.15 | 2738243.38 | 2738243.63 | 0.0138 | 0.0039 |
| Jupiter | 2785-01-16 12:43 G | 2738275.88 | 2738276.03 | 2738276.18 | 0.0515 | 0.0373 |
| Saturn | 2785-07-21 13:26 G | 2738461.82 | 2738462.06 | 2738462.31 | 0.0266 | 0.0053 |
| Uranus | 2785-12-19 03:07 G | 2738612.42 | 2738612.63 | 2738612.87 | 0.0138 | 0.0065 |
| Uranus | 2786-12-23 20:24 G | 2738982.20 | 2738982.35 | 2738982.55 | 0.0139 | 0.0097 |
| Uranus | 2787-12-28 04:33 G | 2739351.65 | 2739351.69 | 2739351.76 | 0.0139 | 0.0136 |
| Saturn | 2800-01-19 22:33 G | 2743757.20 | 2743757.44 | 2743757.68 | 0.0294 | 0.0087 |
| Jupiter | 2814-06-30 03:21 G | 2749032.59 | 2749032.64 | 2749032.72 | 0.0506 | 0.0484 |
| Saturn | 2815-07-28 18:57 G | 2749426.19 | 2749426.29 | 2749426.40 | 0.0266 | 0.0243 |
| Uranus | 2819-05-21 19:26 G | 2750819.24 | 2750819.31 | 2750819.43 | 0.0143 | 0.0132 |
| Uranus | 2820-05-25 12:28 G | 2751188.86 | 2751189.02 | 2751189.20 | 0.0143 | 0.0105 |
| Uranus | 2821-05-30 18:57 G | 2751559.06 | 2751559.29 | 2751559.53 | 0.0142 | 0.0057 |
| Uranus | 2822-06-04 10:19 G | 2751928.70 | 2751928.93 | 2751929.20 | 0.0142 | 0.0037 |
| Uranus | 2823-06-09 15:21 G | 2752298.89 | 2752299.14 | 2752299.40 | 0.0141 | 0.0009 |
| Neptune | 2823-08-06 06:28 G | 2752356.64 | 2752356.77 | 2752356.94 | 0.0088 | 0.0072 |
| Uranus | 2824-06-13 06:43 G | 2752668.53 | 2752668.78 | 2752669.03 | 0.0141 | 0.0040 |
| Neptune | 2824-08-07 12:28 G | 2752723.82 | 2752724.02 | 2752724.26 | 0.0088 | 0.0047 |
| Uranus | 2825-06-18 09:35 G | 2753038.68 | 2753038.90 | 2753039.12 | 0.0140 | 0.0070 |
| Neptune | 2825-08-10 08:24 G | 2753091.61 | 2753091.85 | 2753092.12 | 0.0089 | 0.0027 |
| Uranus | 2826-06-23 00:43 G | 2753408.39 | 2753408.53 | 2753408.70 | 0.0140 | 0.0114 |
| Jupiter | 2826-07-05 05:45 G | 2753420.55 | 2753420.74 | 2753420.94 | 0.0508 | 0.0291 |
| Neptune | 2826-08-12 16:04 G | 2753458.92 | 2753459.17 | 2753459.43 | 0.0089 | 0.0002 |
| Uranus | 2827-06-28 00:57 G | 2753778.47 | 2753778.54 | 2753778.62 | 0.0139 | 0.0132 |
| Neptune | 2827-08-15 08:38 G | 2753826.61 | 2753826.86 | 2753827.14 | 0.0089 | 0.0020 |
| Neptune | 2828-08-16 20:52 G | 2754194.17 | 2754194.37 | 2754194.60 | 0.0089 | 0.0046 |
| Neptune | 2829-08-19 09:07 G | 2754561.72 | 2754561.88 | 2754562.09 | 0.0089 | 0.0064 |
| Jupiter | 2832-01-02 20:38 G | 2755428.22 | 2755428.36 | 2755428.51 | 0.0521 | 0.0398 |
| Jupiter | 2838-07-09 17:02 G | 2757807.97 | 2757808.21 | 2757808.45 | 0.0509 | 0.0056 |
| Jupiter | 2844-01-07 04:48 G | 2759815.47 | 2759815.70 | 2759815.93 | 0.0519 | 0.0116 |

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| Saturn | 2844-07-22 22:33 G | 2760013.20 | 2760013.44 | 2760013.68 | 0.0266 | 0.0017 |
| Jupiter | 2850-07-14 15:07 G | 2762195.93 | 2762196.13 | 2762196.33 | 0.0511 | 0.0231 |
| Jupiter | 2856-01-12 01:26 G | 2764203.35 | 2764203.56 | 2764203.78 | 0.0517 | 0.0124 |
| Saturn | 2859-01-21 08:52 G | 2765308.63 | 2765308.87 | 2765309.12 | 0.0294 | 0.0007 |
| Jupiter | 2862-07-19 11:31 G | 2766583.88 | 2766583.98 | 2766584.07 | 0.0513 | 0.0473 |
| Uranus | 2863-11-25 02:52 G | 2767077.50 | 2767077.62 | 2767077.79 | 0.0136 | 0.0112 |
| Uranus | 2864-11-28 18:57 G | 2767447.11 | 2767447.29 | 2767447.49 | 0.0136 | 0.0086 |
| Uranus | 2865-12-02 21:50 G | 2767816.17 | 2767816.41 | 2767816.65 | 0.0136 | 0.0046 |
| Uranus | 2866-12-07 14:24 G | 2768185.86 | 2768186.10 | 2768186.35 | 0.0137 | 0.0029 |
| Uranus | 2867-12-11 18:28 G | 2768555.02 | 2768555.27 | 2768555.52 | 0.0137 | 0.0015 |
| Jupiter | 2868-01-16 17:02 G | 2768591.03 | 2768591.21 | 2768591.39 | 0.0515 | 0.0324 |
| Uranus | 2868-12-15 11:31 G | 2768924.75 | 2768924.98 | 2768925.23 | 0.0138 | 0.0036 |
| Uranus | 2869-12-19 16:33 G | 2769293.99 | 2769294.19 | 2769294.42 | 0.0138 | 0.0074 |
| Uranus | 2870-12-24 10:33 G | 2769663.79 | 2769663.94 | 2769664.10 | 0.0139 | 0.0106 |
| Uranus | 2871-12-28 17:02 G | 2770033.14 | 2770033.21 | 2770033.32 | 0.0139 | 0.0131 |
| Saturn | 2873-07-17 23:16 G | 2770600.34 | 2770600.47 | 2770600.61 | 0.0266 | 0.0226 |
| Uranus | 2903-05-23 07:11 G | 2781500.72 | 2781500.80 | 2781500.91 | 0.0143 | 0.0132 |
| Saturn | 2903-07-26 11:31 G | 2781564.75 | 2781564.98 | 2781565.21 | 0.0267 | 0.0088 |
| Neptune | 2904-02-03 00:14 G | 2781756.45 | 2781756.51 | 2781756.62 | 0.0089 | 0.0084 |
| Uranus | 2904-05-27 00:14 G | 2781870.34 | 2781870.51 | 2781870.73 | 0.0143 | 0.0090 |
| Neptune | 2905-02-04 16:48 G | 2782124.06 | 2782124.20 | 2782124.40 | 0.0089 | 0.0066 |
| Uranus | 2905-06-01 07:11 G | 2782240.58 | 2782240.80 | 2782241.04 | 0.0142 | 0.0067 |
| Neptune | 2906-02-06 20:38 G | 2782491.15 | 2782491.36 | 2782491.60 | 0.0089 | 0.0040 |
| Uranus | 2906-06-05 23:16 G | 2782610.21 | 2782610.47 | 2782610.73 | 0.0142 | 0.0018 |
| Neptune | 2907-02-09 13:55 G | 2782858.83 | 2782859.08 | 2782859.33 | 0.0089 | 0.0020 |
| Uranus | 2907-06-11 05:02 G | 2782980.45 | 2782980.71 | 2782980.96 | 0.0141 | 0.0006 |
| Neptune | 2908-02-11 18:14 G | 2783226.02 | 2783226.26 | 2783226.51 | 0.0089 | 0.0005 |
| Uranus | 2908-06-14 19:55 G | 2783350.09 | 2783350.33 | 2783350.58 | 0.0141 | 0.0045 |
| Neptune | 2909-02-13 07:26 G | 2783593.57 | 2783593.81 | 2783594.08 | 0.0089 | 0.0024 |
| Uranus | 2909-06-19 23:16 G | 2783720.29 | 2783720.47 | 2783720.69 | 0.0140 | 0.0084 |

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| Jupiter | 2909-07-04 22:19 G | 2783735.26 | 2783735.43 | 2783735.61 | 0.0506 | 0.0344 |
| Neptune | 2910-02-15 16:04 G | 2783960.98 | 2783961.17 | 2783961.39 | 0.0089 | 0.0048 |
| Uranus | 2910-06-24 13:55 G | 2784089.93 | 2784090.08 | 2784090.27 | 0.0140 | 0.0106 |
| Neptune | 2911-02-18 00:28 G | 2784328.38 | 2784328.52 | 2784328.72 | 0.0089 | 0.0067 |
| Jupiter | 2915-01-02 12:57 G | 2785742.94 | 2785743.04 | 2785743.17 | 0.0522 | 0.0452 |
| Saturn | 2918-01-24 00:43 G | 2786860.31 | 2786860.53 | 2786860.76 | 0.0294 | 0.0104 |
| Jupiter | 2921-07-09 18:43 G | 2788123.06 | 2788123.28 | 2788123.51 | 0.0509 | 0.0105 |
| Pluto | 2923-01-23 16:04 G | 2788685.93 | 2788686.17 | 2788686.42 | 0.0065 | 0.0011 |
| Jupiter | 2927-01-07 12:28 G | 2790130.81 | 2790131.02 | 2790131.23 | 0.0519 | 0.0155 |
| Saturn | 2932-07-20 04:33 G | 2792151.49 | 2792151.69 | 2792151.90 | 0.0266 | 0.0155 |
| Jupiter | 2933-07-14 14:52 G | 2792510.89 | 2792511.12 | 2792511.35 | 0.0511 | 0.0181 |
| Mars | 2936-11-17 15:07 G | 2793732.98 | 2793733.13 | 2793733.29 | 0.1843 | 0.0924 |
| Jupiter | 2939-01-12 02:24 G | 2794518.36 | 2794518.60 | 2794518.83 | 0.0517 | 0.0074 |
| Jupiter | 2945-07-19 09:50 G | 2796898.79 | 2796898.91 | 2796899.04 | 0.0513 | 0.0426 |
| Saturn | 2947-01-18 10:04 G | 2797446.77 | 2797446.92 | 2797447.08 | 0.0295 | 0.0223 |
| Uranus | 2947-11-26 17:16 G | 2797759.08 | 2797759.22 | 2797759.39 | 0.0135 | 0.0108 |
| Uranus | 2948-11-30 09:35 G | 2798128.69 | 2798128.90 | 2798129.11 | 0.0136 | 0.0073 |
| Uranus | 2949-12-04 11:31 G | 2798497.76 | 2798497.98 | 2798498.23 | 0.0136 | 0.0053 |
| Uranus | 2950-12-09 04:33 G | 2798867.44 | 2798867.69 | 2798867.94 | 0.0137 | 0.0009 |
| Jupiter | 2951-01-16 14:09 G | 2798905.91 | 2798906.09 | 2798906.28 | 0.0515 | 0.0273 |
| Uranus | 2951-12-13 07:55 G | 2799236.58 | 2799236.83 | 2799237.08 | 0.0137 | 0.0007 |
| Uranus | 2952-12-17 01:11 G | 2799606.32 | 2799606.55 | 2799606.79 | 0.0138 | 0.0050 |
| Uranus | 2953-12-21 05:31 G | 2799975.54 | 2799975.73 | 2799975.96 | 0.0138 | 0.0076 |
| Uranus | 2954-12-26 00:28 G | 2800345.37 | 2800345.52 | 2800345.68 | 0.0139 | 0.0107 |
| Mars | 2962-05-15 20:24 G | 2803043.17 | 2803043.35 | 2803043.53 | 0.1687 | 0.0520 |
| Saturn | 2962-07-27 21:50 G | 2803116.21 | 2803116.41 | 2803116.62 | 0.0267 | 0.0161 |
| Jupiter | 2963-01-21 06:43 G | 2803293.74 | 2803293.78 | 2803293.83 | 0.0514 | 0.0503 |
| Saturn | 2977-01-25 22:04 G | 2808412.25 | 2808412.42 | 2808412.59 | 0.0294 | 0.0204 |
| Uranus | 2987-05-23 20:09 G | 2812182.22 | 2812182.34 | 2812182.48 | 0.0143 | 0.0123 |
| Neptune | 2987-08-06 01:40 G | 2812256.56 | 2812256.57 | 2812256.64 | 0.0088 | 0.0088 |

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| Uranus | 2988-05-27 13:55 G | 2812551.91 | 2812552.08 | 2812552.28 | 0.0143 | 0.0095 |
| Neptune | 2988-08-07 21:07 G | 2812624.19 | 2812624.38 | 2812624.60 | 0.0088 | 0.0056 |
| Uranus | 2989-06-01 20:38 G | 2812922.11 | 2812922.36 | 2812922.60 | 0.0142 | 0.0047 |
| Neptune | 2989-08-10 06:00 G | 2812991.55 | 2812991.75 | 2812991.99 | 0.0088 | 0.0043 |
| Uranus | 2990-06-06 12:14 G | 2813291.77 | 2813292.01 | 2813292.27 | 0.0142 | 0.0027 |
| Neptune | 2990-08-12 21:35 G | 2813359.13 | 2813359.40 | 2813359.67 | 0.0088 | 0.0012 |
| Uranus | 2991-06-11 18:00 G | 2813662.00 | 2813662.25 | 2813662.50 | 0.0141 | 0.0019 |
| Saturn | 2991-07-22 15:35 G | 2813702.92 | 2813703.15 | 2813703.39 | 0.0266 | 0.0080 |
| Neptune | 2991-08-15 10:48 G | 2813726.70 | 2813726.95 | 2813727.21 | 0.0089 | 0.0003 |
| Uranus | 2992-06-15 08:38 G | 2814031.62 | 2814031.86 | 2814032.11 | 0.0141 | 0.0050 |
| Jupiter | 2992-07-04 01:40 G | 2814050.43 | 2814050.57 | 2814050.72 | 0.0506 | 0.0396 |
| Neptune | 2992-08-16 20:52 G | 2814094.13 | 2814094.37 | 2814094.63 | 0.0089 | 0.0034 |
| Uranus | 2993-06-20 12:43 G | 2814401.83 | 2814402.03 | 2814402.25 | 0.0140 | 0.0081 |
| Neptune | 2993-08-19 14:38 G | 2814461.91 | 2814462.11 | 2814462.34 | 0.0089 | 0.0048 |
| Uranus | 2994-06-25 02:24 G | 2814771.51 | 2814771.60 | 2814771.74 | 0.0140 | 0.0125 |
| Neptune | 2994-08-21 21:35 G | 2814829.30 | 2814829.40 | 2814829.54 | 0.0089 | 0.0079 |
| Jupiter | 2998-01-01 19:40 G | 2816058.25 | 2816058.32 | 2816058.40 | 0.0522 | 0.0488 |

4TH MILLENNIUM CE

This is a list of transits of Moon in the 4th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|--------------------|------------|------------|------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Jupiter | 3004-07-09 19:55 G | 2818438.09 | 2818438.33 | 2818438.56 | 0.0508 | 0.0143 | | |
| Saturn | 3006-01-20 22:19 G | 2818998.21 | 2818998.43 | 2818998.66 | 0.0295 | 0.0126 | | |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Jupiter | 3010-01-07 10:04 G | 2820445.71 | 2820445.92 | 2820446.14 | 0.0520 | 0.0205 |
| Pluto | 3011-07-27 15:50 G | 2821011.98 | 2821012.16 | 2821012.36 | 0.0079 | 0.0056 |
| Mars | 3015-11-22 04:48 G | 2822590.58 | 2822590.70 | 2822590.83 | 0.1837 | 0.1335 |
| Jupiter | 3016-07-14 13:11 G | 2822825.83 | 2822826.05 | 2822826.28 | 0.0510 | 0.0134 |
| Saturn | 3021-07-30 03:07 G | 2824667.52 | 2824667.63 | 2824667.76 | 0.0267 | 0.0234 |
| Jupiter | 3022-01-11 22:04 G | 2824833.20 | 2824833.42 | 2824833.64 | 0.0518 | 0.0015 |
| Jupiter | 3028-07-19 13:26 G | 2827213.89 | 2827214.06 | 2827214.23 | 0.0512 | 0.0362 |
| Uranus | 3030-11-24 06:00 G | 2828071.69 | 2828071.75 | 2828071.84 | 0.0135 | 0.0128 |
| Uranus | 3031-11-28 07:11 G | 2828440.66 | 2828440.80 | 2828440.98 | 0.0135 | 0.0102 |
| Uranus | 3032-12-01 23:02 G | 2828810.27 | 2828810.46 | 2828810.69 | 0.0136 | 0.0076 |
| Uranus | 3033-12-06 01:26 G | 2829179.33 | 2829179.56 | 2829179.82 | 0.0136 | 0.0037 |
| Jupiter | 3034-01-16 18:14 G | 2829221.05 | 2829221.26 | 2829221.48 | 0.0516 | 0.0214 |
| Uranus | 3034-12-10 18:43 G | 2829549.03 | 2829549.28 | 2829549.53 | 0.0137 | 0.0019 |
| Uranus | 3035-12-14 21:35 G | 2829918.16 | 2829918.40 | 2829918.66 | 0.0137 | 0.0026 |
| Uranus | 3036-12-18 15:21 G | 2830287.91 | 2830288.14 | 2830288.38 | 0.0138 | 0.0045 |
| Uranus | 3037-12-22 19:11 G | 2830657.12 | 2830657.30 | 2830657.52 | 0.0138 | 0.0085 |
| Uranus | 3038-12-27 13:40 G | 2831026.95 | 2831027.07 | 2831027.22 | 0.0139 | 0.0116 |
| Mars | 3041-05-19 07:40 G | 2831900.63 | 2831900.82 | 2831901.01 | 0.1691 | 0.0586 |
| Jupiter | 3046-01-21 04:19 G | 2833608.59 | 2833608.68 | 2833608.78 | 0.0514 | 0.0465 |
| Saturn | 3050-07-25 06:14 G | 2835254.52 | 2835254.76 | 2835255.00 | 0.0266 | 0.0004 |
| Saturn | 3065-01-22 10:48 G | 2840549.71 | 2840549.95 | 2840550.19 | 0.0295 | 0.0032 |
| Neptune | 3069-02-04 16:19 G | 2842024.05 | 2842024.18 | 2842024.34 | 0.0089 | 0.0072 |
| Neptune | 3070-02-07 08:38 G | 2842391.68 | 2842391.86 | 2842392.08 | 0.0089 | 0.0058 |
| Neptune | 3071-02-09 14:24 G | 2842758.88 | 2842759.10 | 2842759.35 | 0.0089 | 0.0029 |
| Uranus | 3071-05-25 04:48 G | 2842863.58 | 2842863.70 | 2842863.85 | 0.0143 | 0.0122 |
| Neptune | 3072-02-12 03:35 G | 2843126.40 | 2843126.65 | 2843126.92 | 0.0089 | 0.0015 |
| Uranus | 3072-05-28 23:45 G | 2843233.29 | 2843233.49 | 2843233.71 | 0.0143 | 0.0081 |
| Neptune | 3073-02-13 14:09 G | 2843493.85 | 2843494.09 | 2843494.33 | 0.0089 | 0.0015 |
| Uranus | 3073-06-03 05:45 G | 2843603.51 | 2843603.74 | 2843603.99 | 0.0142 | 0.0057 |
| Neptune | 3074-02-15 21:50 G | 2843861.17 | 2843861.41 | 2843861.66 | 0.0089 | 0.0029 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Uranus | 3074-06-07 22:19 G | 2843973.18 | 2843973.43 | 2843973.69 | 0.0142 | 0.0008 |
| Neptune | 3075-02-18 12:28 G | 2844228.84 | 2844229.02 | 2844229.21 | 0.0089 | 0.0059 |
| Uranus | 3075-06-13 04:19 G | 2844343.42 | 2844343.68 | 2844343.94 | 0.0141 | 0.0015 |
| Jupiter | 3075-07-05 02:38 G | 2844365.49 | 2844365.61 | 2844365.73 | 0.0506 | 0.0436 |
| Neptune | 3076-02-20 15:35 G | 2844596.03 | 2844596.15 | 2844596.33 | 0.0089 | 0.0073 |
| Uranus | 3076-06-16 18:57 G | 2844713.06 | 2844713.29 | 2844713.54 | 0.0141 | 0.0056 |
| Uranus | 3077-06-21 23:16 G | 2845083.30 | 2845083.47 | 2845083.68 | 0.0140 | 0.0093 |
| Uranus | 3078-06-26 12:57 G | 2845452.91 | 2845453.04 | 2845453.20 | 0.0140 | 0.0116 |
| Saturn | 3079-07-20 07:26 G | 2845841.70 | 2845841.81 | 2845841.94 | 0.0266 | 0.0234 |
| Jupiter | 3087-07-09 18:43 G | 2848753.07 | 2848753.28 | 2848753.49 | 0.0507 | 0.0189 |
| Jupiter | 3093-01-06 08:09 G | 2850760.65 | 2850760.84 | 2850761.04 | 0.0521 | 0.0261 |
| Jupiter | 3099-07-14 13:55 G | 2853140.84 | 2853141.08 | 2853141.32 | 0.0509 | 0.0081 |
| Jupiter | 3105-01-12 07:26 G | 2855148.58 | 2855148.81 | 2855149.05 | 0.0519 | 0.0031 |
| Saturn | 3109-07-27 18:14 G | 2856806.02 | 2856806.26 | 2856806.50 | 0.0266 | 0.0069 |
| Jupiter | 3111-07-20 04:04 G | 2857528.49 | 2857528.67 | 2857528.87 | 0.0512 | 0.0308 |
| Uranus | 3114-11-25 20:24 G | 2858753.28 | 2858753.35 | 2858753.44 | 0.0135 | 0.0128 |
| Uranus | 3115-11-29 21:50 G | 2859122.25 | 2859122.41 | 2859122.60 | 0.0135 | 0.0097 |
| Uranus | 3116-12-03 13:55 G | 2859491.86 | 2859492.08 | 2859492.31 | 0.0136 | 0.0063 |
| Jupiter | 3117-01-16 16:48 G | 2859535.98 | 2859536.20 | 2859536.41 | 0.0516 | 0.0171 |
| Uranus | 3117-12-07 16:04 G | 2859860.94 | 2859861.17 | 2859861.42 | 0.0136 | 0.0042 |
| Uranus | 3118-12-12 08:52 G | 2860230.61 | 2860230.87 | 2860231.12 | 0.0137 | 0.0002 |
| Uranus | 3119-12-16 11:45 G | 2860599.74 | 2860599.99 | 2860600.24 | 0.0137 | 0.0018 |
| Uranus | 3120-12-20 05:02 G | 2860969.49 | 2860969.71 | 2860969.94 | 0.0138 | 0.0061 |
| Uranus | 3121-12-24 08:38 G | 2861338.68 | 2861338.86 | 2861339.08 | 0.0138 | 0.0086 |
| Uranus | 3122-12-29 03:50 G | 2861708.54 | 2861708.66 | 2861708.80 | 0.0139 | 0.0118 |
| Saturn | 3124-01-26 00:14 G | 2862101.28 | 2862101.51 | 2862101.74 | 0.0295 | 0.0058 |
| Jupiter | 3129-01-21 13:40 G | 2863923.94 | 2863924.07 | 2863924.19 | 0.0514 | 0.0428 |
| Saturn | 3138-07-22 12:00 G | 2867392.81 | 2867393.00 | 2867393.20 | 0.0266 | 0.0167 |
| Neptune | 3152-08-08 20:38 G | 2872524.24 | 2872524.36 | 2872524.52 | 0.0088 | 0.0074 |
| Saturn | 3153-01-19 14:52 G | 2872688.00 | 2872688.12 | 2872688.27 | 0.0294 | 0.0246 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Neptune | 3153-08-11 09:50 G | 2872891.71 | 2872891.91 | 2872892.15 | 0.0088 | 0.0052 |
| Neptune | 3154-08-14 00:57 G | 2873259.32 | 2873259.54 | 2873259.80 | 0.0088 | 0.0030 |
| Uranus | 3155-05-26 16:33 G | 2873545.06 | 2873545.19 | 2873545.37 | 0.0143 | 0.0115 |
| Neptune | 3155-08-16 10:19 G | 2873626.67 | 2873626.93 | 2873627.20 | 0.0089 | 0.0007 |
| Uranus | 3156-05-30 12:43 G | 2873914.83 | 2873915.03 | 2873915.24 | 0.0143 | 0.0084 |
| Neptune | 3156-08-18 05:16 G | 2873994.48 | 2873994.72 | 2873994.98 | 0.0089 | 0.0016 |
| Uranus | 3157-06-04 17:45 G | 2874285.00 | 2874285.24 | 2874285.51 | 0.0142 | 0.0038 |
| Neptune | 3157-08-20 11:16 G | 2874361.75 | 2874361.97 | 2874362.22 | 0.0089 | 0.0039 |
| Uranus | 3158-06-09 10:48 G | 2874654.71 | 2874654.95 | 2874655.21 | 0.0142 | 0.0017 |
| Jupiter | 3158-07-04 23:16 G | 2874680.42 | 2874680.47 | 2874680.53 | 0.0505 | 0.0486 |
| Neptune | 3158-08-23 07:26 G | 2874729.64 | 2874729.81 | 2874730.03 | 0.0089 | 0.0059 |
| Uranus | 3159-06-14 16:04 G | 2875024.92 | 2875025.17 | 2875025.43 | 0.0141 | 0.0031 |
| Neptune | 3159-08-25 14:09 G | 2875097.03 | 2875097.09 | 2875097.21 | 0.0089 | 0.0083 |
| Uranus | 3160-06-18 06:57 G | 2875394.56 | 2875394.79 | 2875395.02 | 0.0141 | 0.0059 |
| Uranus | 3161-06-23 11:16 G | 2875764.79 | 2875764.97 | 2875765.17 | 0.0140 | 0.0092 |
| Uranus | 3162-06-28 00:28 G | 2876134.46 | 2876134.52 | 2876134.60 | 0.0140 | 0.0134 |
| Saturn | 3168-07-28 23:45 G | 2878357.28 | 2878357.49 | 2878357.72 | 0.0266 | 0.0139 |
| Jupiter | 3170-07-09 21:35 G | 2879068.19 | 2879068.40 | 2879068.62 | 0.0507 | 0.0226 |
| Pluto | 3171-01-26 18:28 G | 2879269.04 | 2879269.27 | 2879269.55 | 0.0064 | 0.0018 |
| Jupiter | 3176-01-07 18:28 G | 2881076.08 | 2881076.27 | 2881076.47 | 0.0521 | 0.0292 |
| Jupiter | 3182-07-14 12:14 G | 2883455.78 | 2883456.01 | 2883456.25 | 0.0509 | 0.0048 |
| Saturn | 3183-01-27 12:14 G | 2883652.81 | 2883653.01 | 2883653.23 | 0.0295 | 0.0135 |
| Jupiter | 3188-01-12 05:02 G | 2885463.49 | 2885463.71 | 2885463.94 | 0.0519 | 0.0080 |
| Jupiter | 3194-07-19 17:16 G | 2887844.02 | 2887844.22 | 2887844.42 | 0.0511 | 0.0265 |
| Saturn | 3197-07-23 19:26 G | 2888944.10 | 2888944.31 | 2888944.54 | 0.0266 | 0.0104 |
| Uranus | 3198-11-26 10:33 G | 2889434.83 | 2889434.94 | 2889435.08 | 0.0135 | 0.0117 |
| Uranus | 3199-11-30 12:28 G | 2889803.85 | 2889804.02 | 2889804.22 | 0.0135 | 0.0092 |
| Jupiter | 3200-01-17 01:11 G | 2889851.33 | 2889851.55 | 2889851.77 | 0.0517 | 0.0121 |
| Uranus | 3200-12-04 03:50 G | 2890173.45 | 2890173.66 | 2890173.90 | 0.0136 | 0.0064 |
| Uranus | 3201-12-08 06:28 G | 2890542.53 | 2890542.77 | 2890543.02 | 0.0136 | 0.0025 |

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| Uranus | 3202-12-12 23:02 G | 2890912.21 | 2890912.46 | 2890912.71 | 0.0137 | 0.0007 |
| Uranus | 3203-12-17 02:09 G | 2891281.35 | 2891281.59 | 2891281.83 | 0.0137 | 0.0037 |
| Uranus | 3204-12-20 19:40 G | 2891651.09 | 2891651.32 | 2891651.55 | 0.0138 | 0.0056 |
| Uranus | 3205-12-24 23:31 G | 2892020.31 | 2892020.48 | 2892020.67 | 0.0138 | 0.0096 |
| Jupiter | 3206-07-24 06:43 G | 2892231.69 | 2892231.78 | 2892231.89 | 0.0513 | 0.0469 |
| Uranus | 3206-12-29 18:14 G | 2892390.17 | 2892390.26 | 2892390.37 | 0.0139 | 0.0126 |
| Jupiter | 3212-01-21 10:33 G | 2894238.79 | 2894238.94 | 2894239.10 | 0.0515 | 0.0381 |
| Saturn | 3212-01-21 16:19 G | 2894238.99 | 2894239.18 | 2894239.38 | 0.0294 | 0.0177 * |
| Mars | 3220-11-19 13:55 G | 2897463.90 | 2897464.08 | 2897464.27 | 0.1851 | 0.0864 |
| Saturn | 3227-07-31 00:57 G | 2899908.38 | 2899908.54 | 2899908.71 | 0.0266 | 0.0199 |
| Neptune | 3233-02-05 04:19 G | 2901924.64 | 2901924.68 | 2901924.77 | 0.0089 | 0.0086 |
| Neptune | 3234-02-07 11:16 G | 2902291.84 | 2902291.97 | 2902292.14 | 0.0089 | 0.0070 |
| Neptune | 3235-02-09 22:48 G | 2902659.23 | 2902659.45 | 2902659.69 | 0.0089 | 0.0043 |
| Neptune | 3236-02-12 10:19 G | 2903026.70 | 2903026.93 | 2903027.17 | 0.0089 | 0.0026 |
| Neptune | 3237-02-13 17:02 G | 2903393.95 | 2903394.21 | 2903394.47 | 0.0089 | 0.0001 |
| Neptune | 3238-02-16 08:38 G | 2903761.63 | 2903761.86 | 2903762.12 | 0.0089 | 0.0018 |
| Neptune | 3239-02-18 12:14 G | 2904128.80 | 2904129.01 | 2904129.25 | 0.0089 | 0.0044 |
| Uranus | 3239-05-27 02:52 G | 2904226.47 | 2904226.62 | 2904226.81 | 0.0143 | 0.0110 |
| Neptune | 3240-02-21 05:31 G | 2904496.55 | 2904496.73 | 2904496.93 | 0.0089 | 0.0060 |
| Uranus | 3240-05-30 23:45 G | 2904596.28 | 2904596.49 | 2904596.72 | 0.0143 | 0.0071 |
| Neptune | 3241-02-22 09:50 G | 2904863.85 | 2904863.91 | 2904863.96 | 0.0089 | 0.0086 |
| Uranus | 3241-06-05 04:19 G | 2904966.43 | 2904966.68 | 2904966.93 | 0.0142 | 0.0046 |
| Saturn | 3242-01-28 18:43 G | 2905204.10 | 2905204.28 | 2905204.45 | 0.0295 | 0.0203 |
| Uranus | 3242-06-09 21:50 G | 2905336.16 | 2905336.41 | 2905336.66 | 0.0142 | 0.0003 |
| Uranus | 3243-06-15 02:52 G | 2905706.36 | 2905706.62 | 2905706.88 | 0.0141 | 0.0026 |
| Uranus | 3244-06-18 17:45 G | 2906076.03 | 2906076.24 | 2906076.48 | 0.0141 | 0.0068 |
| Uranus | 3245-06-23 21:50 G | 2906446.26 | 2906446.41 | 2906446.61 | 0.0140 | 0.0104 |
| Mars | 3246-05-19 03:21 G | 2906775.45 | 2906775.64 | 2906775.82 | 0.1682 | 0.0088 |
| Uranus | 3246-06-28 11:16 G | 2906815.88 | 2906815.97 | 2906816.09 | 0.0140 | 0.0127 |
| Jupiter | 3253-07-08 23:16 G | 2909383.27 | 2909383.47 | 2909383.67 | 0.0507 | 0.0250 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Saturn | 3256-07-25 03:35 G | 2910495.41 | 2910495.65 | 2910495.89 | 0.0266 | 0.0046 |
| Jupiter | 3259-01-06 15:21 G | 2911390.97 | 2911391.14 | 2911391.31 | 0.0522 | 0.0339 |
| Pluto | 3259-07-29 07:55 G | 2911594.58 | 2911594.83 | 2911595.09 | 0.0079 | 0.0009 |
| Jupiter | 3265-07-14 01:26 G | 2913771.32 | 2913771.56 | 2913771.79 | 0.0508 | 0.0018 |
| Jupiter | 3271-01-11 16:33 G | 2915778.97 | 2915779.19 | 2915779.41 | 0.0520 | 0.0129 |
| Saturn | 3271-01-22 18:28 G | 2915790.06 | 2915790.27 | 2915790.49 | 0.0294 | 0.0116 |
| Jupiter | 3277-07-18 09:21 G | 2918158.67 | 2918158.89 | 2918159.11 | 0.0510 | 0.0217 |
| Uranus | 3282-11-27 00:14 G | 2920116.41 | 2920116.51 | 2920116.66 | 0.0135 | 0.0118 |
| Jupiter | 3283-01-16 05:16 G | 2920166.49 | 2920166.72 | 2920166.95 | 0.0518 | 0.0094 |
| Uranus | 3283-12-01 03:07 G | 2920485.45 | 2920485.63 | 2920485.83 | 0.0135 | 0.0085 |
| Uranus | 3284-12-04 18:14 G | 2920855.03 | 2920855.26 | 2920855.50 | 0.0136 | 0.0052 |
| Uranus | 3285-12-08 21:07 G | 2921224.14 | 2921224.38 | 2921224.62 | 0.0136 | 0.0030 |
| Saturn | 3286-08-01 03:35 G | 2921459.61 | 2921459.65 | 2921459.72 | 0.0266 | 0.0259 |
| Uranus | 3286-12-13 12:57 G | 2921593.79 | 2921594.04 | 2921594.30 | 0.0137 | 0.0013 |
| Uranus | 3287-12-17 16:19 G | 2921962.94 | 2921963.18 | 2921963.42 | 0.0137 | 0.0029 |
| Uranus | 3288-12-21 09:21 G | 2922332.68 | 2922332.89 | 2922333.11 | 0.0138 | 0.0073 |
| Jupiter | 3289-07-23 12:00 G | 2922546.88 | 2922547.00 | 2922547.13 | 0.0513 | 0.0429 |
| Uranus | 3289-12-25 13:11 G | 2922701.89 | 2922702.05 | 2922702.24 | 0.0138 | 0.0097 |
| Uranus | 3290-12-30 08:09 G | 2923071.77 | 2923071.84 | 2923071.94 | 0.0139 | 0.0130 |
| Jupiter | 3295-01-21 02:09 G | 2924554.44 | 2924554.59 | 2924554.75 | 0.0515 | 0.0364 |
| Mars | 3299-11-23 19:26 G | 2926322.19 | 2926322.31 | 2926322.43 | 0.1844 | 0.1416 |
| Saturn | 3301-01-30 15:07 G | 2926755.02 | 2926755.13 | 2926755.25 | 0.0294 | 0.0261 |
| Saturn | 3315-07-28 04:48 G | 2932046.45 | 2932046.70 | 2932046.96 | 0.0266 | 0.0009 |
| Neptune | 3317-08-11 17:31 G | 2932792.04 | 2932792.23 | 2932792.42 | 0.0088 | 0.0059 |
| Neptune | 3318-08-14 00:43 G | 2933159.32 | 2933159.53 | 2933159.77 | 0.0088 | 0.0046 |
| Neptune | 3319-08-16 20:38 G | 2933527.11 | 2933527.36 | 2933527.62 | 0.0088 | 0.0015 |
| Neptune | 3320-08-18 02:24 G | 2933894.34 | 2933894.60 | 2933894.86 | 0.0088 | 0.0003 |
| Neptune | 3321-08-20 22:04 G | 2934262.18 | 2934262.42 | 2934262.68 | 0.0089 | 0.0029 |
| Uranus | 3322-05-23 14:52 G | 2934538.07 | 2934538.12 | 2934538.22 | 0.0144 | 0.0137 |
| Neptune | 3322-08-23 05:31 G | 2934629.51 | 2934629.73 | 2934629.96 | 0.0089 | 0.0042 |

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| Uranus | 3323-05-28 17:02 G | 2934908.05 | 2934908.21 | 2934908.41 | 0.0143 | 0.0106 |
| Neptune | 3323-08-25 22:19 G | 2934997.30 | 2934997.43 | 2934997.60 | 0.0089 | 0.0073 |
| Uranus | 3324-06-01 14:52 G | 2935277.92 | 2935278.12 | 2935278.35 | 0.0143 | 0.0073 |
| Neptune | 3324-08-27 09:35 G | 2935364.87 | 2935364.90 | 2935364.98 | 0.0089 | 0.0087 |
| Mars | 3325-05-22 04:19 G | 2935632.55 | 2935632.68 | 2935632.81 | 0.1686 | 0.1116 |
| Uranus | 3325-06-06 18:14 G | 2935648.01 | 2935648.26 | 2935648.53 | 0.0142 | 0.0026 |
| Uranus | 3326-06-11 12:28 G | 2936017.78 | 2936018.02 | 2936018.28 | 0.0142 | 0.0006 |
| Uranus | 3327-06-16 16:19 G | 2936387.94 | 2936388.18 | 2936388.44 | 0.0141 | 0.0043 |
| Uranus | 3328-06-20 07:40 G | 2936757.60 | 2936757.82 | 2936758.04 | 0.0141 | 0.0070 |
| Uranus | 3329-06-25 11:16 G | 2937127.81 | 2937127.97 | 2937128.16 | 0.0140 | 0.0104 |
| Saturn | 3330-01-24 22:48 G | 2937341.22 | 2937341.45 | 2937341.68 | 0.0294 | 0.0059 |
| Jupiter | 3336-07-09 08:24 G | 2939698.66 | 2939698.85 | 2939699.05 | 0.0506 | 0.0281 |
| Jupiter | 3342-01-07 09:07 G | 2941706.72 | 2941706.88 | 2941707.05 | 0.0523 | 0.0366 |
| Saturn | 3344-07-22 01:11 G | 2942633.43 | 2942633.55 | 2942633.68 | 0.0265 | 0.0227 |
| Jupiter | 3348-07-13 20:52 G | 2944086.12 | 2944086.37 | 2944086.61 | 0.0508 | 0.0025 |
| Jupiter | 3354-01-11 21:50 G | 2946094.19 | 2946094.41 | 2946094.64 | 0.0520 | 0.0158 |
| Jupiter | 3360-07-18 23:45 G | 2948474.27 | 2948474.49 | 2948474.70 | 0.0510 | 0.0185 |
| Jupiter | 3366-01-16 19:40 G | 2950482.10 | 2950482.32 | 2950482.54 | 0.0518 | 0.0068 |
| Uranus | 3366-11-28 14:09 G | 2950797.94 | 2950798.09 | 2950798.26 | 0.0135 | 0.0106 |
| Uranus | 3367-12-02 17:02 G | 2951167.03 | 2951167.21 | 2951167.42 | 0.0136 | 0.0082 |
| Uranus | 3368-12-06 07:26 G | 2951536.57 | 2951536.81 | 2951537.05 | 0.0136 | 0.0052 |
| Uranus | 3369-12-10 10:48 G | 2951905.70 | 2951905.95 | 2951906.19 | 0.0136 | 0.0014 |
| Uranus | 3370-12-15 02:24 G | 2952275.34 | 2952275.60 | 2952275.85 | 0.0137 | 0.0005 |
| Uranus | 3371-12-19 06:00 G | 2952644.53 | 2952644.75 | 2952644.99 | 0.0137 | 0.0049 |
| Jupiter | 3372-07-23 21:50 G | 2952862.26 | 2952862.41 | 2952862.57 | 0.0512 | 0.0400 |
| Uranus | 3372-12-22 23:16 G | 2953014.25 | 2953014.47 | 2953014.69 | 0.0138 | 0.0067 |
| Uranus | 3373-12-27 03:35 G | 2953383.51 | 2953383.65 | 2953383.82 | 0.0138 | 0.0108 |
| Saturn | 3374-07-28 23:45 G | 2953597.24 | 2953597.49 | 2953597.75 | 0.0266 | 0.0061 |
| Uranus | 3374-12-31 22:04 G | 2953753.39 | 2953753.42 | 2953753.47 | 0.0139 | 0.0137 |
| Jupiter | 3378-01-21 07:26 G | 2954869.63 | 2954869.81 | 2954869.99 | 0.0516 | 0.0332 |

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| Saturn | 3389-01-25 22:04 G | 2958892.18 | 2958892.42 | 2958892.66 | 0.0294 | 0.0006 |
| Neptune | 3398-02-07 18:14 G | 2962192.16 | 2962192.26 | 2962192.43 | 0.0089 | 0.0076 |
| Neptune | 3399-02-10 07:40 G | 2962559.65 | 2962559.82 | 2962560.01 | 0.0089 | 0.0060 |
| Neptune | 3400-02-12 13:26 G | 2962926.83 | 2962927.06 | 2962927.32 | 0.0089 | 0.0033 |
| Neptune | 3401-02-15 06:00 G | 2963294.51 | 2963294.75 | 2963295.01 | 0.0089 | 0.0018 |
| Neptune | 3402-02-17 09:35 G | 2963661.65 | 2963661.90 | 2963662.15 | 0.0089 | 0.0010 |
| Neptune | 3403-02-20 02:24 G | 2964029.37 | 2964029.60 | 2964029.86 | 0.0089 | 0.0025 |
| Saturn | 3403-07-25 05:16 G | 2964184.55 | 2964184.72 | 2964184.91 | 0.0266 | 0.0174 |
| Neptune | 3404-02-22 07:26 G | 2964396.61 | 2964396.81 | 2964397.00 | 0.0089 | 0.0053 |
| Neptune | 3405-02-23 20:38 G | 2964764.22 | 2964764.36 | 2964764.56 | 0.0089 | 0.0068 |
| Uranus | 3406-05-25 03:50 G | 2965219.64 | 2965219.66 | 2965219.71 | 0.0144 | 0.0142 |
| Uranus | 3407-05-30 04:04 G | 2965589.50 | 2965589.67 | 2965589.88 | 0.0143 | 0.0099 |
| Uranus | 3408-06-03 03:07 G | 2965959.41 | 2965959.63 | 2965959.86 | 0.0143 | 0.0061 |
| Uranus | 3409-06-08 05:02 G | 2966329.46 | 2966329.71 | 2966329.98 | 0.0142 | 0.0035 |
| Uranus | 3410-06-13 00:28 G | 2966699.27 | 2966699.52 | 2966699.77 | 0.0142 | 0.0015 |
| Uranus | 3411-06-18 03:50 G | 2967069.41 | 2967069.66 | 2967069.92 | 0.0141 | 0.0037 |
| Uranus | 3412-06-21 19:55 G | 2967439.13 | 2967439.33 | 2967439.54 | 0.0141 | 0.0079 |
| Uranus | 3413-06-26 23:02 G | 2967809.33 | 2967809.46 | 2967809.63 | 0.0140 | 0.0114 |
| Uranus | 3414-07-01 12:43 G | 2968179.02 | 2968179.03 | 2968179.08 | 0.0140 | 0.0139 |
| Pluto | 3419-01-30 00:43 G | 2969852.38 | 2969852.53 | 2969852.72 | 0.0064 | 0.0048 |
| Jupiter | 3419-07-10 11:16 G | 2970013.78 | 2970013.97 | 2970014.16 | 0.0506 | 0.0303 |
| Pluto | 3420-01-31 05:31 G | 2970218.59 | 2970218.73 | 2970218.93 | 0.0065 | 0.0049 |
| Jupiter | 3425-01-07 12:57 G | 2972021.89 | 2972022.04 | 2972022.20 | 0.0523 | 0.0394 |
| Jupiter | 3431-07-15 13:26 G | 2974401.83 | 2974402.06 | 2974402.28 | 0.0508 | 0.0051 |
| Saturn | 3433-07-30 21:07 G | 2975148.17 | 2975148.38 | 2975148.61 | 0.0266 | 0.0114 |
| Jupiter | 3437-01-12 09:50 G | 2976409.70 | 2976409.91 | 2976410.12 | 0.0521 | 0.0195 |
| Jupiter | 3443-07-20 07:26 G | 2978789.58 | 2978789.81 | 2978790.05 | 0.0510 | 0.0149 |
| Saturn | 3448-01-28 15:50 G | 2980442.91 | 2980443.16 | 2980443.41 | 0.0294 | 0.0048 |
| Jupiter | 3449-01-17 01:26 G | 2980797.33 | 2980797.56 | 2980797.80 | 0.0519 | 0.0040 |
| Uranus | 3449-11-25 13:55 G | 2981110.02 | 2981110.08 | 2981110.17 | 0.0135 | 0.0128 |

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| Uranus | 3450-11-30 02:24 G | 2981479.47 | 2981479.60 | 2981479.77 | 0.0135 | 0.0109 |
| Mars | 3451-05-19 05:31 G | 2981649.61 | 2981649.73 | 2981649.86 | 0.1671 | 0.1285 |
| Uranus | 3451-12-04 06:14 G | 2981848.57 | 2981848.76 | 2981848.98 | 0.0135 | 0.0075 |
| Uranus | 3452-12-07 19:55 G | 2982218.10 | 2982218.33 | 2982218.59 | 0.0136 | 0.0043 |
| Uranus | 3453-12-12 00:14 G | 2982587.27 | 2982587.51 | 2982587.76 | 0.0136 | 0.0019 |
| Uranus | 3454-12-16 14:52 G | 2982956.87 | 2982957.12 | 2982957.38 | 0.0137 | 0.0023 |
| Jupiter | 3455-07-24 20:52 G | 2983177.21 | 2983177.37 | 2983177.53 | 0.0511 | 0.0357 |
| Uranus | 3455-12-20 19:26 G | 2983326.07 | 2983326.31 | 2983326.54 | 0.0137 | 0.0040 |
| Uranus | 3456-12-24 11:16 G | 2983695.78 | 2983695.97 | 2983696.19 | 0.0138 | 0.0084 |
| Uranus | 3457-12-28 16:19 G | 2984065.03 | 2984065.18 | 2984065.35 | 0.0138 | 0.0106 |
| Jupiter | 3461-01-21 17:16 G | 2985185.05 | 2985185.22 | 2985185.40 | 0.0517 | 0.0321 |
| Saturn | 3462-07-26 06:57 G | 2985735.57 | 2985735.79 | 2985736.02 | 0.0266 | 0.0121 |
| Saturn | 3477-01-21 10:48 G | 2991028.95 | 2991028.95 | 2991028.98 | 0.0294 | 0.0293 |
| Neptune | 3481-08-11 15:50 G | 2992692.04 | 2992692.16 | 2992692.33 | 0.0088 | 0.0073 |
| Neptune | 3482-08-14 12:14 G | 2993059.83 | 2993060.01 | 2993060.23 | 0.0088 | 0.0055 |
| Neptune | 3483-08-16 18:14 G | 2993427.03 | 2993427.26 | 2993427.52 | 0.0088 | 0.0031 |
| Neptune | 3484-08-18 13:55 G | 2993794.82 | 2993795.08 | 2993795.35 | 0.0088 | 0.0011 |
| Neptune | 3485-08-20 22:19 G | 2994162.18 | 2994162.43 | 2994162.69 | 0.0088 | 0.0013 |
| Neptune | 3486-08-23 13:40 G | 2994529.84 | 2994530.07 | 2994530.34 | 0.0089 | 0.0034 |
| Neptune | 3487-08-26 02:24 G | 2994897.41 | 2994897.60 | 2994897.80 | 0.0089 | 0.0056 |
| Neptune | 3488-08-27 12:43 G | 2995264.91 | 2995265.03 | 2995265.19 | 0.0089 | 0.0076 |
| Uranus | 3490-05-25 16:48 G | 2995901.10 | 2995901.20 | 2995901.33 | 0.0144 | 0.0127 |
| Uranus | 3491-05-30 16:19 G | 2996271.01 | 2996271.18 | 2996271.40 | 0.0143 | 0.0098 |
| Uranus | 3492-06-03 16:33 G | 2996640.97 | 2996641.19 | 2996641.42 | 0.0143 | 0.0062 |
| Saturn | 3492-08-01 00:00 G | 2996699.32 | 2996699.50 | 2996699.69 | 0.0266 | 0.0170 |
| Uranus | 3493-06-08 17:31 G | 2997010.97 | 2997011.23 | 2997011.50 | 0.0142 | 0.0018 |
| Uranus | 3494-06-13 13:55 G | 2997380.83 | 2997381.08 | 2997381.33 | 0.0142 | 0.0005 |
| Uranus | 3495-06-18 16:04 G | 2997750.93 | 2997751.17 | 2997751.42 | 0.0141 | 0.0053 |
| Uranus | 3496-06-22 08:38 G | 2998120.65 | 2998120.86 | 2998121.07 | 0.0141 | 0.0079 |
| Uranus | 3497-06-27 10:48 G | 2998490.83 | 2998490.95 | 2998491.13 | 0.0140 | 0.0115 |

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| Jupiter | 3502-07-11 02:52 G | 3000329.44 | 3000329.62 | 3000329.79 | 0.0505 | 0.0322 |
| Mars | 3504-11-22 00:00 G | 3001194.34 | 3001194.50 | 3001194.66 | 0.1859 | 0.1027 |
| Saturn | 3507-01-30 10:04 G | 3001993.69 | 3001993.92 | 3001994.15 | 0.0294 | 0.0102 |
| Pluto | 3507-08-02 00:57 G | 3002177.42 | 3002177.54 | 3002177.70 | 0.0080 | 0.0068 |
| Jupiter | 3508-01-09 00:28 G | 3002337.40 | 3002337.52 | 3002337.64 | 0.0523 | 0.0432 |
| Jupiter | 3514-07-15 15:07 G | 3004716.89 | 3004717.13 | 3004717.37 | 0.0507 | 0.0092 |
| Jupiter | 3520-01-13 17:31 G | 3006725.02 | 3006725.23 | 3006725.44 | 0.0522 | 0.0228 |
| Saturn | 3521-07-28 03:35 G | 3007286.40 | 3007286.65 | 3007286.90 | 0.0266 | 0.0066 |
| Jupiter | 3526-07-20 08:38 G | 3009104.63 | 3009104.86 | 3009105.08 | 0.0509 | 0.0100 |
| Mars | 3530-05-22 23:16 G | 3010507.27 | 3010507.47 | 3010507.66 | 0.1676 | 0.0517 |
| Jupiter | 3532-01-18 11:02 G | 3011112.74 | 3011112.96 | 3011113.18 | 0.0519 | 0.0018 |
| Uranus | 3534-12-01 14:52 G | 3012160.95 | 3012161.12 | 3012161.31 | 0.0135 | 0.0096 |
| Uranus | 3535-12-05 19:26 G | 3012530.11 | 3012530.31 | 3012530.52 | 0.0135 | 0.0073 |
| Saturn | 3536-01-24 14:52 G | 3012579.98 | 3012580.12 | 3012580.27 | 0.0294 | 0.0231 |
| Uranus | 3536-12-09 07:55 G | 3012899.59 | 3012899.83 | 3012900.08 | 0.0136 | 0.0042 |
| Uranus | 3537-12-13 12:43 G | 3013268.79 | 3013269.03 | 3013269.28 | 0.0136 | 0.0006 |
| Jupiter | 3538-07-25 12:00 G | 3013492.82 | 3013493.00 | 3013493.19 | 0.0511 | 0.0328 |
| Uranus | 3538-12-18 02:52 G | 3013638.36 | 3013638.62 | 3013638.87 | 0.0137 | 0.0014 |
| Uranus | 3539-12-22 08:09 G | 3014007.62 | 3014007.84 | 3014008.06 | 0.0137 | 0.0058 |
| Uranus | 3540-12-25 23:31 G | 3014377.29 | 3014377.48 | 3014377.71 | 0.0138 | 0.0077 |
| Uranus | 3541-12-30 05:45 G | 3014746.63 | 3014746.74 | 3014746.87 | 0.0138 | 0.0118 |
| Jupiter | 3544-01-23 09:35 G | 3015500.71 | 3015500.90 | 3015501.09 | 0.0517 | 0.0301 |
| Saturn | 3551-08-04 03:21 G | 3018250.53 | 3018250.64 | 3018250.79 | 0.0266 | 0.0225 |
| Neptune | 3562-02-09 04:48 G | 3022092.68 | 3022092.70 | 3022092.78 | 0.0089 | 0.0087 |
| Neptune | 3563-02-11 10:04 G | 3022459.79 | 3022459.92 | 3022460.08 | 0.0089 | 0.0073 |
| Neptune | 3564-02-14 02:52 G | 3022827.42 | 3022827.62 | 3022827.85 | 0.0089 | 0.0045 |
| Neptune | 3565-02-15 06:14 G | 3023194.54 | 3023194.76 | 3023195.01 | 0.0089 | 0.0031 |
| Saturn | 3566-01-31 11:31 G | 3023544.79 | 3023544.98 | 3023545.18 | 0.0294 | 0.0165 |
| Neptune | 3566-02-17 23:16 G | 3023562.21 | 3023562.47 | 3023562.73 | 0.0089 | 0.0002 |
| Neptune | 3567-02-20 04:33 G | 3023929.45 | 3023929.69 | 3023929.94 | 0.0089 | 0.0013 |

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| Neptune | 3568-02-22 17:45 G | 3024297.03 | 3024297.24 | 3024297.49 | 0.0089 | 0.0041 |
| Neptune | 3569-02-24 04:04 G | 3024664.48 | 3024664.67 | 3024664.87 | 0.0089 | 0.0055 |
| Neptune | 3570-02-26 12:14 G | 3025031.93 | 3025032.01 | 3025032.12 | 0.0089 | 0.0082 |
| Uranus | 3574-05-27 02:52 G | 3026582.54 | 3026582.62 | 3026582.71 | 0.0144 | 0.0134 |
| Uranus | 3575-06-01 00:28 G | 3026952.32 | 3026952.52 | 3026952.74 | 0.0143 | 0.0089 |
| Uranus | 3576-06-05 01:40 G | 3027322.34 | 3027322.57 | 3027322.80 | 0.0143 | 0.0053 |
| Uranus | 3577-06-10 01:11 G | 3027692.29 | 3027692.55 | 3027692.81 | 0.0142 | 0.0025 |
| Uranus | 3578-06-14 23:02 G | 3028062.21 | 3028062.46 | 3028062.70 | 0.0142 | 0.0023 |
| Uranus | 3579-06-20 00:00 G | 3028432.25 | 3028432.50 | 3028432.75 | 0.0141 | 0.0045 |
| Uranus | 3580-06-23 18:00 G | 3028802.07 | 3028802.25 | 3028802.45 | 0.0141 | 0.0089 |
| Saturn | 3580-07-29 00:14 G | 3028837.26 | 3028837.51 | 3028837.77 | 0.0266 | 0.0012 |
| Uranus | 3581-06-28 20:09 G | 3029172.21 | 3029172.34 | 3029172.48 | 0.0140 | 0.0121 |
| Mars | 3583-11-26 09:07 G | 3030052.71 | 3030052.88 | 3030053.04 | 0.1853 | 0.1135 |
| Jupiter | 3585-07-10 04:19 G | 3030644.50 | 3030644.68 | 3030644.85 | 0.0504 | 0.0354 |
| Jupiter | 3591-01-08 06:28 G | 3032652.67 | 3032652.77 | 3032652.88 | 0.0524 | 0.0470 |
| Saturn | 3595-01-25 15:21 G | 3034130.94 | 3034131.14 | 3034131.36 | 0.0294 | 0.0163 |
| Jupiter | 3597-07-14 21:07 G | 3035032.16 | 3035032.38 | 3035032.60 | 0.0506 | 0.0130 |
| Jupiter | 3603-01-13 01:26 G | 3037040.37 | 3037040.56 | 3037040.75 | 0.0522 | 0.0266 |
| Jupiter | 3609-07-19 23:16 G | 3039420.23 | 3039420.47 | 3039420.71 | 0.0509 | 0.0064 |
| Saturn | 3609-07-24 00:00 G | 3039424.50 | 3039424.50 | 3039424.53 | 0.0266 | 0.0265 |
| Jupiter | 3615-01-17 22:19 G | 3041428.20 | 3041428.43 | 3041428.67 | 0.0520 | 0.0015 |
| Uranus | 3617-11-27 15:50 G | 3042473.06 | 3042473.16 | 3042473.29 | 0.0135 | 0.0119 |
| Uranus | 3618-12-02 02:24 G | 3042842.43 | 3042842.60 | 3042842.78 | 0.0135 | 0.0100 |
| Uranus | 3619-12-06 08:09 G | 3043211.64 | 3043211.84 | 3043212.06 | 0.0135 | 0.0064 |
| Uranus | 3620-12-09 19:40 G | 3043581.08 | 3043581.32 | 3043581.58 | 0.0136 | 0.0035 |
| Jupiter | 3621-07-24 11:45 G | 3043807.81 | 3043807.99 | 3043808.19 | 0.0510 | 0.0296 |
| Uranus | 3621-12-14 01:55 G | 3043950.34 | 3043950.58 | 3043950.83 | 0.0136 | 0.0009 |
| Uranus | 3622-12-18 14:38 G | 3044319.86 | 3044320.11 | 3044320.37 | 0.0137 | 0.0032 |
| Uranus | 3623-12-22 20:52 G | 3044689.14 | 3044689.37 | 3044689.60 | 0.0137 | 0.0049 |
| Uranus | 3624-12-26 11:16 G | 3045058.80 | 3045058.97 | 3045059.17 | 0.0137 | 0.0093 |

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| Saturn | 3625-02-01 18:57 G | 3045096.16 | 3045096.29 | 3045096.44 | 0.0294 | 0.0234 |
| Uranus | 3625-12-30 17:45 G | 3045428.12 | 3045428.24 | 3045428.39 | 0.0138 | 0.0115 |
| Jupiter | 3627-01-22 07:11 G | 3045815.61 | 3045815.80 | 3045816.00 | 0.0518 | 0.0264 |
| Jupiter | 3639-01-27 06:14 G | 3050203.70 | 3050203.76 | 3050203.83 | 0.0516 | 0.0493 |
| Saturn | 3639-07-31 04:04 G | 3050388.44 | 3050388.67 | 3050388.91 | 0.0267 | 0.0051 |
| Neptune | 3646-08-14 12:00 G | 3052959.83 | 3052960.00 | 3052960.20 | 0.0088 | 0.0061 |
| Neptune | 3647-08-17 06:00 G | 3053327.55 | 3053327.75 | 3053328.00 | 0.0088 | 0.0048 |
| Neptune | 3648-08-18 15:35 G | 3053694.91 | 3053695.15 | 3053695.41 | 0.0088 | 0.0018 |
| Neptune | 3649-08-21 06:00 G | 3054062.48 | 3054062.75 | 3054063.02 | 0.0088 | 0.0004 |
| Neptune | 3650-08-23 20:09 G | 3054430.11 | 3054430.34 | 3054430.59 | 0.0088 | 0.0026 |
| Neptune | 3651-08-26 05:31 G | 3054797.51 | 3054797.73 | 3054797.99 | 0.0089 | 0.0039 |
| Neptune | 3652-08-28 00:00 G | 3055165.36 | 3055165.50 | 3055165.68 | 0.0089 | 0.0069 |
| Neptune | 3653-08-30 06:14 G | 3055532.69 | 3055532.76 | 3055532.89 | 0.0089 | 0.0082 |
| Saturn | 3654-01-26 17:31 G | 3055682.00 | 3055682.23 | 3055682.47 | 0.0294 | 0.0086 |
| Mars | 3656-05-18 08:09 G | 3056524.82 | 3056524.84 | 3056524.86 | 0.1663 | 0.1647 |
| Uranus | 3658-05-27 12:43 G | 3057263.91 | 3057264.03 | 3057264.20 | 0.0144 | 0.0118 |
| Uranus | 3659-06-01 09:35 G | 3057633.71 | 3057633.90 | 3057634.12 | 0.0143 | 0.0090 |
| Uranus | 3660-06-05 12:14 G | 3058003.79 | 3058004.01 | 3058004.25 | 0.0143 | 0.0052 |
| Uranus | 3661-06-10 10:48 G | 3058373.68 | 3058373.95 | 3058374.21 | 0.0142 | 0.0010 |
| Uranus | 3662-06-15 09:35 G | 3058743.65 | 3058743.90 | 3058744.15 | 0.0142 | 0.0014 |
| Uranus | 3663-06-20 08:52 G | 3059113.64 | 3059113.87 | 3059114.12 | 0.0141 | 0.0062 |
| Uranus | 3664-06-24 04:04 G | 3059483.48 | 3059483.67 | 3059483.87 | 0.0141 | 0.0087 |
| Uranus | 3665-06-29 04:33 G | 3059853.59 | 3059853.69 | 3059853.84 | 0.0140 | 0.0125 |
| Pluto | 3668-02-02 15:07 G | 3060801.89 | 3060802.13 | 3060802.40 | 0.0065 | 0.0014 |
| Jupiter | 3668-07-09 10:04 G | 3060959.78 | 3060959.92 | 3060960.08 | 0.0504 | 0.0382 |
| Saturn | 3668-07-25 01:40 G | 3060975.41 | 3060975.57 | 3060975.75 | 0.0266 | 0.0201 |
| Jupiter | 3674-01-07 10:19 G | 3062967.91 | 3062967.93 | 3062967.97 | 0.0524 | 0.0518 |
| Jupiter | 3680-07-14 09:21 G | 3065347.66 | 3065347.89 | 3065348.12 | 0.0506 | 0.0163 |
| Jupiter | 3686-01-12 09:07 G | 3067355.70 | 3067355.88 | 3067356.07 | 0.0522 | 0.0312 |
| Jupiter | 3692-07-18 18:00 G | 3069735.02 | 3069735.25 | 3069735.49 | 0.0507 | 0.0019 |

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| Jupiter | 3698-01-16 18:14 G | 3071743.04 | 3071743.26 | 3071743.49 | 0.0521 | 0.0060 |
| Saturn | 3698-08-01 13:26 G | 3071939.84 | 3071940.06 | 3071940.28 | 0.0267 | 0.0118 |
| Uranus | 3701-11-29 05:02 G | 3073154.65 | 3073154.71 | 3073154.81 | 0.0135 | 0.0127 |
| Uranus | 3702-12-03 13:55 G | 3073523.89 | 3073524.08 | 3073524.29 | 0.0135 | 0.0086 |
| Uranus | 3703-12-07 20:52 G | 3073893.16 | 3073893.37 | 3073893.59 | 0.0135 | 0.0064 |
| Jupiter | 3704-07-24 20:24 G | 3074123.15 | 3074123.35 | 3074123.55 | 0.0509 | 0.0252 |
| Uranus | 3704-12-11 07:11 G | 3074262.55 | 3074262.80 | 3074263.06 | 0.0136 | 0.0031 |
| Uranus | 3705-12-15 14:24 G | 3074631.85 | 3074632.10 | 3074632.34 | 0.0136 | 0.0004 |
| Uranus | 3706-12-20 02:09 G | 3075001.34 | 3075001.59 | 3075001.85 | 0.0137 | 0.0025 |
| Uranus | 3707-12-24 09:50 G | 3075370.71 | 3075370.91 | 3075371.13 | 0.0137 | 0.0068 |
| Uranus | 3708-12-27 23:31 G | 3075740.30 | 3075740.48 | 3075740.70 | 0.0137 | 0.0087 |
| Uranus | 3710-01-01 07:26 G | 3076109.74 | 3076109.81 | 3076109.91 | 0.0138 | 0.0129 |
| Jupiter | 3710-01-22 19:55 G | 3076131.13 | 3076131.33 | 3076131.54 | 0.0519 | 0.0223 |
| Saturn | 3713-01-29 04:19 G | 3077233.44 | 3077233.68 | 3077233.91 | 0.0293 | 0.0004 |
| Jupiter | 3722-01-27 06:43 G | 3080518.67 | 3080518.78 | 3080518.90 | 0.0516 | 0.0447 |
| Neptune | 3727-02-12 01:26 G | 3082360.46 | 3082360.56 | 3082360.70 | 0.0089 | 0.0078 |
| Saturn | 3727-07-28 02:24 G | 3082526.39 | 3082526.60 | 3082526.84 | 0.0266 | 0.0134 |
| Neptune | 3728-02-14 04:48 G | 3082727.55 | 3082727.70 | 3082727.91 | 0.0089 | 0.0062 |
| Neptune | 3729-02-15 21:35 G | 3083095.17 | 3083095.40 | 3083095.65 | 0.0089 | 0.0035 |
| Neptune | 3730-02-18 03:35 G | 3083462.42 | 3083462.65 | 3083462.90 | 0.0089 | 0.0020 |
| Neptune | 3731-02-20 15:50 G | 3083829.90 | 3083830.16 | 3083830.43 | 0.0089 | 0.0006 |
| Neptune | 3732-02-23 02:24 G | 3084197.36 | 3084197.60 | 3084197.84 | 0.0089 | 0.0022 |
| Neptune | 3733-02-24 09:07 G | 3084564.68 | 3084564.88 | 3084565.11 | 0.0089 | 0.0048 |
| Neptune | 3734-02-27 00:57 G | 3084932.37 | 3084932.54 | 3084932.71 | 0.0089 | 0.0064 |
| Mars | 3735-05-22 06:57 G | 3085381.63 | 3085381.79 | 3085381.96 | 0.1666 | 0.0741 |
| Uranus | 3742-05-28 21:50 G | 3087945.31 | 3087945.41 | 3087945.55 | 0.0144 | 0.0126 |
| Uranus | 3743-06-02 17:02 G | 3088315.00 | 3088315.21 | 3088315.44 | 0.0143 | 0.0078 |
| Uranus | 3744-06-06 20:38 G | 3088685.13 | 3088685.36 | 3088685.60 | 0.0143 | 0.0046 |
| Uranus | 3745-06-11 17:31 G | 3089054.97 | 3089055.23 | 3089055.50 | 0.0142 | 0.0014 |
| Uranus | 3746-06-16 18:00 G | 3089425.01 | 3089425.25 | 3089425.49 | 0.0142 | 0.0032 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Uranus | 3747-06-21 16:04 G | 3089794.93 | 3089795.17 | 3089795.42 | 0.0141 | 0.0054 |
| Uranus | 3748-06-25 12:57 G | 3090164.88 | 3090165.04 | 3090165.23 | 0.0141 | 0.0100 |
| Uranus | 3749-06-30 12:43 G | 3090534.94 | 3090535.03 | 3090535.15 | 0.0140 | 0.0129 |
| Jupiter | 3751-07-10 18:28 G | 3091275.13 | 3091275.27 | 3091275.41 | 0.0503 | 0.0412 |
| Pluto | 3756-08-04 21:21 G | 3093127.20 | 3093127.39 | 3093127.61 | 0.0079 | 0.0052 |
| Saturn | 3757-08-03 20:09 G | 3093491.17 | 3093491.34 | 3093491.53 | 0.0267 | 0.0188 |
| Jupiter | 3763-07-15 02:52 G | 3095662.41 | 3095662.62 | 3095662.84 | 0.0505 | 0.0209 |
| Jupiter | 3769-01-12 03:21 G | 3097670.49 | 3097670.64 | 3097670.81 | 0.0524 | 0.0368 |
| Saturn | 3772-01-31 21:21 G | 3098785.17 | 3098785.39 | 3098785.62 | 0.0293 | 0.0095 |
| Jupiter | 3775-07-20 03:07 G | 3100050.39 | 3100050.63 | 3100050.86 | 0.0507 | 0.0027 |
| Jupiter | 3781-01-17 07:11 G | 3102058.57 | 3102058.80 | 3102059.02 | 0.0521 | 0.0096 |
| Uranus | 3785-11-29 16:48 G | 3103836.07 | 3103836.20 | 3103836.35 | 0.0135 | 0.0109 |
| Saturn | 3786-07-29 10:19 G | 3104077.70 | 3104077.93 | 3104078.18 | 0.0266 | 0.0062 |
| Uranus | 3786-12-04 00:57 G | 3104205.36 | 3104205.54 | 3104205.74 | 0.0135 | 0.0091 |
| Jupiter | 3787-07-24 16:19 G | 3104437.96 | 3104438.18 | 3104438.40 | 0.0509 | 0.0213 |
| Uranus | 3787-12-08 09:21 G | 3104574.68 | 3104574.89 | 3104575.12 | 0.0135 | 0.0053 |
| Mars | 3788-11-23 09:50 G | 3104925.74 | 3104925.91 | 3104926.07 | 0.1867 | 0.0818 |
| Uranus | 3788-12-11 18:57 G | 3104944.04 | 3104944.29 | 3104944.55 | 0.0136 | 0.0025 |
| Uranus | 3789-12-16 03:21 G | 3105313.40 | 3105313.64 | 3105313.89 | 0.0136 | 0.0003 |
| Uranus | 3790-12-20 14:09 G | 3105682.85 | 3105683.09 | 3105683.34 | 0.0137 | 0.0042 |
| Uranus | 3791-12-24 22:33 G | 3106052.23 | 3106052.44 | 3106052.67 | 0.0137 | 0.0060 |
| Uranus | 3792-12-28 11:02 G | 3106421.81 | 3106421.96 | 3106422.15 | 0.0137 | 0.0105 |
| Jupiter | 3793-01-21 16:04 G | 3106445.95 | 3106446.17 | 3106446.39 | 0.0519 | 0.0176 |
| Uranus | 3794-01-01 19:55 G | 3106791.23 | 3106791.33 | 3106791.43 | 0.0138 | 0.0125 |
| Jupiter | 3799-07-29 16:19 G | 3108826.14 | 3108826.18 | 3108826.24 | 0.0511 | 0.0495 |
| Saturn | 3801-01-25 21:21 G | 3109371.24 | 3109371.39 | 3109371.55 | 0.0294 | 0.0229 |
| Jupiter | 3805-01-27 10:48 G | 3110833.81 | 3110833.95 | 3110834.09 | 0.0517 | 0.0393 |
| Neptune | 3810-08-15 22:48 G | 3112860.32 | 3112860.45 | 3112860.62 | 0.0088 | 0.0073 |
| Neptune | 3811-08-18 09:50 G | 3113227.73 | 3113227.91 | 3113228.12 | 0.0088 | 0.0057 |
| Neptune | 3812-08-19 23:02 G | 3113595.22 | 3113595.46 | 3113595.73 | 0.0088 | 0.0031 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Neptune | 3813-08-22 14:52 G | 3113962.88 | 3113963.12 | 3113963.38 | 0.0088 | 0.0014 |
| Mars | 3814-05-25 10:33 G | 3114238.77 | 3114238.94 | 3114239.10 | 0.1670 | 0.0825 |
| Neptune | 3814-08-24 23:02 G | 3114330.20 | 3114330.46 | 3114330.73 | 0.0088 | 0.0012 |
| Neptune | 3815-08-27 18:14 G | 3114698.02 | 3114698.26 | 3114698.51 | 0.0088 | 0.0030 |
| Saturn | 3816-08-05 23:45 G | 3115042.45 | 3115042.49 | 3115042.54 | 0.0267 | 0.0262 |
| Neptune | 3816-08-29 00:00 G | 3115065.31 | 3115065.50 | 3115065.72 | 0.0089 | 0.0055 |
| Neptune | 3817-08-31 19:55 G | 3115433.20 | 3115433.33 | 3115433.51 | 0.0089 | 0.0073 |
| Uranus | 3826-05-30 09:21 G | 3118626.73 | 3118626.89 | 3118627.06 | 0.0144 | 0.0107 |
| Uranus | 3827-06-04 03:50 G | 3118996.45 | 3118996.66 | 3118996.88 | 0.0143 | 0.0082 |
| Uranus | 3828-06-08 08:24 G | 3119366.61 | 3119366.85 | 3119367.09 | 0.0143 | 0.0041 |
| Uranus | 3829-06-13 04:04 G | 3119736.40 | 3119736.67 | 3119736.93 | 0.0142 | 0.0003 |
| Uranus | 3830-06-18 05:16 G | 3120106.48 | 3120106.72 | 3120106.97 | 0.0142 | 0.0024 |
| Saturn | 3831-02-03 15:21 G | 3120336.96 | 3120337.14 | 3120337.33 | 0.0293 | 0.0191 |
| Uranus | 3831-06-23 01:55 G | 3120476.36 | 3120476.58 | 3120476.82 | 0.0141 | 0.0072 |
| Uranus | 3832-06-26 23:45 G | 3120846.32 | 3120846.49 | 3120846.69 | 0.0141 | 0.0096 |
| Uranus | 3833-07-01 21:50 G | 3121216.37 | 3121216.41 | 3121216.50 | 0.0140 | 0.0136 |
| Jupiter | 3834-07-10 10:33 G | 3121589.86 | 3121589.94 | 3121590.05 | 0.0503 | 0.0457 |
| Saturn | 3845-07-31 23:31 G | 3125629.24 | 3125629.48 | 3125629.72 | 0.0266 | 0.0015 |
| Jupiter | 3846-07-15 11:45 G | 3125977.79 | 3125977.99 | 3125978.19 | 0.0505 | 0.0252 |
| Jupiter | 3852-01-13 13:11 G | 3127985.91 | 3127986.05 | 3127986.19 | 0.0524 | 0.0411 |
| Jupiter | 3858-07-19 23:02 G | 3130365.22 | 3130365.46 | 3130365.70 | 0.0507 | 0.0066 |
| Saturn | 3860-01-28 10:48 G | 3130922.74 | 3130922.95 | 3130923.17 | 0.0294 | 0.0135 |
| Jupiter | 3864-01-17 23:02 G | 3132373.24 | 3132373.46 | 3132373.69 | 0.0522 | 0.0147 |
| Mars | 3867-11-28 03:35 G | 3133783.50 | 3133783.65 | 3133783.81 | 0.1862 | 0.0975 |
| Uranus | 3868-11-26 19:40 G | 3134148.30 | 3134148.32 | 3134148.39 | 0.0135 | 0.0133 |
| Uranus | 3869-12-01 05:16 G | 3134517.62 | 3134517.72 | 3134517.85 | 0.0135 | 0.0118 |
| Jupiter | 3870-07-24 21:21 G | 3134753.17 | 3134753.39 | 3134753.60 | 0.0508 | 0.0174 |
| Uranus | 3870-12-05 12:14 G | 3134886.79 | 3134887.01 | 3134887.23 | 0.0135 | 0.0076 |
| Uranus | 3871-12-09 21:21 G | 3135256.18 | 3135256.39 | 3135256.62 | 0.0136 | 0.0055 |
| Uranus | 3872-12-13 05:31 G | 3135625.48 | 3135625.73 | 3135626.00 | 0.0136 | 0.0020 |

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| Uranus | 3873-12-17 15:21 G | 3135994.90 | 3135995.14 | 3135995.38 | 0.0136 | 0.0013 |
| Saturn | 3874-07-27 03:07 G | 3136216.49 | 3136216.63 | 3136216.78 | 0.0267 | 0.0220 |
| Uranus | 3874-12-22 01:11 G | 3136364.31 | 3136364.55 | 3136364.81 | 0.0137 | 0.0036 |
| Uranus | 3875-12-26 11:02 G | 3136733.78 | 3136733.96 | 3136734.18 | 0.0137 | 0.0079 |
| Jupiter | 3876-01-22 17:45 G | 3136761.03 | 3136761.24 | 3136761.46 | 0.0520 | 0.0121 |
| Uranus | 3876-12-29 23:02 G | 3137103.29 | 3137103.46 | 3137103.65 | 0.0138 | 0.0097 |
| Jupiter | 3882-07-29 14:52 G | 3139141.01 | 3139141.12 | 3139141.25 | 0.0510 | 0.0441 |
| Jupiter | 3888-01-27 10:04 G | 3141148.74 | 3141148.92 | 3141149.11 | 0.0518 | 0.0331 |
| Saturn | 3890-02-05 06:00 G | 3141888.71 | 3141888.75 | 3141888.80 | 0.0293 | 0.0287 |
| Neptune | 3891-02-12 04:19 G | 3142260.64 | 3142260.68 | 3142260.75 | 0.0089 | 0.0086 |
| Neptune | 3892-02-14 19:40 G | 3142628.20 | 3142628.32 | 3142628.49 | 0.0089 | 0.0074 |
| Neptune | 3893-02-16 02:24 G | 3142995.41 | 3142995.60 | 3142995.84 | 0.0089 | 0.0046 |
| Neptune | 3894-02-18 13:55 G | 3143362.86 | 3143363.08 | 3143363.35 | 0.0089 | 0.0033 |
| Neptune | 3895-02-21 02:24 G | 3143730.36 | 3143730.60 | 3143730.85 | 0.0089 | 0.0004 |
| Neptune | 3896-02-23 08:52 G | 3144097.62 | 3144097.87 | 3144098.14 | 0.0089 | 0.0010 |
| Neptune | 3897-02-25 00:28 G | 3144465.31 | 3144465.52 | 3144465.76 | 0.0089 | 0.0039 |
| Neptune | 3898-02-27 04:04 G | 3144832.48 | 3144832.67 | 3144832.89 | 0.0089 | 0.0051 |
| Neptune | 3899-03-01 21:21 G | 3145200.29 | 3145200.39 | 3145200.51 | 0.0089 | 0.0079 |
| Saturn | 3904-08-03 12:43 G | 3147180.80 | 3147181.03 | 3147181.26 | 0.0266 | 0.0089 |
| Uranus | 3909-05-26 12:43 G | 3148937.99 | 3148938.03 | 3148938.12 | 0.0144 | 0.0139 |
| Uranus | 3910-05-31 20:09 G | 3149308.20 | 3149308.34 | 3149308.49 | 0.0144 | 0.0117 |
| Uranus | 3911-06-05 13:26 G | 3149677.84 | 3149678.06 | 3149678.30 | 0.0143 | 0.0068 |
| Uranus | 3912-06-09 18:43 G | 3150048.04 | 3150048.28 | 3150048.52 | 0.0143 | 0.0037 |
| Uranus | 3913-06-14 13:11 G | 3150417.78 | 3150418.05 | 3150418.31 | 0.0142 | 0.0003 |
| Uranus | 3914-06-19 15:50 G | 3150787.93 | 3150788.16 | 3150788.40 | 0.0142 | 0.0042 |
| Uranus | 3915-06-24 11:16 G | 3151157.75 | 3151157.97 | 3151158.22 | 0.0141 | 0.0064 |
| Pluto | 3916-02-06 09:35 G | 3151384.67 | 3151384.90 | 3151385.14 | 0.0064 | 0.0024 |
| Uranus | 3916-06-28 10:48 G | 3151527.82 | 3151527.95 | 3151528.12 | 0.0141 | 0.0111 |
| Uranus | 3917-07-03 07:55 G | 3151897.80 | 3151897.83 | 3151897.90 | 0.0140 | 0.0137 |
| Jupiter | 3917-07-10 21:35 G | 3151905.36 | 3151905.40 | 3151905.46 | 0.0502 | 0.0490 |

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| Saturn | 3919-01-31 05:16 G | 3152474.49 | 3152474.72 | 3152474.96 | 0.0294 | 0.0038 |
| Jupiter | 3929-07-15 06:43 G | 3156292.59 | 3156292.78 | 3156292.97 | 0.0504 | 0.0296 |
| Saturn | 3933-07-29 08:52 G | 3157767.66 | 3157767.87 | 3157768.08 | 0.0267 | 0.0147 |
| Jupiter | 3935-01-13 00:57 G | 3158300.45 | 3158300.54 | 3158300.65 | 0.0525 | 0.0471 |
| Mars | 3940-05-22 05:16 G | 3160256.58 | 3160256.72 | 3160256.87 | 0.1658 | 0.1151 |
| Jupiter | 3941-07-20 03:50 G | 3160680.44 | 3160680.66 | 3160680.88 | 0.0506 | 0.0115 |
| Jupiter | 3947-01-18 01:55 G | 3162688.38 | 3162688.58 | 3162688.79 | 0.0523 | 0.0197 |
| Jupiter | 3953-07-24 16:33 G | 3165067.96 | 3165068.19 | 3165068.43 | 0.0508 | 0.0124 |
| Uranus | 3953-12-02 16:04 G | 3165199.02 | 3165199.17 | 3165199.35 | 0.0135 | 0.0101 |
| Uranus | 3954-12-06 22:04 G | 3165568.23 | 3165568.42 | 3165568.64 | 0.0135 | 0.0083 |
| Uranus | 3955-12-11 09:07 G | 3165937.66 | 3165937.88 | 3165938.13 | 0.0136 | 0.0044 |
| Uranus | 3956-12-14 16:33 G | 3166306.93 | 3166307.19 | 3166307.45 | 0.0136 | 0.0017 |
| Uranus | 3957-12-19 03:35 G | 3166676.41 | 3166676.65 | 3166676.90 | 0.0136 | 0.0013 |
| Uranus | 3958-12-23 12:00 G | 3167045.77 | 3167046.00 | 3167046.26 | 0.0137 | 0.0051 |
| Jupiter | 3959-01-22 20:52 G | 3167076.13 | 3167076.37 | 3167076.60 | 0.0520 | 0.0081 |
| Uranus | 3959-12-27 23:16 G | 3167415.26 | 3167415.47 | 3167415.68 | 0.0137 | 0.0071 |
| Uranus | 3960-12-31 09:07 G | 3167784.75 | 3167784.88 | 3167785.04 | 0.0138 | 0.0115 |
| Uranus | 3962-01-04 19:55 G | 3168154.30 | 3168154.33 | 3168154.39 | 0.0138 | 0.0135 |
| Saturn | 3963-08-05 21:35 G | 3168732.21 | 3168732.40 | 3168732.61 | 0.0266 | 0.0166 |
| Jupiter | 3965-07-29 10:33 G | 3169455.80 | 3169455.94 | 3169456.09 | 0.0510 | 0.0395 |
| Jupiter | 3971-01-27 10:33 G | 3171463.75 | 3171463.94 | 3171464.12 | 0.0518 | 0.0288 |
| Neptune | 3975-08-18 16:33 G | 3173128.01 | 3173128.19 | 3173128.39 | 0.0088 | 0.0062 |
| Neptune | 3976-08-20 09:07 G | 3173495.69 | 3173495.88 | 3173496.12 | 0.0088 | 0.0048 |
| Neptune | 3977-08-22 17:02 G | 3173862.96 | 3173863.21 | 3173863.48 | 0.0088 | 0.0019 |
| Saturn | 3978-02-02 00:14 G | 3174026.28 | 3174026.51 | 3174026.74 | 0.0294 | 0.0058 |
| Neptune | 3978-08-25 12:57 G | 3174230.79 | 3174231.04 | 3174231.31 | 0.0088 | 0.0005 |
| Neptune | 3979-08-27 19:11 G | 3174598.05 | 3174598.30 | 3174598.55 | 0.0088 | 0.0024 |
| Neptune | 3980-08-29 14:52 G | 3174965.89 | 3174966.12 | 3174966.38 | 0.0089 | 0.0037 |
| Neptune | 3981-08-31 22:33 G | 3175333.28 | 3175333.44 | 3175333.62 | 0.0089 | 0.0066 |
| Neptune | 3982-09-03 15:07 G | 3175701.03 | 3175701.13 | 3175701.28 | 0.0089 | 0.0079 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Jupiter | 3983-02-01 06:14 G | 3175851.67 | 3175851.76 | 3175851.85 | 0.0516 | 0.0477 |
| Saturn | 3992-07-30 19:40 G | 3179319.09 | 3179319.32 | 3179319.56 | 0.0267 | 0.0073 |
| Uranus | 3994-06-01 06:43 G | 3179989.62 | 3179989.78 | 3179989.98 | 0.0143 | 0.0099 |
| Uranus | 3995-06-06 00:00 G | 3180359.29 | 3180359.50 | 3180359.73 | 0.0143 | 0.0074 |
| Uranus | 3996-06-10 06:28 G | 3180729.53 | 3180729.77 | 3180730.02 | 0.0143 | 0.0031 |
| Uranus | 3997-06-15 00:14 G | 3181099.24 | 3181099.51 | 3181099.77 | 0.0142 | 0.0007 |
| Uranus | 3998-06-20 03:35 G | 3181469.41 | 3181469.65 | 3181469.90 | 0.0142 | 0.0034 |
| Uranus | 3999-06-24 21:35 G | 3181839.21 | 3181839.40 | 3181839.64 | 0.0141 | 0.0083 |
| Uranus | 4000-06-28 22:19 G | 3182209.28 | 3182209.43 | 3182209.61 | 0.0141 | 0.0105 |

5TH MILLENNIUM CE

This is a list of transits of Moon in the 5th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|--------------------|------------|------------|------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Pluto | 4004-08-07 17:16 G | 3183709.99 | 3183710.22 | 3183710.46 | 0.0079 | 0.0035 | | |
| Saturn | 4007-01-27 08:24 G | 3184612.71 | 3184612.85 | 3184613.00 | 0.0293 | 0.0237 | | |
| Jupiter | 4012-07-14 09:07 G | 3186607.72 | 3186607.88 | 3186608.04 | 0.0503 | 0.0351 | | |
| Jupiter | 4018-01-12 11:16 G | 3188615.92 | 3188615.97 | 3188616.03 | 0.0525 | 0.0505 | | |
| Mars | 4019-05-25 15:07 G | 3189113.94 | 3189114.13 | 3189114.32 | 0.1662 | 0.0071 | | |
| Saturn | 4022-08-07 02:52 G | 3190283.52 | 3190283.62 | 3190283.73 | 0.0266 | 0.0241 | | |
| Jupiter | 4024-07-19 00:14 G | 3190995.28 | 3190995.51 | 3190995.74 | 0.0505 | 0.0162 | | |
| Jupiter | 4030-01-17 04:19 G | 3193003.47 | 3193003.68 | 3193003.90 | 0.0523 | 0.0225 | | |
| Jupiter | 4036-07-23 18:28 G | 3195383.04 | 3195383.27 | 3195383.49 | 0.0507 | 0.0089 | | |
| Uranus | 4036-11-28 15:35 G | 3195511.07 | 3195511.15 | 3195511.25 | 0.0134 | 0.0126 | | |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Saturn | 4037-02-03 13:11 G | 3195577.84 | 3195578.05 | 3195578.27 | 0.0294 | 0.0148 |
| Uranus | 4037-12-03 03:21 G | 3195880.52 | 3195880.64 | 3195880.80 | 0.0135 | 0.0111 |
| Uranus | 4038-12-07 08:09 G | 3196249.62 | 3196249.84 | 3196250.07 | 0.0135 | 0.0067 |
| Uranus | 4039-12-11 20:09 G | 3196619.11 | 3196619.34 | 3196619.57 | 0.0135 | 0.0048 |
| Uranus | 4040-12-15 02:09 G | 3196988.33 | 3196988.59 | 3196988.85 | 0.0136 | 0.0010 |
| Uranus | 4041-12-19 14:24 G | 3197357.86 | 3197358.10 | 3197358.34 | 0.0136 | 0.0021 |
| Jupiter | 4042-01-21 19:55 G | 3197391.11 | 3197391.33 | 3197391.55 | 0.0521 | 0.0038 |
| Uranus | 4042-12-23 21:35 G | 3197727.17 | 3197727.40 | 3197727.66 | 0.0137 | 0.0046 |
| Uranus | 4043-12-28 10:19 G | 3198096.75 | 3198096.93 | 3198097.12 | 0.0137 | 0.0088 |
| Uranus | 4044-12-31 19:11 G | 3198466.15 | 3198466.30 | 3198466.48 | 0.0138 | 0.0106 |
| Jupiter | 4048-07-28 18:43 G | 3199771.12 | 3199771.28 | 3199771.47 | 0.0509 | 0.0354 |
| Saturn | 4051-08-02 08:38 G | 3200870.62 | 3200870.86 | 3200871.10 | 0.0267 | 0.0002 |
| Jupiter | 4054-01-26 13:55 G | 3201778.87 | 3201779.08 | 3201779.29 | 0.0519 | 0.0232 |
| Neptune | 4056-02-15 03:07 G | 3202528.55 | 3202528.63 | 3202528.76 | 0.0089 | 0.0080 |
| Neptune | 4057-02-16 13:55 G | 3202895.90 | 3202896.08 | 3202896.28 | 0.0089 | 0.0061 |
| Neptune | 4058-02-19 02:24 G | 3203263.39 | 3203263.60 | 3203263.84 | 0.0089 | 0.0038 |
| Neptune | 4059-02-21 08:09 G | 3203630.59 | 3203630.84 | 3203631.09 | 0.0089 | 0.0019 |
| Neptune | 4060-02-24 00:28 G | 3203998.27 | 3203998.52 | 3203998.77 | 0.0089 | 0.0004 |
| Neptune | 4061-02-25 03:50 G | 3204365.42 | 3204365.66 | 3204365.91 | 0.0089 | 0.0021 |
| Neptune | 4062-02-27 20:38 G | 3204733.15 | 3204733.36 | 3204733.60 | 0.0089 | 0.0045 |
| Neptune | 4063-03-02 01:11 G | 3205100.39 | 3205100.55 | 3205100.74 | 0.0089 | 0.0062 |
| Neptune | 4064-03-03 15:35 G | 3205468.10 | 3205468.15 | 3205468.22 | 0.0089 | 0.0086 |
| Saturn | 4066-01-28 19:55 G | 3206164.14 | 3206164.33 | 3206164.54 | 0.0293 | 0.0152 |
| Jupiter | 4066-01-31 00:00 G | 3206166.38 | 3206166.50 | 3206166.63 | 0.0517 | 0.0430 |
| Mars | 4072-11-24 23:16 G | 3208656.30 | 3208656.47 | 3208656.65 | 0.1875 | 0.1103 |
| Uranus | 4077-05-27 08:52 G | 3210300.78 | 3210300.87 | 3210300.97 | 0.0144 | 0.0132 |
| Uranus | 4078-06-01 15:50 G | 3210671.01 | 3210671.16 | 3210671.34 | 0.0143 | 0.0110 |
| Uranus | 4079-06-06 08:38 G | 3211040.64 | 3211040.86 | 3211041.10 | 0.0143 | 0.0059 |
| Uranus | 4080-06-10 15:21 G | 3211410.89 | 3211411.14 | 3211411.39 | 0.0143 | 0.0030 |
| Saturn | 4080-07-27 05:45 G | 3211457.64 | 3211457.74 | 3211457.87 | 0.0266 | 0.0237 |

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| Uranus | 4081-06-15 08:09 G | 3211780.58 | 3211780.84 | 3211781.10 | 0.0142 | 0.0006 |
| Uranus | 4082-06-20 12:43 G | 3212150.80 | 3212151.03 | 3212151.27 | 0.0142 | 0.0050 |
| Uranus | 4083-06-25 06:28 G | 3212520.54 | 3212520.77 | 3212521.00 | 0.0141 | 0.0072 |
| Uranus | 4084-06-29 08:09 G | 3212890.73 | 3212890.84 | 3212890.98 | 0.0141 | 0.0121 |
| Jupiter | 4095-07-14 11:02 G | 3216922.82 | 3216922.96 | 3216923.12 | 0.0503 | 0.0390 |
| Saturn | 4096-02-05 18:00 G | 3217129.11 | 3217129.25 | 3217129.41 | 0.0294 | 0.0233 |
| Mars | 4098-05-27 16:48 G | 3217971.10 | 3217971.20 | 3217971.29 | 0.1665 | 0.1409 |
| Jupiter | 4107-07-20 04:48 G | 3221310.49 | 3221310.70 | 3221310.91 | 0.0505 | 0.0198 |
| Saturn | 4110-08-04 15:35 G | 3222421.91 | 3222422.15 | 3222422.40 | 0.0267 | 0.0070 |
| Jupiter | 4113-01-17 02:24 G | 3223318.41 | 3223318.60 | 3223318.79 | 0.0524 | 0.0272 |
| Jupiter | 4119-07-25 01:55 G | 3225698.34 | 3225698.58 | 3225698.83 | 0.0507 | 0.0055 |
| Uranus | 4120-11-30 00:14 G | 3226192.50 | 3226192.51 | 3226192.55 | 0.0134 | 0.0134 |
| Uranus | 4121-12-04 13:40 G | 3226561.90 | 3226562.07 | 3226562.25 | 0.0135 | 0.0093 |
| Uranus | 4122-12-08 17:31 G | 3226931.02 | 3226931.23 | 3226931.45 | 0.0135 | 0.0076 |
| Uranus | 4123-12-13 06:57 G | 3227300.56 | 3227300.79 | 3227301.03 | 0.0135 | 0.0034 |
| Uranus | 4124-12-16 12:00 G | 3227669.74 | 3227670.00 | 3227670.26 | 0.0136 | 0.0010 |
| Jupiter | 4125-01-22 01:26 G | 3227706.33 | 3227706.56 | 3227706.80 | 0.0522 | 0.0011 |
| Saturn | 4125-01-31 07:40 G | 3227715.59 | 3227715.82 | 3227716.05 | 0.0293 | 0.0072 |
| Uranus | 4125-12-21 01:26 G | 3228039.32 | 3228039.56 | 3228039.80 | 0.0136 | 0.0022 |
| Uranus | 4126-12-25 07:11 G | 3228408.58 | 3228408.80 | 3228409.05 | 0.0137 | 0.0058 |
| Uranus | 4127-12-29 20:24 G | 3228778.16 | 3228778.35 | 3228778.56 | 0.0137 | 0.0079 |
| Uranus | 4129-01-02 03:50 G | 3229147.57 | 3229147.66 | 3229147.79 | 0.0138 | 0.0124 |
| Jupiter | 4131-07-29 09:35 G | 3230085.72 | 3230085.90 | 3230086.09 | 0.0509 | 0.0303 |
| Jupiter | 4137-01-26 15:21 G | 3232093.93 | 3232094.14 | 3232094.35 | 0.0520 | 0.0198 |
| Saturn | 4139-07-30 11:45 G | 3233008.81 | 3233008.99 | 3233009.19 | 0.0266 | 0.0170 |
| Neptune | 4139-08-19 05:16 G | 3233028.59 | 3233028.72 | 3233028.90 | 0.0088 | 0.0071 |
| Neptune | 4140-08-20 11:45 G | 3233395.82 | 3233395.99 | 3233396.22 | 0.0088 | 0.0058 |
| Neptune | 4141-08-23 08:09 G | 3233763.61 | 3233763.84 | 3233764.10 | 0.0088 | 0.0030 |
| Neptune | 4142-08-25 14:24 G | 3234130.85 | 3234131.10 | 3234131.36 | 0.0088 | 0.0016 |
| Jupiter | 4143-08-03 13:40 G | 3234474.05 | 3234474.07 | 3234474.10 | 0.0511 | 0.0507 |

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| Neptune | 4143-08-28 09:35 G | 3234498.65 | 3234498.90 | 3234499.18 | 0.0088 | 0.0012 |
| Neptune | 4144-08-29 17:45 G | 3234866.01 | 3234866.24 | 3234866.50 | 0.0088 | 0.0028 |
| Neptune | 4145-09-01 09:07 G | 3235233.69 | 3235233.88 | 3235234.12 | 0.0088 | 0.0054 |
| Neptune | 4146-09-03 22:19 G | 3235601.29 | 3235601.43 | 3235601.60 | 0.0089 | 0.0070 |
| Jupiter | 4149-01-31 15:21 G | 3236482.00 | 3236482.14 | 3236482.29 | 0.0517 | 0.0401 |
| Mars | 4151-11-30 12:00 G | 3237514.84 | 3237515.00 | 3237515.16 | 0.1869 | 0.1025 |
| Uranus | 4161-05-28 16:19 G | 3240982.16 | 3240982.18 | 3240982.24 | 0.0144 | 0.0142 |
| Uranus | 4162-06-03 00:00 G | 3241352.30 | 3241352.50 | 3241352.70 | 0.0143 | 0.0091 |
| Uranus | 4163-06-07 16:33 G | 3241721.98 | 3241722.19 | 3241722.43 | 0.0143 | 0.0068 |
| Pluto | 4164-02-08 14:09 G | 3241967.99 | 3241968.09 | 3241968.26 | 0.0064 | 0.0056 |
| Uranus | 4164-06-12 00:00 G | 3242092.25 | 3242092.50 | 3242092.76 | 0.0143 | 0.0022 |
| Pluto | 4165-02-09 00:14 G | 3242334.31 | 3242334.51 | 3242334.74 | 0.0065 | 0.0032 |
| Uranus | 4165-06-16 16:33 G | 3242461.93 | 3242462.19 | 3242462.45 | 0.0142 | 0.0013 |
| Uranus | 4166-06-21 21:50 G | 3242832.17 | 3242832.41 | 3242832.65 | 0.0142 | 0.0042 |
| Uranus | 4167-06-26 13:40 G | 3243201.89 | 3243202.07 | 3243202.29 | 0.0141 | 0.0091 |
| Uranus | 4168-06-30 16:33 G | 3243572.06 | 3243572.19 | 3243572.36 | 0.0141 | 0.0112 |
| Saturn | 4169-08-05 16:19 G | 3243972.96 | 3243973.18 | 3243973.41 | 0.0266 | 0.0135 |
| Jupiter | 4178-07-14 16:48 G | 3247238.08 | 3247238.20 | 3247238.32 | 0.0502 | 0.0427 |
| Saturn | 4184-02-02 13:26 G | 3249266.81 | 3249267.06 | 3249267.30 | 0.0293 | 0.0006 |
| Jupiter | 4190-07-19 08:09 G | 3251625.63 | 3251625.84 | 3251626.06 | 0.0504 | 0.0238 |
| Jupiter | 4196-01-17 15:07 G | 3253633.93 | 3253634.13 | 3253634.32 | 0.0524 | 0.0293 |
| Saturn | 4198-07-31 19:55 G | 3254560.11 | 3254560.33 | 3254560.56 | 0.0266 | 0.0105 |
| Jupiter | 4202-07-24 20:52 G | 3256013.13 | 3256013.37 | 3256013.60 | 0.0506 | 0.0017 |
| Uranus | 4204-12-01 10:04 G | 3256873.82 | 3256873.92 | 3256874.06 | 0.0134 | 0.0119 |
| Uranus | 4205-12-06 00:14 G | 3257243.37 | 3257243.51 | 3257243.68 | 0.0135 | 0.0103 |
| Uranus | 4206-12-10 02:52 G | 3257612.41 | 3257612.62 | 3257612.87 | 0.0135 | 0.0060 |
| Uranus | 4207-12-14 17:02 G | 3257981.99 | 3257982.21 | 3257982.46 | 0.0135 | 0.0041 |
| Jupiter | 4208-01-23 05:02 G | 3258021.48 | 3258021.71 | 3258021.94 | 0.0522 | 0.0038 |
| Uranus | 4208-12-17 21:07 G | 3258351.12 | 3258351.38 | 3258351.64 | 0.0136 | 0.0001 |
| Uranus | 4209-12-22 11:16 G | 3258720.74 | 3258720.97 | 3258721.22 | 0.0136 | 0.0028 |

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| Uranus | 4210-12-26 16:33 G | 3259089.96 | 3259090.19 | 3259090.43 | 0.0137 | 0.0055 |
| Uranus | 4211-12-31 07:11 G | 3259459.63 | 3259459.80 | 3259459.98 | 0.0137 | 0.0095 |
| Uranus | 4213-01-03 13:40 G | 3259828.94 | 3259829.07 | 3259829.23 | 0.0137 | 0.0114 |
| Jupiter | 4214-07-30 00:28 G | 3260401.32 | 3260401.52 | 3260401.71 | 0.0508 | 0.0275 |
| Jupiter | 4220-01-28 06:00 G | 3262409.53 | 3262409.75 | 3262409.96 | 0.0520 | 0.0156 |
| Neptune | 4220-02-16 13:26 G | 3262428.99 | 3262429.06 | 3262429.13 | 0.0089 | 0.0085 |
| Neptune | 4221-02-18 03:07 G | 3262796.51 | 3262796.63 | 3262796.78 | 0.0089 | 0.0074 |
| Neptune | 4222-02-20 08:24 G | 3263163.65 | 3263163.85 | 3263164.09 | 0.0089 | 0.0045 |
| Neptune | 4223-02-23 01:26 G | 3263531.35 | 3263531.56 | 3263531.82 | 0.0089 | 0.0034 |
| Neptune | 4224-02-25 05:16 G | 3263898.47 | 3263898.72 | 3263898.98 | 0.0089 | 0.0004 |
| Mars | 4224-05-24 20:09 G | 3263988.17 | 3263988.34 | 3263988.51 | 0.1653 | 0.0730 |
| Neptune | 4225-02-26 22:04 G | 3264266.17 | 3264266.42 | 3264266.69 | 0.0089 | 0.0008 |
| Neptune | 4226-03-01 03:07 G | 3264633.42 | 3264633.63 | 3264633.87 | 0.0089 | 0.0037 |
| Jupiter | 4226-08-03 15:35 G | 3264789.07 | 3264789.15 | 3264789.25 | 0.0510 | 0.0470 |
| Neptune | 4227-03-03 16:04 G | 3265000.97 | 3265001.17 | 3265001.41 | 0.0089 | 0.0049 |
| Neptune | 4228-03-05 00:57 G | 3265368.46 | 3265368.54 | 3265368.69 | 0.0089 | 0.0078 |
| Saturn | 4228-08-07 16:04 G | 3265524.01 | 3265524.17 | 3265524.35 | 0.0266 | 0.0195 |
| Neptune | 4229-03-07 09:35 G | 3265735.90 | 3265735.90 | 3265735.94 | 0.0089 | 0.0089 |
| Jupiter | 4232-02-01 13:26 G | 3266796.90 | 3266797.06 | 3266797.23 | 0.0518 | 0.0360 |
| Saturn | 4243-02-04 11:31 G | 3270817.74 | 3270817.98 | 3270818.23 | 0.0294 | 0.0061 |
| Uranus | 4245-05-30 00:43 G | 3271663.42 | 3271663.53 | 3271663.65 | 0.0144 | 0.0126 |
| Uranus | 4246-06-04 06:57 G | 3272033.62 | 3272033.79 | 3272033.98 | 0.0143 | 0.0102 |
| Uranus | 4247-06-09 00:00 G | 3272403.28 | 3272403.50 | 3272403.75 | 0.0143 | 0.0051 |
| Uranus | 4248-06-13 06:57 G | 3272773.55 | 3272773.79 | 3272774.05 | 0.0143 | 0.0024 |
| Uranus | 4249-06-17 23:02 G | 3273143.20 | 3273143.46 | 3273143.72 | 0.0142 | 0.0015 |
| Uranus | 4250-06-23 04:48 G | 3273513.48 | 3273513.70 | 3273513.94 | 0.0142 | 0.0057 |
| Uranus | 4251-06-27 20:38 G | 3273883.15 | 3273883.36 | 3273883.58 | 0.0141 | 0.0080 |
| Uranus | 4252-07-02 00:28 G | 3274253.43 | 3274253.52 | 3274253.63 | 0.0141 | 0.0129 |
| Pluto | 4253-08-12 12:28 G | 3274659.99 | 3274660.02 | 3274660.12 | 0.0079 | 0.0077 |
| Saturn | 4257-08-03 02:09 G | 3276111.34 | 3276111.59 | 3276111.83 | 0.0266 | 0.0045 |

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| Jupiter | 4261-07-14 23:02 G | 3277553.38 | 3277553.46 | 3277553.57 | 0.0502 | 0.0461 |
| Saturn | 4272-01-29 04:33 G | 3281403.63 | 3281403.69 | 3281403.78 | 0.0293 | 0.0279 |
| Jupiter | 4273-07-19 11:16 G | 3281940.78 | 3281940.97 | 3281941.18 | 0.0504 | 0.0264 |
| Jupiter | 4279-01-17 17:45 G | 3283949.06 | 3283949.24 | 3283949.42 | 0.0525 | 0.0322 |
| Jupiter | 4285-07-24 14:09 G | 3286328.85 | 3286329.09 | 3286329.32 | 0.0506 | 0.0008 |
| Saturn | 4287-08-09 19:26 G | 3287075.25 | 3287075.31 | 3287075.39 | 0.0266 | 0.0254 |
| Uranus | 4288-12-01 18:57 G | 3287555.22 | 3287555.29 | 3287555.40 | 0.0134 | 0.0126 |
| Uranus | 4289-12-06 10:04 G | 3287924.74 | 3287924.92 | 3287925.12 | 0.0135 | 0.0085 |
| Uranus | 4290-12-10 12:28 G | 3288293.81 | 3288294.02 | 3288294.25 | 0.0135 | 0.0069 |
| Jupiter | 4291-01-22 17:16 G | 3288337.00 | 3288337.22 | 3288337.45 | 0.0522 | 0.0079 |
| Uranus | 4291-12-15 03:35 G | 3288663.41 | 3288663.65 | 3288663.90 | 0.0135 | 0.0025 |
| Uranus | 4292-12-18 06:43 G | 3289032.53 | 3289032.78 | 3289033.04 | 0.0136 | 0.0004 |
| Uranus | 4293-12-22 21:50 G | 3289402.18 | 3289402.41 | 3289402.66 | 0.0136 | 0.0033 |
| Uranus | 4294-12-27 01:40 G | 3289771.36 | 3289771.57 | 3289771.81 | 0.0137 | 0.0066 |
| Uranus | 4295-12-31 17:16 G | 3290141.03 | 3290141.22 | 3290141.41 | 0.0137 | 0.0088 |
| Uranus | 4297-01-03 22:33 G | 3290510.38 | 3290510.44 | 3290510.52 | 0.0138 | 0.0132 |
| Jupiter | 4297-07-29 01:55 G | 3290716.37 | 3290716.58 | 3290716.80 | 0.0508 | 0.0244 |
| Saturn | 4302-02-06 05:45 G | 3292368.52 | 3292368.74 | 3292368.97 | 0.0294 | 0.0122 |
| Jupiter | 4303-01-28 05:31 G | 3292724.50 | 3292724.73 | 3292724.96 | 0.0521 | 0.0113 |
| Mars | 4303-05-29 05:02 G | 3292845.51 | 3292845.71 | 3292845.90 | 0.1657 | 0.0419 |
| Neptune | 4303-08-20 07:40 G | 3292928.79 | 3292928.82 | 3292928.90 | 0.0088 | 0.0087 |
| Neptune | 4304-08-22 04:19 G | 3293296.49 | 3293296.68 | 3293296.87 | 0.0088 | 0.0061 |
| Neptune | 4305-08-24 10:04 G | 3293663.71 | 3293663.92 | 3293664.15 | 0.0088 | 0.0047 |
| Neptune | 4306-08-27 04:48 G | 3294031.44 | 3294031.70 | 3294031.97 | 0.0088 | 0.0019 |
| Neptune | 4307-08-29 14:38 G | 3294398.85 | 3294399.11 | 3294399.36 | 0.0088 | 0.0005 |
| Neptune | 4308-08-31 04:48 G | 3294766.45 | 3294766.70 | 3294766.97 | 0.0088 | 0.0023 |
| Jupiter | 4309-08-03 21:21 G | 3295104.28 | 3295104.39 | 3295104.52 | 0.0509 | 0.0427 |
| Neptune | 4309-09-02 18:43 G | 3295134.06 | 3295134.28 | 3295134.52 | 0.0088 | 0.0037 |
| Neptune | 4310-09-05 04:04 G | 3295501.51 | 3295501.67 | 3295501.88 | 0.0089 | 0.0064 |
| Neptune | 4311-09-07 22:04 G | 3295869.33 | 3295869.42 | 3295869.58 | 0.0089 | 0.0078 |

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| Jupiter | 4315-02-02 04:33 G | 3297112.53 | 3297112.69 | 3297112.86 | 0.0519 | 0.0341 |
| Saturn | 4316-08-05 01:11 G | 3297662.29 | 3297662.55 | 3297662.80 | 0.0266 | 0.0015 |
| Uranus | 4329-05-31 08:38 G | 3302344.77 | 3302344.86 | 3302344.96 | 0.0144 | 0.0133 |
| Uranus | 4330-06-05 14:09 G | 3302714.90 | 3302715.09 | 3302715.32 | 0.0143 | 0.0084 |
| Saturn | 4331-01-31 07:55 G | 3302954.68 | 3302954.83 | 3302955.00 | 0.0293 | 0.0214 |
| Uranus | 4331-06-10 08:24 G | 3303084.63 | 3303084.85 | 3303085.08 | 0.0143 | 0.0060 |
| Uranus | 4332-06-14 14:52 G | 3303454.87 | 3303455.12 | 3303455.39 | 0.0143 | 0.0013 |
| Uranus | 4333-06-19 07:11 G | 3303824.55 | 3303824.80 | 3303825.05 | 0.0142 | 0.0020 |
| Uranus | 4334-06-24 12:43 G | 3304194.81 | 3304195.03 | 3304195.28 | 0.0142 | 0.0052 |
| Uranus | 4335-06-29 03:50 G | 3304564.49 | 3304564.66 | 3304564.86 | 0.0141 | 0.0098 |
| Uranus | 4336-07-03 08:24 G | 3304934.72 | 3304934.85 | 3304934.98 | 0.0141 | 0.0119 |
| Jupiter | 4344-07-15 04:33 G | 3307868.65 | 3307868.69 | 3307868.75 | 0.0502 | 0.0488 |
| Saturn | 4345-07-30 13:26 G | 3308248.96 | 3308249.06 | 3308249.16 | 0.0266 | 0.0242 |
| Jupiter | 4356-07-20 04:19 G | 3312256.49 | 3312256.68 | 3312256.88 | 0.0503 | 0.0279 |
| Mars | 4356-11-27 01:55 G | 3312386.52 | 3312386.58 | 3312386.65 | 0.1883 | 0.1759 |
| Saturn | 4361-02-07 04:19 G | 3313919.50 | 3313919.68 | 3313919.87 | 0.0293 | 0.0182 |
| Jupiter | 4362-01-18 06:28 G | 3314264.61 | 3314264.77 | 3314264.95 | 0.0525 | 0.0350 |
| Jupiter | 4368-07-24 11:02 G | 3316643.72 | 3316643.96 | 3316644.20 | 0.0505 | 0.0030 |
| Uranus | 4372-12-03 04:48 G | 3318236.58 | 3318236.70 | 3318236.86 | 0.0135 | 0.0113 |
| Uranus | 4373-12-07 20:24 G | 3318606.18 | 3318606.35 | 3318606.54 | 0.0135 | 0.0094 |
| Jupiter | 4374-01-22 20:52 G | 3318652.14 | 3318652.37 | 3318652.60 | 0.0524 | 0.0114 |
| Uranus | 4374-12-11 22:04 G | 3318975.19 | 3318975.42 | 3318975.66 | 0.0135 | 0.0050 |
| Saturn | 4375-08-06 20:09 G | 3319213.10 | 3319213.34 | 3319213.59 | 0.0267 | 0.0075 |
| Uranus | 4375-12-16 13:11 G | 3319344.82 | 3319345.05 | 3319345.30 | 0.0136 | 0.0033 |
| Uranus | 4376-12-19 15:50 G | 3319713.91 | 3319714.16 | 3319714.42 | 0.0136 | 0.0010 |
| Uranus | 4377-12-24 07:26 G | 3320083.58 | 3320083.81 | 3320084.06 | 0.0136 | 0.0037 |
| Uranus | 4378-12-28 11:02 G | 3320452.74 | 3320452.96 | 3320453.19 | 0.0137 | 0.0065 |
| Uranus | 4380-01-02 03:07 G | 3320822.49 | 3320822.63 | 3320822.81 | 0.0137 | 0.0104 |
| Jupiter | 4380-07-29 10:33 G | 3321031.73 | 3321031.94 | 3321032.15 | 0.0507 | 0.0206 |
| Uranus | 4381-01-05 08:24 G | 3321191.75 | 3321191.85 | 3321191.97 | 0.0138 | 0.0123 |

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| Neptune | 4385-02-18 09:07 G | 3322696.77 | 3322696.88 | 3322697.00 | 0.0089 | 0.0079 |
| Jupiter | 4386-01-27 21:21 G | 3323040.17 | 3323040.39 | 3323040.61 | 0.0521 | 0.0081 |
| Neptune | 4386-02-21 01:55 G | 3323064.42 | 3323064.58 | 3323064.79 | 0.0089 | 0.0061 |
| Neptune | 4387-02-23 05:45 G | 3323431.53 | 3323431.74 | 3323431.98 | 0.0089 | 0.0039 |
| Neptune | 4388-02-25 22:19 G | 3323799.19 | 3323799.43 | 3323799.70 | 0.0089 | 0.0020 |
| Neptune | 4389-02-27 04:33 G | 3324166.44 | 3324166.69 | 3324166.94 | 0.0089 | 0.0003 |
| Saturn | 4390-02-01 04:33 G | 3324505.48 | 3324505.69 | 3324505.91 | 0.0293 | 0.0149 |
| Neptune | 4390-03-01 17:02 G | 3324533.96 | 3324534.21 | 3324534.47 | 0.0089 | 0.0021 |
| Neptune | 4391-03-04 03:35 G | 3324901.45 | 3324901.65 | 3324901.88 | 0.0089 | 0.0043 |
| Neptune | 4392-03-05 11:16 G | 3325268.80 | 3325268.97 | 3325269.18 | 0.0089 | 0.0061 |
| Jupiter | 4392-08-03 05:16 G | 3325419.57 | 3325419.72 | 3325419.88 | 0.0509 | 0.0392 |
| Neptune | 4393-03-08 02:09 G | 3325636.52 | 3325636.59 | 3325636.69 | 0.0089 | 0.0083 |
| Jupiter | 4398-02-01 14:38 G | 3327427.92 | 3327428.11 | 3327428.30 | 0.0519 | 0.0314 |
| Saturn | 4404-07-31 17:02 G | 3329800.04 | 3329800.21 | 3329800.39 | 0.0267 | 0.0184 |
| Pluto | 4413-02-11 20:09 G | 3332917.09 | 3332917.34 | 3332917.61 | 0.0064 | 0.0011 |
| Uranus | 4413-05-31 18:57 G | 3333026.17 | 3333026.29 | 3333026.45 | 0.0144 | 0.0120 |
| Uranus | 4414-06-05 23:45 G | 3333396.30 | 3333396.49 | 3333396.70 | 0.0143 | 0.0094 |
| Uranus | 4415-06-10 18:00 G | 3333766.02 | 3333766.25 | 3333766.50 | 0.0143 | 0.0042 |
| Uranus | 4416-06-14 23:45 G | 3334136.24 | 3334136.49 | 3334136.75 | 0.0143 | 0.0016 |
| Uranus | 4417-06-19 15:50 G | 3334505.91 | 3334506.16 | 3334506.41 | 0.0142 | 0.0026 |
| Uranus | 4418-06-24 21:07 G | 3334876.17 | 3334876.38 | 3334876.62 | 0.0142 | 0.0065 |
| Uranus | 4419-06-29 12:00 G | 3335245.82 | 3335246.00 | 3335246.21 | 0.0141 | 0.0090 |
| Saturn | 4420-02-09 07:26 G | 3335470.69 | 3335470.81 | 3335470.94 | 0.0293 | 0.0244 |
| Uranus | 4420-07-03 16:19 G | 3335616.16 | 3335616.18 | 3335616.25 | 0.0141 | 0.0139 |
| Mars | 4429-05-25 04:48 G | 3338863.65 | 3338863.70 | 3338863.75 | 0.1646 | 0.1577 |
| Saturn | 4434-08-07 20:24 G | 3340764.14 | 3340764.35 | 3340764.56 | 0.0267 | 0.0133 |
| Mars | 4435-12-01 14:24 G | 3341244.90 | 3341245.10 | 3341245.30 | 0.1877 | 0.0659 |
| Jupiter | 4439-07-20 02:24 G | 3342571.42 | 3342571.60 | 3342571.80 | 0.0502 | 0.0309 |
| Jupiter | 4445-01-17 09:50 G | 3344579.75 | 3344579.91 | 3344580.08 | 0.0526 | 0.0376 |
| Saturn | 4449-02-02 00:14 G | 3346056.28 | 3346056.51 | 3346056.75 | 0.0293 | 0.0081 |

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| Jupiter | 4451-07-25 01:11 G | 3346959.32 | 3346959.55 | 3346959.78 | 0.0505 | 0.0051 |
| Uranus | 4456-12-03 13:26 G | 3348917.96 | 3348918.06 | 3348918.21 | 0.0135 | 0.0118 |
| Jupiter | 4457-01-22 11:31 G | 3348967.76 | 3348967.98 | 3348968.19 | 0.0524 | 0.0148 |
| Uranus | 4457-12-08 05:16 G | 3349287.53 | 3349287.72 | 3349287.94 | 0.0135 | 0.0078 |
| Uranus | 4458-12-12 06:57 G | 3349656.57 | 3349656.79 | 3349657.02 | 0.0135 | 0.0061 |
| Uranus | 4459-12-16 23:02 G | 3350026.21 | 3350026.46 | 3350026.71 | 0.0136 | 0.0015 |
| Uranus | 4460-12-20 01:11 G | 3350395.30 | 3350395.55 | 3350395.81 | 0.0136 | 0.0005 |
| Uranus | 4461-12-24 17:16 G | 3350764.99 | 3350765.22 | 3350765.47 | 0.0136 | 0.0043 |
| Uranus | 4462-12-28 20:24 G | 3351134.14 | 3351134.35 | 3351134.57 | 0.0137 | 0.0073 |
| Jupiter | 4463-07-29 18:43 G | 3351347.05 | 3351347.28 | 3351347.51 | 0.0507 | 0.0176 |
| Saturn | 4463-08-02 16:04 G | 3351350.95 | 3351351.17 | 3351351.40 | 0.0267 | 0.0126 |
| Uranus | 4464-01-02 12:57 G | 3351503.88 | 3351504.04 | 3351504.23 | 0.0137 | 0.0098 |
| Neptune | 4468-08-21 07:11 G | 3353196.67 | 3353196.80 | 3353196.99 | 0.0088 | 0.0070 |
| Jupiter | 4469-01-27 03:07 G | 3353355.40 | 3353355.63 | 3353355.87 | 0.0521 | 0.0046 |
| Neptune | 4469-08-24 01:11 G | 3353564.35 | 3353564.55 | 3353564.77 | 0.0088 | 0.0056 |
| Neptune | 4470-08-26 11:31 G | 3353931.75 | 3353931.98 | 3353932.23 | 0.0088 | 0.0029 |
| Neptune | 4471-08-29 00:14 G | 3354299.25 | 3354299.51 | 3354299.78 | 0.0088 | 0.0015 |
| Neptune | 4472-08-30 15:35 G | 3354666.90 | 3354667.15 | 3354667.40 | 0.0088 | 0.0012 |
| Neptune | 4473-09-02 00:14 G | 3355034.26 | 3355034.51 | 3355034.77 | 0.0088 | 0.0026 |
| Neptune | 4474-09-04 19:11 G | 3355402.12 | 3355402.30 | 3355402.53 | 0.0089 | 0.0054 |
| Jupiter | 4475-08-03 12:43 G | 3355734.88 | 3355735.03 | 3355735.20 | 0.0509 | 0.0360 |
| Neptune | 4475-09-07 01:26 G | 3355769.41 | 3355769.56 | 3355769.75 | 0.0089 | 0.0068 |
| Jupiter | 4481-01-31 18:43 G | 3357743.10 | 3357743.28 | 3357743.47 | 0.0520 | 0.0286 |
| Saturn | 4493-08-09 00:43 G | 3362315.38 | 3362315.53 | 3362315.71 | 0.0267 | 0.0194 |
| Uranus | 4497-06-01 04:48 G | 3363707.60 | 3363707.70 | 3363707.84 | 0.0144 | 0.0125 |
| Uranus | 4498-06-06 08:38 G | 3364077.65 | 3364077.86 | 3364078.10 | 0.0143 | 0.0076 |
| Uranus | 4499-06-11 04:04 G | 3364447.45 | 3364447.67 | 3364447.91 | 0.0143 | 0.0052 |
| Uranus | 4500-06-16 09:07 G | 3364817.62 | 3364817.88 | 3364818.15 | 0.0143 | 0.0003 |
| Uranus | 4501-06-21 01:55 G | 3365187.34 | 3365187.58 | 3365187.83 | 0.0142 | 0.0028 |
| Pluto | 4501-08-14 20:38 G | 3365242.13 | 3365242.36 | 3365242.62 | 0.0079 | 0.0019 |

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| Uranus | 4502-06-26 06:57 G | 3365557.57 | 3365557.79 | 3365558.04 | 0.0142 | 0.0062 |
| Uranus | 4503-06-30 21:50 G | 3365927.25 | 3365927.41 | 3365927.58 | 0.0141 | 0.0107 |
| Uranus | 4504-07-05 01:55 G | 3366297.49 | 3366297.58 | 3366297.70 | 0.0141 | 0.0128 |
| Saturn | 4508-02-05 03:50 G | 3367607.43 | 3367607.66 | 3367607.90 | 0.0293 | 0.0013 |
| Mars | 4508-05-28 04:33 G | 3367720.51 | 3367720.69 | 3367720.86 | 0.1649 | 0.0195 |
| Jupiter | 4522-07-20 16:48 G | 3372887.04 | 3372887.20 | 3372887.38 | 0.0502 | 0.0331 |
| Saturn | 4522-08-04 12:14 G | 3372901.76 | 3372902.01 | 3372902.26 | 0.0267 | 0.0065 |
| Jupiter | 4528-01-18 20:38 G | 3374895.22 | 3374895.36 | 3374895.50 | 0.0526 | 0.0407 |
| Jupiter | 4534-07-25 07:40 G | 3377274.58 | 3377274.82 | 3377275.07 | 0.0504 | 0.0075 |
| Jupiter | 4540-01-23 14:24 G | 3379282.88 | 3379283.10 | 3379283.32 | 0.0524 | 0.0188 |
| Uranus | 4540-12-04 23:16 G | 3379599.33 | 3379599.47 | 3379599.63 | 0.0135 | 0.0107 |
| Uranus | 4541-12-09 14:38 G | 3379968.93 | 3379969.11 | 3379969.31 | 0.0135 | 0.0087 |
| Uranus | 4542-12-13 16:04 G | 3380337.94 | 3380338.17 | 3380338.42 | 0.0135 | 0.0043 |
| Uranus | 4543-12-18 07:55 G | 3380707.58 | 3380707.83 | 3380708.08 | 0.0136 | 0.0025 |
| Uranus | 4544-12-21 09:50 G | 3381076.66 | 3381076.91 | 3381077.16 | 0.0136 | 0.0018 |
| Uranus | 4545-12-26 02:09 G | 3381446.36 | 3381446.59 | 3381446.84 | 0.0136 | 0.0043 |
| Jupiter | 4546-07-29 21:50 G | 3381662.19 | 3381662.41 | 3381662.63 | 0.0506 | 0.0131 |
| Uranus | 4546-12-30 04:33 G | 3381815.50 | 3381815.69 | 3381815.92 | 0.0137 | 0.0075 |
| Uranus | 4548-01-03 22:04 G | 3382185.29 | 3382185.42 | 3382185.58 | 0.0137 | 0.0112 |
| Uranus | 4549-01-07 02:09 G | 3382554.54 | 3382554.59 | 3382554.68 | 0.0138 | 0.0132 |
| Neptune | 4549-02-19 03:35 G | 3382597.59 | 3382597.65 | 3382597.75 | 0.0089 | 0.0084 |
| Neptune | 4550-02-21 07:26 G | 3382964.69 | 3382964.81 | 3382964.97 | 0.0089 | 0.0073 |
| Neptune | 4551-02-23 23:31 G | 3383332.28 | 3383332.48 | 3383332.73 | 0.0089 | 0.0044 |
| Jupiter | 4552-01-28 06:57 G | 3383670.57 | 3383670.79 | 3383671.01 | 0.0523 | 0.0004 |
| Neptune | 4552-02-26 06:43 G | 3383699.56 | 3383699.78 | 3383700.02 | 0.0089 | 0.0033 |
| Saturn | 4552-08-11 03:50 G | 3383866.59 | 3383866.66 | 3383866.75 | 0.0267 | 0.0253 |
| Neptune | 4553-02-27 18:43 G | 3384067.02 | 3384067.28 | 3384067.54 | 0.0089 | 0.0004 |
| Neptune | 4554-03-02 06:00 G | 3384434.50 | 3384434.75 | 3384435.00 | 0.0089 | 0.0007 |
| Neptune | 4555-03-04 12:28 G | 3384801.79 | 3384802.02 | 3384802.27 | 0.0089 | 0.0036 |
| Neptune | 4556-03-06 04:19 G | 3385169.47 | 3385169.68 | 3385169.89 | 0.0089 | 0.0047 |

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| Neptune | 4557-03-08 07:55 G | 3385536.71 | 3385536.83 | 3385536.97 | 0.0089 | 0.0076 |
| Neptune | 4558-03-11 00:28 G | 3385904.50 | 3385904.52 | 3385904.61 | 0.0089 | 0.0087 |
| Jupiter | 4558-08-03 20:38 G | 3386050.17 | 3386050.36 | 3386050.55 | 0.0508 | 0.0308 |
| Jupiter | 4564-02-02 07:11 G | 3388058.60 | 3388058.80 | 3388059.01 | 0.0521 | 0.0259 |
| Saturn | 4567-02-06 13:11 G | 3389158.83 | 3389159.05 | 3389159.28 | 0.0292 | 0.0064 |
| Uranus | 4581-06-02 15:50 G | 3394389.03 | 3394389.16 | 3394389.33 | 0.0144 | 0.0114 |
| Saturn | 4581-08-05 13:11 G | 3394452.80 | 3394453.05 | 3394453.30 | 0.0267 | 0.0004 |
| Uranus | 4582-06-07 18:14 G | 3394759.06 | 3394759.26 | 3394759.48 | 0.0143 | 0.0086 |
| Uranus | 4583-06-12 14:24 G | 3395128.87 | 3395129.10 | 3395129.35 | 0.0143 | 0.0034 |
| Uranus | 4584-06-16 18:14 G | 3395499.00 | 3395499.26 | 3395499.52 | 0.0143 | 0.0009 |
| Uranus | 4585-06-21 11:16 G | 3395868.73 | 3395868.97 | 3395869.22 | 0.0142 | 0.0035 |
| Uranus | 4586-06-26 15:35 G | 3396238.94 | 3396239.15 | 3396239.39 | 0.0142 | 0.0072 |
| Mars | 4587-05-31 01:40 G | 3396577.42 | 3396577.57 | 3396577.72 | 0.1652 | 0.0930 |
| Uranus | 4587-07-01 06:43 G | 3396608.61 | 3396608.78 | 3396608.97 | 0.0141 | 0.0099 |
| Saturn | 4596-01-31 11:45 G | 3399744.89 | 3399744.99 | 3399745.12 | 0.0293 | 0.0257 |
| Jupiter | 4605-07-20 19:11 G | 3403202.14 | 3403202.30 | 3403202.48 | 0.0501 | 0.0362 |
| Saturn | 4610-08-01 23:02 G | 3405040.36 | 3405040.46 | 3405040.58 | 0.0268 | 0.0241 |
| Jupiter | 4611-01-18 19:40 G | 3405210.21 | 3405210.32 | 3405210.45 | 0.0528 | 0.0452 |
| Jupiter | 4617-07-25 10:33 G | 3407589.71 | 3407589.94 | 3407590.16 | 0.0503 | 0.0114 |
| Jupiter | 4623-01-23 17:02 G | 3409598.01 | 3409598.21 | 3409598.41 | 0.0525 | 0.0239 |
| Uranus | 4624-12-06 07:11 G | 3410280.67 | 3410280.80 | 3410280.95 | 0.0135 | 0.0111 |
| Uranus | 4625-12-10 22:19 G | 3410650.22 | 3410650.43 | 3410650.65 | 0.0135 | 0.0072 |
| Saturn | 4626-02-09 00:14 G | 3410710.30 | 3410710.51 | 3410710.72 | 0.0292 | 0.0145 |
| Uranus | 4626-12-14 23:45 G | 3411019.28 | 3411019.49 | 3411019.74 | 0.0135 | 0.0055 |
| Uranus | 4627-12-19 15:50 G | 3411388.91 | 3411389.16 | 3411389.42 | 0.0136 | 0.0009 |
| Uranus | 4628-12-22 18:14 G | 3411758.01 | 3411758.26 | 3411758.51 | 0.0136 | 0.0011 |
| Jupiter | 4629-07-30 06:28 G | 3411977.53 | 3411977.77 | 3411978.01 | 0.0505 | 0.0086 |
| Uranus | 4629-12-27 10:33 G | 3412127.72 | 3412127.94 | 3412128.19 | 0.0136 | 0.0051 |
| Uranus | 4630-12-31 13:40 G | 3412496.87 | 3412497.07 | 3412497.28 | 0.0137 | 0.0079 |
| Uranus | 4632-01-05 06:43 G | 3412866.64 | 3412866.78 | 3412866.96 | 0.0137 | 0.0107 |

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| Neptune | 4632-08-22 20:09 G | 3413097.28 | 3413097.34 | 3413097.46 | 0.0088 | 0.0084 |
| Neptune | 4633-08-25 08:24 G | 3413464.69 | 3413464.85 | 3413465.05 | 0.0088 | 0.0060 |
| Neptune | 4634-08-27 20:09 G | 3413832.13 | 3413832.34 | 3413832.60 | 0.0088 | 0.0045 |
| Jupiter | 4635-01-28 18:28 G | 3413986.04 | 3413986.27 | 3413986.51 | 0.0523 | 0.0033 |
| Neptune | 4635-08-30 13:11 G | 3414199.80 | 3414200.05 | 3414200.30 | 0.0088 | 0.0020 |
| Neptune | 4636-08-31 20:52 G | 3414567.10 | 3414567.37 | 3414567.63 | 0.0088 | 0.0004 |
| Neptune | 4637-09-03 15:50 G | 3414934.93 | 3414935.16 | 3414935.43 | 0.0088 | 0.0023 |
| Neptune | 4638-09-05 22:04 G | 3415302.19 | 3415302.42 | 3415302.66 | 0.0089 | 0.0037 |
| Neptune | 4639-09-08 17:31 G | 3415670.06 | 3415670.23 | 3415670.43 | 0.0089 | 0.0063 |
| Saturn | 4640-08-07 20:52 G | 3416004.14 | 3416004.37 | 3416004.61 | 0.0267 | 0.0064 |
| Neptune | 4640-09-10 00:28 G | 3416037.42 | 3416037.52 | 3416037.67 | 0.0089 | 0.0077 |
| Jupiter | 4641-08-03 18:28 G | 3416365.08 | 3416365.27 | 3416365.47 | 0.0508 | 0.0268 |
| Jupiter | 4647-02-02 04:33 G | 3418373.48 | 3418373.69 | 3418373.89 | 0.0521 | 0.0223 |
| Jupiter | 4653-08-08 22:19 G | 3420753.40 | 3420753.43 | 3420753.46 | 0.0510 | 0.0504 |
| Saturn | 4655-02-02 19:40 G | 3421296.13 | 3421296.32 | 3421296.52 | 0.0292 | 0.0173 |
| Jupiter | 4659-02-07 04:04 G | 3422761.59 | 3422761.67 | 3422761.74 | 0.0519 | 0.0486 |
| Pluto | 4661-02-15 00:28 G | 3423500.37 | 3423500.52 | 3423500.71 | 0.0064 | 0.0046 |
| Pluto | 4662-02-16 05:02 G | 3423866.53 | 3423866.71 | 3423866.93 | 0.0065 | 0.0040 |
| Uranus | 4665-06-04 00:14 G | 3425070.38 | 3425070.51 | 3425070.67 | 0.0144 | 0.0117 |
| Uranus | 4666-06-09 01:11 G | 3425440.33 | 3425440.55 | 3425440.79 | 0.0143 | 0.0070 |
| Uranus | 4667-06-13 23:02 G | 3425810.23 | 3425810.46 | 3425810.70 | 0.0143 | 0.0045 |
| Uranus | 4668-06-18 01:40 G | 3426180.30 | 3426180.57 | 3426180.83 | 0.0143 | 0.0006 |
| Uranus | 4669-06-22 20:09 G | 3426550.10 | 3426550.34 | 3426550.59 | 0.0142 | 0.0034 |
| Saturn | 4669-08-03 00:43 G | 3426591.34 | 3426591.53 | 3426591.74 | 0.0268 | 0.0170 |
| Uranus | 4670-06-27 23:45 G | 3426920.27 | 3426920.49 | 3426920.73 | 0.0142 | 0.0070 |
| Uranus | 4671-07-02 15:21 G | 3427290.00 | 3427290.14 | 3427290.30 | 0.0141 | 0.0113 |
| Uranus | 4672-07-06 19:11 G | 3427660.24 | 3427660.30 | 3427660.38 | 0.0141 | 0.0135 |
| Saturn | 4685-02-10 09:35 G | 3432261.76 | 3432261.90 | 3432262.06 | 0.0292 | 0.0232 |
| Jupiter | 4688-07-19 21:35 G | 3433517.27 | 3433517.40 | 3433517.54 | 0.0501 | 0.0396 |
| Jupiter | 4694-01-18 00:28 G | 3435525.45 | 3435525.52 | 3435525.60 | 0.0528 | 0.0492 |

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| Saturn | 4699-08-10 07:40 G | 3437555.62 | 3437555.82 | 3437556.04 | 0.0267 | 0.0136 |
| Jupiter | 4700-07-25 17:31 G | 3437905.00 | 3437905.23 | 3437905.46 | 0.0503 | 0.0146 |
| Jupiter | 4706-01-24 00:00 G | 3439913.31 | 3439913.50 | 3439913.70 | 0.0525 | 0.0285 |
| Uranus | 4707-12-04 13:55 G | 3440593.06 | 3440593.08 | 3440593.14 | 0.0134 | 0.0133 |
| Uranus | 4708-12-07 16:04 G | 3440962.04 | 3440962.17 | 3440962.36 | 0.0135 | 0.0103 |
| Uranus | 4709-12-12 06:43 G | 3441331.58 | 3441331.78 | 3441332.00 | 0.0135 | 0.0080 |
| Uranus | 4710-12-16 09:07 G | 3441700.65 | 3441700.88 | 3441701.13 | 0.0135 | 0.0037 |
| Uranus | 4711-12-21 00:14 G | 3442070.26 | 3442070.51 | 3442070.77 | 0.0136 | 0.0019 |
| Jupiter | 4712-07-30 04:19 G | 3442292.45 | 3442292.68 | 3442292.92 | 0.0505 | 0.0047 |
| Uranus | 4712-12-24 02:38 G | 3442439.37 | 3442439.61 | 3442439.86 | 0.0136 | 0.0026 |
| Mars | 4713-05-28 21:07 G | 3442595.23 | 3442595.38 | 3442595.54 | 0.1641 | 0.1065 |
| Uranus | 4713-12-28 18:43 G | 3442809.05 | 3442809.28 | 3442809.53 | 0.0136 | 0.0048 |
| Saturn | 4714-02-05 11:31 G | 3442847.76 | 3442847.98 | 3442848.21 | 0.0292 | 0.0083 |
| Neptune | 4714-02-23 01:11 G | 3442865.44 | 3442865.55 | 3442865.69 | 0.0089 | 0.0077 |
| Uranus | 4715-01-01 21:35 G | 3443178.22 | 3443178.40 | 3443178.62 | 0.0137 | 0.0083 |
| Neptune | 4715-02-25 08:24 G | 3443232.68 | 3443232.85 | 3443233.05 | 0.0089 | 0.0058 |
| Uranus | 4716-01-06 15:07 G | 3443548.02 | 3443548.13 | 3443548.28 | 0.0137 | 0.0117 |
| Neptune | 4716-02-27 18:57 G | 3443600.07 | 3443600.29 | 3443600.55 | 0.0089 | 0.0039 |
| Neptune | 4717-03-01 07:55 G | 3443967.59 | 3443967.83 | 3443968.07 | 0.0089 | 0.0018 |
| Jupiter | 4718-01-28 12:00 G | 3444300.78 | 3444301.00 | 3444301.23 | 0.0524 | 0.0082 |
| Neptune | 4718-03-03 14:24 G | 3444334.84 | 3444335.10 | 3444335.36 | 0.0089 | 0.0002 |
| Neptune | 4719-03-06 06:43 G | 3444702.54 | 3444702.78 | 3444703.03 | 0.0089 | 0.0022 |
| Mars | 4719-12-04 05:02 G | 3444975.54 | 3444975.71 | 3444975.89 | 0.1885 | 0.0533 |
| Neptune | 4720-03-07 10:04 G | 3445069.72 | 3445069.92 | 3445070.16 | 0.0089 | 0.0042 |
| Neptune | 4721-03-10 03:50 G | 3445437.47 | 3445437.66 | 3445437.85 | 0.0089 | 0.0060 |
| Neptune | 4722-03-12 07:40 G | 3445804.74 | 3445804.82 | 3445804.94 | 0.0089 | 0.0081 |
| Jupiter | 4724-08-04 04:48 G | 3446680.49 | 3446680.70 | 3446680.91 | 0.0506 | 0.0224 |
| Saturn | 4728-08-05 03:35 G | 3448142.42 | 3448142.65 | 3448142.89 | 0.0268 | 0.0098 |
| Jupiter | 4730-02-02 10:33 G | 3448688.73 | 3448688.94 | 3448689.16 | 0.0522 | 0.0175 |
| Jupiter | 4736-08-08 14:38 G | 3451068.01 | 3451068.11 | 3451068.23 | 0.0508 | 0.0451 |

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| Jupiter | 4742-02-06 22:19 G | 3453076.30 | 3453076.43 | 3453076.56 | 0.0520 | 0.0432 |
| Uranus | 4748-05-31 06:57 G | 3455381.79 | 3455381.79 | 3455381.81 | 0.0144 | 0.0144 |
| Uranus | 4749-06-05 09:07 G | 3455751.74 | 3455751.88 | 3455752.06 | 0.0144 | 0.0109 |
| Uranus | 4750-06-10 08:24 G | 3456121.64 | 3456121.85 | 3456122.08 | 0.0143 | 0.0078 |
| Uranus | 4751-06-15 07:11 G | 3456491.56 | 3456491.80 | 3456492.05 | 0.0143 | 0.0027 |
| Uranus | 4752-06-19 08:09 G | 3456861.58 | 3456861.84 | 3456862.11 | 0.0143 | 0.0004 |
| Uranus | 4753-06-24 03:35 G | 3457231.42 | 3457231.65 | 3457231.90 | 0.0142 | 0.0044 |
| Uranus | 4754-06-29 06:00 G | 3457601.54 | 3457601.75 | 3457601.98 | 0.0142 | 0.0077 |
| Uranus | 4755-07-03 22:48 G | 3457971.30 | 3457971.45 | 3457971.62 | 0.0141 | 0.0107 |
| Saturn | 4758-08-12 15:35 G | 3459106.99 | 3459107.15 | 3459107.31 | 0.0267 | 0.0209 |
| Jupiter | 4771-07-21 05:02 G | 3463832.58 | 3463832.71 | 3463832.85 | 0.0501 | 0.0417 |
| Saturn | 4773-02-07 05:45 G | 3464399.50 | 3464399.74 | 3464399.98 | 0.0292 | 0.0012 |
| Jupiter | 4783-07-25 14:09 G | 3468219.87 | 3468220.09 | 3468220.31 | 0.0502 | 0.0184 |
| Saturn | 4787-08-07 14:24 G | 3469693.86 | 3469694.10 | 3469694.34 | 0.0268 | 0.0024 |
| Jupiter | 4789-01-22 13:26 G | 3470227.90 | 3470228.06 | 3470228.23 | 0.0527 | 0.0350 |
| Uranus | 4791-12-04 21:21 G | 3471274.36 | 3471274.39 | 3471274.47 | 0.0134 | 0.0132 |
| Mars | 4792-05-31 08:24 G | 3471452.66 | 3471452.85 | 3471453.04 | 0.1644 | 0.0362 |
| Uranus | 4792-12-08 00:43 G | 3471643.38 | 3471643.53 | 3471643.69 | 0.0135 | 0.0103 |
| Uranus | 4793-12-12 13:55 G | 3472012.87 | 3472013.08 | 3472013.32 | 0.0135 | 0.0067 |
| Uranus | 4794-12-16 17:02 G | 3472381.99 | 3472382.21 | 3472382.46 | 0.0135 | 0.0047 |
| Jupiter | 4795-07-30 12:57 G | 3472607.80 | 3472608.04 | 3472608.27 | 0.0504 | 0.0005 |
| Uranus | 4795-12-21 07:55 G | 3472751.57 | 3472751.83 | 3472752.09 | 0.0136 | 0.0002 |
| Uranus | 4796-12-24 11:31 G | 3473120.74 | 3473120.98 | 3473121.23 | 0.0136 | 0.0017 |
| Neptune | 4797-08-25 16:33 G | 3473365.03 | 3473365.19 | 3473365.39 | 0.0088 | 0.0067 |
| Uranus | 4797-12-29 03:07 G | 3473490.40 | 3473490.63 | 3473490.87 | 0.0136 | 0.0058 |
| Neptune | 4798-08-28 09:35 G | 3473732.73 | 3473732.90 | 3473733.13 | 0.0088 | 0.0056 |
| Uranus | 4799-01-02 06:43 G | 3473859.61 | 3473859.78 | 3473859.99 | 0.0137 | 0.0086 |
| Neptune | 4799-08-30 17:02 G | 3474099.96 | 3474100.21 | 3474100.47 | 0.0088 | 0.0026 |
| Uranus | 4800-01-07 00:00 G | 3474229.37 | 3474229.50 | 3474229.65 | 0.0137 | 0.0114 |
| Neptune | 4800-09-01 12:57 G | 3474467.80 | 3474468.04 | 3474468.31 | 0.0088 | 0.0016 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Jupiter | 4801-01-27 17:16 G | 3474616.00 | 3474616.22 | 3474616.44 | 0.0525 | 0.0137 |
| Neptune | 4801-09-03 19:11 G | 3474835.05 | 3474835.30 | 3474835.56 | 0.0088 | 0.0013 |
| Saturn | 4802-02-01 14:38 G | 3474986.04 | 3474986.11 | 3474986.20 | 0.0292 | 0.0273 |
| Neptune | 4802-09-06 14:38 G | 3475202.85 | 3475203.11 | 3475203.36 | 0.0089 | 0.0025 |
| Neptune | 4803-09-08 22:19 G | 3475570.24 | 3475570.43 | 3475570.65 | 0.0089 | 0.0053 |
| Neptune | 4804-09-10 14:38 G | 3475937.95 | 3475938.11 | 3475938.31 | 0.0089 | 0.0066 |
| Jupiter | 4807-08-03 19:11 G | 3476995.07 | 3476995.30 | 3476995.53 | 0.0506 | 0.0176 |
| Jupiter | 4813-02-01 07:40 G | 3479003.59 | 3479003.82 | 3479004.05 | 0.0522 | 0.0133 |
| Jupiter | 4819-08-08 19:11 G | 3481383.18 | 3481383.30 | 3481383.44 | 0.0508 | 0.0416 |
| Jupiter | 4825-02-06 05:16 G | 3483391.58 | 3483391.72 | 3483391.87 | 0.0520 | 0.0390 |
| Saturn | 4832-02-09 20:09 G | 3485951.12 | 3485951.34 | 3485951.58 | 0.0292 | 0.0107 |
| Uranus | 4833-06-05 16:19 G | 3486433.04 | 3486433.18 | 3486433.36 | 0.0144 | 0.0108 |
| Uranus | 4834-06-10 14:09 G | 3486802.86 | 3486803.09 | 3486803.33 | 0.0143 | 0.0064 |
| Uranus | 4835-06-15 14:52 G | 3487172.88 | 3487173.12 | 3487173.36 | 0.0143 | 0.0037 |
| Uranus | 4836-06-19 14:24 G | 3487542.84 | 3487543.10 | 3487543.37 | 0.0143 | 0.0014 |
| Uranus | 4837-06-24 11:31 G | 3487912.76 | 3487912.98 | 3487913.23 | 0.0142 | 0.0041 |
| Uranus | 4838-06-29 12:57 G | 3488282.83 | 3488283.04 | 3488283.27 | 0.0142 | 0.0079 |
| Uranus | 4839-07-04 06:43 G | 3488652.66 | 3488652.78 | 3488652.92 | 0.0141 | 0.0120 |
| Saturn | 4846-08-09 04:04 G | 3491245.44 | 3491245.67 | 3491245.92 | 0.0268 | 0.0051 |
| Jupiter | 4854-07-20 00:43 G | 3494147.45 | 3494147.53 | 3494147.64 | 0.0500 | 0.0451 |
| Saturn | 4861-02-03 07:26 G | 3496537.64 | 3496537.81 | 3496538.00 | 0.0292 | 0.0182 |
| Jupiter | 4866-07-24 19:26 G | 3498535.10 | 3498535.31 | 3498535.52 | 0.0501 | 0.0226 |
| Jupiter | 4872-01-23 00:00 G | 3500543.36 | 3500543.50 | 3500543.66 | 0.0527 | 0.0396 |
| Saturn | 4875-08-04 00:14 G | 3501832.34 | 3501832.51 | 3501832.70 | 0.0268 | 0.0191 |
| Uranus | 4875-12-05 05:31 G | 3501955.65 | 3501955.73 | 3501955.84 | 0.0134 | 0.0125 |
| Uranus | 4876-12-08 10:04 G | 3502324.76 | 3502324.92 | 3502325.10 | 0.0135 | 0.0097 |
| Uranus | 4877-12-12 22:48 G | 3502694.23 | 3502694.45 | 3502694.67 | 0.0135 | 0.0071 |
| Neptune | 4878-02-22 10:48 G | 3502765.89 | 3502765.95 | 3502766.07 | 0.0089 | 0.0083 |
| Jupiter | 4878-07-29 03:50 G | 3502922.42 | 3502922.66 | 3502922.90 | 0.0504 | 0.0042 |
| Uranus | 4878-12-17 02:52 G | 3503063.39 | 3503063.62 | 3503063.87 | 0.0135 | 0.0031 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Neptune | 4879-02-24 21:07 G | 3503133.25 | 3503133.38 | 3503133.56 | 0.0089 | 0.0072 |
| Uranus | 4879-12-21 16:33 G | 3503432.93 | 3503433.19 | 3503433.45 | 0.0136 | 0.0011 |
| Neptune | 4880-02-27 10:19 G | 3503500.73 | 3503500.93 | 3503501.16 | 0.0089 | 0.0043 |
| Uranus | 4880-12-24 20:38 G | 3503802.13 | 3503802.36 | 3503802.60 | 0.0136 | 0.0034 |
| Neptune | 4881-02-28 15:35 G | 3503867.92 | 3503868.15 | 3503868.41 | 0.0089 | 0.0032 |
| Uranus | 4881-12-29 11:31 G | 3504171.75 | 3504171.98 | 3504172.22 | 0.0136 | 0.0055 |
| Neptune | 4882-03-03 08:24 G | 3504235.60 | 3504235.85 | 3504236.11 | 0.0089 | 0.0004 |
| Uranus | 4883-01-02 16:04 G | 3504541.00 | 3504541.17 | 3504541.36 | 0.0137 | 0.0092 |
| Neptune | 4883-03-05 12:00 G | 3504602.75 | 3504603.00 | 3504603.25 | 0.0089 | 0.0007 |
| Uranus | 4884-01-07 08:09 G | 3504910.75 | 3504910.84 | 3504910.97 | 0.0137 | 0.0124 |
| Jupiter | 4884-01-27 13:11 G | 3504930.83 | 3504931.05 | 3504931.27 | 0.0525 | 0.0178 |
| Neptune | 4884-03-07 04:33 G | 3504970.47 | 3504970.69 | 3504970.94 | 0.0089 | 0.0036 |
| Neptune | 4885-03-09 09:50 G | 3505337.70 | 3505337.91 | 3505338.12 | 0.0089 | 0.0046 |
| Neptune | 4886-03-11 23:16 G | 3505705.36 | 3505705.47 | 3505705.64 | 0.0089 | 0.0075 |
| Neptune | 4887-03-14 08:38 G | 3506072.82 | 3506072.86 | 3506072.94 | 0.0089 | 0.0086 |
| Jupiter | 4890-08-03 03:50 G | 3507310.44 | 3507310.66 | 3507310.88 | 0.0506 | 0.0140 |
| Saturn | 4891-02-11 06:43 G | 3507502.60 | 3507502.78 | 3507502.97 | 0.0293 | 0.0197 |
| Jupiter | 4896-02-01 12:28 G | 3509318.80 | 3509319.02 | 3509319.24 | 0.0523 | 0.0090 |
| Jupiter | 4902-08-08 20:24 G | 3511698.19 | 3511698.35 | 3511698.52 | 0.0507 | 0.0379 |
| Saturn | 4905-08-11 14:52 G | 3512796.90 | 3512797.12 | 3512797.35 | 0.0268 | 0.0123 |
| Jupiter | 4908-02-07 00:28 G | 3513706.34 | 3513706.52 | 3513706.71 | 0.0521 | 0.0332 |
| Pluto | 4910-02-19 09:07 G | 3514449.62 | 3514449.88 | 3514450.14 | 0.0064 | 0.0007 |
| Uranus | 4916-06-01 21:07 G | 3516744.31 | 3516744.38 | 3516744.48 | 0.0144 | 0.0135 |
| Uranus | 4917-06-07 01:40 G | 3517114.42 | 3517114.57 | 3517114.77 | 0.0144 | 0.0103 |
| Mars | 4918-05-28 23:45 G | 3517470.42 | 3517470.49 | 3517470.56 | 0.1634 | 0.1485 |
| Uranus | 4918-06-11 21:50 G | 3517484.19 | 3517484.41 | 3517484.66 | 0.0143 | 0.0069 |
| Uranus | 4919-06-16 23:31 G | 3517854.24 | 3517854.48 | 3517854.73 | 0.0143 | 0.0020 |
| Saturn | 4920-02-07 01:55 G | 3518089.36 | 3518089.58 | 3518089.80 | 0.0292 | 0.0090 |
| Uranus | 4920-06-20 21:35 G | 3518224.13 | 3518224.40 | 3518224.66 | 0.0143 | 0.0004 |
| Uranus | 4921-06-25 19:55 G | 3518594.11 | 3518594.33 | 3518594.57 | 0.0142 | 0.0052 |

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| Uranus | 4922-06-30 19:26 G | 3518964.10 | 3518964.31 | 3518964.53 | 0.0142 | 0.0083 |
| Uranus | 4923-07-05 14:38 G | 3519333.99 | 3519334.11 | 3519334.26 | 0.0141 | 0.0116 |
| Saturn | 4934-08-06 09:21 G | 3523383.67 | 3523383.89 | 3523384.11 | 0.0268 | 0.0117 |
| Jupiter | 4937-07-20 07:26 G | 3524462.76 | 3524462.81 | 3524462.87 | 0.0499 | 0.0483 |
| Jupiter | 4949-07-24 15:07 G | 3528849.93 | 3528850.13 | 3528850.34 | 0.0501 | 0.0260 |
| Saturn | 4950-02-13 18:00 G | 3529054.20 | 3529054.25 | 3529054.31 | 0.0293 | 0.0285 |
| Jupiter | 4955-01-22 17:16 G | 3530858.10 | 3530858.22 | 3530858.35 | 0.0527 | 0.0439 |
| Uranus | 4959-12-06 13:11 G | 3532636.97 | 3532637.05 | 3532637.15 | 0.0134 | 0.0126 |
| Uranus | 4960-12-09 18:14 G | 3533006.10 | 3533006.26 | 3533006.45 | 0.0135 | 0.0095 |
| Jupiter | 4961-07-29 14:38 G | 3533237.88 | 3533238.11 | 3533238.34 | 0.0503 | 0.0082 |
| Neptune | 4961-08-26 06:43 G | 3533265.71 | 3533265.78 | 3533265.92 | 0.0088 | 0.0081 |
| Uranus | 4961-12-14 05:31 G | 3533375.51 | 3533375.73 | 3533375.98 | 0.0135 | 0.0061 |
| Neptune | 4962-08-28 13:40 G | 3533632.88 | 3533633.07 | 3533633.28 | 0.0088 | 0.0059 |
| Uranus | 4962-12-18 11:16 G | 3533744.74 | 3533744.97 | 3533745.21 | 0.0135 | 0.0039 |
| Neptune | 4963-08-31 10:04 G | 3534000.70 | 3534000.92 | 3534001.16 | 0.0088 | 0.0042 |
| Uranus | 4963-12-23 00:00 G | 3534114.24 | 3534114.50 | 3534114.76 | 0.0136 | 0.0007 |
| Saturn | 4964-08-12 20:38 G | 3534348.19 | 3534348.36 | 3534348.55 | 0.0268 | 0.0193 |
| Neptune | 4964-09-01 16:19 G | 3534367.94 | 3534368.18 | 3534368.44 | 0.0088 | 0.0020 |
| Uranus | 4964-12-26 05:45 G | 3534483.51 | 3534483.74 | 3534483.99 | 0.0136 | 0.0025 |
| Neptune | 4965-09-04 11:16 G | 3534735.71 | 3534735.97 | 3534736.24 | 0.0088 | 0.0003 |
| Uranus | 4965-12-30 19:55 G | 3534853.11 | 3534853.33 | 3534853.56 | 0.0136 | 0.0068 |
| Neptune | 4966-09-06 19:40 G | 3535103.09 | 3535103.32 | 3535103.58 | 0.0088 | 0.0022 |
| Uranus | 4967-01-04 01:40 G | 3535222.41 | 3535222.57 | 3535222.76 | 0.0137 | 0.0093 |
| Jupiter | 4967-01-27 15:35 G | 3535245.95 | 3535246.15 | 3535246.35 | 0.0526 | 0.0229 |
| Neptune | 4967-09-09 10:19 G | 3535470.70 | 3535470.93 | 3535471.20 | 0.0089 | 0.0038 |
| Uranus | 4968-01-08 17:16 G | 3535592.13 | 3535592.22 | 3535592.34 | 0.0137 | 0.0124 |
| Neptune | 4968-09-10 23:45 G | 3535838.33 | 3535838.49 | 3535838.69 | 0.0089 | 0.0062 |
| Neptune | 4969-09-13 09:50 G | 3536205.81 | 3536205.91 | 3536206.08 | 0.0089 | 0.0077 |
| Jupiter | 4973-08-03 03:07 G | 3537625.39 | 3537625.63 | 3537625.88 | 0.0505 | 0.0100 |
| Jupiter | 4979-02-01 08:38 G | 3539633.62 | 3539633.86 | 3539634.09 | 0.0524 | 0.0044 |

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| Saturn | 4979-02-08 15:21 G | 3539640.90 | 3539641.14 | 3539641.39 | 0.0292 | 0.0008 |
| Jupiter | 4985-08-07 15:07 G | 3542012.96 | 3542013.13 | 3542013.30 | 0.0507 | 0.0335 |
| Jupiter | 4991-02-06 04:04 G | 3544021.49 | 3544021.67 | 3544021.86 | 0.0522 | 0.0298 |
| Saturn | 4993-08-07 21:50 G | 3544935.18 | 3544935.41 | 3544935.66 | 0.0268 | 0.0044 |
| Mars | 4997-05-30 20:09 G | 3546327.17 | 3546327.34 | 3546327.51 | 0.1637 | 0.0464 |
| Pluto | 4998-08-20 21:50 G | 3546774.16 | 3546774.41 | 3546774.68 | 0.0079 | 0.0019 |
| Uranus | 5000-06-03 05:31 G | 3547425.70 | 3547425.73 | 3547425.80 | 0.0144 | 0.0141 |

6TH MILLENNIUM CE

This is a list of transits of Moon in the 6th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Uranus | 5001-06-08 11:02 G | | 3547795.80 | 3547795.96 | 3547796.16 | 0.0144 | 0.0099 | |
| Uranus | 5002-06-13 06:14 G | | 3548165.52 | 3548165.76 | 3548166.00 | 0.0143 | 0.0057 | |
| Jupiter | 5003-02-12 03:35 G | | 3548409.56 | 3548409.65 | 3548409.73 | 0.0519 | 0.0479 | |
| Uranus | 5003-06-18 09:21 G | | 3548535.65 | 3548535.89 | 3548536.14 | 0.0143 | 0.0029 | |
| Mars | 5003-12-06 05:02 G | | 3548706.51 | 3548706.71 | 3548706.90 | 0.1892 | 0.0492 | |
| Uranus | 5004-06-22 06:00 G | | 3548905.50 | 3548905.75 | 3548906.02 | 0.0143 | 0.0023 | |
| Uranus | 5005-06-27 06:00 G | | 3549275.53 | 3549275.75 | 3549275.99 | 0.0142 | 0.0048 | |
| Uranus | 5006-07-02 04:19 G | | 3549645.49 | 3549645.68 | 3549645.90 | 0.0142 | 0.0090 | |
| Uranus | 5007-07-07 00:43 G | | 3550015.45 | 3550015.53 | 3550015.66 | 0.0141 | 0.0128 | |
| Saturn | 5023-08-16 00:00 G | | 3555899.46 | 3555899.50 | 3555899.56 | 0.0267 | 0.0262 | |
| Jupiter | 5032-07-25 02:09 G | | 3559165.41 | 3559165.59 | 3559165.78 | 0.0501 | 0.0295 | |
| Jupiter | 5038-01-22 22:04 G | | 3561173.35 | 3561173.42 | 3561173.51 | 0.0528 | 0.0489 | |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Saturn | 5038-02-10 20:52 G | 3561192.14 | 3561192.37 | 3561192.62 | 0.0292 | 0.0072 |
| Neptune | 5043-02-26 12:28 G | 3563033.91 | 3563034.02 | 3563034.16 | 0.0089 | 0.0077 |
| Uranus | 5043-12-07 20:38 G | 3563318.26 | 3563318.36 | 3563318.51 | 0.0134 | 0.0118 |
| Neptune | 5044-02-28 17:16 G | 3563401.04 | 3563401.22 | 3563401.45 | 0.0089 | 0.0055 |
| Jupiter | 5044-07-29 09:21 G | 3563552.65 | 3563552.89 | 3563553.13 | 0.0502 | 0.0131 |
| Uranus | 5044-12-11 04:19 G | 3563687.51 | 3563687.68 | 3563687.86 | 0.0135 | 0.0092 |
| Neptune | 5045-03-02 10:48 G | 3563768.73 | 3563768.95 | 3563769.19 | 0.0089 | 0.0038 |
| Uranus | 5045-12-15 14:24 G | 3564056.87 | 3564057.10 | 3564057.34 | 0.0135 | 0.0063 |
| Neptune | 5046-03-04 14:24 G | 3564135.86 | 3564136.10 | 3564136.35 | 0.0089 | 0.0017 |
| Uranus | 5046-12-19 21:21 G | 3564426.16 | 3564426.39 | 3564426.64 | 0.0135 | 0.0024 |
| Neptune | 5047-03-07 07:11 G | 3564503.55 | 3564503.80 | 3564504.06 | 0.0089 | 0.0002 |
| Uranus | 5047-12-24 08:52 G | 3564795.61 | 3564795.87 | 3564796.13 | 0.0136 | 0.0004 |
| Neptune | 5048-03-08 12:28 G | 3564870.80 | 3564871.02 | 3564871.27 | 0.0089 | 0.0023 |
| Uranus | 5048-12-27 15:21 G | 3565164.92 | 3565165.14 | 3565165.38 | 0.0136 | 0.0042 |
| Neptune | 5049-03-11 01:40 G | 3565238.35 | 3565238.57 | 3565238.82 | 0.0089 | 0.0041 |
| Uranus | 5050-01-01 04:19 G | 3565534.45 | 3565534.68 | 3565534.91 | 0.0136 | 0.0062 |
| Jupiter | 5050-01-27 18:14 G | 3565561.06 | 3565561.26 | 3565561.47 | 0.0526 | 0.0257 |
| Neptune | 5050-03-13 11:16 G | 3565605.81 | 3565605.97 | 3565606.16 | 0.0089 | 0.0061 |
| Uranus | 5051-01-05 10:48 G | 3565903.81 | 3565903.95 | 3565904.13 | 0.0137 | 0.0102 |
| Neptune | 5051-03-15 19:26 G | 3565973.20 | 3565973.31 | 3565973.44 | 0.0089 | 0.0078 |
| Uranus | 5052-01-10 00:57 G | 3566273.49 | 3566273.54 | 3566273.64 | 0.0137 | 0.0131 |
| Saturn | 5052-08-10 09:50 G | 3566486.66 | 3566486.91 | 3566487.15 | 0.0267 | 0.0028 |
| Jupiter | 5056-08-03 01:55 G | 3567940.36 | 3567940.58 | 3567940.81 | 0.0504 | 0.0059 |
| Jupiter | 5062-02-01 14:52 G | 3569948.90 | 3569949.12 | 3569949.34 | 0.0524 | 0.0021 |
| Saturn | 5067-02-04 17:31 G | 3571778.13 | 3571778.23 | 3571778.35 | 0.0292 | 0.0253 |
| Jupiter | 5068-08-08 01:26 G | 3572328.37 | 3572328.56 | 3572328.75 | 0.0507 | 0.0307 |
| Jupiter | 5074-02-06 14:09 G | 3574336.89 | 3574337.09 | 3574337.30 | 0.0522 | 0.0260 |
| Mars | 5076-06-02 23:16 G | 3575184.30 | 3575184.47 | 3575184.65 | 0.1640 | 0.0750 |
| Saturn | 5081-08-04 20:52 G | 3577073.24 | 3577073.37 | 3577073.52 | 0.0268 | 0.0220 |
| Uranus | 5084-06-03 15:50 G | 3578107.05 | 3578107.16 | 3578107.29 | 0.0144 | 0.0127 |

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| Uranus | 5085-06-08 21:50 G | 3578477.25 | 3578477.41 | 3578477.61 | 0.0144 | 0.0097 |
| Jupiter | 5086-02-10 21:21 G | 3578724.27 | 3578724.39 | 3578724.52 | 0.0520 | 0.0437 |
| Uranus | 5086-06-13 16:04 G | 3578846.94 | 3578847.17 | 3578847.41 | 0.0143 | 0.0060 |
| Uranus | 5087-06-18 20:09 G | 3579217.09 | 3579217.34 | 3579217.59 | 0.0143 | 0.0012 |
| Uranus | 5088-06-22 15:21 G | 3579586.88 | 3579587.14 | 3579587.41 | 0.0143 | 0.0012 |
| Uranus | 5089-06-27 16:19 G | 3579956.97 | 3579957.18 | 3579957.41 | 0.0142 | 0.0062 |
| Uranus | 5090-07-02 12:57 G | 3580326.85 | 3580327.04 | 3580327.26 | 0.0142 | 0.0091 |
| Uranus | 5091-07-07 11:16 G | 3580696.87 | 3580696.97 | 3580697.09 | 0.0141 | 0.0127 |
| Saturn | 5097-02-11 21:35 G | 3582743.19 | 3582743.40 | 3582743.62 | 0.0292 | 0.0143 |
| Saturn | 5111-08-13 13:40 G | 3588037.84 | 3588038.07 | 3588038.32 | 0.0267 | 0.0093 |
| Jupiter | 5115-07-25 23:45 G | 3589480.31 | 3589480.49 | 3589480.67 | 0.0500 | 0.0333 |
| Jupiter | 5121-01-23 02:38 G | 3591488.57 | 3591488.61 | 3591488.65 | 0.0529 | 0.0519 |
| Saturn | 5126-02-07 01:26 G | 3593329.38 | 3593329.56 | 3593329.75 | 0.0292 | 0.0182 |
| Neptune | 5126-08-30 06:00 G | 3593533.59 | 3593533.75 | 3593533.95 | 0.0088 | 0.0065 |
| Jupiter | 5127-07-30 16:33 G | 3593867.98 | 3593868.19 | 3593868.40 | 0.0502 | 0.0169 |
| Neptune | 5127-09-01 12:28 G | 3593900.84 | 3593901.02 | 3593901.24 | 0.0088 | 0.0054 |
| Uranus | 5127-12-09 03:50 G | 3593999.57 | 3593999.66 | 3593999.79 | 0.0134 | 0.0122 |
| Neptune | 5128-09-03 06:28 G | 3594268.53 | 3594268.77 | 3594269.05 | 0.0088 | 0.0026 |
| Uranus | 5128-12-12 12:14 G | 3594368.84 | 3594369.01 | 3594369.21 | 0.0135 | 0.0088 |
| Neptune | 5129-09-05 16:48 G | 3594635.96 | 3594636.20 | 3594636.46 | 0.0088 | 0.0015 |
| Uranus | 5129-12-16 20:52 G | 3594738.14 | 3594738.37 | 3594738.62 | 0.0135 | 0.0056 |
| Neptune | 5130-09-08 06:57 G | 3595003.53 | 3595003.79 | 3595004.06 | 0.0088 | 0.0014 |
| Uranus | 5130-12-21 05:31 G | 3595107.50 | 3595107.73 | 3595107.98 | 0.0135 | 0.0031 |
| Neptune | 5131-09-10 22:04 G | 3595371.17 | 3595371.42 | 3595371.66 | 0.0088 | 0.0025 |
| Uranus | 5131-12-25 15:50 G | 3595476.90 | 3595477.16 | 3595477.42 | 0.0136 | 0.0013 |
| Neptune | 5132-09-12 06:43 G | 3595738.58 | 3595738.78 | 3595739.01 | 0.0089 | 0.0053 |
| Uranus | 5132-12-29 00:28 G | 3595846.29 | 3595846.52 | 3595846.76 | 0.0136 | 0.0032 |
| Jupiter | 5133-01-28 00:28 G | 3595876.34 | 3595876.52 | 3595876.71 | 0.0526 | 0.0285 |
| Neptune | 5133-09-15 01:26 G | 3596106.38 | 3596106.56 | 3596106.74 | 0.0089 | 0.0064 |
| Uranus | 5134-01-02 12:14 G | 3596215.80 | 3596216.01 | 3596216.23 | 0.0136 | 0.0076 |

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| Uranus | 5135-01-06 20:24 G | 3596585.19 | 3596585.35 | 3596585.53 | 0.0137 | 0.0099 |
| Uranus | 5136-01-11 09:35 G | 3596954.85 | 3596954.90 | 3596954.96 | 0.0137 | 0.0134 |
| Jupiter | 5139-08-04 14:38 G | 3598255.87 | 3598256.11 | 3598256.36 | 0.0504 | 0.0031 |
| Saturn | 5140-08-07 02:38 G | 3598624.42 | 3598624.61 | 3598624.81 | 0.0268 | 0.0159 |
| Jupiter | 5145-02-01 22:04 G | 3600264.18 | 3600264.42 | 3600264.65 | 0.0524 | 0.0012 |
| Jupiter | 5151-08-09 01:26 G | 3602643.37 | 3602643.56 | 3602643.75 | 0.0506 | 0.0277 |
| Saturn | 5156-02-15 00:14 G | 3604294.36 | 3604294.51 | 3604294.69 | 0.0292 | 0.0205 |
| Jupiter | 5157-02-06 10:33 G | 3604651.73 | 3604651.94 | 3604652.14 | 0.0523 | 0.0221 |
| Pluto | 5158-02-22 01:55 G | 3605032.44 | 3605032.58 | 3605032.79 | 0.0064 | 0.0045 |
| Pluto | 5159-02-23 15:21 G | 3605398.96 | 3605399.14 | 3605399.37 | 0.0064 | 0.0041 |
| Jupiter | 5163-08-13 22:19 G | 3607031.43 | 3607031.43 | 3607031.45 | 0.0508 | 0.0507 |
| Uranus | 5168-06-05 00:28 G | 3608788.46 | 3608788.52 | 3608788.63 | 0.0144 | 0.0136 |
| Jupiter | 5169-02-11 14:24 G | 3609039.96 | 3609040.10 | 3609040.25 | 0.0521 | 0.0406 |
| Uranus | 5169-06-10 07:11 G | 3609158.63 | 3609158.80 | 3609159.02 | 0.0144 | 0.0091 |
| Uranus | 5170-06-15 00:57 G | 3609528.30 | 3609528.54 | 3609528.78 | 0.0143 | 0.0051 |
| Saturn | 5170-08-14 12:14 G | 3609588.80 | 3609589.01 | 3609589.22 | 0.0267 | 0.0154 |
| Uranus | 5171-06-20 06:14 G | 3609898.52 | 3609898.76 | 3609899.01 | 0.0143 | 0.0021 |
| Uranus | 5172-06-24 00:43 G | 3610268.28 | 3610268.53 | 3610268.79 | 0.0142 | 0.0031 |
| Uranus | 5173-06-29 03:21 G | 3610638.41 | 3610638.64 | 3610638.87 | 0.0142 | 0.0054 |
| Uranus | 5174-07-03 23:02 G | 3611008.28 | 3611008.46 | 3611008.66 | 0.0142 | 0.0099 |
| Uranus | 5175-07-08 22:04 G | 3611378.37 | 3611378.42 | 3611378.51 | 0.0141 | 0.0135 |
| Saturn | 5185-02-08 00:43 G | 3614880.30 | 3614880.53 | 3614880.76 | 0.0292 | 0.0120 |
| Jupiter | 5198-07-25 09:50 G | 3619795.76 | 3619795.91 | 3619796.07 | 0.0500 | 0.0364 |
| Saturn | 5199-08-09 08:24 G | 3620175.64 | 3620175.85 | 3620176.09 | 0.0268 | 0.0101 |
| Mars | 5202-06-01 06:57 G | 3621202.62 | 3621202.79 | 3621202.95 | 0.1631 | 0.0839 |
| Neptune | 5207-02-26 18:57 G | 3622934.21 | 3622934.29 | 3622934.43 | 0.0089 | 0.0080 |
| Neptune | 5208-02-29 12:14 G | 3623301.88 | 3623302.01 | 3623302.19 | 0.0089 | 0.0070 |
| Neptune | 5209-03-02 16:04 G | 3623668.97 | 3623669.17 | 3623669.41 | 0.0089 | 0.0042 |
| Neptune | 5210-03-05 08:24 G | 3624036.62 | 3624036.85 | 3624037.11 | 0.0089 | 0.0031 |
| Jupiter | 5210-07-30 05:02 G | 3624183.49 | 3624183.71 | 3624183.94 | 0.0502 | 0.0198 |

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| Neptune | 5211-03-07 14:38 G | 3624403.86 | 3624404.11 | 3624404.35 | 0.0089 | 0.0003 |
| Uranus | 5211-12-09 12:00 G | 3624680.86 | 3624681.00 | 3624681.15 | 0.0134 | 0.0111 |
| Neptune | 5212-03-09 02:38 G | 3624771.35 | 3624771.61 | 3624771.88 | 0.0089 | 0.0008 |
| Uranus | 5212-12-12 22:19 G | 3625050.24 | 3625050.43 | 3625050.61 | 0.0135 | 0.0088 |
| Neptune | 5213-03-11 13:26 G | 3625138.84 | 3625139.06 | 3625139.30 | 0.0089 | 0.0035 |
| Uranus | 5213-12-17 05:31 G | 3625419.50 | 3625419.73 | 3625419.98 | 0.0135 | 0.0056 |
| Neptune | 5214-03-13 21:21 G | 3625506.17 | 3625506.39 | 3625506.62 | 0.0089 | 0.0045 |
| Uranus | 5214-12-21 15:35 G | 3625788.91 | 3625789.15 | 3625789.40 | 0.0135 | 0.0019 |
| Saturn | 5215-02-16 04:33 G | 3625845.59 | 3625845.69 | 3625845.80 | 0.0292 | 0.0261 |
| Neptune | 5215-03-16 12:00 G | 3625873.89 | 3625874.00 | 3625874.16 | 0.0089 | 0.0074 |
| Uranus | 5215-12-26 00:14 G | 3626158.25 | 3626158.51 | 3626158.77 | 0.0136 | 0.0003 |
| Jupiter | 5216-01-28 08:24 G | 3626191.67 | 3626191.85 | 3626192.04 | 0.0527 | 0.0315 |
| Neptune | 5216-03-17 16:04 G | 3626241.11 | 3626241.17 | 3626241.28 | 0.0089 | 0.0084 |
| Uranus | 5216-12-29 09:35 G | 3626527.68 | 3626527.90 | 3626528.14 | 0.0136 | 0.0049 |
| Uranus | 5218-01-02 19:40 G | 3626897.09 | 3626897.32 | 3626897.55 | 0.0136 | 0.0068 |
| Uranus | 5219-01-07 04:48 G | 3627266.58 | 3627266.70 | 3627266.86 | 0.0137 | 0.0110 |
| Uranus | 5220-01-11 16:19 G | 3627636.17 | 3627636.18 | 3627636.23 | 0.0137 | 0.0136 |
| Jupiter | 5222-08-03 11:02 G | 3628570.73 | 3628570.96 | 3628571.19 | 0.0503 | 0.0009 |
| Jupiter | 5228-02-02 00:00 G | 3630579.27 | 3630579.50 | 3630579.73 | 0.0526 | 0.0040 |
| Saturn | 5229-08-15 13:11 G | 3631139.91 | 3631140.05 | 3631140.21 | 0.0268 | 0.0211 |
| Jupiter | 5234-08-08 11:45 G | 3632958.79 | 3632958.99 | 3632959.20 | 0.0505 | 0.0246 |
| Jupiter | 5240-02-07 05:16 G | 3634967.51 | 3634967.72 | 3634967.93 | 0.0523 | 0.0191 |
| Saturn | 5244-02-09 20:24 G | 3636431.11 | 3636431.35 | 3636431.59 | 0.0292 | 0.0063 |
| Jupiter | 5246-08-13 00:43 G | 3637346.44 | 3637346.53 | 3637346.61 | 0.0507 | 0.0474 |
| Pluto | 5247-08-25 16:04 G | 3637724.15 | 3637724.17 | 3637724.21 | 0.0079 | 0.0079 |
| Jupiter | 5252-02-11 18:00 G | 3639355.08 | 3639355.25 | 3639355.41 | 0.0521 | 0.0371 |
| Uranus | 5252-06-05 09:35 G | 3639469.77 | 3639469.90 | 3639470.05 | 0.0144 | 0.0120 |
| Uranus | 5253-06-10 16:48 G | 3639840.01 | 3639840.20 | 3639840.40 | 0.0144 | 0.0091 |
| Uranus | 5254-06-15 09:35 G | 3640209.66 | 3640209.90 | 3640210.15 | 0.0143 | 0.0051 |
| Uranus | 5255-06-20 15:35 G | 3640579.90 | 3640580.15 | 3640580.40 | 0.0143 | 0.0005 |

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| Uranus | 5256-06-24 08:52 G | 3640949.61 | 3640949.87 | 3640950.13 | 0.0142 | 0.0020 |
| Uranus | 5257-06-29 12:28 G | 3641319.80 | 3641320.02 | 3641320.24 | 0.0142 | 0.0070 |
| Uranus | 5258-07-04 06:28 G | 3641689.59 | 3641689.77 | 3641689.98 | 0.0142 | 0.0097 |
| Saturn | 5258-08-10 10:04 G | 3641726.67 | 3641726.92 | 3641727.17 | 0.0268 | 0.0044 |
| Uranus | 5259-07-09 07:11 G | 3642059.76 | 3642059.80 | 3642059.88 | 0.0141 | 0.0136 |
| Mars | 5281-06-03 09:35 G | 3650059.72 | 3650059.90 | 3650060.08 | 0.1633 | 0.0236 |
| Jupiter | 5281-07-24 18:57 G | 3650111.14 | 3650111.29 | 3650111.44 | 0.0499 | 0.0395 |
| Mars | 5287-12-05 21:50 G | 3652436.20 | 3652436.41 | 3652436.62 | 0.1900 | 0.0022 |
| Saturn | 5288-08-16 17:31 G | 3652691.21 | 3652691.23 | 3652691.27 | 0.0268 | 0.0265 |
| Neptune | 5290-08-29 09:50 G | 3653433.81 | 3653433.91 | 3653434.05 | 0.0088 | 0.0078 |
| Neptune | 5291-09-01 02:52 G | 3653801.44 | 3653801.62 | 3653801.85 | 0.0088 | 0.0057 |
| Neptune | 5292-09-02 13:55 G | 3654168.87 | 3654169.08 | 3654169.33 | 0.0088 | 0.0039 |
| Jupiter | 5293-07-29 03:50 G | 3654498.46 | 3654498.66 | 3654498.87 | 0.0501 | 0.0233 |
| Neptune | 5293-09-05 02:09 G | 3654536.34 | 3654536.59 | 3654536.87 | 0.0088 | 0.0020 |
| Neptune | 5294-09-07 18:28 G | 3654904.01 | 3654904.27 | 3654904.52 | 0.0088 | 0.0002 |
| Neptune | 5295-09-10 02:38 G | 3655271.35 | 3655271.61 | 3655271.87 | 0.0088 | 0.0020 |
| Uranus | 5295-12-09 19:26 G | 3655362.18 | 3655362.31 | 3655362.43 | 0.0134 | 0.0118 |
| Neptune | 5296-09-11 22:04 G | 3655639.19 | 3655639.42 | 3655639.66 | 0.0088 | 0.0038 |
| Uranus | 5296-12-13 06:14 G | 3655731.58 | 3655731.76 | 3655731.97 | 0.0135 | 0.0081 |
| Neptune | 5297-09-14 04:04 G | 3656006.49 | 3656006.67 | 3656006.87 | 0.0089 | 0.0060 |
| Uranus | 5297-12-17 12:14 G | 3656100.78 | 3656101.01 | 3656101.27 | 0.0135 | 0.0052 |
| Neptune | 5298-09-17 00:28 G | 3656374.39 | 3656374.52 | 3656374.66 | 0.0089 | 0.0076 |
| Uranus | 5298-12-22 00:00 G | 3656470.26 | 3656470.50 | 3656470.75 | 0.0135 | 0.0023 |
| Jupiter | 5299-01-27 12:14 G | 3656506.84 | 3656507.01 | 3656507.18 | 0.0528 | 0.0345 |
| Uranus | 5299-12-26 07:11 G | 3656839.55 | 3656839.80 | 3656840.06 | 0.0136 | 0.0019 |
| Uranus | 5300-12-30 18:28 G | 3657209.05 | 3657209.27 | 3657209.51 | 0.0136 | 0.0039 |
| Uranus | 5302-01-04 03:07 G | 3657578.44 | 3657578.63 | 3657578.85 | 0.0136 | 0.0084 |
| Uranus | 5303-01-08 13:55 G | 3657947.94 | 3657948.08 | 3657948.25 | 0.0137 | 0.0105 |
| Saturn | 5303-02-11 20:09 G | 3657982.11 | 3657982.34 | 3657982.58 | 0.0292 | 0.0007 |
| Jupiter | 5305-08-04 03:50 G | 3658886.42 | 3658886.66 | 3658886.89 | 0.0503 | 0.0029 |

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| Jupiter | 5311-02-02 18:00 G | 3660895.03 | 3660895.25 | 3660895.48 | 0.0526 | 0.0063 |
| Jupiter | 5317-08-08 15:21 G | 3663273.93 | 3663274.14 | 3663274.36 | 0.0505 | 0.0227 |
| Saturn | 5317-08-12 05:45 G | 3663277.48 | 3663277.74 | 3663278.00 | 0.0268 | 0.0011 |
| Jupiter | 5323-02-07 05:02 G | 3665282.49 | 3665282.71 | 3665282.94 | 0.0523 | 0.0151 |
| Jupiter | 5329-08-13 14:24 G | 3667662.01 | 3667662.10 | 3667662.22 | 0.0507 | 0.0447 |
| Jupiter | 5335-02-12 03:35 G | 3669670.49 | 3669670.65 | 3669670.83 | 0.0521 | 0.0334 |
| Uranus | 5336-06-06 17:16 G | 3670151.14 | 3670151.22 | 3670151.35 | 0.0144 | 0.0130 |
| Uranus | 5337-06-12 00:43 G | 3670521.33 | 3670521.53 | 3670521.75 | 0.0144 | 0.0082 |
| Uranus | 5338-06-16 17:31 G | 3670890.99 | 3670891.23 | 3670891.47 | 0.0143 | 0.0045 |
| Uranus | 5339-06-22 00:14 G | 3671261.26 | 3671261.51 | 3671261.76 | 0.0143 | 0.0012 |
| Uranus | 5340-06-25 16:48 G | 3671630.96 | 3671631.20 | 3671631.46 | 0.0143 | 0.0039 |
| Uranus | 5341-06-30 21:35 G | 3672001.18 | 3672001.40 | 3672001.63 | 0.0142 | 0.0061 |
| Uranus | 5342-07-05 14:38 G | 3672370.96 | 3672371.11 | 3672371.30 | 0.0142 | 0.0109 |
| Uranus | 5343-07-10 17:02 G | 3672741.19 | 3672741.21 | 3672741.23 | 0.0141 | 0.0141 |
| Saturn | 5346-08-07 08:24 G | 3673864.72 | 3673864.85 | 3673864.99 | 0.0269 | 0.0221 |
| Mars | 5360-06-06 06:14 G | 3678916.65 | 3678916.76 | 3678916.86 | 0.1636 | 0.1315 |
| Saturn | 5362-02-13 00:14 G | 3679533.29 | 3679533.51 | 3679533.75 | 0.0291 | 0.0055 |
| Jupiter | 5364-07-24 22:04 G | 3680426.31 | 3680426.42 | 3680426.55 | 0.0499 | 0.0422 |
| Neptune | 5372-02-29 17:31 G | 3683202.12 | 3683202.23 | 3683202.38 | 0.0089 | 0.0075 |
| Neptune | 5373-03-03 09:21 G | 3683569.71 | 3683569.89 | 3683570.13 | 0.0089 | 0.0053 |
| Neptune | 5374-03-05 17:02 G | 3683936.99 | 3683937.21 | 3683937.44 | 0.0089 | 0.0037 |
| Neptune | 5375-03-08 04:33 G | 3684304.44 | 3684304.69 | 3684304.96 | 0.0089 | 0.0016 |
| Neptune | 5376-03-09 16:19 G | 3684671.93 | 3684672.18 | 3684672.43 | 0.0089 | 0.0001 |
| Jupiter | 5376-07-29 21:50 G | 3684814.20 | 3684814.41 | 3684814.61 | 0.0501 | 0.0258 |
| Saturn | 5376-08-13 02:38 G | 3684828.37 | 3684828.61 | 3684828.85 | 0.0268 | 0.0066 |
| Neptune | 5377-03-11 22:33 G | 3685039.20 | 3685039.44 | 3685039.70 | 0.0089 | 0.0023 |
| Neptune | 5378-03-14 14:09 G | 3685406.87 | 3685407.09 | 3685407.32 | 0.0089 | 0.0039 |
| Neptune | 5379-03-16 17:31 G | 3685774.07 | 3685774.23 | 3685774.44 | 0.0089 | 0.0061 |
| Uranus | 5379-12-11 03:35 G | 3686043.51 | 3686043.65 | 3686043.84 | 0.0134 | 0.0103 |
| Neptune | 5380-03-18 10:33 G | 3686141.84 | 3686141.94 | 3686142.10 | 0.0089 | 0.0077 |

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| Uranus | 5380-12-14 16:33 G | 3686413.01 | 3686413.19 | 3686413.40 | 0.0135 | 0.0083 |
| Uranus | 5381-12-18 21:50 G | 3686782.17 | 3686782.41 | 3686782.66 | 0.0135 | 0.0047 |
| Jupiter | 5382-01-28 02:24 G | 3686822.44 | 3686822.60 | 3686822.77 | 0.0528 | 0.0371 |
| Uranus | 5382-12-23 10:04 G | 3687151.68 | 3687151.92 | 3687152.17 | 0.0135 | 0.0014 |
| Uranus | 5383-12-27 15:50 G | 3687520.90 | 3687521.16 | 3687521.42 | 0.0136 | 0.0012 |
| Uranus | 5384-12-31 04:04 G | 3687890.45 | 3687890.67 | 3687890.90 | 0.0136 | 0.0056 |
| Uranus | 5386-01-04 10:48 G | 3688259.74 | 3688259.95 | 3688260.18 | 0.0136 | 0.0075 |
| Uranus | 5387-01-08 22:48 G | 3688629.35 | 3688629.45 | 3688629.59 | 0.0137 | 0.0119 |
| Jupiter | 5388-08-03 06:57 G | 3689201.55 | 3689201.79 | 3689202.03 | 0.0502 | 0.0046 |
| Saturn | 5391-02-06 23:45 G | 3690119.37 | 3690119.49 | 3690119.61 | 0.0291 | 0.0254 |
| Jupiter | 5394-02-01 16:04 G | 3691209.94 | 3691210.17 | 3691210.41 | 0.0526 | 0.0100 |
| Jupiter | 5400-08-09 01:40 G | 3693589.36 | 3693589.57 | 3693589.78 | 0.0504 | 0.0198 |
| Saturn | 5405-08-09 11:16 G | 3695415.78 | 3695415.97 | 3695416.17 | 0.0269 | 0.0164 |
| Jupiter | 5406-02-07 16:19 G | 3695597.96 | 3695598.18 | 3695598.40 | 0.0525 | 0.0106 |
| Pluto | 5407-02-26 13:40 G | 3695981.83 | 3695982.07 | 3695982.33 | 0.0064 | 0.0007 |
| Jupiter | 5412-08-13 17:02 G | 3697977.07 | 3697977.21 | 3697977.37 | 0.0506 | 0.0403 |
| Jupiter | 5418-02-12 12:57 G | 3699985.84 | 3699986.04 | 3699986.24 | 0.0522 | 0.0295 |
| Uranus | 5420-06-08 02:09 G | 3700832.44 | 3700832.59 | 3700832.75 | 0.0144 | 0.0112 |
| Saturn | 5421-02-15 05:16 G | 3701084.50 | 3701084.72 | 3701084.94 | 0.0291 | 0.0121 |
| Uranus | 5421-06-13 08:52 G | 3701202.68 | 3701202.87 | 3701203.10 | 0.0144 | 0.0085 |
| Uranus | 5422-06-18 01:55 G | 3701572.35 | 3701572.58 | 3701572.83 | 0.0143 | 0.0042 |
| Uranus | 5423-06-23 08:52 G | 3701942.62 | 3701942.87 | 3701943.12 | 0.0143 | 0.0002 |
| Uranus | 5424-06-27 00:43 G | 3702312.28 | 3702312.53 | 3702312.79 | 0.0143 | 0.0028 |
| Uranus | 5425-07-02 06:00 G | 3702682.54 | 3702682.75 | 3702682.96 | 0.0142 | 0.0080 |
| Uranus | 5426-07-06 21:50 G | 3703052.25 | 3703052.41 | 3703052.60 | 0.0142 | 0.0104 |
| Saturn | 5435-08-16 06:00 G | 3706379.54 | 3706379.75 | 3706379.97 | 0.0268 | 0.0121 |
| Jupiter | 5447-07-26 15:50 G | 3710742.06 | 3710742.16 | 3710742.27 | 0.0498 | 0.0446 |
| Saturn | 5450-02-08 23:45 G | 3711670.32 | 3711670.49 | 3711670.67 | 0.0291 | 0.0193 |
| Neptune | 5455-09-02 10:04 G | 3713701.77 | 3713701.92 | 3713702.12 | 0.0088 | 0.0064 |
| Neptune | 5456-09-03 21:21 G | 3714069.19 | 3714069.39 | 3714069.62 | 0.0088 | 0.0053 |

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| Neptune | 5457-09-06 14:52 G | 3714436.88 | 3714437.12 | 3714437.37 | 0.0088 | 0.0025 |
| Neptune | 5458-09-08 22:04 G | 3714804.17 | 3714804.42 | 3714804.69 | 0.0088 | 0.0015 |
| Jupiter | 5459-07-30 20:52 G | 3715129.19 | 3715129.37 | 3715129.57 | 0.0499 | 0.0292 |
| Neptune | 5459-09-11 18:00 G | 3715172.00 | 3715172.25 | 3715172.51 | 0.0088 | 0.0014 |
| Neptune | 5460-09-12 23:45 G | 3715539.26 | 3715539.49 | 3715539.75 | 0.0088 | 0.0025 |
| Neptune | 5461-09-15 19:26 G | 3715907.12 | 3715907.31 | 3715907.55 | 0.0088 | 0.0053 |
| Neptune | 5462-09-18 03:07 G | 3716274.47 | 3716274.63 | 3716274.83 | 0.0089 | 0.0063 |
| Uranus | 5462-12-08 09:21 G | 3716355.82 | 3716355.89 | 3716355.96 | 0.0134 | 0.0128 |
| Uranus | 5463-12-12 11:45 G | 3716724.86 | 3716724.99 | 3716725.15 | 0.0134 | 0.0112 |
| Saturn | 5464-08-10 08:52 G | 3716966.64 | 3716966.87 | 3716967.11 | 0.0269 | 0.0108 |
| Uranus | 5464-12-16 01:26 G | 3717094.36 | 3717094.56 | 3717094.78 | 0.0135 | 0.0072 |
| Jupiter | 5465-01-27 22:19 G | 3717137.29 | 3717137.43 | 3717137.58 | 0.0530 | 0.0413 |
| Uranus | 5465-12-20 05:16 G | 3717463.48 | 3717463.72 | 3717463.97 | 0.0135 | 0.0045 |
| Uranus | 5466-12-24 18:57 G | 3717833.05 | 3717833.29 | 3717833.54 | 0.0135 | 0.0014 |
| Uranus | 5467-12-28 23:31 G | 3718202.23 | 3718202.48 | 3718202.74 | 0.0136 | 0.0026 |
| Uranus | 5469-01-01 13:26 G | 3718571.83 | 3718572.06 | 3718572.29 | 0.0136 | 0.0047 |
| Uranus | 5470-01-05 18:57 G | 3718941.12 | 3718941.29 | 3718941.50 | 0.0136 | 0.0093 |
| Uranus | 5471-01-10 08:38 G | 3719310.74 | 3719310.86 | 3719311.01 | 0.0137 | 0.0112 |
| Jupiter | 5471-08-04 17:16 G | 3719516.99 | 3719517.22 | 3719517.45 | 0.0501 | 0.0072 |
| Jupiter | 5477-02-02 03:07 G | 3721525.42 | 3721525.63 | 3721525.85 | 0.0527 | 0.0137 |
| Saturn | 5480-02-17 06:28 G | 3722635.59 | 3722635.77 | 3722635.97 | 0.0291 | 0.0185 |
| Jupiter | 5483-08-09 06:14 G | 3723904.53 | 3723904.76 | 3723904.99 | 0.0504 | 0.0169 |
| Mars | 5486-06-03 23:31 G | 3724934.29 | 3724934.48 | 3724934.66 | 0.1627 | 0.0473 |
| Jupiter | 5489-02-07 00:43 G | 3725913.29 | 3725913.53 | 3725913.76 | 0.0525 | 0.0068 |
| Saturn | 5494-08-17 12:00 G | 3727930.83 | 3727931.00 | 3727931.20 | 0.0268 | 0.0179 |
| Jupiter | 5495-08-13 23:45 G | 3728292.34 | 3728292.49 | 3728292.65 | 0.0506 | 0.0372 |
| Pluto | 5495-08-28 04:33 G | 3728306.44 | 3728306.69 | 3728306.95 | 0.0080 | 0.0026 |
| Jupiter | 5501-02-12 16:04 G | 3730300.98 | 3730301.17 | 3730301.36 | 0.0523 | 0.0260 |
| Uranus | 5504-06-09 12:14 G | 3731513.89 | 3731514.01 | 3731514.14 | 0.0144 | 0.0122 |
| Uranus | 5505-06-14 18:14 G | 3731884.06 | 3731884.26 | 3731884.50 | 0.0144 | 0.0073 |

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| Uranus | 5506-06-19 11:31 G | 3732253.74 | 3732253.98 | 3732254.23 | 0.0143 | 0.0038 |
| Uranus | 5507-06-24 18:14 G | 3732624.00 | 3732624.26 | 3732624.51 | 0.0143 | 0.0002 |
| Uranus | 5508-06-28 10:04 G | 3732993.68 | 3732993.92 | 3732994.17 | 0.0143 | 0.0047 |
| Saturn | 5509-02-11 09:07 G | 3733221.67 | 3733221.88 | 3733222.09 | 0.0291 | 0.0124 |
| Uranus | 5509-07-03 15:35 G | 3733363.94 | 3733364.15 | 3733364.38 | 0.0142 | 0.0070 |
| Uranus | 5510-07-08 07:11 G | 3733733.67 | 3733733.80 | 3733733.95 | 0.0142 | 0.0119 |
| Jupiter | 5513-02-17 14:52 G | 3734689.06 | 3734689.12 | 3734689.18 | 0.0521 | 0.0503 |
| Saturn | 5523-08-13 06:43 G | 3738517.53 | 3738517.78 | 3738518.03 | 0.0269 | 0.0052 |
| Jupiter | 5530-07-26 14:09 G | 3741057.04 | 3741057.09 | 3741057.15 | 0.0497 | 0.0482 |
| Neptune | 5536-03-02 09:50 G | 3743102.81 | 3743102.91 | 3743103.06 | 0.0089 | 0.0079 |
| Neptune | 5537-03-04 17:31 G | 3743470.10 | 3743470.23 | 3743470.41 | 0.0089 | 0.0068 |
| Neptune | 5538-03-07 04:19 G | 3743837.46 | 3743837.68 | 3743837.93 | 0.0089 | 0.0041 |
| Saturn | 5539-02-19 10:04 G | 3744186.81 | 3744186.92 | 3744187.04 | 0.0291 | 0.0256 |
| Neptune | 5539-03-09 17:02 G | 3744204.99 | 3744205.21 | 3744205.45 | 0.0089 | 0.0030 |
| Neptune | 5540-03-10 23:31 G | 3744572.22 | 3744572.48 | 3744572.74 | 0.0089 | 0.0003 |
| Neptune | 5541-03-13 15:50 G | 3744939.92 | 3744940.16 | 3744940.42 | 0.0089 | 0.0008 |
| Neptune | 5542-03-15 19:11 G | 3745307.08 | 3745307.30 | 3745307.55 | 0.0089 | 0.0035 |
| Jupiter | 5542-07-31 07:40 G | 3745444.65 | 3745444.82 | 3745445.00 | 0.0499 | 0.0325 |
| Neptune | 5543-03-18 12:14 G | 3745674.81 | 3745675.01 | 3745675.26 | 0.0089 | 0.0045 |
| Neptune | 5544-03-19 16:48 G | 3746042.08 | 3746042.20 | 3746042.37 | 0.0089 | 0.0072 |
| Neptune | 5545-03-22 07:11 G | 3746409.73 | 3746409.80 | 3746409.92 | 0.0089 | 0.0082 |
| Uranus | 5547-12-13 21:07 G | 3747406.22 | 3747406.38 | 3747406.58 | 0.0134 | 0.0096 |
| Jupiter | 5548-01-29 11:02 G | 3747452.84 | 3747452.96 | 3747453.09 | 0.0530 | 0.0433 |
| Uranus | 5548-12-17 12:14 G | 3747775.81 | 3747776.01 | 3747776.22 | 0.0135 | 0.0076 |
| Uranus | 5549-12-21 14:52 G | 3748144.88 | 3748145.12 | 3748145.38 | 0.0135 | 0.0038 |
| Uranus | 5550-12-26 05:16 G | 3748514.48 | 3748514.72 | 3748514.97 | 0.0135 | 0.0006 |
| Uranus | 5551-12-30 08:38 G | 3748883.61 | 3748883.86 | 3748884.12 | 0.0136 | 0.0022 |
| Uranus | 5553-01-02 23:16 G | 3749253.26 | 3749253.47 | 3749253.69 | 0.0136 | 0.0064 |
| Saturn | 5553-08-19 14:52 G | 3749482.01 | 3749482.12 | 3749482.25 | 0.0268 | 0.0236 |
| Uranus | 5554-01-07 03:50 G | 3749622.46 | 3749622.66 | 3749622.87 | 0.0136 | 0.0083 |

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| Jupiter | 5554-08-04 20:52 G | 3749832.13 | 3749832.37 | 3749832.61 | 0.0501 | 0.0098 |
| Uranus | 5555-01-11 18:14 G | 3749992.19 | 3749992.26 | 3749992.36 | 0.0137 | 0.0128 |
| Jupiter | 5560-02-03 06:14 G | 3751840.54 | 3751840.76 | 3751840.99 | 0.0527 | 0.0171 |
| Mars | 5565-06-07 10:33 G | 3753791.77 | 3753791.94 | 3753792.12 | 0.1630 | 0.0817 |
| Jupiter | 5566-08-09 12:43 G | 3754219.82 | 3754220.03 | 3754220.25 | 0.0503 | 0.0142 |
| Saturn | 5568-02-13 20:24 G | 3754773.12 | 3754773.35 | 3754773.59 | 0.0291 | 0.0050 |
| Mars | 5571-12-08 14:09 G | 3756166.91 | 3756167.09 | 3756167.27 | 0.1906 | 0.0323 |
| Jupiter | 5572-02-08 00:14 G | 3756228.29 | 3756228.51 | 3756228.74 | 0.0525 | 0.0025 |
| Jupiter | 5578-08-14 08:09 G | 3758607.66 | 3758607.84 | 3758608.03 | 0.0505 | 0.0324 |
| Saturn | 5582-08-14 11:45 G | 3760068.75 | 3760068.99 | 3760069.24 | 0.0269 | 0.0011 |
| Jupiter | 5584-02-12 21:35 G | 3760616.19 | 3760616.40 | 3760616.62 | 0.0524 | 0.0212 |
| Uranus | 5588-06-09 23:02 G | 3762195.30 | 3762195.46 | 3762195.64 | 0.0144 | 0.0105 |
| Uranus | 5589-06-15 05:02 G | 3762565.50 | 3762565.71 | 3762565.94 | 0.0144 | 0.0077 |
| Uranus | 5590-06-19 22:33 G | 3762935.20 | 3762935.44 | 3762935.69 | 0.0143 | 0.0032 |
| Jupiter | 5590-08-18 18:14 G | 3762995.21 | 3762995.26 | 3762995.32 | 0.0506 | 0.0491 |
| Uranus | 5591-06-25 04:48 G | 3763305.45 | 3763305.70 | 3763305.96 | 0.0143 | 0.0011 |
| Uranus | 5592-06-28 20:24 G | 3763675.11 | 3763675.35 | 3763675.60 | 0.0143 | 0.0038 |
| Uranus | 5593-07-04 01:55 G | 3764045.39 | 3764045.58 | 3764045.79 | 0.0142 | 0.0090 |
| Uranus | 5594-07-08 16:33 G | 3764415.06 | 3764415.19 | 3764415.37 | 0.0142 | 0.0113 |
| Jupiter | 5596-02-17 10:48 G | 3765003.85 | 3765003.95 | 3765004.06 | 0.0522 | 0.0464 |
| Saturn | 5611-08-09 10:04 G | 3770655.81 | 3770655.92 | 3770656.06 | 0.0269 | 0.0235 |
| Neptune | 5619-09-02 16:48 G | 3773602.08 | 3773602.20 | 3773602.37 | 0.0088 | 0.0075 |
| Neptune | 5620-09-04 10:48 G | 3773969.77 | 3773969.95 | 3773970.16 | 0.0088 | 0.0058 |
| Neptune | 5621-09-06 17:16 G | 3774336.99 | 3774337.22 | 3774337.47 | 0.0088 | 0.0037 |
| Neptune | 5622-09-09 13:11 G | 3774704.81 | 3774705.05 | 3774705.32 | 0.0088 | 0.0020 |
| Neptune | 5623-09-11 19:26 G | 3775072.06 | 3775072.31 | 3775072.57 | 0.0088 | 0.0001 |
| Neptune | 5624-09-13 14:24 G | 3775439.84 | 3775440.10 | 3775440.37 | 0.0088 | 0.0019 |
| Jupiter | 5625-07-30 11:31 G | 3775759.81 | 3775759.98 | 3775760.15 | 0.0499 | 0.0352 |
| Neptune | 5625-09-15 23:02 G | 3775807.25 | 3775807.46 | 3775807.70 | 0.0088 | 0.0038 |
| Neptune | 5626-09-18 14:38 G | 3776174.93 | 3776175.11 | 3776175.34 | 0.0089 | 0.0058 |

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| Saturn | 5627-02-15 05:45 G | 3776324.50 | 3776324.74 | 3776324.99 | 0.0291 | 0.0032 |
| Neptune | 5627-09-21 04:04 G | 3776542.55 | 3776542.67 | 3776542.81 | 0.0089 | 0.0076 |
| Uranus | 5630-12-10 04:19 G | 3777718.60 | 3777718.68 | 3777718.80 | 0.0134 | 0.0122 |
| Jupiter | 5631-01-28 08:38 G | 3777767.75 | 3777767.86 | 3777767.97 | 0.0530 | 0.0468 |
| Uranus | 5631-12-14 06:00 G | 3778087.60 | 3778087.75 | 3778087.91 | 0.0134 | 0.0106 |
| Uranus | 5632-12-17 20:52 G | 3778457.16 | 3778457.37 | 3778457.60 | 0.0135 | 0.0063 |
| Uranus | 5633-12-21 22:48 G | 3778826.21 | 3778826.45 | 3778826.70 | 0.0135 | 0.0039 |
| Uranus | 5634-12-26 14:09 G | 3779195.84 | 3779196.09 | 3779196.34 | 0.0135 | 0.0005 |
| Uranus | 5635-12-30 17:02 G | 3779564.96 | 3779565.21 | 3779565.46 | 0.0136 | 0.0033 |
| Uranus | 5637-01-03 08:24 G | 3779934.63 | 3779934.85 | 3779935.09 | 0.0136 | 0.0056 |
| Jupiter | 5637-08-04 01:11 G | 3780147.33 | 3780147.55 | 3780147.78 | 0.0500 | 0.0132 |
| Uranus | 5638-01-07 12:28 G | 3780303.86 | 3780304.02 | 3780304.20 | 0.0136 | 0.0101 |
| Uranus | 5639-01-12 04:19 G | 3780673.57 | 3780673.68 | 3780673.80 | 0.0137 | 0.0119 |
| Saturn | 5641-08-15 22:04 G | 3781620.19 | 3781620.42 | 3781620.65 | 0.0269 | 0.0075 |
| Jupiter | 5643-02-02 02:09 G | 3782155.39 | 3782155.59 | 3782155.79 | 0.0529 | 0.0227 |
| Jupiter | 5649-08-08 18:43 G | 3784535.04 | 3784535.28 | 3784535.52 | 0.0502 | 0.0102 |
| Mars | 5650-12-11 19:26 G | 3785025.29 | 3785025.31 | 3785025.33 | 0.1902 | 0.1889 |
| Jupiter | 5655-02-07 04:04 G | 3786543.43 | 3786543.67 | 3786543.91 | 0.0527 | 0.0029 |
| Pluto | 5655-02-28 08:38 G | 3786564.68 | 3786564.86 | 3786565.07 | 0.0064 | 0.0043 |
| Saturn | 5656-02-09 17:45 G | 3786911.12 | 3786911.24 | 3786911.38 | 0.0290 | 0.0240 |
| Pluto | 5656-03-01 01:55 G | 3786931.41 | 3786931.58 | 3786931.79 | 0.0064 | 0.0042 |
| Jupiter | 5661-08-13 02:09 G | 3788922.40 | 3788922.59 | 3788922.79 | 0.0504 | 0.0277 |
| Jupiter | 5667-02-11 20:09 G | 3790931.12 | 3790931.34 | 3790931.55 | 0.0524 | 0.0176 |
| Saturn | 5670-08-10 13:55 G | 3792206.89 | 3792207.08 | 3792207.29 | 0.0269 | 0.0166 |
| Uranus | 5671-06-06 14:24 G | 3792507.05 | 3792507.10 | 3792507.19 | 0.0144 | 0.0139 |
| Uranus | 5672-06-10 10:48 G | 3792876.82 | 3792876.95 | 3792877.12 | 0.0144 | 0.0115 |
| Uranus | 5673-06-15 16:04 G | 3793246.93 | 3793247.17 | 3793247.40 | 0.0144 | 0.0063 |
| Jupiter | 5673-08-18 03:35 G | 3793310.55 | 3793310.65 | 3793310.76 | 0.0506 | 0.0450 |
| Uranus | 5674-06-20 10:04 G | 3793616.67 | 3793616.92 | 3793617.16 | 0.0143 | 0.0030 |
| Uranus | 5675-06-25 15:35 G | 3793986.89 | 3793987.15 | 3793987.41 | 0.0143 | 0.0008 |

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| Uranus | 5676-06-29 07:40 G | 3794356.59 | 3794356.82 | 3794357.06 | 0.0143 | 0.0056 |
| Uranus | 5677-07-04 13:11 G | 3794726.85 | 3794727.05 | 3794727.28 | 0.0142 | 0.0080 |
| Uranus | 5678-07-09 04:33 G | 3795096.59 | 3795096.69 | 3795096.79 | 0.0142 | 0.0129 |
| Jupiter | 5679-02-16 21:07 G | 3795319.26 | 3795319.38 | 3795319.50 | 0.0522 | 0.0435 |
| Saturn | 5686-02-16 15:21 G | 3797875.91 | 3797876.14 | 3797876.37 | 0.0291 | 0.0117 |
| Mars | 5691-06-04 10:48 G | 3799809.81 | 3799809.95 | 3799810.09 | 0.1621 | 0.1015 |
| Neptune | 5700-03-02 18:28 G | 3803003.27 | 3803003.27 | 3803003.30 | 0.0089 | 0.0089 |
| Saturn | 5700-08-18 07:26 G | 3803171.61 | 3803171.81 | 3803172.03 | 0.0269 | 0.0145 |
| Neptune | 5701-03-05 04:04 G | 3803370.56 | 3803370.67 | 3803370.84 | 0.0089 | 0.0076 |
| Neptune | 5702-03-07 18:14 G | 3803738.07 | 3803738.26 | 3803738.47 | 0.0089 | 0.0051 |
| Neptune | 5703-03-09 23:31 G | 3804105.26 | 3804105.48 | 3804105.73 | 0.0089 | 0.0038 |
| Neptune | 5704-03-11 16:33 G | 3804472.95 | 3804473.19 | 3804473.44 | 0.0089 | 0.0015 |
| Neptune | 5705-03-13 20:09 G | 3804840.09 | 3804840.34 | 3804840.60 | 0.0089 | 0.0002 |
| Neptune | 5706-03-16 12:57 G | 3805207.80 | 3805208.04 | 3805208.30 | 0.0089 | 0.0022 |
| Neptune | 5707-03-18 17:45 G | 3805575.02 | 3805575.24 | 3805575.47 | 0.0089 | 0.0037 |
| Neptune | 5708-03-20 06:57 G | 3805942.62 | 3805942.79 | 3805943.01 | 0.0089 | 0.0060 |
| Jupiter | 5708-07-30 14:09 G | 3806074.96 | 3806075.09 | 3806075.24 | 0.0498 | 0.0390 |
| Neptune | 5709-03-22 16:33 G | 3806310.07 | 3806310.19 | 3806310.33 | 0.0089 | 0.0074 |
| Jupiter | 5714-01-28 04:33 G | 3808082.66 | 3808082.69 | 3808082.73 | 0.0531 | 0.0523 |
| Uranus | 5714-12-11 14:09 G | 3808400.08 | 3808400.09 | 3808400.13 | 0.0134 | 0.0133 |
| Saturn | 5715-02-12 12:43 G | 3808462.83 | 3808463.03 | 3808463.23 | 0.0290 | 0.0151 |
| Uranus | 5715-12-15 15:35 G | 3808768.96 | 3808769.15 | 3808769.35 | 0.0134 | 0.0089 |
| Uranus | 5716-12-19 06:43 G | 3809138.58 | 3809138.78 | 3809139.01 | 0.0135 | 0.0071 |
| Uranus | 5717-12-23 08:38 G | 3809507.62 | 3809507.86 | 3809508.11 | 0.0135 | 0.0030 |
| Uranus | 5718-12-28 00:14 G | 3809877.26 | 3809877.51 | 3809877.76 | 0.0135 | 0.0002 |
| Uranus | 5720-01-01 02:24 G | 3810246.36 | 3810246.60 | 3810246.85 | 0.0136 | 0.0030 |
| Jupiter | 5720-08-04 03:35 G | 3810462.42 | 3810462.65 | 3810462.88 | 0.0500 | 0.0167 |
| Uranus | 5721-01-04 18:28 G | 3810616.06 | 3810616.27 | 3810616.48 | 0.0136 | 0.0071 |
| Uranus | 5722-01-08 21:07 G | 3810985.21 | 3810985.38 | 3810985.59 | 0.0136 | 0.0091 |
| Uranus | 5723-01-13 13:55 G | 3811355.07 | 3811355.08 | 3811355.11 | 0.0137 | 0.0136 |

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| Jupiter | 5726-02-02 09:07 G | 3812470.68 | 3812470.88 | 3812471.09 | 0.0529 | 0.0263 |
| Saturn | 5729-08-12 21:50 G | 3813758.18 | 3813758.41 | 3813758.64 | 0.0269 | 0.0094 |
| Jupiter | 5732-08-08 13:11 G | 3814849.82 | 3814850.05 | 3814850.28 | 0.0502 | 0.0061 |
| Jupiter | 5738-02-07 00:28 G | 3816858.30 | 3816858.52 | 3816858.75 | 0.0527 | 0.0074 |
| Jupiter | 5744-08-13 13:11 G | 3819237.85 | 3819238.05 | 3819238.26 | 0.0504 | 0.0235 |
| Pluto | 5744-08-31 18:28 G | 3819256.18 | 3819256.27 | 3819256.40 | 0.0079 | 0.0073 |
| Saturn | 5745-02-19 04:48 G | 3819427.53 | 3819427.70 | 3819427.87 | 0.0291 | 0.0208 |
| Jupiter | 5750-02-12 02:24 G | 3821246.39 | 3821246.60 | 3821246.83 | 0.0525 | 0.0133 |
| Uranus | 5756-06-11 21:50 G | 3823558.24 | 3823558.41 | 3823558.60 | 0.0144 | 0.0097 |
| Jupiter | 5756-08-17 23:16 G | 3823625.33 | 3823625.47 | 3823625.61 | 0.0505 | 0.0406 |
| Uranus | 5757-06-17 01:55 G | 3823928.36 | 3823928.58 | 3823928.82 | 0.0144 | 0.0070 |
| Uranus | 5758-06-21 21:07 G | 3824298.14 | 3824298.38 | 3824298.63 | 0.0143 | 0.0023 |
| Uranus | 5759-06-27 02:09 G | 3824668.33 | 3824668.59 | 3824668.85 | 0.0143 | 0.0018 |
| Saturn | 5759-08-20 13:40 G | 3824722.92 | 3824723.07 | 3824723.23 | 0.0269 | 0.0212 |
| Uranus | 5760-06-30 18:28 G | 3825038.04 | 3825038.27 | 3825038.52 | 0.0143 | 0.0048 |
| Uranus | 5761-07-05 23:45 G | 3825408.31 | 3825408.49 | 3825408.68 | 0.0142 | 0.0098 |
| Jupiter | 5762-02-16 11:02 G | 3825633.80 | 3825633.96 | 3825634.12 | 0.0523 | 0.0379 |
| Uranus | 5762-07-10 14:24 G | 3825777.99 | 3825778.10 | 3825778.25 | 0.0142 | 0.0121 |
| Mars | 5770-06-07 06:57 G | 3828666.61 | 3828666.79 | 3828666.97 | 0.1624 | 0.0161 |
| Saturn | 5774-02-14 05:31 G | 3830014.50 | 3830014.73 | 3830014.98 | 0.0290 | 0.0061 |
| Neptune | 5783-09-03 06:14 G | 3833502.76 | 3833502.76 | 3833502.78 | 0.0088 | 0.0088 |
| Neptune | 5784-09-04 12:00 G | 3833869.84 | 3833870.00 | 3833870.22 | 0.0088 | 0.0062 |
| Neptune | 5785-09-07 08:24 G | 3834237.65 | 3834237.85 | 3834238.07 | 0.0088 | 0.0052 |
| Neptune | 5786-09-09 14:52 G | 3834604.89 | 3834605.12 | 3834605.38 | 0.0088 | 0.0025 |
| Neptune | 5787-09-12 09:07 G | 3834972.62 | 3834972.88 | 3834973.15 | 0.0088 | 0.0014 |
| Saturn | 5788-08-14 12:14 G | 3835309.78 | 3835310.01 | 3835310.26 | 0.0269 | 0.0022 |
| Neptune | 5788-09-13 18:43 G | 3835340.04 | 3835340.28 | 3835340.54 | 0.0088 | 0.0014 |
| Neptune | 5789-09-16 08:24 G | 3835707.60 | 3835707.85 | 3835708.12 | 0.0088 | 0.0024 |
| Neptune | 5790-09-18 22:19 G | 3836075.24 | 3836075.43 | 3836075.65 | 0.0088 | 0.0051 |
| Jupiter | 5791-07-30 16:33 G | 3836390.06 | 3836390.19 | 3836390.32 | 0.0498 | 0.0423 |

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| Neptune | 5791-09-21 07:40 G | 3836442.65 | 3836442.82 | 3836443.04 | 0.0089 | 0.0061 |
| Neptune | 5792-09-23 02:52 G | 3836810.62 | 3836810.62 | 3836810.64 | 0.0089 | 0.0088 |
| Uranus | 5798-12-11 23:16 G | 3839081.37 | 3839081.47 | 3839081.62 | 0.0134 | 0.0116 |
| Uranus | 5799-12-16 00:28 G | 3839450.36 | 3839450.52 | 3839450.70 | 0.0134 | 0.0099 |
| Uranus | 5800-12-20 15:50 G | 3839819.94 | 3839820.16 | 3839820.40 | 0.0134 | 0.0056 |
| Uranus | 5801-12-24 16:48 G | 3840188.97 | 3840189.20 | 3840189.46 | 0.0135 | 0.0034 |
| Uranus | 5802-12-29 08:52 G | 3840558.62 | 3840558.87 | 3840559.12 | 0.0135 | 0.0003 |
| Jupiter | 5803-08-05 01:40 G | 3840777.36 | 3840777.57 | 3840777.79 | 0.0500 | 0.0196 |
| Uranus | 5804-01-02 10:48 G | 3840927.71 | 3840927.95 | 3840928.20 | 0.0135 | 0.0039 |
| Uranus | 5805-01-06 03:21 G | 3841297.42 | 3841297.64 | 3841297.86 | 0.0136 | 0.0063 |
| Uranus | 5806-01-10 06:14 G | 3841666.61 | 3841666.76 | 3841666.92 | 0.0136 | 0.0108 |
| Uranus | 5807-01-14 23:16 G | 3842036.39 | 3842036.47 | 3842036.58 | 0.0137 | 0.0126 |
| Jupiter | 5809-02-02 02:52 G | 3842785.44 | 3842785.62 | 3842785.80 | 0.0529 | 0.0311 |
| Jupiter | 5815-08-10 00:28 G | 3845165.28 | 3845165.52 | 3845165.75 | 0.0501 | 0.0028 |
| Saturn | 5817-08-10 11:16 G | 3845896.91 | 3845896.97 | 3845897.07 | 0.0270 | 0.0256 |
| Jupiter | 5821-02-07 02:38 G | 3847173.39 | 3847173.61 | 3847173.83 | 0.0528 | 0.0136 |
| Jupiter | 5827-08-14 07:11 G | 3849552.58 | 3849552.80 | 3849553.03 | 0.0503 | 0.0193 |
| Jupiter | 5833-02-11 16:48 G | 3851560.97 | 3851561.20 | 3851561.43 | 0.0526 | 0.0078 |
| Saturn | 5833-02-16 16:33 G | 3851565.94 | 3851566.19 | 3851566.44 | 0.0290 | 0.0023 |
| Uranus | 5839-06-09 09:50 G | 3853869.81 | 3853869.91 | 3853870.02 | 0.0144 | 0.0132 |
| Jupiter | 5839-08-19 01:26 G | 3853940.41 | 3853940.56 | 3853940.72 | 0.0505 | 0.0363 |
| Uranus | 5840-06-13 08:38 G | 3854239.71 | 3854239.86 | 3854240.04 | 0.0144 | 0.0107 |
| Uranus | 5841-06-18 11:31 G | 3854609.74 | 3854609.98 | 3854610.22 | 0.0144 | 0.0054 |
| Uranus | 5842-06-23 07:26 G | 3854979.56 | 3854979.81 | 3854980.05 | 0.0143 | 0.0023 |
| Uranus | 5843-06-28 11:31 G | 3855349.72 | 3855349.98 | 3855350.24 | 0.0143 | 0.0017 |
| Uranus | 5844-07-02 04:33 G | 3855719.48 | 3855719.69 | 3855719.93 | 0.0143 | 0.0064 |
| Jupiter | 5845-02-16 19:26 G | 3855949.15 | 3855949.31 | 3855949.48 | 0.0524 | 0.0349 |
| Uranus | 5845-07-07 09:50 G | 3856089.71 | 3856089.91 | 3856090.12 | 0.0142 | 0.0088 |
| Uranus | 5846-07-12 00:57 G | 3856459.51 | 3856459.54 | 3856459.61 | 0.0142 | 0.0139 |
| Saturn | 5847-08-18 03:21 G | 3856861.40 | 3856861.64 | 3856861.89 | 0.0269 | 0.0051 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Mars | 5849-06-10 05:16 G | 3857523.63 | 3857523.72 | 3857523.81 | 0.1626 | 0.1417 |
| Mars | 5855-12-10 02:38 G | 3859897.42 | 3859897.61 | 3859897.81 | 0.1913 | 0.0812 |
| Saturn | 5862-02-10 18:14 G | 3862152.23 | 3862152.26 | 3862152.30 | 0.0290 | 0.0286 |
| Neptune | 5865-03-05 17:45 G | 3863271.15 | 3863271.24 | 3863271.38 | 0.0089 | 0.0078 |
| Neptune | 5866-03-07 22:48 G | 3863638.29 | 3863638.45 | 3863638.64 | 0.0089 | 0.0066 |
| Neptune | 5867-03-10 16:04 G | 3864005.96 | 3864006.17 | 3864006.41 | 0.0089 | 0.0041 |
| Neptune | 5868-03-11 19:55 G | 3864373.10 | 3864373.33 | 3864373.58 | 0.0089 | 0.0030 |
| Neptune | 5869-03-14 12:43 G | 3864740.77 | 3864741.03 | 3864741.29 | 0.0089 | 0.0004 |
| Neptune | 5870-03-16 18:43 G | 3865108.04 | 3865108.28 | 3865108.53 | 0.0089 | 0.0008 |
| Neptune | 5871-03-19 07:40 G | 3865475.59 | 3865475.82 | 3865476.08 | 0.0089 | 0.0033 |
| Neptune | 5872-03-20 18:00 G | 3865843.04 | 3865843.25 | 3865843.47 | 0.0089 | 0.0044 |
| Neptune | 5873-03-23 01:11 G | 3866210.41 | 3866210.55 | 3866210.74 | 0.0089 | 0.0069 |
| Neptune | 5874-03-25 15:50 G | 3866578.08 | 3866578.16 | 3866578.29 | 0.0089 | 0.0080 |
| Jupiter | 5874-07-30 16:33 G | 3866705.10 | 3866705.19 | 3866705.29 | 0.0497 | 0.0452 |
| Saturn | 5876-08-11 17:45 G | 3867448.07 | 3867448.24 | 3867448.43 | 0.0270 | 0.0187 |
| Uranus | 5882-12-13 09:35 G | 3869762.82 | 3869762.90 | 3869763.00 | 0.0134 | 0.0125 |
| Uranus | 5883-12-17 10:48 G | 3870131.76 | 3870131.95 | 3870132.16 | 0.0134 | 0.0081 |
| Uranus | 5884-12-21 01:55 G | 3870501.37 | 3870501.58 | 3870501.82 | 0.0134 | 0.0064 |
| Uranus | 5885-12-25 03:21 G | 3870870.40 | 3870870.64 | 3870870.90 | 0.0135 | 0.0022 |
| Jupiter | 5886-08-04 12:00 G | 3871092.79 | 3871093.00 | 3871093.21 | 0.0499 | 0.0218 |
| Uranus | 5886-12-29 19:26 G | 3871240.06 | 3871240.31 | 3871240.56 | 0.0135 | 0.0006 |
| Uranus | 5888-01-02 21:07 G | 3871609.15 | 3871609.38 | 3871609.63 | 0.0135 | 0.0038 |
| Uranus | 5889-01-06 13:40 G | 3871978.87 | 3871979.07 | 3871979.28 | 0.0136 | 0.0078 |
| Uranus | 5890-01-10 16:04 G | 3872348.01 | 3872348.17 | 3872348.35 | 0.0136 | 0.0098 |
| Jupiter | 5892-02-02 05:45 G | 3873100.58 | 3873100.74 | 3873100.91 | 0.0530 | 0.0366 |
| Saturn | 5892-02-19 00:43 G | 3873117.30 | 3873117.53 | 3873117.76 | 0.0290 | 0.0101 |
| Mars | 5896-06-04 05:16 G | 3874684.64 | 3874684.72 | 3874684.80 | 0.1616 | 0.1467 |
| Jupiter | 5898-08-08 14:24 G | 3875479.86 | 3875480.10 | 3875480.34 | 0.0500 | 0.0018 |
| Jupiter | 5904-02-07 23:31 G | 3877488.26 | 3877488.48 | 3877488.70 | 0.0528 | 0.0177 |
| Pluto | 5904-03-04 17:31 G | 3877513.97 | 3877514.23 | 3877514.48 | 0.0064 | 0.0002 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Saturn | 5906-08-20 12:43 G | 3878412.80 | 3878413.03 | 3878413.26 | 0.0269 | 0.0121 |
| Jupiter | 5910-08-14 12:14 G | 3879867.80 | 3879868.01 | 3879868.23 | 0.0502 | 0.0151 |
| Jupiter | 5916-02-13 03:07 G | 3881876.40 | 3881876.63 | 3881876.85 | 0.0526 | 0.0047 |
| Saturn | 5921-02-13 08:09 G | 3883703.69 | 3883703.84 | 3883704.02 | 0.0290 | 0.0208 |
| Jupiter | 5922-08-19 02:09 G | 3884255.41 | 3884255.59 | 3884255.78 | 0.0505 | 0.0329 |
| Uranus | 5923-06-10 17:45 G | 3884551.19 | 3884551.24 | 3884551.32 | 0.0145 | 0.0140 |
| Uranus | 5924-06-14 18:57 G | 3884921.10 | 3884921.29 | 3884921.48 | 0.0144 | 0.0089 |
| Uranus | 5925-06-19 20:09 G | 3885291.11 | 3885291.34 | 3885291.59 | 0.0144 | 0.0062 |
| Uranus | 5926-06-24 17:31 G | 3885660.99 | 3885661.23 | 3885661.48 | 0.0144 | 0.0013 |
| Uranus | 5927-06-29 20:38 G | 3886031.11 | 3886031.36 | 3886031.63 | 0.0143 | 0.0026 |
| Jupiter | 5928-02-17 19:40 G | 3886264.13 | 3886264.32 | 3886264.52 | 0.0524 | 0.0308 |
| Uranus | 5928-07-03 15:07 G | 3886400.90 | 3886401.13 | 3886401.36 | 0.0143 | 0.0057 |
| Uranus | 5929-07-08 18:43 G | 3886771.13 | 3886771.28 | 3886771.47 | 0.0142 | 0.0108 |
| Uranus | 5930-07-13 10:33 G | 3887140.86 | 3887140.94 | 3887141.06 | 0.0142 | 0.0130 |
| Mars | 5934-12-14 17:16 G | 3888756.15 | 3888756.22 | 3888756.29 | 0.1908 | 0.1766 |
| Saturn | 5935-08-15 03:21 G | 3888999.43 | 3888999.64 | 3888999.86 | 0.0269 | 0.0118 |
| Neptune | 5948-09-06 02:24 G | 3893770.48 | 3893770.60 | 3893770.77 | 0.0088 | 0.0074 |
| Neptune | 5949-09-08 09:21 G | 3894137.72 | 3894137.89 | 3894138.10 | 0.0088 | 0.0059 |
| Neptune | 5950-09-11 01:55 G | 3894505.36 | 3894505.58 | 3894505.85 | 0.0088 | 0.0037 |
| Saturn | 5951-02-21 11:02 G | 3894668.78 | 3894668.96 | 3894669.15 | 0.0291 | 0.0176 |
| Neptune | 5951-09-13 13:11 G | 3894872.82 | 3894873.05 | 3894873.31 | 0.0088 | 0.0021 |
| Neptune | 5952-09-15 02:09 G | 3895240.32 | 3895240.59 | 3895240.86 | 0.0088 | 0.0001 |
| Neptune | 5953-09-17 17:31 G | 3895608.00 | 3895608.23 | 3895608.50 | 0.0088 | 0.0017 |
| Neptune | 5954-09-20 01:55 G | 3895975.34 | 3895975.58 | 3895975.83 | 0.0088 | 0.0037 |
| Neptune | 5955-09-22 21:07 G | 3896343.19 | 3896343.38 | 3896343.59 | 0.0089 | 0.0054 |
| Neptune | 5956-09-24 02:38 G | 3896710.50 | 3896710.61 | 3896710.78 | 0.0089 | 0.0075 |
| Jupiter | 5957-07-30 23:02 G | 3897020.41 | 3897020.46 | 3897020.51 | 0.0496 | 0.0483 |
| Saturn | 5965-08-21 17:16 G | 3899964.05 | 3899964.22 | 3899964.42 | 0.0269 | 0.0187 |
| Uranus | 5966-12-14 19:26 G | 3900444.17 | 3900444.31 | 3900444.47 | 0.0134 | 0.0108 |
| Uranus | 5967-12-18 20:52 G | 3900813.20 | 3900813.37 | 3900813.56 | 0.0134 | 0.0091 |

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| Uranus | 5968-12-22 11:16 G | 3901182.75 | 3901182.97 | 3901183.23 | 0.0134 | 0.0048 |
| Jupiter | 5969-08-04 04:48 G | 3901407.50 | 3901407.70 | 3901407.91 | 0.0498 | 0.0253 |
| Uranus | 5969-12-26 12:57 G | 3901551.80 | 3901552.04 | 3901552.29 | 0.0135 | 0.0026 |
| Uranus | 5970-12-31 04:33 G | 3901921.44 | 3901921.69 | 3901921.95 | 0.0135 | 0.0013 |
| Uranus | 5972-01-04 06:28 G | 3902290.55 | 3902290.77 | 3902291.02 | 0.0135 | 0.0047 |
| Uranus | 5973-01-07 22:48 G | 3902660.25 | 3902660.45 | 3902660.68 | 0.0136 | 0.0073 |
| Uranus | 5974-01-12 01:40 G | 3903029.46 | 3903029.57 | 3903029.72 | 0.0136 | 0.0117 |
| Uranus | 5975-01-16 19:11 G | 3903399.28 | 3903399.30 | 3903399.37 | 0.0137 | 0.0135 |
| Jupiter | 5975-02-02 04:48 G | 3903415.55 | 3903415.70 | 3903415.85 | 0.0531 | 0.0403 |
| Mars | 5975-06-08 13:40 G | 3903541.88 | 3903542.07 | 3903542.27 | 0.1618 | 0.0366 |
| Saturn | 5980-02-15 14:24 G | 3905254.89 | 3905255.10 | 3905255.34 | 0.0290 | 0.0133 |
| Jupiter | 5981-08-09 02:24 G | 3905795.37 | 3905795.60 | 3905795.83 | 0.0500 | 0.0048 |
| Jupiter | 5987-02-07 08:52 G | 3907803.67 | 3907803.87 | 3907804.08 | 0.0528 | 0.0218 |
| Pluto | 5992-09-03 11:16 G | 3909838.73 | 3909838.97 | 3909839.22 | 0.0080 | 0.0024 |
| Jupiter | 5993-08-13 15:07 G | 3910182.89 | 3910183.13 | 3910183.37 | 0.0502 | 0.0116 |
| Saturn | 5994-08-16 14:24 G | 3910550.86 | 3910551.10 | 3910551.34 | 0.0269 | 0.0053 |
| Jupiter | 5999-02-11 23:31 G | 3912191.24 | 3912191.48 | 3912191.72 | 0.0526 | 0.0005 |

7TH MILLENNIUM CE

This is a list of transits of Moon in the 7th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|--------------------|------------|------------|------------|--------|--------|-------|---|
| | TRANSIT | | | | | | | |
| | TIME | | | | | | | |
| Jupiter | 6005-08-18 06:57 G | 3914570.61 | 3914570.79 | 3914570.98 | 0.0504 | 0.0301 | | |
| Uranus | 6007-06-11 03:35 G | 3915232.54 | 3915232.65 | 3915232.80 | 0.0145 | 0.0125 | | |

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| Uranus | 6008-06-15 05:16 G | 3915602.56 | 3915602.72 | 3915602.91 | 0.0144 | 0.0099 |
| Uranus | 6009-06-20 05:31 G | 3915972.48 | 3915972.73 | 3915972.98 | 0.0144 | 0.0044 |
| Saturn | 6010-02-22 21:21 G | 3916220.27 | 3916220.39 | 3916220.52 | 0.0291 | 0.0244 |
| Uranus | 6010-06-25 03:50 G | 3916342.42 | 3916342.66 | 3916342.91 | 0.0144 | 0.0015 |
| Jupiter | 6011-02-16 19:11 G | 3916579.12 | 3916579.30 | 3916579.50 | 0.0525 | 0.0271 |
| Uranus | 6011-06-30 05:31 G | 3916712.48 | 3916712.73 | 3916713.00 | 0.0143 | 0.0028 |
| Uranus | 6012-07-04 01:26 G | 3917082.34 | 3917082.56 | 3917082.77 | 0.0143 | 0.0072 |
| Uranus | 6013-07-09 04:48 G | 3917452.52 | 3917452.70 | 3917452.90 | 0.0142 | 0.0098 |
| Jupiter | 6023-02-21 21:21 G | 3920967.32 | 3920967.39 | 3920967.48 | 0.0523 | 0.0492 |
| Saturn | 6024-08-22 22:33 G | 3921515.37 | 3921515.44 | 3921515.53 | 0.0269 | 0.0252 |
| Neptune | 6029-03-05 22:33 G | 3923171.38 | 3923171.44 | 3923171.50 | 0.0089 | 0.0086 |
| Neptune | 6030-03-08 15:50 G | 3923539.03 | 3923539.16 | 3923539.30 | 0.0089 | 0.0075 |
| Neptune | 6031-03-10 19:40 G | 3923906.12 | 3923906.32 | 3923906.53 | 0.0089 | 0.0050 |
| Neptune | 6032-03-12 11:31 G | 3924273.76 | 3924273.98 | 3924274.23 | 0.0089 | 0.0038 |
| Neptune | 6033-03-14 18:00 G | 3924641.01 | 3924641.25 | 3924641.50 | 0.0089 | 0.0014 |
| Neptune | 6034-03-17 05:45 G | 3925008.48 | 3925008.74 | 3925009.01 | 0.0089 | 0.0003 |
| Neptune | 6035-03-19 17:02 G | 3925375.98 | 3925376.21 | 3925376.45 | 0.0089 | 0.0022 |
| Neptune | 6036-03-21 00:00 G | 3925743.28 | 3925743.50 | 3925743.76 | 0.0089 | 0.0034 |
| Neptune | 6037-03-23 15:50 G | 3926110.99 | 3926111.16 | 3926111.37 | 0.0089 | 0.0059 |
| Neptune | 6038-03-25 19:26 G | 3926478.19 | 3926478.31 | 3926478.49 | 0.0089 | 0.0071 |
| Saturn | 6039-02-16 15:21 G | 3926805.90 | 3926806.14 | 3926806.39 | 0.0290 | 0.0068 |
| Uranus | 6050-12-15 06:00 G | 3931125.63 | 3931125.75 | 3931125.88 | 0.0134 | 0.0116 |
| Uranus | 6051-12-19 07:55 G | 3931494.63 | 3931494.83 | 3931495.05 | 0.0134 | 0.0073 |
| Jupiter | 6052-08-03 19:40 G | 3931723.13 | 3931723.32 | 3931723.51 | 0.0498 | 0.0275 |
| Uranus | 6052-12-22 22:04 G | 3931864.20 | 3931864.42 | 3931864.67 | 0.0134 | 0.0055 |
| Saturn | 6053-08-17 21:50 G | 3932102.16 | 3932102.41 | 3932102.66 | 0.0269 | 0.0010 |
| Uranus | 6053-12-27 00:43 G | 3932233.28 | 3932233.53 | 3932233.78 | 0.0135 | 0.0012 |
| Mars | 6054-06-10 19:26 G | 3932399.15 | 3932399.31 | 3932399.47 | 0.1620 | 0.0796 |
| Uranus | 6054-12-31 16:04 G | 3932602.91 | 3932603.17 | 3932603.43 | 0.0135 | 0.0015 |
| Uranus | 6056-01-04 18:28 G | 3932972.05 | 3932972.27 | 3932972.51 | 0.0135 | 0.0049 |

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| Uranus | 6057-01-08 10:33 G | 3933341.75 | 3933341.94 | 3933342.14 | 0.0136 | 0.0087 |
| Uranus | 6058-01-12 13:26 G | 3933710.93 | 3933711.06 | 3933711.23 | 0.0136 | 0.0109 |
| Jupiter | 6058-02-01 11:45 G | 3933730.88 | 3933730.99 | 3933731.12 | 0.0531 | 0.0447 |
| Jupiter | 6064-08-08 05:16 G | 3936110.48 | 3936110.72 | 3936110.96 | 0.0500 | 0.0077 |
| Jupiter | 6070-02-06 06:28 G | 3938118.56 | 3938118.77 | 3938118.98 | 0.0529 | 0.0257 |
| Jupiter | 6076-08-12 17:02 G | 3940497.98 | 3940498.21 | 3940498.43 | 0.0501 | 0.0072 |
| Jupiter | 6082-02-11 06:28 G | 3942506.55 | 3942506.77 | 3942506.99 | 0.0528 | 0.0023 |
| Saturn | 6082-08-12 15:50 G | 3942689.03 | 3942689.16 | 3942689.32 | 0.0270 | 0.0219 |
| Jupiter | 6088-08-17 12:43 G | 3944885.83 | 3944886.03 | 3944886.24 | 0.0503 | 0.0262 |
| Uranus | 6091-06-11 14:09 G | 3945913.98 | 3945914.09 | 3945914.21 | 0.0145 | 0.0130 |
| Uranus | 6092-06-15 17:16 G | 3946284.02 | 3946284.22 | 3946284.43 | 0.0144 | 0.0080 |
| Uranus | 6093-06-20 16:04 G | 3946653.93 | 3946654.17 | 3946654.42 | 0.0144 | 0.0053 |
| Jupiter | 6094-02-16 09:07 G | 3946894.68 | 3946894.88 | 3946895.09 | 0.0525 | 0.0251 |
| Uranus | 6094-06-25 16:04 G | 3947023.92 | 3947024.17 | 3947024.42 | 0.0144 | 0.0002 |
| Uranus | 6095-06-30 16:48 G | 3947393.95 | 3947394.20 | 3947394.46 | 0.0143 | 0.0034 |
| Uranus | 6096-07-04 13:11 G | 3947763.85 | 3947764.05 | 3947764.28 | 0.0143 | 0.0069 |
| Uranus | 6097-07-09 15:50 G | 3948134.01 | 3948134.16 | 3948134.31 | 0.0142 | 0.0117 |
| Saturn | 6098-02-17 17:45 G | 3948357.00 | 3948357.24 | 3948357.47 | 0.0290 | 0.0007 |
| Uranus | 6098-07-14 09:07 G | 3948503.86 | 3948503.88 | 3948503.93 | 0.0142 | 0.0140 |
| Jupiter | 6100-08-23 00:14 G | 3949273.50 | 3949273.51 | 3949273.53 | 0.0506 | 0.0504 |
| Jupiter | 6106-02-21 22:19 G | 3951282.33 | 3951282.43 | 3951282.54 | 0.0523 | 0.0460 |
| Saturn | 6112-08-19 20:52 G | 3953653.12 | 3953653.37 | 3953653.63 | 0.0269 | 0.0063 |
| Neptune | 6112-09-06 03:07 G | 3953670.61 | 3953670.63 | 3953670.68 | 0.0088 | 0.0087 |
| Neptune | 6113-09-08 18:57 G | 3954038.12 | 3954038.29 | 3954038.50 | 0.0088 | 0.0062 |
| Neptune | 6114-09-11 07:26 G | 3954405.63 | 3954405.81 | 3954406.04 | 0.0088 | 0.0052 |
| Neptune | 6115-09-13 18:43 G | 3954773.03 | 3954773.28 | 3954773.55 | 0.0088 | 0.0026 |
| Neptune | 6116-09-15 11:31 G | 3955140.73 | 3955140.98 | 3955141.24 | 0.0088 | 0.0015 |
| Neptune | 6117-09-17 18:28 G | 3955508.02 | 3955508.27 | 3955508.54 | 0.0088 | 0.0012 |
| Neptune | 6118-09-20 14:24 G | 3955875.86 | 3955876.10 | 3955876.36 | 0.0088 | 0.0022 |
| Neptune | 6119-09-22 20:09 G | 3956243.14 | 3956243.34 | 3956243.57 | 0.0088 | 0.0049 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Neptune | 6120-09-24 15:50 G | 3956610.97 | 3956611.16 | 3956611.37 | 0.0089 | 0.0058 |
| Neptune | 6121-09-26 23:31 G | 3956978.42 | 3956978.48 | 3956978.56 | 0.0089 | 0.0085 |
| Uranus | 6134-12-16 16:19 G | 3961807.03 | 3961807.18 | 3961807.37 | 0.0134 | 0.0101 |
| Jupiter | 6135-08-04 18:57 G | 3962038.11 | 3962038.29 | 3962038.49 | 0.0497 | 0.0306 |
| Uranus | 6135-12-20 19:11 G | 3962176.12 | 3962176.30 | 3962176.51 | 0.0134 | 0.0083 |
| Uranus | 6136-12-24 08:52 G | 3962545.62 | 3962545.87 | 3962546.12 | 0.0134 | 0.0038 |
| Uranus | 6137-12-28 11:31 G | 3962914.74 | 3962914.98 | 3962915.24 | 0.0135 | 0.0018 |
| Uranus | 6139-01-02 01:55 G | 3963284.33 | 3963284.58 | 3963284.84 | 0.0135 | 0.0023 |
| Uranus | 6140-01-06 05:02 G | 3963653.49 | 3963653.71 | 3963653.95 | 0.0135 | 0.0055 |
| Uranus | 6141-01-09 20:38 G | 3964023.17 | 3964023.36 | 3964023.57 | 0.0136 | 0.0083 |
| Jupiter | 6141-02-01 13:26 G | 3964045.96 | 3964046.06 | 3964046.16 | 0.0532 | 0.0481 |
| Saturn | 6141-08-14 22:04 G | 3964240.24 | 3964240.42 | 3964240.62 | 0.0270 | 0.0164 |
| Uranus | 6142-01-14 00:00 G | 3964392.43 | 3964392.50 | 3964392.62 | 0.0136 | 0.0126 |
| Jupiter | 6147-08-09 10:33 G | 3966425.72 | 3966425.94 | 3966426.16 | 0.0499 | 0.0117 |
| Pluto | 6152-03-06 23:31 G | 3968097.28 | 3968097.48 | 3968097.73 | 0.0064 | 0.0032 |
| Jupiter | 6153-02-06 16:33 G | 3968434.01 | 3968434.19 | 3968434.38 | 0.0530 | 0.0291 |
| Pluto | 6153-03-08 07:55 G | 3968463.70 | 3968463.83 | 3968463.98 | 0.0064 | 0.0053 |
| Saturn | 6157-02-19 22:19 G | 3969908.20 | 3969908.43 | 3969908.66 | 0.0290 | 0.0053 |
| Jupiter | 6159-08-14 04:48 G | 3970813.46 | 3970813.70 | 3970813.95 | 0.0501 | 0.0038 |
| Jupiter | 6165-02-11 19:26 G | 3972822.07 | 3972822.31 | 3972822.55 | 0.0528 | 0.0039 |
| Jupiter | 6171-08-18 16:04 G | 3975200.97 | 3975201.17 | 3975201.38 | 0.0503 | 0.0238 |
| Saturn | 6171-08-21 18:00 G | 3975204.02 | 3975204.25 | 3975204.48 | 0.0269 | 0.0113 |
| Uranus | 6175-06-13 02:09 G | 3976595.45 | 3976595.59 | 3976595.75 | 0.0145 | 0.0117 |
| Uranus | 6176-06-17 05:45 G | 3976965.57 | 3976965.74 | 3976965.96 | 0.0144 | 0.0090 |
| Jupiter | 6177-02-16 07:26 G | 3977209.60 | 3977209.81 | 3977210.02 | 0.0525 | 0.0219 |
| Uranus | 6177-06-22 03:35 G | 3977335.40 | 3977335.65 | 3977335.91 | 0.0144 | 0.0034 |
| Uranus | 6178-06-27 04:48 G | 3977705.45 | 3977705.70 | 3977705.94 | 0.0144 | 0.0006 |
| Uranus | 6179-07-02 04:19 G | 3978075.43 | 3978075.68 | 3978075.94 | 0.0143 | 0.0039 |
| Mars | 6180-06-07 11:45 G | 3978416.84 | 3978416.99 | 3978417.13 | 0.1613 | 0.0882 |
| Uranus | 6180-07-06 02:09 G | 3978445.40 | 3978445.59 | 3978445.80 | 0.0143 | 0.0082 |

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| Uranus | 6181-07-11 03:50 G | 3978815.50 | 3978815.66 | 3978815.84 | 0.0142 | 0.0109 |
| Jupiter | 6183-08-23 17:02 G | 3979589.15 | 3979589.21 | 3979589.28 | 0.0505 | 0.0483 |
| Saturn | 6186-02-14 01:26 G | 3980494.43 | 3980494.56 | 3980494.69 | 0.0290 | 0.0245 |
| Jupiter | 6189-02-21 10:48 G | 3981597.82 | 3981597.95 | 3981598.08 | 0.0523 | 0.0424 |
| Neptune | 6194-03-08 18:00 G | 3983439.16 | 3983439.25 | 3983439.40 | 0.0089 | 0.0078 |
| Neptune | 6195-03-11 09:35 G | 3983806.74 | 3983806.90 | 3983807.09 | 0.0089 | 0.0065 |
| Neptune | 6196-03-12 17:31 G | 3984174.02 | 3984174.23 | 3984174.45 | 0.0089 | 0.0042 |
| Neptune | 6197-03-15 04:33 G | 3984541.45 | 3984541.69 | 3984541.95 | 0.0089 | 0.0030 |
| Neptune | 6198-03-17 17:02 G | 3984908.97 | 3984909.21 | 3984909.46 | 0.0089 | 0.0007 |
| Neptune | 6199-03-19 23:02 G | 3985276.20 | 3985276.46 | 3985276.72 | 0.0089 | 0.0007 |
| Neptune | 6200-03-22 14:52 G | 3985643.90 | 3985644.12 | 3985644.37 | 0.0089 | 0.0031 |
| Saturn | 6200-08-17 02:09 G | 3985791.38 | 3985791.59 | 3985791.82 | 0.0270 | 0.0112 |
| Neptune | 6201-03-24 18:43 G | 3986011.06 | 3986011.28 | 3986011.51 | 0.0089 | 0.0042 |
| Neptune | 6202-03-27 11:45 G | 3986378.83 | 3986378.99 | 3986379.17 | 0.0089 | 0.0066 |
| Neptune | 6203-03-29 15:50 G | 3986746.06 | 3986746.16 | 3986746.30 | 0.0089 | 0.0077 |
| Saturn | 6216-02-23 01:26 G | 3991459.34 | 3991459.56 | 3991459.79 | 0.0290 | 0.0110 |
| Uranus | 6217-12-13 15:21 G | 3992119.12 | 3992119.14 | 3992119.21 | 0.0134 | 0.0132 |
| Jupiter | 6218-08-05 05:45 G | 3992353.58 | 3992353.74 | 3992353.92 | 0.0497 | 0.0327 |
| Mars | 6218-12-15 14:38 G | 3992485.93 | 3992486.11 | 3992486.28 | 0.1915 | 0.1209 |
| Uranus | 6218-12-18 03:07 G | 3992488.49 | 3992488.63 | 3992488.80 | 0.0134 | 0.0108 |
| Uranus | 6219-12-22 07:26 G | 3992857.60 | 3992857.81 | 3992858.03 | 0.0134 | 0.0065 |
| Uranus | 6220-12-25 19:40 G | 3993227.09 | 3993227.32 | 3993227.58 | 0.0134 | 0.0048 |
| Uranus | 6221-12-30 00:14 G | 3993596.26 | 3993596.51 | 3993596.76 | 0.0135 | 0.0003 |
| Uranus | 6223-01-03 13:55 G | 3993965.83 | 3993966.08 | 3993966.34 | 0.0135 | 0.0023 |
| Uranus | 6224-01-07 18:00 G | 3994335.04 | 3994335.25 | 3994335.48 | 0.0135 | 0.0059 |
| Jupiter | 6224-02-03 00:57 G | 3994361.49 | 3994361.54 | 3994361.59 | 0.0532 | 0.0515 |
| Uranus | 6225-01-11 08:38 G | 3994704.69 | 3994704.86 | 3994705.06 | 0.0136 | 0.0096 |
| Uranus | 6226-01-15 12:57 G | 3995073.93 | 3995074.04 | 3995074.17 | 0.0136 | 0.0119 |
| Jupiter | 6230-08-09 23:45 G | 3996741.26 | 3996741.49 | 3996741.73 | 0.0499 | 0.0147 |
| Saturn | 6230-08-23 20:09 G | 3996755.16 | 3996755.34 | 3996755.54 | 0.0269 | 0.0166 |

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| Jupiter | 6236-02-08 01:26 G | 3998749.37 | 3998749.56 | 3998749.75 | 0.0530 | 0.0324 |
| Jupiter | 6242-08-14 08:52 G | 4001128.63 | 4001128.87 | 4001129.10 | 0.0501 | 0.0013 |
| Saturn | 6245-02-15 22:04 G | 4002045.25 | 4002045.42 | 4002045.60 | 0.0290 | 0.0193 |
| Jupiter | 6248-02-12 17:16 G | 4003137.00 | 4003137.22 | 4003137.45 | 0.0528 | 0.0072 |
| Jupiter | 6254-08-19 05:02 G | 4005516.50 | 4005516.71 | 4005516.93 | 0.0502 | 0.0206 |
| Mars | 6259-06-11 09:35 G | 4007273.71 | 4007273.90 | 4007274.09 | 0.1615 | 0.0177 |
| Uranus | 6259-06-14 13:55 G | 4007276.95 | 4007277.08 | 4007277.23 | 0.0145 | 0.0121 |
| Saturn | 6259-08-19 00:00 G | 4007342.25 | 4007342.50 | 4007342.75 | 0.0270 | 0.0060 |
| Jupiter | 6260-02-17 22:19 G | 4007525.22 | 4007525.43 | 4007525.65 | 0.0527 | 0.0188 |
| Uranus | 6260-06-18 19:11 G | 4007647.10 | 4007647.30 | 4007647.52 | 0.0144 | 0.0071 |
| Uranus | 6261-06-23 16:04 G | 4008016.93 | 4008017.17 | 4008017.43 | 0.0144 | 0.0044 |
| Uranus | 6262-06-28 18:43 G | 4008387.03 | 4008387.28 | 4008387.52 | 0.0144 | 0.0009 |
| Uranus | 6263-07-03 17:02 G | 4008756.97 | 4008757.21 | 4008757.48 | 0.0143 | 0.0044 |
| Uranus | 6264-07-07 16:19 G | 4009126.98 | 4009127.18 | 4009127.39 | 0.0143 | 0.0080 |
| Uranus | 6265-07-12 16:48 G | 4009497.08 | 4009497.20 | 4009497.32 | 0.0142 | 0.0127 |
| Jupiter | 6266-08-23 13:55 G | 4009903.97 | 4009904.08 | 4009904.19 | 0.0504 | 0.0444 |
| Jupiter | 6272-02-22 13:40 G | 4011912.92 | 4011913.07 | 4011913.23 | 0.0524 | 0.0390 |
| Saturn | 6275-02-23 22:48 G | 4013010.25 | 4013010.45 | 4013010.65 | 0.0290 | 0.0168 |
| Neptune | 6277-09-09 00:00 G | 4013938.37 | 4013938.50 | 4013938.65 | 0.0088 | 0.0073 |
| Neptune | 6278-09-11 09:21 G | 4014305.72 | 4014305.89 | 4014306.11 | 0.0088 | 0.0061 |
| Neptune | 6279-09-14 03:50 G | 4014673.44 | 4014673.66 | 4014673.91 | 0.0088 | 0.0037 |
| Neptune | 6280-09-15 10:33 G | 4015040.70 | 4015040.94 | 4015041.21 | 0.0088 | 0.0024 |
| Neptune | 6281-09-18 06:57 G | 4015408.53 | 4015408.79 | 4015409.05 | 0.0088 | 0.0001 |
| Neptune | 6282-09-20 13:11 G | 4015775.79 | 4015776.05 | 4015776.30 | 0.0088 | 0.0013 |
| Neptune | 6283-09-23 07:55 G | 4016143.59 | 4016143.83 | 4016144.09 | 0.0088 | 0.0035 |
| Neptune | 6284-09-24 16:04 G | 4016510.98 | 4016511.17 | 4016511.40 | 0.0089 | 0.0050 |
| Neptune | 6285-09-27 06:57 G | 4016878.65 | 4016878.79 | 4016878.97 | 0.0089 | 0.0071 |
| Neptune | 6286-09-29 19:55 G | 4017246.30 | 4017246.33 | 4017246.41 | 0.0089 | 0.0087 |
| Saturn | 6289-08-25 00:28 G | 4018306.38 | 4018306.52 | 4018306.67 | 0.0269 | 0.0216 |
| Jupiter | 6301-08-05 19:26 G | 4022669.14 | 4022669.31 | 4022669.49 | 0.0497 | 0.0339 |

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| Uranus | 6301-12-15 03:50 G | 4022800.65 | 4022800.66 | 4022800.69 | 0.0134 | 0.0133 |
| Uranus | 6302-12-19 14:24 G | 4023169.93 | 4023170.10 | 4023170.30 | 0.0134 | 0.0094 |
| Uranus | 6303-12-23 19:11 G | 4023539.11 | 4023539.30 | 4023539.52 | 0.0134 | 0.0075 |
| Saturn | 6304-02-19 01:40 G | 4023596.36 | 4023596.57 | 4023596.78 | 0.0290 | 0.0132 |
| Uranus | 6304-12-27 06:57 G | 4023908.53 | 4023908.79 | 4023909.05 | 0.0134 | 0.0030 |
| Uranus | 6305-12-31 11:45 G | 4024277.75 | 4024277.99 | 4024278.24 | 0.0135 | 0.0010 |
| Uranus | 6307-01-05 00:00 G | 4024647.26 | 4024647.50 | 4024647.77 | 0.0135 | 0.0033 |
| Uranus | 6308-01-09 04:48 G | 4025016.50 | 4025016.70 | 4025016.93 | 0.0135 | 0.0063 |
| Uranus | 6309-01-12 18:43 G | 4025386.11 | 4025386.28 | 4025386.48 | 0.0136 | 0.0093 |
| Uranus | 6310-01-16 23:45 G | 4025755.47 | 4025755.49 | 4025755.54 | 0.0136 | 0.0134 |
| Jupiter | 6313-08-10 00:57 G | 4027056.32 | 4027056.54 | 4027056.75 | 0.0498 | 0.0181 |
| Saturn | 6318-08-20 18:57 G | 4028893.03 | 4028893.29 | 4028893.54 | 0.0270 | 0.0011 |
| Jupiter | 6319-02-07 23:45 G | 4029064.34 | 4029064.49 | 4029064.66 | 0.0531 | 0.0369 |
| Jupiter | 6325-08-14 22:33 G | 4031444.21 | 4031444.44 | 4031444.68 | 0.0499 | 0.0024 |
| Jupiter | 6331-02-13 08:38 G | 4033452.64 | 4033452.86 | 4033453.09 | 0.0529 | 0.0101 |
| Saturn | 6334-02-25 20:38 G | 4034561.21 | 4034561.36 | 4034561.50 | 0.0290 | 0.0231 |
| Jupiter | 6337-08-19 05:31 G | 4035831.51 | 4035831.73 | 4035831.96 | 0.0502 | 0.0181 |
| Mars | 6338-06-14 15:21 G | 4036131.01 | 4036131.14 | 4036131.27 | 0.1617 | 0.1211 |
| Jupiter | 6343-02-18 01:11 G | 4037840.33 | 4037840.55 | 4037840.78 | 0.0527 | 0.0159 |
| Uranus | 6343-06-16 01:40 G | 4037958.41 | 4037958.57 | 4037958.75 | 0.0145 | 0.0110 |
| Uranus | 6344-06-20 07:26 G | 4038328.62 | 4038328.81 | 4038329.03 | 0.0144 | 0.0081 |
| Uranus | 6345-06-25 03:21 G | 4038698.38 | 4038698.64 | 4038698.90 | 0.0144 | 0.0025 |
| Uranus | 6346-06-30 06:57 G | 4039068.55 | 4039068.79 | 4039069.04 | 0.0144 | 0.0004 |
| Uranus | 6347-07-05 04:33 G | 4039438.45 | 4039438.69 | 4039438.95 | 0.0143 | 0.0051 |
| Saturn | 6347-08-15 11:16 G | 4039479.92 | 4039479.97 | 4039480.03 | 0.0271 | 0.0262 |
| Uranus | 6348-07-09 05:02 G | 4039808.53 | 4039808.71 | 4039808.91 | 0.0143 | 0.0091 |
| Saturn | 6348-08-27 00:28 G | 4039857.52 | 4039857.52 | 4039857.52 | 0.0269 | 0.0269 |
| Uranus | 6349-07-14 04:33 G | 4040178.56 | 4040178.69 | 4040178.84 | 0.0142 | 0.0120 |
| Jupiter | 6349-08-24 04:48 G | 4040219.58 | 4040219.70 | 4040219.82 | 0.0504 | 0.0427 |
| Jupiter | 6355-02-23 00:57 G | 4042228.38 | 4042228.54 | 4042228.71 | 0.0525 | 0.0350 |

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| Neptune | 6358-03-10 07:11 G | 4043339.76 | 4043339.80 | 4043339.89 | 0.0089 | 0.0086 |
| Neptune | 6359-03-12 16:04 G | 4043707.06 | 4043707.17 | 4043707.31 | 0.0089 | 0.0076 |
| Neptune | 6360-03-14 01:55 G | 4044074.36 | 4044074.58 | 4044074.80 | 0.0089 | 0.0050 |
| Neptune | 6361-03-16 15:07 G | 4044441.91 | 4044442.13 | 4044442.35 | 0.0089 | 0.0040 |
| Neptune | 6362-03-18 20:24 G | 4044809.10 | 4044809.35 | 4044809.61 | 0.0089 | 0.0015 |
| Saturn | 6363-02-20 06:14 G | 4045147.53 | 4045147.76 | 4045148.00 | 0.0289 | 0.0070 |
| Neptune | 6363-03-21 13:26 G | 4045176.81 | 4045177.06 | 4045177.31 | 0.0089 | 0.0005 |
| Neptune | 6364-03-22 16:33 G | 4045543.96 | 4045544.19 | 4045544.45 | 0.0089 | 0.0021 |
| Neptune | 6365-03-25 09:50 G | 4045911.67 | 4045911.91 | 4045912.16 | 0.0089 | 0.0030 |
| Neptune | 6366-03-27 14:24 G | 4046278.93 | 4046279.10 | 4046279.32 | 0.0089 | 0.0056 |
| Neptune | 6367-03-30 04:33 G | 4046646.53 | 4046646.69 | 4046646.88 | 0.0089 | 0.0066 |
| Saturn | 6377-08-21 18:28 G | 4050444.03 | 4050444.27 | 4050444.51 | 0.0271 | 0.0045 |
| Jupiter | 6384-08-04 20:52 G | 4052984.22 | 4052984.37 | 4052984.53 | 0.0495 | 0.0366 |
| Mars | 6385-06-08 22:48 G | 4053292.38 | 4053292.45 | 4053292.54 | 0.1609 | 0.1463 |
| Uranus | 6385-12-15 16:19 G | 4053482.11 | 4053482.18 | 4053482.29 | 0.0133 | 0.0125 |
| Uranus | 6386-12-20 01:26 G | 4053851.41 | 4053851.56 | 4053851.76 | 0.0134 | 0.0100 |
| Uranus | 6387-12-24 07:55 G | 4054220.62 | 4054220.83 | 4054221.06 | 0.0134 | 0.0058 |
| Uranus | 6388-12-27 18:43 G | 4054590.03 | 4054590.28 | 4054590.53 | 0.0134 | 0.0039 |
| Uranus | 6390-01-01 00:57 G | 4054959.30 | 4054959.54 | 4054959.79 | 0.0135 | 0.0007 |
| Uranus | 6391-01-05 12:28 G | 4055328.78 | 4055329.02 | 4055329.28 | 0.0135 | 0.0031 |
| Uranus | 6392-01-09 18:28 G | 4055698.06 | 4055698.27 | 4055698.48 | 0.0135 | 0.0069 |
| Uranus | 6393-01-13 06:43 G | 4056067.63 | 4056067.78 | 4056067.97 | 0.0136 | 0.0104 |
| Uranus | 6394-01-17 12:43 G | 4056436.96 | 4056437.03 | 4056437.12 | 0.0136 | 0.0128 |
| Jupiter | 6396-08-09 16:04 G | 4057371.95 | 4057372.17 | 4057372.38 | 0.0497 | 0.0209 |
| Pluto | 6401-03-11 08:24 G | 4059046.62 | 4059046.85 | 4059047.12 | 0.0064 | 0.0018 |
| Jupiter | 6402-02-07 16:19 G | 4059380.03 | 4059380.18 | 4059380.34 | 0.0532 | 0.0394 |
| Saturn | 6406-08-16 12:57 G | 4061030.89 | 4061031.04 | 4061031.21 | 0.0271 | 0.0207 |
| Jupiter | 6408-08-13 23:02 G | 4061759.22 | 4061759.46 | 4061759.70 | 0.0499 | 0.0049 |
| Jupiter | 6414-02-12 07:11 G | 4063767.57 | 4063767.80 | 4063768.03 | 0.0529 | 0.0134 |
| Jupiter | 6420-08-18 20:24 G | 4066147.14 | 4066147.35 | 4066147.57 | 0.0501 | 0.0168 |

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| Saturn | 6422-02-21 09:07 G | 4066698.63 | 4066698.88 | 4066699.13 | 0.0289 | 0.0005 |
| Jupiter | 6426-02-17 09:50 G | 4068155.69 | 4068155.91 | 4068156.13 | 0.0527 | 0.0120 |
| Uranus | 6427-06-16 12:43 G | 4068639.89 | 4068640.03 | 4068640.21 | 0.0145 | 0.0112 |
| Uranus | 6428-06-20 19:55 G | 4069010.11 | 4069010.33 | 4069010.56 | 0.0144 | 0.0062 |
| Uranus | 6429-06-25 15:07 G | 4069379.89 | 4069380.13 | 4069380.39 | 0.0144 | 0.0035 |
| Uranus | 6430-06-30 20:09 G | 4069750.10 | 4069750.34 | 4069750.59 | 0.0144 | 0.0019 |
| Uranus | 6431-07-05 16:33 G | 4070119.96 | 4070120.19 | 4070120.45 | 0.0143 | 0.0052 |
| Uranus | 6432-07-09 18:14 G | 4070490.08 | 4070490.26 | 4070490.46 | 0.0143 | 0.0091 |
| Jupiter | 6432-08-23 08:38 G | 4070534.71 | 4070534.86 | 4070535.01 | 0.0503 | 0.0392 |
| Uranus | 6433-07-14 16:04 G | 4070860.11 | 4070860.17 | 4070860.26 | 0.0143 | 0.0137 |
| Saturn | 6436-08-23 00:00 G | 4071995.28 | 4071995.50 | 4071995.72 | 0.0271 | 0.0100 |
| Jupiter | 6438-02-22 02:38 G | 4072543.42 | 4072543.61 | 4072543.82 | 0.0526 | 0.0296 |
| Neptune | 6441-09-09 00:28 G | 4073838.51 | 4073838.52 | 4073838.60 | 0.0088 | 0.0088 |
| Neptune | 6442-09-11 19:55 G | 4074206.17 | 4074206.33 | 4074206.52 | 0.0088 | 0.0064 |
| Neptune | 6443-09-14 01:55 G | 4074573.38 | 4074573.58 | 4074573.80 | 0.0088 | 0.0052 |
| Neptune | 6444-09-15 21:50 G | 4074941.17 | 4074941.41 | 4074941.67 | 0.0088 | 0.0028 |
| Neptune | 6445-09-18 04:48 G | 4075308.44 | 4075308.70 | 4075308.95 | 0.0088 | 0.0017 |
| Neptune | 6446-09-20 22:33 G | 4075676.17 | 4075676.44 | 4075676.70 | 0.0088 | 0.0008 |
| Neptune | 6447-09-23 08:09 G | 4076043.61 | 4076043.84 | 4076044.10 | 0.0088 | 0.0020 |
| Neptune | 6448-09-24 22:04 G | 4076411.19 | 4076411.42 | 4076411.66 | 0.0088 | 0.0044 |
| Neptune | 6449-09-27 12:43 G | 4076778.86 | 4076779.03 | 4076779.26 | 0.0089 | 0.0056 |
| Jupiter | 6450-02-26 21:21 G | 4076931.32 | 4076931.39 | 4076931.48 | 0.0524 | 0.0486 |
| Neptune | 6450-09-29 21:50 G | 4077146.32 | 4077146.41 | 4077146.54 | 0.0089 | 0.0080 |
| Saturn | 6451-02-15 17:31 G | 4077285.18 | 4077285.23 | 4077285.29 | 0.0288 | 0.0278 |
| Mars | 6464-06-11 02:09 G | 4082149.41 | 4082149.59 | 4082149.78 | 0.1611 | 0.0263 |
| Saturn | 6465-08-17 11:31 G | 4082581.77 | 4082581.98 | 4082582.20 | 0.0271 | 0.0151 |
| Jupiter | 6467-08-05 11:16 G | 4083299.83 | 4083299.97 | 4083300.12 | 0.0495 | 0.0389 |
| Uranus | 6469-12-16 05:31 G | 4084163.66 | 4084163.73 | 4084163.84 | 0.0133 | 0.0123 |
| Uranus | 6470-12-20 14:09 G | 4084532.89 | 4084533.09 | 4084533.30 | 0.0134 | 0.0086 |
| Uranus | 6471-12-24 21:07 G | 4084902.18 | 4084902.38 | 4084902.61 | 0.0134 | 0.0065 |

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| Uranus | 6472-12-28 06:28 G | 4085271.51 | 4085271.77 | 4085272.03 | 0.0134 | 0.0020 |
| Uranus | 6474-01-01 13:26 G | 4085640.81 | 4085641.06 | 4085641.30 | 0.0134 | 0.0001 |
| Uranus | 6475-01-05 23:16 G | 4086010.22 | 4086010.47 | 4086010.72 | 0.0135 | 0.0043 |
| Uranus | 6476-01-10 06:00 G | 4086379.55 | 4086379.75 | 4086379.96 | 0.0135 | 0.0072 |
| Uranus | 6477-01-13 17:02 G | 4086749.07 | 4086749.21 | 4086749.40 | 0.0136 | 0.0104 |
| Jupiter | 6479-08-09 16:33 G | 4087686.98 | 4087687.19 | 4087687.40 | 0.0497 | 0.0235 |
| Saturn | 6481-02-22 12:00 G | 4088249.76 | 4088250.00 | 4088250.24 | 0.0289 | 0.0073 |
| Jupiter | 6485-02-06 10:19 G | 4089694.80 | 4089694.93 | 4089695.07 | 0.0532 | 0.0435 |
| Pluto | 6489-09-09 18:28 G | 4091371.02 | 4091371.27 | 4091371.53 | 0.0080 | 0.0008 |
| Jupiter | 6491-08-14 11:45 G | 4092074.77 | 4092074.99 | 4092075.22 | 0.0498 | 0.0080 |
| Saturn | 6495-08-25 06:00 G | 4093546.55 | 4093546.75 | 4093546.96 | 0.0271 | 0.0158 |
| Jupiter | 6497-02-11 12:14 G | 4094082.80 | 4094083.01 | 4094083.22 | 0.0531 | 0.0179 |
| Mars | 6502-12-16 07:55 G | 4096215.65 | 4096215.83 | 4096216.02 | 0.1921 | 0.0511 |
| Jupiter | 6503-08-19 22:19 G | 4096462.20 | 4096462.43 | 4096462.67 | 0.0500 | 0.0138 |
| Jupiter | 6509-02-17 09:21 G | 4098470.65 | 4098470.89 | 4098471.13 | 0.0529 | 0.0072 |
| Saturn | 6510-02-18 07:40 G | 4098836.66 | 4098836.82 | 4098836.99 | 0.0288 | 0.0200 |
| Uranus | 6510-06-13 05:45 G | 4098951.71 | 4098951.74 | 4098951.81 | 0.0145 | 0.0142 |
| Uranus | 6511-06-17 23:45 G | 4099321.32 | 4099321.49 | 4099321.68 | 0.0145 | 0.0102 |
| Uranus | 6512-06-22 07:11 G | 4099691.59 | 4099691.80 | 4099692.03 | 0.0145 | 0.0071 |
| Uranus | 6513-06-27 01:40 G | 4100061.32 | 4100061.57 | 4100061.83 | 0.0144 | 0.0015 |
| Uranus | 6514-07-02 07:26 G | 4100431.57 | 4100431.81 | 4100432.06 | 0.0144 | 0.0013 |
| Uranus | 6515-07-07 02:52 G | 4100801.40 | 4100801.62 | 4100801.87 | 0.0143 | 0.0062 |
| Jupiter | 6515-08-24 10:48 G | 4100849.79 | 4100849.95 | 4100850.11 | 0.0502 | 0.0361 |
| Uranus | 6516-07-11 05:31 G | 4101171.58 | 4101171.73 | 4101171.93 | 0.0143 | 0.0101 |
| Uranus | 6517-07-16 03:07 G | 4101541.53 | 4101541.63 | 4101541.74 | 0.0143 | 0.0131 |
| Jupiter | 6521-02-22 06:57 G | 4102858.60 | 4102858.79 | 4102858.98 | 0.0526 | 0.0258 |
| Neptune | 6523-03-12 22:33 G | 4103607.33 | 4103607.44 | 4103607.57 | 0.0089 | 0.0079 |
| Neptune | 6524-03-14 12:57 G | 4103974.90 | 4103975.04 | 4103975.24 | 0.0089 | 0.0065 |
| Saturn | 6524-08-19 14:24 G | 4104132.87 | 4104133.10 | 4104133.34 | 0.0271 | 0.0091 |
| Neptune | 6525-03-16 18:14 G | 4104342.04 | 4104342.26 | 4104342.49 | 0.0089 | 0.0044 |

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| Neptune | 6526-03-19 11:02 G | 4104709.74 | 4104709.96 | 4104710.21 | 0.0089 | 0.0031 |
| Neptune | 6527-03-21 14:52 G | 4105076.88 | 4105077.12 | 4105077.38 | 0.0089 | 0.0010 |
| Neptune | 6528-03-23 07:26 G | 4105444.55 | 4105444.81 | 4105445.07 | 0.0089 | 0.0004 |
| Neptune | 6529-03-25 12:43 G | 4105811.80 | 4105812.03 | 4105812.28 | 0.0089 | 0.0026 |
| Neptune | 6530-03-28 00:57 G | 4106179.32 | 4106179.54 | 4106179.79 | 0.0089 | 0.0040 |
| Neptune | 6531-03-30 11:31 G | 4106546.81 | 4106546.98 | 4106547.16 | 0.0089 | 0.0061 |
| Neptune | 6532-03-31 18:57 G | 4106914.17 | 4106914.29 | 4106914.45 | 0.0089 | 0.0074 |
| Jupiter | 6533-02-27 07:40 G | 4107246.71 | 4107246.82 | 4107246.95 | 0.0524 | 0.0448 |
| Saturn | 6540-02-25 20:24 G | 4109801.16 | 4109801.35 | 4109801.56 | 0.0289 | 0.0152 |
| Mars | 6543-06-14 22:04 G | 4111006.27 | 4111006.42 | 4111006.57 | 0.1612 | 0.0878 |
| Jupiter | 6550-08-05 10:19 G | 4113614.81 | 4113614.93 | 4113615.06 | 0.0495 | 0.0419 |
| Uranus | 6553-12-17 19:26 G | 4114845.19 | 4114845.31 | 4114845.43 | 0.0133 | 0.0116 |
| Saturn | 6554-08-27 08:09 G | 4115097.70 | 4115097.84 | 4115098.00 | 0.0271 | 0.0220 |
| Uranus | 6554-12-22 02:09 G | 4115214.40 | 4115214.59 | 4115214.80 | 0.0134 | 0.0089 |
| Uranus | 6555-12-26 10:48 G | 4115583.73 | 4115583.95 | 4115584.18 | 0.0134 | 0.0048 |
| Uranus | 6556-12-29 18:57 G | 4115953.04 | 4115953.29 | 4115953.55 | 0.0134 | 0.0029 |
| Uranus | 6558-01-03 03:07 G | 4116322.40 | 4116322.63 | 4116322.88 | 0.0134 | 0.0018 |
| Uranus | 6559-01-07 12:28 G | 4116691.77 | 4116692.02 | 4116692.27 | 0.0135 | 0.0040 |
| Uranus | 6560-01-11 20:09 G | 4117061.15 | 4117061.34 | 4117061.55 | 0.0135 | 0.0080 |
| Uranus | 6561-01-15 06:14 G | 4117430.63 | 4117430.76 | 4117430.92 | 0.0136 | 0.0113 |
| Jupiter | 6562-08-10 03:50 G | 4118002.47 | 4118002.66 | 4118002.85 | 0.0496 | 0.0273 |
| Jupiter | 6568-02-07 14:52 G | 4120010.02 | 4120010.12 | 4120010.21 | 0.0533 | 0.0482 |
| Saturn | 6569-02-19 20:52 G | 4120388.15 | 4120388.37 | 4120388.59 | 0.0288 | 0.0118 |
| Jupiter | 6574-08-14 10:33 G | 4122389.71 | 4122389.94 | 4122390.19 | 0.0498 | 0.0114 |
| Jupiter | 6580-02-12 13:40 G | 4124397.85 | 4124398.07 | 4124398.29 | 0.0531 | 0.0204 |
| Saturn | 6583-08-22 01:26 G | 4125684.32 | 4125684.56 | 4125684.80 | 0.0271 | 0.0023 |
| Jupiter | 6586-08-19 00:28 G | 4126777.30 | 4126777.52 | 4126777.74 | 0.0500 | 0.0110 |
| Jupiter | 6592-02-17 11:31 G | 4128785.76 | 4128785.98 | 4128786.20 | 0.0529 | 0.0034 |
| Uranus | 6594-06-13 18:14 G | 4129633.22 | 4129633.26 | 4129633.33 | 0.0145 | 0.0141 |
| Uranus | 6595-06-18 12:14 G | 4130002.83 | 4130003.01 | 4130003.19 | 0.0145 | 0.0101 |

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| Uranus | 6596-06-22 19:55 G | 4130373.11 | 4130373.33 | 4130373.58 | 0.0145 | 0.0053 |
| Uranus | 6597-06-27 14:24 G | 4130742.84 | 4130743.10 | 4130743.35 | 0.0144 | 0.0025 |
| Uranus | 6598-07-02 20:52 G | 4131113.13 | 4131113.37 | 4131113.62 | 0.0144 | 0.0031 |
| Jupiter | 6598-08-23 19:55 G | 4131165.15 | 4131165.33 | 4131165.52 | 0.0502 | 0.0330 |
| Saturn | 6599-02-27 12:43 G | 4131352.91 | 4131353.03 | 4131353.17 | 0.0289 | 0.0238 |
| Uranus | 6599-07-07 15:21 G | 4131482.91 | 4131483.14 | 4131483.38 | 0.0144 | 0.0062 |
| Uranus | 6600-07-12 18:57 G | 4131853.13 | 4131853.29 | 4131853.48 | 0.0143 | 0.0104 |
| Jupiter | 6604-02-23 12:28 G | 4133173.80 | 4133174.02 | 4133174.23 | 0.0527 | 0.0211 |
| Neptune | 6606-09-12 16:19 G | 4134106.05 | 4134106.18 | 4134106.34 | 0.0088 | 0.0073 |
| Neptune | 6607-09-15 11:16 G | 4134473.81 | 4134473.97 | 4134474.18 | 0.0088 | 0.0064 |
| Neptune | 6608-09-16 19:11 G | 4134841.09 | 4134841.30 | 4134841.54 | 0.0088 | 0.0039 |
| Neptune | 6609-09-19 12:00 G | 4135208.75 | 4135209.00 | 4135209.27 | 0.0088 | 0.0027 |
| Jupiter | 6610-08-29 05:31 G | 4135552.71 | 4135552.73 | 4135552.78 | 0.0504 | 0.0496 |
| Neptune | 6610-09-22 00:00 G | 4135576.24 | 4135576.50 | 4135576.75 | 0.0088 | 0.0003 |
| Neptune | 6611-09-24 11:31 G | 4135943.71 | 4135943.98 | 4135944.25 | 0.0088 | 0.0008 |
| Saturn | 6612-08-17 00:14 G | 4136271.43 | 4136271.51 | 4136271.61 | 0.0272 | 0.0254 |
| Neptune | 6612-09-26 03:35 G | 4136311.42 | 4136311.65 | 4136311.90 | 0.0088 | 0.0033 |
| Neptune | 6613-09-28 11:02 G | 4136678.75 | 4136678.96 | 4136679.21 | 0.0088 | 0.0044 |
| Neptune | 6614-10-01 06:43 G | 4137046.64 | 4137046.78 | 4137046.97 | 0.0088 | 0.0068 |
| Neptune | 6615-10-03 12:28 G | 4137413.93 | 4137414.02 | 4137414.16 | 0.0089 | 0.0080 |
| Jupiter | 6616-02-27 21:35 G | 4137561.26 | 4137561.40 | 4137561.55 | 0.0525 | 0.0397 |
| Saturn | 6628-02-23 06:14 G | 4141939.51 | 4141939.76 | 4141940.01 | 0.0288 | 0.0031 |
| Jupiter | 6633-08-05 17:31 G | 4143930.16 | 4143930.23 | 4143930.33 | 0.0494 | 0.0457 |
| Uranus | 6637-12-19 09:35 G | 4145526.78 | 4145526.90 | 4145527.04 | 0.0133 | 0.0113 |
| Uranus | 6638-12-23 15:35 G | 4145895.95 | 4145896.15 | 4145896.38 | 0.0134 | 0.0077 |
| Uranus | 6639-12-28 01:11 G | 4146265.33 | 4146265.55 | 4146265.77 | 0.0134 | 0.0054 |
| Uranus | 6640-12-31 07:40 G | 4146634.56 | 4146634.82 | 4146635.09 | 0.0134 | 0.0010 |
| Uranus | 6642-01-04 16:33 G | 4147003.95 | 4147004.19 | 4147004.44 | 0.0134 | 0.0011 |
| Saturn | 6642-08-24 14:38 G | 4147235.87 | 4147236.11 | 4147236.36 | 0.0271 | 0.0048 |
| Uranus | 6643-01-09 00:00 G | 4147373.27 | 4147373.50 | 4147373.75 | 0.0135 | 0.0055 |

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| Uranus | 6644-01-13 08:38 G | 4147742.68 | 4147742.86 | 4147743.07 | 0.0135 | 0.0082 |
| Uranus | 6645-01-16 18:00 G | 4148112.12 | 4148112.25 | 4148112.39 | 0.0136 | 0.0115 |
| Jupiter | 6645-08-10 01:40 G | 4148317.38 | 4148317.57 | 4148317.76 | 0.0496 | 0.0312 |
| Pluto | 6649-03-14 15:35 G | 4149629.90 | 4149630.15 | 4149630.40 | 0.0064 | 0.0004 |
| Jupiter | 6651-02-07 13:11 G | 4150324.99 | 4150325.05 | 4150325.12 | 0.0533 | 0.0512 |
| Jupiter | 6657-08-14 15:07 G | 4152704.91 | 4152705.13 | 4152705.35 | 0.0498 | 0.0144 |
| Jupiter | 6663-02-12 12:43 G | 4154712.83 | 4154713.03 | 4154713.23 | 0.0531 | 0.0243 |
| Mars | 6669-06-11 19:11 G | 4157024.14 | 4157024.30 | 4157024.46 | 0.1606 | 0.0891 |
| Jupiter | 6669-08-19 08:52 G | 4157092.63 | 4157092.87 | 4157093.11 | 0.0499 | 0.0080 |
| Saturn | 6671-08-19 05:45 G | 4157822.56 | 4157822.74 | 4157822.92 | 0.0272 | 0.0187 |
| Jupiter | 6675-02-17 10:19 G | 4159100.70 | 4159100.93 | 4159101.17 | 0.0530 | 0.0022 |
| Uranus | 6678-06-15 06:43 G | 4160314.70 | 4160314.78 | 4160314.90 | 0.0145 | 0.0133 |
| Uranus | 6679-06-20 00:57 G | 4160684.36 | 4160684.54 | 4160684.74 | 0.0145 | 0.0093 |
| Uranus | 6680-06-24 08:52 G | 4161054.65 | 4161054.87 | 4161055.11 | 0.0145 | 0.0060 |
| Uranus | 6681-06-29 02:38 G | 4161424.36 | 4161424.61 | 4161424.87 | 0.0144 | 0.0004 |
| Jupiter | 6681-08-23 16:19 G | 4161480.00 | 4161480.18 | 4161480.37 | 0.0501 | 0.0291 |
| Uranus | 6682-07-04 09:21 G | 4161794.65 | 4161794.89 | 4161795.14 | 0.0144 | 0.0024 |
| Uranus | 6683-07-09 03:07 G | 4162164.42 | 4162164.63 | 4162164.86 | 0.0144 | 0.0075 |
| Uranus | 6684-07-13 07:55 G | 4162534.68 | 4162534.83 | 4162534.99 | 0.0143 | 0.0111 |
| Jupiter | 6687-02-22 02:09 G | 4163488.38 | 4163488.59 | 4163488.81 | 0.0528 | 0.0161 |
| Saturn | 6687-02-24 18:00 G | 4163491.01 | 4163491.25 | 4163491.49 | 0.0288 | 0.0057 |
| Neptune | 6687-03-13 09:07 G | 4163507.85 | 4163507.88 | 4163507.98 | 0.0089 | 0.0086 |
| Neptune | 6688-03-14 13:40 G | 4163874.97 | 4163875.07 | 4163875.22 | 0.0089 | 0.0078 |
| Neptune | 6689-03-17 07:40 G | 4164242.62 | 4164242.82 | 4164243.03 | 0.0089 | 0.0051 |
| Neptune | 6690-03-19 11:31 G | 4164609.77 | 4164609.98 | 4164610.21 | 0.0089 | 0.0043 |
| Neptune | 6691-03-22 03:21 G | 4164977.40 | 4164977.64 | 4164977.91 | 0.0089 | 0.0017 |
| Neptune | 6692-03-23 10:33 G | 4165344.70 | 4165344.94 | 4165345.19 | 0.0089 | 0.0008 |
| Neptune | 6693-03-25 22:19 G | 4165712.18 | 4165712.43 | 4165712.69 | 0.0089 | 0.0018 |
| Jupiter | 6693-08-28 11:02 G | 4165867.85 | 4165867.96 | 4165868.07 | 0.0503 | 0.0444 |
| Neptune | 6694-03-28 09:50 G | 4166079.69 | 4166079.91 | 4166080.16 | 0.0089 | 0.0027 |

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| Neptune | 6695-03-30 16:19 G | 4166446.98 | 4166447.18 | 4166447.40 | 0.0089 | 0.0052 |
| Neptune | 6696-04-01 07:55 G | 4166814.66 | 4166814.83 | 4166815.02 | 0.0089 | 0.0061 |
| Neptune | 6697-04-03 11:16 G | 4167181.94 | 4167181.97 | 4167182.04 | 0.0089 | 0.0087 |
| Jupiter | 6699-02-27 08:38 G | 4167876.70 | 4167876.86 | 4167877.02 | 0.0525 | 0.0367 |
| Saturn | 6701-08-27 00:28 G | 4168787.30 | 4168787.52 | 4168787.76 | 0.0271 | 0.0121 |
| Saturn | 6716-02-20 04:48 G | 4174077.58 | 4174077.70 | 4174077.84 | 0.0288 | 0.0241 |
| Jupiter | 6716-08-05 18:00 G | 4174245.21 | 4174245.25 | 4174245.29 | 0.0494 | 0.0487 |
| Uranus | 6721-12-20 23:45 G | 4176208.36 | 4176208.49 | 4176208.65 | 0.0133 | 0.0107 |
| Uranus | 6722-12-25 04:19 G | 4176577.48 | 4176577.68 | 4176577.91 | 0.0134 | 0.0079 |
| Uranus | 6723-12-29 15:07 G | 4176946.90 | 4176947.13 | 4176947.37 | 0.0134 | 0.0038 |
| Uranus | 6725-01-01 20:52 G | 4177316.11 | 4177316.37 | 4177316.63 | 0.0134 | 0.0018 |
| Uranus | 6726-01-06 06:57 G | 4177685.56 | 4177685.79 | 4177686.04 | 0.0134 | 0.0029 |
| Uranus | 6727-01-10 13:55 G | 4178054.84 | 4178055.08 | 4178055.32 | 0.0135 | 0.0050 |
| Uranus | 6728-01-15 00:00 G | 4178424.32 | 4178424.50 | 4178424.68 | 0.0135 | 0.0092 |
| Jupiter | 6728-08-10 06:57 G | 4178632.63 | 4178632.79 | 4178632.95 | 0.0496 | 0.0351 |
| Uranus | 6729-01-18 07:40 G | 4178793.72 | 4178793.82 | 4178793.94 | 0.0136 | 0.0122 |
| Saturn | 6730-08-21 15:50 G | 4179373.95 | 4179374.16 | 4179374.39 | 0.0271 | 0.0116 |
| Pluto | 6737-09-13 16:48 G | 4181954.00 | 4181954.20 | 4181954.44 | 0.0080 | 0.0047 |
| Jupiter | 6740-08-14 21:21 G | 4183020.17 | 4183020.39 | 4183020.63 | 0.0497 | 0.0175 |
| Jupiter | 6746-02-12 10:33 G | 4185027.75 | 4185027.94 | 4185028.14 | 0.0532 | 0.0290 |
| Saturn | 6746-02-27 09:07 G | 4185042.69 | 4185042.88 | 4185043.09 | 0.0289 | 0.0143 |
| Mars | 6748-06-15 01:11 G | 4185881.35 | 4185881.55 | 4185881.75 | 0.1608 | 0.0275 |
| Jupiter | 6752-08-19 01:11 G | 4187407.32 | 4187407.55 | 4187407.78 | 0.0499 | 0.0038 |
| Jupiter | 6758-02-17 06:57 G | 4189415.57 | 4189415.79 | 4189416.02 | 0.0530 | 0.0056 |
| Saturn | 6760-08-28 07:40 G | 4190338.65 | 4190338.82 | 4190339.01 | 0.0270 | 0.0192 |
| Uranus | 6762-06-16 20:52 G | 4190996.29 | 4190996.37 | 4190996.49 | 0.0145 | 0.0133 |
| Uranus | 6763-06-21 15:21 G | 4191365.95 | 4191366.14 | 4191366.34 | 0.0145 | 0.0091 |
| Uranus | 6764-06-25 23:31 G | 4191736.24 | 4191736.48 | 4191736.73 | 0.0145 | 0.0043 |
| Jupiter | 6764-08-23 22:19 G | 4191795.23 | 4191795.43 | 4191795.64 | 0.0501 | 0.0250 |
| Uranus | 6765-06-30 17:02 G | 4192105.96 | 4192106.21 | 4192106.47 | 0.0144 | 0.0015 |

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| Uranus | 6766-07-06 00:14 G | 4192476.28 | 4192476.51 | 4192476.76 | 0.0144 | 0.0043 |
| Uranus | 6767-07-10 17:31 G | 4192846.02 | 4192846.23 | 4192846.47 | 0.0144 | 0.0073 |
| Uranus | 6768-07-14 23:02 G | 4193216.32 | 4193216.46 | 4193216.61 | 0.0143 | 0.0116 |
| Jupiter | 6770-02-22 13:11 G | 4193803.83 | 4193804.05 | 4193804.27 | 0.0528 | 0.0120 |
| Neptune | 6770-09-13 02:24 G | 4194006.58 | 4194006.60 | 4194006.63 | 0.0088 | 0.0088 |
| Neptune | 6771-09-15 10:33 G | 4194373.79 | 4194373.94 | 4194374.12 | 0.0088 | 0.0068 |
| Neptune | 6772-09-17 01:11 G | 4194741.33 | 4194741.55 | 4194741.77 | 0.0088 | 0.0053 |
| Neptune | 6773-09-19 13:55 G | 4195108.86 | 4195109.08 | 4195109.33 | 0.0088 | 0.0032 |
| Neptune | 6774-09-22 00:14 G | 4195476.25 | 4195476.51 | 4195476.78 | 0.0088 | 0.0018 |
| Saturn | 6775-02-21 16:19 G | 4195628.98 | 4195629.18 | 4195629.40 | 0.0288 | 0.0157 |
| Neptune | 6775-09-24 18:14 G | 4195844.01 | 4195844.26 | 4195844.52 | 0.0088 | 0.0003 |
| Jupiter | 6776-08-28 07:26 G | 4196182.67 | 4196182.81 | 4196182.96 | 0.0503 | 0.0404 |
| Neptune | 6776-09-26 00:57 G | 4196211.29 | 4196211.54 | 4196211.81 | 0.0088 | 0.0016 |
| Neptune | 6777-09-28 20:52 G | 4196579.15 | 4196579.37 | 4196579.62 | 0.0088 | 0.0039 |
| Neptune | 6778-10-01 02:52 G | 4196946.43 | 4196946.62 | 4196946.85 | 0.0088 | 0.0051 |
| Neptune | 6779-10-03 22:19 G | 4197314.30 | 4197314.43 | 4197314.59 | 0.0089 | 0.0074 |
| Neptune | 6780-10-05 06:57 G | 4197681.73 | 4197681.79 | 4197681.86 | 0.0089 | 0.0085 |
| Jupiter | 6782-02-27 02:38 G | 4198191.43 | 4198191.61 | 4198191.80 | 0.0526 | 0.0326 |
| Mars | 6786-12-18 01:40 G | 4199946.38 | 4199946.57 | 4199946.77 | 0.1926 | 0.0354 |
| Saturn | 6789-08-23 06:00 G | 4200925.52 | 4200925.75 | 4200925.99 | 0.0271 | 0.0047 |
| Saturn | 6805-03-01 01:11 G | 4206594.41 | 4206594.55 | 4206594.70 | 0.0289 | 0.0225 |
| Uranus | 6805-12-21 14:09 G | 4206889.95 | 4206890.09 | 4206890.26 | 0.0133 | 0.0103 |
| Uranus | 6806-12-25 18:00 G | 4207259.04 | 4207259.25 | 4207259.49 | 0.0134 | 0.0069 |
| Uranus | 6807-12-30 05:31 G | 4207628.51 | 4207628.73 | 4207628.97 | 0.0134 | 0.0045 |
| Uranus | 6809-01-02 09:50 G | 4207997.65 | 4207997.91 | 4207998.18 | 0.0134 | 0.0002 |
| Uranus | 6810-01-06 20:38 G | 4208367.13 | 4208367.36 | 4208367.61 | 0.0134 | 0.0021 |
| Uranus | 6811-01-11 01:55 G | 4208736.36 | 4208736.58 | 4208736.82 | 0.0135 | 0.0066 |
| Jupiter | 6811-08-10 08:52 G | 4208947.72 | 4208947.87 | 4208948.02 | 0.0495 | 0.0387 |
| Uranus | 6812-01-15 12:57 G | 4209105.87 | 4209106.04 | 4209106.23 | 0.0135 | 0.0091 |
| Uranus | 6813-01-18 19:40 G | 4209475.25 | 4209475.32 | 4209475.43 | 0.0135 | 0.0127 |

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| Saturn | 6819-08-30 16:04 G | 4211890.13 | 4211890.17 | 4211890.24 | 0.0270 | 0.0264 |
| Jupiter | 6823-08-14 15:50 G | 4213334.95 | 4213335.16 | 4213335.37 | 0.0497 | 0.0213 |
| Mars | 6827-06-18 08:52 G | 4214738.82 | 4214738.87 | 4214738.91 | 0.1610 | 0.1565 |
| Jupiter | 6829-02-11 09:36 G | 4215342.72 | 4215342.90 | 4215343.08 | 0.0533 | 0.0326 |
| Saturn | 6834-02-22 23:31 G | 4217180.24 | 4217180.48 | 4217180.72 | 0.0288 | 0.0077 |
| Jupiter | 6835-08-19 12:14 G | 4217722.77 | 4217723.01 | 4217723.25 | 0.0499 | 0.0015 |
| Jupiter | 6841-02-16 15:36 G | 4219730.93 | 4219731.15 | 4219731.38 | 0.0530 | 0.0100 |
| Uranus | 6846-06-17 09:36 G | 4221677.79 | 4221677.90 | 4221678.06 | 0.0145 | 0.0123 |
| Uranus | 6847-06-22 04:33 G | 4222047.50 | 4222047.69 | 4222047.90 | 0.0145 | 0.0085 |
| Jupiter | 6847-08-23 20:38 G | 4222110.14 | 4222110.36 | 4222110.57 | 0.0500 | 0.0216 |
| Uranus | 6848-06-26 12:14 G | 4222417.79 | 4222418.01 | 4222418.26 | 0.0145 | 0.0050 |
| Saturn | 6848-08-24 18:00 G | 4222477.00 | 4222477.25 | 4222477.50 | 0.0271 | 0.0022 |
| Uranus | 6849-07-01 06:00 G | 4222787.50 | 4222787.75 | 4222788.01 | 0.0144 | 0.0006 |
| Uranus | 6850-07-06 13:11 G | 4223157.81 | 4223158.05 | 4223158.30 | 0.0144 | 0.0034 |
| Uranus | 6851-07-11 06:00 G | 4223527.56 | 4223527.75 | 4223527.97 | 0.0144 | 0.0086 |
| Neptune | 6852-03-15 02:52 G | 4223775.54 | 4223775.62 | 4223775.74 | 0.0089 | 0.0082 |
| Uranus | 6852-07-15 12:00 G | 4223897.89 | 4223898.00 | 4223898.15 | 0.0143 | 0.0122 |
| Jupiter | 6853-02-21 02:52 G | 4224118.39 | 4224118.62 | 4224118.85 | 0.0528 | 0.0067 |
| Neptune | 6853-03-17 07:26 G | 4224142.67 | 4224142.81 | 4224143.00 | 0.0089 | 0.0066 |
| Neptune | 6854-03-19 23:02 G | 4224510.26 | 4224510.46 | 4224510.70 | 0.0089 | 0.0047 |
| Neptune | 6855-03-22 07:26 G | 4224877.58 | 4224877.81 | 4224878.04 | 0.0089 | 0.0031 |
| Neptune | 6856-03-23 17:31 G | 4225244.98 | 4225245.23 | 4225245.50 | 0.0089 | 0.0014 |
| Neptune | 6857-03-26 06:14 G | 4225612.52 | 4225612.76 | 4225613.01 | 0.0089 | 0.0003 |
| Neptune | 6858-03-28 12:00 G | 4225979.76 | 4225980.00 | 4225980.26 | 0.0089 | 0.0021 |
| Neptune | 6859-03-31 04:33 G | 4226347.47 | 4226347.69 | 4226347.93 | 0.0089 | 0.0037 |
| Jupiter | 6859-08-28 16:33 G | 4226498.04 | 4226498.19 | 4226498.35 | 0.0502 | 0.0367 |
| Neptune | 6860-04-01 07:40 G | 4226714.65 | 4226714.82 | 4226715.04 | 0.0089 | 0.0056 |
| Neptune | 6861-04-04 01:11 G | 4227082.40 | 4227082.55 | 4227082.71 | 0.0089 | 0.0070 |
| Jupiter | 6865-02-26 04:48 G | 4228506.52 | 4228506.70 | 4228506.89 | 0.0527 | 0.0285 |
| Mars | 6874-06-12 13:26 G | 4231899.93 | 4231900.06 | 4231900.19 | 0.1603 | 0.1122 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Saturn | 6877-08-19 12:14 G | 4233063.86 | 4233064.01 | 4233064.18 | 0.0271 | 0.0206 |
| Uranus | 6888-12-17 16:19 G | 4237202.11 | 4237202.18 | 4237202.26 | 0.0133 | 0.0126 |
| Uranus | 6889-12-22 04:19 G | 4237571.53 | 4237571.68 | 4237571.86 | 0.0133 | 0.0100 |
| Uranus | 6890-12-26 07:11 G | 4237940.59 | 4237940.80 | 4237941.04 | 0.0134 | 0.0069 |
| Uranus | 6891-12-30 19:26 G | 4238310.08 | 4238310.31 | 4238310.56 | 0.0134 | 0.0030 |
| Uranus | 6893-01-02 23:16 G | 4238679.21 | 4238679.47 | 4238679.73 | 0.0134 | 0.0008 |
| Saturn | 6893-02-24 07:26 G | 4238731.57 | 4238731.81 | 4238732.05 | 0.0289 | 0.0002 |
| Uranus | 6894-01-07 11:16 G | 4239048.74 | 4239048.97 | 4239049.21 | 0.0134 | 0.0038 |
| Jupiter | 6894-08-09 09:07 G | 4239262.76 | 4239262.88 | 4239263.01 | 0.0495 | 0.0418 |
| Uranus | 6895-01-11 15:50 G | 4239417.94 | 4239418.16 | 4239418.41 | 0.0135 | 0.0060 |
| Uranus | 6896-01-16 04:04 G | 4239787.52 | 4239787.67 | 4239787.84 | 0.0135 | 0.0102 |
| Uranus | 6897-01-19 09:36 G | 4240156.85 | 4240156.90 | 4240156.98 | 0.0135 | 0.0131 |
| Pluto | 6897-03-16 14:23 G | 4240212.89 | 4240213.10 | 4240213.35 | 0.0064 | 0.0031 |
| Pluto | 6898-03-18 08:09 G | 4240579.74 | 4240579.84 | 4240579.97 | 0.0064 | 0.0058 |
| Jupiter | 6906-08-15 05:02 G | 4243650.51 | 4243650.71 | 4243650.93 | 0.0496 | 0.0233 |
| Saturn | 6907-08-27 22:04 G | 4244028.19 | 4244028.42 | 4244028.67 | 0.0271 | 0.0089 |
| Jupiter | 6912-02-12 14:23 G | 4245657.93 | 4245658.10 | 4245658.27 | 0.0533 | 0.0366 |
| Jupiter | 6918-08-19 10:33 G | 4248037.70 | 4248037.94 | 4248038.18 | 0.0498 | 0.0010 |
| Saturn | 6922-02-20 03:07 G | 4249318.58 | 4249318.63 | 4249318.71 | 0.0288 | 0.0277 |
| Jupiter | 6924-02-17 06:28 G | 4250045.55 | 4250045.77 | 4250045.99 | 0.0531 | 0.0149 |
| Uranus | 6930-06-18 23:16 G | 4252359.34 | 4252359.47 | 4252359.60 | 0.0145 | 0.0125 |
| Jupiter | 6930-08-24 02:09 G | 4252425.38 | 4252425.59 | 4252425.81 | 0.0499 | 0.0175 |
| Uranus | 6931-06-23 18:28 G | 4252729.07 | 4252729.27 | 4252729.48 | 0.0145 | 0.0081 |
| Uranus | 6932-06-28 01:55 G | 4253099.33 | 4253099.58 | 4253099.83 | 0.0145 | 0.0034 |
| Uranus | 6933-07-02 19:40 G | 4253469.07 | 4253469.32 | 4253469.58 | 0.0144 | 0.0005 |
| Uranus | 6934-07-08 03:07 G | 4253839.41 | 4253839.63 | 4253839.88 | 0.0144 | 0.0053 |
| Uranus | 6935-07-12 20:09 G | 4254209.13 | 4254209.34 | 4254209.55 | 0.0144 | 0.0082 |
| Neptune | 6935-09-15 14:23 G | 4254273.97 | 4254274.10 | 4254274.27 | 0.0088 | 0.0074 |
| Jupiter | 6936-02-22 12:57 G | 4254433.82 | 4254434.04 | 4254434.26 | 0.0530 | 0.0028 |
| Uranus | 6936-07-17 02:23 G | 4254579.50 | 4254579.60 | 4254579.73 | 0.0143 | 0.0127 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Saturn | 6936-08-21 23:31 G | 4254615.28 | 4254615.48 | 4254615.69 | 0.0271 | 0.0137 |
| Neptune | 6936-09-17 05:31 G | 4254641.57 | 4254641.73 | 4254641.91 | 0.0088 | 0.0066 |
| Neptune | 6937-09-19 13:40 G | 4255008.85 | 4255009.07 | 4255009.33 | 0.0088 | 0.0040 |
| Neptune | 6938-09-22 08:23 G | 4255376.62 | 4255376.85 | 4255377.10 | 0.0088 | 0.0032 |
| Neptune | 6939-09-24 14:23 G | 4255743.84 | 4255744.10 | 4255744.36 | 0.0088 | 0.0005 |
| Neptune | 6940-09-26 10:33 G | 4256111.67 | 4256111.94 | 4256112.20 | 0.0088 | 0.0004 |
| Neptune | 6941-09-28 16:19 G | 4256478.95 | 4256479.18 | 4256479.44 | 0.0088 | 0.0029 |
| Jupiter | 6942-08-28 13:11 G | 4256812.87 | 4256813.05 | 4256813.24 | 0.0501 | 0.0325 |
| Neptune | 6942-10-01 10:33 G | 4256846.70 | 4256846.94 | 4256847.19 | 0.0088 | 0.0038 |
| Neptune | 6943-10-03 20:23 G | 4257214.18 | 4257214.35 | 4257214.54 | 0.0088 | 0.0063 |
| Neptune | 6944-10-05 10:04 G | 4257581.80 | 4257581.92 | 4257582.11 | 0.0088 | 0.0073 |
| Jupiter | 6948-02-27 10:19 G | 4258821.72 | 4258821.93 | 4258822.14 | 0.0527 | 0.0254 |
| Saturn | 6952-02-27 17:31 G | 4260283.01 | 4260283.23 | 4260283.46 | 0.0289 | 0.0074 |
| Mars | 6953-06-15 08:38 G | 4260756.69 | 4260756.86 | 4260757.04 | 0.1604 | 0.0167 |
| Jupiter | 6960-03-03 06:14 G | 4263209.71 | 4263209.76 | 4263209.81 | 0.0525 | 0.0510 |
| Saturn | 6966-08-29 00:28 G | 4265579.32 | 4265579.52 | 4265579.73 | 0.0270 | 0.0153 |
| Uranus | 6972-12-19 06:28 G | 4267883.72 | 4267883.77 | 4267883.83 | 0.0133 | 0.0129 |
| Uranus | 6973-12-23 19:11 G | 4268253.14 | 4268253.30 | 4268253.49 | 0.0133 | 0.0093 |
| Uranus | 6974-12-27 21:21 G | 4268622.17 | 4268622.39 | 4268622.63 | 0.0133 | 0.0060 |
| Uranus | 6976-01-01 10:04 G | 4268991.69 | 4268991.92 | 4268992.17 | 0.0134 | 0.0035 |
| Uranus | 6977-01-04 12:28 G | 4269360.77 | 4269361.02 | 4269361.29 | 0.0134 | 0.0010 |
| Jupiter | 6977-08-09 23:16 G | 4269578.37 | 4269578.47 | 4269578.58 | 0.0494 | 0.0441 |
| Uranus | 6978-01-09 01:11 G | 4269730.31 | 4269730.55 | 4269730.79 | 0.0134 | 0.0030 |
| Uranus | 6979-01-13 04:48 G | 4270099.49 | 4270099.70 | 4270099.92 | 0.0135 | 0.0076 |
| Uranus | 6980-01-17 17:31 G | 4270469.07 | 4270469.23 | 4270469.40 | 0.0135 | 0.0100 |
| Saturn | 6981-02-21 02:23 G | 4270869.44 | 4270869.60 | 4270869.78 | 0.0288 | 0.0208 |
| Jupiter | 6989-08-14 00:14 G | 4273965.32 | 4273965.51 | 4273965.72 | 0.0495 | 0.0263 |
| Jupiter | 6995-02-11 10:48 G | 4275972.81 | 4275972.95 | 4275973.11 | 0.0534 | 0.0403 |
| Saturn | 6995-08-24 08:52 G | 4276166.64 | 4276166.87 | 4276167.11 | 0.0271 | 0.0073 |

8TH MILLENNIUM CE

This is a list of transits of Moon in the 8th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Jupiter | 7001-08-19 19:26 | G | 4278353.08 | 4278353.31 | 4278353.54 | 0.0497 | 0.0038 | |
| Jupiter | 7007-02-17 20:09 | G | 4280361.13 | 4280361.34 | 4280361.55 | 0.0532 | 0.0189 | |
| Saturn | 7011-03-02 00:28 | G | 4281834.32 | 4281834.52 | 4281834.74 | 0.0289 | 0.0143 | |
| Jupiter | 7013-08-24 05:31 | G | 4282740.50 | 4282740.73 | 4282740.96 | 0.0499 | 0.0145 | |
| Uranus | 7014-06-20 09:36 | G | 4283040.76 | 4283040.90 | 4283041.08 | 0.0145 | 0.0114 | |
| Uranus | 7015-06-25 06:00 | G | 4283410.55 | 4283410.75 | 4283410.97 | 0.0145 | 0.0077 | |
| Neptune | 7016-03-16 02:52 | G | 4283675.60 | 4283675.62 | 4283675.70 | 0.0089 | 0.0087 | |
| Uranus | 7016-06-29 12:57 | G | 4283780.80 | 4283781.04 | 4283781.29 | 0.0145 | 0.0039 | |
| Neptune | 7017-03-18 17:31 | G | 4284043.11 | 4284043.23 | 4284043.35 | 0.0089 | 0.0079 | |
| Uranus | 7017-07-04 07:11 | G | 4284150.55 | 4284150.80 | 4284151.05 | 0.0145 | 0.0015 | |
| Neptune | 7018-03-21 03:07 | G | 4284410.43 | 4284410.63 | 4284410.82 | 0.0089 | 0.0054 | |
| Uranus | 7018-07-09 14:09 | G | 4284520.85 | 4284521.09 | 4284521.34 | 0.0144 | 0.0043 | |
| Jupiter | 7019-02-22 17:16 | G | 4284748.99 | 4284749.22 | 4284749.46 | 0.0530 | 0.0012 | |
| Neptune | 7019-03-23 12:28 | G | 4284777.80 | 4284778.02 | 4284778.25 | 0.0089 | 0.0045 | |
| Uranus | 7019-07-14 06:43 | G | 4284890.61 | 4284890.78 | 4284890.99 | 0.0144 | 0.0097 | |
| Neptune | 7020-03-25 03:07 | G | 4285145.39 | 4285145.63 | 4285145.87 | 0.0089 | 0.0019 | |
| Uranus | 7020-07-18 13:40 | G | 4285260.98 | 4285261.07 | 4285261.19 | 0.0143 | 0.0131 | |
| Neptune | 7021-03-27 08:23 | G | 4285512.59 | 4285512.85 | 4285513.10 | 0.0089 | 0.0011 | |
| Neptune | 7022-03-30 01:26 | G | 4285880.31 | 4285880.56 | 4285880.81 | 0.0089 | 0.0015 | |
| Neptune | 7023-04-01 04:48 | G | 4286247.47 | 4286247.70 | 4286247.95 | 0.0089 | 0.0023 | |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Neptune | 7024-04-02 21:21 G | 4286615.19 | 4286615.39 | 4286615.62 | 0.0089 | 0.0048 |
| Neptune | 7025-04-05 02:38 G | 4286982.43 | 4286982.61 | 4286982.81 | 0.0089 | 0.0056 |
| Jupiter | 7025-08-28 23:02 G | 4287128.28 | 4287128.46 | 4287128.64 | 0.0501 | 0.0297 |
| Saturn | 7025-08-31 06:00 G | 4287130.61 | 4287130.75 | 4287130.90 | 0.0270 | 0.0216 |
| Neptune | 7026-04-07 15:21 G | 4287350.05 | 4287350.14 | 4287350.26 | 0.0089 | 0.0081 |
| Jupiter | 7031-02-27 12:14 G | 4289136.82 | 4289137.01 | 4289137.22 | 0.0527 | 0.0222 |
| Mars | 7032-06-18 02:52 G | 4289613.46 | 4289613.62 | 4289613.77 | 0.1606 | 0.0805 |
| Jupiter | 7037-09-02 17:31 G | 4291516.17 | 4291516.23 | 4291516.30 | 0.0503 | 0.0482 |
| Saturn | 7040-02-24 01:40 G | 4292420.36 | 4292420.57 | 4292420.78 | 0.0288 | 0.0145 |
| Jupiter | 7043-03-04 12:43 G | 4293524.94 | 4293525.03 | 4293525.14 | 0.0526 | 0.0476 |
| Saturn | 7054-08-26 12:00 G | 4297717.75 | 4297718.00 | 4297718.26 | 0.0271 | 0.0012 |
| Uranus | 7056-12-20 19:40 G | 4298565.22 | 4298565.32 | 4298565.47 | 0.0133 | 0.0117 |
| Uranus | 7057-12-25 09:21 G | 4298934.72 | 4298934.89 | 4298935.09 | 0.0133 | 0.0090 |
| Uranus | 7058-12-29 10:48 G | 4299303.72 | 4299303.95 | 4299304.19 | 0.0133 | 0.0058 |
| Uranus | 7060-01-03 00:14 G | 4299673.27 | 4299673.51 | 4299673.76 | 0.0134 | 0.0020 |
| Jupiter | 7060-08-09 21:36 G | 4299893.33 | 4299893.40 | 4299893.47 | 0.0493 | 0.0472 |
| Uranus | 7061-01-06 02:23 G | 4300042.34 | 4300042.60 | 4300042.86 | 0.0134 | 0.0002 |
| Uranus | 7062-01-10 15:50 G | 4300411.94 | 4300412.16 | 4300412.40 | 0.0134 | 0.0049 |
| Uranus | 7063-01-14 18:43 G | 4300781.07 | 4300781.28 | 4300781.52 | 0.0135 | 0.0070 |
| Uranus | 7064-01-19 08:52 G | 4301150.74 | 4301150.87 | 4301151.00 | 0.0135 | 0.0113 |
| Saturn | 7070-03-02 23:31 G | 4303385.31 | 4303385.48 | 4303385.66 | 0.0288 | 0.0207 |
| Mars | 7070-12-18 10:04 G | 4303675.72 | 4303675.92 | 4303676.13 | 0.1931 | 0.0743 |
| Jupiter | 7072-08-14 15:07 G | 4304280.94 | 4304281.13 | 4304281.32 | 0.0495 | 0.0277 |
| Jupiter | 7078-02-12 01:40 G | 4306288.44 | 4306288.57 | 4306288.71 | 0.0534 | 0.0425 |
| Saturn | 7083-08-20 16:48 G | 4308304.18 | 4308304.20 | 4308304.23 | 0.0272 | 0.0270 |
| Jupiter | 7084-08-19 01:11 G | 4308668.31 | 4308668.55 | 4308668.79 | 0.0497 | 0.0058 |
| Jupiter | 7090-02-16 20:38 G | 4310676.15 | 4310676.36 | 4310676.58 | 0.0532 | 0.0226 |
| Jupiter | 7096-08-23 16:04 G | 4313055.95 | 4313056.17 | 4313056.40 | 0.0499 | 0.0119 |
| Uranus | 7098-06-20 21:36 G | 4313722.26 | 4313722.40 | 4313722.57 | 0.0145 | 0.0117 |
| Saturn | 7099-02-25 04:48 G | 4313971.48 | 4313971.70 | 4313971.93 | 0.0288 | 0.0084 |

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| Uranus | 7099-06-25 18:28 G | 4314092.07 | 4314092.27 | 4314092.50 | 0.0145 | 0.0072 |
| Neptune | 7099-09-15 20:09 G | 4314174.33 | 4314174.34 | 4314174.38 | 0.0088 | 0.0088 |
| Uranus | 7100-07-01 00:57 G | 4314462.29 | 4314462.54 | 4314462.80 | 0.0145 | 0.0025 |
| Neptune | 7100-09-18 02:52 G | 4314541.49 | 4314541.62 | 4314541.80 | 0.0088 | 0.0072 |
| Uranus | 7101-07-05 19:40 G | 4314832.07 | 4314832.32 | 4314832.57 | 0.0145 | 0.0007 |
| Neptune | 7101-09-20 22:19 G | 4314909.25 | 4314909.43 | 4314909.65 | 0.0088 | 0.0055 |
| Jupiter | 7102-02-22 20:23 G | 4315064.13 | 4315064.35 | 4315064.58 | 0.0530 | 0.0045 |
| Uranus | 7102-07-11 02:38 G | 4315202.39 | 4315202.61 | 4315202.85 | 0.0144 | 0.0064 |
| Neptune | 7102-09-23 04:04 G | 4315276.45 | 4315276.67 | 4315276.92 | 0.0088 | 0.0037 |
| Uranus | 7103-07-15 19:40 G | 4315572.14 | 4315572.32 | 4315572.53 | 0.0144 | 0.0092 |
| Neptune | 7103-09-25 23:45 G | 4315644.24 | 4315644.49 | 4315644.76 | 0.0088 | 0.0021 |
| Uranus | 7104-07-20 02:52 G | 4315942.57 | 4315942.62 | 4315942.70 | 0.0143 | 0.0138 |
| Neptune | 7104-09-27 06:57 G | 4316011.54 | 4316011.79 | 4316012.05 | 0.0088 | 0.0003 |
| Neptune | 7105-09-29 23:45 G | 4316379.23 | 4316379.49 | 4316379.76 | 0.0088 | 0.0012 |
| Neptune | 7106-10-02 11:02 G | 4316746.73 | 4316746.96 | 4316747.20 | 0.0088 | 0.0032 |
| Neptune | 7107-10-04 22:48 G | 4317114.23 | 4317114.45 | 4317114.69 | 0.0088 | 0.0047 |
| Jupiter | 7108-08-29 06:00 G | 4317443.54 | 4317443.75 | 4317443.96 | 0.0500 | 0.0254 |
| Neptune | 7108-10-06 14:38 G | 4317481.96 | 4317482.11 | 4317482.29 | 0.0088 | 0.0067 |
| Neptune | 7109-10-08 22:19 G | 4317849.34 | 4317849.43 | 4317849.56 | 0.0088 | 0.0081 |
| Saturn | 7113-08-28 08:52 G | 4319268.62 | 4319268.87 | 4319269.13 | 0.0272 | 0.0045 |
| Jupiter | 7114-02-27 22:19 G | 4319452.21 | 4319452.43 | 4319452.65 | 0.0529 | 0.0195 |
| Jupiter | 7120-09-02 15:07 G | 4321831.04 | 4321831.13 | 4321831.25 | 0.0502 | 0.0450 |
| Jupiter | 7126-03-04 16:04 G | 4323840.06 | 4323840.17 | 4323840.29 | 0.0526 | 0.0450 |
| Saturn | 7129-03-04 20:09 G | 4324936.26 | 4324936.34 | 4324936.42 | 0.0288 | 0.0271 |
| Uranus | 7140-12-22 10:04 G | 4329246.83 | 4329246.92 | 4329247.05 | 0.0133 | 0.0120 |
| Uranus | 7141-12-27 00:28 G | 4329616.32 | 4329616.52 | 4329616.72 | 0.0133 | 0.0082 |
| Saturn | 7142-08-22 22:19 G | 4329855.29 | 4329855.43 | 4329855.58 | 0.0272 | 0.0215 |
| Uranus | 7142-12-31 01:11 G | 4329985.32 | 4329985.55 | 4329985.80 | 0.0133 | 0.0050 |
| Jupiter | 7143-08-11 13:55 G | 4330209.08 | 4330209.08 | 4330209.08 | 0.0493 | 0.0493 |
| Uranus | 7144-01-04 15:21 G | 4330354.89 | 4330355.14 | 4330355.38 | 0.0134 | 0.0023 |

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| Uranus | 7145-01-07 16:33 G | 4330723.93 | 4330724.19 | 4330724.44 | 0.0134 | 0.0020 |
| Pluto | 7145-03-21 05:02 G | 4330796.56 | 4330796.71 | 4330796.89 | 0.0064 | 0.0048 |
| Uranus | 7146-01-12 06:28 G | 4331093.54 | 4331093.77 | 4331094.01 | 0.0134 | 0.0041 |
| Pluto | 7146-03-22 09:07 G | 4331162.74 | 4331162.88 | 4331163.08 | 0.0064 | 0.0048 |
| Uranus | 7147-01-16 08:23 G | 4331462.67 | 4331462.85 | 4331463.06 | 0.0135 | 0.0088 |
| Uranus | 7148-01-20 22:48 G | 4331832.32 | 4331832.45 | 4331832.60 | 0.0135 | 0.0111 |
| Jupiter | 7155-08-15 21:50 G | 4334596.22 | 4334596.41 | 4334596.61 | 0.0495 | 0.0291 |
| Saturn | 7158-02-27 07:55 G | 4335522.59 | 4335522.83 | 4335523.07 | 0.0288 | 0.0024 |
| Mars | 7158-06-16 15:50 G | 4335631.97 | 4335632.16 | 4335632.35 | 0.1601 | 0.0568 |
| Jupiter | 7161-02-12 00:28 G | 4336603.41 | 4336603.52 | 4336603.65 | 0.0534 | 0.0456 |
| Jupiter | 7167-08-20 09:21 G | 4338983.67 | 4338983.89 | 4338984.12 | 0.0496 | 0.0088 |
| Saturn | 7172-08-29 07:11 G | 4340819.57 | 4340819.80 | 4340820.03 | 0.0272 | 0.0099 |
| Jupiter | 7173-02-17 02:09 G | 4340991.40 | 4340991.59 | 4340991.78 | 0.0533 | 0.0269 |
| Jupiter | 7179-08-25 00:43 G | 4343371.29 | 4343371.53 | 4343371.77 | 0.0498 | 0.0078 |
| Neptune | 7181-03-18 22:48 G | 4343943.39 | 4343943.45 | 4343943.53 | 0.0089 | 0.0086 |
| Neptune | 7182-03-21 06:14 G | 4344310.61 | 4344310.76 | 4344310.97 | 0.0089 | 0.0067 |
| Uranus | 7182-06-22 08:52 G | 4344403.69 | 4344403.87 | 4344404.05 | 0.0145 | 0.0103 |
| Neptune | 7183-03-23 21:50 G | 4344678.22 | 4344678.41 | 4344678.62 | 0.0089 | 0.0051 |
| Uranus | 7183-06-27 06:57 G | 4344773.58 | 4344773.79 | 4344774.01 | 0.0145 | 0.0068 |
| Neptune | 7184-03-25 02:09 G | 4345045.37 | 4345045.59 | 4345045.84 | 0.0089 | 0.0032 |
| Uranus | 7184-07-01 12:00 G | 4345143.75 | 4345144.00 | 4345144.26 | 0.0145 | 0.0028 |
| Jupiter | 7185-02-22 07:11 G | 4345379.57 | 4345379.80 | 4345380.04 | 0.0531 | 0.0076 |
| Neptune | 7185-03-27 20:09 G | 4345413.09 | 4345413.34 | 4345413.59 | 0.0089 | 0.0017 |
| Uranus | 7185-07-06 07:11 G | 4345513.56 | 4345513.80 | 4345514.05 | 0.0145 | 0.0026 |
| Neptune | 7186-03-30 00:00 G | 4345780.25 | 4345780.50 | 4345780.75 | 0.0089 | 0.0000 |
| Uranus | 7186-07-11 13:26 G | 4345883.83 | 4345884.06 | 4345884.31 | 0.0144 | 0.0054 |
| Neptune | 7187-04-01 16:04 G | 4346147.92 | 4346148.17 | 4346148.44 | 0.0089 | 0.0016 |
| Uranus | 7187-07-16 06:57 G | 4346253.63 | 4346253.79 | 4346253.96 | 0.0144 | 0.0108 |
| Neptune | 7188-04-02 22:48 G | 4346515.24 | 4346515.45 | 4346515.69 | 0.0089 | 0.0034 |
| Uranus | 7188-07-20 13:40 G | 4346624.04 | 4346624.07 | 4346624.14 | 0.0143 | 0.0141 |

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| Neptune | 7189-04-05 11:02 G | 4346882.76 | 4346882.96 | 4346883.19 | 0.0089 | 0.0050 |
| Neptune | 7190-04-07 22:04 G | 4347250.29 | 4347250.42 | 4347250.61 | 0.0089 | 0.0068 |
| Neptune | 7191-04-10 05:16 G | 4347617.63 | 4347617.72 | 4347617.83 | 0.0089 | 0.0082 |
| Jupiter | 7191-08-29 09:07 G | 4347758.67 | 4347758.88 | 4347759.09 | 0.0500 | 0.0224 |
| Jupiter | 7197-02-27 02:23 G | 4349767.39 | 4349767.60 | 4349767.82 | 0.0529 | 0.0178 |
| Saturn | 7201-08-23 23:16 G | 4351406.27 | 4351406.47 | 4351406.68 | 0.0272 | 0.0160 |
| Jupiter | 7203-09-03 09:07 G | 4352146.77 | 4352146.88 | 4352147.01 | 0.0502 | 0.0431 |
| Jupiter | 7209-03-04 06:00 G | 4354155.62 | 4354155.75 | 4354155.89 | 0.0527 | 0.0422 |
| Saturn | 7217-02-28 07:11 G | 4357073.55 | 4357073.80 | 4357074.05 | 0.0288 | 0.0037 |
| Uranus | 7224-12-23 00:00 G | 4359928.37 | 4359928.50 | 4359928.68 | 0.0133 | 0.0106 |
| Uranus | 7225-12-27 14:38 G | 4360297.91 | 4360298.11 | 4360298.32 | 0.0133 | 0.0080 |
| Uranus | 7226-12-31 15:07 G | 4360666.89 | 4360667.13 | 4360667.37 | 0.0134 | 0.0047 |
| Uranus | 7228-01-05 05:31 G | 4361036.48 | 4361036.73 | 4361036.98 | 0.0134 | 0.0009 |
| Uranus | 7229-01-08 06:28 G | 4361405.52 | 4361405.77 | 4361406.03 | 0.0134 | 0.0013 |
| Uranus | 7230-01-12 21:07 G | 4361775.17 | 4361775.38 | 4361775.62 | 0.0134 | 0.0061 |
| Uranus | 7231-01-16 23:02 G | 4362144.27 | 4362144.46 | 4362144.68 | 0.0135 | 0.0081 |
| Saturn | 7231-08-31 10:48 G | 4362370.76 | 4362370.95 | 4362371.15 | 0.0272 | 0.0157 |
| Uranus | 7232-01-21 14:23 G | 4362514.01 | 4362514.10 | 4362514.19 | 0.0135 | 0.0125 |
| Pluto | 7234-09-21 03:21 G | 4363487.44 | 4363487.64 | 4363487.84 | 0.0079 | 0.0050 |
| Mars | 7237-06-18 22:04 G | 4364489.24 | 4364489.42 | 4364489.60 | 0.1602 | 0.0510 |
| Jupiter | 7238-08-15 07:11 G | 4364911.62 | 4364911.80 | 4364911.97 | 0.0494 | 0.0314 |
| Jupiter | 7244-02-12 07:55 G | 4366918.75 | 4366918.83 | 4366918.91 | 0.0536 | 0.0495 |
| Saturn | 7246-02-22 12:00 G | 4367659.87 | 4367660.00 | 4367660.12 | 0.0286 | 0.0242 |
| Jupiter | 7250-08-19 20:09 G | 4369299.11 | 4369299.34 | 4369299.58 | 0.0496 | 0.0109 |
| Jupiter | 7256-02-17 13:40 G | 4371306.88 | 4371307.07 | 4371307.27 | 0.0534 | 0.0299 |
| Saturn | 7260-08-24 18:28 G | 4372957.04 | 4372957.27 | 4372957.52 | 0.0272 | 0.0103 |
| Jupiter | 7262-08-24 04:48 G | 4373686.47 | 4373686.70 | 4373686.93 | 0.0498 | 0.0047 |
| Neptune | 7264-09-17 13:40 G | 4374441.94 | 4374442.07 | 4374442.22 | 0.0088 | 0.0075 |
| Uranus | 7265-06-17 20:23 G | 4374715.28 | 4374715.35 | 4374715.44 | 0.0146 | 0.0138 |
| Neptune | 7265-09-19 19:26 G | 4374809.16 | 4374809.31 | 4374809.49 | 0.0088 | 0.0067 |

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| Uranus | 7266-06-22 21:36 G | 4375085.25 | 4375085.40 | 4375085.60 | 0.0145 | 0.0109 |
| Neptune | 7266-09-22 13:55 G | 4375176.87 | 4375177.08 | 4375177.34 | 0.0088 | 0.0043 |
| Uranus | 7267-06-27 20:52 G | 4375455.15 | 4375455.37 | 4375455.60 | 0.0145 | 0.0060 |
| Neptune | 7267-09-24 22:19 G | 4375544.21 | 4375544.43 | 4375544.67 | 0.0088 | 0.0035 |
| Jupiter | 7268-02-22 08:23 G | 4375694.63 | 4375694.85 | 4375695.07 | 0.0531 | 0.0107 |
| Uranus | 7268-07-02 00:57 G | 4375825.29 | 4375825.54 | 4375825.81 | 0.0145 | 0.0016 |
| Neptune | 7268-09-26 13:11 G | 4375911.78 | 4375912.05 | 4375912.32 | 0.0088 | 0.0009 |
| Uranus | 7269-07-06 21:21 G | 4376195.15 | 4376195.39 | 4376195.64 | 0.0145 | 0.0018 |
| Neptune | 7269-09-29 01:55 G | 4376279.33 | 4376279.58 | 4376279.83 | 0.0088 | 0.0001 |
| Uranus | 7270-07-12 03:07 G | 4376565.42 | 4376565.63 | 4376565.87 | 0.0144 | 0.0074 |
| Neptune | 7270-10-01 12:00 G | 4376646.76 | 4376647.00 | 4376647.27 | 0.0088 | 0.0025 |
| Uranus | 7271-07-16 21:36 G | 4376935.23 | 4376935.40 | 4376935.58 | 0.0144 | 0.0102 |
| Neptune | 7271-10-04 05:31 G | 4377014.51 | 4377014.73 | 4377014.98 | 0.0088 | 0.0033 |
| Neptune | 7272-10-05 12:00 G | 4377381.83 | 4377382.00 | 4377382.22 | 0.0088 | 0.0059 |
| Neptune | 7273-10-08 08:23 G | 4377749.69 | 4377749.85 | 4377750.03 | 0.0088 | 0.0066 |
| Jupiter | 7274-08-29 02:52 G | 4378074.40 | 4378074.62 | 4378074.84 | 0.0500 | 0.0200 |
| Saturn | 7276-03-01 03:50 G | 4378624.44 | 4378624.66 | 4378624.90 | 0.0288 | 0.0104 |
| Jupiter | 7280-02-27 13:55 G | 4380082.86 | 4380083.08 | 4380083.30 | 0.0529 | 0.0152 |
| Jupiter | 7286-09-02 07:55 G | 4382461.70 | 4382461.83 | 4382461.99 | 0.0501 | 0.0395 |
| Saturn | 7290-09-01 13:40 G | 4383921.93 | 4383922.07 | 4383922.23 | 0.0272 | 0.0213 |
| Jupiter | 7292-03-03 03:07 G | 4384470.47 | 4384470.63 | 4384470.79 | 0.0528 | 0.0381 |
| Saturn | 7305-02-24 20:23 G | 4389211.16 | 4389211.35 | 4389211.54 | 0.0286 | 0.0171 |
| Uranus | 7307-12-21 13:55 G | 4390241.07 | 4390241.08 | 4390241.12 | 0.0133 | 0.0132 |
| Uranus | 7308-12-24 14:09 G | 4390609.97 | 4390610.09 | 4390610.25 | 0.0133 | 0.0112 |
| Uranus | 7309-12-29 05:02 G | 4390979.50 | 4390979.71 | 4390979.93 | 0.0133 | 0.0072 |
| Uranus | 7311-01-02 05:16 G | 4391348.49 | 4391348.72 | 4391348.98 | 0.0133 | 0.0041 |
| Uranus | 7312-01-06 20:23 G | 4391718.10 | 4391718.35 | 4391718.60 | 0.0134 | 0.0013 |
| Uranus | 7313-01-09 20:52 G | 4392087.13 | 4392087.37 | 4392087.63 | 0.0134 | 0.0031 |
| Uranus | 7314-01-14 12:00 G | 4392456.77 | 4392457.00 | 4392457.24 | 0.0134 | 0.0052 |
| Uranus | 7315-01-18 13:11 G | 4392825.90 | 4392826.05 | 4392826.24 | 0.0135 | 0.0100 |

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| Uranus | 7316-01-23 04:33 G | 4393195.60 | 4393195.69 | 4393195.81 | 0.0135 | 0.0122 |
| Mars | 7316-06-21 19:55 G | 4393346.27 | 4393346.33 | 4393346.40 | 0.1604 | 0.1487 |
| Saturn | 7319-08-27 16:48 G | 4394507.96 | 4394508.20 | 4394508.45 | 0.0272 | 0.0044 |
| Jupiter | 7321-08-15 17:45 G | 4395227.07 | 4395227.24 | 4395227.43 | 0.0494 | 0.0326 |
| Jupiter | 7327-02-12 15:07 G | 4397234.09 | 4397234.13 | 4397234.19 | 0.0535 | 0.0522 |
| Jupiter | 7333-08-20 00:57 G | 4399614.32 | 4399614.54 | 4399614.76 | 0.0496 | 0.0130 |
| Saturn | 7335-03-04 06:00 G | 4400175.57 | 4400175.75 | 4400175.95 | 0.0288 | 0.0173 |
| Jupiter | 7339-02-17 12:00 G | 4401621.83 | 4401622.00 | 4401622.18 | 0.0534 | 0.0343 |
| Neptune | 7345-03-19 00:43 G | 4403843.52 | 4403843.53 | 4403843.59 | 0.0089 | 0.0088 |
| Jupiter | 7345-08-24 20:09 G | 4404002.11 | 4404002.34 | 4404002.58 | 0.0497 | 0.0012 |
| Neptune | 7346-03-21 17:02 G | 4404211.13 | 4404211.21 | 4404211.34 | 0.0089 | 0.0081 |
| Neptune | 7347-03-23 21:21 G | 4404578.21 | 4404578.39 | 4404578.61 | 0.0089 | 0.0056 |
| Neptune | 7348-03-25 15:21 G | 4404945.93 | 4404946.14 | 4404946.36 | 0.0089 | 0.0048 |
| Neptune | 7349-03-27 19:55 G | 4405313.09 | 4405313.33 | 4405313.57 | 0.0089 | 0.0022 |
| Neptune | 7350-03-30 11:31 G | 4405680.72 | 4405680.98 | 4405681.24 | 0.0089 | 0.0014 |
| Uranus | 7350-06-24 09:36 G | 4405766.72 | 4405766.90 | 4405767.12 | 0.0145 | 0.0094 |
| Jupiter | 7351-02-22 16:04 G | 4406009.95 | 4406010.17 | 4406010.39 | 0.0533 | 0.0150 |
| Neptune | 7351-04-01 18:57 G | 4406048.05 | 4406048.29 | 4406048.54 | 0.0089 | 0.0011 |
| Uranus | 7351-06-29 10:04 G | 4406136.71 | 4406136.92 | 4406137.15 | 0.0145 | 0.0059 |
| Neptune | 7352-04-03 05:45 G | 4406415.49 | 4406415.74 | 4406416.00 | 0.0089 | 0.0019 |
| Uranus | 7352-07-03 13:11 G | 4406506.79 | 4406507.05 | 4406507.31 | 0.0145 | 0.0017 |
| Neptune | 7353-04-05 18:14 G | 4406783.05 | 4406783.26 | 4406783.48 | 0.0089 | 0.0044 |
| Uranus | 7353-07-08 10:19 G | 4406876.70 | 4406876.93 | 4406877.18 | 0.0145 | 0.0035 |
| Neptune | 7354-04-08 00:00 G | 4407150.31 | 4407150.50 | 4407150.74 | 0.0089 | 0.0052 |
| Uranus | 7354-07-13 15:36 G | 4407246.91 | 4407247.15 | 4407247.38 | 0.0144 | 0.0064 |
| Mars | 7354-12-19 14:38 G | 4407406.02 | 4407406.11 | 4407406.21 | 0.1935 | 0.1643 |
| Neptune | 7355-04-10 16:33 G | 4407518.09 | 4407518.19 | 4407518.34 | 0.0089 | 0.0077 |
| Uranus | 7355-07-18 09:50 G | 4407616.79 | 4407616.91 | 4407617.06 | 0.0144 | 0.0119 |
| Neptune | 7356-04-11 20:09 G | 4407885.28 | 4407885.34 | 4407885.45 | 0.0089 | 0.0084 |
| Jupiter | 7357-08-29 01:11 G | 4408389.32 | 4408389.55 | 4408389.78 | 0.0498 | 0.0166 |

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| Jupiter | 7363-02-27 10:19 G | 4410397.70 | 4410397.93 | 4410398.16 | 0.0531 | 0.0110 |
| Mars | 7363-06-16 21:21 G | 4410507.27 | 4410507.39 | 4410507.51 | 0.1598 | 0.1171 |
| Saturn | 7364-02-27 02:52 G | 4410762.40 | 4410762.62 | 4410762.86 | 0.0286 | 0.0097 |
| Jupiter | 7369-09-02 20:09 G | 4412777.20 | 4412777.34 | 4412777.50 | 0.0500 | 0.0373 |
| Jupiter | 7375-03-04 16:33 G | 4414786.03 | 4414786.19 | 4414786.36 | 0.0528 | 0.0353 |
| Saturn | 7378-08-28 22:04 G | 4416059.18 | 4416059.42 | 4416059.66 | 0.0272 | 0.0017 |
| Jupiter | 7387-03-09 11:31 G | 4419173.95 | 4419173.98 | 4419174.03 | 0.0526 | 0.0516 |
| Uranus | 7392-12-25 04:04 G | 4421291.52 | 4421291.67 | 4421291.86 | 0.0133 | 0.0097 |
| Pluto | 7393-03-23 05:31 G | 4421379.69 | 4421379.73 | 4421379.84 | 0.0064 | 0.0061 |
| Uranus | 7393-12-29 18:43 G | 4421661.08 | 4421661.28 | 4421661.51 | 0.0133 | 0.0072 |
| Saturn | 7394-03-05 16:19 G | 4421727.07 | 4421727.18 | 4421727.31 | 0.0288 | 0.0246 |
| Pluto | 7394-03-24 23:02 G | 4421746.25 | 4421746.46 | 4421746.70 | 0.0064 | 0.0033 |
| Uranus | 7395-01-02 19:11 G | 4422030.06 | 4422030.30 | 4422030.55 | 0.0133 | 0.0037 |
| Uranus | 7396-01-07 10:04 G | 4422399.67 | 4422399.92 | 4422400.17 | 0.0134 | 0.0000 |
| Uranus | 7397-01-10 10:48 G | 4422768.71 | 4422768.95 | 4422769.21 | 0.0134 | 0.0024 |
| Uranus | 7398-01-15 02:23 G | 4423138.39 | 4423138.60 | 4423138.82 | 0.0134 | 0.0071 |
| Uranus | 7399-01-19 03:36 G | 4423507.47 | 4423507.65 | 4423507.84 | 0.0135 | 0.0091 |
| Jupiter | 7404-08-15 21:07 G | 4425542.22 | 4425542.38 | 4425542.55 | 0.0493 | 0.0344 |
| Saturn | 7407-08-24 19:55 G | 4426646.20 | 4426646.33 | 4426646.50 | 0.0274 | 0.0224 |
| Jupiter | 7416-08-20 15:07 G | 4429929.91 | 4429930.13 | 4429930.35 | 0.0495 | 0.0158 |
| Jupiter | 7422-02-17 18:28 G | 4431937.12 | 4431937.27 | 4431937.43 | 0.0535 | 0.0395 |
| Saturn | 7423-03-01 07:11 G | 4432313.55 | 4432313.80 | 4432314.06 | 0.0286 | 0.0021 |
| Jupiter | 7428-08-24 17:02 G | 4434316.97 | 4434317.21 | 4434317.45 | 0.0496 | 0.0018 |
| Neptune | 7428-09-18 10:33 G | 4434341.91 | 4434341.94 | 4434342.00 | 0.0088 | 0.0087 |
| Neptune | 7429-09-21 03:50 G | 4434709.54 | 4434709.66 | 4434709.83 | 0.0088 | 0.0073 |
| Neptune | 7430-09-23 13:26 G | 4435076.89 | 4435077.06 | 4435077.28 | 0.0088 | 0.0056 |
| Neptune | 7431-09-26 03:07 G | 4435444.42 | 4435444.63 | 4435444.90 | 0.0088 | 0.0041 |
| Neptune | 7432-09-27 18:00 G | 4435812.01 | 4435812.25 | 4435812.50 | 0.0088 | 0.0021 |
| Uranus | 7433-06-20 23:02 G | 4436078.37 | 4436078.46 | 4436078.59 | 0.0145 | 0.0130 |
| Neptune | 7433-09-30 02:38 G | 4436179.35 | 4436179.61 | 4436179.89 | 0.0088 | 0.0007 |

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| Mars | 7433-12-24 03:21 G | 4436264.49 | 4436264.64 | 4436264.80 | 0.1932 | 0.1307 |
| Jupiter | 7434-02-22 15:07 G | 4436324.91 | 4436325.13 | 4436325.35 | 0.0533 | 0.0181 |
| Uranus | 7434-06-25 22:19 G | 4436448.26 | 4436448.43 | 4436448.64 | 0.0145 | 0.0101 |
| Neptune | 7434-10-02 21:07 G | 4436547.13 | 4436547.38 | 4436547.64 | 0.0088 | 0.0011 |
| Uranus | 7435-07-01 00:00 G | 4436818.27 | 4436818.50 | 4436818.73 | 0.0145 | 0.0050 |
| Neptune | 7435-10-05 02:52 G | 4436914.37 | 4436914.62 | 4436914.87 | 0.0088 | 0.0026 |
| Uranus | 7436-07-05 01:55 G | 4437188.32 | 4437188.58 | 4437188.85 | 0.0145 | 0.0008 |
| Neptune | 7436-10-06 22:19 G | 4437282.22 | 4437282.43 | 4437282.68 | 0.0088 | 0.0043 |
| Uranus | 7437-07-10 00:28 G | 4437558.28 | 4437558.52 | 4437558.76 | 0.0144 | 0.0028 |
| Saturn | 7437-08-31 06:00 G | 4437610.53 | 4437610.75 | 4437610.99 | 0.0272 | 0.0083 |
| Neptune | 7437-10-09 04:19 G | 4437649.52 | 4437649.68 | 4437649.89 | 0.0088 | 0.0061 |
| Uranus | 7438-07-15 05:02 G | 4437928.50 | 4437928.71 | 4437928.92 | 0.0144 | 0.0084 |
| Neptune | 7438-10-11 22:33 G | 4438017.33 | 4438017.44 | 4438017.60 | 0.0088 | 0.0077 |
| Uranus | 7439-07-20 00:28 G | 4438298.38 | 4438298.52 | 4438298.69 | 0.0144 | 0.0112 |
| Jupiter | 7440-08-29 12:57 G | 4438704.82 | 4438705.04 | 4438705.26 | 0.0498 | 0.0141 |
| Mars | 7442-06-19 17:02 G | 4439364.02 | 4439364.21 | 4439364.39 | 0.1599 | 0.0067 |
| Jupiter | 7446-02-27 21:07 G | 4440713.16 | 4440713.38 | 4440713.60 | 0.0531 | 0.0082 |
| Jupiter | 7452-09-03 00:14 G | 4443092.34 | 4443092.51 | 4443092.69 | 0.0500 | 0.0352 |
| Jupiter | 7458-03-04 15:50 G | 4445100.97 | 4445101.16 | 4445101.36 | 0.0529 | 0.0307 |
| Saturn | 7466-08-25 20:09 G | 4448197.15 | 4448197.34 | 4448197.56 | 0.0273 | 0.0161 |
| Jupiter | 7470-03-09 07:55 G | 4449488.73 | 4449488.83 | 4449488.94 | 0.0527 | 0.0465 |
| Uranus | 7475-12-23 17:02 G | 4451604.14 | 4451604.21 | 4451604.33 | 0.0133 | 0.0124 |
| Uranus | 7476-12-26 17:45 G | 4451973.10 | 4451973.24 | 4451973.42 | 0.0133 | 0.0104 |
| Uranus | 7477-12-31 08:23 G | 4452342.64 | 4452342.85 | 4452343.09 | 0.0133 | 0.0063 |
| Uranus | 7479-01-04 09:21 G | 4452711.64 | 4452711.89 | 4452712.14 | 0.0133 | 0.0032 |
| Uranus | 7480-01-09 00:28 G | 4453081.26 | 4453081.52 | 4453081.77 | 0.0134 | 0.0003 |
| Uranus | 7481-01-12 01:11 G | 4453450.31 | 4453450.55 | 4453450.80 | 0.0134 | 0.0040 |
| Uranus | 7482-01-16 16:19 G | 4453819.96 | 4453820.18 | 4453820.41 | 0.0134 | 0.0061 |
| Saturn | 7482-03-02 15:36 G | 4453864.91 | 4453865.15 | 4453865.39 | 0.0286 | 0.0059 |
| Pluto | 7482-09-24 00:43 G | 4454070.30 | 4454070.53 | 4454070.79 | 0.0080 | 0.0030 |

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| Uranus | 7483-01-20 17:16 G | 4454189.09 | 4454189.22 | 4454189.38 | 0.0135 | 0.0110 |
| Uranus | 7484-01-25 09:07 G | 4454558.83 | 4454558.88 | 4454558.93 | 0.0135 | 0.0131 |
| Jupiter | 7487-08-16 08:09 G | 4455857.68 | 4455857.84 | 4455858.00 | 0.0493 | 0.0363 |
| Saturn | 7496-09-01 12:57 G | 4459161.83 | 4459162.04 | 4459162.25 | 0.0272 | 0.0148 |
| Jupiter | 7499-08-20 11:02 G | 4460244.74 | 4460244.96 | 4460245.19 | 0.0494 | 0.0186 |
| Jupiter | 7505-02-17 14:52 G | 4462251.99 | 4462252.12 | 4462252.26 | 0.0535 | 0.0432 |
| Neptune | 7510-03-22 16:04 G | 4464111.16 | 4464111.17 | 4464111.25 | 0.0089 | 0.0089 |
| Saturn | 7511-02-26 03:50 G | 4464451.53 | 4464451.66 | 4464451.81 | 0.0286 | 0.0231 |
| Neptune | 7511-03-25 09:50 G | 4464478.76 | 4464478.91 | 4464479.10 | 0.0089 | 0.0067 |
| Jupiter | 7511-08-26 06:00 G | 4464632.53 | 4464632.75 | 4464632.98 | 0.0496 | 0.0049 |
| Neptune | 7512-03-26 15:21 G | 4464845.94 | 4464846.14 | 4464846.33 | 0.0089 | 0.0055 |
| Neptune | 7513-03-29 05:45 G | 4465213.50 | 4465213.74 | 4465213.98 | 0.0089 | 0.0034 |
| Neptune | 7514-03-31 14:38 G | 4465580.88 | 4465581.11 | 4465581.36 | 0.0089 | 0.0021 |
| Neptune | 7515-04-03 00:43 G | 4465948.27 | 4465948.53 | 4465948.79 | 0.0089 | 0.0001 |
| Neptune | 7516-04-04 14:52 G | 4466315.87 | 4466316.12 | 4466316.37 | 0.0089 | 0.0011 |
| Jupiter | 7517-02-22 21:50 G | 4466640.21 | 4466640.41 | 4466640.62 | 0.0533 | 0.0219 |
| Neptune | 7517-04-06 20:09 G | 4466683.10 | 4466683.34 | 4466683.58 | 0.0089 | 0.0031 |
| Uranus | 7517-06-22 11:02 G | 4466759.90 | 4466759.96 | 4466760.03 | 0.0145 | 0.0140 |
| Neptune | 7518-04-09 12:57 G | 4467050.84 | 4467051.04 | 4467051.28 | 0.0089 | 0.0044 |
| Uranus | 7518-06-27 09:07 G | 4467129.68 | 4467129.88 | 4467130.11 | 0.0145 | 0.0084 |
| Neptune | 7519-04-11 17:02 G | 4467418.04 | 4467418.21 | 4467418.39 | 0.0089 | 0.0064 |
| Uranus | 7519-07-02 12:00 G | 4467499.78 | 4467500.00 | 4467500.24 | 0.0145 | 0.0051 |
| Neptune | 7520-04-13 09:36 G | 4467785.79 | 4467785.90 | 4467786.05 | 0.0089 | 0.0077 |
| Uranus | 7520-07-06 12:57 G | 4467869.77 | 4467870.04 | 4467870.30 | 0.0145 | 0.0007 |
| Mars | 7521-06-22 19:40 G | 4468221.18 | 4468221.32 | 4468221.46 | 0.1600 | 0.1129 |
| Uranus | 7521-07-11 12:28 G | 4468239.79 | 4468240.02 | 4468240.26 | 0.0144 | 0.0043 |
| Uranus | 7522-07-16 15:21 G | 4468609.93 | 4468610.14 | 4468610.38 | 0.0144 | 0.0074 |
| Uranus | 7523-07-21 11:45 G | 4468979.89 | 4468979.99 | 4468980.11 | 0.0144 | 0.0129 |
| Jupiter | 7523-08-30 15:21 G | 4469019.90 | 4469020.14 | 4469020.38 | 0.0498 | 0.0112 |
| Saturn | 7525-08-28 03:07 G | 4469748.41 | 4469748.63 | 4469748.86 | 0.0273 | 0.0093 |

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| Jupiter | 7529-02-27 12:57 G | 4471027.80 | 4471028.04 | 4471028.28 | 0.0532 | 0.0030 |
| Jupiter | 7535-09-04 03:36 G | 4473407.49 | 4473407.65 | 4473407.83 | 0.0499 | 0.0329 |
| Jupiter | 7541-03-04 12:28 G | 4475415.83 | 4475416.02 | 4475416.21 | 0.0530 | 0.0257 |
| Saturn | 7541-03-05 05:31 G | 4475416.53 | 4475416.73 | 4475416.94 | 0.0286 | 0.0139 |
| Jupiter | 7553-03-09 17:45 G | 4479804.10 | 4479804.24 | 4479804.38 | 0.0528 | 0.0424 |
| Saturn | 7555-09-04 17:45 G | 4480713.09 | 4480713.24 | 4480713.39 | 0.0272 | 0.0221 |
| Uranus | 7559-12-25 06:57 G | 4482285.78 | 4482285.79 | 4482285.82 | 0.0133 | 0.0132 |
| Uranus | 7560-12-28 07:55 G | 4482654.65 | 4482654.83 | 4482655.02 | 0.0133 | 0.0088 |
| Uranus | 7562-01-01 21:50 G | 4483024.19 | 4483024.41 | 4483024.65 | 0.0133 | 0.0063 |
| Uranus | 7563-01-05 22:48 G | 4483393.21 | 4483393.45 | 4483393.70 | 0.0133 | 0.0027 |
| Uranus | 7564-01-10 13:26 G | 4483762.81 | 4483763.06 | 4483763.32 | 0.0134 | 0.0010 |
| Uranus | 7565-01-13 14:38 G | 4484131.86 | 4484132.11 | 4484132.35 | 0.0134 | 0.0034 |
| Uranus | 7566-01-18 05:16 G | 4484501.53 | 4484501.72 | 4484501.94 | 0.0134 | 0.0081 |
| Uranus | 7567-01-22 06:57 G | 4484870.62 | 4484870.79 | 4484870.95 | 0.0134 | 0.0101 |
| Mars | 7568-06-17 08:38 G | 4485382.76 | 4485382.86 | 4485382.96 | 0.1596 | 0.1365 |
| Saturn | 7570-02-27 14:52 G | 4486002.91 | 4486003.12 | 4486003.34 | 0.0286 | 0.0147 |
| Jupiter | 7570-08-16 05:45 G | 4486172.60 | 4486172.74 | 4486172.89 | 0.0493 | 0.0389 |
| Jupiter | 7582-08-21 00:00 G | 4490560.29 | 4490560.50 | 4490560.71 | 0.0494 | 0.0216 |
| Saturn | 7584-08-29 16:19 G | 4491299.94 | 4491300.18 | 4491300.42 | 0.0273 | 0.0020 |
| Jupiter | 7588-02-17 15:36 G | 4492567.06 | 4492567.15 | 4492567.25 | 0.0536 | 0.0484 |
| Neptune | 7593-09-21 06:57 G | 4494609.69 | 4494609.79 | 4494609.94 | 0.0088 | 0.0076 |
| Jupiter | 7594-08-25 06:14 G | 4494947.52 | 4494947.76 | 4494948.00 | 0.0495 | 0.0081 |
| Neptune | 7594-09-23 18:28 G | 4494977.12 | 4494977.27 | 4494977.47 | 0.0088 | 0.0067 |
| Neptune | 7595-09-26 10:19 G | 4495344.71 | 4495344.93 | 4495345.16 | 0.0088 | 0.0043 |
| Neptune | 7596-09-27 17:45 G | 4495712.01 | 4495712.24 | 4495712.50 | 0.0088 | 0.0036 |
| Neptune | 7597-09-30 13:11 G | 4496079.80 | 4496080.05 | 4496080.32 | 0.0088 | 0.0011 |
| Neptune | 7598-10-02 18:57 G | 4496447.03 | 4496447.29 | 4496447.55 | 0.0088 | 0.0004 |
| Neptune | 7599-10-05 14:38 G | 4496814.85 | 4496815.11 | 4496815.37 | 0.0088 | 0.0022 |
| Jupiter | 7600-02-22 11:31 G | 4496954.78 | 4496954.98 | 4496955.19 | 0.0534 | 0.0269 |
| Saturn | 7600-03-06 23:02 G | 4496968.33 | 4496968.46 | 4496968.62 | 0.0287 | 0.0225 |

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| Neptune | 7600-10-06 21:21 G | 4497182.16 | 4497182.39 | 4497182.64 | 0.0088 | 0.0030 |
| Uranus | 7601-06-22 23:16 G | 4497441.34 | 4497441.47 | 4497441.61 | 0.0145 | 0.0121 |
| Neptune | 7601-10-09 14:23 G | 4497549.90 | 4497550.10 | 4497550.33 | 0.0088 | 0.0054 |
| Uranus | 7602-06-27 20:09 G | 4497811.15 | 4497811.34 | 4497811.55 | 0.0145 | 0.0093 |
| Neptune | 7602-10-12 01:11 G | 4497917.38 | 4497917.55 | 4497917.74 | 0.0088 | 0.0062 |
| Uranus | 7603-07-03 00:00 G | 4498181.27 | 4498181.50 | 4498181.74 | 0.0145 | 0.0040 |
| Neptune | 7603-10-14 12:43 G | 4498285.00 | 4498285.03 | 4498285.12 | 0.0088 | 0.0087 |
| Uranus | 7604-07-06 23:45 G | 4498551.22 | 4498551.49 | 4498551.75 | 0.0145 | 0.0001 |
| Uranus | 7605-07-12 00:28 G | 4498921.30 | 4498921.52 | 4498921.77 | 0.0144 | 0.0039 |
| Uranus | 7606-07-17 02:23 G | 4499291.42 | 4499291.60 | 4499291.82 | 0.0144 | 0.0094 |
| Jupiter | 7606-08-29 15:07 G | 4499334.91 | 4499335.13 | 4499335.36 | 0.0497 | 0.0079 |
| Uranus | 7607-07-22 00:43 G | 4499661.40 | 4499661.53 | 4499661.66 | 0.0144 | 0.0121 |
| Jupiter | 7612-02-27 16:19 G | 4501342.96 | 4501343.18 | 4501343.40 | 0.0532 | 0.0005 |
| Saturn | 7613-08-24 10:33 G | 4501886.86 | 4501886.94 | 4501887.03 | 0.0274 | 0.0258 |
| Jupiter | 7618-09-03 07:55 G | 4503722.64 | 4503722.83 | 4503723.03 | 0.0499 | 0.0296 |
| Jupiter | 7624-03-03 20:09 G | 4505731.13 | 4505731.34 | 4505731.56 | 0.0530 | 0.0217 |
| Saturn | 7629-02-28 23:31 G | 4507554.24 | 4507554.48 | 4507554.72 | 0.0286 | 0.0063 |
| Jupiter | 7630-09-07 16:33 G | 4508110.17 | 4508110.19 | 4508110.23 | 0.0501 | 0.0495 |
| Jupiter | 7636-03-08 10:48 G | 4510118.79 | 4510118.95 | 4510119.10 | 0.0528 | 0.0382 |
| Pluto | 7641-03-26 23:31 G | 4511963.42 | 4511963.48 | 4511963.60 | 0.0064 | 0.0060 |
| Pluto | 7642-03-28 06:43 G | 4512329.56 | 4512329.78 | 4512330.02 | 0.0064 | 0.0025 |
| Saturn | 7643-09-01 04:33 G | 4512851.45 | 4512851.69 | 4512851.94 | 0.0273 | 0.0055 |
| Uranus | 7643-12-25 19:26 G | 4512967.19 | 4512967.31 | 4512967.45 | 0.0133 | 0.0114 |
| Uranus | 7644-12-28 20:52 G | 4513336.21 | 4513336.37 | 4513336.57 | 0.0133 | 0.0094 |
| Uranus | 7646-01-02 11:02 G | 4513705.73 | 4513705.96 | 4513706.21 | 0.0133 | 0.0052 |
| Uranus | 7647-01-06 12:43 G | 4514074.78 | 4514075.03 | 4514075.28 | 0.0133 | 0.0022 |
| Mars | 7647-06-20 12:57 G | 4514239.86 | 4514240.04 | 4514240.22 | 0.1597 | 0.0442 |
| Uranus | 7648-01-11 03:07 G | 4514444.37 | 4514444.63 | 4514444.89 | 0.0134 | 0.0009 |
| Uranus | 7649-01-14 04:33 G | 4514813.46 | 4514813.69 | 4514813.92 | 0.0134 | 0.0050 |
| Uranus | 7650-01-18 18:43 G | 4515183.08 | 4515183.28 | 4515183.51 | 0.0134 | 0.0073 |

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| Uranus | 7651-01-22 20:09 G | 4515552.24 | 4515552.34 | 4515552.46 | 0.0135 | 0.0121 |
| Jupiter | 7653-08-15 17:16 G | 4516488.10 | 4516488.22 | 4516488.35 | 0.0492 | 0.0413 |
| Jupiter | 7665-08-19 19:11 G | 4520875.09 | 4520875.30 | 4520875.51 | 0.0493 | 0.0253 |
| Jupiter | 7671-02-16 10:48 G | 4522881.89 | 4522881.95 | 4522882.01 | 0.0536 | 0.0519 |
| Saturn | 7672-08-25 20:38 G | 4523438.18 | 4523438.36 | 4523438.55 | 0.0273 | 0.0183 |
| Neptune | 7675-03-24 11:16 G | 4524378.88 | 4524378.97 | 4524379.09 | 0.0089 | 0.0081 |
| Neptune | 7676-03-26 00:57 G | 4524746.36 | 4524746.54 | 4524746.76 | 0.0089 | 0.0057 |
| Neptune | 7677-03-28 11:31 G | 4525113.78 | 4525113.98 | 4525114.19 | 0.0089 | 0.0048 |
| Jupiter | 7677-08-24 07:11 G | 4525262.58 | 4525262.80 | 4525263.02 | 0.0495 | 0.0123 |
| Neptune | 7678-03-30 19:55 G | 4525481.08 | 4525481.33 | 4525481.59 | 0.0089 | 0.0026 |
| Neptune | 7679-04-02 10:33 G | 4525848.71 | 4525848.94 | 4525849.20 | 0.0089 | 0.0017 |
| Neptune | 7680-04-03 15:21 G | 4526215.89 | 4526216.14 | 4526216.40 | 0.0089 | 0.0007 |
| Neptune | 7681-04-06 08:38 G | 4526583.62 | 4526583.86 | 4526584.12 | 0.0089 | 0.0016 |
| Neptune | 7682-04-08 12:14 G | 4526950.80 | 4526951.01 | 4526951.25 | 0.0089 | 0.0040 |
| Jupiter | 7683-02-21 17:02 G | 4527270.03 | 4527270.21 | 4527270.40 | 0.0534 | 0.0298 |
| Neptune | 7683-04-11 04:48 G | 4527318.50 | 4527318.70 | 4527318.93 | 0.0089 | 0.0048 |
| Neptune | 7684-04-12 11:02 G | 4527685.84 | 4527685.96 | 4527686.13 | 0.0089 | 0.0072 |
| Neptune | 7685-04-15 00:14 G | 4528053.40 | 4528053.51 | 4528053.64 | 0.0089 | 0.0079 |
| Uranus | 7685-06-23 09:36 G | 4528122.82 | 4528122.90 | 4528123.03 | 0.0145 | 0.0132 |
| Uranus | 7686-06-28 06:00 G | 4528492.54 | 4528492.75 | 4528492.99 | 0.0145 | 0.0075 |
| Uranus | 7687-07-03 11:16 G | 4528862.74 | 4528862.97 | 4528863.21 | 0.0145 | 0.0043 |
| Saturn | 7688-03-02 12:14 G | 4529105.78 | 4529106.01 | 4529106.25 | 0.0287 | 0.0022 |
| Uranus | 7688-07-07 09:36 G | 4529232.63 | 4529232.90 | 4529233.16 | 0.0145 | 0.0005 |
| Uranus | 7689-07-12 11:31 G | 4529602.76 | 4529602.98 | 4529603.21 | 0.0144 | 0.0053 |
| Jupiter | 7689-08-28 22:33 G | 4529650.20 | 4529650.44 | 4529650.68 | 0.0497 | 0.0050 |
| Uranus | 7690-07-17 12:00 G | 4529972.79 | 4529973.00 | 4529973.22 | 0.0144 | 0.0084 |
| Uranus | 7691-07-22 10:04 G | 4530342.88 | 4530342.92 | 4530343.00 | 0.0144 | 0.0140 |
| Jupiter | 7695-02-26 19:40 G | 4531658.08 | 4531658.32 | 4531658.56 | 0.0532 | 0.0032 |
| Jupiter | 7701-09-03 06:43 G | 4534037.59 | 4534037.78 | 4534037.98 | 0.0498 | 0.0266 |
| Saturn | 7702-09-03 11:31 G | 4534402.76 | 4534402.98 | 4534403.21 | 0.0273 | 0.0127 |

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| Jupiter | 7707-03-04 08:23 G | 4536045.64 | 4536045.85 | 4536046.06 | 0.0531 | 0.0170 |
| Jupiter | 7713-09-08 03:07 G | 4538425.54 | 4538425.63 | 4538425.72 | 0.0500 | 0.0459 |
| Saturn | 7717-02-26 13:40 G | 4539692.94 | 4539693.07 | 4539693.21 | 0.0286 | 0.0239 |
| Mars | 7717-12-25 16:04 G | 4539995.01 | 4539995.17 | 4539995.33 | 0.1935 | 0.1078 |
| Jupiter | 7719-03-09 13:55 G | 4540433.91 | 4540434.08 | 4540434.27 | 0.0529 | 0.0335 |
| Mars | 7726-06-23 08:52 G | 4543096.71 | 4543096.87 | 4543097.03 | 0.1598 | 0.0663 |
| Uranus | 7727-12-27 08:09 G | 4543648.76 | 4543648.84 | 4543648.95 | 0.0133 | 0.0123 |
| Uranus | 7728-12-30 11:02 G | 4544017.76 | 4544017.96 | 4544018.16 | 0.0133 | 0.0078 |
| Uranus | 7730-01-03 23:45 G | 4544387.26 | 4544387.49 | 4544387.74 | 0.0133 | 0.0053 |
| Pluto | 7730-09-27 16:04 G | 4544653.93 | 4544654.17 | 4544654.44 | 0.0080 | 0.0023 |
| Uranus | 7731-01-08 01:55 G | 4544756.33 | 4544756.58 | 4544756.83 | 0.0133 | 0.0016 |
| Saturn | 7731-08-29 11:16 G | 4544989.75 | 4544989.97 | 4544990.19 | 0.0273 | 0.0107 |
| Uranus | 7732-01-12 15:21 G | 4545125.89 | 4545126.14 | 4545126.40 | 0.0134 | 0.0020 |
| Uranus | 7733-01-15 16:48 G | 4545494.98 | 4545495.20 | 4545495.45 | 0.0134 | 0.0046 |
| Uranus | 7734-01-20 06:57 G | 4545864.62 | 4545864.79 | 4545864.99 | 0.0134 | 0.0092 |
| Uranus | 7735-01-24 09:07 G | 4546233.75 | 4546233.88 | 4546234.02 | 0.0135 | 0.0112 |
| Jupiter | 7736-08-15 13:11 G | 4546802.95 | 4546803.05 | 4546803.16 | 0.0491 | 0.0443 |
| Saturn | 7747-03-06 03:50 G | 4550657.44 | 4550657.66 | 4550657.88 | 0.0287 | 0.0100 |
| Jupiter | 7748-08-20 00:57 G | 4551190.35 | 4551190.54 | 4551190.72 | 0.0493 | 0.0291 |
| Neptune | 7757-09-21 10:48 G | 4554509.89 | 4554509.95 | 4554510.05 | 0.0088 | 0.0084 |
| Neptune | 7758-09-24 03:21 G | 4554877.54 | 4554877.64 | 4554877.81 | 0.0088 | 0.0076 |
| Neptune | 7759-09-26 10:33 G | 4555244.74 | 4555244.94 | 4555245.16 | 0.0088 | 0.0054 |
| Jupiter | 7760-08-24 15:36 G | 4555577.93 | 4555578.15 | 4555578.39 | 0.0495 | 0.0156 |
| Neptune | 7760-09-28 06:14 G | 4555612.54 | 4555612.76 | 4555613.00 | 0.0088 | 0.0042 |
| Saturn | 7761-09-04 18:00 G | 4555954.09 | 4555954.25 | 4555954.43 | 0.0272 | 0.0200 |
| Neptune | 7761-09-30 12:00 G | 4555979.75 | 4555980.00 | 4555980.25 | 0.0088 | 0.0021 |
| Neptune | 7762-10-03 06:57 G | 4556347.53 | 4556347.79 | 4556348.06 | 0.0088 | 0.0010 |
| Neptune | 7763-10-05 14:38 G | 4556714.86 | 4556715.11 | 4556715.37 | 0.0088 | 0.0010 |
| Neptune | 7764-10-07 06:14 G | 4557082.50 | 4557082.76 | 4557083.02 | 0.0088 | 0.0023 |
| Neptune | 7765-10-09 18:00 G | 4557450.04 | 4557450.25 | 4557450.48 | 0.0088 | 0.0042 |

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| Jupiter | 7766-02-21 13:40 G | 4557584.89 | 4557585.07 | 4557585.26 | 0.0535 | 0.0339 |
| Neptune | 7766-10-12 04:48 G | 4557817.50 | 4557817.70 | 4557817.93 | 0.0088 | 0.0055 |
| Neptune | 7767-10-14 21:36 G | 4558185.29 | 4558185.40 | 4558185.57 | 0.0088 | 0.0075 |
| Neptune | 7768-10-16 04:48 G | 4558552.69 | 4558552.70 | 4558552.77 | 0.0088 | 0.0088 |
| Uranus | 7769-06-24 22:04 G | 4558804.29 | 4558804.42 | 4558804.60 | 0.0145 | 0.0113 |
| Uranus | 7770-06-29 17:31 G | 4559174.03 | 4559174.23 | 4559174.45 | 0.0145 | 0.0084 |
| Uranus | 7771-07-04 23:02 G | 4559544.23 | 4559544.46 | 4559544.71 | 0.0145 | 0.0030 |
| Uranus | 7772-07-08 20:23 G | 4559914.09 | 4559914.35 | 4559914.61 | 0.0145 | 0.0009 |
| Jupiter | 7772-08-28 21:21 G | 4559965.16 | 4559965.39 | 4559965.62 | 0.0496 | 0.0020 |
| Uranus | 7773-07-13 23:31 G | 4560284.26 | 4560284.48 | 4560284.72 | 0.0144 | 0.0049 |
| Uranus | 7774-07-18 22:48 G | 4560654.27 | 4560654.45 | 4560654.64 | 0.0144 | 0.0102 |
| Uranus | 7775-07-23 22:48 G | 4561024.36 | 4561024.45 | 4561024.56 | 0.0144 | 0.0131 |
| Saturn | 7776-02-28 19:26 G | 4561244.11 | 4561244.31 | 4561244.53 | 0.0286 | 0.0164 |
| Jupiter | 7778-02-26 09:21 G | 4561972.67 | 4561972.89 | 4561973.11 | 0.0533 | 0.0079 |
| Jupiter | 7784-09-02 12:57 G | 4564352.83 | 4564353.04 | 4564353.25 | 0.0498 | 0.0229 |
| Jupiter | 7790-03-03 18:43 G | 4566361.06 | 4566361.28 | 4566361.50 | 0.0532 | 0.0132 |
| Saturn | 7790-08-31 01:40 G | 4566541.33 | 4566541.57 | 4566541.81 | 0.0273 | 0.0034 |
| Jupiter | 7796-09-06 18:57 G | 4568740.17 | 4568740.29 | 4568740.43 | 0.0499 | 0.0417 |
| Jupiter | 7802-03-09 12:00 G | 4570748.81 | 4570749.00 | 4570749.20 | 0.0529 | 0.0299 |
| Saturn | 7806-03-08 15:36 G | 4572208.97 | 4572209.15 | 4572209.35 | 0.0287 | 0.0176 |
| Uranus | 7811-12-28 19:55 G | 4574330.19 | 4574330.33 | 4574330.51 | 0.0133 | 0.0106 |
| Uranus | 7812-12-31 23:16 G | 4574699.30 | 4574699.47 | 4574699.68 | 0.0133 | 0.0086 |
| Uranus | 7814-01-05 12:00 G | 4575068.76 | 4575069.00 | 4575069.26 | 0.0133 | 0.0042 |
| Jupiter | 7814-03-14 14:52 G | 4575137.07 | 4575137.12 | 4575137.17 | 0.0527 | 0.0511 |
| Uranus | 7815-01-09 15:07 G | 4575437.89 | 4575438.13 | 4575438.38 | 0.0134 | 0.0013 |
| Uranus | 7816-01-14 04:04 G | 4575807.42 | 4575807.67 | 4575807.93 | 0.0134 | 0.0020 |
| Uranus | 7817-01-17 06:43 G | 4576176.56 | 4576176.78 | 4576177.01 | 0.0134 | 0.0060 |
| Uranus | 7818-01-21 19:40 G | 4576546.14 | 4576546.32 | 4576546.54 | 0.0134 | 0.0084 |
| Uranus | 7819-01-25 22:04 G | 4576915.39 | 4576915.42 | 4576915.50 | 0.0135 | 0.0132 |
| Jupiter | 7819-08-16 21:21 G | 4577118.32 | 4577118.39 | 4577118.46 | 0.0491 | 0.0467 |

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| Saturn | 7820-09-07 03:36 G | 4577505.62 | 4577505.65 | 4577505.69 | 0.0272 | 0.0268 |
| Jupiter | 7831-08-21 09:21 G | 4581505.71 | 4581505.89 | 4581506.08 | 0.0493 | 0.0320 |
| Saturn | 7835-03-02 23:45 G | 4582795.27 | 4582795.49 | 4582795.73 | 0.0286 | 0.0094 |
| Neptune | 7839-03-25 19:40 G | 4584279.31 | 4584279.32 | 4584279.39 | 0.0089 | 0.0089 |
| Neptune | 7840-03-27 07:40 G | 4584646.68 | 4584646.82 | 4584647.00 | 0.0089 | 0.0067 |
| Neptune | 7841-03-29 15:21 G | 4585013.96 | 4585014.14 | 4585014.36 | 0.0089 | 0.0057 |
| Neptune | 7842-04-01 07:40 G | 4585381.61 | 4585381.82 | 4585382.07 | 0.0089 | 0.0035 |
| Neptune | 7843-04-03 12:14 G | 4585748.77 | 4585749.01 | 4585749.26 | 0.0089 | 0.0024 |
| Jupiter | 7843-08-25 11:02 G | 4585892.75 | 4585892.96 | 4585893.18 | 0.0494 | 0.0193 |
| Neptune | 7844-04-05 06:14 G | 4586116.50 | 4586116.76 | 4586117.01 | 0.0089 | 0.0002 |
| Neptune | 7845-04-07 10:19 G | 4586483.68 | 4586483.93 | 4586484.18 | 0.0089 | 0.0007 |
| Neptune | 7846-04-10 01:55 G | 4586851.35 | 4586851.58 | 4586851.84 | 0.0089 | 0.0029 |
| Neptune | 7847-04-12 09:07 G | 4587218.67 | 4587218.88 | 4587219.11 | 0.0089 | 0.0039 |
| Neptune | 7848-04-13 19:55 G | 4587586.16 | 4587586.33 | 4587586.55 | 0.0089 | 0.0061 |
| Jupiter | 7849-02-21 11:16 G | 4587899.82 | 4587899.97 | 4587900.13 | 0.0536 | 0.0377 |
| Neptune | 7849-04-16 08:23 G | 4587953.71 | 4587953.85 | 4587954.00 | 0.0089 | 0.0071 |
| Saturn | 7849-09-02 10:48 G | 4588092.70 | 4588092.95 | 4588093.20 | 0.0273 | 0.0037 |
| Mars | 7852-06-20 08:23 G | 4589114.69 | 4589114.85 | 4589115.01 | 0.1595 | 0.0821 |
| Uranus | 7853-06-26 10:19 G | 4589485.80 | 4589485.93 | 4589486.07 | 0.0145 | 0.0123 |
| Uranus | 7854-07-01 04:48 G | 4589855.48 | 4589855.70 | 4589855.94 | 0.0145 | 0.0065 |
| Uranus | 7855-07-06 11:16 G | 4590225.74 | 4590225.97 | 4590226.22 | 0.0145 | 0.0035 |
| Jupiter | 7855-08-30 05:45 G | 4590280.50 | 4590280.74 | 4590280.98 | 0.0495 | 0.0013 |
| Uranus | 7856-07-10 07:26 G | 4590595.55 | 4590595.81 | 4590596.07 | 0.0145 | 0.0015 |
| Uranus | 7857-07-15 11:16 G | 4590965.75 | 4590965.97 | 4590966.20 | 0.0144 | 0.0062 |
| Uranus | 7858-07-20 08:38 G | 4591335.68 | 4591335.86 | 4591336.07 | 0.0144 | 0.0094 |
| Jupiter | 7861-02-26 22:04 G | 4592288.19 | 4592288.42 | 4592288.65 | 0.0534 | 0.0108 |
| Saturn | 7865-03-09 20:52 G | 4593760.25 | 4593760.37 | 4593760.51 | 0.0287 | 0.0244 |
| Jupiter | 7867-09-03 11:02 G | 4594667.75 | 4594667.96 | 4594668.18 | 0.0497 | 0.0203 |
| Jupiter | 7873-03-03 15:50 G | 4596675.93 | 4596676.16 | 4596676.39 | 0.0532 | 0.0095 |
| Saturn | 7878-08-27 16:33 G | 4598679.04 | 4598679.19 | 4598679.33 | 0.0274 | 0.0217 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Jupiter | 7879-09-08 08:09 G | 4599055.70 | 4599055.84 | 4599055.99 | 0.0499 | 0.0385 |
| Jupiter | 7885-03-08 17:31 G | 4601064.03 | 4601064.23 | 4601064.42 | 0.0529 | 0.0256 |
| Pluto | 7889-03-30 05:31 G | 4602546.72 | 4602546.73 | 4602546.81 | 0.0064 | 0.0063 |
| Pluto | 7890-03-31 19:11 G | 4602913.07 | 4602913.30 | 4602913.57 | 0.0064 | 0.0022 |
| Saturn | 7894-03-04 06:43 G | 4604346.54 | 4604346.78 | 4604347.01 | 0.0286 | 0.0028 |
| Uranus | 7895-12-29 07:55 G | 4605011.72 | 4605011.83 | 4605011.97 | 0.0133 | 0.0116 |
| Uranus | 7897-01-01 12:28 G | 4605380.82 | 4605381.02 | 4605381.24 | 0.0133 | 0.0069 |
| Jupiter | 7897-03-13 12:43 G | 4605451.93 | 4605452.03 | 4605452.14 | 0.0528 | 0.0471 |
| Uranus | 7898-01-05 23:31 G | 4605750.25 | 4605750.48 | 4605750.74 | 0.0133 | 0.0046 |
| Uranus | 7899-01-10 03:36 G | 4606119.40 | 4606119.65 | 4606119.90 | 0.0134 | 0.0006 |
| Uranus | 7900-01-14 15:21 G | 4606488.88 | 4606489.14 | 4606489.40 | 0.0134 | 0.0028 |
| Uranus | 7901-01-18 18:28 G | 4606858.05 | 4606858.27 | 4606858.50 | 0.0134 | 0.0056 |
| Uranus | 7902-01-23 07:11 G | 4607227.63 | 4607227.80 | 4607227.98 | 0.0134 | 0.0101 |
| Jupiter | 7902-08-17 03:36 G | 4607433.64 | 4607433.65 | 4607433.65 | 0.0491 | 0.0490 |
| Uranus | 7903-01-27 11:02 G | 4607596.86 | 4607596.96 | 4607597.06 | 0.0135 | 0.0122 |
| Saturn | 7908-09-04 12:43 G | 4609643.79 | 4609644.03 | 4609644.27 | 0.0273 | 0.0107 |
| Jupiter | 7914-08-21 07:40 G | 4611820.67 | 4611820.82 | 4611820.99 | 0.0492 | 0.0352 |
| Neptune | 7922-09-25 04:19 G | 4614777.57 | 4614777.68 | 4614777.83 | 0.0088 | 0.0076 |
| Neptune | 7923-09-27 23:45 G | 4615145.34 | 4615145.49 | 4615145.68 | 0.0088 | 0.0067 |
| Neptune | 7924-09-29 05:31 G | 4615512.52 | 4615512.73 | 4615512.97 | 0.0088 | 0.0044 |
| Neptune | 7925-10-01 23:45 G | 4615880.25 | 4615880.49 | 4615880.74 | 0.0088 | 0.0035 |
| Jupiter | 7926-08-26 01:11 G | 4616208.34 | 4616208.55 | 4616208.77 | 0.0494 | 0.0218 |
| Neptune | 7926-10-04 08:23 G | 4616247.61 | 4616247.85 | 4616248.11 | 0.0088 | 0.0014 |
| Neptune | 7927-10-06 23:16 G | 4616615.20 | 4616615.47 | 4616615.74 | 0.0088 | 0.0004 |
| Neptune | 7928-10-08 12:43 G | 4616982.80 | 4616983.03 | 4616983.29 | 0.0088 | 0.0019 |
| Neptune | 7929-10-10 22:19 G | 4617350.18 | 4617350.43 | 4617350.69 | 0.0088 | 0.0027 |
| Neptune | 7930-10-13 15:50 G | 4617717.97 | 4617718.16 | 4617718.38 | 0.0088 | 0.0052 |
| Mars | 7931-06-24 11:45 G | 4617971.79 | 4617971.99 | 4617972.18 | 0.1596 | 0.0190 |
| Neptune | 7931-10-15 21:50 G | 4618085.24 | 4618085.41 | 4618085.63 | 0.0088 | 0.0060 |
| Jupiter | 7932-02-23 00:14 G | 4618215.36 | 4618215.51 | 4618215.67 | 0.0536 | 0.0400 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Neptune | 7932-10-17 17:31 G | 4618453.17 | 4618453.23 | 4618453.35 | 0.0088 | 0.0084 |
| Uranus | 7937-06-27 22:33 G | 4620167.28 | 4620167.44 | 4620167.62 | 0.0145 | 0.0105 |
| Saturn | 7937-08-30 01:55 G | 4620230.39 | 4620230.58 | 4620230.79 | 0.0273 | 0.0150 |
| Uranus | 7938-07-02 16:33 G | 4620536.98 | 4620537.19 | 4620537.41 | 0.0145 | 0.0076 |
| Jupiter | 7938-08-30 06:28 G | 4620595.53 | 4620595.77 | 4620596.01 | 0.0495 | 0.0032 |
| Uranus | 7939-07-07 23:31 G | 4620907.23 | 4620907.48 | 4620907.73 | 0.0145 | 0.0020 |
| Uranus | 7940-07-11 18:28 G | 4621277.01 | 4621277.27 | 4621277.53 | 0.0145 | 0.0017 |
| Uranus | 7941-07-16 23:31 G | 4621647.26 | 4621647.48 | 4621647.71 | 0.0144 | 0.0059 |
| Uranus | 7942-07-21 19:55 G | 4622017.18 | 4622017.33 | 4622017.51 | 0.0144 | 0.0111 |
| Uranus | 7943-07-26 22:19 G | 4622387.39 | 4622387.43 | 4622387.50 | 0.0144 | 0.0140 |
| Jupiter | 7944-02-27 15:50 G | 4622602.94 | 4622603.16 | 4622603.39 | 0.0534 | 0.0148 |
| Jupiter | 7950-09-04 01:11 G | 4624983.34 | 4624983.55 | 4624983.76 | 0.0497 | 0.0186 |
| Saturn | 7953-03-06 13:11 G | 4625897.82 | 4625898.05 | 4625898.29 | 0.0286 | 0.0038 |
| Jupiter | 7956-03-03 22:33 G | 4626991.22 | 4626991.44 | 4626991.66 | 0.0532 | 0.0048 |
| Jupiter | 7962-09-08 07:26 G | 4629370.64 | 4629370.81 | 4629370.99 | 0.0498 | 0.0343 |
| Saturn | 7967-09-06 14:09 G | 4631194.92 | 4631195.09 | 4631195.30 | 0.0273 | 0.0175 |
| Jupiter | 7968-03-08 19:40 G | 4631379.10 | 4631379.32 | 4631379.54 | 0.0531 | 0.0215 |
| Jupiter | 7974-09-12 22:19 G | 4633758.39 | 4633758.43 | 4633758.49 | 0.0500 | 0.0485 |
| Pluto | 7978-09-30 21:07 G | 4635237.13 | 4635237.38 | 4635237.64 | 0.0080 | 0.0015 |
| Uranus | 7979-12-30 18:57 G | 4635693.11 | 4635693.29 | 4635693.47 | 0.0133 | 0.0099 |
| Jupiter | 7980-03-13 19:55 G | 4635767.22 | 4635767.33 | 4635767.45 | 0.0529 | 0.0448 |
| Uranus | 7981-01-03 00:00 G | 4636062.31 | 4636062.50 | 4636062.71 | 0.0133 | 0.0078 |
| Uranus | 7982-01-07 10:33 G | 4636431.69 | 4636431.94 | 4636432.20 | 0.0133 | 0.0033 |
| Saturn | 7982-02-28 13:40 G | 4636483.94 | 4636484.07 | 4636484.21 | 0.0285 | 0.0238 |
| Uranus | 7983-01-11 15:50 G | 4636800.91 | 4636801.16 | 4636801.41 | 0.0134 | 0.0006 |
| Uranus | 7984-01-16 02:52 G | 4637170.36 | 4637170.62 | 4637170.88 | 0.0134 | 0.0029 |
| Uranus | 7985-01-19 07:11 G | 4637539.60 | 4637539.80 | 4637540.03 | 0.0134 | 0.0068 |
| Uranus | 7986-01-23 18:57 G | 4637909.11 | 4637909.29 | 4637909.49 | 0.0134 | 0.0093 |
| Saturn | 7996-08-31 06:28 G | 4641781.54 | 4641781.77 | 4641782.01 | 0.0274 | 0.0086 |
| Jupiter | 7997-08-21 00:14 G | 4642136.36 | 4642136.51 | 4642136.67 | 0.0492 | 0.0374 |

9TH MILLENNIUM CE

This is a list of transits of Moon in the 9th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Mars | 8001-12-26 06:00 | G | 4643724.52 | 4643724.75 | 4643724.98 | 0.1939 | 0.0175 | |
| Neptune | 8004-03-27 12:00 | G | 4644546.90 | 4644547.00 | 4644547.13 | 0.0089 | 0.0079 | |
| Neptune | 8005-03-30 05:02 | G | 4644914.53 | 4644914.71 | 4644914.91 | 0.0089 | 0.0059 | |
| Neptune | 8006-04-01 08:52 | G | 4645281.68 | 4645281.87 | 4645282.10 | 0.0089 | 0.0048 | |
| Neptune | 8007-04-04 03:07 | G | 4645649.38 | 4645649.63 | 4645649.87 | 0.0089 | 0.0027 | |
| Neptune | 8008-04-05 07:26 | G | 4646016.57 | 4646016.81 | 4646017.06 | 0.0089 | 0.0017 | |
| Neptune | 8009-04-07 22:33 | G | 4646384.18 | 4646384.44 | 4646384.70 | 0.0089 | 0.0004 | |
| Jupiter | 8009-08-25 03:21 | G | 4646523.43 | 4646523.64 | 4646523.85 | 0.0493 | 0.0238 | |
| Neptune | 8010-04-10 06:57 | G | 4646751.55 | 4646751.79 | 4646752.04 | 0.0089 | 0.0015 | |
| Mars | 8010-06-26 18:28 | G | 4646829.15 | 4646829.27 | 4646829.39 | 0.1596 | 0.1259 | |
| Neptune | 8011-04-12 17:16 | G | 4647118.99 | 4647119.22 | 4647119.47 | 0.0089 | 0.0036 | |
| Saturn | 8012-03-07 14:09 | G | 4647448.86 | 4647449.09 | 4647449.32 | 0.0286 | 0.0096 | |
| Neptune | 8012-04-14 06:43 | G | 4647486.58 | 4647486.78 | 4647487.01 | 0.0089 | 0.0046 | |
| Neptune | 8013-04-16 12:28 | G | 4647853.87 | 4647854.02 | 4647854.20 | 0.0089 | 0.0067 | |
| Neptune | 8014-04-19 05:16 | G | 4648221.60 | 4648221.72 | 4648221.86 | 0.0089 | 0.0076 | |
| Jupiter | 8015-02-21 17:45 | G | 4648530.12 | 4648530.24 | 4648530.38 | 0.0536 | 0.0440 | |
| Uranus | 8021-06-28 09:36 | G | 4650848.76 | 4650848.90 | 4650849.06 | 0.0145 | 0.0114 | |
| Jupiter | 8021-08-29 18:43 | G | 4650911.05 | 4650911.28 | 4650911.51 | 0.0494 | 0.0051 | |
| Uranus | 8022-07-03 03:07 | G | 4651218.41 | 4651218.63 | 4651218.88 | 0.0145 | 0.0057 | |

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| Uranus | 8023-07-08 10:48 G | 4651588.71 | 4651588.95 | 4651589.20 | 0.0145 | 0.0027 |
| Uranus | 8024-07-12 05:02 G | 4651958.46 | 4651958.71 | 4651958.97 | 0.0145 | 0.0025 |
| Uranus | 8025-07-17 10:19 G | 4652328.73 | 4652328.93 | 4652329.16 | 0.0144 | 0.0070 |
| Uranus | 8026-07-22 05:45 G | 4652698.57 | 4652698.74 | 4652698.93 | 0.0144 | 0.0103 |
| Saturn | 8026-09-07 19:55 G | 4652746.23 | 4652746.33 | 4652746.47 | 0.0273 | 0.0236 |
| Jupiter | 8027-02-27 02:09 G | 4652918.39 | 4652918.59 | 4652918.81 | 0.0535 | 0.0186 |
| Jupiter | 8033-09-03 02:52 G | 4655298.39 | 4655298.62 | 4655298.85 | 0.0496 | 0.0156 |
| Jupiter | 8039-03-04 02:23 G | 4657306.36 | 4657306.60 | 4657306.84 | 0.0533 | 0.0009 |
| Saturn | 8041-03-01 16:33 G | 4658035.01 | 4658035.19 | 4658035.38 | 0.0285 | 0.0178 |
| Jupiter | 8045-09-07 16:33 G | 4659686.02 | 4659686.19 | 4659686.37 | 0.0498 | 0.0318 |
| Jupiter | 8051-03-09 04:19 G | 4661694.48 | 4661694.68 | 4661694.89 | 0.0531 | 0.0189 |
| Saturn | 8055-09-02 04:04 G | 4663332.41 | 4663332.67 | 4663332.93 | 0.0274 | 0.0027 |
| Mars | 8057-06-21 05:31 G | 4663990.63 | 4663990.73 | 4663990.84 | 0.1593 | 0.1326 |
| Jupiter | 8057-09-12 10:33 G | 4664073.85 | 4664073.94 | 4664074.04 | 0.0500 | 0.0456 |
| Uranus | 8062-12-26 20:38 G | 4666005.33 | 4666005.36 | 4666005.43 | 0.0133 | 0.0131 |
| Jupiter | 8063-03-14 05:16 G | 4666082.58 | 4666082.72 | 4666082.87 | 0.0529 | 0.0419 |
| Uranus | 8063-12-31 05:16 G | 4666374.58 | 4666374.72 | 4666374.89 | 0.0133 | 0.0108 |
| Uranus | 8065-01-03 12:14 G | 4666743.80 | 4666744.01 | 4666744.23 | 0.0133 | 0.0061 |
| Uranus | 8066-01-07 21:07 G | 4667113.13 | 4667113.38 | 4667113.64 | 0.0133 | 0.0038 |
| Uranus | 8067-01-12 03:07 G | 4667482.39 | 4667482.63 | 4667482.88 | 0.0134 | 0.0004 |
| Uranus | 8068-01-16 12:28 G | 4667851.78 | 4667852.02 | 4667852.29 | 0.0134 | 0.0035 |
| Uranus | 8069-01-19 18:14 G | 4668221.05 | 4668221.26 | 4668221.48 | 0.0134 | 0.0065 |
| Uranus | 8070-01-24 04:33 G | 4668590.56 | 4668590.69 | 4668590.86 | 0.0134 | 0.0109 |
| Uranus | 8071-01-28 10:48 G | 4668959.90 | 4668959.95 | 4668960.01 | 0.0135 | 0.0131 |
| Saturn | 8071-03-09 08:52 G | 4668999.67 | 4668999.87 | 4669000.10 | 0.0286 | 0.0153 |
| Jupiter | 8080-08-20 00:57 G | 4672451.41 | 4672451.54 | 4672451.68 | 0.0491 | 0.0402 |
| Saturn | 8084-08-27 00:43 G | 4673919.48 | 4673919.53 | 4673919.59 | 0.0275 | 0.0266 |
| Neptune | 8086-09-24 18:57 G | 4674678.22 | 4674678.29 | 4674678.41 | 0.0088 | 0.0082 |
| Neptune | 8087-09-27 01:11 G | 4675045.44 | 4675045.55 | 4675045.72 | 0.0088 | 0.0075 |
| Neptune | 8088-09-28 18:43 G | 4675413.08 | 4675413.28 | 4675413.51 | 0.0088 | 0.0052 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Neptune | 8089-10-01 04:33 G | 4675780.48 | 4675780.69 | 4675780.92 | 0.0088 | 0.0043 |
| Neptune | 8090-10-03 17:02 G | 4676147.95 | 4676148.21 | 4676148.48 | 0.0088 | 0.0021 |
| Neptune | 8091-10-06 07:40 G | 4676515.57 | 4676515.82 | 4676516.08 | 0.0088 | 0.0011 |
| Jupiter | 8092-08-24 17:31 G | 4676839.04 | 4676839.23 | 4676839.42 | 0.0492 | 0.0262 |
| Neptune | 8092-10-07 15:50 G | 4676882.90 | 4676883.16 | 4676883.43 | 0.0088 | 0.0011 |
| Neptune | 8093-10-10 10:33 G | 4677250.70 | 4677250.94 | 4677251.20 | 0.0088 | 0.0020 |
| Neptune | 8094-10-12 16:19 G | 4677617.97 | 4677618.18 | 4677618.43 | 0.0088 | 0.0041 |
| Neptune | 8095-10-15 12:14 G | 4677985.82 | 4677986.01 | 4677986.25 | 0.0088 | 0.0052 |
| Neptune | 8096-10-16 18:57 G | 4678353.16 | 4678353.29 | 4678353.46 | 0.0088 | 0.0072 |
| Neptune | 8097-10-19 12:28 G | 4678720.97 | 4678721.02 | 4678721.14 | 0.0088 | 0.0084 |
| Jupiter | 8098-02-21 06:43 G | 4678845.67 | 4678845.78 | 4678845.90 | 0.0537 | 0.0466 |
| Saturn | 8100-03-03 22:33 G | 4679586.23 | 4679586.44 | 4679586.66 | 0.0285 | 0.0119 |
| Jupiter | 8104-08-30 00:14 G | 4681226.26 | 4681226.51 | 4681226.75 | 0.0494 | 0.0066 |
| Uranus | 8105-06-29 19:55 G | 4681530.16 | 4681530.33 | 4681530.53 | 0.0145 | 0.0098 |
| Uranus | 8106-07-04 13:11 G | 4681899.85 | 4681900.05 | 4681900.29 | 0.0145 | 0.0069 |
| Uranus | 8107-07-09 20:52 G | 4682270.13 | 4682270.37 | 4682270.63 | 0.0145 | 0.0012 |
| Uranus | 8108-07-13 14:23 G | 4682639.85 | 4682640.10 | 4682640.36 | 0.0145 | 0.0024 |
| Uranus | 8109-07-18 21:07 G | 4683010.16 | 4683010.38 | 4683010.60 | 0.0144 | 0.0069 |
| Jupiter | 8110-02-27 07:11 G | 4683233.58 | 4683233.80 | 4683234.02 | 0.0535 | 0.0208 |
| Uranus | 8110-07-23 15:07 G | 4683380.00 | 4683380.13 | 4683380.29 | 0.0144 | 0.0119 |
| Saturn | 8114-09-04 00:57 G | 4684883.29 | 4684883.54 | 4684883.79 | 0.0274 | 0.0031 |
| Jupiter | 8116-09-03 13:40 G | 4685613.85 | 4685614.07 | 4685614.29 | 0.0496 | 0.0138 |
| Jupiter | 8122-03-04 09:07 G | 4687621.65 | 4687621.88 | 4687622.10 | 0.0533 | 0.0031 |
| Jupiter | 8128-09-08 05:45 G | 4690001.54 | 4690001.74 | 4690001.93 | 0.0498 | 0.0289 |
| Saturn | 8130-03-11 07:40 G | 4690550.66 | 4690550.82 | 4690550.98 | 0.0286 | 0.0206 |
| Jupiter | 8134-03-09 11:31 G | 4692009.76 | 4692009.98 | 4692010.21 | 0.0531 | 0.0154 |
| Mars | 8136-06-23 23:45 G | 4692847.31 | 4692847.49 | 4692847.66 | 0.1594 | 0.0176 |
| Pluto | 8137-04-02 23:02 G | 4693130.40 | 4693130.46 | 4693130.59 | 0.0064 | 0.0060 |
| Pluto | 8138-04-04 10:19 G | 4693496.72 | 4693496.93 | 4693497.16 | 0.0064 | 0.0032 |
| Jupiter | 8140-09-12 12:00 G | 4694388.89 | 4694389.00 | 4694389.13 | 0.0499 | 0.0422 |

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| Saturn | 8143-08-30 03:36 G | 4695470.51 | 4695470.65 | 4695470.82 | 0.0275 | 0.0209 |
| Jupiter | 8146-03-14 03:36 G | 4696397.51 | 4696397.65 | 4696397.81 | 0.0530 | 0.0387 |
| Uranus | 8148-01-01 15:07 G | 4697055.95 | 4697056.13 | 4697056.33 | 0.0133 | 0.0091 |
| Uranus | 8149-01-04 23:02 G | 4697425.26 | 4697425.46 | 4697425.68 | 0.0133 | 0.0070 |
| Uranus | 8150-01-09 07:11 G | 4697794.54 | 4697794.80 | 4697795.06 | 0.0133 | 0.0024 |
| Uranus | 8151-01-13 14:52 G | 4698163.87 | 4698164.12 | 4698164.36 | 0.0134 | 0.0002 |
| Uranus | 8152-01-17 23:16 G | 4698533.22 | 4698533.47 | 4698533.73 | 0.0134 | 0.0039 |
| Uranus | 8153-01-21 06:14 G | 4698902.57 | 4698902.76 | 4698902.98 | 0.0134 | 0.0076 |
| Uranus | 8154-01-25 15:36 G | 4699272.01 | 4699272.15 | 4699272.35 | 0.0134 | 0.0103 |
| Saturn | 8159-03-06 01:40 G | 4701137.33 | 4701137.57 | 4701137.81 | 0.0284 | 0.0058 |
| Jupiter | 8163-08-21 16:33 G | 4702767.09 | 4702767.19 | 4702767.31 | 0.0491 | 0.0431 |
| Neptune | 8168-03-28 02:09 G | 4704447.58 | 4704447.59 | 4704447.65 | 0.0089 | 0.0089 |
| Neptune | 8169-03-30 06:14 G | 4704814.62 | 4704814.76 | 4704814.96 | 0.0089 | 0.0066 |
| Neptune | 8170-04-02 00:28 G | 4705182.33 | 4705182.52 | 4705182.72 | 0.0089 | 0.0058 |
| Neptune | 8171-04-04 06:14 G | 4705549.54 | 4705549.76 | 4705549.99 | 0.0089 | 0.0034 |
| Neptune | 8172-04-05 20:38 G | 4705917.12 | 4705917.36 | 4705917.63 | 0.0089 | 0.0026 |
| Neptune | 8173-04-08 06:43 G | 4706284.53 | 4706284.78 | 4706285.03 | 0.0089 | 0.0003 |
| Saturn | 8173-09-05 02:38 G | 4706434.38 | 4706434.61 | 4706434.84 | 0.0274 | 0.0086 |
| Neptune | 8174-04-10 15:50 G | 4706651.89 | 4706652.16 | 4706652.42 | 0.0089 | 0.0005 |
| Neptune | 8175-04-13 05:31 G | 4707019.51 | 4707019.73 | 4707019.98 | 0.0089 | 0.0028 |
| Jupiter | 8175-08-25 23:31 G | 4707154.29 | 4707154.48 | 4707154.69 | 0.0492 | 0.0280 |
| Neptune | 8176-04-14 10:48 G | 4707386.72 | 4707386.95 | 4707387.19 | 0.0089 | 0.0035 |
| Neptune | 8177-04-17 04:04 G | 4707754.48 | 4707754.67 | 4707754.86 | 0.0089 | 0.0058 |
| Neptune | 8178-04-19 07:11 G | 4708121.66 | 4708121.80 | 4708121.99 | 0.0089 | 0.0067 |
| Jupiter | 8181-02-21 07:55 G | 4709160.73 | 4709160.83 | 4709160.93 | 0.0537 | 0.0483 |
| Jupiter | 8187-08-30 11:31 G | 4711541.76 | 4711541.98 | 4711542.21 | 0.0494 | 0.0080 |
| Uranus | 8188-06-24 21:50 G | 4711841.37 | 4711841.41 | 4711841.49 | 0.0145 | 0.0141 |
| Saturn | 8189-03-12 12:43 G | 4712101.95 | 4712102.03 | 4712102.13 | 0.0286 | 0.0263 |
| Uranus | 8189-06-30 04:33 G | 4712211.54 | 4712211.69 | 4712211.89 | 0.0145 | 0.0107 |
| Uranus | 8190-07-04 22:33 G | 4712581.21 | 4712581.44 | 4712581.68 | 0.0145 | 0.0049 |

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| Uranus | 8191-07-10 06:14 G | 4712951.51 | 4712951.76 | 4712952.01 | 0.0145 | 0.0020 |
| Uranus | 8192-07-13 23:16 G | 4713321.23 | 4713321.47 | 4713321.73 | 0.0145 | 0.0035 |
| Jupiter | 8193-02-26 12:14 G | 4713548.81 | 4713549.01 | 4713549.21 | 0.0536 | 0.0243 |
| Uranus | 8193-07-19 06:00 G | 4713691.55 | 4713691.75 | 4713691.98 | 0.0144 | 0.0077 |
| Uranus | 8194-07-23 23:16 G | 4714061.34 | 4714061.47 | 4714061.66 | 0.0144 | 0.0113 |
| Jupiter | 8199-09-04 00:43 G | 4715929.29 | 4715929.53 | 4715929.77 | 0.0495 | 0.0110 |
| Saturn | 8202-09-01 01:11 G | 4717021.35 | 4717021.55 | 4717021.78 | 0.0275 | 0.0152 |
| Jupiter | 8205-03-04 12:57 G | 4717936.81 | 4717937.04 | 4717937.28 | 0.0535 | 0.0074 |
| Jupiter | 8211-09-09 07:40 G | 4720316.63 | 4720316.82 | 4720317.02 | 0.0497 | 0.0253 |
| Mars | 8215-06-27 16:33 G | 4721704.03 | 4721704.19 | 4721704.35 | 0.1594 | 0.0788 |
| Jupiter | 8217-03-09 11:02 G | 4722324.74 | 4722324.96 | 4722325.18 | 0.0533 | 0.0118 |
| Saturn | 8218-03-08 01:11 G | 4722688.30 | 4722688.55 | 4722688.80 | 0.0284 | 0.0002 |
| Jupiter | 8223-09-14 02:52 G | 4724704.48 | 4724704.62 | 4724704.76 | 0.0499 | 0.0394 |
| Pluto | 8226-10-04 13:26 G | 4725820.80 | 4725821.06 | 4725821.33 | 0.0080 | 0.0018 |
| Jupiter | 8229-03-14 20:09 G | 4726713.19 | 4726713.34 | 4726713.51 | 0.0530 | 0.0375 |
| Uranus | 8230-12-29 19:11 G | 4727368.22 | 4727368.30 | 4727368.40 | 0.0133 | 0.0123 |
| Uranus | 8232-01-03 01:11 G | 4727737.37 | 4727737.55 | 4727737.72 | 0.0133 | 0.0100 |
| Saturn | 8232-09-07 07:40 G | 4727985.62 | 4727985.82 | 4727986.03 | 0.0274 | 0.0145 |
| Uranus | 8233-01-06 10:04 G | 4728106.71 | 4728106.92 | 4728107.16 | 0.0133 | 0.0054 |
| Uranus | 8234-01-10 16:48 G | 4728475.94 | 4728476.20 | 4728476.46 | 0.0133 | 0.0031 |
| Uranus | 8235-01-15 01:26 G | 4728845.31 | 4728845.56 | 4728845.81 | 0.0134 | 0.0013 |
| Uranus | 8236-01-19 08:23 G | 4729214.60 | 4729214.85 | 4729215.11 | 0.0134 | 0.0042 |
| Uranus | 8237-01-22 17:02 G | 4729584.01 | 4729584.21 | 4729584.41 | 0.0134 | 0.0075 |
| Uranus | 8238-01-27 00:57 G | 4729953.43 | 4729953.54 | 4729953.68 | 0.0134 | 0.0117 |
| Jupiter | 8246-08-21 23:31 G | 4733082.40 | 4733082.48 | 4733082.58 | 0.0491 | 0.0454 |
| Saturn | 8247-03-02 07:11 G | 4733274.76 | 4733274.80 | 4733274.87 | 0.0284 | 0.0275 |
| Neptune | 8251-09-28 13:26 G | 4734945.94 | 4734946.06 | 4734946.22 | 0.0088 | 0.0075 |
| Neptune | 8252-09-30 00:14 G | 4735313.36 | 4735313.51 | 4735313.70 | 0.0088 | 0.0066 |
| Neptune | 8253-10-02 12:00 G | 4735680.77 | 4735681.00 | 4735681.24 | 0.0088 | 0.0045 |
| Neptune | 8254-10-05 03:50 G | 4736048.44 | 4736048.66 | 4736048.91 | 0.0088 | 0.0035 |

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| Neptune | 8255-10-07 11:16 G | 4736415.71 | 4736415.97 | 4736416.23 | 0.0088 | 0.0013 |
| Neptune | 8256-10-09 06:28 G | 4736783.51 | 4736783.77 | 4736784.03 | 0.0088 | 0.0004 |
| Neptune | 8257-10-11 11:45 G | 4737150.74 | 4737150.99 | 4737151.25 | 0.0088 | 0.0017 |
| Jupiter | 8258-08-26 09:50 G | 4737469.73 | 4737469.91 | 4737470.09 | 0.0492 | 0.0302 |
| Neptune | 8258-10-14 07:11 G | 4737518.56 | 4737518.80 | 4737519.07 | 0.0088 | 0.0027 |
| Neptune | 8259-10-16 14:23 G | 4737885.89 | 4737886.10 | 4737886.32 | 0.0088 | 0.0049 |
| Neptune | 8260-10-18 06:28 G | 4738253.59 | 4738253.77 | 4738254.00 | 0.0088 | 0.0058 |
| Saturn | 8261-09-01 20:23 G | 4738572.12 | 4738572.35 | 4738572.59 | 0.0275 | 0.0093 |
| Neptune | 8261-10-20 17:45 G | 4738621.15 | 4738621.24 | 4738621.36 | 0.0088 | 0.0080 |
| Neptune | 8262-10-23 05:45 G | 4738988.73 | 4738988.74 | 4738988.81 | 0.0088 | 0.0088 |
| Jupiter | 8264-02-22 09:21 G | 4739475.84 | 4739475.89 | 4739475.94 | 0.0538 | 0.0523 |
| Jupiter | 8270-08-30 22:19 G | 4741857.20 | 4741857.43 | 4741857.67 | 0.0493 | 0.0099 |
| Uranus | 8272-06-26 08:09 G | 4742522.81 | 4742522.84 | 4742522.92 | 0.0145 | 0.0141 |
| Uranus | 8273-07-01 14:09 G | 4742892.90 | 4742893.09 | 4742893.30 | 0.0145 | 0.0091 |
| Uranus | 8274-07-06 08:23 G | 4743262.62 | 4743262.85 | 4743263.07 | 0.0145 | 0.0061 |
| Uranus | 8275-07-11 15:21 G | 4743632.88 | 4743633.14 | 4743633.39 | 0.0145 | 0.0003 |
| Jupiter | 8276-02-27 14:52 G | 4743863.93 | 4743864.12 | 4743864.33 | 0.0537 | 0.0282 |
| Uranus | 8276-07-15 07:55 G | 4744002.59 | 4744002.83 | 4744003.09 | 0.0145 | 0.0031 |
| Saturn | 8277-03-09 03:21 G | 4744239.41 | 4744239.64 | 4744239.88 | 0.0284 | 0.0068 |
| Uranus | 8277-07-20 15:07 G | 4744372.93 | 4744373.13 | 4744373.35 | 0.0144 | 0.0078 |
| Uranus | 8278-07-25 08:23 G | 4744742.73 | 4744742.85 | 4744742.98 | 0.0144 | 0.0126 |
| Jupiter | 8282-09-04 02:38 G | 4746244.39 | 4746244.61 | 4746244.84 | 0.0495 | 0.0084 |
| Mars | 8285-12-26 13:55 G | 4747453.91 | 4747454.08 | 4747454.25 | 0.1941 | 0.0952 |
| Jupiter | 8288-03-03 16:19 G | 4748251.96 | 4748252.18 | 4748252.40 | 0.0535 | 0.0103 |
| Saturn | 8291-09-09 10:04 G | 4749536.76 | 4749536.92 | 4749537.10 | 0.0274 | 0.0203 |
| Jupiter | 8294-09-08 22:19 G | 4750632.22 | 4750632.43 | 4750632.64 | 0.0497 | 0.0219 |
| Jupiter | 8300-03-10 00:14 G | 4752640.28 | 4752640.51 | 4752640.74 | 0.0533 | 0.0093 |
| Saturn | 8306-03-04 15:50 G | 4754826.01 | 4754826.16 | 4754826.33 | 0.0284 | 0.0207 |
| Jupiter | 8306-09-14 04:48 G | 4755019.54 | 4755019.70 | 4755019.86 | 0.0498 | 0.0368 |
| Jupiter | 8312-03-14 16:19 G | 4757028.01 | 4757028.18 | 4757028.37 | 0.0531 | 0.0342 |

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| Uranus | 8314-12-31 05:31 G | 4758049.67 | 4758049.73 | 4758049.79 | 0.0133 | 0.0129 |
| Uranus | 8316-01-04 09:50 G | 4758418.72 | 4758418.91 | 4758419.13 | 0.0133 | 0.0085 |
| Uranus | 8317-01-07 20:38 G | 4758788.15 | 4758788.36 | 4758788.59 | 0.0133 | 0.0063 |
| Uranus | 8318-01-12 02:09 G | 4759157.33 | 4759157.59 | 4759157.85 | 0.0134 | 0.0015 |
| Uranus | 8319-01-16 12:28 G | 4759526.78 | 4759527.02 | 4759527.27 | 0.0134 | 0.0009 |
| Uranus | 8320-01-20 18:28 G | 4759896.04 | 4759896.27 | 4759896.53 | 0.0134 | 0.0049 |
| Saturn | 8320-09-03 22:19 G | 4760123.19 | 4760123.43 | 4760123.67 | 0.0275 | 0.0035 |
| Uranus | 8321-01-24 04:48 G | 4760265.51 | 4760265.70 | 4760265.89 | 0.0134 | 0.0084 |
| Uranus | 8322-01-28 11:31 G | 4760634.85 | 4760634.98 | 4760635.14 | 0.0134 | 0.0112 |
| Jupiter | 8329-08-22 08:38 G | 4763397.83 | 4763397.86 | 4763397.91 | 0.0490 | 0.0481 |
| Neptune | 8333-03-31 22:33 G | 4764715.34 | 4764715.44 | 4764715.58 | 0.0089 | 0.0078 |
| Neptune | 8334-04-03 04:48 G | 4765082.53 | 4765082.70 | 4765082.90 | 0.0089 | 0.0060 |
| Neptune | 8335-04-05 17:45 G | 4765450.04 | 4765450.24 | 4765450.49 | 0.0089 | 0.0047 |
| Saturn | 8336-03-11 12:14 G | 4765790.81 | 4765791.01 | 4765791.22 | 0.0284 | 0.0136 |
| Neptune | 8336-04-07 05:02 G | 4765817.48 | 4765817.71 | 4765817.95 | 0.0089 | 0.0028 |
| Neptune | 8337-04-09 13:40 G | 4766184.82 | 4766185.07 | 4766185.33 | 0.0089 | 0.0016 |
| Neptune | 8338-04-12 05:31 G | 4766552.48 | 4766552.73 | 4766552.98 | 0.0089 | 0.0002 |
| Neptune | 8339-04-14 10:04 G | 4766919.67 | 4766919.92 | 4766920.18 | 0.0089 | 0.0014 |
| Neptune | 8340-04-16 03:50 G | 4767287.43 | 4767287.66 | 4767287.90 | 0.0089 | 0.0033 |
| Neptune | 8341-04-18 07:26 G | 4767654.61 | 4767654.81 | 4767655.05 | 0.0089 | 0.0045 |
| Mars | 8341-06-25 06:28 G | 4767722.60 | 4767722.77 | 4767722.95 | 0.1593 | 0.0743 |
| Jupiter | 8341-08-26 18:14 G | 4767785.09 | 4767785.26 | 4767785.45 | 0.0491 | 0.0322 |
| Neptune | 8342-04-21 00:14 G | 4768022.33 | 4768022.51 | 4768022.69 | 0.0089 | 0.0064 |
| Neptune | 8343-04-23 06:00 G | 4768389.64 | 4768389.75 | 4768389.91 | 0.0089 | 0.0075 |
| Saturn | 8350-09-11 09:07 G | 4771087.81 | 4771087.88 | 4771087.95 | 0.0274 | 0.0262 |
| Jupiter | 8353-08-30 23:31 G | 4772172.26 | 4772172.48 | 4772172.71 | 0.0493 | 0.0120 |
| Uranus | 8356-06-27 18:14 G | 4773204.18 | 4773204.26 | 4773204.35 | 0.0145 | 0.0136 |
| Uranus | 8357-07-02 23:16 G | 4773574.28 | 4773574.47 | 4773574.67 | 0.0145 | 0.0097 |
| Uranus | 8358-07-07 17:45 G | 4773944.01 | 4773944.24 | 4773944.49 | 0.0145 | 0.0042 |
| Jupiter | 8359-02-27 16:48 G | 4774179.02 | 4774179.20 | 4774179.38 | 0.0537 | 0.0315 |

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| Uranus | 8359-07-13 00:28 G | 4774314.27 | 4774314.52 | 4774314.78 | 0.0145 | 0.0013 |
| Uranus | 8360-07-16 17:45 G | 4774684.01 | 4774684.24 | 4774684.49 | 0.0145 | 0.0044 |
| Uranus | 8361-07-22 00:43 G | 4775054.34 | 4775054.53 | 4775054.75 | 0.0144 | 0.0083 |
| Uranus | 8362-07-26 17:45 G | 4775424.11 | 4775424.24 | 4775424.37 | 0.0144 | 0.0122 |
| Saturn | 8365-03-05 21:36 G | 4776377.19 | 4776377.40 | 4776377.63 | 0.0284 | 0.0139 |
| Jupiter | 8365-09-04 17:45 G | 4776560.01 | 4776560.24 | 4776560.48 | 0.0494 | 0.0057 |
| Jupiter | 8371-03-05 00:28 G | 4778567.30 | 4778567.52 | 4778567.74 | 0.0535 | 0.0146 |
| Jupiter | 8377-09-08 22:33 G | 4780947.22 | 4780947.44 | 4780947.66 | 0.0496 | 0.0186 |
| Saturn | 8379-09-06 06:28 G | 4781674.53 | 4781674.77 | 4781675.01 | 0.0275 | 0.0025 |
| Jupiter | 8383-03-09 13:55 G | 4782954.85 | 4782955.08 | 4782955.31 | 0.0534 | 0.0045 |
| Pluto | 8385-04-06 12:43 G | 4783713.92 | 4783714.03 | 4783714.17 | 0.0064 | 0.0055 |
| Pluto | 8386-04-07 21:36 G | 4784080.21 | 4784080.40 | 4784080.63 | 0.0064 | 0.0040 |
| Jupiter | 8389-09-13 16:33 G | 4785335.03 | 4785335.19 | 4785335.36 | 0.0497 | 0.0341 |
| Saturn | 8395-03-14 01:55 G | 4787342.43 | 4787342.58 | 4787342.75 | 0.0284 | 0.0209 |
| Jupiter | 8395-03-14 20:52 G | 4787343.19 | 4787343.37 | 4787343.55 | 0.0532 | 0.0303 |
| Uranus | 8398-12-31 15:21 G | 4788731.04 | 4788731.14 | 4788731.27 | 0.0133 | 0.0119 |
| Uranus | 8400-01-04 19:11 G | 4789100.11 | 4789100.30 | 4789100.49 | 0.0133 | 0.0093 |
| Uranus | 8401-01-08 07:11 G | 4789469.57 | 4789469.80 | 4789470.04 | 0.0133 | 0.0046 |
| Uranus | 8402-01-12 11:02 G | 4789838.71 | 4789838.96 | 4789839.23 | 0.0134 | 0.0025 |
| Uranus | 8403-01-16 22:33 G | 4790208.20 | 4790208.44 | 4790208.69 | 0.0134 | 0.0022 |
| Uranus | 8404-01-21 03:07 G | 4790577.40 | 4790577.63 | 4790577.89 | 0.0134 | 0.0049 |
| Uranus | 8405-01-24 14:38 G | 4790946.93 | 4790947.11 | 4790947.31 | 0.0134 | 0.0085 |
| Uranus | 8406-01-28 20:09 G | 4791316.27 | 4791316.34 | 4791316.46 | 0.0134 | 0.0125 |
| Jupiter | 8407-03-19 20:09 G | 4791731.29 | 4791731.34 | 4791731.40 | 0.0530 | 0.0515 |
| Saturn | 8408-08-30 17:45 G | 4792261.10 | 4792261.24 | 4792261.40 | 0.0276 | 0.0223 |
| Neptune | 8415-09-28 22:04 G | 4794846.34 | 4794846.42 | 4794846.55 | 0.0088 | 0.0080 |
| Neptune | 8416-09-30 08:23 G | 4795213.71 | 4795213.85 | 4795214.01 | 0.0088 | 0.0072 |
| Neptune | 8417-10-03 00:57 G | 4795581.35 | 4795581.54 | 4795581.77 | 0.0088 | 0.0050 |
| Neptune | 8418-10-05 07:11 G | 4795948.59 | 4795948.80 | 4795949.05 | 0.0088 | 0.0043 |
| Neptune | 8419-10-08 02:52 G | 4796316.37 | 4796316.62 | 4796316.88 | 0.0088 | 0.0020 |

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| Mars | 8420-06-27 11:16 G | 4796579.79 | 4796579.97 | 4796580.16 | 0.1593 | 0.0461 |
| Neptune | 8420-10-09 08:23 G | 4796683.59 | 4796683.85 | 4796684.10 | 0.0088 | 0.0012 |
| Neptune | 8421-10-12 03:07 G | 4797051.37 | 4797051.63 | 4797051.90 | 0.0088 | 0.0010 |
| Neptune | 8422-10-14 10:48 G | 4797418.71 | 4797418.95 | 4797419.21 | 0.0088 | 0.0019 |
| Neptune | 8423-10-17 02:23 G | 4797786.37 | 4797786.60 | 4797786.85 | 0.0088 | 0.0040 |
| Saturn | 8424-03-07 02:52 G | 4797928.38 | 4797928.62 | 4797928.86 | 0.0284 | 0.0069 |
| Jupiter | 8424-08-25 20:38 G | 4798100.20 | 4798100.36 | 4798100.53 | 0.0491 | 0.0341 |
| Neptune | 8424-10-18 14:23 G | 4798153.92 | 4798154.10 | 4798154.34 | 0.0088 | 0.0050 |
| Neptune | 8425-10-21 01:11 G | 4798521.42 | 4798521.55 | 4798521.75 | 0.0088 | 0.0071 |
| Neptune | 8426-10-23 18:00 G | 4798889.17 | 4798889.25 | 4798889.39 | 0.0088 | 0.0080 |
| Jupiter | 8436-08-30 13:55 G | 4802487.86 | 4802488.08 | 4802488.31 | 0.0492 | 0.0135 |
| Saturn | 8438-09-07 13:55 G | 4803225.85 | 4803226.08 | 4803226.32 | 0.0275 | 0.0089 |
| Uranus | 8440-06-28 05:16 G | 4803885.64 | 4803885.72 | 4803885.82 | 0.0145 | 0.0134 |
| Uranus | 8441-07-03 08:52 G | 4804255.68 | 4804255.87 | 4804256.10 | 0.0145 | 0.0085 |
| Jupiter | 8442-02-26 16:48 G | 4804494.04 | 4804494.20 | 4804494.38 | 0.0537 | 0.0365 |
| Uranus | 8442-07-08 04:19 G | 4804625.46 | 4804625.68 | 4804625.92 | 0.0145 | 0.0053 |
| Uranus | 8443-07-13 10:04 G | 4804995.67 | 4804995.92 | 4804996.18 | 0.0145 | 0.0006 |
| Uranus | 8444-07-17 03:36 G | 4805365.41 | 4805365.65 | 4805365.90 | 0.0144 | 0.0037 |
| Uranus | 8445-07-22 10:19 G | 4805735.74 | 4805735.93 | 4805736.15 | 0.0144 | 0.0088 |
| Uranus | 8446-07-27 02:52 G | 4806105.56 | 4806105.62 | 4806105.74 | 0.0144 | 0.0134 |
| Jupiter | 8448-09-03 16:33 G | 4806874.95 | 4806875.19 | 4806875.43 | 0.0494 | 0.0029 |
| Jupiter | 8454-03-03 12:43 G | 4808881.82 | 4808882.03 | 4808882.25 | 0.0536 | 0.0199 |
| Saturn | 8454-03-15 14:23 G | 4808894.07 | 4808894.10 | 4808894.14 | 0.0285 | 0.0281 |
| Jupiter | 8460-09-08 06:43 G | 4811262.57 | 4811262.78 | 4811263.00 | 0.0495 | 0.0154 |
| Jupiter | 8466-03-08 23:45 G | 4813270.27 | 4813270.49 | 4813270.72 | 0.0534 | 0.0021 |
| Saturn | 8467-09-02 00:43 G | 4813812.33 | 4813812.53 | 4813812.74 | 0.0275 | 0.0154 |
| Jupiter | 8472-09-12 14:52 G | 4815649.93 | 4815650.12 | 4815650.31 | 0.0497 | 0.0309 |
| Pluto | 8474-10-07 03:21 G | 4816404.43 | 4816404.64 | 4816404.88 | 0.0080 | 0.0037 |
| Jupiter | 8478-03-13 21:36 G | 4817658.19 | 4817658.40 | 4817658.61 | 0.0532 | 0.0268 |
| Uranus | 8483-01-01 00:43 G | 4819412.45 | 4819412.53 | 4819412.64 | 0.0133 | 0.0123 |

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| Saturn | 8483-03-09 14:52 G | 4819479.89 | 4819480.12 | 4819480.36 | 0.0284 | 0.0009 |
| Uranus | 8484-01-05 03:21 G | 4819781.45 | 4819781.64 | 4819781.86 | 0.0133 | 0.0080 |
| Uranus | 8485-01-08 16:48 G | 4820150.98 | 4820151.20 | 4820151.43 | 0.0133 | 0.0057 |
| Uranus | 8486-01-12 20:09 G | 4820520.08 | 4820520.34 | 4820520.60 | 0.0134 | 0.0008 |
| Uranus | 8487-01-17 09:07 G | 4820889.64 | 4820889.88 | 4820890.13 | 0.0134 | 0.0015 |
| Uranus | 8488-01-21 13:26 G | 4821258.82 | 4821259.06 | 4821259.29 | 0.0134 | 0.0057 |
| Uranus | 8489-01-25 01:40 G | 4821628.40 | 4821628.57 | 4821628.77 | 0.0134 | 0.0090 |
| Uranus | 8490-01-29 06:28 G | 4821997.68 | 4821997.77 | 4821997.90 | 0.0134 | 0.0121 |
| Jupiter | 8490-03-18 20:09 G | 4822046.25 | 4822046.34 | 4822046.44 | 0.0530 | 0.0474 |
| Neptune | 8497-03-31 05:02 G | 4824615.65 | 4824615.71 | 4824615.76 | 0.0089 | 0.0087 |
| Saturn | 8497-09-08 18:57 G | 4824777.08 | 4824777.29 | 4824777.51 | 0.0275 | 0.0153 |
| Neptune | 8498-04-02 17:02 G | 4824983.05 | 4824983.21 | 4824983.42 | 0.0089 | 0.0063 |
| Neptune | 8499-04-05 05:16 G | 4825350.55 | 4825350.72 | 4825350.93 | 0.0089 | 0.0057 |
| Mars | 8499-06-30 10:19 G | 4825436.91 | 4825436.93 | 4825436.96 | 0.1593 | 0.1570 |
| Neptune | 8500-04-07 12:57 G | 4825717.81 | 4825718.04 | 4825718.29 | 0.0089 | 0.0033 |
| Neptune | 8501-04-10 04:48 G | 4826085.48 | 4826085.70 | 4826085.96 | 0.0089 | 0.0028 |
| Neptune | 8502-04-12 09:21 G | 4826452.64 | 4826452.89 | 4826453.15 | 0.0089 | 0.0003 |
| Neptune | 8503-04-15 03:21 G | 4826820.38 | 4826820.64 | 4826820.90 | 0.0089 | 0.0004 |
| Neptune | 8504-04-16 07:40 G | 4827187.58 | 4827187.82 | 4827188.06 | 0.0089 | 0.0028 |
| Neptune | 8505-04-18 23:02 G | 4827555.23 | 4827555.46 | 4827555.72 | 0.0089 | 0.0034 |
| Neptune | 8506-04-21 06:28 G | 4827922.60 | 4827922.77 | 4827922.98 | 0.0089 | 0.0057 |
| Neptune | 8507-04-23 17:45 G | 4828290.09 | 4828290.24 | 4828290.45 | 0.0089 | 0.0064 |
| Jupiter | 8507-08-27 09:21 G | 4828415.74 | 4828415.89 | 4828416.06 | 0.0491 | 0.0354 |
| Neptune | 8508-04-25 06:14 G | 4828657.73 | 4828657.76 | 4828657.83 | 0.0089 | 0.0087 |
| Saturn | 8512-03-04 19:26 G | 4830067.17 | 4830067.31 | 4830067.45 | 0.0283 | 0.0231 |
| Jupiter | 8519-08-31 07:55 G | 4832802.61 | 4832802.83 | 4832803.06 | 0.0492 | 0.0163 |
| Uranus | 8524-06-29 15:21 G | 4834567.05 | 4834567.14 | 4834567.25 | 0.0145 | 0.0131 |
| Jupiter | 8525-02-26 11:31 G | 4834808.83 | 4834808.98 | 4834809.13 | 0.0538 | 0.0404 |
| Uranus | 8525-07-04 17:45 G | 4834937.05 | 4834937.24 | 4834937.46 | 0.0145 | 0.0090 |
| Uranus | 8526-07-09 14:38 G | 4835306.87 | 4835307.11 | 4835307.35 | 0.0145 | 0.0036 |

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| Saturn | 8526-09-04 13:55 G | 4835363.85 | 4835364.08 | 4835364.31 | 0.0275 | 0.0083 |
| Uranus | 8527-07-14 19:40 G | 4835677.06 | 4835677.32 | 4835677.58 | 0.0145 | 0.0006 |
| Uranus | 8528-07-18 14:09 G | 4836046.86 | 4836047.09 | 4836047.33 | 0.0144 | 0.0051 |
| Uranus | 8529-07-23 20:38 G | 4836417.17 | 4836417.36 | 4836417.57 | 0.0144 | 0.0089 |
| Uranus | 8530-07-28 13:40 G | 4836786.98 | 4836787.07 | 4836787.18 | 0.0144 | 0.0131 |
| Jupiter | 8531-09-05 00:28 G | 4837190.29 | 4837190.52 | 4837190.75 | 0.0493 | 0.0004 |
| Jupiter | 8537-03-03 23:02 G | 4839197.25 | 4839197.46 | 4839197.66 | 0.0536 | 0.0238 |
| Saturn | 8542-03-12 07:11 G | 4841031.58 | 4841031.80 | 4841032.03 | 0.0285 | 0.0084 |
| Jupiter | 8543-09-09 07:11 G | 4841577.57 | 4841577.80 | 4841578.04 | 0.0495 | 0.0124 |
| Mars | 8546-06-25 16:48 G | 4842598.06 | 4842598.20 | 4842598.34 | 0.1592 | 0.0950 |
| Jupiter | 8549-03-08 19:26 G | 4843585.08 | 4843585.31 | 4843585.55 | 0.0534 | 0.0025 |
| Jupiter | 8555-09-13 21:21 G | 4845965.21 | 4845965.39 | 4845965.58 | 0.0497 | 0.0288 |
| Saturn | 8556-09-11 00:43 G | 4846328.39 | 4846328.53 | 4846328.68 | 0.0274 | 0.0222 |
| Jupiter | 8561-03-13 16:33 G | 4847972.99 | 4847973.19 | 4847973.40 | 0.0533 | 0.0221 |
| Uranus | 8567-01-02 10:19 G | 4850093.81 | 4850093.93 | 4850094.06 | 0.0133 | 0.0115 |
| Jupiter | 8567-09-18 12:14 G | 4850352.99 | 4850353.01 | 4850353.04 | 0.0498 | 0.0495 |
| Uranus | 8568-01-06 12:00 G | 4850462.82 | 4850463.00 | 4850463.21 | 0.0133 | 0.0087 |
| Uranus | 8569-01-10 02:23 G | 4850832.37 | 4850832.60 | 4850832.84 | 0.0133 | 0.0040 |
| Mars | 8569-12-27 23:31 G | 4851184.37 | 4851184.48 | 4851184.59 | 0.1942 | 0.1633 |
| Uranus | 8570-01-14 04:48 G | 4851201.44 | 4851201.70 | 4851201.96 | 0.0134 | 0.0019 |
| Uranus | 8571-01-18 18:28 G | 4851571.03 | 4851571.27 | 4851571.51 | 0.0134 | 0.0029 |
| Saturn | 8571-03-07 03:50 G | 4851618.45 | 4851618.66 | 4851618.87 | 0.0284 | 0.0156 |
| Uranus | 8572-01-22 21:07 G | 4851940.15 | 4851940.38 | 4851940.63 | 0.0134 | 0.0054 |
| Uranus | 8573-01-26 11:02 G | 4852309.79 | 4852309.96 | 4852310.14 | 0.0134 | 0.0093 |
| Jupiter | 8573-03-18 18:57 G | 4852361.15 | 4852361.29 | 4852361.43 | 0.0531 | 0.0420 |
| Uranus | 8574-01-30 14:09 G | 4852679.06 | 4852679.09 | 4852679.18 | 0.0134 | 0.0131 |
| Neptune | 8580-09-30 21:50 G | 4855114.30 | 4855114.41 | 4855114.58 | 0.0088 | 0.0075 |
| Neptune | 8581-10-03 04:04 G | 4855481.50 | 4855481.67 | 4855481.87 | 0.0088 | 0.0062 |
| Neptune | 8582-10-05 23:45 G | 4855849.28 | 4855849.49 | 4855849.73 | 0.0088 | 0.0044 |
| Neptune | 8583-10-08 05:45 G | 4856216.50 | 4856216.74 | 4856216.98 | 0.0088 | 0.0033 |

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| Neptune | 8584-10-10 00:00 G | 4856584.24 | 4856584.50 | 4856584.77 | 0.0088 | 0.0013 |
| Saturn | 8585-09-06 05:45 G | 4856915.49 | 4856915.74 | 4856915.98 | 0.0275 | 0.0008 |
| Neptune | 8585-10-12 08:38 G | 4856951.61 | 4856951.86 | 4856952.12 | 0.0088 | 0.0003 |
| Neptune | 8586-10-14 22:19 G | 4857319.17 | 4857319.43 | 4857319.70 | 0.0088 | 0.0016 |
| Neptune | 8587-10-17 11:31 G | 4857686.74 | 4857686.98 | 4857687.23 | 0.0088 | 0.0027 |
| Neptune | 8588-10-18 20:38 G | 4858054.15 | 4858054.36 | 4858054.61 | 0.0088 | 0.0046 |
| Neptune | 8589-10-21 14:52 G | 4858421.93 | 4858422.12 | 4858422.33 | 0.0088 | 0.0057 |
| Jupiter | 8590-08-26 03:36 G | 4858730.51 | 4858730.65 | 4858730.81 | 0.0490 | 0.0380 |
| Neptune | 8590-10-23 20:52 G | 4858789.27 | 4858789.37 | 4858789.53 | 0.0088 | 0.0078 |
| Neptune | 8591-10-26 17:31 G | 4859157.17 | 4859157.23 | 4859157.29 | 0.0088 | 0.0086 |
| Saturn | 8601-03-14 22:04 G | 4862583.23 | 4862583.42 | 4862583.63 | 0.0285 | 0.0163 |
| Jupiter | 8602-08-31 18:57 G | 4863118.08 | 4863118.29 | 4863118.50 | 0.0492 | 0.0187 |
| Jupiter | 8608-02-27 18:43 G | 4865124.16 | 4865124.28 | 4865124.41 | 0.0538 | 0.0446 |
| Uranus | 8608-07-01 01:55 G | 4865248.47 | 4865248.58 | 4865248.70 | 0.0145 | 0.0126 |
| Uranus | 8609-07-06 03:07 G | 4865618.42 | 4865618.63 | 4865618.86 | 0.0145 | 0.0080 |
| Uranus | 8610-07-11 00:43 G | 4865988.30 | 4865988.53 | 4865988.77 | 0.0145 | 0.0046 |
| Uranus | 8611-07-16 04:33 G | 4866358.43 | 4866358.69 | 4866358.95 | 0.0145 | 0.0012 |
| Uranus | 8612-07-19 23:45 G | 4866728.26 | 4866728.49 | 4866728.73 | 0.0144 | 0.0044 |
| Uranus | 8613-07-25 05:31 G | 4867098.54 | 4867098.73 | 4867098.92 | 0.0144 | 0.0096 |
| Uranus | 8614-07-29 22:33 G | 4867468.40 | 4867468.44 | 4867468.51 | 0.0144 | 0.0140 |
| Saturn | 8614-09-01 13:40 G | 4867501.97 | 4867502.07 | 4867502.17 | 0.0276 | 0.0252 |
| Jupiter | 8614-09-05 01:40 G | 4867505.33 | 4867505.57 | 4867505.81 | 0.0493 | 0.0033 |
| Jupiter | 8620-03-03 11:02 G | 4869511.76 | 4869511.96 | 4869512.16 | 0.0536 | 0.0284 |
| Mars | 8625-06-28 10:04 G | 4871454.74 | 4871454.92 | 4871455.11 | 0.1592 | 0.0111 |
| Jupiter | 8626-09-09 13:11 G | 4871892.83 | 4871893.05 | 4871893.27 | 0.0494 | 0.0093 |
| Saturn | 8630-03-09 12:00 G | 4873169.77 | 4873170.00 | 4873170.23 | 0.0284 | 0.0081 |
| Jupiter | 8632-03-08 15:36 G | 4873899.93 | 4873900.15 | 4873900.37 | 0.0535 | 0.0069 |
| Pluto | 8633-04-10 06:00 G | 4874297.53 | 4874297.75 | 4874297.98 | 0.0064 | 0.0034 |
| Pluto | 8634-04-11 20:09 G | 4874664.24 | 4874664.34 | 4874664.50 | 0.0064 | 0.0055 |
| Jupiter | 8638-09-13 23:02 G | 4876280.26 | 4876280.46 | 4876280.68 | 0.0496 | 0.0254 |

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| Jupiter | 8644-03-13 20:23 G | 4878288.13 | 4878288.35 | 4878288.58 | 0.0533 | 0.0190 |
| Saturn | 8644-09-08 17:45 G | 4878466.99 | 4878467.24 | 4878467.48 | 0.0275 | 0.0068 |
| Mars | 8649-01-01 12:57 G | 4880042.90 | 4880043.04 | 4880043.18 | 0.1941 | 0.1290 |
| Jupiter | 8650-09-18 05:45 G | 4880667.66 | 4880667.74 | 4880667.83 | 0.0498 | 0.0461 |
| Uranus | 8651-01-03 18:57 G | 4880775.19 | 4880775.29 | 4880775.43 | 0.0133 | 0.0116 |
| Uranus | 8652-01-07 20:23 G | 4881144.15 | 4881144.35 | 4881144.58 | 0.0133 | 0.0075 |
| Uranus | 8653-01-11 11:31 G | 4881513.76 | 4881513.98 | 4881514.22 | 0.0133 | 0.0050 |
| Uranus | 8654-01-15 13:26 G | 4881882.80 | 4881883.06 | 4881883.32 | 0.0133 | 0.0002 |
| Uranus | 8655-01-20 04:19 G | 4882252.43 | 4882252.68 | 4882252.93 | 0.0134 | 0.0020 |
| Uranus | 8656-01-24 06:43 G | 4882621.56 | 4882621.78 | 4882622.01 | 0.0134 | 0.0065 |
| Jupiter | 8656-03-18 16:48 G | 4882676.05 | 4882676.20 | 4882676.36 | 0.0531 | 0.0383 |
| Uranus | 8657-01-27 21:07 G | 4882991.21 | 4882991.38 | 4882991.56 | 0.0134 | 0.0096 |
| Uranus | 8658-01-31 23:45 G | 4883360.44 | 4883360.49 | 4883360.57 | 0.0134 | 0.0130 |
| Saturn | 8660-03-16 08:09 G | 4884134.72 | 4884134.84 | 4884134.99 | 0.0285 | 0.0238 |
| Neptune | 8661-04-01 16:19 G | 4884516.17 | 4884516.18 | 4884516.25 | 0.0089 | 0.0089 |
| Neptune | 8662-04-04 05:16 G | 4884883.61 | 4884883.72 | 4884883.87 | 0.0089 | 0.0075 |
| Neptune | 8663-04-06 12:00 G | 4885250.83 | 4885251.00 | 4885251.22 | 0.0089 | 0.0060 |
| Neptune | 8664-04-08 05:16 G | 4885618.51 | 4885618.72 | 4885618.95 | 0.0089 | 0.0045 |
| Neptune | 8665-04-10 09:21 G | 4885985.66 | 4885985.89 | 4885986.14 | 0.0089 | 0.0028 |
| Neptune | 8666-04-13 03:21 G | 4886353.39 | 4886353.64 | 4886353.90 | 0.0089 | 0.0015 |
| Neptune | 8667-04-15 08:23 G | 4886720.60 | 4886720.85 | 4886721.10 | 0.0089 | 0.0002 |
| Neptune | 8668-04-16 23:45 G | 4887088.24 | 4887088.49 | 4887088.76 | 0.0089 | 0.0014 |
| Neptune | 8669-04-19 08:23 G | 4887455.62 | 4887455.85 | 4887456.08 | 0.0089 | 0.0031 |
| Neptune | 8670-04-21 18:28 G | 4887823.06 | 4887823.27 | 4887823.52 | 0.0089 | 0.0044 |
| Neptune | 8671-04-24 07:26 G | 4888190.65 | 4888190.81 | 4888191.01 | 0.0089 | 0.0062 |
| Neptune | 8672-04-25 13:11 G | 4888557.93 | 4888558.05 | 4888558.22 | 0.0089 | 0.0074 |
| Jupiter | 8673-08-26 15:50 G | 4889046.03 | 4889046.16 | 4889046.29 | 0.0490 | 0.0400 |
| Saturn | 8673-09-03 01:40 G | 4889053.39 | 4889053.57 | 4889053.75 | 0.0275 | 0.0181 |
| Jupiter | 8685-08-30 19:55 G | 4893433.11 | 4893433.33 | 4893433.55 | 0.0491 | 0.0211 |
| Saturn | 8689-03-10 23:45 G | 4894721.26 | 4894721.49 | 4894721.73 | 0.0284 | 0.0011 |

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| Jupiter | 8691-02-26 05:45 G | 4895438.65 | 4895438.74 | 4895438.84 | 0.0538 | 0.0490 |
| Uranus | 8692-07-01 10:33 G | 4895929.84 | 4895929.94 | 4895930.07 | 0.0145 | 0.0127 |
| Uranus | 8693-07-06 10:48 G | 4896299.74 | 4896299.95 | 4896300.17 | 0.0145 | 0.0082 |
| Uranus | 8694-07-11 10:04 G | 4896669.69 | 4896669.92 | 4896670.16 | 0.0145 | 0.0031 |
| Uranus | 8695-07-16 12:43 G | 4897039.77 | 4897040.03 | 4897040.30 | 0.0145 | 0.0003 |
| Uranus | 8696-07-20 09:21 G | 4897409.67 | 4897409.89 | 4897410.12 | 0.0144 | 0.0059 |
| Uranus | 8697-07-25 13:55 G | 4897779.90 | 4897780.08 | 4897780.29 | 0.0144 | 0.0096 |
| Jupiter | 8697-09-04 03:50 G | 4897820.44 | 4897820.66 | 4897820.88 | 0.0492 | 0.0073 |
| Uranus | 8698-07-30 08:09 G | 4898149.80 | 4898149.84 | 4898149.91 | 0.0144 | 0.0140 |
| Jupiter | 8703-03-04 15:07 G | 4899826.96 | 4899827.13 | 4899827.31 | 0.0537 | 0.0325 |
| Saturn | 8703-09-12 00:14 G | 4900018.30 | 4900018.51 | 4900018.74 | 0.0275 | 0.0140 |
| Mars | 8704-07-01 10:19 G | 4900311.77 | 4900311.93 | 4900312.08 | 0.1592 | 0.0995 |
| Jupiter | 8709-09-09 16:04 G | 4902207.93 | 4902208.17 | 4902208.41 | 0.0494 | 0.0053 |
| Jupiter | 8715-03-09 20:09 G | 4904215.11 | 4904215.34 | 4904215.58 | 0.0536 | 0.0096 |
| Saturn | 8718-03-06 10:19 G | 4905307.89 | 4905307.93 | 4905307.99 | 0.0283 | 0.0277 |
| Jupiter | 8721-09-13 22:04 G | 4906595.22 | 4906595.42 | 4906595.63 | 0.0496 | 0.0227 |
| Pluto | 8722-10-11 20:52 G | 4906988.26 | 4906988.37 | 4906988.54 | 0.0080 | 0.0069 |
| Jupiter | 8727-03-14 17:45 G | 4908603.03 | 4908603.24 | 4908603.46 | 0.0534 | 0.0158 |
| Saturn | 8732-09-05 16:04 G | 4910604.95 | 4910605.17 | 4910605.39 | 0.0275 | 0.0110 |
| Jupiter | 8733-09-18 19:11 G | 4910983.20 | 4910983.30 | 4910983.42 | 0.0498 | 0.0437 |
| Uranus | 8735-01-05 03:36 G | 4911456.53 | 4911456.65 | 4911456.81 | 0.0133 | 0.0110 |
| Uranus | 8736-01-09 05:02 G | 4911825.52 | 4911825.71 | 4911825.93 | 0.0133 | 0.0080 |
| Uranus | 8737-01-12 20:38 G | 4912195.12 | 4912195.36 | 4912195.61 | 0.0133 | 0.0034 |
| Uranus | 8738-01-16 21:50 G | 4912564.16 | 4912564.41 | 4912564.67 | 0.0134 | 0.0013 |
| Uranus | 8739-01-21 12:57 G | 4912933.81 | 4912934.04 | 4912934.29 | 0.0134 | 0.0037 |
| Jupiter | 8739-03-19 21:21 G | 4912991.22 | 4912991.39 | 4912991.58 | 0.0532 | 0.0340 |
| Uranus | 8740-01-25 14:23 G | 4913302.88 | 4913303.10 | 4913303.34 | 0.0134 | 0.0060 |
| Uranus | 8741-01-29 05:16 G | 4913672.58 | 4913672.72 | 4913672.90 | 0.0134 | 0.0102 |
| Neptune | 8744-10-02 01:40 G | 4915014.46 | 4915014.57 | 4915014.71 | 0.0088 | 0.0077 |
| Neptune | 8745-10-04 20:52 G | 4915382.24 | 4915382.37 | 4915382.55 | 0.0088 | 0.0071 |

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| Neptune | 8746-10-07 03:21 G | 4915749.43 | 4915749.64 | 4915749.86 | 0.0088 | 0.0048 |
| Neptune | 8747-10-09 20:23 G | 4916117.12 | 4916117.35 | 4916117.60 | 0.0088 | 0.0041 |
| Saturn | 8748-03-13 12:00 G | 4916272.77 | 4916273.00 | 4916273.24 | 0.0285 | 0.0056 |
| Neptune | 8748-10-11 06:00 G | 4916484.52 | 4916484.75 | 4916485.01 | 0.0088 | 0.0019 |
| Neptune | 8749-10-13 19:11 G | 4916852.03 | 4916852.30 | 4916852.57 | 0.0088 | 0.0012 |
| Neptune | 8750-10-16 09:50 G | 4917219.67 | 4917219.91 | 4917220.17 | 0.0088 | 0.0011 |
| Jupiter | 8751-03-24 12:14 G | 4917378.93 | 4917379.01 | 4917379.10 | 0.0530 | 0.0494 |
| Mars | 8751-06-27 02:38 G | 4917473.59 | 4917473.61 | 4917473.63 | 0.1592 | 0.1581 |
| Neptune | 8751-10-18 18:14 G | 4917587.01 | 4917587.26 | 4917587.53 | 0.0088 | 0.0018 |
| Neptune | 8752-10-20 12:43 G | 4917954.81 | 4917955.03 | 4917955.26 | 0.0088 | 0.0041 |
| Neptune | 8753-10-22 18:00 G | 4918322.05 | 4918322.25 | 4918322.49 | 0.0088 | 0.0047 |
| Neptune | 8754-10-25 13:26 G | 4918689.93 | 4918690.06 | 4918690.25 | 0.0088 | 0.0070 |
| Neptune | 8755-10-27 19:55 G | 4919057.22 | 4919057.33 | 4919057.48 | 0.0088 | 0.0077 |
| Jupiter | 8756-08-26 13:26 G | 4919360.95 | 4919361.06 | 4919361.19 | 0.0489 | 0.0427 |
| Saturn | 8762-09-13 08:09 G | 4921569.69 | 4921569.84 | 4921570.01 | 0.0275 | 0.0209 |
| Jupiter | 8768-08-31 00:14 G | 4923748.32 | 4923748.51 | 4923748.71 | 0.0491 | 0.0244 |
| Jupiter | 8774-02-26 14:09 G | 4925754.06 | 4925754.09 | 4925754.14 | 0.0539 | 0.0531 |
| Uranus | 8776-07-02 19:55 G | 4926611.21 | 4926611.33 | 4926611.49 | 0.0145 | 0.0119 |
| Saturn | 8777-03-07 14:09 G | 4926858.93 | 4926859.09 | 4926859.26 | 0.0283 | 0.0212 |
| Uranus | 8777-07-07 18:43 G | 4926981.07 | 4926981.28 | 4926981.51 | 0.0145 | 0.0076 |
| Uranus | 8778-07-12 19:11 G | 4927351.07 | 4927351.30 | 4927351.54 | 0.0145 | 0.0038 |
| Uranus | 8779-07-17 20:23 G | 4927721.09 | 4927721.35 | 4927721.61 | 0.0145 | 0.0019 |
| Uranus | 8780-07-21 17:45 G | 4928091.02 | 4928091.24 | 4928091.48 | 0.0144 | 0.0051 |
| Jupiter | 8780-09-04 11:16 G | 4928135.74 | 4928135.97 | 4928136.21 | 0.0492 | 0.0107 |
| Uranus | 8781-07-26 21:07 G | 4928461.21 | 4928461.38 | 4928461.57 | 0.0144 | 0.0105 |
| Jupiter | 8786-03-03 18:14 G | 4930142.08 | 4930142.26 | 4930142.44 | 0.0538 | 0.0356 |
| Saturn | 8791-09-08 01:55 G | 4932156.34 | 4932156.58 | 4932156.83 | 0.0275 | 0.0041 |
| Jupiter | 8792-09-08 17:45 G | 4932523.01 | 4932523.24 | 4932523.47 | 0.0494 | 0.0026 |
| Jupiter | 8798-03-08 14:52 G | 4934529.91 | 4934530.12 | 4934530.34 | 0.0536 | 0.0131 |
| Jupiter | 8804-09-13 12:14 G | 4936910.79 | 4936911.01 | 4936911.22 | 0.0495 | 0.0204 |

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| Saturn | 8807-03-15 17:16 G | 4937824.01 | 4937824.22 | 4937824.46 | 0.0285 | 0.0118 |
| Jupiter | 8810-03-13 22:33 G | 4938918.21 | 4938918.44 | 4938918.67 | 0.0534 | 0.0120 |
| Jupiter | 8816-09-17 12:43 G | 4941297.89 | 4941298.03 | 4941298.18 | 0.0497 | 0.0397 |
| Uranus | 8819-01-05 12:57 G | 4942137.90 | 4942138.04 | 4942138.19 | 0.0133 | 0.0109 |
| Uranus | 8820-01-09 13:55 G | 4942506.87 | 4942507.08 | 4942507.31 | 0.0133 | 0.0070 |
| Saturn | 8820-09-01 18:28 G | 4942743.22 | 4942743.27 | 4942743.33 | 0.0276 | 0.0268 |
| Uranus | 8821-01-13 05:16 G | 4942876.49 | 4942876.72 | 4942876.97 | 0.0133 | 0.0044 |
| Uranus | 8822-01-17 06:43 G | 4943245.52 | 4943245.78 | 4943246.03 | 0.0134 | 0.0006 |
| Jupiter | 8822-03-18 16:33 G | 4943306.00 | 4943306.19 | 4943306.38 | 0.0533 | 0.0303 |
| Uranus | 8823-01-21 22:04 G | 4943615.18 | 4943615.42 | 4943615.68 | 0.0134 | 0.0027 |
| Uranus | 8824-01-25 23:16 G | 4943984.27 | 4943984.47 | 4943984.70 | 0.0134 | 0.0074 |
| Uranus | 8825-01-29 14:23 G | 4944353.96 | 4944354.10 | 4944354.29 | 0.0134 | 0.0103 |
| Neptune | 8826-04-04 12:43 G | 4944783.97 | 4944784.03 | 4944784.13 | 0.0089 | 0.0085 |
| Neptune | 8827-04-07 06:28 G | 4945151.59 | 4945151.77 | 4945151.95 | 0.0089 | 0.0061 |
| Neptune | 8828-04-08 10:04 G | 4945518.74 | 4945518.92 | 4945519.13 | 0.0089 | 0.0056 |
| Neptune | 8829-04-11 03:36 G | 4945886.43 | 4945886.65 | 4945886.91 | 0.0089 | 0.0032 |
| Neptune | 8830-04-13 09:07 G | 4946253.65 | 4946253.88 | 4946254.13 | 0.0089 | 0.0027 |
| Mars | 8830-06-29 07:26 G | 4946330.62 | 4946330.81 | 4946331.00 | 0.1592 | 0.0221 |
| Neptune | 8831-04-15 23:31 G | 4946621.22 | 4946621.48 | 4946621.75 | 0.0089 | 0.0003 |
| Neptune | 8832-04-17 08:52 G | 4946988.62 | 4946988.87 | 4946989.11 | 0.0089 | 0.0004 |
| Neptune | 8833-04-19 18:14 G | 4947356.02 | 4947356.26 | 4947356.52 | 0.0089 | 0.0027 |
| Jupiter | 8834-03-24 00:57 G | 4947694.44 | 4947694.54 | 4947694.65 | 0.0531 | 0.0463 |
| Neptune | 8834-04-22 08:52 G | 4947723.65 | 4947723.87 | 4947724.11 | 0.0089 | 0.0033 |
| Neptune | 8835-04-24 14:23 G | 4948090.91 | 4948091.10 | 4948091.31 | 0.0089 | 0.0056 |
| Saturn | 8836-03-08 20:23 G | 4948410.16 | 4948410.35 | 4948410.56 | 0.0283 | 0.0147 |
| Neptune | 8836-04-26 07:26 G | 4948458.65 | 4948458.81 | 4948459.01 | 0.0089 | 0.0062 |
| Neptune | 8837-04-28 11:16 G | 4948825.92 | 4948825.97 | 4948826.07 | 0.0089 | 0.0085 |
| Jupiter | 8839-08-26 22:19 G | 4949676.35 | 4949676.43 | 4949676.53 | 0.0489 | 0.0445 |
| Saturn | 8850-09-09 05:16 G | 4953707.46 | 4953707.72 | 4953707.97 | 0.0275 | 0.0022 |
| Jupiter | 8851-08-31 09:50 G | 4954063.71 | 4954063.91 | 4954064.12 | 0.0491 | 0.0263 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Uranus | 8860-07-03 05:16 G | 4957292.60 | 4957292.72 | 4957292.86 | 0.0145 | 0.0122 |
| Uranus | 8861-07-08 02:23 G | 4957662.38 | 4957662.60 | 4957662.83 | 0.0145 | 0.0074 |
| Uranus | 8862-07-13 04:33 G | 4958032.45 | 4958032.69 | 4958032.93 | 0.0145 | 0.0025 |
| Uranus | 8863-07-18 04:04 G | 4958402.41 | 4958402.67 | 4958402.94 | 0.0145 | 0.0009 |
| Jupiter | 8863-09-04 14:09 G | 4958450.87 | 4958451.09 | 4958451.31 | 0.0492 | 0.0135 |
| Uranus | 8864-07-22 03:21 G | 4958772.43 | 4958772.64 | 4958772.86 | 0.0144 | 0.0067 |
| Uranus | 8865-07-27 05:16 G | 4959142.54 | 4959142.72 | 4959142.92 | 0.0144 | 0.0101 |
| Saturn | 8866-03-16 16:33 G | 4959375.00 | 4959375.19 | 4959375.39 | 0.0285 | 0.0175 |
| Jupiter | 8869-03-02 14:23 G | 4960456.96 | 4960457.10 | 4960457.25 | 0.0538 | 0.0401 |
| Jupiter | 8875-09-09 05:16 G | 4962838.48 | 4962838.72 | 4962838.95 | 0.0493 | 0.0012 |
| Saturn | 8879-09-04 01:55 G | 4964294.43 | 4964294.58 | 4964294.75 | 0.0276 | 0.0206 |
| Jupiter | 8881-03-07 23:02 G | 4964845.24 | 4964845.46 | 4964845.69 | 0.0537 | 0.0164 |
| Pluto | 8881-04-13 05:02 G | 4964881.46 | 4964881.71 | 4964881.96 | 0.0064 | 0.0007 |
| Jupiter | 8887-09-13 08:09 G | 4967225.62 | 4967225.84 | 4967226.06 | 0.0494 | 0.0171 |
| Jupiter | 8893-03-12 20:38 G | 4969233.13 | 4969233.36 | 4969233.59 | 0.0535 | 0.0085 |
| Saturn | 8895-03-11 04:19 G | 4969961.46 | 4969961.68 | 4969961.91 | 0.0283 | 0.0086 |
| Jupiter | 8899-09-18 02:38 G | 4971613.47 | 4971613.61 | 4971613.77 | 0.0496 | 0.0377 |
| Uranus | 8903-01-06 20:38 G | 4972819.22 | 4972819.36 | 4972819.53 | 0.0133 | 0.0106 |
| Uranus | 8904-01-10 22:33 G | 4973188.23 | 4973188.44 | 4973188.65 | 0.0133 | 0.0073 |
| Uranus | 8905-01-14 13:55 G | 4973557.83 | 4973558.08 | 4973558.33 | 0.0133 | 0.0028 |
| Jupiter | 8905-03-19 06:28 G | 4973621.58 | 4973621.77 | 4973621.97 | 0.0533 | 0.0270 |
| Uranus | 8906-01-18 15:07 G | 4973926.88 | 4973927.13 | 4973927.39 | 0.0134 | 0.0005 |
| Uranus | 8907-01-23 06:28 G | 4974296.53 | 4974296.77 | 4974297.02 | 0.0134 | 0.0044 |
| Uranus | 8908-01-27 07:40 G | 4974665.60 | 4974665.82 | 4974666.04 | 0.0134 | 0.0067 |
| Neptune | 8908-10-02 18:28 G | 4974915.23 | 4974915.27 | 4974915.33 | 0.0088 | 0.0087 |
| Uranus | 8909-01-30 22:48 G | 4975035.32 | 4975035.45 | 4975035.60 | 0.0134 | 0.0111 |
| Mars | 8909-07-02 04:48 G | 4975187.54 | 4975187.70 | 4975187.86 | 0.1592 | 0.0680 |
| Saturn | 8909-09-11 05:16 G | 4975258.48 | 4975258.72 | 4975258.96 | 0.0275 | 0.0082 |
| Neptune | 8909-10-05 01:26 G | 4975282.41 | 4975282.56 | 4975282.70 | 0.0088 | 0.0072 |
| Neptune | 8910-10-07 17:16 G | 4975650.04 | 4975650.22 | 4975650.44 | 0.0088 | 0.0059 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Neptune | 8911-10-10 04:48 G | 4976017.49 | 4976017.70 | 4976017.92 | 0.0088 | 0.0043 |
| Neptune | 8912-10-11 16:04 G | 4976384.93 | 4976385.17 | 4976385.44 | 0.0088 | 0.0031 |
| Neptune | 8913-10-14 07:55 G | 4976752.58 | 4976752.83 | 4976753.08 | 0.0088 | 0.0013 |
| Neptune | 8914-10-16 15:07 G | 4977119.87 | 4977120.13 | 4977120.40 | 0.0088 | 0.0001 |
| Neptune | 8915-10-19 10:19 G | 4977487.68 | 4977487.93 | 4977488.19 | 0.0088 | 0.0016 |
| Neptune | 8916-10-20 15:36 G | 4977854.92 | 4977855.15 | 4977855.41 | 0.0088 | 0.0028 |
| Jupiter | 8917-03-24 00:57 G | 4978009.40 | 4978009.54 | 4978009.69 | 0.0531 | 0.0425 |
| Neptune | 8917-10-23 10:48 G | 4978222.74 | 4978222.95 | 4978223.20 | 0.0088 | 0.0045 |
| Neptune | 8918-10-25 18:00 G | 4978590.06 | 4978590.25 | 4978590.45 | 0.0088 | 0.0056 |
| Neptune | 8919-10-28 10:48 G | 4978957.83 | 4978957.95 | 4978958.12 | 0.0088 | 0.0075 |
| Neptune | 8920-10-29 21:21 G | 4979325.36 | 4979325.39 | 4979325.49 | 0.0088 | 0.0086 |
| Jupiter | 8922-08-27 09:50 G | 4979991.82 | 4979991.91 | 4979992.01 | 0.0489 | 0.0450 |
| Saturn | 8925-03-18 15:50 G | 4980926.03 | 4980926.16 | 4980926.31 | 0.0285 | 0.0231 |
| Mars | 8933-01-02 15:21 G | 4983772.93 | 4983773.14 | 4983773.35 | 0.1942 | 0.0622 |
| Jupiter | 8934-08-31 11:31 G | 4984378.80 | 4984378.98 | 4984379.17 | 0.0490 | 0.0291 |
| Saturn | 8938-09-06 08:52 G | 4985845.67 | 4985845.87 | 4985846.08 | 0.0276 | 0.0145 |
| Uranus | 8944-07-04 15:36 G | 4987974.00 | 4987974.15 | 4987974.31 | 0.0145 | 0.0111 |
| Uranus | 8945-07-09 11:31 G | 4988343.75 | 4988343.98 | 4988344.21 | 0.0145 | 0.0071 |
| Uranus | 8946-07-14 14:09 G | 4988713.86 | 4988714.09 | 4988714.34 | 0.0145 | 0.0031 |
| Jupiter | 8946-09-05 04:04 G | 4988766.46 | 4988766.67 | 4988766.90 | 0.0491 | 0.0166 |
| Uranus | 8947-07-19 12:00 G | 4989083.75 | 4989084.00 | 4989084.27 | 0.0145 | 0.0026 |
| Uranus | 8948-07-23 12:14 G | 4989453.80 | 4989454.01 | 4989454.25 | 0.0144 | 0.0058 |
| Uranus | 8949-07-28 12:28 G | 4989823.87 | 4989824.02 | 4989824.19 | 0.0144 | 0.0114 |
| Jupiter | 8952-03-03 00:43 G | 4990772.40 | 4990772.53 | 4990772.67 | 0.0539 | 0.0436 |
| Saturn | 8954-03-13 09:21 G | 4991512.65 | 4991512.89 | 4991513.14 | 0.0283 | 0.0026 |
| Jupiter | 8958-09-09 05:45 G | 4993153.50 | 4993153.74 | 4993153.98 | 0.0493 | 0.0032 |
| Jupiter | 8964-03-07 23:45 G | 4995160.27 | 4995160.49 | 4995160.70 | 0.0537 | 0.0189 |
| Saturn | 8968-09-12 08:09 G | 4996809.63 | 4996809.84 | 4996810.05 | 0.0275 | 0.0138 |
| Pluto | 8969-10-12 16:19 G | 4997205.06 | 4997205.18 | 4997205.36 | 0.0080 | 0.0066 |
| Jupiter | 8970-09-14 00:28 G | 4997541.30 | 4997541.52 | 4997541.74 | 0.0494 | 0.0160 |

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| Jupiter | 8976-03-13 08:38 G | 4999548.64 | 4999548.86 | 4999549.09 | 0.0535 | 0.0055 |
| Jupiter | 8982-09-18 08:23 G | 5001928.69 | 5001928.85 | 5001929.03 | 0.0496 | 0.0356 |
| Uranus | 8987-01-07 05:16 G | 5003500.57 | 5003500.72 | 5003500.90 | 0.0133 | 0.0103 |
| Uranus | 8988-01-11 07:11 G | 5003869.59 | 5003869.80 | 5003870.03 | 0.0133 | 0.0066 |
| Jupiter | 8988-03-18 04:48 G | 5003936.49 | 5003936.70 | 5003936.92 | 0.0533 | 0.0225 |
| Uranus | 8989-01-14 22:04 G | 5004239.18 | 5004239.42 | 5004239.68 | 0.0133 | 0.0037 |
| Uranus | 8990-01-18 23:45 G | 5004608.24 | 5004608.49 | 5004608.74 | 0.0134 | 0.0011 |
| Neptune | 8990-04-05 06:43 G | 5004684.73 | 5004684.78 | 5004684.86 | 0.0089 | 0.0086 |
| Uranus | 8991-01-23 14:52 G | 5004977.87 | 5004978.12 | 5004978.37 | 0.0134 | 0.0033 |
| Neptune | 8991-04-07 10:33 G | 5005051.82 | 5005051.94 | 5005052.12 | 0.0089 | 0.0072 |
| Uranus | 8992-01-27 16:04 G | 5005346.98 | 5005347.17 | 5005347.38 | 0.0134 | 0.0082 |
| Neptune | 8992-04-09 04:04 G | 5005419.49 | 5005419.67 | 5005419.89 | 0.0089 | 0.0058 |
| Uranus | 8993-01-31 07:40 G | 5005716.68 | 5005716.82 | 5005716.98 | 0.0134 | 0.0108 |
| Neptune | 8993-04-11 10:19 G | 5005786.73 | 5005786.93 | 5005787.16 | 0.0089 | 0.0043 |
| Neptune | 8994-04-14 00:14 G | 5006154.28 | 5006154.51 | 5006154.78 | 0.0089 | 0.0029 |
| Jupiter | 8994-09-22 19:40 G | 5006316.31 | 5006316.32 | 5006316.33 | 0.0497 | 0.0496 |
| Neptune | 8995-04-16 11:16 G | 5006521.73 | 5006521.97 | 5006522.21 | 0.0089 | 0.0013 |
| Neptune | 8996-04-17 19:55 G | 5006889.07 | 5006889.33 | 5006889.59 | 0.0089 | 0.0001 |
| Neptune | 8997-04-20 10:33 G | 5007256.70 | 5007256.94 | 5007257.20 | 0.0089 | 0.0015 |
| Saturn | 8997-09-07 08:23 G | 5007396.61 | 5007396.85 | 5007397.09 | 0.0276 | 0.0092 |
| Neptune | 8998-04-22 15:21 G | 5007623.91 | 5007624.14 | 5007624.39 | 0.0089 | 0.0029 |
| Neptune | 8999-04-25 08:38 G | 5007991.65 | 5007991.86 | 5007992.10 | 0.0089 | 0.0043 |
| Jupiter | 9000-03-24 04:33 G | 5008324.55 | 5008324.69 | 5008324.85 | 0.0532 | 0.0390 |
| Neptune | 9000-04-27 12:28 G | 5008358.85 | 5008359.02 | 5008359.22 | 0.0089 | 0.0059 |

10TH MILLENNIUM CE

This is a list of transits of Moon in the 10th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Neptune | 9001-04-30 05:02 | G | 5008726.58 | 5008726.71 | 5008726.89 | 0.0089 | 0.0072 | |
| Neptune | 9002-05-02 11:16 | G | 5009093.96 | 5009093.97 | 5009094.03 | 0.0089 | 0.0088 | |
| Jupiter | 9005-08-27 13:55 | G | 5010307.01 | 5010307.08 | 5010307.15 | 0.0488 | 0.0465 | |
| Saturn | 9013-03-15 08:23 | G | 5013063.60 | 5013063.85 | 5013064.10 | 0.0283 | 0.0030 | |
| Jupiter | 9017-09-01 04:33 | G | 5014694.51 | 5014694.69 | 5014694.87 | 0.0489 | 0.0308 | |
| Saturn | 9027-09-15 13:26 | G | 5018360.90 | 5018361.06 | 5018361.24 | 0.0275 | 0.0190 | |
| Uranus | 9028-07-06 01:11 | G | 5018655.41 | 5018655.55 | 5018655.69 | 0.0145 | 0.0118 | |
| Uranus | 9029-07-10 19:40 | G | 5019025.10 | 5019025.32 | 5019025.56 | 0.0145 | 0.0067 | |
| Jupiter | 9029-09-05 06:14 | G | 5019081.54 | 5019081.76 | 5019081.98 | 0.0491 | 0.0185 | |
| Uranus | 9030-07-16 00:14 | G | 5019395.27 | 5019395.51 | 5019395.75 | 0.0145 | 0.0020 | |
| Uranus | 9031-07-20 21:07 | G | 5019765.12 | 5019765.38 | 5019765.64 | 0.0145 | 0.0015 | |
| Uranus | 9032-07-24 22:48 | G | 5020135.25 | 5020135.45 | 5020135.66 | 0.0144 | 0.0075 | |
| Uranus | 9033-07-29 21:36 | G | 5020505.24 | 5020505.40 | 5020505.59 | 0.0144 | 0.0107 | |
| Jupiter | 9035-03-03 23:16 | G | 5021087.37 | 5021087.47 | 5021087.59 | 0.0539 | 0.0467 | |
| Mars | 9035-06-30 05:16 | G | 5021205.57 | 5021205.72 | 5021205.87 | 0.1592 | 0.0953 | |
| Jupiter | 9041-09-09 23:16 | G | 5023469.24 | 5023469.47 | 5023469.70 | 0.0492 | 0.0047 | |
| Saturn | 9042-03-09 14:52 | G | 5023650.01 | 5023650.12 | 5023650.26 | 0.0283 | 0.0238 | |
| Jupiter | 9047-03-09 10:19 | G | 5025475.72 | 5025475.93 | 5025476.14 | 0.0537 | 0.0219 | |
| Jupiter | 9053-09-14 04:48 | G | 5027856.46 | 5027856.70 | 5027856.93 | 0.0493 | 0.0141 | |
| Saturn | 9056-09-09 02:38 | G | 5028947.37 | 5028947.61 | 5028947.87 | 0.0277 | 0.0045 | |
| Jupiter | 9059-03-14 05:02 | G | 5029863.47 | 5029863.71 | 5029863.95 | 0.0536 | 0.0014 | |
| Jupiter | 9065-09-18 16:33 | G | 5032244.03 | 5032244.19 | 5032244.36 | 0.0495 | 0.0331 | |
| Uranus | 9070-01-03 22:33 | G | 5033812.41 | 5033812.44 | 5033812.48 | 0.0133 | 0.0132 | |
| Uranus | 9071-01-08 12:28 | G | 5034181.87 | 5034182.02 | 5034182.20 | 0.0133 | 0.0103 | |
| Jupiter | 9071-03-19 11:16 | G | 5034251.76 | 5034251.97 | 5034252.18 | 0.0535 | 0.0183 | |

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| Uranus | 9072-01-12 15:36 G | 5034550.94 | 5034551.15 | 5034551.37 | 0.0133 | 0.0067 |
| Saturn | 9072-03-16 06:28 G | 5034614.54 | 5034614.77 | 5034615.01 | 0.0283 | 0.0085 |
| Uranus | 9073-01-16 05:45 G | 5034920.49 | 5034920.74 | 5034921.00 | 0.0134 | 0.0025 |
| Neptune | 9073-10-05 14:23 G | 5035182.99 | 5035183.10 | 5035183.28 | 0.0088 | 0.0075 |
| Uranus | 9074-01-20 08:09 G | 5035289.59 | 5035289.84 | 5035290.09 | 0.0134 | 0.0002 |
| Neptune | 9074-10-08 02:38 G | 5035550.46 | 5035550.61 | 5035550.77 | 0.0088 | 0.0069 |
| Uranus | 9075-01-24 22:33 G | 5035659.21 | 5035659.44 | 5035659.69 | 0.0134 | 0.0050 |
| Neptune | 9075-10-10 12:43 G | 5035917.81 | 5035918.03 | 5035918.27 | 0.0088 | 0.0045 |
| Uranus | 9076-01-29 00:14 G | 5036028.31 | 5036028.51 | 5036028.73 | 0.0134 | 0.0072 |
| Neptune | 9076-10-12 05:16 G | 5036285.52 | 5036285.72 | 5036285.97 | 0.0088 | 0.0041 |
| Uranus | 9077-02-01 15:21 G | 5036398.02 | 5036398.14 | 5036398.27 | 0.0134 | 0.0118 |
| Jupiter | 9077-09-23 06:43 G | 5036631.70 | 5036631.78 | 5036631.87 | 0.0497 | 0.0466 |
| Neptune | 9077-10-14 12:14 G | 5036652.76 | 5036653.01 | 5036653.28 | 0.0088 | 0.0017 |
| Neptune | 9078-10-17 07:55 G | 5037020.58 | 5037020.83 | 5037021.10 | 0.0088 | 0.0012 |
| Neptune | 9079-10-19 13:40 G | 5037387.82 | 5037388.07 | 5037388.33 | 0.0088 | 0.0012 |
| Neptune | 9080-10-21 08:38 G | 5037755.61 | 5037755.86 | 5037756.13 | 0.0088 | 0.0018 |
| Neptune | 9081-10-23 16:04 G | 5038122.96 | 5038123.17 | 5038123.41 | 0.0088 | 0.0041 |
| Neptune | 9082-10-26 07:40 G | 5038490.61 | 5038490.82 | 5038491.07 | 0.0088 | 0.0047 |
| Jupiter | 9083-03-24 18:14 G | 5038640.09 | 5038640.26 | 5038640.43 | 0.0532 | 0.0364 |
| Neptune | 9083-10-28 19:26 G | 5038858.16 | 5038858.31 | 5038858.47 | 0.0088 | 0.0069 |
| Neptune | 9084-10-30 06:00 G | 5039225.63 | 5039225.75 | 5039225.92 | 0.0088 | 0.0075 |
| Saturn | 9086-09-16 14:23 G | 5039911.98 | 5039912.10 | 5039912.23 | 0.0276 | 0.0238 |
| Jupiter | 9088-08-27 07:11 G | 5040622.75 | 5040622.80 | 5040622.86 | 0.0488 | 0.0474 |
| Jupiter | 9100-09-01 07:40 G | 5045009.65 | 5045009.82 | 5045010.00 | 0.0489 | 0.0326 |
| Saturn | 9101-03-11 20:09 G | 5045201.16 | 5045201.34 | 5045201.53 | 0.0283 | 0.0183 |
| Uranus | 9112-07-07 11:16 G | 5049336.81 | 5049336.97 | 5049337.15 | 0.0145 | 0.0105 |
| Jupiter | 9112-09-05 23:02 G | 5049397.26 | 5049397.46 | 5049397.67 | 0.0490 | 0.0212 |
| Uranus | 9113-07-12 05:16 G | 5049706.49 | 5049706.72 | 5049706.95 | 0.0145 | 0.0067 |
| Mars | 9114-07-03 07:11 G | 5050062.61 | 5050062.80 | 5050063.00 | 0.1592 | 0.0282 |
| Uranus | 9114-07-17 10:04 G | 5050076.68 | 5050076.92 | 5050077.17 | 0.0145 | 0.0023 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Uranus | 9115-07-22 05:31 G | 5050446.48 | 5050446.73 | 5050446.99 | 0.0145 | 0.0031 |
| Saturn | 9115-09-12 01:40 G | 5050498.33 | 5050498.57 | 5050498.82 | 0.0277 | 0.0007 |
| Uranus | 9116-07-26 08:09 G | 5050816.63 | 5050816.84 | 5050817.07 | 0.0144 | 0.0064 |
| Uranus | 9117-07-31 05:16 G | 5051186.59 | 5051186.72 | 5051186.87 | 0.0144 | 0.0121 |
| Jupiter | 9118-03-04 06:28 G | 5051402.71 | 5051402.77 | 5051402.86 | 0.0540 | 0.0507 |
| Jupiter | 9124-09-10 04:33 G | 5053784.45 | 5053784.69 | 5053784.94 | 0.0491 | 0.0066 |
| Pluto | 9128-04-16 17:31 G | 5055099.21 | 5055099.23 | 5055099.26 | 0.0064 | 0.0063 |
| Pluto | 9129-04-18 00:57 G | 5055465.31 | 5055465.54 | 5055465.78 | 0.0064 | 0.0029 |
| Jupiter | 9130-03-09 06:28 G | 5055790.57 | 5055790.77 | 5055790.99 | 0.0539 | 0.0253 |
| Saturn | 9131-03-19 10:48 G | 5056165.75 | 5056165.95 | 5056166.16 | 0.0283 | 0.0144 |
| Jupiter | 9136-09-14 13:40 G | 5058171.85 | 5058172.07 | 5058172.29 | 0.0493 | 0.0129 |
| Jupiter | 9142-03-14 16:19 G | 5060178.95 | 5060179.18 | 5060179.40 | 0.0537 | 0.0017 |
| Saturn | 9144-09-05 14:23 G | 5061085.00 | 5061085.10 | 5061085.21 | 0.0277 | 0.0250 |
| Jupiter | 9148-09-19 04:33 G | 5062559.50 | 5062559.69 | 5062559.88 | 0.0495 | 0.0309 |
| Jupiter | 9154-03-19 21:07 G | 5064567.15 | 5064567.38 | 5064567.61 | 0.0534 | 0.0147 |
| Neptune | 9154-04-06 11:02 G | 5064584.93 | 5064584.96 | 5064585.04 | 0.0089 | 0.0087 |
| Uranus | 9155-01-09 20:38 G | 5064863.19 | 5064863.36 | 5064863.56 | 0.0133 | 0.0097 |
| Neptune | 9155-04-09 04:48 G | 5064952.61 | 5064952.70 | 5064952.81 | 0.0089 | 0.0082 |
| Uranus | 9156-01-14 00:00 G | 5065232.29 | 5065232.50 | 5065232.73 | 0.0133 | 0.0063 |
| Neptune | 9156-04-10 12:00 G | 5065319.82 | 5065320.00 | 5065320.19 | 0.0089 | 0.0059 |
| Uranus | 9157-01-17 13:11 G | 5065601.80 | 5065602.05 | 5065602.31 | 0.0133 | 0.0030 |
| Neptune | 9157-04-13 00:57 G | 5065687.33 | 5065687.54 | 5065687.75 | 0.0089 | 0.0053 |
| Uranus | 9158-01-21 16:19 G | 5065970.94 | 5065971.18 | 5065971.43 | 0.0134 | 0.0016 |
| Neptune | 9158-04-15 11:45 G | 5066054.78 | 5066054.99 | 5066055.24 | 0.0089 | 0.0031 |
| Uranus | 9159-01-26 05:45 G | 5066340.50 | 5066340.74 | 5066341.00 | 0.0134 | 0.0039 |
| Neptune | 9159-04-17 19:55 G | 5066422.08 | 5066422.33 | 5066422.59 | 0.0089 | 0.0025 |
| Uranus | 9160-01-30 08:38 G | 5066709.69 | 5066709.86 | 5066710.06 | 0.0134 | 0.0088 |
| Saturn | 9160-03-12 20:52 G | 5066752.14 | 5066752.37 | 5066752.59 | 0.0282 | 0.0124 |
| Neptune | 9160-04-19 12:00 G | 5066789.75 | 5066790.00 | 5066790.25 | 0.0089 | 0.0002 |
| Jupiter | 9160-09-23 12:00 G | 5066946.90 | 5066947.00 | 5066947.11 | 0.0497 | 0.0443 |

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| Uranus | 9161-02-02 23:02 G | 5067079.34 | 5067079.46 | 5067079.62 | 0.0134 | 0.0112 |
| Neptune | 9161-04-21 16:33 G | 5067156.94 | 5067157.19 | 5067157.45 | 0.0089 | 0.0004 |
| Neptune | 9162-04-24 10:04 G | 5067524.69 | 5067524.92 | 5067525.17 | 0.0089 | 0.0027 |
| Neptune | 9163-04-26 14:23 G | 5067891.87 | 5067892.10 | 5067892.34 | 0.0089 | 0.0032 |
| Neptune | 9164-04-28 06:57 G | 5068259.59 | 5068259.79 | 5068260.00 | 0.0089 | 0.0055 |
| Neptune | 9165-04-30 13:26 G | 5068626.91 | 5068627.06 | 5068627.27 | 0.0089 | 0.0061 |
| Jupiter | 9166-03-24 16:04 G | 5068954.99 | 5068955.17 | 5068955.35 | 0.0533 | 0.0331 |
| Neptune | 9166-05-03 01:26 G | 5068994.49 | 5068994.56 | 5068994.68 | 0.0089 | 0.0083 |
| Neptune | 9167-05-05 13:11 G | 5069362.04 | 5069362.05 | 5069362.09 | 0.0089 | 0.0088 |
| Saturn | 9174-09-13 05:16 G | 5072049.49 | 5072049.72 | 5072049.95 | 0.0277 | 0.0054 |
| Jupiter | 9183-09-02 00:43 G | 5075325.38 | 5075325.53 | 5075325.69 | 0.0489 | 0.0350 |
| Saturn | 9190-03-20 19:55 G | 5077717.18 | 5077717.33 | 5077717.50 | 0.0283 | 0.0206 |
| Mars | 9193-07-05 14:09 G | 5078919.99 | 5078920.09 | 5078920.20 | 0.1591 | 0.1316 |
| Uranus | 9195-07-03 13:40 G | 5079648.07 | 5079648.07 | 5079648.08 | 0.0145 | 0.0145 |
| Jupiter | 9195-09-06 03:07 G | 5079712.42 | 5079712.63 | 5079712.85 | 0.0490 | 0.0237 |
| Uranus | 9196-07-07 20:09 G | 5080018.20 | 5080018.34 | 5080018.51 | 0.0145 | 0.0114 |
| Uranus | 9197-07-12 13:11 G | 5080387.83 | 5080388.05 | 5080388.30 | 0.0145 | 0.0060 |
| Uranus | 9198-07-17 19:26 G | 5080758.07 | 5080758.31 | 5080758.56 | 0.0145 | 0.0015 |
| Uranus | 9199-07-22 13:55 G | 5081127.83 | 5081128.08 | 5081128.34 | 0.0145 | 0.0023 |
| Uranus | 9200-07-26 18:00 G | 5081498.06 | 5081498.25 | 5081498.46 | 0.0144 | 0.0082 |
| Jupiter | 9201-03-03 06:57 G | 5081717.75 | 5081717.79 | 5081717.85 | 0.0540 | 0.0526 |
| Uranus | 9201-07-31 14:23 G | 5081867.94 | 5081868.10 | 5081868.27 | 0.0144 | 0.0112 |
| Saturn | 9203-09-07 11:45 G | 5082635.81 | 5082635.99 | 5082636.17 | 0.0277 | 0.0197 |
| Jupiter | 9207-09-10 13:11 G | 5084099.83 | 5084100.05 | 5084100.28 | 0.0491 | 0.0083 |
| Jupiter | 9213-03-08 17:02 G | 5086106.02 | 5086106.21 | 5086106.40 | 0.0538 | 0.0269 |
| Mars | 9217-01-02 14:23 G | 5087501.90 | 5087502.10 | 5087502.30 | 0.1942 | 0.0409 |
| Pluto | 9217-10-17 00:00 G | 5087789.25 | 5087789.50 | 5087789.76 | 0.0080 | 0.0006 |
| Saturn | 9219-03-14 20:38 G | 5088303.12 | 5088303.36 | 5088303.61 | 0.0282 | 0.0063 |
| Jupiter | 9219-09-15 02:38 G | 5088487.38 | 5088487.61 | 5088487.85 | 0.0493 | 0.0114 |
| Jupiter | 9225-03-13 20:52 G | 5090494.13 | 5090494.37 | 5090494.61 | 0.0537 | 0.0049 |

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| Jupiter | 9231-09-19 08:23 G | 5092874.67 | 5092874.85 | 5092875.04 | 0.0494 | 0.0284 |
| Saturn | 9233-09-14 08:38 G | 5093600.64 | 5093600.86 | 5093601.09 | 0.0277 | 0.0108 |
| Jupiter | 9237-03-18 14:09 G | 5094881.87 | 5094882.09 | 5094882.31 | 0.0536 | 0.0105 |
| Neptune | 9237-10-06 01:55 G | 5095083.51 | 5095083.58 | 5095083.68 | 0.0088 | 0.0082 |
| Uranus | 9238-01-05 15:36 G | 5095175.09 | 5095175.15 | 5095175.25 | 0.0133 | 0.0126 |
| Neptune | 9238-10-08 11:16 G | 5095450.82 | 5095450.97 | 5095451.14 | 0.0088 | 0.0069 |
| Uranus | 9239-01-10 03:36 G | 5095544.48 | 5095544.65 | 5095544.83 | 0.0133 | 0.0099 |
| Neptune | 9239-10-11 04:19 G | 5095818.50 | 5095818.68 | 5095818.90 | 0.0088 | 0.0055 |
| Uranus | 9240-01-14 08:23 G | 5095913.64 | 5095913.85 | 5095914.08 | 0.0133 | 0.0060 |
| Mars | 9240-06-30 03:21 G | 5096081.49 | 5096081.64 | 5096081.79 | 0.1592 | 0.0964 |
| Neptune | 9240-10-12 10:04 G | 5096185.70 | 5096185.92 | 5096186.16 | 0.0088 | 0.0042 |
| Uranus | 9241-01-17 20:38 G | 5096283.11 | 5096283.36 | 5096283.63 | 0.0133 | 0.0020 |
| Neptune | 9241-10-15 05:45 G | 5096553.50 | 5096553.74 | 5096553.99 | 0.0088 | 0.0028 |
| Uranus | 9242-01-22 01:11 G | 5096652.30 | 5096652.55 | 5096652.80 | 0.0134 | 0.0008 |
| Neptune | 9242-10-17 11:31 G | 5096920.72 | 5096920.98 | 5096921.23 | 0.0088 | 0.0014 |
| Uranus | 9243-01-26 13:40 G | 5097021.83 | 5097022.07 | 5097022.31 | 0.0134 | 0.0055 |
| Jupiter | 9243-09-24 02:09 G | 5097262.47 | 5097262.59 | 5097262.74 | 0.0496 | 0.0407 |
| Neptune | 9243-10-20 05:45 G | 5097288.47 | 5097288.74 | 5097289.01 | 0.0088 | 0.0000 |
| Uranus | 9244-01-30 17:02 G | 5097391.03 | 5097391.21 | 5097391.43 | 0.0134 | 0.0078 |
| Neptune | 9244-10-21 13:40 G | 5097655.84 | 5097656.07 | 5097656.34 | 0.0088 | 0.0017 |
| Uranus | 9245-02-03 06:43 G | 5097760.69 | 5097760.78 | 5097760.88 | 0.0134 | 0.0125 |
| Neptune | 9245-10-24 04:33 G | 5098023.45 | 5098023.69 | 5098023.96 | 0.0088 | 0.0029 |
| Neptune | 9246-10-26 18:00 G | 5098391.04 | 5098391.25 | 5098391.48 | 0.0088 | 0.0044 |
| Neptune | 9247-10-29 04:04 G | 5098758.47 | 5098758.67 | 5098758.89 | 0.0088 | 0.0056 |
| Neptune | 9248-10-30 20:52 G | 5099126.25 | 5099126.37 | 5099126.54 | 0.0088 | 0.0073 |
| Saturn | 9249-03-22 02:38 G | 5099268.56 | 5099268.61 | 5099268.69 | 0.0283 | 0.0271 |
| Jupiter | 9249-03-24 00:00 G | 5099270.31 | 5099270.50 | 5099270.69 | 0.0534 | 0.0295 |
| Neptune | 9249-11-02 03:50 G | 5099493.59 | 5099493.66 | 5099493.75 | 0.0088 | 0.0084 |
| Saturn | 9262-09-08 12:14 G | 5104186.81 | 5104187.01 | 5104187.23 | 0.0277 | 0.0142 |
| Jupiter | 9266-09-01 03:50 G | 5105640.52 | 5105640.66 | 5105640.83 | 0.0488 | 0.0376 |

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| Saturn | 9278-03-16 03:36 G | 5109854.42 | 5109854.65 | 5109854.89 | 0.0282 | 0.0007 |
| Jupiter | 9278-09-05 12:43 G | 5110027.84 | 5110028.03 | 5110028.22 | 0.0490 | 0.0264 |
| Uranus | 9280-07-08 05:02 G | 5110699.54 | 5110699.71 | 5110699.91 | 0.0145 | 0.0098 |
| Uranus | 9281-07-12 21:50 G | 5111069.19 | 5111069.41 | 5111069.65 | 0.0145 | 0.0063 |
| Uranus | 9282-07-18 04:19 G | 5111439.44 | 5111439.68 | 5111439.93 | 0.0145 | 0.0016 |
| Uranus | 9283-07-22 21:50 G | 5111809.16 | 5111809.41 | 5111809.66 | 0.0145 | 0.0037 |
| Uranus | 9284-07-27 02:38 G | 5112179.40 | 5112179.61 | 5112179.83 | 0.0144 | 0.0070 |
| Uranus | 9285-07-31 21:21 G | 5112549.29 | 5112549.39 | 5112549.52 | 0.0144 | 0.0129 |
| Jupiter | 9290-09-10 01:40 G | 5114415.33 | 5114415.57 | 5114415.81 | 0.0491 | 0.0101 |
| Saturn | 9292-09-15 09:07 G | 5115151.68 | 5115151.88 | 5115152.09 | 0.0277 | 0.0162 |
| Jupiter | 9296-03-07 12:28 G | 5116420.83 | 5116421.02 | 5116421.22 | 0.0539 | 0.0307 |
| Jupiter | 9302-09-15 05:16 G | 5118802.50 | 5118802.72 | 5118802.95 | 0.0492 | 0.0092 |
| Saturn | 9307-03-12 07:26 G | 5120441.69 | 5120441.81 | 5120441.97 | 0.0281 | 0.0231 |
| Jupiter | 9308-03-13 13:55 G | 5120808.86 | 5120809.08 | 5120809.30 | 0.0538 | 0.0091 |
| Jupiter | 9314-09-19 19:55 G | 5123190.13 | 5123190.33 | 5123190.53 | 0.0494 | 0.0253 |
| Neptune | 9319-04-09 12:00 G | 5124852.93 | 5124853.00 | 5124853.10 | 0.0089 | 0.0084 |
| Mars | 9319-07-03 22:48 G | 5124938.28 | 5124938.45 | 5124938.63 | 0.1592 | 0.0234 |
| Jupiter | 9320-03-19 02:09 G | 5125197.36 | 5125197.59 | 5125197.83 | 0.0536 | 0.0074 |
| Neptune | 9320-04-11 00:00 G | 5125220.35 | 5125220.50 | 5125220.70 | 0.0089 | 0.0068 |
| Neptune | 9321-04-13 13:11 G | 5125587.88 | 5125588.05 | 5125588.26 | 0.0089 | 0.0056 |
| Saturn | 9321-09-10 21:07 G | 5125738.16 | 5125738.38 | 5125738.62 | 0.0277 | 0.0082 |
| Neptune | 9322-04-15 20:38 G | 5125955.15 | 5125955.36 | 5125955.61 | 0.0089 | 0.0040 |
| Uranus | 9323-01-11 11:16 G | 5126225.79 | 5126225.97 | 5126226.19 | 0.0133 | 0.0090 |
| Neptune | 9323-04-18 13:26 G | 5126322.83 | 5126323.06 | 5126323.31 | 0.0089 | 0.0028 |
| Uranus | 9324-01-15 17:31 G | 5126595.01 | 5126595.23 | 5126595.46 | 0.0133 | 0.0058 |
| Neptune | 9324-04-19 18:00 G | 5126690.00 | 5126690.25 | 5126690.50 | 0.0089 | 0.0011 |
| Uranus | 9325-01-19 03:50 G | 5126964.41 | 5126964.66 | 5126964.93 | 0.0133 | 0.0023 |
| Neptune | 9325-04-22 11:45 G | 5127057.73 | 5127057.99 | 5127058.25 | 0.0089 | 0.0002 |
| Uranus | 9326-01-23 09:36 G | 5127333.65 | 5127333.90 | 5127334.14 | 0.0134 | 0.0021 |
| Neptune | 9326-04-24 16:19 G | 5127424.93 | 5127425.18 | 5127425.42 | 0.0089 | 0.0017 |

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| Jupiter | 9326-09-24 00:14 G | 5127577.35 | 5127577.51 | 5127577.66 | 0.0495 | 0.0373 |
| Uranus | 9327-01-27 20:23 G | 5127703.12 | 5127703.35 | 5127703.61 | 0.0134 | 0.0046 |
| Neptune | 9327-04-27 07:26 G | 5127792.57 | 5127792.81 | 5127793.07 | 0.0089 | 0.0029 |
| Uranus | 9328-02-01 02:09 G | 5128072.42 | 5128072.59 | 5128072.76 | 0.0134 | 0.0094 |
| Neptune | 9328-04-28 15:21 G | 5128159.92 | 5128160.14 | 5128160.35 | 0.0089 | 0.0043 |
| Uranus | 9329-02-04 14:38 G | 5128441.99 | 5128442.11 | 5128442.24 | 0.0134 | 0.0118 |
| Neptune | 9329-05-01 02:09 G | 5128527.40 | 5128527.59 | 5128527.80 | 0.0089 | 0.0056 |
| Neptune | 9330-05-03 14:38 G | 5128894.99 | 5128895.11 | 5128895.28 | 0.0089 | 0.0072 |
| Neptune | 9331-05-05 21:50 G | 5129262.33 | 5129262.41 | 5129262.49 | 0.0089 | 0.0084 |
| Jupiter | 9332-03-23 22:04 G | 5129585.22 | 5129585.42 | 5129585.62 | 0.0534 | 0.0268 |
| Saturn | 9337-03-18 15:50 G | 5131405.94 | 5131406.16 | 5131406.40 | 0.0283 | 0.0076 |
| Jupiter | 9344-03-29 03:21 G | 5133973.59 | 5133973.64 | 5133973.70 | 0.0532 | 0.0513 |
| Jupiter | 9349-09-01 12:43 G | 5135955.91 | 5135956.03 | 5135956.16 | 0.0488 | 0.0406 |
| Saturn | 9351-09-18 09:50 G | 5136702.77 | 5136702.91 | 5136703.07 | 0.0276 | 0.0219 |
| Jupiter | 9361-09-05 23:45 G | 5140343.30 | 5140343.49 | 5140343.69 | 0.0489 | 0.0286 |
| Uranus | 9363-07-05 06:57 G | 5141010.73 | 5141010.79 | 5141010.86 | 0.0145 | 0.0140 |
| Uranus | 9364-07-09 13:11 G | 5141380.90 | 5141381.05 | 5141381.23 | 0.0145 | 0.0108 |
| Uranus | 9365-07-14 05:45 G | 5141750.51 | 5141750.74 | 5141750.98 | 0.0145 | 0.0052 |
| Saturn | 9366-03-13 13:55 G | 5141992.88 | 5141993.08 | 5141993.30 | 0.0282 | 0.0161 |
| Uranus | 9366-07-19 12:43 G | 5142120.78 | 5142121.03 | 5142121.28 | 0.0145 | 0.0010 |
| Uranus | 9367-07-24 05:45 G | 5142490.49 | 5142490.74 | 5142491.00 | 0.0145 | 0.0030 |
| Uranus | 9368-07-28 11:31 G | 5142860.79 | 5142860.98 | 5142861.19 | 0.0144 | 0.0088 |
| Uranus | 9369-08-02 05:31 G | 5143230.60 | 5143230.73 | 5143230.89 | 0.0144 | 0.0119 |
| Jupiter | 9373-09-09 23:45 G | 5144730.27 | 5144730.49 | 5144730.72 | 0.0490 | 0.0127 |
| Pluto | 9376-04-19 18:43 G | 5145683.03 | 5145683.28 | 5145683.55 | 0.0064 | 0.0014 |
| Jupiter | 9379-03-08 12:43 G | 5146735.86 | 5146736.03 | 5146736.21 | 0.0540 | 0.0337 |
| Saturn | 9380-09-12 09:21 G | 5147289.65 | 5147289.89 | 5147290.14 | 0.0277 | 0.0019 |
| Jupiter | 9385-09-14 15:50 G | 5149117.93 | 5149118.16 | 5149118.40 | 0.0492 | 0.0070 |
| Jupiter | 9391-03-14 00:14 G | 5151124.28 | 5151124.51 | 5151124.74 | 0.0538 | 0.0123 |
| Saturn | 9396-03-20 05:02 G | 5152957.52 | 5152957.71 | 5152957.93 | 0.0283 | 0.0147 |

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| Jupiter | 9397-09-18 18:57 G | 5153505.08 | 5153505.29 | 5153505.51 | 0.0493 | 0.0223 |
| Mars | 9398-07-05 16:04 G | 5153795.02 | 5153795.17 | 5153795.31 | 0.1592 | 0.0918 |
| Neptune | 9402-10-10 02:38 G | 5155351.46 | 5155351.61 | 5155351.77 | 0.0088 | 0.0070 |
| Jupiter | 9403-03-19 19:40 G | 5155512.09 | 5155512.32 | 5155512.55 | 0.0536 | 0.0033 |
| Neptune | 9403-10-12 07:26 G | 5155718.66 | 5155718.81 | 5155719.01 | 0.0088 | 0.0066 |
| Neptune | 9404-10-14 03:07 G | 5156086.41 | 5156086.63 | 5156086.87 | 0.0088 | 0.0043 |
| Neptune | 9405-10-16 09:07 G | 5156453.66 | 5156453.88 | 5156454.12 | 0.0088 | 0.0038 |
| Uranus | 9406-01-08 09:36 G | 5156537.80 | 5156537.90 | 5156538.02 | 0.0133 | 0.0120 |
| Neptune | 9406-10-19 02:52 G | 5156821.36 | 5156821.62 | 5156821.89 | 0.0088 | 0.0015 |
| Uranus | 9407-01-12 17:45 G | 5156907.08 | 5156907.24 | 5156907.45 | 0.0133 | 0.0095 |
| Neptune | 9407-10-21 12:14 G | 5157188.77 | 5157189.01 | 5157189.27 | 0.0088 | 0.0010 |
| Uranus | 9408-01-17 01:55 G | 5157276.36 | 5157276.58 | 5157276.81 | 0.0133 | 0.0052 |
| Neptune | 9408-10-23 01:26 G | 5157556.30 | 5157556.56 | 5157556.84 | 0.0088 | 0.0012 |
| Uranus | 9409-01-20 11:31 G | 5157645.72 | 5157645.98 | 5157646.24 | 0.0133 | 0.0016 |
| Saturn | 9409-09-07 16:04 G | 5157876.10 | 5157876.17 | 5157876.25 | 0.0278 | 0.0263 |
| Jupiter | 9409-09-24 12:57 G | 5157892.88 | 5157893.04 | 5157893.20 | 0.0495 | 0.0342 |
| Neptune | 9409-10-25 15:21 G | 5157923.90 | 5157924.14 | 5157924.40 | 0.0088 | 0.0018 |
| Uranus | 9410-01-24 18:28 G | 5158015.03 | 5158015.27 | 5158015.52 | 0.0134 | 0.0015 |
| Neptune | 9410-10-27 23:45 G | 5158291.28 | 5158291.49 | 5158291.75 | 0.0088 | 0.0041 |
| Uranus | 9411-01-29 04:33 G | 5158384.45 | 5158384.69 | 5158384.92 | 0.0134 | 0.0061 |
| Neptune | 9411-10-30 18:14 G | 5158659.05 | 5158659.26 | 5158659.49 | 0.0088 | 0.0046 |
| Uranus | 9412-02-02 10:33 G | 5158753.77 | 5158753.94 | 5158754.15 | 0.0134 | 0.0085 |
| Neptune | 9412-11-01 00:14 G | 5159026.37 | 5159026.51 | 5159026.70 | 0.0088 | 0.0069 |
| Uranus | 9413-02-05 21:50 G | 5159123.38 | 5159123.41 | 5159123.45 | 0.0134 | 0.0133 |
| Neptune | 9413-11-03 20:23 G | 5159394.22 | 5159394.35 | 5159394.51 | 0.0088 | 0.0073 |
| Jupiter | 9415-03-24 22:33 G | 5159900.24 | 5159900.44 | 5159900.64 | 0.0534 | 0.0228 |
| Jupiter | 9421-09-28 20:09 G | 5162280.31 | 5162280.34 | 5162280.37 | 0.0496 | 0.0492 |
| Saturn | 9425-03-15 21:21 G | 5163544.17 | 5163544.39 | 5163544.63 | 0.0282 | 0.0091 |
| Jupiter | 9427-03-29 19:55 G | 5164288.22 | 5164288.33 | 5164288.44 | 0.0533 | 0.0466 |
| Jupiter | 9432-09-01 19:11 G | 5166271.20 | 5166271.30 | 5166271.42 | 0.0488 | 0.0432 |

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| Saturn | 9439-09-15 18:43 G | 5168841.03 | 5168841.28 | 5168841.53 | 0.0277 | 0.0049 |
| Jupiter | 9444-09-05 21:07 G | 5170658.21 | 5170658.38 | 5170658.56 | 0.0489 | 0.0314 |
| Uranus | 9448-07-10 22:04 G | 5172062.23 | 5172062.42 | 5172062.63 | 0.0145 | 0.0091 |
| Uranus | 9449-07-15 15:07 G | 5172431.90 | 5172432.13 | 5172432.36 | 0.0145 | 0.0057 |
| Uranus | 9450-07-20 21:50 G | 5172802.16 | 5172802.41 | 5172802.66 | 0.0145 | 0.0008 |
| Uranus | 9451-07-25 14:09 G | 5173171.85 | 5173172.09 | 5173172.34 | 0.0145 | 0.0043 |
| Uranus | 9452-07-29 20:23 G | 5173542.15 | 5173542.35 | 5173542.57 | 0.0144 | 0.0078 |
| Uranus | 9453-08-03 13:40 G | 5173912.00 | 5173912.07 | 5173912.15 | 0.0144 | 0.0138 |
| Saturn | 9455-03-23 15:07 G | 5174508.99 | 5174509.13 | 5174509.30 | 0.0283 | 0.0222 |
| Jupiter | 9456-09-10 12:14 G | 5175045.78 | 5175046.01 | 5175046.23 | 0.0490 | 0.0144 |
| Jupiter | 9462-03-08 18:00 G | 5177051.08 | 5177051.25 | 5177051.43 | 0.0540 | 0.0368 |
| Saturn | 9468-09-09 03:07 G | 5179427.47 | 5179427.63 | 5179427.81 | 0.0277 | 0.0194 |
| Jupiter | 9468-09-14 15:07 G | 5179432.89 | 5179433.13 | 5179433.37 | 0.0492 | 0.0048 |
| Jupiter | 9474-03-13 10:04 G | 5181438.71 | 5181438.92 | 5181439.14 | 0.0538 | 0.0173 |
| Jupiter | 9480-09-19 06:14 G | 5183820.55 | 5183820.76 | 5183820.97 | 0.0493 | 0.0194 |
| Neptune | 9483-04-10 00:14 G | 5184753.44 | 5184753.51 | 5184753.62 | 0.0089 | 0.0084 |
| Saturn | 9484-03-17 11:16 G | 5185095.74 | 5185095.97 | 5185096.21 | 0.0282 | 0.0017 |
| Neptune | 9484-04-11 13:55 G | 5185120.97 | 5185121.08 | 5185121.20 | 0.0089 | 0.0079 |
| Neptune | 9485-04-13 20:09 G | 5185488.15 | 5185488.34 | 5185488.55 | 0.0089 | 0.0057 |
| Jupiter | 9486-03-18 19:55 G | 5185827.10 | 5185827.33 | 5185827.55 | 0.0537 | 0.0021 |
| Neptune | 9486-04-16 13:11 G | 5185855.87 | 5185856.05 | 5185856.28 | 0.0089 | 0.0052 |
| Neptune | 9487-04-18 17:45 G | 5186223.01 | 5186223.24 | 5186223.50 | 0.0089 | 0.0029 |
| Neptune | 9488-04-20 11:45 G | 5186590.75 | 5186590.99 | 5186591.25 | 0.0089 | 0.0023 |
| Neptune | 9489-04-22 17:16 G | 5186957.97 | 5186958.22 | 5186958.47 | 0.0089 | 0.0001 |
| Uranus | 9490-01-08 19:11 G | 5187219.26 | 5187219.30 | 5187219.37 | 0.0133 | 0.0130 |
| Neptune | 9490-04-25 08:23 G | 5187325.59 | 5187325.85 | 5187326.12 | 0.0089 | 0.0004 |
| Uranus | 9491-01-13 02:09 G | 5187588.39 | 5187588.59 | 5187588.81 | 0.0133 | 0.0082 |
| Neptune | 9491-04-27 17:16 G | 5187693.00 | 5187693.22 | 5187693.47 | 0.0089 | 0.0027 |
| Uranus | 9492-01-17 11:02 G | 5187957.75 | 5187957.96 | 5187958.20 | 0.0133 | 0.0054 |
| Neptune | 9492-04-29 03:36 G | 5188060.42 | 5188060.65 | 5188060.91 | 0.0089 | 0.0032 |

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| Jupiter | 9492-09-23 09:07 G | 5188207.69 | 5188207.88 | 5188208.07 | 0.0494 | 0.0306 |
| Uranus | 9493-01-20 18:57 G | 5188327.03 | 5188327.29 | 5188327.55 | 0.0133 | 0.0014 |
| Neptune | 9493-05-01 16:33 G | 5188428.02 | 5188428.19 | 5188428.41 | 0.0089 | 0.0055 |
| Uranus | 9494-01-25 03:21 G | 5188696.40 | 5188696.64 | 5188696.89 | 0.0134 | 0.0026 |
| Neptune | 9494-05-03 22:33 G | 5188795.26 | 5188795.44 | 5188795.64 | 0.0089 | 0.0059 |
| Uranus | 9495-01-29 11:45 G | 5189065.76 | 5189065.99 | 5189066.24 | 0.0134 | 0.0053 |
| Neptune | 9495-05-06 15:07 G | 5189163.06 | 5189163.13 | 5189163.25 | 0.0089 | 0.0082 |
| Uranus | 9496-02-02 19:55 G | 5189435.19 | 5189435.33 | 5189435.51 | 0.0134 | 0.0102 |
| Neptune | 9496-05-07 18:43 G | 5189530.24 | 5189530.28 | 5189530.37 | 0.0089 | 0.0086 |
| Uranus | 9497-02-06 06:00 G | 5189804.67 | 5189804.75 | 5189804.86 | 0.0134 | 0.0124 |
| Jupiter | 9498-03-23 19:55 G | 5190215.11 | 5190215.33 | 5190215.56 | 0.0535 | 0.0193 |
| Saturn | 9498-09-17 01:55 G | 5190392.35 | 5190392.58 | 5190392.81 | 0.0277 | 0.0119 |
| Mars | 9501-01-05 00:43 G | 5191232.36 | 5191232.53 | 5191232.70 | 0.1941 | 0.0952 |
| Jupiter | 9504-09-28 21:50 G | 5192595.34 | 5192595.41 | 5192595.49 | 0.0496 | 0.0465 |
| Jupiter | 9510-03-30 00:14 G | 5194603.39 | 5194603.51 | 5194603.64 | 0.0533 | 0.0437 |
| Saturn | 9513-03-12 23:16 G | 5195682.43 | 5195682.47 | 5195682.54 | 0.0281 | 0.0273 |
| Jupiter | 9515-09-02 18:28 G | 5196586.20 | 5196586.27 | 5196586.36 | 0.0488 | 0.0458 |
| Mars | 9524-07-04 03:36 G | 5199813.46 | 5199813.65 | 5199813.85 | 0.1593 | 0.0442 |
| Jupiter | 9527-09-07 10:04 G | 5200973.75 | 5200973.92 | 5200974.10 | 0.0489 | 0.0335 |
| Saturn | 9527-09-12 18:14 G | 5200979.05 | 5200979.26 | 5200979.47 | 0.0277 | 0.0123 |
| Uranus | 9531-07-08 01:26 G | 5202373.49 | 5202373.56 | 5202373.66 | 0.0145 | 0.0135 |
| Uranus | 9532-07-12 06:43 G | 5202743.61 | 5202743.78 | 5202743.97 | 0.0145 | 0.0103 |
| Uranus | 9533-07-17 00:00 G | 5203113.27 | 5203113.50 | 5203113.74 | 0.0145 | 0.0045 |
| Uranus | 9534-07-22 06:43 G | 5203483.53 | 5203483.78 | 5203484.04 | 0.0145 | 0.0005 |
| Uranus | 9535-07-26 23:16 G | 5203853.23 | 5203853.47 | 5203853.72 | 0.0145 | 0.0039 |
| Uranus | 9536-07-31 06:00 G | 5204223.58 | 5204223.75 | 5204223.95 | 0.0144 | 0.0095 |
| Uranus | 9537-08-04 23:02 G | 5204593.35 | 5204593.46 | 5204593.60 | 0.0144 | 0.0126 |
| Jupiter | 9539-09-11 10:19 G | 5205360.71 | 5205360.93 | 5205361.16 | 0.0490 | 0.0162 |
| Saturn | 9543-03-21 02:52 G | 5206647.39 | 5206647.62 | 5206647.85 | 0.0283 | 0.0059 |
| Jupiter | 9545-03-08 03:50 G | 5207365.52 | 5207365.66 | 5207365.81 | 0.0540 | 0.0419 |

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| Jupiter | 9551-09-15 21:50 G | 5209748.18 | 5209748.41 | 5209748.64 | 0.0491 | 0.0021 |
| Jupiter | 9557-03-13 17:02 G | 5211754.00 | 5211754.21 | 5211754.42 | 0.0539 | 0.0218 |
| Saturn | 9557-09-19 12:14 G | 5211943.85 | 5211944.01 | 5211944.20 | 0.0276 | 0.0193 |
| Jupiter | 9563-09-20 02:52 G | 5214135.39 | 5214135.62 | 5214135.86 | 0.0492 | 0.0159 |
| Neptune | 9566-10-10 06:00 G | 5215251.66 | 5215251.75 | 5215251.89 | 0.0088 | 0.0078 |
| Neptune | 9567-10-13 01:11 G | 5215619.41 | 5215619.55 | 5215619.75 | 0.0088 | 0.0068 |
| Neptune | 9568-10-14 07:55 G | 5215986.63 | 5215986.83 | 5215987.05 | 0.0088 | 0.0051 |
| Jupiter | 9569-03-18 17:31 G | 5216142.00 | 5216142.23 | 5216142.47 | 0.0537 | 0.0057 |
| Neptune | 9569-10-17 00:00 G | 5216354.28 | 5216354.50 | 5216354.76 | 0.0088 | 0.0041 |
| Neptune | 9570-10-19 10:19 G | 5216721.69 | 5216721.93 | 5216722.17 | 0.0088 | 0.0025 |
| Neptune | 9571-10-21 22:04 G | 5217089.16 | 5217089.42 | 5217089.69 | 0.0088 | 0.0014 |
| Saturn | 9572-03-14 06:57 G | 5217233.62 | 5217233.79 | 5217233.97 | 0.0282 | 0.0200 |
| Neptune | 9572-10-23 13:26 G | 5217456.81 | 5217457.06 | 5217457.32 | 0.0088 | 0.0002 |
| Neptune | 9573-10-25 21:21 G | 5217824.13 | 5217824.39 | 5217824.66 | 0.0088 | 0.0015 |
| Uranus | 9574-01-10 03:21 G | 5217900.53 | 5217900.64 | 5217900.78 | 0.0133 | 0.0115 |
| Neptune | 9574-10-28 16:04 G | 5218191.93 | 5218192.17 | 5218192.42 | 0.0088 | 0.0030 |
| Uranus | 9575-01-14 09:07 G | 5218269.70 | 5218269.88 | 5218270.09 | 0.0133 | 0.0090 |
| Jupiter | 9575-09-24 14:52 G | 5218522.94 | 5218523.12 | 5218523.32 | 0.0494 | 0.0279 |
| Neptune | 9575-10-30 21:21 G | 5218559.18 | 5218559.39 | 5218559.64 | 0.0088 | 0.0043 |
| Uranus | 9576-01-18 20:09 G | 5218639.11 | 5218639.34 | 5218639.58 | 0.0133 | 0.0045 |
| Neptune | 9576-11-01 17:16 G | 5218927.03 | 5218927.22 | 5218927.44 | 0.0088 | 0.0056 |
| Uranus | 9577-01-22 02:52 G | 5219008.36 | 5219008.62 | 5219008.88 | 0.0133 | 0.0012 |
| Neptune | 9577-11-03 23:45 G | 5219294.36 | 5219294.49 | 5219294.67 | 0.0088 | 0.0070 |
| Uranus | 9578-01-26 12:57 G | 5219377.80 | 5219378.04 | 5219378.28 | 0.0134 | 0.0023 |
| Neptune | 9578-11-06 16:48 G | 5219662.14 | 5219662.20 | 5219662.33 | 0.0088 | 0.0083 |
| Uranus | 9579-01-30 19:55 G | 5219747.11 | 5219747.33 | 5219747.57 | 0.0134 | 0.0067 |
| Mars | 9580-01-09 11:45 G | 5220090.91 | 5220090.99 | 5220091.06 | 0.1942 | 0.1782 |
| Uranus | 9580-02-04 05:45 G | 5220116.56 | 5220116.74 | 5220116.92 | 0.0134 | 0.0091 |
| Jupiter | 9581-03-23 23:02 G | 5220530.25 | 5220530.46 | 5220530.67 | 0.0535 | 0.0160 |
| Saturn | 9586-09-14 07:26 G | 5222530.57 | 5222530.81 | 5222531.06 | 0.0277 | 0.0050 |

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| Jupiter | 9587-09-29 05:31 G | 5222910.62 | 5222910.73 | 5222910.84 | 0.0496 | 0.0442 |
| Jupiter | 9593-03-28 21:07 G | 5224918.23 | 5224918.38 | 5224918.55 | 0.0533 | 0.0392 |
| Jupiter | 9598-09-02 07:40 G | 5226901.79 | 5226901.82 | 5226901.85 | 0.0488 | 0.0481 |
| Saturn | 9602-03-22 12:43 G | 5228198.81 | 5228199.03 | 5228199.25 | 0.0283 | 0.0131 |
| Mars | 9603-07-07 10:19 G | 5228670.75 | 5228670.93 | 5228671.12 | 0.1592 | 0.0474 |
| Jupiter | 9610-09-06 04:48 G | 5231288.54 | 5231288.70 | 5231288.86 | 0.0488 | 0.0364 |
| Saturn | 9615-09-08 23:02 G | 5233117.44 | 5233117.46 | 5233117.52 | 0.0278 | 0.0274 |
| Uranus | 9616-07-12 16:04 G | 5233424.98 | 5233425.17 | 5233425.39 | 0.0145 | 0.0086 |
| Saturn | 9616-09-21 02:52 G | 5233495.57 | 5233495.62 | 5233495.68 | 0.0276 | 0.0267 |
| Uranus | 9617-07-17 10:19 G | 5233794.71 | 5233794.93 | 5233795.17 | 0.0145 | 0.0053 |
| Uranus | 9618-07-22 16:48 G | 5234164.95 | 5234165.20 | 5234165.46 | 0.0145 | 0.0003 |
| Uranus | 9619-07-27 09:21 G | 5234534.67 | 5234534.89 | 5234535.14 | 0.0145 | 0.0049 |
| Uranus | 9620-07-31 16:04 G | 5234904.98 | 5234905.17 | 5234905.39 | 0.0144 | 0.0086 |
| Jupiter | 9622-09-10 18:28 G | 5235676.06 | 5235676.27 | 5235676.48 | 0.0489 | 0.0183 |
| Pluto | 9623-04-23 16:04 G | 5235901.03 | 5235901.17 | 5235901.37 | 0.0064 | 0.0049 |
| Pluto | 9624-04-24 05:16 G | 5236267.58 | 5236267.72 | 5236267.93 | 0.0064 | 0.0047 |
| Jupiter | 9628-03-07 13:11 G | 5237680.93 | 5237681.05 | 5237681.18 | 0.0541 | 0.0447 |
| Saturn | 9631-03-16 17:02 G | 5238785.00 | 5238785.21 | 5238785.42 | 0.0282 | 0.0127 |
| Jupiter | 9634-09-14 22:33 G | 5240063.20 | 5240063.44 | 5240063.69 | 0.0491 | 0.0010 |
| Jupiter | 9640-03-12 12:43 G | 5242068.83 | 5242069.03 | 5242069.24 | 0.0539 | 0.0255 |
| Saturn | 9645-09-15 15:07 G | 5244081.87 | 5244082.13 | 5244082.39 | 0.0277 | 0.0018 |
| Jupiter | 9646-09-19 10:33 G | 5244450.72 | 5244450.94 | 5244451.16 | 0.0492 | 0.0131 |
| Neptune | 9648-04-11 19:55 G | 5245021.24 | 5245021.33 | 5245021.45 | 0.0089 | 0.0082 |
| Neptune | 9649-04-14 13:55 G | 5245388.91 | 5245389.08 | 5245389.26 | 0.0089 | 0.0064 |
| Neptune | 9650-04-16 18:00 G | 5245756.06 | 5245756.25 | 5245756.46 | 0.0089 | 0.0054 |
| Neptune | 9651-04-19 11:45 G | 5246123.77 | 5246123.99 | 5246124.24 | 0.0089 | 0.0038 |
| Jupiter | 9652-03-17 17:02 G | 5246456.99 | 5246457.21 | 5246457.43 | 0.0537 | 0.0100 |
| Neptune | 9652-04-20 17:45 G | 5246491.01 | 5246491.24 | 5246491.48 | 0.0089 | 0.0028 |
| Neptune | 9653-04-23 08:09 G | 5246858.58 | 5246858.84 | 5246859.10 | 0.0089 | 0.0010 |
| Neptune | 9654-04-25 18:00 G | 5247226.00 | 5247226.25 | 5247226.49 | 0.0089 | 0.0002 |

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| Neptune | 9655-04-28 02:52 G | 5247593.38 | 5247593.62 | 5247593.89 | 0.0089 | 0.0018 |
| Neptune | 9656-04-29 17:45 G | 5247961.01 | 5247961.24 | 5247961.48 | 0.0089 | 0.0028 |
| Neptune | 9657-05-01 23:02 G | 5248328.25 | 5248328.46 | 5248328.70 | 0.0089 | 0.0044 |
| Uranus | 9658-01-10 13:11 G | 5248581.98 | 5248582.05 | 5248582.14 | 0.0133 | 0.0126 |
| Neptune | 9658-05-04 16:48 G | 5248696.00 | 5248696.20 | 5248696.40 | 0.0089 | 0.0054 |
| Jupiter | 9658-09-23 22:04 G | 5248838.22 | 5248838.42 | 5248838.64 | 0.0494 | 0.0250 |
| Uranus | 9659-01-14 17:31 G | 5248951.02 | 5248951.23 | 5248951.45 | 0.0133 | 0.0077 |
| Neptune | 9659-05-06 20:23 G | 5249063.21 | 5249063.35 | 5249063.51 | 0.0089 | 0.0070 |
| Uranus | 9660-01-19 05:31 G | 5249320.50 | 5249320.73 | 5249320.96 | 0.0133 | 0.0050 |
| Neptune | 9660-05-08 12:57 G | 5249430.97 | 5249431.04 | 5249431.17 | 0.0089 | 0.0082 |
| Uranus | 9661-01-22 10:33 G | 5249689.67 | 5249689.94 | 5249690.20 | 0.0133 | 0.0008 |
| Saturn | 9661-03-23 17:02 G | 5249750.05 | 5249750.21 | 5249750.40 | 0.0283 | 0.0202 |
| Uranus | 9662-01-26 21:50 G | 5250059.18 | 5250059.41 | 5250059.66 | 0.0134 | 0.0031 |
| Uranus | 9663-01-31 03:50 G | 5250428.43 | 5250428.66 | 5250428.90 | 0.0134 | 0.0060 |
| Uranus | 9664-02-04 15:21 G | 5250797.99 | 5250798.14 | 5250798.28 | 0.0134 | 0.0107 |
| Jupiter | 9664-03-22 18:28 G | 5250845.04 | 5250845.27 | 5250845.50 | 0.0536 | 0.0117 |
| Uranus | 9665-02-07 21:50 G | 5251167.37 | 5251167.41 | 5251167.49 | 0.0134 | 0.0131 |
| Jupiter | 9670-09-28 00:28 G | 5253225.40 | 5253225.52 | 5253225.65 | 0.0495 | 0.0411 |
| Saturn | 9674-09-10 12:57 G | 5254668.89 | 5254669.04 | 5254669.21 | 0.0278 | 0.0205 |
| Jupiter | 9676-03-27 17:45 G | 5255233.08 | 5255233.24 | 5255233.42 | 0.0535 | 0.0358 |
| Jupiter | 9688-04-02 04:04 G | 5259621.65 | 5259621.67 | 5259621.69 | 0.0533 | 0.0529 |
| Saturn | 9690-03-18 05:02 G | 5260336.48 | 5260336.71 | 5260336.95 | 0.0282 | 0.0057 |
| Jupiter | 9693-09-05 16:33 G | 5261604.05 | 5261604.19 | 5261604.33 | 0.0488 | 0.0384 |
| Uranus | 9699-07-08 21:21 G | 5263736.31 | 5263736.39 | 5263736.52 | 0.0145 | 0.0131 |
| Uranus | 9700-07-14 00:57 G | 5264106.37 | 5264106.54 | 5264106.75 | 0.0145 | 0.0098 |
| Uranus | 9701-07-18 20:09 G | 5264476.11 | 5264476.34 | 5264476.58 | 0.0145 | 0.0038 |
| Uranus | 9702-07-24 01:55 G | 5264846.32 | 5264846.58 | 5264846.84 | 0.0145 | 0.0001 |
| Uranus | 9703-07-28 19:11 G | 5265216.07 | 5265216.30 | 5265216.55 | 0.0145 | 0.0046 |
| Uranus | 9704-08-02 01:55 G | 5265586.41 | 5265586.58 | 5265586.77 | 0.0144 | 0.0102 |
| Saturn | 9704-09-17 19:40 G | 5265633.09 | 5265633.32 | 5265633.57 | 0.0277 | 0.0084 |

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| Uranus | 9705-08-06 18:43 G | 5265956.20 | 5265956.28 | 5265956.39 | 0.0144 | 0.0134 |
| Jupiter | 9705-09-10 21:07 G | 5265991.16 | 5265991.38 | 5265991.60 | 0.0489 | 0.0201 |
| Jupiter | 9711-03-08 04:04 G | 5267995.58 | 5267995.67 | 5267995.78 | 0.0540 | 0.0483 |
| Pluto | 9712-10-24 00:43 G | 5268591.29 | 5268591.53 | 5268591.78 | 0.0080 | 0.0034 |
| Jupiter | 9717-09-15 06:57 G | 5270378.57 | 5270378.79 | 5270379.02 | 0.0491 | 0.0031 |
| Saturn | 9720-03-25 20:23 G | 5271301.28 | 5271301.35 | 5271301.44 | 0.0283 | 0.0267 |
| Jupiter | 9723-03-13 13:11 G | 5272383.87 | 5272384.05 | 5272384.24 | 0.0539 | 0.0300 |
| Mars | 9729-07-04 16:48 G | 5274689.08 | 5274689.20 | 5274689.33 | 0.1594 | 0.1078 |
| Jupiter | 9729-09-19 14:52 G | 5274765.88 | 5274766.12 | 5274766.36 | 0.0491 | 0.0092 |
| Neptune | 9731-10-13 05:16 G | 5275519.57 | 5275519.72 | 5275519.89 | 0.0088 | 0.0068 |
| Neptune | 9732-10-14 20:52 G | 5275887.19 | 5275887.37 | 5275887.57 | 0.0088 | 0.0062 |
| Saturn | 9733-09-13 01:40 G | 5276220.37 | 5276220.57 | 5276220.79 | 0.0278 | 0.0139 |
| Neptune | 9733-10-17 08:38 G | 5276254.64 | 5276254.86 | 5276255.09 | 0.0088 | 0.0042 |
| Neptune | 9734-10-19 18:57 G | 5276622.06 | 5276622.29 | 5276622.56 | 0.0088 | 0.0037 |
| Jupiter | 9735-03-18 15:50 G | 5276771.93 | 5276772.16 | 5276772.39 | 0.0539 | 0.0140 |
| Neptune | 9735-10-22 11:16 G | 5276989.73 | 5276989.97 | 5276990.23 | 0.0088 | 0.0015 |
| Neptune | 9736-10-23 18:00 G | 5277356.99 | 5277357.25 | 5277357.52 | 0.0088 | 0.0009 |
| Neptune | 9737-10-26 12:57 G | 5277724.79 | 5277725.04 | 5277725.30 | 0.0088 | 0.0013 |
| Neptune | 9738-10-28 18:14 G | 5278092.02 | 5278092.26 | 5278092.52 | 0.0088 | 0.0018 |
| Neptune | 9739-10-31 13:26 G | 5278459.83 | 5278460.06 | 5278460.30 | 0.0088 | 0.0040 |
| Neptune | 9740-11-01 20:23 G | 5278827.15 | 5278827.35 | 5278827.59 | 0.0088 | 0.0045 |
| Jupiter | 9741-09-23 20:09 G | 5279153.13 | 5279153.34 | 5279153.55 | 0.0493 | 0.0214 |
| Neptune | 9741-11-04 12:43 G | 5279194.87 | 5279195.03 | 5279195.22 | 0.0088 | 0.0067 |
| Uranus | 9742-01-11 21:36 G | 5279263.27 | 5279263.40 | 5279263.55 | 0.0133 | 0.0110 |
| Neptune | 9742-11-07 00:28 G | 5279562.39 | 5279562.52 | 5279562.68 | 0.0088 | 0.0072 |
| Uranus | 9743-01-16 00:57 G | 5279632.36 | 5279632.54 | 5279632.76 | 0.0133 | 0.0087 |
| Uranus | 9744-01-20 14:38 G | 5280001.88 | 5280002.11 | 5280002.36 | 0.0133 | 0.0039 |
| Uranus | 9745-01-23 18:57 G | 5280371.03 | 5280371.29 | 5280371.55 | 0.0133 | 0.0008 |
| Uranus | 9746-01-28 07:40 G | 5280740.58 | 5280740.82 | 5280741.06 | 0.0134 | 0.0030 |
| Uranus | 9747-02-01 12:00 G | 5281109.79 | 5281110.00 | 5281110.23 | 0.0134 | 0.0072 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Jupiter | 9747-03-23 19:40 G | 5281160.10 | 5281160.32 | 5281160.54 | 0.0537 | 0.0090 |
| Uranus | 9748-02-06 00:14 G | 5281479.35 | 5281479.51 | 5281479.69 | 0.0134 | 0.0098 |
| Saturn | 9749-03-20 14:52 G | 5281887.87 | 5281888.12 | 5281888.36 | 0.0282 | 0.0010 |
| Jupiter | 9753-09-28 13:40 G | 5283540.93 | 5283541.07 | 5283541.22 | 0.0495 | 0.0390 |
| Jupiter | 9759-03-29 05:45 G | 5285548.56 | 5285548.74 | 5285548.92 | 0.0535 | 0.0332 |
| Saturn | 9763-09-20 04:04 G | 5287184.47 | 5287184.67 | 5287184.87 | 0.0277 | 0.0148 |
| Jupiter | 9771-04-02 20:38 G | 5289936.28 | 5289936.36 | 5289936.45 | 0.0533 | 0.0492 |
| Jupiter | 9776-09-05 20:38 G | 5291919.23 | 5291919.36 | 5291919.50 | 0.0488 | 0.0401 |
| Saturn | 9778-03-14 20:38 G | 5292474.25 | 5292474.36 | 5292474.49 | 0.0281 | 0.0243 |
| Uranus | 9783-07-10 07:26 G | 5294417.77 | 5294417.81 | 5294417.89 | 0.0145 | 0.0140 |
| Uranus | 9784-07-14 10:33 G | 5294787.73 | 5294787.94 | 5294788.16 | 0.0145 | 0.0079 |
| Uranus | 9785-07-19 06:43 G | 5295157.56 | 5295157.78 | 5295158.02 | 0.0145 | 0.0047 |
| Uranus | 9786-07-24 12:00 G | 5295527.74 | 5295528.00 | 5295528.26 | 0.0145 | 0.0008 |
| Uranus | 9787-07-29 05:45 G | 5295897.53 | 5295897.74 | 5295897.98 | 0.0145 | 0.0055 |
| Uranus | 9788-08-02 12:00 G | 5296267.82 | 5296268.00 | 5296268.21 | 0.0144 | 0.0094 |
| Jupiter | 9788-09-10 03:50 G | 5296306.47 | 5296306.66 | 5296306.87 | 0.0489 | 0.0228 |
| Saturn | 9792-09-14 06:28 G | 5297771.53 | 5297771.77 | 5297772.02 | 0.0278 | 0.0075 |
| Jupiter | 9794-03-07 08:38 G | 5298310.81 | 5298310.86 | 5298310.92 | 0.0542 | 0.0523 |
| Jupiter | 9800-09-15 13:40 G | 5300693.83 | 5300694.07 | 5300694.32 | 0.0490 | 0.0059 |
| Jupiter | 9806-03-13 13:55 G | 5302698.90 | 5302699.08 | 5302699.28 | 0.0540 | 0.0337 |
| Saturn | 9808-03-22 16:48 G | 5303438.96 | 5303439.20 | 5303439.44 | 0.0282 | 0.0074 |
| Mars | 9808-07-07 09:07 G | 5303545.70 | 5303545.88 | 5303546.06 | 0.1593 | 0.0192 |
| Neptune | 9812-04-13 13:26 G | 5304921.97 | 5304922.06 | 5304922.19 | 0.0089 | 0.0081 |
| Jupiter | 9812-09-19 17:31 G | 5305081.00 | 5305081.23 | 5305081.46 | 0.0491 | 0.0061 |
| Neptune | 9813-04-15 17:31 G | 5305289.12 | 5305289.23 | 5305289.39 | 0.0089 | 0.0076 |
| Neptune | 9814-04-18 10:48 G | 5305656.76 | 5305656.95 | 5305657.18 | 0.0089 | 0.0055 |
| Neptune | 9815-04-20 17:16 G | 5306024.03 | 5306024.22 | 5306024.45 | 0.0089 | 0.0049 |
| Neptune | 9816-04-22 06:57 G | 5306391.55 | 5306391.79 | 5306392.05 | 0.0089 | 0.0028 |
| Neptune | 9817-04-24 18:28 G | 5306759.03 | 5306759.27 | 5306759.51 | 0.0089 | 0.0021 |
| Jupiter | 9818-03-18 20:23 G | 5307087.14 | 5307087.35 | 5307087.56 | 0.0539 | 0.0167 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Neptune | 9818-04-27 03:21 G | 5307126.37 | 5307126.64 | 5307126.90 | 0.0089 | 0.0001 |
| Neptune | 9819-04-29 18:43 G | 5307494.03 | 5307494.28 | 5307494.53 | 0.0089 | 0.0005 |
| Neptune | 9820-04-30 23:31 G | 5307861.24 | 5307861.48 | 5307861.73 | 0.0089 | 0.0026 |
| Neptune | 9821-05-03 17:02 G | 5308228.98 | 5308229.21 | 5308229.46 | 0.0089 | 0.0031 |
| Neptune | 9822-05-05 21:07 G | 5308596.19 | 5308596.38 | 5308596.59 | 0.0089 | 0.0053 |
| Saturn | 9822-09-22 13:26 G | 5308735.92 | 5308736.06 | 5308736.23 | 0.0277 | 0.0210 |
| Neptune | 9823-05-08 13:26 G | 5308963.88 | 5308964.06 | 5308964.27 | 0.0089 | 0.0058 |
| Neptune | 9824-05-09 19:26 G | 5309331.23 | 5309331.31 | 5309331.45 | 0.0089 | 0.0080 |
| Jupiter | 9824-09-24 11:31 G | 5309468.76 | 5309468.98 | 5309469.19 | 0.0493 | 0.0190 |
| Neptune | 9825-05-12 07:40 G | 5309698.77 | 5309698.82 | 5309698.94 | 0.0089 | 0.0084 |
| Uranus | 9826-01-13 07:40 G | 5309944.73 | 5309944.82 | 5309944.95 | 0.0133 | 0.0120 |
| Uranus | 9827-01-17 10:04 G | 5310313.72 | 5310313.92 | 5310314.16 | 0.0133 | 0.0070 |
| Uranus | 9828-01-22 00:28 G | 5310683.29 | 5310683.52 | 5310683.76 | 0.0133 | 0.0045 |
| Uranus | 9829-01-25 03:21 G | 5311052.38 | 5311052.64 | 5311052.90 | 0.0133 | 0.0000 |
| Uranus | 9830-01-29 17:02 G | 5311421.97 | 5311422.21 | 5311422.45 | 0.0133 | 0.0036 |
| Jupiter | 9830-03-24 04:04 G | 5311475.44 | 5311475.67 | 5311475.90 | 0.0537 | 0.0066 |
| Uranus | 9831-02-02 20:23 G | 5311791.14 | 5311791.35 | 5311791.59 | 0.0134 | 0.0068 |
| Uranus | 9832-02-07 09:36 G | 5312160.79 | 5312160.90 | 5312161.05 | 0.0134 | 0.0114 |
| Jupiter | 9836-09-28 14:23 G | 5313855.94 | 5313856.10 | 5313856.26 | 0.0494 | 0.0367 |
| Saturn | 9837-03-17 02:38 G | 5314025.43 | 5314025.61 | 5314025.79 | 0.0281 | 0.0180 |
| Jupiter | 9842-03-28 22:04 G | 5315863.24 | 5315863.42 | 5315863.62 | 0.0535 | 0.0295 |
| Saturn | 9851-09-17 05:31 G | 5319322.47 | 5319322.73 | 5319322.98 | 0.0278 | 0.0018 |
| Jupiter | 9854-04-03 06:00 G | 5320251.64 | 5320251.75 | 5320251.87 | 0.0534 | 0.0455 |
| Jupiter | 9859-09-07 05:45 G | 5322234.63 | 5322234.74 | 5322234.85 | 0.0487 | 0.0422 |
| Mars | 9864-01-10 18:57 G | 5323821.12 | 5323821.29 | 5323821.46 | 0.1941 | 0.1106 |
| Saturn | 9867-03-24 15:50 G | 5324989.94 | 5324990.16 | 5324990.37 | 0.0281 | 0.0139 |
| Uranus | 9867-07-11 17:45 G | 5325099.12 | 5325099.24 | 5325099.37 | 0.0145 | 0.0125 |
| Uranus | 9868-07-15 18:43 G | 5325469.10 | 5325469.28 | 5325469.50 | 0.0145 | 0.0091 |
| Uranus | 9869-07-20 16:19 G | 5325838.95 | 5325839.18 | 5325839.43 | 0.0145 | 0.0031 |
| Pluto | 9870-04-26 17:31 G | 5326119.23 | 5326119.23 | 5326119.23 | 0.0064 | 0.0064 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Uranus | 9870-07-25 20:09 G | 5326209.08 | 5326209.34 | 5326209.60 | 0.0145 | 0.0007 |
| Pluto | 9871-04-28 04:04 G | 5326485.44 | 5326485.67 | 5326485.91 | 0.0064 | 0.0021 |
| Uranus | 9871-07-30 15:07 G | 5326578.92 | 5326579.13 | 5326579.37 | 0.0145 | 0.0056 |
| Jupiter | 9871-09-11 14:09 G | 5326621.88 | 5326622.09 | 5326622.30 | 0.0488 | 0.0239 |
| Uranus | 9872-08-03 20:52 G | 5326949.21 | 5326949.37 | 5326949.55 | 0.0144 | 0.0109 |
| Uranus | 9873-08-08 14:09 G | 5327319.07 | 5327319.09 | 5327319.14 | 0.0144 | 0.0142 |
| Saturn | 9880-09-10 13:55 G | 5329909.07 | 5329909.08 | 5329909.12 | 0.0279 | 0.0277 |
| Saturn | 9881-09-23 17:31 G | 5330287.17 | 5330287.23 | 5330287.30 | 0.0277 | 0.0266 |
| Jupiter | 9883-09-15 18:14 G | 5331009.03 | 5331009.26 | 5331009.49 | 0.0490 | 0.0080 |
| Mars | 9887-07-10 07:55 G | 5332402.69 | 5332402.83 | 5332402.97 | 0.1593 | 0.1101 |
| Jupiter | 9889-03-12 18:14 G | 5333014.10 | 5333014.26 | 5333014.42 | 0.0540 | 0.0373 |
| Jupiter | 9895-09-20 10:19 G | 5335396.70 | 5335396.93 | 5335397.17 | 0.0491 | 0.0034 |
| Neptune | 9895-10-13 17:45 G | 5335420.10 | 5335420.24 | 5335420.38 | 0.0088 | 0.0075 |
| Saturn | 9896-03-18 07:55 G | 5335576.61 | 5335576.83 | 5335577.05 | 0.0281 | 0.0120 |
| Neptune | 9896-10-15 05:45 G | 5335787.59 | 5335787.74 | 5335787.92 | 0.0088 | 0.0066 |
| Neptune | 9897-10-17 14:38 G | 5336154.91 | 5336155.11 | 5336155.36 | 0.0088 | 0.0048 |
| Neptune | 9898-10-20 08:23 G | 5336522.62 | 5336522.85 | 5336523.08 | 0.0088 | 0.0040 |
| Neptune | 9899-10-22 14:23 G | 5336889.85 | 5336890.10 | 5336890.36 | 0.0088 | 0.0023 |
| Neptune | 9900-10-25 09:50 G | 5337257.66 | 5337257.91 | 5337258.17 | 0.0088 | 0.0014 |
| Jupiter | 9901-03-19 02:38 G | 5337402.39 | 5337402.61 | 5337402.83 | 0.0539 | 0.0202 |
| Neptune | 9901-10-27 15:21 G | 5337624.88 | 5337625.14 | 5337625.40 | 0.0088 | 0.0003 |
| Neptune | 9902-10-30 09:50 G | 5337992.65 | 5337992.91 | 5337993.18 | 0.0088 | 0.0014 |
| Neptune | 9903-11-01 18:00 G | 5338360.02 | 5338360.25 | 5338360.49 | 0.0088 | 0.0030 |
| Neptune | 9904-11-03 08:38 G | 5338727.63 | 5338727.86 | 5338728.11 | 0.0088 | 0.0041 |
| Neptune | 9905-11-05 21:07 G | 5339095.19 | 5339095.38 | 5339095.58 | 0.0088 | 0.0056 |
| Neptune | 9906-11-08 06:28 G | 5339462.62 | 5339462.77 | 5339462.97 | 0.0088 | 0.0067 |
| Jupiter | 9907-09-25 10:48 G | 5339783.73 | 5339783.95 | 5339784.18 | 0.0492 | 0.0161 |
| Neptune | 9907-11-10 23:45 G | 5339830.42 | 5339830.49 | 5339830.62 | 0.0088 | 0.0082 |
| Uranus | 9910-01-14 16:33 G | 5340626.06 | 5340626.19 | 5340626.37 | 0.0133 | 0.0104 |
| Saturn | 9910-09-19 05:45 G | 5340873.50 | 5340873.74 | 5340873.98 | 0.0278 | 0.0038 |

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|---------|--------------------|------------|------------|------------|--------|--------|
| Uranus | 9911-01-18 18:43 G | 5340995.09 | 5340995.28 | 5340995.50 | 0.0133 | 0.0080 |
| Uranus | 9912-01-23 10:04 G | 5341364.67 | 5341364.92 | 5341365.17 | 0.0133 | 0.0031 |
| Uranus | 9913-01-26 12:14 G | 5341733.75 | 5341734.01 | 5341734.27 | 0.0133 | 0.0002 |
| Jupiter | 9913-03-23 21:21 G | 5341790.16 | 5341790.39 | 5341790.62 | 0.0538 | 0.0028 |
| Uranus | 9914-01-31 02:38 G | 5342103.38 | 5342103.61 | 5342103.86 | 0.0133 | 0.0039 |
| Uranus | 9915-02-04 05:02 G | 5342472.50 | 5342472.71 | 5342472.93 | 0.0134 | 0.0078 |
| Uranus | 9916-02-08 18:57 G | 5342842.15 | 5342842.29 | 5342842.46 | 0.0134 | 0.0106 |
| Jupiter | 9919-09-30 04:19 G | 5344171.52 | 5344171.68 | 5344171.84 | 0.0493 | 0.0345 |
| Jupiter | 9925-03-29 10:33 G | 5346178.75 | 5346178.94 | 5346179.14 | 0.0536 | 0.0263 |
| Saturn | 9926-03-26 19:11 G | 5346541.14 | 5346541.30 | 5346541.47 | 0.0281 | 0.0201 |
| Mars | 9934-07-06 00:28 G | 5349564.38 | 5349564.52 | 5349564.65 | 0.1596 | 0.1166 |
| Jupiter | 9937-04-03 10:19 G | 5350566.79 | 5350566.93 | 5350567.08 | 0.0534 | 0.0424 |
| Saturn | 9939-09-13 16:33 G | 5351460.05 | 5351460.19 | 5351460.34 | 0.0279 | 0.0222 |
| Jupiter | 9942-09-07 17:31 G | 5352550.12 | 5352550.23 | 5352550.34 | 0.0487 | 0.0429 |
| Uranus | 9951-07-13 03:36 G | 5355780.57 | 5355780.65 | 5355780.77 | 0.0145 | 0.0133 |
| Uranus | 9952-07-17 04:19 G | 5356150.46 | 5356150.68 | 5356150.91 | 0.0145 | 0.0073 |
| Uranus | 9953-07-22 02:52 G | 5356520.40 | 5356520.62 | 5356520.87 | 0.0145 | 0.0040 |
| Uranus | 9954-07-27 06:00 G | 5356890.49 | 5356890.75 | 5356891.01 | 0.0145 | 0.0018 |
| Jupiter | 9954-09-11 19:55 G | 5356937.14 | 5356937.33 | 5356937.54 | 0.0488 | 0.0251 |
| Saturn | 9955-03-21 08:09 G | 5357127.60 | 5357127.84 | 5357128.09 | 0.0281 | 0.0062 |
| Uranus | 9955-08-01 01:55 G | 5357260.37 | 5357260.58 | 5357260.81 | 0.0145 | 0.0062 |
| Uranus | 9956-08-05 06:28 G | 5357630.60 | 5357630.77 | 5357630.96 | 0.0145 | 0.0103 |
| Pluto | 9959-10-27 22:19 G | 5358809.16 | 5358809.43 | 5358809.70 | 0.0080 | 0.0002 |
| Jupiter | 9966-09-16 10:48 G | 5361324.72 | 5361324.95 | 5361325.18 | 0.0489 | 0.0105 |
| Saturn | 9969-09-20 08:52 G | 5362424.65 | 5362424.87 | 5362425.10 | 0.0278 | 0.0091 |
| Jupiter | 9972-03-12 20:52 G | 5363329.22 | 5363329.37 | 5363329.52 | 0.0541 | 0.0419 |
| Neptune | 9976-04-13 16:33 G | 5364822.16 | 5364822.19 | 5364822.26 | 0.0089 | 0.0088 |
| Neptune | 9977-04-16 09:50 G | 5365189.81 | 5365189.91 | 5365190.04 | 0.0089 | 0.0080 |
| Neptune | 9978-04-18 17:16 G | 5365557.06 | 5365557.22 | 5365557.42 | 0.0089 | 0.0061 |
| Jupiter | 9978-09-20 11:45 G | 5365711.75 | 5365711.99 | 5365712.22 | 0.0490 | 0.0011 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 9979-04-21 05:31 G | 5365924.55 | 5365924.73 | 5365924.97 | 0.0089 | 0.0054 |
| Neptune | 9980-04-22 17:45 G | 5366292.03 | 5366292.24 | 5366292.48 | 0.0089 | 0.0035 |
| Neptune | 9981-04-25 01:11 G | 5366659.31 | 5366659.55 | 5366659.81 | 0.0089 | 0.0028 |
| Neptune | 9982-04-27 17:31 G | 5367026.99 | 5367027.23 | 5367027.49 | 0.0089 | 0.0009 |
| Neptune | 9983-04-29 22:19 G | 5367394.17 | 5367394.43 | 5367394.68 | 0.0089 | 0.0001 |
| Jupiter | 9984-03-17 22:19 G | 5367717.23 | 5367717.43 | 5367717.64 | 0.0540 | 0.0240 |
| Neptune | 9984-05-01 16:04 G | 5367761.92 | 5367762.17 | 5367762.43 | 0.0089 | 0.0018 |
| Saturn | 9985-03-28 01:26 G | 5368092.49 | 5368092.56 | 5368092.65 | 0.0281 | 0.0263 |
| Neptune | 9985-05-03 20:23 G | 5368129.13 | 5368129.35 | 5368129.60 | 0.0089 | 0.0027 |
| Neptune | 9986-05-06 12:43 G | 5368496.82 | 5368497.03 | 5368497.27 | 0.0089 | 0.0044 |
| Neptune | 9987-05-08 20:23 G | 5368864.17 | 5368864.35 | 5368864.57 | 0.0089 | 0.0053 |
| Neptune | 9988-05-10 08:09 G | 5369231.70 | 5369231.84 | 5369232.02 | 0.0089 | 0.0069 |
| Neptune | 9989-05-12 20:38 G | 5369599.25 | 5369599.36 | 5369599.48 | 0.0089 | 0.0078 |
| Jupiter | 9990-09-25 02:38 G | 5370099.40 | 5370099.61 | 5370099.83 | 0.0492 | 0.0145 |
| Uranus | 9994-01-15 03:21 G | 5371307.53 | 5371307.64 | 5371307.79 | 0.0133 | 0.0113 |
| Uranus | 9995-01-19 05:16 G | 5371676.49 | 5371676.72 | 5371676.95 | 0.0133 | 0.0063 |
| Uranus | 9996-01-23 20:09 G | 5372046.11 | 5372046.34 | 5372046.59 | 0.0133 | 0.0038 |
| Jupiter | 9996-03-23 13:55 G | 5372105.85 | 5372106.08 | 5372106.31 | 0.0538 | 0.0012 |
| Uranus | 9997-01-26 21:36 G | 5372415.14 | 5372415.40 | 5372415.66 | 0.0133 | 0.0009 |
| Uranus | 9998-01-31 12:28 G | 5372784.79 | 5372785.02 | 5372785.26 | 0.0134 | 0.0042 |
| Saturn | 9998-09-14 12:43 G | 5373010.84 | 5373011.03 | 5373011.24 | 0.0279 | 0.0171 |
| Uranus | 9999-02-04 13:55 G | 5373153.89 | 5373154.08 | 5373154.31 | 0.0134 | 0.0077 |
| Uranus | 10000-02-09 04:48 G | 5373523.61 | 5373523.70 | 5373523.82 | 0.0134 | 0.0121 |

11TH MILLENNIUM CE

This is a list of transits of Moon in the 11th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|---|------------|------------|------------|--------|--------|---|
| | TRANSIT | | | | | | | |
| | TIME | | | | | | | |
| Jupiter | 10002-09-29 09:07 G | | 5374486.70 | 5374486.88 | 5374487.06 | 0.0493 | 0.0330 | |
| Jupiter | 10008-03-28 11:31 G | | 5376493.77 | 5376493.98 | 5376494.20 | 0.0536 | 0.0232 | |
| Mars | 10013-07-08 05:31 G | | 5378421.54 | 5378421.73 | 5378421.92 | 0.1595 | 0.0381 | |
| Saturn | 10014-03-22 05:16 G | | 5378678.47 | 5378678.72 | 5378678.97 | 0.0281 | 0.0001 | |
| Jupiter | 10020-04-02 15:21 G | | 5380882.00 | 5380882.14 | 5380882.30 | 0.0534 | 0.0385 | |
| Jupiter | 10025-09-06 23:16 G | | 5382865.39 | 5382865.47 | 5382865.57 | 0.0487 | 0.0442 | |
| Saturn | 10028-09-21 11:16 G | | 5383975.77 | 5383975.97 | 5383976.20 | 0.0278 | 0.0140 | |
| Uranus | 10035-07-13 14:23 G | | 5386461.98 | 5386462.10 | 5386462.25 | 0.0145 | 0.0120 | |
| Uranus | 10036-07-17 13:11 G | | 5386831.85 | 5386832.05 | 5386832.27 | 0.0145 | 0.0083 | |
| Uranus | 10037-07-22 13:26 G | | 5387201.82 | 5387202.06 | 5387202.30 | 0.0145 | 0.0023 | |
| Jupiter | 10037-09-11 13:55 G | | 5387252.88 | 5387253.08 | 5387253.28 | 0.0487 | 0.0258 | |
| Uranus | 10038-07-27 14:38 G | | 5387571.85 | 5387572.11 | 5387572.37 | 0.0145 | 0.0013 | |
| Uranus | 10039-08-01 11:45 G | | 5387941.78 | 5387941.99 | 5387942.22 | 0.0145 | 0.0066 | |
| Uranus | 10040-08-05 15:21 G | | 5388312.00 | 5388312.14 | 5388312.30 | 0.0145 | 0.0116 | |
| Saturn | 10043-03-17 03:50 G | | 5389265.56 | 5389265.66 | 5389265.78 | 0.0279 | 0.0243 | |
| Jupiter | 10049-09-15 12:14 G | | 5391639.78 | 5391640.01 | 5391640.24 | 0.0489 | 0.0123 | |
| Jupiter | 10055-03-12 22:48 G | | 5393644.33 | 5393644.45 | 5393644.58 | 0.0542 | 0.0450 | |
| Saturn | 10057-09-15 09:36 G | | 5394561.68 | 5394561.90 | 5394562.13 | 0.0279 | 0.0121 | |
| Neptune | 10059-10-14 02:23 G | | 5395320.56 | 5395320.60 | 5395320.69 | 0.0088 | 0.0085 | |
| Neptune | 10060-10-15 10:48 G | | 5395687.79 | 5395687.95 | 5395688.15 | 0.0088 | 0.0065 | |
| Jupiter | 10061-09-20 04:04 G | | 5396027.44 | 5396027.67 | 5396027.90 | 0.0490 | 0.0014 | |
| Neptune | 10061-10-18 04:33 G | | 5396055.53 | 5396055.69 | 5396055.91 | 0.0088 | 0.0061 | |
| Neptune | 10062-10-20 10:19 G | | 5396422.72 | 5396422.93 | 5396423.18 | 0.0088 | 0.0040 | |
| Neptune | 10063-10-23 05:45 G | | 5396790.52 | 5396790.74 | 5396791.00 | 0.0088 | 0.0036 | |
| Neptune | 10064-10-24 12:00 G | | 5397157.75 | 5397158.00 | 5397158.26 | 0.0088 | 0.0014 | |
| Neptune | 10065-10-27 05:31 G | | 5397525.46 | 5397525.73 | 5397526.00 | 0.0088 | 0.0009 | |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 10066-10-29 14:23 G | 5397892.85 | 5397893.10 | 5397893.35 | 0.0088 | 0.0012 |
| Jupiter | 10067-03-18 13:26 G | 5398032.86 | 5398033.06 | 5398033.26 | 0.0540 | 0.0263 |
| Neptune | 10067-11-01 03:36 G | 5398260.39 | 5398260.65 | 5398260.92 | 0.0088 | 0.0018 |
| Neptune | 10068-11-02 17:16 G | 5398628.01 | 5398628.22 | 5398628.46 | 0.0088 | 0.0038 |
| Neptune | 10069-11-05 02:38 G | 5398995.38 | 5398995.61 | 5398995.85 | 0.0088 | 0.0043 |
| Neptune | 10070-11-07 20:23 G | 5399363.19 | 5399363.35 | 5399363.54 | 0.0088 | 0.0065 |
| Neptune | 10071-11-10 02:38 G | 5399730.45 | 5399730.61 | 5399730.78 | 0.0088 | 0.0069 |
| Saturn | 10073-03-23 06:14 G | 5400229.53 | 5400229.76 | 5400230.00 | 0.0281 | 0.0058 |
| Jupiter | 10073-09-24 08:52 G | 5400414.64 | 5400414.87 | 5400415.11 | 0.0491 | 0.0130 |
| Uranus | 10078-01-15 13:26 G | 5401988.89 | 5401989.06 | 5401989.24 | 0.0133 | 0.0096 |
| Uranus | 10079-01-19 14:38 G | 5402357.90 | 5402358.11 | 5402358.32 | 0.0133 | 0.0073 |
| Jupiter | 10079-03-23 10:48 G | 5402420.72 | 5402420.95 | 5402421.19 | 0.0538 | 0.0023 |
| Uranus | 10080-01-24 06:00 G | 5402727.50 | 5402727.75 | 5402728.00 | 0.0133 | 0.0023 |
| Uranus | 10081-01-27 07:11 G | 5403096.54 | 5403096.80 | 5403097.06 | 0.0133 | 0.0005 |
| Uranus | 10082-01-31 22:19 G | 5403466.20 | 5403466.43 | 5403466.68 | 0.0133 | 0.0048 |
| Uranus | 10083-02-04 23:16 G | 5403835.29 | 5403835.47 | 5403835.69 | 0.0134 | 0.0085 |
| Uranus | 10084-02-09 14:23 G | 5404204.99 | 5404205.10 | 5404205.25 | 0.0134 | 0.0115 |
| Jupiter | 10085-09-28 19:40 G | 5404802.16 | 5404802.32 | 5404802.50 | 0.0492 | 0.0319 |
| Saturn | 10087-09-23 08:23 G | 5405526.68 | 5405526.85 | 5405527.05 | 0.0278 | 0.0192 |
| Jupiter | 10091-03-28 13:55 G | 5406808.87 | 5406809.08 | 5406809.29 | 0.0537 | 0.0189 |
| Mars | 10092-07-10 03:07 G | 5407278.48 | 5407278.63 | 5407278.78 | 0.1594 | 0.0873 |
| Jupiter | 10097-10-03 09:21 G | 5409189.84 | 5409189.89 | 5409189.94 | 0.0494 | 0.0481 |
| Saturn | 10102-03-19 09:36 G | 5410816.72 | 5410816.90 | 5410817.10 | 0.0280 | 0.0181 |
| Jupiter | 10103-04-03 19:55 G | 5411197.15 | 5411197.33 | 5411197.52 | 0.0536 | 0.0339 |
| Jupiter | 10108-09-07 15:36 G | 5413181.07 | 5413181.15 | 5413181.25 | 0.0486 | 0.0445 |
| Jupiter | 10115-04-08 19:11 G | 5415585.26 | 5415585.30 | 5415585.35 | 0.0534 | 0.0521 |
| Saturn | 10116-09-17 13:55 G | 5416112.85 | 5416113.08 | 5416113.32 | 0.0279 | 0.0065 |
| Pluto | 10118-05-01 05:45 G | 5416703.49 | 5416703.74 | 5416703.98 | 0.0064 | 0.0011 |
| Uranus | 10119-07-15 01:55 G | 5417143.46 | 5417143.58 | 5417143.70 | 0.0145 | 0.0125 |
| Uranus | 10120-07-18 23:31 G | 5417513.26 | 5417513.48 | 5417513.72 | 0.0145 | 0.0066 |

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| Jupiter | 10120-09-11 15:21 G | 5417567.94 | 5417568.14 | 5417568.34 | 0.0487 | 0.0273 |
| Uranus | 10121-07-24 00:57 G | 5417883.31 | 5417883.54 | 5417883.78 | 0.0145 | 0.0033 |
| Uranus | 10122-07-29 01:11 G | 5418253.30 | 5418253.55 | 5418253.81 | 0.0145 | 0.0027 |
| Uranus | 10123-08-02 23:31 G | 5418623.28 | 5418623.48 | 5418623.71 | 0.0145 | 0.0069 |
| Uranus | 10124-08-07 01:55 G | 5418993.43 | 5418993.58 | 5418993.75 | 0.0145 | 0.0113 |
| Saturn | 10132-03-25 13:55 G | 5421780.88 | 5421781.08 | 5421781.30 | 0.0281 | 0.0123 |
| Jupiter | 10132-09-16 05:16 G | 5421955.50 | 5421955.72 | 5421955.94 | 0.0489 | 0.0144 |
| Jupiter | 10138-03-13 09:36 G | 5423959.81 | 5423959.90 | 5423960.01 | 0.0541 | 0.0483 |
| Neptune | 10141-04-16 15:50 G | 5425090.08 | 5425090.16 | 5425090.31 | 0.0089 | 0.0080 |
| Neptune | 10142-04-19 03:36 G | 5425457.51 | 5425457.65 | 5425457.82 | 0.0089 | 0.0072 |
| Neptune | 10143-04-21 17:02 G | 5425825.03 | 5425825.21 | 5425825.42 | 0.0089 | 0.0054 |
| Neptune | 10144-04-23 00:14 G | 5426192.29 | 5426192.51 | 5426192.74 | 0.0089 | 0.0047 |
| Jupiter | 10144-09-20 10:04 G | 5426342.67 | 5426342.92 | 5426343.16 | 0.0489 | 0.0035 |
| Neptune | 10145-04-25 17:16 G | 5426559.99 | 5426560.22 | 5426560.47 | 0.0089 | 0.0027 |
| Neptune | 10146-04-27 21:21 G | 5426927.16 | 5426927.39 | 5426927.65 | 0.0089 | 0.0021 |
| Saturn | 10146-09-25 03:50 G | 5427077.56 | 5427077.66 | 5427077.79 | 0.0278 | 0.0245 |
| Neptune | 10147-04-30 15:21 G | 5427294.89 | 5427295.14 | 5427295.40 | 0.0089 | 0.0002 |
| Mars | 10148-01-10 12:57 G | 5427549.83 | 5427550.04 | 5427550.26 | 0.1939 | 0.0136 |
| Neptune | 10148-05-01 20:23 G | 5427662.11 | 5427662.35 | 5427662.60 | 0.0089 | 0.0006 |
| Neptune | 10149-05-04 11:31 G | 5428029.73 | 5428029.98 | 5428030.24 | 0.0089 | 0.0025 |
| Jupiter | 10150-03-18 02:52 G | 5428347.43 | 5428347.62 | 5428347.81 | 0.0541 | 0.0305 |
| Neptune | 10150-05-06 19:40 G | 5428397.10 | 5428397.32 | 5428397.56 | 0.0089 | 0.0031 |
| Neptune | 10151-05-09 06:14 G | 5428764.55 | 5428764.76 | 5428764.98 | 0.0089 | 0.0050 |
| Neptune | 10152-05-10 19:26 G | 5429132.15 | 5429132.31 | 5429132.52 | 0.0089 | 0.0057 |
| Neptune | 10153-05-13 02:09 G | 5429499.46 | 5429499.59 | 5429499.72 | 0.0089 | 0.0076 |
| Neptune | 10154-05-15 18:28 G | 5429867.21 | 5429867.27 | 5429867.40 | 0.0089 | 0.0082 |
| Jupiter | 10156-09-24 19:26 G | 5430730.09 | 5430730.31 | 5430730.53 | 0.0491 | 0.0118 |
| Uranus | 10161-01-12 08:23 G | 5432300.84 | 5432300.85 | 5432300.89 | 0.0133 | 0.0132 |
| Saturn | 10161-03-20 11:16 G | 5432367.74 | 5432367.97 | 5432368.20 | 0.0280 | 0.0113 |
| Uranus | 10162-01-16 23:45 G | 5432670.36 | 5432670.49 | 5432670.67 | 0.0133 | 0.0107 |

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| Jupiter | 10162-03-23 14:09 G | 5432735.87 | 5432736.09 | 5432736.31 | 0.0539 | 0.0055 |
| Uranus | 10163-01-21 01:26 G | 5433039.33 | 5433039.56 | 5433039.79 | 0.0133 | 0.0056 |
| Uranus | 10164-01-25 16:33 G | 5433408.95 | 5433409.19 | 5433409.45 | 0.0133 | 0.0032 |
| Uranus | 10165-01-28 17:16 G | 5433777.98 | 5433778.22 | 5433778.48 | 0.0133 | 0.0018 |
| Uranus | 10166-02-02 08:38 G | 5434147.63 | 5434147.86 | 5434148.10 | 0.0133 | 0.0048 |
| Uranus | 10167-02-06 09:07 G | 5434516.71 | 5434516.88 | 5434517.10 | 0.0134 | 0.0086 |
| Uranus | 10168-02-11 00:28 G | 5434886.47 | 5434886.52 | 5434886.62 | 0.0134 | 0.0128 |
| Jupiter | 10168-09-29 05:45 G | 5435117.55 | 5435117.74 | 5435117.93 | 0.0492 | 0.0302 |
| Jupiter | 10174-03-28 21:50 G | 5437124.18 | 5437124.41 | 5437124.64 | 0.0538 | 0.0159 |
| Saturn | 10175-09-19 20:52 G | 5437664.12 | 5437664.37 | 5437664.61 | 0.0279 | 0.0006 |
| Jupiter | 10180-10-03 10:33 G | 5439504.87 | 5439504.94 | 5439505.03 | 0.0494 | 0.0461 |
| Jupiter | 10186-04-02 21:21 G | 5441512.21 | 5441512.39 | 5441512.58 | 0.0536 | 0.0308 |
| Saturn | 10191-03-27 23:16 G | 5443332.30 | 5443332.47 | 5443332.65 | 0.0281 | 0.0189 |
| Jupiter | 10191-09-07 17:45 G | 5443496.17 | 5443496.24 | 5443496.33 | 0.0486 | 0.0458 |
| Jupiter | 10198-04-08 05:45 G | 5445900.65 | 5445900.74 | 5445900.83 | 0.0534 | 0.0490 |
| Uranus | 10203-07-16 13:26 G | 5447824.91 | 5447825.06 | 5447825.21 | 0.0145 | 0.0115 |
| Jupiter | 10203-09-13 07:55 G | 5447883.65 | 5447883.83 | 5447884.01 | 0.0487 | 0.0291 |
| Uranus | 10204-07-20 09:21 G | 5448194.68 | 5448194.89 | 5448195.12 | 0.0145 | 0.0076 |
| Saturn | 10204-09-14 01:40 G | 5448250.47 | 5448250.57 | 5448250.68 | 0.0279 | 0.0253 |
| Uranus | 10205-07-25 12:00 G | 5448564.76 | 5448565.00 | 5448565.25 | 0.0145 | 0.0015 |
| Uranus | 10206-07-30 10:33 G | 5448934.69 | 5448934.94 | 5448935.21 | 0.0145 | 0.0020 |
| Pluto | 10206-10-30 23:02 G | 5449027.21 | 5449027.46 | 5449027.74 | 0.0080 | 0.0020 |
| Uranus | 10207-08-04 10:33 G | 5449304.74 | 5449304.94 | 5449305.16 | 0.0145 | 0.0075 |
| Uranus | 10208-08-08 11:45 G | 5449674.86 | 5449674.99 | 5449675.14 | 0.0145 | 0.0123 |
| Jupiter | 10215-09-17 10:48 G | 5452270.73 | 5452270.95 | 5452271.18 | 0.0488 | 0.0166 |
| Mars | 10218-07-09 03:07 G | 5453296.46 | 5453296.63 | 5453296.80 | 0.1597 | 0.0599 |
| Saturn | 10220-03-22 14:52 G | 5453918.88 | 5453919.12 | 5453919.36 | 0.0280 | 0.0044 |
| Jupiter | 10221-03-12 21:36 G | 5454274.34 | 5454274.40 | 5454274.46 | 0.0542 | 0.0521 |
| Neptune | 10224-10-17 00:43 G | 5455588.38 | 5455588.53 | 5455588.68 | 0.0088 | 0.0072 |
| Neptune | 10225-10-19 05:02 G | 5455955.57 | 5455955.71 | 5455955.91 | 0.0088 | 0.0066 |

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| Neptune | 10226-10-22 00:28 G | 5456323.31 | 5456323.52 | 5456323.76 | 0.0088 | 0.0047 |
| Jupiter | 10227-09-21 17:02 G | 5456657.99 | 5456658.21 | 5456658.43 | 0.0489 | 0.0060 |
| Neptune | 10227-10-24 06:57 G | 5456690.57 | 5456690.79 | 5456691.02 | 0.0088 | 0.0040 |
| Neptune | 10228-10-25 23:16 G | 5457058.22 | 5457058.47 | 5457058.75 | 0.0088 | 0.0022 |
| Neptune | 10229-10-28 10:04 G | 5457425.68 | 5457425.92 | 5457426.18 | 0.0088 | 0.0014 |
| Neptune | 10230-10-30 22:33 G | 5457793.17 | 5457793.44 | 5457793.71 | 0.0088 | 0.0004 |
| Neptune | 10231-11-02 13:26 G | 5458160.81 | 5458161.06 | 5458161.31 | 0.0088 | 0.0012 |
| Neptune | 10232-11-03 20:38 G | 5458528.12 | 5458528.36 | 5458528.63 | 0.0088 | 0.0030 |
| Jupiter | 10233-03-18 13:11 G | 5458662.87 | 5458663.05 | 5458663.23 | 0.0541 | 0.0326 |
| Neptune | 10233-11-06 15:21 G | 5458895.92 | 5458896.14 | 5458896.38 | 0.0088 | 0.0038 |
| Saturn | 10234-09-22 00:28 G | 5459215.27 | 5459215.52 | 5459215.77 | 0.0279 | 0.0057 |
| Neptune | 10234-11-08 20:52 G | 5459263.18 | 5459263.37 | 5459263.59 | 0.0088 | 0.0056 |
| Neptune | 10235-11-11 16:19 G | 5459631.02 | 5459631.18 | 5459631.38 | 0.0088 | 0.0064 |
| Neptune | 10236-11-12 22:33 G | 5459998.35 | 5459998.44 | 5459998.57 | 0.0088 | 0.0080 |
| Neptune | 10237-11-15 16:19 G | 5460366.18 | 5460366.18 | 5460366.19 | 0.0088 | 0.0088 |
| Jupiter | 10239-09-26 04:33 G | 5461045.45 | 5461045.69 | 5461045.93 | 0.0490 | 0.0100 |
| Jupiter | 10245-03-23 18:57 G | 5463051.05 | 5463051.29 | 5463051.53 | 0.0539 | 0.0074 |
| Uranus | 10246-01-18 09:36 G | 5463351.73 | 5463351.90 | 5463352.11 | 0.0133 | 0.0091 |
| Uranus | 10247-01-22 11:02 G | 5463720.76 | 5463720.96 | 5463721.19 | 0.0133 | 0.0067 |
| Uranus | 10248-01-27 02:09 G | 5464090.34 | 5464090.59 | 5464090.85 | 0.0133 | 0.0016 |
| Uranus | 10249-01-30 03:21 G | 5464459.39 | 5464459.64 | 5464459.90 | 0.0133 | 0.0011 |
| Uranus | 10250-02-03 18:28 G | 5464829.05 | 5464829.27 | 5464829.52 | 0.0133 | 0.0056 |
| Saturn | 10250-03-30 04:48 G | 5464883.61 | 5464883.70 | 5464883.80 | 0.0281 | 0.0259 |
| Uranus | 10251-02-07 19:26 G | 5465198.14 | 5465198.31 | 5465198.51 | 0.0134 | 0.0091 |
| Jupiter | 10251-09-30 08:09 G | 5465432.66 | 5465432.84 | 5465433.03 | 0.0492 | 0.0284 |
| Uranus | 10252-02-12 10:33 G | 5465567.87 | 5465567.94 | 5465568.07 | 0.0134 | 0.0123 |
| Jupiter | 10257-03-28 19:26 G | 5467439.10 | 5467439.31 | 5467439.53 | 0.0538 | 0.0126 |
| Saturn | 10263-09-16 07:26 G | 5469801.64 | 5469801.81 | 5469801.99 | 0.0279 | 0.0192 |
| Jupiter | 10263-10-05 02:23 G | 5469820.49 | 5469820.60 | 5469820.71 | 0.0493 | 0.0434 |
| Jupiter | 10269-04-03 00:00 G | 5471827.30 | 5471827.50 | 5471827.70 | 0.0536 | 0.0264 |

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| Jupiter | 10274-09-08 09:07 G | 5473811.84 | 5473811.88 | 5473811.95 | 0.0486 | 0.0470 |
| Saturn | 10279-03-25 01:55 G | 5475470.35 | 5475470.58 | 5475470.82 | 0.0280 | 0.0026 |
| Jupiter | 10281-04-07 18:43 G | 5476215.16 | 5476215.28 | 5476215.41 | 0.0535 | 0.0450 |
| Jupiter | 10286-09-12 09:07 G | 5478198.70 | 5478198.88 | 5478199.07 | 0.0487 | 0.0313 |
| Uranus | 10287-07-17 00:14 G | 5478506.39 | 5478506.51 | 5478506.68 | 0.0145 | 0.0118 |
| Uranus | 10288-07-20 20:23 G | 5478876.11 | 5478876.35 | 5478876.58 | 0.0145 | 0.0060 |
| Uranus | 10289-07-26 00:00 G | 5479246.26 | 5479246.50 | 5479246.75 | 0.0145 | 0.0026 |
| Uranus | 10290-07-30 21:50 G | 5479616.16 | 5479616.41 | 5479616.66 | 0.0145 | 0.0035 |
| Uranus | 10291-08-04 23:02 G | 5479986.25 | 5479986.46 | 5479986.67 | 0.0145 | 0.0075 |
| Uranus | 10292-08-08 22:19 G | 5480356.32 | 5480356.43 | 5480356.59 | 0.0145 | 0.0123 |
| Saturn | 10293-09-23 03:36 G | 5480766.42 | 5480766.65 | 5480766.88 | 0.0278 | 0.0124 |
| Mars | 10297-07-11 04:04 G | 5482153.48 | 5482153.67 | 5482153.87 | 0.1596 | 0.0203 |
| Jupiter | 10298-09-16 16:33 G | 5482585.99 | 5482586.19 | 5482586.40 | 0.0488 | 0.0199 |
| Neptune | 10305-04-18 00:43 G | 5484990.46 | 5484990.53 | 5484990.64 | 0.0089 | 0.0083 |
| Neptune | 10306-04-20 15:36 G | 5485358.05 | 5485358.15 | 5485358.28 | 0.0089 | 0.0079 |
| Neptune | 10307-04-22 21:21 G | 5485725.21 | 5485725.39 | 5485725.61 | 0.0089 | 0.0058 |
| Saturn | 10308-03-19 14:09 G | 5486056.95 | 5486057.09 | 5486057.23 | 0.0280 | 0.0232 |
| Neptune | 10308-04-24 15:21 G | 5486092.94 | 5486093.14 | 5486093.35 | 0.0089 | 0.0053 |
| Neptune | 10309-04-26 19:40 G | 5486460.09 | 5486460.32 | 5486460.56 | 0.0089 | 0.0032 |
| Neptune | 10310-04-29 12:57 G | 5486827.80 | 5486828.04 | 5486828.30 | 0.0089 | 0.0027 |
| Jupiter | 10310-09-22 03:07 G | 5486973.40 | 5486973.63 | 5486973.87 | 0.0489 | 0.0086 |
| Neptune | 10311-05-01 18:43 G | 5487195.03 | 5487195.28 | 5487195.53 | 0.0089 | 0.0008 |
| Neptune | 10312-05-03 09:07 G | 5487562.62 | 5487562.88 | 5487563.15 | 0.0089 | 0.0003 |
| Neptune | 10313-05-05 18:57 G | 5487930.06 | 5487930.29 | 5487930.54 | 0.0089 | 0.0018 |
| Neptune | 10314-05-08 04:48 G | 5488297.45 | 5488297.70 | 5488297.96 | 0.0089 | 0.0024 |
| Neptune | 10315-05-10 18:57 G | 5488665.09 | 5488665.29 | 5488665.52 | 0.0089 | 0.0044 |
| Jupiter | 10316-03-18 11:45 G | 5488977.81 | 5488977.99 | 5488978.17 | 0.0541 | 0.0352 |
| Neptune | 10316-05-12 00:28 G | 5489032.31 | 5489032.52 | 5489032.74 | 0.0089 | 0.0049 |
| Neptune | 10317-05-14 17:31 G | 5489400.09 | 5489400.23 | 5489400.42 | 0.0089 | 0.0068 |
| Neptune | 10318-05-16 21:21 G | 5489767.28 | 5489767.39 | 5489767.55 | 0.0089 | 0.0074 |

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| Saturn | 10322-09-18 18:57 G | 5491353.08 | 5491353.29 | 5491353.51 | 0.0279 | 0.0126 |
| Jupiter | 10322-09-26 06:28 G | 5491360.55 | 5491360.77 | 5491361.00 | 0.0490 | 0.0080 |
| Jupiter | 10328-03-23 10:04 G | 5493365.70 | 5493365.92 | 5493366.14 | 0.0540 | 0.0115 |
| Uranus | 10329-01-15 06:14 G | 5493663.71 | 5493663.76 | 5493663.86 | 0.0133 | 0.0127 |
| Uranus | 10330-01-19 21:07 G | 5494033.22 | 5494033.38 | 5494033.56 | 0.0133 | 0.0099 |
| Uranus | 10331-01-23 22:48 G | 5494402.23 | 5494402.45 | 5494402.70 | 0.0133 | 0.0050 |
| Uranus | 10332-01-28 13:26 G | 5494771.81 | 5494772.06 | 5494772.32 | 0.0133 | 0.0025 |
| Uranus | 10333-01-31 14:38 G | 5495140.87 | 5495141.11 | 5495141.37 | 0.0133 | 0.0025 |
| Uranus | 10334-02-05 05:16 G | 5495510.49 | 5495510.72 | 5495510.96 | 0.0133 | 0.0055 |
| Jupiter | 10334-09-30 22:19 G | 5495748.24 | 5495748.43 | 5495748.63 | 0.0491 | 0.0264 |
| Uranus | 10335-02-09 06:28 G | 5495879.60 | 5495879.77 | 5495879.96 | 0.0134 | 0.0094 |
| Saturn | 10338-03-27 15:50 G | 5497021.94 | 5497022.16 | 5497022.38 | 0.0280 | 0.0099 |
| Jupiter | 10340-03-28 19:40 G | 5497754.09 | 5497754.32 | 5497754.56 | 0.0539 | 0.0082 |
| Jupiter | 10346-10-04 21:07 G | 5500135.25 | 5500135.38 | 5500135.52 | 0.0493 | 0.0401 |
| Jupiter | 10352-04-02 18:43 G | 5502142.07 | 5502142.28 | 5502142.49 | 0.0537 | 0.0233 |
| Saturn | 10352-09-25 11:31 G | 5502317.80 | 5502317.98 | 5502318.16 | 0.0278 | 0.0192 |
| Jupiter | 10364-04-08 05:31 G | 5506530.60 | 5506530.73 | 5506530.87 | 0.0535 | 0.0430 |
| Pluto | 10365-05-04 09:50 G | 5506921.68 | 5506921.91 | 5506922.17 | 0.0064 | 0.0014 |
| Saturn | 10367-03-21 21:07 G | 5507608.17 | 5507608.38 | 5507608.58 | 0.0280 | 0.0158 |
| Jupiter | 10369-09-12 15:50 G | 5508514.00 | 5508514.16 | 5508514.33 | 0.0487 | 0.0337 |
| Uranus | 10371-07-18 11:45 G | 5509187.85 | 5509187.99 | 5509188.17 | 0.0145 | 0.0109 |
| Uranus | 10372-07-22 06:14 G | 5509557.54 | 5509557.76 | 5509558.00 | 0.0145 | 0.0068 |
| Uranus | 10373-07-27 11:02 G | 5509927.72 | 5509927.96 | 5509928.21 | 0.0145 | 0.0007 |
| Uranus | 10374-08-01 07:26 G | 5510297.56 | 5510297.81 | 5510298.07 | 0.0145 | 0.0028 |
| Uranus | 10375-08-06 09:50 G | 5510667.72 | 5510667.91 | 5510668.12 | 0.0145 | 0.0085 |
| Mars | 10376-07-14 09:36 G | 5511010.83 | 5511010.90 | 5511010.97 | 0.1595 | 0.1472 |
| Uranus | 10376-08-10 08:23 G | 5511037.76 | 5511037.85 | 5511037.98 | 0.0145 | 0.0131 |
| Jupiter | 10381-09-17 02:52 G | 5512901.41 | 5512901.62 | 5512901.84 | 0.0488 | 0.0227 |
| Saturn | 10381-09-20 06:28 G | 5512904.53 | 5512904.77 | 5512905.01 | 0.0279 | 0.0058 |
| Neptune | 10388-10-17 00:57 G | 5515488.47 | 5515488.54 | 5515488.65 | 0.0088 | 0.0083 |

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| Neptune | 10389-10-19 19:40 G | 5515856.16 | 5515856.32 | 5515856.51 | 0.0088 | 0.0064 |
| Neptune | 10390-10-22 03:07 G | 5516223.44 | 5516223.63 | 5516223.82 | 0.0088 | 0.0058 |
| Neptune | 10391-10-24 17:31 G | 5516591.01 | 5516591.23 | 5516591.50 | 0.0088 | 0.0040 |
| Neptune | 10392-10-26 05:16 G | 5516958.49 | 5516958.72 | 5516958.96 | 0.0088 | 0.0033 |
| Jupiter | 10393-09-21 03:50 G | 5517288.44 | 5517288.66 | 5517288.89 | 0.0489 | 0.0109 |
| Neptune | 10393-10-28 15:36 G | 5517325.89 | 5517326.15 | 5517326.42 | 0.0088 | 0.0015 |
| Neptune | 10394-10-31 07:55 G | 5517693.58 | 5517693.83 | 5517694.09 | 0.0088 | 0.0008 |
| Neptune | 10395-11-02 14:38 G | 5518060.86 | 5518061.11 | 5518061.38 | 0.0088 | 0.0011 |
| Neptune | 10396-11-04 10:04 G | 5518428.67 | 5518428.92 | 5518429.18 | 0.0088 | 0.0017 |
| Saturn | 10397-03-29 02:52 G | 5518573.43 | 5518573.62 | 5518573.82 | 0.0281 | 0.0169 |
| Neptune | 10397-11-06 15:21 G | 5518795.92 | 5518796.14 | 5518796.39 | 0.0088 | 0.0037 |
| Neptune | 10398-11-09 10:33 G | 5519163.72 | 5519163.94 | 5519164.19 | 0.0088 | 0.0042 |
| Jupiter | 10399-03-18 03:21 G | 5519292.49 | 5519292.64 | 5519292.79 | 0.0541 | 0.0396 |
| Neptune | 10399-11-11 17:31 G | 5519531.08 | 5519531.23 | 5519531.44 | 0.0088 | 0.0062 |
| Neptune | 10400-11-13 09:21 G | 5519898.74 | 5519898.89 | 5519899.10 | 0.0088 | 0.0067 |
| Neptune | 10401-11-15 20:52 G | 5520266.34 | 5520266.37 | 5520266.44 | 0.0088 | 0.0087 |
| Jupiter | 10405-09-25 16:04 G | 5521675.93 | 5521676.17 | 5521676.40 | 0.0489 | 0.0054 |
| Jupiter | 10411-03-23 15:07 G | 5523680.91 | 5523681.13 | 5523681.36 | 0.0541 | 0.0145 |
| Saturn | 10411-09-28 02:09 G | 5523869.53 | 5523869.59 | 5523869.66 | 0.0278 | 0.0266 |
| Uranus | 10413-01-15 17:45 G | 5524345.20 | 5524345.24 | 5524345.32 | 0.0133 | 0.0129 |
| Uranus | 10414-01-20 07:11 G | 5524714.61 | 5524714.80 | 5524715.02 | 0.0133 | 0.0084 |
| Uranus | 10415-01-24 09:36 G | 5525083.68 | 5525083.90 | 5525084.13 | 0.0133 | 0.0059 |
| Uranus | 10416-01-28 23:16 G | 5525453.21 | 5525453.47 | 5525453.74 | 0.0133 | 0.0008 |
| Uranus | 10417-02-01 01:26 G | 5525822.32 | 5525822.56 | 5525822.81 | 0.0133 | 0.0018 |
| Jupiter | 10417-09-29 16:33 G | 5526062.99 | 5526063.19 | 5526063.41 | 0.0491 | 0.0234 |
| Uranus | 10418-02-05 15:36 G | 5526191.93 | 5526192.15 | 5526192.39 | 0.0133 | 0.0064 |
| Uranus | 10419-02-09 17:16 G | 5526561.07 | 5526561.22 | 5526561.41 | 0.0133 | 0.0098 |
| Uranus | 10420-02-14 08:09 G | 5526930.81 | 5526930.84 | 5526930.90 | 0.0134 | 0.0132 |
| Jupiter | 10423-03-28 15:21 G | 5528068.92 | 5528069.14 | 5528069.37 | 0.0539 | 0.0049 |
| Mars | 10423-07-10 00:14 G | 5528172.40 | 5528172.51 | 5528172.62 | 0.1600 | 0.1273 |

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| Saturn | 10426-03-23 07:26 G | 5529159.58 | 5529159.81 | 5529160.04 | 0.0280 | 0.0085 |
| Jupiter | 10429-10-04 08:09 G | 5530450.70 | 5530450.84 | 5530451.00 | 0.0493 | 0.0369 |
| Mars | 10432-01-11 16:19 G | 5531280.01 | 5531280.18 | 5531280.36 | 0.1936 | 0.0742 |
| Jupiter | 10435-04-03 02:23 G | 5532457.40 | 5532457.60 | 5532457.82 | 0.0537 | 0.0196 |
| Saturn | 10440-09-21 13:40 G | 5534455.82 | 5534456.07 | 5534456.33 | 0.0279 | 0.0016 |
| Jupiter | 10441-10-08 16:04 G | 5534838.12 | 5534838.17 | 5534838.24 | 0.0494 | 0.0477 |
| Jupiter | 10447-04-07 19:11 G | 5536845.14 | 5536845.30 | 5536845.47 | 0.0535 | 0.0386 |
| Jupiter | 10452-09-12 01:26 G | 5538829.40 | 5538829.56 | 5538829.73 | 0.0487 | 0.0356 |
| Pluto | 10453-11-02 06:57 G | 5539245.55 | 5539245.79 | 5539246.06 | 0.0080 | 0.0022 |
| Uranus | 10455-07-18 22:48 G | 5539869.29 | 5539869.45 | 5539869.62 | 0.0146 | 0.0108 |
| Saturn | 10456-03-30 10:19 G | 5540124.81 | 5540124.93 | 5540125.06 | 0.0281 | 0.0242 |
| Uranus | 10456-07-22 16:33 G | 5540238.96 | 5540239.19 | 5540239.44 | 0.0145 | 0.0053 |
| Uranus | 10457-07-27 22:33 G | 5540609.20 | 5540609.44 | 5540609.69 | 0.0145 | 0.0017 |
| Uranus | 10458-08-01 18:14 G | 5540979.02 | 5540979.26 | 5540979.51 | 0.0145 | 0.0045 |
| Uranus | 10459-08-06 21:50 G | 5541349.22 | 5541349.41 | 5541349.62 | 0.0145 | 0.0084 |
| Uranus | 10460-08-10 19:26 G | 5541719.22 | 5541719.31 | 5541719.42 | 0.0145 | 0.0133 |
| Jupiter | 10464-09-15 23:16 G | 5543216.27 | 5543216.47 | 5543216.66 | 0.0487 | 0.0257 |
| Saturn | 10469-09-16 11:45 G | 5545042.84 | 5545042.99 | 5545043.15 | 0.0279 | 0.0213 |
| Neptune | 10470-04-19 17:16 G | 5545258.13 | 5545258.22 | 5545258.38 | 0.0089 | 0.0079 |
| Neptune | 10471-04-22 12:00 G | 5545625.86 | 5545626.00 | 5545626.18 | 0.0089 | 0.0070 |
| Neptune | 10472-04-23 16:48 G | 5545993.01 | 5545993.20 | 5545993.42 | 0.0089 | 0.0053 |
| Neptune | 10473-04-26 10:04 G | 5546360.71 | 5546360.92 | 5546361.16 | 0.0089 | 0.0045 |
| Neptune | 10474-04-28 17:02 G | 5546727.99 | 5546728.21 | 5546728.46 | 0.0089 | 0.0028 |
| Neptune | 10475-05-01 06:43 G | 5547095.53 | 5547095.78 | 5547096.04 | 0.0089 | 0.0020 |
| Neptune | 10476-05-02 17:31 G | 5547462.99 | 5547463.23 | 5547463.48 | 0.0089 | 0.0003 |
| Jupiter | 10476-09-20 13:26 G | 5547603.83 | 5547604.06 | 5547604.28 | 0.0488 | 0.0136 |
| Neptune | 10477-05-05 01:40 G | 5547830.31 | 5547830.57 | 5547830.84 | 0.0089 | 0.0006 |
| Neptune | 10478-05-07 17:02 G | 5548197.97 | 5548198.21 | 5548198.45 | 0.0089 | 0.0023 |
| Neptune | 10479-05-09 21:36 G | 5548565.17 | 5548565.40 | 5548565.66 | 0.0089 | 0.0030 |
| Neptune | 10480-05-11 15:07 G | 5548932.94 | 5548933.13 | 5548933.37 | 0.0089 | 0.0048 |

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| Neptune | 10481-05-13 19:11 G | 5549300.12 | 5549300.30 | 5549300.52 | 0.0089 | 0.0054 |
| Jupiter | 10482-03-17 08:52 G | 5549607.72 | 5549607.87 | 5549608.01 | 0.0542 | 0.0424 |
| Neptune | 10482-05-16 11:45 G | 5549667.86 | 5549667.99 | 5549668.16 | 0.0089 | 0.0073 |
| Neptune | 10483-05-18 18:57 G | 5550035.19 | 5550035.29 | 5550035.41 | 0.0089 | 0.0079 |
| Saturn | 10485-03-24 22:33 G | 5550711.20 | 5550711.44 | 5550711.68 | 0.0280 | 0.0009 |
| Jupiter | 10488-09-24 12:57 G | 5551990.81 | 5551991.04 | 5551991.28 | 0.0489 | 0.0031 |
| Jupiter | 10494-03-22 09:21 G | 5553995.68 | 5553995.89 | 5553996.11 | 0.0541 | 0.0181 |
| Uranus | 10497-01-16 06:14 G | 5555026.67 | 5555026.76 | 5555026.88 | 0.0133 | 0.0120 |
| Uranus | 10498-01-20 18:57 G | 5555396.11 | 5555396.29 | 5555396.49 | 0.0133 | 0.0090 |
| Uranus | 10499-01-24 22:04 G | 5555765.20 | 5555765.42 | 5555765.67 | 0.0133 | 0.0042 |
| Saturn | 10499-09-23 21:36 G | 5556007.17 | 5556007.40 | 5556007.64 | 0.0278 | 0.0093 |
| Uranus | 10500-01-29 11:16 G | 5556134.71 | 5556134.97 | 5556135.23 | 0.0133 | 0.0016 |
| Jupiter | 10500-09-30 04:48 G | 5556378.49 | 5556378.70 | 5556378.91 | 0.0491 | 0.0213 |
| Uranus | 10501-02-02 13:55 G | 5556503.84 | 5556504.08 | 5556504.33 | 0.0133 | 0.0034 |
| Uranus | 10502-02-07 03:07 G | 5556873.40 | 5556873.63 | 5556873.86 | 0.0133 | 0.0063 |
| Mars | 10502-07-12 21:07 G | 5557029.21 | 5557029.38 | 5557029.56 | 0.1598 | 0.0120 |
| Uranus | 10503-02-11 05:31 G | 5557242.58 | 5557242.73 | 5557242.89 | 0.0133 | 0.0104 |
| Jupiter | 10506-03-28 17:31 G | 5558384.00 | 5558384.23 | 5558384.46 | 0.0539 | 0.0010 |
| Jupiter | 10512-10-04 09:36 G | 5560765.73 | 5560765.90 | 5560766.09 | 0.0492 | 0.0338 |
| Saturn | 10514-03-20 18:00 G | 5561298.14 | 5561298.25 | 5561298.39 | 0.0280 | 0.0243 |
| Jupiter | 10518-04-02 13:55 G | 5562771.85 | 5562772.08 | 5562772.31 | 0.0538 | 0.0147 |
| Jupiter | 10524-10-08 17:16 G | 5565153.13 | 5565153.22 | 5565153.32 | 0.0493 | 0.0444 |
| Saturn | 10528-09-19 03:21 G | 5566594.43 | 5566594.64 | 5566594.86 | 0.0279 | 0.0136 |
| Jupiter | 10530-04-07 21:07 G | 5567160.22 | 5567160.38 | 5567160.55 | 0.0536 | 0.0355 |
| Jupiter | 10535-09-12 22:33 G | 5569144.30 | 5569144.44 | 5569144.58 | 0.0486 | 0.0383 |
| Uranus | 10539-07-20 10:33 G | 5570550.76 | 5570550.94 | 5570551.12 | 0.0146 | 0.0101 |
| Uranus | 10540-07-24 03:21 G | 5570920.42 | 5570920.64 | 5570920.89 | 0.0146 | 0.0059 |
| Uranus | 10541-07-29 10:04 G | 5571290.67 | 5571290.92 | 5571291.16 | 0.0145 | 0.0003 |
| Uranus | 10542-08-03 04:19 G | 5571660.44 | 5571660.68 | 5571660.94 | 0.0145 | 0.0037 |
| Uranus | 10543-08-08 08:52 G | 5572030.71 | 5572030.87 | 5572031.08 | 0.0145 | 0.0096 |

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| Saturn | 10544-03-27 12:28 G | 5572262.78 | 5572263.02 | 5572263.26 | 0.0280 | 0.0067 |
| Uranus | 10544-08-12 05:45 G | 5572400.69 | 5572400.74 | 5572400.83 | 0.0145 | 0.0139 |
| Jupiter | 10547-09-17 11:31 G | 5573531.79 | 5573531.98 | 5573532.18 | 0.0487 | 0.0281 |
| Neptune | 10553-10-19 20:52 G | 5575756.24 | 5575756.37 | 5575756.54 | 0.0088 | 0.0069 |
| Neptune | 10554-10-22 10:04 G | 5576123.77 | 5576123.92 | 5576124.13 | 0.0088 | 0.0066 |
| Neptune | 10555-10-24 23:31 G | 5576491.28 | 5576491.48 | 5576491.71 | 0.0088 | 0.0045 |
| Neptune | 10556-10-26 08:38 G | 5576858.64 | 5576858.86 | 5576859.11 | 0.0088 | 0.0041 |
| Neptune | 10557-10-29 02:09 G | 5577226.35 | 5577226.59 | 5577226.84 | 0.0088 | 0.0020 |
| Saturn | 10558-09-26 10:33 G | 5577558.75 | 5577558.94 | 5577559.13 | 0.0278 | 0.0167 |
| Neptune | 10558-10-31 07:55 G | 5577593.58 | 5577593.83 | 5577594.09 | 0.0088 | 0.0016 |
| Jupiter | 10559-09-21 11:31 G | 5577918.76 | 5577918.98 | 5577919.21 | 0.0488 | 0.0157 |
| Neptune | 10559-11-03 03:21 G | 5577961.38 | 5577961.64 | 5577961.90 | 0.0088 | 0.0004 |
| Neptune | 10560-11-04 08:52 G | 5578328.63 | 5578328.87 | 5578329.14 | 0.0088 | 0.0010 |
| Neptune | 10561-11-07 03:07 G | 5578696.39 | 5578696.63 | 5578696.90 | 0.0088 | 0.0028 |
| Neptune | 10562-11-09 11:16 G | 5579063.74 | 5579063.97 | 5579064.21 | 0.0088 | 0.0035 |
| Neptune | 10563-11-12 01:26 G | 5579431.37 | 5579431.56 | 5579431.80 | 0.0088 | 0.0054 |
| Neptune | 10564-11-13 14:52 G | 5579798.95 | 5579799.12 | 5579799.31 | 0.0088 | 0.0060 |
| Jupiter | 10565-03-16 22:48 G | 5579922.34 | 5579922.45 | 5579922.57 | 0.0542 | 0.0469 |
| Neptune | 10565-11-16 00:28 G | 5580166.42 | 5580166.52 | 5580166.68 | 0.0088 | 0.0078 |
| Neptune | 10566-11-18 18:00 G | 5580534.20 | 5580534.25 | 5580534.36 | 0.0088 | 0.0084 |
| Jupiter | 10571-09-26 01:26 G | 5582306.33 | 5582306.56 | 5582306.78 | 0.0489 | 0.0022 |
| Saturn | 10573-03-22 00:00 G | 5582849.31 | 5582849.50 | 5582849.69 | 0.0280 | 0.0171 |
| Jupiter | 10577-03-22 10:19 G | 5584310.72 | 5584310.93 | 5584311.14 | 0.0541 | 0.0223 |
| Uranus | 10581-01-17 18:28 G | 5585708.19 | 5585708.27 | 5585708.40 | 0.0133 | 0.0120 |
| Mars | 10581-07-14 13:55 G | 5585885.93 | 5585886.08 | 5585886.22 | 0.1597 | 0.0922 |
| Uranus | 10582-01-22 06:00 G | 5586077.54 | 5586077.75 | 5586077.97 | 0.0133 | 0.0076 |
| Uranus | 10583-01-26 09:50 G | 5586446.69 | 5586446.91 | 5586447.15 | 0.0133 | 0.0050 |
| Jupiter | 10583-09-30 02:38 G | 5586693.39 | 5586693.61 | 5586693.84 | 0.0490 | 0.0181 |
| Uranus | 10584-01-30 22:04 G | 5586816.15 | 5586816.42 | 5586816.68 | 0.0133 | 0.0002 |
| Uranus | 10585-02-03 01:40 G | 5587185.33 | 5587185.57 | 5587185.82 | 0.0133 | 0.0027 |

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| Uranus | 10586-02-07 14:09 G | 5587554.88 | 5587555.09 | 5587555.32 | 0.0133 | 0.0074 |
| Uranus | 10587-02-11 17:45 G | 5587924.10 | 5587924.24 | 5587924.40 | 0.0133 | 0.0107 |
| Saturn | 10587-09-21 13:55 G | 5588145.83 | 5588146.08 | 5588146.33 | 0.0279 | 0.0062 |
| Jupiter | 10589-03-27 09:07 G | 5588698.64 | 5588698.88 | 5588699.12 | 0.0540 | 0.0045 |
| Jupiter | 10595-10-04 12:43 G | 5591080.85 | 5591081.03 | 5591081.21 | 0.0491 | 0.0304 |
| Jupiter | 10601-04-02 20:09 G | 5593087.13 | 5593087.34 | 5593087.56 | 0.0539 | 0.0110 |
| Saturn | 10603-03-30 18:43 G | 5593814.07 | 5593814.28 | 5593814.51 | 0.0280 | 0.0138 |
| Jupiter | 10607-10-09 23:45 G | 5595468.36 | 5595468.49 | 5595468.62 | 0.0493 | 0.0414 |
| Pluto | 10611-05-07 14:23 G | 5596774.07 | 5596774.10 | 5596774.19 | 0.0064 | 0.0062 |
| Pluto | 10612-05-07 19:11 G | 5597140.07 | 5597140.30 | 5597140.56 | 0.0064 | 0.0020 |
| Jupiter | 10613-04-08 01:11 G | 5597475.36 | 5597475.55 | 5597475.74 | 0.0537 | 0.0324 |
| Saturn | 10617-09-29 00:28 G | 5599110.41 | 5599110.52 | 5599110.65 | 0.0278 | 0.0239 |
| Jupiter | 10618-09-13 12:14 G | 5599459.89 | 5599460.01 | 5599460.15 | 0.0486 | 0.0403 |
| Uranus | 10623-07-21 20:52 G | 5601232.21 | 5601232.37 | 5601232.58 | 0.0146 | 0.0100 |
| Uranus | 10624-07-25 14:38 G | 5601601.87 | 5601602.11 | 5601602.36 | 0.0146 | 0.0045 |
| Uranus | 10625-07-30 21:50 G | 5601972.16 | 5601972.41 | 5601972.66 | 0.0145 | 0.0008 |
| Uranus | 10626-08-04 15:50 G | 5602341.93 | 5602342.16 | 5602342.41 | 0.0145 | 0.0056 |
| Uranus | 10627-08-09 21:36 G | 5602712.23 | 5602712.40 | 5602712.61 | 0.0145 | 0.0092 |
| Mars | 10628-07-09 20:52 G | 5603047.29 | 5603047.37 | 5603047.45 | 0.1603 | 0.1425 |
| Uranus | 10628-08-13 17:31 G | 5603082.23 | 5603082.23 | 5603082.24 | 0.0145 | 0.0145 |
| Jupiter | 10630-09-17 10:48 G | 5603846.76 | 5603846.95 | 5603847.13 | 0.0487 | 0.0303 |
| Saturn | 10632-03-24 09:21 G | 5604400.68 | 5604400.89 | 5604401.12 | 0.0280 | 0.0105 |
| Neptune | 10634-04-21 08:23 G | 5605158.76 | 5605158.85 | 5605158.97 | 0.0089 | 0.0081 |
| Neptune | 10635-04-23 13:26 G | 5605525.95 | 5605526.06 | 5605526.19 | 0.0089 | 0.0078 |
| Neptune | 10636-04-25 05:45 G | 5605893.56 | 5605893.74 | 5605893.96 | 0.0089 | 0.0057 |
| Neptune | 10637-04-27 13:55 G | 5606260.88 | 5606261.08 | 5606261.28 | 0.0089 | 0.0053 |
| Neptune | 10638-04-30 01:55 G | 5606628.35 | 5606628.58 | 5606628.84 | 0.0089 | 0.0032 |
| Neptune | 10639-05-02 14:52 G | 5606995.89 | 5606996.12 | 5606996.36 | 0.0089 | 0.0027 |
| Neptune | 10640-05-03 22:33 G | 5607363.19 | 5607363.44 | 5607363.71 | 0.0089 | 0.0007 |
| Neptune | 10641-05-06 15:07 G | 5607730.88 | 5607731.13 | 5607731.38 | 0.0089 | 0.0003 |

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| Neptune | 10642-05-08 19:26 G | 5608098.07 | 5608098.31 | 5608098.57 | 0.0089 | 0.0017 |
| Jupiter | 10642-09-21 21:50 G | 5608234.20 | 5608234.41 | 5608234.63 | 0.0487 | 0.0181 |
| Neptune | 10643-05-11 13:11 G | 5608465.81 | 5608466.05 | 5608466.31 | 0.0089 | 0.0022 |
| Neptune | 10644-05-12 17:31 G | 5608833.03 | 5608833.23 | 5608833.47 | 0.0089 | 0.0042 |
| Neptune | 10645-05-15 09:07 G | 5609200.68 | 5609200.88 | 5609201.13 | 0.0089 | 0.0047 |
| Neptune | 10646-05-17 16:33 G | 5609568.05 | 5609568.19 | 5609568.38 | 0.0089 | 0.0066 |
| Saturn | 10646-09-23 18:57 G | 5609697.03 | 5609697.29 | 5609697.54 | 0.0279 | 0.0011 |
| Neptune | 10647-05-20 03:36 G | 5609935.51 | 5609935.65 | 5609935.84 | 0.0089 | 0.0070 |
| Jupiter | 10648-03-17 02:38 G | 5610237.54 | 5610237.61 | 5610237.70 | 0.0543 | 0.0506 |
| Jupiter | 10654-09-26 01:26 G | 5612621.31 | 5612621.56 | 5612621.80 | 0.0488 | 0.0005 |
| Jupiter | 10660-03-22 05:02 G | 5614625.50 | 5614625.71 | 5614625.91 | 0.0542 | 0.0259 |
| Saturn | 10662-03-31 21:36 G | 5615365.25 | 5615365.40 | 5615365.58 | 0.0280 | 0.0208 |
| Uranus | 10665-01-19 07:55 G | 5616389.71 | 5616389.83 | 5616389.97 | 0.0133 | 0.0113 |
| Uranus | 10666-01-23 18:14 G | 5616759.06 | 5616759.26 | 5616759.48 | 0.0133 | 0.0081 |
| Jupiter | 10666-09-30 09:50 G | 5617008.70 | 5617008.91 | 5617009.13 | 0.0490 | 0.0159 |
| Uranus | 10667-01-27 23:45 G | 5617128.26 | 5617128.49 | 5617128.74 | 0.0133 | 0.0034 |
| Uranus | 10668-02-01 10:48 G | 5617497.69 | 5617497.95 | 5617498.21 | 0.0133 | 0.0008 |
| Uranus | 10669-02-04 15:07 G | 5617866.91 | 5617867.13 | 5617867.38 | 0.0133 | 0.0044 |
| Uranus | 10670-02-09 02:23 G | 5618236.39 | 5618236.60 | 5618236.84 | 0.0133 | 0.0071 |
| Uranus | 10671-02-13 06:43 G | 5618605.67 | 5618605.78 | 5618605.92 | 0.0133 | 0.0115 |
| Jupiter | 10672-03-27 18:00 G | 5619014.03 | 5619014.25 | 5619014.48 | 0.0540 | 0.0082 |
| Saturn | 10675-09-18 03:50 G | 5620283.56 | 5620283.66 | 5620283.77 | 0.0280 | 0.0251 |
| Jupiter | 10678-10-04 21:21 G | 5621396.19 | 5621396.39 | 5621396.59 | 0.0491 | 0.0276 |
| Jupiter | 10684-04-01 19:26 G | 5623402.07 | 5623402.31 | 5623402.55 | 0.0538 | 0.0071 |
| Jupiter | 10690-10-09 02:38 G | 5625783.48 | 5625783.61 | 5625783.75 | 0.0493 | 0.0392 |
| Saturn | 10691-03-26 18:28 G | 5625952.03 | 5625952.27 | 5625952.50 | 0.0280 | 0.0039 |
| Jupiter | 10696-04-06 19:40 G | 5627790.13 | 5627790.32 | 5627790.51 | 0.0537 | 0.0287 |
| Pluto | 10700-11-06 18:00 G | 5629463.99 | 5629464.25 | 5629464.51 | 0.0080 | 0.0001 |
| Jupiter | 10701-09-13 10:48 G | 5629774.84 | 5629774.95 | 5629775.06 | 0.0486 | 0.0429 |
| Saturn | 10705-09-25 23:45 G | 5631248.26 | 5631248.49 | 5631248.73 | 0.0279 | 0.0076 |

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| Uranus | 10706-07-18 02:38 G | 5631543.56 | 5631543.61 | 5631543.70 | 0.0146 | 0.0140 |
| Mars | 10707-07-13 23:45 G | 5631904.31 | 5631904.49 | 5631904.67 | 0.1601 | 0.0640 |
| Uranus | 10707-07-23 09:50 G | 5631913.74 | 5631913.91 | 5631914.12 | 0.0146 | 0.0095 |
| Jupiter | 10708-04-13 03:21 G | 5632178.58 | 5632178.64 | 5632178.72 | 0.0536 | 0.0509 |
| Uranus | 10708-07-27 03:07 G | 5632283.40 | 5632283.63 | 5632283.87 | 0.0146 | 0.0050 |
| Uranus | 10709-08-01 10:33 G | 5632653.69 | 5632653.94 | 5632654.19 | 0.0145 | 0.0011 |
| Uranus | 10710-08-06 04:19 G | 5633023.44 | 5633023.68 | 5633023.92 | 0.0145 | 0.0045 |
| Uranus | 10711-08-11 10:33 G | 5633393.78 | 5633393.94 | 5633394.12 | 0.0145 | 0.0106 |
| Jupiter | 10713-09-17 23:31 G | 5634162.32 | 5634162.48 | 5634162.65 | 0.0486 | 0.0333 |
| Mars | 10716-01-13 13:40 G | 5635009.92 | 5635010.07 | 5635010.22 | 0.1932 | 0.1429 |
| Neptune | 10717-10-21 04:04 G | 5635656.57 | 5635656.67 | 5635656.80 | 0.0088 | 0.0079 |
| Neptune | 10718-10-23 18:00 G | 5636024.10 | 5636024.25 | 5636024.43 | 0.0088 | 0.0065 |
| Neptune | 10719-10-26 01:26 G | 5636391.36 | 5636391.56 | 5636391.78 | 0.0088 | 0.0055 |
| Neptune | 10720-10-27 19:40 G | 5636759.09 | 5636759.32 | 5636759.55 | 0.0088 | 0.0041 |
| Saturn | 10721-04-03 03:36 G | 5636916.61 | 5636916.65 | 5636916.72 | 0.0280 | 0.0272 |
| Neptune | 10721-10-30 00:28 G | 5637126.29 | 5637126.52 | 5637126.78 | 0.0088 | 0.0033 |
| Neptune | 10722-11-01 19:40 G | 5637494.07 | 5637494.32 | 5637494.59 | 0.0088 | 0.0017 |
| Neptune | 10723-11-04 01:40 G | 5637861.32 | 5637861.57 | 5637861.83 | 0.0088 | 0.0009 |
| Neptune | 10724-11-05 18:57 G | 5638229.03 | 5638229.29 | 5638229.56 | 0.0088 | 0.0008 |
| Jupiter | 10725-09-22 01:26 G | 5638549.34 | 5638549.56 | 5638549.79 | 0.0487 | 0.0196 |
| Neptune | 10725-11-08 04:33 G | 5638596.45 | 5638596.69 | 5638596.94 | 0.0088 | 0.0016 |
| Neptune | 10726-11-10 17:31 G | 5638963.99 | 5638964.23 | 5638964.49 | 0.0088 | 0.0033 |
| Neptune | 10727-11-13 07:40 G | 5639331.62 | 5639331.82 | 5639332.07 | 0.0088 | 0.0040 |
| Neptune | 10728-11-14 15:50 G | 5639698.98 | 5639699.16 | 5639699.39 | 0.0088 | 0.0057 |
| Neptune | 10729-11-17 10:04 G | 5640066.77 | 5640066.92 | 5640067.13 | 0.0088 | 0.0064 |
| Neptune | 10730-11-19 16:04 G | 5640434.08 | 5640434.17 | 5640434.28 | 0.0088 | 0.0081 |
| Jupiter | 10731-03-18 00:43 G | 5640552.48 | 5640552.53 | 5640552.59 | 0.0543 | 0.0527 |
| Neptune | 10731-11-22 11:45 G | 5640801.96 | 5640801.99 | 5640802.05 | 0.0088 | 0.0087 |
| Saturn | 10734-09-20 11:02 G | 5641834.79 | 5641834.96 | 5641835.16 | 0.0280 | 0.0185 |
| Jupiter | 10737-09-26 10:19 G | 5642936.71 | 5642936.93 | 5642937.16 | 0.0488 | 0.0020 |

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| Jupiter | 10743-03-23 12:57 G | 5644940.85 | 5644941.04 | 5644941.23 | 0.0541 | 0.0287 |
| Uranus | 10749-01-20 20:38 G | 5647071.25 | 5647071.36 | 5647071.51 | 0.0133 | 0.0112 |
| Jupiter | 10749-09-30 20:09 G | 5647324.11 | 5647324.34 | 5647324.58 | 0.0490 | 0.0137 |
| Uranus | 10750-01-25 05:31 G | 5647440.52 | 5647440.73 | 5647440.97 | 0.0133 | 0.0070 |
| Saturn | 10750-03-28 22:33 G | 5647503.19 | 5647503.44 | 5647503.69 | 0.0280 | 0.0023 |
| Uranus | 10751-01-29 12:14 G | 5647809.78 | 5647810.01 | 5647810.25 | 0.0133 | 0.0041 |
| Uranus | 10752-02-02 22:04 G | 5648179.16 | 5648179.42 | 5648179.69 | 0.0133 | 0.0010 |
| Uranus | 10753-02-06 04:04 G | 5648548.43 | 5648548.67 | 5648548.91 | 0.0133 | 0.0035 |
| Uranus | 10754-02-10 14:23 G | 5648917.91 | 5648918.10 | 5648918.32 | 0.0133 | 0.0084 |
| Uranus | 10755-02-14 20:09 G | 5649287.23 | 5649287.34 | 5649287.48 | 0.0133 | 0.0115 |
| Jupiter | 10755-03-28 14:52 G | 5649328.89 | 5649329.12 | 5649329.36 | 0.0540 | 0.0121 |
| Jupiter | 10761-10-04 23:02 G | 5651711.26 | 5651711.46 | 5651711.66 | 0.0490 | 0.0242 |
| Saturn | 10764-09-27 07:26 G | 5652799.61 | 5652799.81 | 5652800.02 | 0.0279 | 0.0142 |
| Jupiter | 10767-04-02 17:16 G | 5653716.99 | 5653717.22 | 5653717.44 | 0.0540 | 0.0033 |
| Jupiter | 10773-10-09 14:52 G | 5656098.96 | 5656099.12 | 5656099.28 | 0.0492 | 0.0362 |
| Saturn | 10779-03-23 08:38 G | 5658089.72 | 5658089.86 | 5658090.02 | 0.0278 | 0.0216 |
| Jupiter | 10779-04-08 05:02 G | 5658105.51 | 5658105.71 | 5658105.92 | 0.0538 | 0.0263 |
| Jupiter | 10784-09-13 01:55 G | 5660090.50 | 5660090.58 | 5660090.66 | 0.0485 | 0.0454 |
| Mars | 10786-07-16 06:57 G | 5660761.63 | 5660761.79 | 5660761.96 | 0.1600 | 0.0806 |
| Uranus | 10790-07-18 14:38 G | 5662225.11 | 5662225.11 | 5662225.11 | 0.0146 | 0.0146 |
| Jupiter | 10791-04-13 03:36 G | 5662493.56 | 5662493.65 | 5662493.76 | 0.0536 | 0.0485 |
| Uranus | 10791-07-23 21:07 G | 5662595.19 | 5662595.38 | 5662595.59 | 0.0146 | 0.0091 |
| Uranus | 10792-07-27 14:52 G | 5662964.88 | 5662965.12 | 5662965.37 | 0.0146 | 0.0038 |
| Uranus | 10793-08-01 22:48 G | 5663335.20 | 5663335.45 | 5663335.70 | 0.0145 | 0.0001 |
| Saturn | 10793-09-21 10:33 G | 5663385.71 | 5663385.94 | 5663386.17 | 0.0280 | 0.0119 |
| Uranus | 10794-08-06 16:19 G | 5663704.96 | 5663705.18 | 5663705.42 | 0.0145 | 0.0064 |
| Mars | 10795-01-17 16:48 G | 5663869.11 | 5663869.20 | 5663869.29 | 0.1936 | 0.1700 |
| Uranus | 10795-08-11 23:31 G | 5664075.32 | 5664075.48 | 5664075.67 | 0.0145 | 0.0100 |
| Jupiter | 10796-09-17 04:48 G | 5664477.54 | 5664477.70 | 5664477.87 | 0.0486 | 0.0353 |
| Neptune | 10799-04-24 00:28 G | 5665426.41 | 5665426.52 | 5665426.66 | 0.0089 | 0.0078 |

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| Neptune | 10800-04-25 09:36 G | 5665793.76 | 5665793.90 | 5665794.08 | 0.0089 | 0.0068 |
| Neptune | 10801-04-27 20:52 G | 5666161.18 | 5666161.37 | 5666161.60 | 0.0089 | 0.0053 |
| Neptune | 10802-04-30 10:48 G | 5666528.75 | 5666528.95 | 5666529.18 | 0.0089 | 0.0044 |
| Neptune | 10803-05-02 17:31 G | 5666895.99 | 5666896.23 | 5666896.49 | 0.0089 | 0.0030 |
| Neptune | 10804-05-04 10:48 G | 5667263.71 | 5667263.95 | 5667264.20 | 0.0089 | 0.0020 |
| Neptune | 10805-05-06 15:21 G | 5667630.89 | 5667631.14 | 5667631.39 | 0.0089 | 0.0005 |
| Neptune | 10806-05-09 09:07 G | 5667998.63 | 5667998.88 | 5667999.14 | 0.0089 | 0.0005 |
| Neptune | 10807-05-11 13:55 G | 5668365.85 | 5668366.08 | 5668366.34 | 0.0089 | 0.0021 |
| Neptune | 10808-05-13 05:02 G | 5668733.47 | 5668733.71 | 5668733.97 | 0.0089 | 0.0029 |
| Jupiter | 10808-09-21 11:45 G | 5668864.79 | 5668864.99 | 5668865.20 | 0.0487 | 0.0212 |
| Saturn | 10809-03-29 20:09 G | 5669054.11 | 5669054.34 | 5669054.59 | 0.0280 | 0.0084 |
| Neptune | 10809-05-15 14:09 G | 5669100.89 | 5669101.09 | 5669101.31 | 0.0089 | 0.0044 |
| Neptune | 10810-05-18 00:28 G | 5669468.32 | 5669468.52 | 5669468.75 | 0.0089 | 0.0052 |
| Neptune | 10811-05-20 14:09 G | 5669835.95 | 5669836.09 | 5669836.27 | 0.0089 | 0.0068 |
| Neptune | 10812-05-21 19:40 G | 5670203.20 | 5670203.32 | 5670203.47 | 0.0089 | 0.0076 |
| Jupiter | 10820-09-25 20:52 G | 5673252.12 | 5673252.37 | 5673252.61 | 0.0488 | 0.0038 |
| Saturn | 10823-09-29 13:11 G | 5674350.89 | 5674351.05 | 5674351.23 | 0.0279 | 0.0202 |
| Jupiter | 10826-03-22 07:26 G | 5675255.62 | 5675255.81 | 5675256.00 | 0.0542 | 0.0325 |
| Jupiter | 10832-09-30 00:00 G | 5677639.28 | 5677639.50 | 5677639.73 | 0.0489 | 0.0111 |
| Uranus | 10833-01-21 10:33 G | 5677752.81 | 5677752.94 | 5677753.10 | 0.0133 | 0.0107 |
| Uranus | 10834-01-25 18:57 G | 5678122.08 | 5678122.29 | 5678122.52 | 0.0133 | 0.0072 |
| Uranus | 10835-01-30 02:52 G | 5678491.38 | 5678491.62 | 5678491.87 | 0.0133 | 0.0026 |
| Uranus | 10836-02-03 11:31 G | 5678860.72 | 5678860.98 | 5678861.25 | 0.0133 | 0.0002 |
| Uranus | 10837-02-06 18:14 G | 5679230.05 | 5679230.26 | 5679230.50 | 0.0133 | 0.0053 |
| Uranus | 10838-02-11 03:21 G | 5679599.44 | 5679599.64 | 5679599.87 | 0.0133 | 0.0079 |
| Saturn | 10838-03-24 16:33 G | 5679641.00 | 5679641.19 | 5679641.39 | 0.0278 | 0.0152 |
| Jupiter | 10838-03-27 17:02 G | 5679643.99 | 5679644.21 | 5679644.42 | 0.0541 | 0.0158 |
| Uranus | 10839-02-15 09:50 G | 5679968.84 | 5679968.91 | 5679969.01 | 0.0133 | 0.0125 |
| Jupiter | 10844-10-04 14:09 G | 5682026.88 | 5682027.09 | 5682027.30 | 0.0490 | 0.0212 |
| Jupiter | 10850-04-02 05:31 G | 5684032.50 | 5684032.73 | 5684032.97 | 0.0540 | 0.0014 |

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| Saturn | 10852-09-22 09:07 G | 5684936.64 | 5684936.88 | 5684937.13 | 0.0280 | 0.0059 |
| Jupiter | 10856-10-08 16:33 G | 5686414.03 | 5686414.19 | 5686414.37 | 0.0492 | 0.0342 |
| Pluto | 10858-05-10 02:52 G | 5686992.47 | 5686992.62 | 5686992.82 | 0.0064 | 0.0046 |
| Pluto | 10859-05-11 08:38 G | 5687358.68 | 5687358.86 | 5687359.06 | 0.0064 | 0.0044 |
| Jupiter | 10862-04-07 03:21 G | 5688420.44 | 5688420.64 | 5688420.85 | 0.0538 | 0.0241 |
| Jupiter | 10867-09-13 09:07 G | 5690405.84 | 5690405.88 | 5690405.93 | 0.0485 | 0.0476 |
| Saturn | 10868-03-30 19:11 G | 5690605.10 | 5690605.30 | 5690605.51 | 0.0280 | 0.0143 |
| Jupiter | 10874-04-12 13:11 G | 5692808.94 | 5692809.05 | 5692809.17 | 0.0536 | 0.0454 |
| Uranus | 10874-07-19 03:50 G | 5692906.58 | 5692906.66 | 5692906.79 | 0.0146 | 0.0132 |
| Uranus | 10875-07-24 10:33 G | 5693276.75 | 5693276.94 | 5693277.16 | 0.0146 | 0.0088 |
| Uranus | 10876-07-28 04:33 G | 5693646.46 | 5693646.69 | 5693646.94 | 0.0146 | 0.0041 |
| Uranus | 10877-08-02 12:14 G | 5694016.76 | 5694017.01 | 5694017.26 | 0.0145 | 0.0020 |
| Uranus | 10878-08-07 05:16 G | 5694386.50 | 5694386.72 | 5694386.97 | 0.0145 | 0.0055 |
| Uranus | 10879-08-12 12:57 G | 5694756.90 | 5694757.04 | 5694757.20 | 0.0145 | 0.0116 |
| Jupiter | 10879-09-17 15:07 G | 5694793.00 | 5694793.13 | 5694793.28 | 0.0486 | 0.0377 |
| Neptune | 10881-10-20 10:48 G | 5695556.95 | 5695556.95 | 5695556.99 | 0.0088 | 0.0088 |
| Saturn | 10882-09-30 11:02 G | 5695901.88 | 5695901.96 | 5695902.07 | 0.0279 | 0.0259 |
| Neptune | 10882-10-22 17:16 G | 5695924.08 | 5695924.22 | 5695924.42 | 0.0088 | 0.0067 |
| Neptune | 10883-10-25 12:00 G | 5696291.86 | 5696292.00 | 5696292.21 | 0.0088 | 0.0066 |
| Neptune | 10884-10-26 17:31 G | 5696659.02 | 5696659.23 | 5696659.46 | 0.0088 | 0.0044 |
| Neptune | 10885-10-29 12:14 G | 5697026.79 | 5697027.01 | 5697027.25 | 0.0088 | 0.0041 |
| Neptune | 10886-10-31 18:57 G | 5697394.05 | 5697394.29 | 5697394.55 | 0.0088 | 0.0021 |
| Neptune | 10887-11-03 10:33 G | 5697761.69 | 5697761.94 | 5697762.22 | 0.0088 | 0.0018 |
| Neptune | 10888-11-04 21:21 G | 5698129.14 | 5698129.39 | 5698129.64 | 0.0088 | 0.0003 |
| Neptune | 10889-11-07 08:09 G | 5698496.57 | 5698496.84 | 5698497.11 | 0.0088 | 0.0007 |
| Neptune | 10890-11-09 23:45 G | 5698864.26 | 5698864.49 | 5698864.74 | 0.0088 | 0.0027 |
| Jupiter | 10891-09-22 00:57 G | 5699180.32 | 5699180.54 | 5699180.75 | 0.0486 | 0.0223 |
| Neptune | 10891-11-12 06:57 G | 5699231.55 | 5699231.79 | 5699232.05 | 0.0088 | 0.0030 |
| Neptune | 10892-11-14 02:23 G | 5699599.39 | 5699599.60 | 5699599.82 | 0.0088 | 0.0051 |
| Neptune | 10893-11-16 07:40 G | 5699966.63 | 5699966.82 | 5699967.04 | 0.0088 | 0.0055 |

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| Neptune | 10894-11-19 02:52 G | 5700334.51 | 5700334.62 | 5700334.79 | 0.0088 | 0.0075 |
| Neptune | 10895-11-21 10:04 G | 5700701.83 | 5700701.92 | 5700702.07 | 0.0088 | 0.0079 |
| Saturn | 10897-03-25 21:21 G | 5701192.16 | 5701192.39 | 5701192.62 | 0.0278 | 0.0091 |
| Jupiter | 10903-09-27 01:40 G | 5703567.34 | 5703567.57 | 5703567.80 | 0.0487 | 0.0052 |
| Jupiter | 10909-03-22 16:33 G | 5705571.02 | 5705571.19 | 5705571.36 | 0.0543 | 0.0347 |
| Saturn | 10911-09-25 12:57 G | 5706487.80 | 5706488.04 | 5706488.28 | 0.0280 | 0.0003 |
| Mars | 10912-07-13 13:40 G | 5706779.91 | 5706780.07 | 5706780.23 | 0.1605 | 0.0685 |
| Jupiter | 10915-10-01 16:19 G | 5707954.95 | 5707955.18 | 5707955.42 | 0.0489 | 0.0088 |
| Uranus | 10917-01-23 00:43 G | 5708434.38 | 5708434.53 | 5708434.70 | 0.0133 | 0.0102 |
| Uranus | 10918-01-27 07:26 G | 5708803.58 | 5708803.81 | 5708804.05 | 0.0133 | 0.0062 |
| Uranus | 10919-01-31 16:19 G | 5709172.94 | 5709173.18 | 5709173.42 | 0.0133 | 0.0032 |
| Uranus | 10920-02-04 23:45 G | 5709542.23 | 5709542.49 | 5709542.76 | 0.0133 | 0.0019 |
| Uranus | 10921-02-08 07:55 G | 5709911.61 | 5709911.83 | 5709912.07 | 0.0133 | 0.0045 |
| Jupiter | 10921-03-28 02:52 G | 5709959.40 | 5709959.62 | 5709959.85 | 0.0541 | 0.0188 |
| Uranus | 10922-02-12 16:04 G | 5710281.00 | 5710281.17 | 5710281.37 | 0.0133 | 0.0094 |
| Uranus | 10923-02-16 23:31 G | 5710650.42 | 5710650.48 | 5710650.59 | 0.0133 | 0.0125 |
| Saturn | 10927-04-03 00:14 G | 5712156.36 | 5712156.51 | 5712156.68 | 0.0280 | 0.0200 |
| Jupiter | 10927-10-05 17:31 G | 5712342.02 | 5712342.23 | 5712342.46 | 0.0490 | 0.0189 |
| Jupiter | 10933-04-02 02:09 G | 5714347.36 | 5714347.59 | 5714347.82 | 0.0540 | 0.0020 |
| Jupiter | 10939-10-10 08:52 G | 5716729.71 | 5716729.87 | 5716730.05 | 0.0491 | 0.0323 |
| Saturn | 10940-09-19 03:21 G | 5717074.53 | 5717074.64 | 5717074.76 | 0.0281 | 0.0248 |
| Jupiter | 10945-04-07 10:19 G | 5718735.72 | 5718735.93 | 5718736.14 | 0.0539 | 0.0210 |
| Pluto | 10947-11-10 11:45 G | 5719682.81 | 5719682.99 | 5719683.20 | 0.0080 | 0.0051 |
| Saturn | 10956-03-27 20:38 G | 5722743.11 | 5722743.36 | 5722743.61 | 0.0278 | 0.0033 |
| Jupiter | 10957-04-12 10:19 G | 5723123.79 | 5723123.93 | 5723124.08 | 0.0538 | 0.0418 |
| Uranus | 10958-07-20 15:21 G | 5723588.09 | 5723588.14 | 5723588.24 | 0.0146 | 0.0139 |
| Uranus | 10959-07-25 21:07 G | 5723958.19 | 5723958.38 | 5723958.61 | 0.0146 | 0.0082 |
| Uranus | 10960-07-29 16:04 G | 5724327.94 | 5724328.17 | 5724328.42 | 0.0146 | 0.0030 |
| Uranus | 10961-08-03 23:45 G | 5724698.24 | 5724698.49 | 5724698.75 | 0.0146 | 0.0011 |
| Uranus | 10962-08-08 17:16 G | 5725068.02 | 5725068.22 | 5725068.45 | 0.0145 | 0.0075 |

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| Jupiter | 10962-09-18 04:33 G | 5725108.54 | 5725108.69 | 5725108.83 | 0.0485 | 0.0389 |
| Neptune | 10963-04-24 05:02 G | 5725326.62 | 5725326.71 | 5725326.85 | 0.0089 | 0.0080 |
| Uranus | 10963-08-14 01:26 G | 5725438.40 | 5725438.56 | 5725438.73 | 0.0145 | 0.0110 |
| Neptune | 10964-04-25 14:23 G | 5725694.00 | 5725694.10 | 5725694.27 | 0.0089 | 0.0077 |
| Neptune | 10965-04-28 06:14 G | 5726061.57 | 5726061.76 | 5726061.96 | 0.0089 | 0.0056 |
| Neptune | 10966-04-30 11:45 G | 5726428.80 | 5726428.99 | 5726429.22 | 0.0089 | 0.0053 |
| Neptune | 10967-05-03 05:45 G | 5726796.52 | 5726796.74 | 5726797.00 | 0.0089 | 0.0032 |
| Neptune | 10968-05-04 10:19 G | 5727163.70 | 5727163.93 | 5727164.18 | 0.0089 | 0.0029 |
| Neptune | 10969-05-07 04:19 G | 5727531.43 | 5727531.68 | 5727531.94 | 0.0089 | 0.0008 |
| Neptune | 10970-05-09 10:48 G | 5727898.70 | 5727898.95 | 5727899.20 | 0.0089 | 0.0005 |
| Saturn | 10970-09-26 17:02 G | 5728038.97 | 5728039.21 | 5728039.45 | 0.0280 | 0.0055 |
| Neptune | 10971-05-12 00:57 G | 5728266.28 | 5728266.54 | 5728266.80 | 0.0089 | 0.0016 |
| Neptune | 10972-05-13 10:48 G | 5728633.72 | 5728633.95 | 5728634.20 | 0.0089 | 0.0019 |
| Neptune | 10973-05-15 19:40 G | 5729001.09 | 5729001.32 | 5729001.57 | 0.0089 | 0.0039 |
| Neptune | 10974-05-18 10:19 G | 5729368.73 | 5729368.93 | 5729369.17 | 0.0089 | 0.0043 |
| Jupiter | 10974-09-22 05:31 G | 5729495.54 | 5729495.73 | 5729495.94 | 0.0486 | 0.0236 |
| Neptune | 10975-05-20 15:21 G | 5729735.98 | 5729736.14 | 5729736.34 | 0.0089 | 0.0063 |
| Neptune | 10976-05-22 08:38 G | 5730103.72 | 5730103.86 | 5730104.06 | 0.0089 | 0.0066 |
| Neptune | 10977-05-24 12:28 G | 5730470.99 | 5730471.02 | 5730471.12 | 0.0089 | 0.0086 |
| Neptune | 10978-05-27 05:31 G | 5730838.72 | 5730838.73 | 5730838.79 | 0.0089 | 0.0088 |
| Saturn | 10986-04-04 06:14 G | 5733707.66 | 5733707.76 | 5733707.85 | 0.0280 | 0.0255 |
| Jupiter | 10986-09-26 19:11 G | 5733883.07 | 5733883.30 | 5733883.54 | 0.0487 | 0.0061 |
| Mars | 10991-07-16 07:40 G | 5735636.64 | 5735636.82 | 5735637.00 | 0.1603 | 0.0038 |
| Jupiter | 10992-03-21 22:04 G | 5735886.24 | 5735886.42 | 5735886.59 | 0.0542 | 0.0374 |
| Jupiter | 10998-09-30 19:55 G | 5738270.10 | 5738270.33 | 5738270.57 | 0.0488 | 0.0064 |
| Saturn | 10999-09-20 22:19 G | 5738625.26 | 5738625.43 | 5738625.62 | 0.0281 | 0.0194 |
| Uranus | 11000-01-20 04:33 G | 5738746.65 | 5738746.69 | 5738746.75 | 0.0133 | 0.0130 |

12TH MILLENNIUM CE

This is a list of transits of Moon in the 12th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Uranus | 11001-01-24 15:21 | G | 5739115.98 | 5739116.14 | 5739116.31 | 0.0133 | 0.0098 | |
| Uranus | 11002-01-28 21:07 | G | 5739485.16 | 5739485.38 | 5739485.63 | 0.0133 | 0.0062 | |
| Uranus | 11003-02-02 07:26 | G | 5739854.57 | 5739854.81 | 5739855.06 | 0.0133 | 0.0017 | |
| Uranus | 11004-02-06 13:40 | G | 5740223.81 | 5740224.07 | 5740224.34 | 0.0133 | 0.0011 | |
| Jupiter | 11004-03-27 18:43 | G | 5740274.08 | 5740274.28 | 5740274.49 | 0.0542 | 0.0233 | |
| Uranus | 11005-02-09 22:33 | G | 5740593.23 | 5740593.44 | 5740593.67 | 0.0133 | 0.0063 | |
| Uranus | 11006-02-14 05:02 | G | 5740962.53 | 5740962.71 | 5740962.93 | 0.0133 | 0.0089 | |
| Jupiter | 11010-10-06 10:33 | G | 5742657.72 | 5742657.94 | 5742658.15 | 0.0489 | 0.0168 | |
| Saturn | 11015-03-30 20:38 | G | 5744294.12 | 5744294.36 | 5744294.61 | 0.0278 | 0.0026 | |
| Jupiter | 11016-04-02 09:36 | G | 5744662.67 | 5744662.90 | 5744663.13 | 0.0541 | 0.0053 | |
| Jupiter | 11022-10-10 12:43 | G | 5747044.85 | 5747045.03 | 5747045.23 | 0.0491 | 0.0304 | |
| Jupiter | 11028-04-07 11:45 | G | 5749050.77 | 5749050.99 | 5749051.22 | 0.0539 | 0.0188 | |
| Saturn | 11029-09-28 17:31 | G | 5749590.00 | 5749590.23 | 5749590.46 | 0.0280 | 0.0108 | |
| Jupiter | 11034-10-15 00:14 | G | 5751432.49 | 5751432.51 | 5751432.54 | 0.0492 | 0.0488 | |
| Jupiter | 11040-04-12 21:07 | G | 5753439.23 | 5753439.38 | 5753439.54 | 0.0537 | 0.0391 | |
| Uranus | 11042-07-22 05:31 | G | 5754269.62 | 5754269.73 | 5754269.88 | 0.0146 | 0.0123 | |
| Uranus | 11043-07-27 11:16 | G | 5754639.75 | 5754639.97 | 5754640.18 | 0.0146 | 0.0079 | |
| Saturn | 11044-03-24 11:45 | G | 5754880.85 | 5754880.99 | 5754881.13 | 0.0278 | 0.0225 | |
| Uranus | 11044-07-31 06:28 | G | 5755009.53 | 5755009.77 | 5755010.01 | 0.0146 | 0.0030 | |
| Uranus | 11045-08-05 12:57 | G | 5755379.80 | 5755380.04 | 5755380.30 | 0.0146 | 0.0029 | |
| Jupiter | 11045-09-18 09:36 | G | 5755423.78 | 5755423.90 | 5755424.03 | 0.0486 | 0.0405 | |
| Uranus | 11046-08-10 06:43 | G | 5755749.57 | 5755749.78 | 5755750.01 | 0.0145 | 0.0065 | |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 11046-10-24 04:48 G | 5755824.59 | 5755824.70 | 5755824.83 | 0.0088 | 0.0077 |
| Uranus | 11047-08-15 14:23 G | 5756119.99 | 5756120.10 | 5756120.22 | 0.0145 | 0.0128 |
| Neptune | 11047-10-26 10:04 G | 5756191.76 | 5756191.92 | 5756192.09 | 0.0088 | 0.0066 |
| Neptune | 11048-10-28 03:07 G | 5756559.45 | 5756559.63 | 5756559.87 | 0.0088 | 0.0055 |
| Neptune | 11049-10-30 11:16 G | 5756926.75 | 5756926.97 | 5756927.19 | 0.0088 | 0.0042 |
| Neptune | 11050-11-02 01:11 G | 5757294.31 | 5757294.55 | 5757294.81 | 0.0088 | 0.0031 |
| Neptune | 11051-11-04 13:55 G | 5757661.83 | 5757662.08 | 5757662.32 | 0.0088 | 0.0019 |
| Jupiter | 11052-04-18 00:43 G | 5757827.48 | 5757827.53 | 5757827.59 | 0.0536 | 0.0522 |
| Neptune | 11052-11-05 23:16 G | 5758029.21 | 5758029.47 | 5758029.75 | 0.0088 | 0.0009 |
| Neptune | 11053-11-08 16:19 G | 5758396.93 | 5758397.18 | 5758397.44 | 0.0088 | 0.0004 |
| Neptune | 11054-11-10 22:19 G | 5758764.17 | 5758764.43 | 5758764.69 | 0.0088 | 0.0015 |
| Neptune | 11055-11-13 17:31 G | 5759131.99 | 5759132.23 | 5759132.48 | 0.0088 | 0.0029 |
| Neptune | 11056-11-14 22:33 G | 5759499.22 | 5759499.44 | 5759499.69 | 0.0088 | 0.0038 |
| Jupiter | 11057-09-22 23:31 G | 5759811.28 | 5759811.48 | 5759811.69 | 0.0486 | 0.0239 |
| Neptune | 11057-11-17 16:48 G | 5759867.01 | 5759867.20 | 5759867.44 | 0.0088 | 0.0053 |
| Saturn | 11058-09-22 22:48 G | 5760176.25 | 5760176.45 | 5760176.66 | 0.0281 | 0.0140 |
| Neptune | 11058-11-20 00:43 G | 5760234.37 | 5760234.53 | 5760234.74 | 0.0088 | 0.0061 |
| Neptune | 11059-11-22 15:50 G | 5760602.03 | 5760602.16 | 5760602.32 | 0.0088 | 0.0075 |
| Neptune | 11060-11-24 04:19 G | 5760969.63 | 5760969.68 | 5760969.79 | 0.0088 | 0.0084 |
| Jupiter | 11069-09-26 23:16 G | 5764198.23 | 5764198.47 | 5764198.71 | 0.0487 | 0.0073 |
| Mars | 11070-07-19 06:00 G | 5764493.64 | 5764493.75 | 5764493.85 | 0.1601 | 0.1318 |
| Saturn | 11074-04-01 02:23 G | 5765845.38 | 5765845.60 | 5765845.83 | 0.0278 | 0.0085 |
| Jupiter | 11075-03-22 14:52 G | 5766200.98 | 5766201.12 | 5766201.27 | 0.0543 | 0.0415 |
| Mars | 11079-01-18 00:43 G | 5767598.31 | 5767598.53 | 5767598.75 | 0.1932 | 0.0545 |
| Jupiter | 11081-10-01 10:19 G | 5768585.71 | 5768585.93 | 5768586.16 | 0.0488 | 0.0043 |
| Uranus | 11085-01-25 05:31 G | 5769797.57 | 5769797.73 | 5769797.93 | 0.0133 | 0.0092 |
| Uranus | 11086-01-29 10:19 G | 5770166.70 | 5770166.93 | 5770167.19 | 0.0133 | 0.0053 |
| Uranus | 11087-02-02 21:21 G | 5770536.15 | 5770536.39 | 5770536.64 | 0.0133 | 0.0021 |
| Jupiter | 11087-03-28 08:09 G | 5770589.64 | 5770589.84 | 5770590.04 | 0.0542 | 0.0265 |
| Uranus | 11088-02-07 02:23 G | 5770905.35 | 5770905.60 | 5770905.87 | 0.0133 | 0.0029 |

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| Saturn | 11088-09-29 15:36 G | 5771140.95 | 5771141.15 | 5771141.36 | 0.0280 | 0.0167 |
| Uranus | 11089-02-10 12:43 G | 5771274.81 | 5771275.03 | 5771275.26 | 0.0133 | 0.0055 |
| Uranus | 11090-02-14 18:28 G | 5771644.12 | 5771644.27 | 5771644.44 | 0.0133 | 0.0106 |
| Jupiter | 11093-10-05 13:55 G | 5772972.85 | 5772973.08 | 5772973.32 | 0.0489 | 0.0148 |
| Jupiter | 11099-04-02 09:36 G | 5774977.67 | 5774977.90 | 5774978.13 | 0.0541 | 0.0078 |
| Saturn | 11103-03-27 15:36 G | 5776431.95 | 5776432.15 | 5776432.35 | 0.0278 | 0.0164 |
| Pluto | 11105-05-14 19:55 G | 5777211.09 | 5777211.33 | 5777211.58 | 0.0064 | 0.0011 |
| Jupiter | 11105-10-11 00:00 G | 5777360.33 | 5777360.50 | 5777360.69 | 0.0491 | 0.0295 |
| Jupiter | 11111-04-08 19:40 G | 5779366.10 | 5779366.32 | 5779366.53 | 0.0539 | 0.0162 |
| Mars | 11117-07-14 18:00 G | 5781655.19 | 5781655.25 | 5781655.31 | 0.1609 | 0.1518 |
| Saturn | 11117-09-25 05:02 G | 5781727.49 | 5781727.71 | 5781727.95 | 0.0281 | 0.0081 |
| Jupiter | 11117-10-15 12:43 G | 5781747.97 | 5781748.03 | 5781748.10 | 0.0492 | 0.0474 |
| Jupiter | 11123-04-13 18:00 G | 5783754.07 | 5783754.25 | 5783754.43 | 0.0538 | 0.0345 |
| Uranus | 11126-07-23 17:16 G | 5784951.14 | 5784951.22 | 5784951.35 | 0.0146 | 0.0131 |
| Neptune | 11127-04-25 08:09 G | 5785226.81 | 5785226.84 | 5785226.90 | 0.0089 | 0.0088 |
| Uranus | 11127-07-28 21:50 G | 5785321.18 | 5785321.41 | 5785321.63 | 0.0146 | 0.0071 |
| Neptune | 11128-04-27 00:43 G | 5785594.43 | 5785594.53 | 5785594.66 | 0.0089 | 0.0079 |
| Uranus | 11128-08-01 17:45 G | 5785691.00 | 5785691.24 | 5785691.49 | 0.0146 | 0.0021 |
| Jupiter | 11128-09-19 03:36 G | 5785739.53 | 5785739.65 | 5785739.77 | 0.0485 | 0.0412 |
| Neptune | 11129-04-29 05:45 G | 5785961.58 | 5785961.74 | 5785961.93 | 0.0089 | 0.0065 |
| Uranus | 11129-08-07 00:14 G | 5786061.25 | 5786061.51 | 5786061.76 | 0.0146 | 0.0021 |
| Neptune | 11130-05-02 00:00 G | 5786329.32 | 5786329.50 | 5786329.72 | 0.0089 | 0.0055 |
| Uranus | 11130-08-11 18:28 G | 5786431.08 | 5786431.27 | 5786431.48 | 0.0146 | 0.0085 |
| Neptune | 11131-05-04 05:02 G | 5786696.49 | 5786696.71 | 5786696.94 | 0.0089 | 0.0042 |
| Uranus | 11131-08-17 02:09 G | 5786801.45 | 5786801.59 | 5786801.74 | 0.0145 | 0.0120 |
| Neptune | 11132-05-05 21:50 G | 5787064.17 | 5787064.41 | 5787064.67 | 0.0089 | 0.0030 |
| Saturn | 11133-04-03 12:43 G | 5787396.84 | 5787397.03 | 5787397.24 | 0.0279 | 0.0148 |
| Neptune | 11133-05-08 04:48 G | 5787431.47 | 5787431.70 | 5787431.96 | 0.0089 | 0.0020 |
| Neptune | 11134-05-10 18:00 G | 5787798.98 | 5787799.25 | 5787799.51 | 0.0089 | 0.0007 |
| Jupiter | 11135-04-18 18:14 G | 5788142.17 | 5788142.26 | 5788142.36 | 0.0537 | 0.0483 |

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| Neptune | 11135-05-13 06:00 G | 5788166.50 | 5788166.75 | 5788166.99 | 0.0089 | 0.0004 |
| Neptune | 11136-05-14 14:23 G | 5788533.84 | 5788534.10 | 5788534.35 | 0.0089 | 0.0017 |
| Neptune | 11137-05-17 06:28 G | 5788901.54 | 5788901.77 | 5788902.02 | 0.0089 | 0.0028 |
| Neptune | 11138-05-19 11:02 G | 5789268.74 | 5789268.96 | 5789269.20 | 0.0089 | 0.0040 |
| Neptune | 11139-05-22 05:02 G | 5789636.51 | 5789636.71 | 5789636.93 | 0.0089 | 0.0050 |
| Neptune | 11140-05-23 08:52 G | 5790003.72 | 5790003.87 | 5790004.08 | 0.0089 | 0.0063 |
| Jupiter | 11140-09-23 00:14 G | 5790126.31 | 5790126.51 | 5790126.72 | 0.0486 | 0.0250 |
| Neptune | 11141-05-26 01:26 G | 5790371.42 | 5790371.56 | 5790371.72 | 0.0089 | 0.0072 |
| Neptune | 11142-05-28 08:09 G | 5790738.80 | 5790738.84 | 5790738.92 | 0.0089 | 0.0086 |
| Saturn | 11147-10-02 17:45 G | 5792692.10 | 5792692.24 | 5792692.38 | 0.0280 | 0.0228 |
| Jupiter | 11152-09-27 12:14 G | 5794513.79 | 5794514.01 | 5794514.24 | 0.0487 | 0.0092 |
| Jupiter | 11158-03-23 03:21 G | 5796516.51 | 5796516.64 | 5796516.78 | 0.0543 | 0.0442 |
| Saturn | 11162-03-28 17:45 G | 5797983.01 | 5797983.24 | 5797983.48 | 0.0278 | 0.0100 |
| Jupiter | 11164-10-01 15:07 G | 5798900.89 | 5798901.13 | 5798901.38 | 0.0488 | 0.0021 |
| Uranus | 11168-01-23 07:40 G | 5800109.74 | 5800109.82 | 5800109.95 | 0.0133 | 0.0121 |
| Uranus | 11169-01-26 21:07 G | 5800479.19 | 5800479.38 | 5800479.56 | 0.0133 | 0.0089 |
| Uranus | 11170-01-31 00:57 G | 5800848.30 | 5800848.54 | 5800848.79 | 0.0133 | 0.0051 |
| Jupiter | 11170-03-28 03:21 G | 5800904.44 | 5800904.64 | 5800904.84 | 0.0542 | 0.0295 |
| Uranus | 11171-02-04 12:57 G | 5801217.79 | 5801218.04 | 5801218.29 | 0.0133 | 0.0007 |
| Uranus | 11172-02-08 16:48 G | 5801586.94 | 5801587.20 | 5801587.46 | 0.0133 | 0.0022 |
| Uranus | 11173-02-12 03:36 G | 5801956.45 | 5801956.65 | 5801956.87 | 0.0133 | 0.0074 |
| Uranus | 11174-02-16 07:55 G | 5802325.67 | 5802325.83 | 5802326.02 | 0.0133 | 0.0099 |
| Saturn | 11176-09-26 11:02 G | 5803278.71 | 5803278.96 | 5803279.21 | 0.0280 | 0.0019 |
| Jupiter | 11176-10-06 00:43 G | 5803288.32 | 5803288.53 | 5803288.75 | 0.0489 | 0.0129 |
| Jupiter | 11182-04-02 10:19 G | 5805292.71 | 5805292.93 | 5805293.15 | 0.0541 | 0.0116 |
| Jupiter | 11188-10-10 11:31 G | 5807675.78 | 5807675.98 | 5807676.18 | 0.0490 | 0.0284 |
| Saturn | 11192-04-04 21:50 G | 5808948.26 | 5808948.41 | 5808948.58 | 0.0279 | 0.0212 |
| Pluto | 11193-11-12 03:36 G | 5809534.49 | 5809534.65 | 5809534.85 | 0.0080 | 0.0060 |
| Jupiter | 11194-04-07 12:57 G | 5809680.81 | 5809681.04 | 5809681.28 | 0.0540 | 0.0123 |
| Mars | 11196-07-17 00:57 G | 5810512.35 | 5810512.54 | 5810512.74 | 0.1607 | 0.0039 |

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| Jupiter | 11200-10-14 11:31 G | 5812062.90 | 5812062.98 | 5812063.08 | 0.0491 | 0.0454 |
| Saturn | 11205-09-20 18:14 G | 5813865.19 | 5813865.26 | 5813865.36 | 0.0281 | 0.0261 |
| Jupiter | 11206-04-12 18:43 G | 5814069.10 | 5814069.28 | 5814069.46 | 0.0539 | 0.0314 |
| Uranus | 11210-07-24 08:23 G | 5815632.71 | 5815632.85 | 5815633.01 | 0.0146 | 0.0114 |
| Neptune | 11210-10-24 02:09 G | 5815724.56 | 5815724.59 | 5815724.65 | 0.0088 | 0.0086 |
| Uranus | 11211-07-29 11:31 G | 5816002.77 | 5816002.98 | 5816003.22 | 0.0146 | 0.0072 |
| Jupiter | 11211-09-19 02:52 G | 5816054.52 | 5816054.62 | 5816054.74 | 0.0485 | 0.0428 |
| Neptune | 11211-10-26 18:57 G | 5816092.13 | 5816092.29 | 5816092.48 | 0.0088 | 0.0066 |
| Uranus | 11212-08-02 08:38 G | 5816372.62 | 5816372.86 | 5816373.11 | 0.0146 | 0.0020 |
| Neptune | 11212-10-28 04:04 G | 5816459.52 | 5816459.67 | 5816459.86 | 0.0088 | 0.0064 |
| Uranus | 11213-08-07 13:40 G | 5816742.84 | 5816743.07 | 5816743.33 | 0.0146 | 0.0039 |
| Neptune | 11213-10-30 16:48 G | 5816826.98 | 5816827.20 | 5816827.45 | 0.0088 | 0.0044 |
| Uranus | 11214-08-12 08:38 G | 5817112.66 | 5817112.86 | 5817113.08 | 0.0146 | 0.0075 |
| Neptune | 11214-11-02 06:28 G | 5817194.57 | 5817194.77 | 5817195.01 | 0.0088 | 0.0042 |
| Uranus | 11215-08-17 15:21 G | 5817483.08 | 5817483.14 | 5817483.23 | 0.0145 | 0.0139 |
| Neptune | 11215-11-04 14:09 G | 5817561.85 | 5817562.09 | 5817562.37 | 0.0088 | 0.0023 |
| Neptune | 11216-11-06 08:09 G | 5817929.59 | 5817929.84 | 5817930.09 | 0.0088 | 0.0019 |
| Neptune | 11217-11-08 13:40 G | 5818296.81 | 5818297.07 | 5818297.33 | 0.0088 | 0.0002 |
| Jupiter | 11218-04-18 06:43 G | 5818457.66 | 5818457.78 | 5818457.91 | 0.0537 | 0.0449 |
| Neptune | 11218-11-11 08:52 G | 5818664.61 | 5818664.87 | 5818665.13 | 0.0088 | 0.0004 |
| Neptune | 11219-11-13 14:09 G | 5819031.85 | 5819032.09 | 5819032.35 | 0.0088 | 0.0025 |
| Neptune | 11220-11-15 07:40 G | 5819399.57 | 5819399.82 | 5819400.08 | 0.0088 | 0.0027 |
| Saturn | 11221-03-30 01:40 G | 5819534.33 | 5819534.57 | 5819534.81 | 0.0278 | 0.0034 |
| Neptune | 11221-11-17 16:33 G | 5819767.00 | 5819767.19 | 5819767.43 | 0.0088 | 0.0048 |
| Neptune | 11222-11-20 06:14 G | 5820134.55 | 5820134.76 | 5820134.99 | 0.0088 | 0.0050 |
| Jupiter | 11223-09-23 13:40 G | 5820441.88 | 5820442.07 | 5820442.26 | 0.0486 | 0.0262 |
| Neptune | 11223-11-22 19:55 G | 5820502.20 | 5820502.33 | 5820502.50 | 0.0088 | 0.0070 |
| Neptune | 11224-11-24 04:19 G | 5820869.55 | 5820869.68 | 5820869.85 | 0.0088 | 0.0073 |
| Jupiter | 11235-09-27 17:16 G | 5824828.98 | 5824829.22 | 5824829.45 | 0.0487 | 0.0110 |
| Saturn | 11235-09-28 13:11 G | 5824829.80 | 5824830.05 | 5824830.30 | 0.0280 | 0.0044 |

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| Jupiter | 11241-03-21 13:11 G | 5826830.95 | 5826831.05 | 5826831.17 | 0.0543 | 0.0480 |
| Jupiter | 11247-10-02 00:43 G | 5829216.30 | 5829216.53 | 5829216.76 | 0.0487 | 0.0004 |
| Saturn | 11250-03-25 08:38 G | 5830121.77 | 5830121.86 | 5830121.97 | 0.0278 | 0.0253 |
| Saturn | 11251-04-07 02:52 G | 5830499.60 | 5830499.62 | 5830499.67 | 0.0279 | 0.0277 |
| Uranus | 11252-01-23 21:50 G | 5830791.35 | 5830791.41 | 5830791.52 | 0.0133 | 0.0126 |
| Uranus | 11253-01-27 11:16 G | 5831160.79 | 5831160.97 | 5831161.18 | 0.0133 | 0.0082 |
| Jupiter | 11253-03-27 03:07 G | 5831219.45 | 5831219.63 | 5831219.81 | 0.0543 | 0.0337 |
| Uranus | 11254-01-31 14:23 G | 5831529.86 | 5831530.10 | 5831530.35 | 0.0133 | 0.0044 |
| Uranus | 11255-02-05 02:52 G | 5831899.37 | 5831899.62 | 5831899.87 | 0.0133 | 0.0010 |
| Uranus | 11256-02-09 05:45 G | 5832268.50 | 5832268.74 | 5832269.00 | 0.0133 | 0.0039 |
| Uranus | 11257-02-12 17:45 G | 5832638.04 | 5832638.24 | 5832638.47 | 0.0133 | 0.0066 |
| Uranus | 11258-02-16 21:50 G | 5833007.28 | 5833007.41 | 5833007.53 | 0.0133 | 0.0117 |
| Jupiter | 11259-10-06 07:40 G | 5833603.58 | 5833603.82 | 5833604.06 | 0.0488 | 0.0101 |
| Saturn | 11264-09-22 07:26 G | 5835416.64 | 5835416.81 | 5835416.98 | 0.0281 | 0.0193 |
| Jupiter | 11265-04-01 07:55 G | 5835607.60 | 5835607.83 | 5835608.06 | 0.0542 | 0.0144 |
| Jupiter | 11271-10-10 09:36 G | 5837990.71 | 5837990.90 | 5837991.10 | 0.0489 | 0.0262 |
| Mars | 11275-07-20 01:11 G | 5839369.39 | 5839369.55 | 5839369.71 | 0.1605 | 0.0785 |
| Jupiter | 11277-04-06 15:50 G | 5839995.94 | 5839996.16 | 5839996.38 | 0.0540 | 0.0100 |
| Saturn | 11280-03-31 15:36 G | 5841085.92 | 5841086.15 | 5841086.39 | 0.0278 | 0.0033 |
| Jupiter | 11283-10-15 01:11 G | 5842378.45 | 5842378.55 | 5842378.67 | 0.0491 | 0.0434 |
| Jupiter | 11289-04-12 02:09 G | 5844384.39 | 5844384.59 | 5844384.79 | 0.0539 | 0.0278 |
| Neptune | 11292-04-25 23:02 G | 5845494.35 | 5845494.46 | 5845494.59 | 0.0089 | 0.0078 |
| Neptune | 11293-04-28 17:02 G | 5845862.10 | 5845862.21 | 5845862.38 | 0.0089 | 0.0076 |
| Neptune | 11294-04-30 22:19 G | 5846229.26 | 5846229.43 | 5846229.65 | 0.0089 | 0.0056 |
| Uranus | 11294-07-24 20:23 G | 5846314.24 | 5846314.35 | 5846314.49 | 0.0146 | 0.0123 |
| Jupiter | 11294-09-18 15:36 G | 5846370.07 | 5846370.15 | 5846370.25 | 0.0485 | 0.0444 |
| Saturn | 11294-09-29 18:57 G | 5846381.07 | 5846381.29 | 5846381.52 | 0.0280 | 0.0112 |
| Neptune | 11295-05-03 14:52 G | 5846596.92 | 5846597.12 | 5846597.34 | 0.0089 | 0.0053 |
| Uranus | 11295-07-29 22:19 G | 5846684.20 | 5846684.43 | 5846684.67 | 0.0146 | 0.0062 |
| Neptune | 11296-05-04 23:31 G | 5846964.27 | 5846964.48 | 5846964.73 | 0.0089 | 0.0033 |

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| Uranus | 11296-08-02 20:23 G | 5847054.11 | 5847054.35 | 5847054.59 | 0.0146 | 0.0013 |
| Neptune | 11297-05-07 11:45 G | 5847331.74 | 5847331.99 | 5847332.24 | 0.0089 | 0.0030 |
| Uranus | 11297-08-08 00:57 G | 5847424.29 | 5847424.54 | 5847424.79 | 0.0146 | 0.0031 |
| Neptune | 11298-05-10 00:57 G | 5847699.29 | 5847699.54 | 5847699.79 | 0.0089 | 0.0009 |
| Uranus | 11298-08-12 20:52 G | 5847794.18 | 5847794.37 | 5847794.56 | 0.0146 | 0.0094 |
| Neptune | 11299-05-12 07:40 G | 5848066.56 | 5848066.82 | 5848067.08 | 0.0089 | 0.0006 |
| Uranus | 11299-08-18 02:52 G | 5848164.52 | 5848164.62 | 5848164.76 | 0.0145 | 0.0130 |
| Neptune | 11300-05-15 00:28 G | 5848434.28 | 5848434.52 | 5848434.78 | 0.0089 | 0.0014 |
| Jupiter | 11301-04-17 16:48 G | 5848772.06 | 5848772.20 | 5848772.35 | 0.0537 | 0.0410 |
| Neptune | 11301-05-17 04:48 G | 5848801.46 | 5848801.70 | 5848801.96 | 0.0089 | 0.0016 |
| Neptune | 11302-05-19 22:33 G | 5849169.23 | 5849169.44 | 5849169.70 | 0.0089 | 0.0037 |
| Neptune | 11303-05-22 03:36 G | 5849536.44 | 5849536.65 | 5849536.89 | 0.0089 | 0.0039 |
| Neptune | 11304-05-23 19:11 G | 5849904.12 | 5849904.30 | 5849904.51 | 0.0089 | 0.0059 |
| Neptune | 11305-05-26 03:50 G | 5850271.50 | 5850271.66 | 5850271.85 | 0.0089 | 0.0062 |
| Neptune | 11306-05-28 14:52 G | 5850639.03 | 5850639.12 | 5850639.23 | 0.0089 | 0.0081 |
| Jupiter | 11306-09-23 17:45 G | 5850757.05 | 5850757.24 | 5850757.44 | 0.0486 | 0.0277 |
| Neptune | 11307-05-31 03:36 G | 5851006.60 | 5851006.65 | 5851006.77 | 0.0089 | 0.0084 |
| Saturn | 11309-03-27 14:23 G | 5851672.92 | 5851673.10 | 5851673.30 | 0.0278 | 0.0187 |
| Jupiter | 11318-09-27 21:50 G | 5855144.20 | 5855144.41 | 5855144.63 | 0.0486 | 0.0138 |
| Saturn | 11323-09-25 21:21 G | 5856968.17 | 5856968.39 | 5856968.61 | 0.0281 | 0.0120 |
| Jupiter | 11324-03-21 19:26 G | 5857146.25 | 5857146.31 | 5857146.39 | 0.0544 | 0.0516 |
| Jupiter | 11330-10-02 06:43 G | 5859531.54 | 5859531.78 | 5859532.02 | 0.0487 | 0.0038 |
| Uranus | 11336-01-25 11:31 G | 5861472.87 | 5861472.98 | 5861473.15 | 0.0133 | 0.0112 |
| Jupiter | 11336-03-27 00:14 G | 5861534.33 | 5861534.51 | 5861534.69 | 0.0543 | 0.0366 |
| Uranus | 11337-01-29 02:09 G | 5861842.40 | 5861842.59 | 5861842.80 | 0.0133 | 0.0081 |
| Uranus | 11338-02-02 04:33 G | 5862211.45 | 5862211.69 | 5862211.94 | 0.0133 | 0.0041 |
| Uranus | 11339-02-06 18:00 G | 5862581.00 | 5862581.25 | 5862581.50 | 0.0133 | 0.0003 |
| Saturn | 11339-04-04 05:16 G | 5862637.50 | 5862637.72 | 5862637.95 | 0.0279 | 0.0103 |
| Uranus | 11340-02-10 20:23 G | 5862950.09 | 5862950.35 | 5862950.60 | 0.0133 | 0.0032 |
| Uranus | 11341-02-14 08:52 G | 5863319.68 | 5863319.87 | 5863320.07 | 0.0133 | 0.0084 |

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| Uranus | 11342-02-18 11:02 G | 5863688.83 | 5863688.96 | 5863689.13 | 0.0133 | 0.0109 |
| Jupiter | 11342-10-06 07:26 G | 5863918.58 | 5863918.81 | 5863919.04 | 0.0488 | 0.0077 |
| Jupiter | 11348-04-01 09:21 G | 5865922.68 | 5865922.89 | 5865923.10 | 0.0542 | 0.0169 |
| Pluto | 11351-05-17 08:09 G | 5867063.73 | 5867063.84 | 5867063.97 | 0.0064 | 0.0056 |
| Pluto | 11352-05-17 14:52 G | 5867429.94 | 5867430.12 | 5867430.34 | 0.0064 | 0.0037 |
| Saturn | 11353-10-02 07:26 G | 5867932.63 | 5867932.81 | 5867933.00 | 0.0280 | 0.0180 |
| Jupiter | 11354-10-10 23:31 G | 5868306.28 | 5868306.48 | 5868306.69 | 0.0489 | 0.0244 |
| Jupiter | 11360-04-06 14:09 G | 5870310.85 | 5870311.09 | 5870311.33 | 0.0540 | 0.0063 |
| Mars | 11363-01-18 18:28 G | 5871328.09 | 5871328.27 | 5871328.46 | 0.1927 | 0.0229 |
| Jupiter | 11366-10-14 23:31 G | 5872693.36 | 5872693.48 | 5872693.61 | 0.0491 | 0.0410 |
| Saturn | 11368-03-28 21:21 G | 5873224.18 | 5873224.39 | 5873224.62 | 0.0279 | 0.0119 |
| Jupiter | 11372-04-11 11:02 G | 5874698.75 | 5874698.96 | 5874699.16 | 0.0539 | 0.0238 |
| Neptune | 11374-10-24 10:48 G | 5875624.95 | 5875624.95 | 5875625.00 | 0.0088 | 0.0088 |
| Neptune | 11375-10-26 20:52 G | 5875992.25 | 5875992.37 | 5875992.51 | 0.0088 | 0.0074 |
| Neptune | 11376-10-28 06:57 G | 5876359.64 | 5876359.79 | 5876359.99 | 0.0088 | 0.0067 |
| Jupiter | 11377-09-18 16:04 G | 5876685.11 | 5876685.17 | 5876685.25 | 0.0485 | 0.0464 |
| Neptune | 11377-10-30 22:19 G | 5876727.25 | 5876727.43 | 5876727.65 | 0.0088 | 0.0053 |
| Uranus | 11378-07-26 11:16 G | 5876995.83 | 5876995.97 | 5876996.16 | 0.0146 | 0.0106 |
| Neptune | 11378-11-02 05:31 G | 5877094.51 | 5877094.73 | 5877094.96 | 0.0088 | 0.0044 |
| Uranus | 11379-07-31 12:28 G | 5877365.79 | 5877366.02 | 5877366.26 | 0.0146 | 0.0064 |
| Neptune | 11379-11-05 00:00 G | 5877462.27 | 5877462.50 | 5877462.75 | 0.0088 | 0.0030 |
| Uranus | 11380-08-04 11:31 G | 5877735.74 | 5877735.98 | 5877736.22 | 0.0146 | 0.0010 |
| Neptune | 11380-11-06 05:16 G | 5877829.47 | 5877829.72 | 5877829.97 | 0.0088 | 0.0022 |
| Uranus | 11381-08-09 14:38 G | 5878105.87 | 5878106.11 | 5878106.37 | 0.0146 | 0.0047 |
| Neptune | 11381-11-09 00:14 G | 5878197.25 | 5878197.51 | 5878197.78 | 0.0088 | 0.0009 |
| Uranus | 11382-08-14 11:02 G | 5878475.77 | 5878475.96 | 5878476.17 | 0.0146 | 0.0085 |
| Saturn | 11382-09-27 08:38 G | 5878519.62 | 5878519.86 | 5878520.12 | 0.0281 | 0.0046 |
| Neptune | 11382-11-11 06:43 G | 5878564.53 | 5878564.78 | 5878565.04 | 0.0088 | 0.0001 |
| Neptune | 11383-11-13 22:33 G | 5878932.18 | 5878932.44 | 5878932.71 | 0.0088 | 0.0013 |
| Jupiter | 11384-04-17 00:28 G | 5879087.36 | 5879087.52 | 5879087.68 | 0.0538 | 0.0375 |

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| Neptune | 11384-11-15 08:38 G | 5879299.63 | 5879299.86 | 5879300.12 | 0.0088 | 0.0024 |
| Neptune | 11385-11-17 19:55 G | 5879667.09 | 5879667.33 | 5879667.59 | 0.0088 | 0.0036 |
| Neptune | 11386-11-20 11:31 G | 5880034.77 | 5880034.98 | 5880035.20 | 0.0088 | 0.0047 |
| Neptune | 11387-11-22 18:14 G | 5880402.08 | 5880402.26 | 5880402.48 | 0.0088 | 0.0058 |
| Neptune | 11388-11-24 13:26 G | 5880769.92 | 5880770.06 | 5880770.24 | 0.0088 | 0.0069 |
| Jupiter | 11389-09-22 22:04 G | 5881072.24 | 5881072.42 | 5881072.60 | 0.0485 | 0.0299 |
| Neptune | 11389-11-26 18:57 G | 5881137.20 | 5881137.29 | 5881137.42 | 0.0088 | 0.0079 |
| Saturn | 11398-04-05 14:09 G | 5884188.90 | 5884189.09 | 5884189.29 | 0.0279 | 0.0172 |
| Mars | 11401-07-17 22:33 G | 5885387.29 | 5885387.44 | 5885387.59 | 0.1611 | 0.0921 |
| Jupiter | 11401-09-28 05:31 G | 5885459.51 | 5885459.73 | 5885459.96 | 0.0486 | 0.0163 |
| Jupiter | 11407-03-22 13:40 G | 5887461.07 | 5887461.07 | 5887461.09 | 0.0544 | 0.0543 |
| Saturn | 11412-10-04 22:48 G | 5889484.36 | 5889484.45 | 5889484.56 | 0.0280 | 0.0253 |
| Jupiter | 11413-10-02 06:57 G | 5889846.56 | 5889846.79 | 5889847.02 | 0.0487 | 0.0065 |
| Jupiter | 11419-03-27 21:07 G | 5891849.24 | 5891849.38 | 5891849.53 | 0.0543 | 0.0410 |
| Uranus | 11420-01-27 01:55 G | 5892154.49 | 5892154.58 | 5892154.73 | 0.0133 | 0.0118 |
| Uranus | 11421-01-30 16:48 G | 5892524.00 | 5892524.20 | 5892524.42 | 0.0133 | 0.0072 |
| Uranus | 11422-02-03 18:00 G | 5892893.02 | 5892893.25 | 5892893.52 | 0.0133 | 0.0036 |
| Uranus | 11423-02-08 07:55 G | 5893262.58 | 5893262.83 | 5893263.09 | 0.0133 | 0.0002 |
| Uranus | 11424-02-12 09:21 G | 5893631.66 | 5893631.89 | 5893632.15 | 0.0133 | 0.0049 |
| Uranus | 11425-02-15 22:48 G | 5894001.27 | 5894001.45 | 5894001.68 | 0.0133 | 0.0076 |
| Jupiter | 11425-10-06 20:52 G | 5894234.14 | 5894234.37 | 5894234.60 | 0.0488 | 0.0055 |
| Uranus | 11426-02-20 00:43 G | 5894370.48 | 5894370.53 | 5894370.63 | 0.0133 | 0.0127 |
| Saturn | 11427-04-01 08:38 G | 5894775.63 | 5894775.86 | 5894776.09 | 0.0279 | 0.0050 |
| Jupiter | 11431-04-02 04:04 G | 5896237.46 | 5896237.67 | 5896237.90 | 0.0542 | 0.0208 |
| Jupiter | 11437-10-10 17:31 G | 5898621.02 | 5898621.23 | 5898621.44 | 0.0489 | 0.0211 |
| Pluto | 11440-11-16 12:14 G | 5899753.78 | 5899754.01 | 5899754.28 | 0.0080 | 0.0026 |
| Saturn | 11441-09-29 16:48 G | 5900070.95 | 5900071.20 | 5900071.45 | 0.0280 | 0.0031 |
| Jupiter | 11443-04-07 05:02 G | 5900625.49 | 5900625.71 | 5900625.94 | 0.0541 | 0.0025 |
| Jupiter | 11449-10-15 07:55 G | 5903008.69 | 5903008.83 | 5903008.98 | 0.0490 | 0.0380 |
| Jupiter | 11455-04-12 20:52 G | 5905014.16 | 5905014.37 | 5905014.59 | 0.0540 | 0.0202 |

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| Neptune | 11456-04-27 09:50 G | 5905394.84 | 5905394.91 | 5905395.00 | 0.0089 | 0.0085 |
| Saturn | 11457-04-07 20:38 G | 5905740.25 | 5905740.36 | 5905740.50 | 0.0279 | 0.0241 |
| Neptune | 11457-04-29 16:04 G | 5905762.08 | 5905762.17 | 5905762.31 | 0.0089 | 0.0079 |
| Neptune | 11458-05-02 07:26 G | 5906129.64 | 5906129.81 | 5906130.01 | 0.0089 | 0.0064 |
| Neptune | 11459-05-04 17:45 G | 5906497.05 | 5906497.24 | 5906497.44 | 0.0089 | 0.0056 |
| Neptune | 11460-05-06 03:36 G | 5906864.43 | 5906864.65 | 5906864.90 | 0.0089 | 0.0041 |
| Jupiter | 11460-09-18 21:50 G | 5907000.39 | 5907000.41 | 5907000.44 | 0.0485 | 0.0481 |
| Neptune | 11461-05-08 18:28 G | 5907232.05 | 5907232.27 | 5907232.51 | 0.0089 | 0.0033 |
| Jupiter | 11461-10-19 12:14 G | 5907396.01 | 5907396.01 | 5907396.02 | 0.0492 | 0.0491 |
| Neptune | 11462-05-11 00:28 G | 5907599.28 | 5907599.52 | 5907599.79 | 0.0089 | 0.0018 |
| Uranus | 11462-07-27 23:16 G | 5907677.34 | 5907677.47 | 5907677.64 | 0.0146 | 0.0115 |
| Neptune | 11463-05-13 18:43 G | 5907967.03 | 5907967.28 | 5907967.54 | 0.0089 | 0.0010 |
| Uranus | 11463-08-01 22:48 G | 5908047.21 | 5908047.45 | 5908047.70 | 0.0146 | 0.0052 |
| Neptune | 11464-05-14 23:02 G | 5908334.21 | 5908334.46 | 5908334.72 | 0.0089 | 0.0004 |
| Uranus | 11464-08-05 23:02 G | 5908417.22 | 5908417.46 | 5908417.70 | 0.0146 | 0.0005 |
| Neptune | 11465-05-17 16:48 G | 5908701.95 | 5908702.20 | 5908702.46 | 0.0089 | 0.0013 |
| Uranus | 11465-08-11 01:11 G | 5908787.31 | 5908787.55 | 5908787.81 | 0.0146 | 0.0042 |
| Neptune | 11466-05-19 22:33 G | 5909069.22 | 5909069.44 | 5909069.69 | 0.0089 | 0.0027 |
| Uranus | 11466-08-15 22:48 G | 5909157.30 | 5909157.45 | 5909157.64 | 0.0146 | 0.0104 |
| Jupiter | 11467-04-17 19:40 G | 5909402.15 | 5909402.32 | 5909402.51 | 0.0538 | 0.0342 |
| Neptune | 11467-05-22 13:11 G | 5909436.82 | 5909437.05 | 5909437.31 | 0.0089 | 0.0036 |
| Uranus | 11467-08-21 03:36 G | 5909527.59 | 5909527.65 | 5909527.75 | 0.0145 | 0.0139 |
| Neptune | 11468-05-23 23:02 G | 5909804.27 | 5909804.46 | 5909804.69 | 0.0089 | 0.0049 |
| Neptune | 11469-05-26 08:23 G | 5910171.66 | 5910171.85 | 5910172.06 | 0.0089 | 0.0057 |
| Neptune | 11470-05-28 23:02 G | 5910539.33 | 5910539.46 | 5910539.63 | 0.0089 | 0.0070 |
| Saturn | 11470-09-24 04:19 G | 5910657.54 | 5910657.68 | 5910657.84 | 0.0281 | 0.0221 |
| Neptune | 11471-05-31 04:19 G | 5910906.59 | 5910906.68 | 5910906.82 | 0.0089 | 0.0079 |
| Jupiter | 11472-09-23 06:28 G | 5911387.59 | 5911387.77 | 5911387.95 | 0.0485 | 0.0311 |
| Jupiter | 11479-04-22 22:19 G | 5913790.42 | 5913790.43 | 5913790.45 | 0.0536 | 0.0534 |
| Mars | 11480-07-19 21:50 G | 5914244.23 | 5914244.41 | 5914244.59 | 0.1609 | 0.0510 |

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| Jupiter | 11484-09-27 06:00 G | 5915774.54 | 5915774.75 | 5915774.96 | 0.0486 | 0.0188 |
| Saturn | 11486-04-02 21:21 G | 5916327.15 | 5916327.39 | 5916327.63 | 0.0279 | 0.0018 |
| Jupiter | 11496-10-01 17:16 G | 5920161.99 | 5920162.22 | 5920162.45 | 0.0486 | 0.0097 |
| Saturn | 11500-10-02 03:21 G | 5921622.41 | 5921622.64 | 5921622.86 | 0.0280 | 0.0106 |
| Jupiter | 11502-03-27 17:45 G | 5922164.11 | 5922164.24 | 5922164.37 | 0.0544 | 0.0453 |
| Uranus | 11504-01-28 15:36 G | 5922836.01 | 5922836.15 | 5922836.34 | 0.0133 | 0.0102 |
| Uranus | 11505-02-01 06:57 G | 5923205.59 | 5923205.79 | 5923206.02 | 0.0133 | 0.0072 |
| Uranus | 11506-02-05 07:55 G | 5923574.59 | 5923574.83 | 5923575.10 | 0.0133 | 0.0031 |
| Uranus | 11507-02-09 22:33 G | 5923944.19 | 5923944.44 | 5923944.70 | 0.0133 | 0.0013 |
| Uranus | 11508-02-13 23:45 G | 5924313.25 | 5924313.49 | 5924313.74 | 0.0133 | 0.0043 |
| Jupiter | 11508-10-06 15:50 G | 5924548.93 | 5924549.16 | 5924549.40 | 0.0487 | 0.0027 |
| Uranus | 11509-02-17 13:26 G | 5924682.90 | 5924683.06 | 5924683.25 | 0.0133 | 0.0095 |
| Uranus | 11510-02-21 14:38 G | 5925052.02 | 5925052.11 | 5925052.25 | 0.0133 | 0.0119 |
| Jupiter | 11514-04-01 23:16 G | 5926552.28 | 5926552.47 | 5926552.68 | 0.0543 | 0.0245 |
| Saturn | 11515-03-29 08:23 G | 5926913.69 | 5926913.85 | 5926914.01 | 0.0278 | 0.0212 |
| Jupiter | 11520-10-11 05:16 G | 5928936.51 | 5928936.72 | 5928936.93 | 0.0489 | 0.0195 |
| Jupiter | 11526-04-07 15:21 G | 5930940.90 | 5930941.14 | 5930941.37 | 0.0541 | 0.0010 |
| Saturn | 11529-09-26 15:50 G | 5932208.95 | 5932209.16 | 5932209.38 | 0.0281 | 0.0148 |
| Jupiter | 11532-10-15 09:50 G | 5933323.74 | 5933323.91 | 5933324.08 | 0.0490 | 0.0355 |
| Jupiter | 11538-04-12 10:48 G | 5935328.73 | 5935328.95 | 5935329.18 | 0.0540 | 0.0160 |
| Neptune | 11538-10-25 15:21 G | 5935525.13 | 5935525.14 | 5935525.18 | 0.0088 | 0.0087 |
| Neptune | 11539-10-28 00:00 G | 5935892.45 | 5935892.50 | 5935892.61 | 0.0088 | 0.0084 |
| Neptune | 11540-10-29 16:33 G | 5936260.04 | 5936260.19 | 5936260.37 | 0.0088 | 0.0066 |
| Neptune | 11541-10-31 21:36 G | 5936627.25 | 5936627.40 | 5936627.62 | 0.0088 | 0.0063 |
| Neptune | 11542-11-03 16:33 G | 5936994.98 | 5936995.19 | 5936995.43 | 0.0088 | 0.0044 |
| Neptune | 11543-11-05 21:36 G | 5937362.19 | 5937362.40 | 5937362.64 | 0.0088 | 0.0041 |
| Jupiter | 11544-10-19 19:26 G | 5937711.24 | 5937711.31 | 5937711.38 | 0.0491 | 0.0465 |
| Neptune | 11544-11-07 15:50 G | 5937729.90 | 5937730.16 | 5937730.42 | 0.0088 | 0.0022 |
| Saturn | 11545-04-05 06:00 G | 5937878.52 | 5937878.75 | 5937879.00 | 0.0279 | 0.0084 |
| Neptune | 11545-11-09 22:48 G | 5938097.22 | 5938097.45 | 5938097.71 | 0.0088 | 0.0020 |

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| Uranus | 11546-07-29 13:55 G | 5938358.91 | 5938359.08 | 5938359.27 | 0.0146 | 0.0096 |
| Neptune | 11546-11-12 13:26 G | 5938464.79 | 5938465.06 | 5938465.33 | 0.0088 | 0.0002 |
| Uranus | 11547-08-03 12:14 G | 5938728.78 | 5938729.01 | 5938729.26 | 0.0146 | 0.0056 |
| Neptune | 11547-11-15 01:40 G | 5938832.32 | 5938832.57 | 5938832.82 | 0.0088 | 0.0003 |
| Uranus | 11548-08-07 13:40 G | 5939098.82 | 5939099.07 | 5939099.31 | 0.0146 | 0.0001 |
| Neptune | 11548-11-16 11:16 G | 5939199.73 | 5939199.97 | 5939200.25 | 0.0088 | 0.0023 |
| Uranus | 11549-08-12 14:38 G | 5939468.87 | 5939469.11 | 5939469.35 | 0.0146 | 0.0055 |
| Neptune | 11549-11-19 04:19 G | 5939567.44 | 5939567.68 | 5939567.93 | 0.0088 | 0.0024 |
| Jupiter | 11550-04-17 18:43 G | 5939717.10 | 5939717.28 | 5939717.47 | 0.0538 | 0.0299 |
| Uranus | 11550-08-17 13:11 G | 5939838.87 | 5939839.05 | 5939839.24 | 0.0146 | 0.0095 |
| Neptune | 11550-11-21 10:04 G | 5939934.70 | 5939934.92 | 5939935.16 | 0.0088 | 0.0044 |
| Neptune | 11551-11-24 05:16 G | 5940302.50 | 5940302.72 | 5940302.95 | 0.0088 | 0.0046 |
| Neptune | 11552-11-25 10:33 G | 5940669.78 | 5940669.94 | 5940670.12 | 0.0088 | 0.0066 |
| Neptune | 11553-11-28 04:48 G | 5941037.54 | 5941037.70 | 5941037.88 | 0.0088 | 0.0068 |
| Neptune | 11554-11-30 12:14 G | 5941404.99 | 5941405.01 | 5941405.05 | 0.0088 | 0.0088 |
| Jupiter | 11555-09-24 05:16 G | 5941702.56 | 5941702.72 | 5941702.89 | 0.0485 | 0.0334 |
| Mars | 11559-07-24 05:02 G | 5943101.63 | 5943101.71 | 5943101.79 | 0.1607 | 0.1461 |
| Saturn | 11559-10-04 17:16 G | 5943174.04 | 5943174.22 | 5943174.41 | 0.0280 | 0.0176 |
| Jupiter | 11562-04-22 22:04 G | 5944105.34 | 5944105.42 | 5944105.52 | 0.0538 | 0.0497 |
| Jupiter | 11567-09-28 18:28 G | 5946090.06 | 5946090.27 | 5946090.48 | 0.0485 | 0.0213 |
| Saturn | 11574-03-30 15:50 G | 5948464.96 | 5948465.16 | 5948465.36 | 0.0277 | 0.0148 |
| Jupiter | 11579-10-02 15:21 G | 5950476.91 | 5950477.14 | 5950477.37 | 0.0486 | 0.0117 |
| Jupiter | 11585-03-26 17:16 G | 5952479.13 | 5952479.22 | 5952479.33 | 0.0544 | 0.0486 |
| Uranus | 11588-01-29 06:00 G | 5953517.62 | 5953517.75 | 5953517.91 | 0.0133 | 0.0108 |
| Saturn | 11588-09-27 21:07 G | 5953760.13 | 5953760.38 | 5953760.62 | 0.0281 | 0.0080 |
| Uranus | 11589-02-01 21:07 G | 5953887.16 | 5953887.38 | 5953887.61 | 0.0133 | 0.0061 |
| Uranus | 11590-02-05 21:50 G | 5954256.16 | 5954256.41 | 5954256.67 | 0.0133 | 0.0026 |
| Uranus | 11591-02-10 12:28 G | 5954625.77 | 5954626.02 | 5954626.27 | 0.0133 | 0.0011 |
| Jupiter | 11591-10-07 05:31 G | 5954864.50 | 5954864.73 | 5954864.96 | 0.0487 | 0.0013 |
| Uranus | 11592-02-14 13:11 G | 5954994.82 | 5954995.05 | 5954995.28 | 0.0133 | 0.0059 |

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| Uranus | 11593-02-18 03:50 G | 5955364.47 | 5955364.66 | 5955364.85 | 0.0133 | 0.0086 |
| Jupiter | 11597-04-01 06:00 G | 5956867.56 | 5956867.75 | 5956867.96 | 0.0542 | 0.0276 |
| Pluto | 11598-05-21 09:50 G | 5957282.65 | 5957282.91 | 5957283.17 | 0.0064 | 0.0005 |
| Jupiter | 11603-10-11 07:55 G | 5959251.61 | 5959251.83 | 5959252.06 | 0.0489 | 0.0181 |
| Saturn | 11604-04-06 07:40 G | 5959429.60 | 5959429.82 | 5959430.04 | 0.0279 | 0.0141 |
| Mars | 11606-07-18 15:36 G | 5960262.99 | 5960263.15 | 5960263.31 | 0.1616 | 0.0910 |
| Jupiter | 11609-04-06 03:50 G | 5961255.43 | 5961255.66 | 5961255.89 | 0.0541 | 0.0047 |
| Jupiter | 11615-10-15 14:52 G | 5963638.96 | 5963639.12 | 5963639.29 | 0.0489 | 0.0327 |
| Saturn | 11618-10-06 04:04 G | 5964725.56 | 5964725.67 | 5964725.80 | 0.0280 | 0.0241 |
| Jupiter | 11621-04-11 13:55 G | 5965643.86 | 5965644.08 | 5965644.30 | 0.0541 | 0.0112 |
| Neptune | 11621-04-29 22:04 G | 5965662.32 | 5965662.42 | 5965662.58 | 0.0089 | 0.0078 |
| Neptune | 11622-05-02 10:33 G | 5966029.82 | 5966029.94 | 5966030.09 | 0.0089 | 0.0074 |
| Neptune | 11623-05-04 19:40 G | 5966397.14 | 5966397.32 | 5966397.56 | 0.0089 | 0.0056 |
| Neptune | 11624-05-06 12:28 G | 5966764.82 | 5966765.02 | 5966765.23 | 0.0089 | 0.0052 |
| Neptune | 11625-05-08 17:45 G | 5967132.01 | 5967132.24 | 5967132.49 | 0.0089 | 0.0033 |
| Neptune | 11626-05-11 12:00 G | 5967499.78 | 5967500.00 | 5967500.26 | 0.0089 | 0.0031 |
| Neptune | 11627-05-13 16:48 G | 5967866.96 | 5967867.20 | 5967867.46 | 0.0089 | 0.0011 |
| Jupiter | 11627-10-20 01:26 G | 5968026.45 | 5968026.56 | 5968026.68 | 0.0490 | 0.0430 |
| Neptune | 11628-05-15 09:50 G | 5968234.66 | 5968234.91 | 5968235.18 | 0.0089 | 0.0009 |
| Neptune | 11629-05-17 16:48 G | 5968601.95 | 5968602.20 | 5968602.44 | 0.0089 | 0.0012 |
| Uranus | 11629-07-24 21:07 G | 5968670.34 | 5968670.38 | 5968670.45 | 0.0146 | 0.0142 |
| Neptune | 11630-05-20 05:45 G | 5968969.48 | 5968969.74 | 5968970.01 | 0.0089 | 0.0015 |
| Uranus | 11630-07-30 01:11 G | 5969040.40 | 5969040.55 | 5969040.73 | 0.0146 | 0.0106 |
| Neptune | 11631-05-22 17:31 G | 5969337.00 | 5969337.23 | 5969337.46 | 0.0089 | 0.0033 |
| Uranus | 11631-08-03 22:19 G | 5969410.18 | 5969410.43 | 5969410.68 | 0.0146 | 0.0041 |
| Neptune | 11632-05-24 01:40 G | 5969704.34 | 5969704.57 | 5969704.82 | 0.0089 | 0.0036 |
| Uranus | 11632-08-08 00:43 G | 5969780.29 | 5969780.53 | 5969780.77 | 0.0146 | 0.0004 |
| Saturn | 11633-04-01 02:52 G | 5970016.40 | 5970016.62 | 5970016.85 | 0.0277 | 0.0086 |
| Jupiter | 11633-04-16 20:23 G | 5970032.14 | 5970032.35 | 5970032.56 | 0.0540 | 0.0261 |
| Neptune | 11633-05-26 18:00 G | 5970072.06 | 5970072.25 | 5970072.45 | 0.0089 | 0.0055 |

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| Uranus | 11633-08-13 00:28 G | 5970150.28 | 5970150.52 | 5970150.77 | 0.0146 | 0.0053 |
| Neptune | 11634-05-28 22:33 G | 5970439.27 | 5970439.44 | 5970439.66 | 0.0089 | 0.0058 |
| Uranus | 11634-08-18 00:43 G | 5970520.38 | 5970520.53 | 5970520.69 | 0.0146 | 0.0113 |
| Neptune | 11635-05-31 17:02 G | 5970807.09 | 5970807.21 | 5970807.33 | 0.0089 | 0.0077 |
| Neptune | 11636-06-01 21:07 G | 5971174.28 | 5971174.38 | 5971174.51 | 0.0089 | 0.0079 |
| Jupiter | 11638-09-23 20:09 G | 5972018.18 | 5972018.34 | 5972018.51 | 0.0485 | 0.0346 |
| Jupiter | 11645-04-22 00:14 G | 5974420.42 | 5974420.51 | 5974420.62 | 0.0538 | 0.0475 |
| Mars | 11647-01-20 03:50 G | 5975058.46 | 5975058.66 | 5975058.87 | 0.1921 | 0.0491 |
| Saturn | 11647-09-30 00:57 G | 5975311.29 | 5975311.54 | 5975311.79 | 0.0281 | 0.0016 |
| Jupiter | 11650-09-27 18:00 G | 5976405.05 | 5976405.25 | 5976405.47 | 0.0485 | 0.0231 |
| Jupiter | 11662-10-02 06:28 G | 5980792.55 | 5980792.77 | 5980792.99 | 0.0486 | 0.0139 |
| Saturn | 11663-04-08 08:38 G | 5980980.70 | 5980980.86 | 5980981.04 | 0.0279 | 0.0197 |
| Jupiter | 11668-03-25 21:50 G | 5982794.35 | 5982794.41 | 5982794.48 | 0.0543 | 0.0519 |
| Uranus | 11672-01-29 19:26 G | 5984199.13 | 5984199.31 | 5984199.50 | 0.0133 | 0.0091 |
| Uranus | 11673-02-02 10:48 G | 5984568.73 | 5984568.95 | 5984569.18 | 0.0133 | 0.0062 |
| Uranus | 11674-02-06 11:31 G | 5984937.72 | 5984937.98 | 5984938.23 | 0.0133 | 0.0019 |
| Jupiter | 11674-10-06 07:55 G | 5985179.59 | 5985179.83 | 5985180.07 | 0.0487 | 0.0009 |
| Uranus | 11675-02-11 02:23 G | 5985307.35 | 5985307.60 | 5985307.86 | 0.0133 | 0.0023 |
| Uranus | 11676-02-15 03:07 G | 5985676.40 | 5985676.63 | 5985676.87 | 0.0133 | 0.0054 |
| Saturn | 11676-09-24 01:40 G | 5985898.46 | 5985898.57 | 5985898.70 | 0.0282 | 0.0245 |
| Uranus | 11677-02-18 17:31 G | 5986046.10 | 5986046.23 | 5986046.40 | 0.0133 | 0.0106 |
| Uranus | 11678-02-22 18:28 G | 5986415.23 | 5986415.27 | 5986415.33 | 0.0133 | 0.0130 |
| Jupiter | 11680-03-30 18:57 G | 5987182.10 | 5987182.29 | 5987182.48 | 0.0543 | 0.0319 |
| Mars | 11685-07-20 15:07 G | 5989119.95 | 5989120.13 | 5989120.31 | 0.1613 | 0.0153 |
| Jupiter | 11686-10-10 15:50 G | 5989566.95 | 5989567.16 | 5989567.37 | 0.0488 | 0.0164 |
| Pluto | 11686-11-18 12:28 G | 5989605.79 | 5989606.02 | 5989606.26 | 0.0080 | 0.0038 |
| Saturn | 11692-04-02 10:33 G | 5991567.70 | 5991567.94 | 5991568.19 | 0.0277 | 0.0026 |
| Jupiter | 11692-04-05 11:31 G | 5991570.76 | 5991570.98 | 5991571.20 | 0.0543 | 0.0080 |
| Jupiter | 11698-10-15 00:43 G | 5993954.35 | 5993954.53 | 5993954.72 | 0.0489 | 0.0305 |
| Neptune | 11703-10-28 10:04 G | 5995792.91 | 5995792.92 | 5995792.98 | 0.0088 | 0.0087 |

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| Jupiter | 11704-04-11 18:00 G | 5995959.01 | 5995959.25 | 5995959.49 | 0.0541 | 0.0080 |
| Neptune | 11704-10-29 15:36 G | 5996160.00 | 5996160.15 | 5996160.30 | 0.0088 | 0.0070 |
| Neptune | 11705-11-01 10:04 G | 5996527.75 | 5996527.92 | 5996528.09 | 0.0088 | 0.0066 |
| Saturn | 11706-10-02 07:26 G | 5996862.58 | 5996862.81 | 5996863.05 | 0.0281 | 0.0044 |
| Neptune | 11706-11-03 14:38 G | 5996894.93 | 5996895.11 | 5996895.34 | 0.0088 | 0.0051 |
| Neptune | 11707-11-06 07:55 G | 5997262.62 | 5997262.83 | 5997263.08 | 0.0088 | 0.0045 |
| Neptune | 11708-11-07 16:48 G | 5997629.97 | 5997630.20 | 5997630.45 | 0.0088 | 0.0029 |
| Neptune | 11709-11-10 05:45 G | 5997997.49 | 5997997.74 | 5997998.01 | 0.0088 | 0.0023 |
| Jupiter | 11710-10-20 05:02 G | 5998341.60 | 5998341.71 | 5998341.84 | 0.0490 | 0.0410 |
| Neptune | 11710-11-12 18:57 G | 5998365.05 | 5998365.29 | 5998365.55 | 0.0088 | 0.0008 |
| Neptune | 11711-11-15 03:21 G | 5998732.37 | 5998732.64 | 5998732.90 | 0.0088 | 0.0002 |
| Neptune | 11712-11-16 20:52 G | 5999100.12 | 5999100.37 | 5999100.63 | 0.0088 | 0.0013 |
| Neptune | 11713-11-19 01:55 G | 5999467.34 | 5999467.58 | 5999467.85 | 0.0088 | 0.0020 |
| Uranus | 11714-07-31 15:36 G | 5999721.95 | 5999722.15 | 5999722.35 | 0.0146 | 0.0086 |
| Neptune | 11714-11-21 21:07 G | 5999835.16 | 5999835.38 | 5999835.64 | 0.0088 | 0.0035 |
| Uranus | 11715-08-05 11:16 G | 6000091.74 | 6000091.97 | 6000092.23 | 0.0146 | 0.0048 |
| Neptune | 11715-11-24 02:52 G | 6000202.41 | 6000202.62 | 6000202.86 | 0.0088 | 0.0043 |
| Jupiter | 11716-04-16 21:50 G | 6000347.21 | 6000347.41 | 6000347.62 | 0.0539 | 0.0232 |
| Uranus | 11716-08-09 14:52 G | 6000461.88 | 6000462.12 | 6000462.37 | 0.0146 | 0.0012 |
| Neptune | 11716-11-25 20:23 G | 6000570.17 | 6000570.35 | 6000570.58 | 0.0088 | 0.0056 |
| Uranus | 11717-08-14 13:26 G | 6000831.83 | 6000832.06 | 6000832.30 | 0.0146 | 0.0064 |
| Neptune | 11717-11-28 05:45 G | 6000937.57 | 6000937.74 | 6000937.92 | 0.0088 | 0.0064 |
| Uranus | 11718-08-19 14:23 G | 6001201.94 | 6001202.10 | 6001202.28 | 0.0146 | 0.0106 |
| Neptune | 11718-11-30 18:43 G | 6001305.18 | 6001305.28 | 6001305.45 | 0.0088 | 0.0077 |
| Neptune | 11719-12-03 08:38 G | 6001672.80 | 6001672.86 | 6001672.94 | 0.0088 | 0.0085 |
| Saturn | 11721-03-28 15:21 G | 6002154.06 | 6002154.14 | 6002154.22 | 0.0277 | 0.0262 |
| Jupiter | 11721-09-23 21:36 G | 6002333.25 | 6002333.40 | 6002333.56 | 0.0485 | 0.0362 |
| Saturn | 11722-04-10 14:38 G | 6002532.03 | 6002532.11 | 6002532.22 | 0.0279 | 0.0253 |
| Jupiter | 11728-04-22 06:14 G | 6004735.63 | 6004735.76 | 6004735.89 | 0.0538 | 0.0443 |
| Jupiter | 11733-09-28 09:36 G | 6006720.71 | 6006720.90 | 6006721.10 | 0.0485 | 0.0257 |

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| Saturn | 11735-09-27 02:09 G | 6007449.41 | 6007449.59 | 6007449.79 | 0.0282 | 0.0188 |
| Jupiter | 11745-10-02 11:45 G | 6011107.76 | 6011107.99 | 6011108.22 | 0.0486 | 0.0160 |
| Saturn | 11751-04-05 12:14 G | 6013118.76 | 6013119.01 | 6013119.26 | 0.0277 | 0.0030 |
| Uranus | 11755-01-27 07:55 G | 6014511.76 | 6014511.83 | 6014511.93 | 0.0133 | 0.0125 |
| Uranus | 11756-01-31 09:21 G | 6014880.73 | 6014880.89 | 6014881.07 | 0.0133 | 0.0099 |
| Uranus | 11757-02-04 00:14 G | 6015250.28 | 6015250.51 | 6015250.76 | 0.0133 | 0.0051 |
| Jupiter | 11757-10-06 17:31 G | 6015495.00 | 6015495.23 | 6015495.46 | 0.0486 | 0.0019 |
| Uranus | 11758-02-08 00:57 G | 6015619.30 | 6015619.54 | 6015619.80 | 0.0133 | 0.0017 |
| Uranus | 11759-02-12 16:04 G | 6015988.92 | 6015989.17 | 6015989.43 | 0.0133 | 0.0022 |
| Uranus | 11760-02-16 16:33 G | 6016357.98 | 6016358.19 | 6016358.41 | 0.0133 | 0.0069 |
| Uranus | 11761-02-20 07:26 G | 6016727.65 | 6016727.81 | 6016727.99 | 0.0133 | 0.0097 |
| Jupiter | 11763-04-01 09:07 G | 6017497.70 | 6017497.88 | 6017498.06 | 0.0544 | 0.0329 |
| Mars | 11764-07-23 08:09 G | 6017976.73 | 6017976.84 | 6017976.96 | 0.1611 | 0.1210 |
| Saturn | 11765-10-03 14:09 G | 6018413.88 | 6018414.09 | 6018414.32 | 0.0281 | 0.0101 |
| Jupiter | 11769-10-11 03:21 G | 6019882.42 | 6019882.64 | 6019882.88 | 0.0488 | 0.0153 |
| Jupiter | 11775-04-06 12:57 G | 6021885.81 | 6021886.04 | 6021886.28 | 0.0542 | 0.0105 |
| Saturn | 11780-03-29 19:55 G | 6023705.18 | 6023705.33 | 6023705.49 | 0.0277 | 0.0208 |
| Jupiter | 11781-10-15 06:14 G | 6024269.58 | 6024269.76 | 6024269.95 | 0.0489 | 0.0287 |
| Neptune | 11785-04-30 04:19 G | 6025562.59 | 6025562.68 | 6025562.78 | 0.0089 | 0.0082 |
| Neptune | 11786-05-02 11:31 G | 6025929.89 | 6025929.98 | 6025930.14 | 0.0089 | 0.0079 |
| Jupiter | 11787-04-11 19:11 G | 6026274.08 | 6026274.30 | 6026274.52 | 0.0541 | 0.0045 |
| Neptune | 11787-05-05 05:02 G | 6026297.55 | 6026297.71 | 6026297.92 | 0.0089 | 0.0062 |
| Neptune | 11788-05-06 10:04 G | 6026664.75 | 6026664.92 | 6026665.15 | 0.0089 | 0.0058 |
| Neptune | 11789-05-09 05:16 G | 6027032.50 | 6027032.72 | 6027032.96 | 0.0089 | 0.0039 |
| Neptune | 11790-05-11 10:19 G | 6027399.71 | 6027399.93 | 6027400.18 | 0.0089 | 0.0035 |
| Neptune | 11791-05-14 03:07 G | 6027767.38 | 6027767.63 | 6027767.90 | 0.0089 | 0.0018 |
| Neptune | 11792-05-15 11:31 G | 6028134.75 | 6028134.98 | 6028135.23 | 0.0089 | 0.0013 |
| Neptune | 11793-05-18 00:00 G | 6028502.23 | 6028502.50 | 6028502.76 | 0.0089 | 0.0004 |
| Jupiter | 11793-10-19 20:23 G | 6028657.20 | 6028657.35 | 6028657.50 | 0.0490 | 0.0377 |
| Neptune | 11794-05-20 12:57 G | 6028869.79 | 6028870.04 | 6028870.29 | 0.0089 | 0.0009 |

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| Saturn | 11794-09-27 21:50 G | 6029000.20 | 6029000.41 | 6029000.64 | 0.0282 | 0.0135 |
| Neptune | 11795-05-22 19:40 G | 6029237.08 | 6029237.32 | 6029237.58 | 0.0089 | 0.0026 |
| Neptune | 11796-05-24 12:43 G | 6029604.79 | 6029605.03 | 6029605.26 | 0.0089 | 0.0032 |
| Neptune | 11797-05-26 16:48 G | 6029972.00 | 6029972.20 | 6029972.43 | 0.0089 | 0.0047 |
| Uranus | 11797-07-26 21:07 G | 6030033.30 | 6030033.38 | 6030033.49 | 0.0146 | 0.0135 |
| Neptune | 11798-05-29 10:33 G | 6030339.75 | 6030339.94 | 6030340.17 | 0.0089 | 0.0053 |
| Uranus | 11798-08-01 02:38 G | 6030403.44 | 6030403.61 | 6030403.81 | 0.0146 | 0.0098 |
| Jupiter | 11799-04-17 00:57 G | 6030662.32 | 6030662.54 | 6030662.77 | 0.0541 | 0.0194 |
| Neptune | 11799-05-31 15:36 G | 6030707.00 | 6030707.15 | 6030707.32 | 0.0089 | 0.0067 |
| Uranus | 11799-08-05 21:50 G | 6030773.16 | 6030773.41 | 6030773.66 | 0.0146 | 0.0032 |
| Neptune | 11800-06-03 07:26 G | 6031074.67 | 6031074.81 | 6031074.96 | 0.0089 | 0.0073 |
| Uranus | 11800-08-11 02:23 G | 6031143.36 | 6031143.60 | 6031143.84 | 0.0146 | 0.0012 |
| Neptune | 11801-06-05 15:50 G | 6031442.14 | 6031442.16 | 6031442.21 | 0.0089 | 0.0088 |
| Uranus | 11801-08-16 00:00 G | 6031513.26 | 6031513.50 | 6031513.73 | 0.0146 | 0.0063 |
| Uranus | 11802-08-21 02:23 G | 6031883.48 | 6031883.60 | 6031883.74 | 0.0145 | 0.0122 |
| Jupiter | 11804-09-24 15:21 G | 6032649.00 | 6032649.14 | 6032649.29 | 0.0484 | 0.0377 |
| Saturn | 11810-04-07 11:16 G | 6034669.73 | 6034669.97 | 6034670.21 | 0.0277 | 0.0084 |
| Jupiter | 11811-04-23 01:55 G | 6035050.44 | 6035050.58 | 6035050.73 | 0.0539 | 0.0417 |
| Jupiter | 11816-09-28 15:50 G | 6037035.97 | 6037036.16 | 6037036.37 | 0.0485 | 0.0278 |
| Saturn | 11824-10-05 15:21 G | 6039964.95 | 6039965.14 | 6039965.37 | 0.0281 | 0.0154 |
| Jupiter | 11828-10-02 21:50 G | 6041423.21 | 6041423.41 | 6041423.63 | 0.0485 | 0.0179 |
| Saturn | 11839-04-02 02:23 G | 6045256.41 | 6045256.60 | 6045256.81 | 0.0277 | 0.0154 |
| Uranus | 11840-02-01 21:36 G | 6045562.21 | 6045562.40 | 6045562.61 | 0.0133 | 0.0083 |
| Jupiter | 11840-10-07 07:11 G | 6045810.56 | 6045810.80 | 6045811.05 | 0.0486 | 0.0031 |
| Uranus | 11841-02-05 12:43 G | 6045931.80 | 6045932.03 | 6045932.28 | 0.0133 | 0.0054 |
| Uranus | 11842-02-09 13:55 G | 6046300.83 | 6046301.08 | 6046301.34 | 0.0133 | 0.0010 |
| Uranus | 11843-02-14 05:16 G | 6046670.47 | 6046670.72 | 6046670.97 | 0.0133 | 0.0031 |
| Uranus | 11844-02-18 06:00 G | 6047039.54 | 6047039.75 | 6047039.98 | 0.0133 | 0.0065 |
| Pluto | 11844-05-23 20:09 G | 6047135.11 | 6047135.34 | 6047135.61 | 0.0064 | 0.0023 |
| Uranus | 11845-02-21 20:52 G | 6047409.26 | 6047409.37 | 6047409.51 | 0.0133 | 0.0116 |

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| Pluto | 11845-05-25 11:16 G | 6047501.94 | 6047501.97 | 6047502.06 | 0.0064 | 0.0063 |
| Jupiter | 11846-04-01 06:28 G | 6047812.59 | 6047812.77 | 6047812.96 | 0.0543 | 0.0348 |
| Jupiter | 11852-10-11 08:52 G | 6050197.65 | 6050197.87 | 6050198.09 | 0.0487 | 0.0135 |
| Saturn | 11853-09-29 21:21 G | 6050551.17 | 6050551.39 | 6050551.62 | 0.0282 | 0.0088 |
| Jupiter | 11858-04-06 11:16 G | 6052200.76 | 6052200.97 | 6052201.19 | 0.0543 | 0.0142 |
| Jupiter | 11864-10-15 23:16 G | 6054585.27 | 6054585.47 | 6054585.67 | 0.0488 | 0.0262 |
| Neptune | 11867-10-28 10:04 G | 6055692.88 | 6055692.92 | 6055693.02 | 0.0088 | 0.0085 |
| Neptune | 11868-10-30 04:33 G | 6056060.61 | 6056060.69 | 6056060.82 | 0.0088 | 0.0081 |
| Saturn | 11869-04-08 13:55 G | 6056220.88 | 6056221.08 | 6056221.29 | 0.0277 | 0.0138 |
| Neptune | 11869-11-01 10:33 G | 6056427.78 | 6056427.94 | 6056428.12 | 0.0088 | 0.0065 |
| Jupiter | 11870-04-11 22:33 G | 6056589.20 | 6056589.44 | 6056589.68 | 0.0542 | 0.0010 |
| Neptune | 11870-11-04 02:23 G | 6056795.41 | 6056795.60 | 6056795.79 | 0.0088 | 0.0060 |
| Neptune | 11871-11-06 11:31 G | 6057162.77 | 6057162.98 | 6057163.21 | 0.0088 | 0.0044 |
| Neptune | 11872-11-07 22:33 G | 6057530.20 | 6057530.44 | 6057530.68 | 0.0088 | 0.0039 |
| Neptune | 11873-11-10 12:57 G | 6057897.80 | 6057898.04 | 6057898.29 | 0.0088 | 0.0023 |
| Neptune | 11874-11-12 20:09 G | 6058265.08 | 6058265.34 | 6058265.60 | 0.0088 | 0.0019 |
| Neptune | 11875-11-15 14:38 G | 6058632.85 | 6058633.11 | 6058633.37 | 0.0088 | 0.0002 |
| Jupiter | 11876-10-19 22:19 G | 6058972.27 | 6058972.43 | 6058972.60 | 0.0489 | 0.0353 |
| Neptune | 11876-11-16 19:40 G | 6059000.06 | 6059000.32 | 6059000.58 | 0.0088 | 0.0002 |
| Neptune | 11877-11-19 14:23 G | 6059367.86 | 6059368.10 | 6059368.37 | 0.0088 | 0.0020 |
| Neptune | 11878-11-21 20:52 G | 6059735.13 | 6059735.37 | 6059735.62 | 0.0088 | 0.0023 |
| Neptune | 11879-11-24 12:57 G | 6060102.82 | 6060103.04 | 6060103.30 | 0.0088 | 0.0041 |
| Neptune | 11880-11-25 22:48 G | 6060470.25 | 6060470.45 | 6060470.69 | 0.0088 | 0.0044 |
| Uranus | 11881-07-28 09:21 G | 6060714.88 | 6060714.89 | 6060714.96 | 0.0145 | 0.0144 |
| Neptune | 11881-11-28 10:19 G | 6060837.76 | 6060837.93 | 6060838.14 | 0.0088 | 0.0062 |
| Jupiter | 11882-04-17 03:07 G | 6060977.41 | 6060977.63 | 6060977.84 | 0.0541 | 0.0175 |
| Uranus | 11882-08-02 16:19 G | 6061084.98 | 6061085.18 | 6061085.40 | 0.0146 | 0.0079 |
| Neptune | 11882-12-01 01:26 G | 6061205.40 | 6061205.56 | 6061205.74 | 0.0088 | 0.0065 |
| Uranus | 11883-08-07 10:33 G | 6061454.70 | 6061454.94 | 6061455.20 | 0.0146 | 0.0041 |
| Saturn | 11883-10-07 11:02 G | 6061515.79 | 6061515.96 | 6061516.15 | 0.0281 | 0.0200 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 11883-12-03 09:21 G | 6061572.80 | 6061572.89 | 6061572.98 | 0.0088 | 0.0083 |
| Uranus | 11884-08-11 16:19 G | 6061824.94 | 6061825.18 | 6061825.43 | 0.0146 | 0.0021 |
| Neptune | 11884-12-05 03:21 G | 6061940.61 | 6061940.64 | 6061940.74 | 0.0088 | 0.0086 |
| Uranus | 11885-08-16 12:43 G | 6062194.81 | 6062195.03 | 6062195.26 | 0.0145 | 0.0071 |
| Uranus | 11886-08-21 15:50 G | 6062565.03 | 6062565.16 | 6062565.32 | 0.0145 | 0.0115 |
| Jupiter | 11887-09-24 22:19 G | 6062964.29 | 6062964.43 | 6062964.58 | 0.0484 | 0.0391 |
| Jupiter | 11888-10-24 13:55 G | 6063360.05 | 6063360.08 | 6063360.11 | 0.0491 | 0.0486 |
| Mars | 11890-07-21 11:45 G | 6063994.80 | 6063994.99 | 6063995.18 | 0.1619 | 0.0370 |
| Jupiter | 11894-04-22 16:33 G | 6065366.04 | 6065366.19 | 6065366.34 | 0.0539 | 0.0405 |
| Saturn | 11898-04-03 04:33 G | 6066807.46 | 6066807.69 | 6066807.92 | 0.0277 | 0.0102 |
| Jupiter | 11899-09-29 02:38 G | 6067351.44 | 6067351.61 | 6067351.79 | 0.0485 | 0.0303 |
| Jupiter | 11911-10-04 12:43 G | 6071738.82 | 6071739.03 | 6071739.26 | 0.0485 | 0.0195 |
| Saturn | 11912-10-02 01:11 G | 6072102.32 | 6072102.55 | 6072102.79 | 0.0282 | 0.0042 |
| Uranus | 11923-01-30 08:52 G | 6075874.76 | 6075874.87 | 6075875.00 | 0.0133 | 0.0117 |
| Jupiter | 11923-10-08 13:26 G | 6076125.83 | 6076126.06 | 6076126.29 | 0.0486 | 0.0041 |
| Uranus | 11924-02-03 11:02 G | 6076243.80 | 6076243.96 | 6076244.16 | 0.0133 | 0.0092 |
| Uranus | 11925-02-07 01:40 G | 6076613.34 | 6076613.57 | 6076613.83 | 0.0133 | 0.0042 |
| Uranus | 11926-02-11 03:36 G | 6076982.40 | 6076982.65 | 6076982.90 | 0.0133 | 0.0008 |
| Uranus | 11927-02-15 18:14 G | 6077352.01 | 6077352.26 | 6077352.52 | 0.0133 | 0.0032 |
| Uranus | 11928-02-19 19:11 G | 6077721.11 | 6077721.30 | 6077721.51 | 0.0133 | 0.0078 |
| Saturn | 11928-04-10 21:36 G | 6077772.23 | 6077772.40 | 6077772.58 | 0.0277 | 0.0190 |
| Uranus | 11929-02-23 09:50 G | 6078090.78 | 6078090.91 | 6078091.08 | 0.0133 | 0.0107 |
| Jupiter | 11929-04-01 07:26 G | 6078127.65 | 6078127.81 | 6078127.97 | 0.0544 | 0.0378 |
| Mars | 11931-01-21 05:16 G | 6078787.60 | 6078787.72 | 6078787.84 | 0.1914 | 0.1582 |
| Jupiter | 11935-10-13 01:11 G | 6080513.32 | 6080513.55 | 6080513.78 | 0.0487 | 0.0122 |
| Jupiter | 11941-04-06 20:09 G | 6082516.11 | 6082516.34 | 6082516.57 | 0.0543 | 0.0161 |
| Saturn | 11942-10-09 09:36 G | 6083066.80 | 6083066.90 | 6083067.02 | 0.0281 | 0.0248 |
| Jupiter | 11947-10-17 01:11 G | 6084900.35 | 6084900.55 | 6084900.76 | 0.0488 | 0.0238 |
| Neptune | 11950-05-03 22:19 G | 6085830.33 | 6085830.43 | 6085830.59 | 0.0089 | 0.0078 |
| Neptune | 11951-05-06 03:36 G | 6086197.51 | 6086197.65 | 6086197.81 | 0.0089 | 0.0072 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 11952-05-07 21:50 G | 6086565.23 | 6086565.41 | 6086565.64 | 0.0089 | 0.0056 |
| Jupiter | 11953-04-12 00:57 G | 6086904.31 | 6086904.54 | 6086904.77 | 0.0542 | 0.0018 |
| Neptune | 11953-05-10 04:19 G | 6086932.49 | 6086932.68 | 6086932.90 | 0.0089 | 0.0051 |
| Neptune | 11954-05-12 20:23 G | 6087300.11 | 6087300.35 | 6087300.60 | 0.0089 | 0.0034 |
| Neptune | 11955-05-15 06:00 G | 6087667.52 | 6087667.75 | 6087667.99 | 0.0089 | 0.0029 |
| Neptune | 11956-05-16 16:33 G | 6088034.94 | 6088035.19 | 6088035.46 | 0.0089 | 0.0013 |
| Saturn | 11957-04-05 02:38 G | 6088358.36 | 6088358.61 | 6088358.86 | 0.0277 | 0.0053 |
| Neptune | 11957-05-19 07:11 G | 6088402.56 | 6088402.80 | 6088403.05 | 0.0089 | 0.0008 |
| Neptune | 11958-05-21 13:40 G | 6088769.81 | 6088770.07 | 6088770.33 | 0.0089 | 0.0009 |
| Neptune | 11959-05-24 07:40 G | 6089137.57 | 6089137.82 | 6089138.07 | 0.0089 | 0.0014 |
| Jupiter | 11959-10-21 15:07 G | 6089287.97 | 6089288.13 | 6089288.30 | 0.0489 | 0.0333 |
| Neptune | 11960-05-25 11:31 G | 6089504.76 | 6089504.98 | 6089505.24 | 0.0089 | 0.0031 |
| Neptune | 11961-05-28 05:31 G | 6089872.51 | 6089872.73 | 6089872.99 | 0.0089 | 0.0034 |
| Neptune | 11962-05-30 11:31 G | 6090239.79 | 6090239.98 | 6090240.19 | 0.0089 | 0.0052 |
| Neptune | 11963-06-02 01:55 G | 6090607.40 | 6090607.58 | 6090607.81 | 0.0089 | 0.0055 |
| Neptune | 11964-06-03 11:16 G | 6090974.86 | 6090974.97 | 6090975.14 | 0.0089 | 0.0073 |
| Jupiter | 11965-04-17 14:09 G | 6091292.87 | 6091293.09 | 6091293.31 | 0.0541 | 0.0153 |
| Neptune | 11965-06-05 21:07 G | 6091342.27 | 6091342.38 | 6091342.54 | 0.0089 | 0.0076 |
| Uranus | 11965-07-29 21:21 G | 6091396.29 | 6091396.39 | 6091396.53 | 0.0145 | 0.0128 |
| Uranus | 11966-08-04 03:50 G | 6091766.48 | 6091766.66 | 6091766.87 | 0.0145 | 0.0090 |
| Uranus | 11967-08-08 21:36 G | 6092136.15 | 6092136.40 | 6092136.66 | 0.0145 | 0.0023 |
| Uranus | 11968-08-13 03:50 G | 6092506.42 | 6092506.66 | 6092506.91 | 0.0145 | 0.0019 |
| Mars | 11969-07-24 19:26 G | 6092852.12 | 6092852.31 | 6092852.50 | 0.1616 | 0.0496 |
| Uranus | 11969-08-17 23:16 G | 6092876.25 | 6092876.47 | 6092876.70 | 0.0145 | 0.0073 |
| Uranus | 11970-08-23 04:04 G | 6093246.56 | 6093246.67 | 6093246.78 | 0.0145 | 0.0130 |
| Jupiter | 11970-09-25 08:52 G | 6093279.76 | 6093279.87 | 6093280.00 | 0.0484 | 0.0411 |
| Saturn | 11971-10-04 02:09 G | 6093653.34 | 6093653.59 | 6093653.84 | 0.0282 | 0.0007 |
| Jupiter | 11971-10-25 20:23 G | 6093675.28 | 6093675.35 | 6093675.42 | 0.0490 | 0.0466 |
| Jupiter | 11977-04-22 07:40 G | 6095680.66 | 6095680.82 | 6095681.00 | 0.0540 | 0.0369 |
| Jupiter | 11982-09-29 18:57 G | 6097667.11 | 6097667.29 | 6097667.47 | 0.0485 | 0.0318 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Saturn | 11986-03-31 06:14 G | 6098945.71 | 6098945.76 | 6098945.84 | 0.0276 | 0.0266 |
| Saturn | 11987-04-13 03:21 G | 6099323.54 | 6099323.64 | 6099323.77 | 0.0277 | 0.0243 |
| Jupiter | 11994-10-03 16:19 G | 6102053.97 | 6102054.18 | 6102054.39 | 0.0485 | 0.0210 |
| Saturn | 12000-09-27 03:50 G | 6104239.55 | 6104239.66 | 6104239.80 | 0.0282 | 0.0241 |

13TH MILLENNIUM CE

This is a list of transits of Moon in the 13th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Jupiter | 12006-10-08 05:16 G | | 6106441.48 | 6106441.72 | 6106441.95 | 0.0486 | 0.0048 | |
| Uranus | 12007-01-30 20:09 G | | 6106556.29 | 6106556.34 | 6106556.44 | 0.0133 | 0.0127 | |
| Uranus | 12008-02-03 23:02 G | | 6106925.27 | 6106925.46 | 6106925.68 | 0.0133 | 0.0075 | |
| Uranus | 12009-02-07 13:26 G | | 6107294.82 | 6107295.06 | 6107295.31 | 0.0133 | 0.0046 | |
| Mars | 12010-01-25 14:09 G | | 6107646.96 | 6107647.09 | 6107647.23 | 0.1920 | 0.1534 | |
| Uranus | 12010-02-11 15:50 G | | 6107663.91 | 6107664.16 | 6107664.42 | 0.0133 | 0.0002 | |
| Uranus | 12011-02-16 06:00 G | | 6108033.52 | 6108033.75 | 6108034.02 | 0.0133 | 0.0040 | |
| Uranus | 12012-02-20 07:55 G | | 6108402.64 | 6108402.83 | 6108403.06 | 0.0133 | 0.0075 | |
| Jupiter | 12012-03-31 14:52 G | | 6108442.95 | 6108443.12 | 6108443.29 | 0.0544 | 0.0391 | |
| Uranus | 12013-02-23 22:19 G | | 6108772.37 | 6108772.43 | 6108772.54 | 0.0133 | 0.0125 | |
| Saturn | 12016-04-06 06:00 G | | 6109909.50 | 6109909.75 | 6109909.99 | 0.0277 | 0.0005 | |
| Jupiter | 12018-10-12 04:04 G | | 6110828.44 | 6110828.67 | 6110828.91 | 0.0487 | 0.0107 | |
| Jupiter | 12024-04-05 19:40 G | | 6112831.11 | 6112831.32 | 6112831.54 | 0.0543 | 0.0190 | |
| Saturn | 12030-10-04 23:16 G | | 6115204.22 | 6115204.47 | 6115204.72 | 0.0282 | 0.0054 | |
| Jupiter | 12030-10-16 18:00 G | | 6115216.04 | 6115216.25 | 6115216.45 | 0.0488 | 0.0215 | |

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| Neptune | 12031-10-28 23:31 G | 6115593.47 | 6115593.48 | 6115593.54 | 0.0088 | 0.0087 |
| Neptune | 12032-10-30 05:45 G | 6115960.70 | 6115960.74 | 6115960.83 | 0.0088 | 0.0085 |
| Neptune | 12033-11-01 20:23 G | 6116328.20 | 6116328.35 | 6116328.54 | 0.0088 | 0.0067 |
| Neptune | 12034-11-04 07:26 G | 6116695.66 | 6116695.81 | 6116696.00 | 0.0088 | 0.0065 |
| Neptune | 12035-11-06 17:16 G | 6117063.02 | 6117063.22 | 6117063.47 | 0.0088 | 0.0048 |
| Jupiter | 12036-04-11 03:36 G | 6117219.42 | 6117219.65 | 6117219.89 | 0.0542 | 0.0061 |
| Neptune | 12036-11-08 09:21 G | 6117430.68 | 6117430.89 | 6117431.11 | 0.0088 | 0.0045 |
| Neptune | 12037-11-10 15:07 G | 6117797.89 | 6117798.13 | 6117798.39 | 0.0088 | 0.0027 |
| Neptune | 12038-11-13 09:36 G | 6118165.66 | 6118165.90 | 6118166.16 | 0.0088 | 0.0024 |
| Neptune | 12039-11-15 14:23 G | 6118532.85 | 6118533.10 | 6118533.36 | 0.0088 | 0.0007 |
| Neptune | 12040-11-17 08:38 G | 6118900.60 | 6118900.86 | 6118901.13 | 0.0088 | 0.0003 |
| Neptune | 12041-11-19 15:21 G | 6119267.89 | 6119268.14 | 6119268.39 | 0.0088 | 0.0013 |
| Jupiter | 12042-10-20 21:36 G | 6119603.22 | 6119603.40 | 6119603.59 | 0.0489 | 0.0312 |
| Neptune | 12042-11-22 06:14 G | 6119635.50 | 6119635.76 | 6119636.03 | 0.0088 | 0.0018 |
| Neptune | 12043-11-24 17:45 G | 6120003.02 | 6120003.24 | 6120003.49 | 0.0088 | 0.0034 |
| Neptune | 12044-11-26 04:19 G | 6120370.45 | 6120370.68 | 6120370.93 | 0.0088 | 0.0039 |
| Saturn | 12045-04-01 12:43 G | 6120496.88 | 6120497.03 | 6120497.21 | 0.0277 | 0.0207 |
| Neptune | 12045-11-28 20:23 G | 6120738.17 | 6120738.35 | 6120738.57 | 0.0088 | 0.0055 |
| Neptune | 12046-12-01 02:52 G | 6121105.45 | 6121105.62 | 6121105.84 | 0.0088 | 0.0059 |
| Neptune | 12047-12-03 21:50 G | 6121473.30 | 6121473.41 | 6121473.57 | 0.0088 | 0.0075 |
| Jupiter | 12048-04-16 03:36 G | 6121607.42 | 6121607.65 | 6121607.88 | 0.0542 | 0.0116 |
| Neptune | 12048-12-05 02:52 G | 6121840.54 | 6121840.62 | 6121840.76 | 0.0088 | 0.0079 |
| Uranus | 12049-07-30 09:21 G | 6122077.81 | 6122077.89 | 6122078.00 | 0.0145 | 0.0135 |
| Uranus | 12050-08-04 16:33 G | 6122447.98 | 6122448.19 | 6122448.42 | 0.0145 | 0.0070 |
| Uranus | 12051-08-09 10:04 G | 6122817.68 | 6122817.92 | 6122818.18 | 0.0145 | 0.0033 |
| Uranus | 12052-08-13 17:02 G | 6123187.97 | 6123188.21 | 6123188.45 | 0.0145 | 0.0031 |
| Uranus | 12053-08-18 11:31 G | 6123557.77 | 6123557.98 | 6123558.20 | 0.0145 | 0.0079 |
| Jupiter | 12053-09-24 22:19 G | 6123595.33 | 6123595.43 | 6123595.55 | 0.0484 | 0.0424 |
| Uranus | 12054-08-23 16:19 G | 6123928.08 | 6123928.18 | 6123928.33 | 0.0145 | 0.0126 |
| Jupiter | 12054-10-25 04:48 G | 6123990.62 | 6123990.70 | 6123990.78 | 0.0490 | 0.0453 |

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| Saturn | 12059-09-29 11:31 G | 6125790.80 | 6125790.98 | 6125791.16 | 0.0282 | 0.0185 |
| Jupiter | 12060-04-21 17:45 G | 6125996.08 | 6125996.24 | 6125996.42 | 0.0540 | 0.0351 |
| Jupiter | 12065-09-28 20:38 G | 6127982.20 | 6127982.36 | 6127982.53 | 0.0484 | 0.0336 |
| Jupiter | 12072-04-26 23:45 G | 6130384.45 | 6130384.49 | 6130384.54 | 0.0539 | 0.0527 |
| Saturn | 12075-04-08 15:07 G | 6131460.91 | 6131461.13 | 6131461.37 | 0.0277 | 0.0061 |
| Jupiter | 12077-10-03 08:38 G | 6132369.65 | 6132369.86 | 6132370.07 | 0.0485 | 0.0221 |
| Saturn | 12089-10-05 23:45 G | 6136755.27 | 6136755.49 | 6136755.72 | 0.0281 | 0.0108 |
| Jupiter | 12089-10-07 08:09 G | 6136756.61 | 6136756.84 | 6136757.08 | 0.0486 | 0.0057 |
| Pluto | 12090-05-26 13:40 G | 6136987.89 | 6136988.07 | 6136988.29 | 0.0064 | 0.0039 |
| Uranus | 12091-01-31 08:09 G | 6137237.71 | 6137237.84 | 6137238.00 | 0.0133 | 0.0109 |
| Pluto | 12091-05-28 04:48 G | 6137354.55 | 6137354.70 | 6137354.91 | 0.0064 | 0.0048 |
| Uranus | 12092-02-04 12:28 G | 6137606.83 | 6137607.02 | 6137607.22 | 0.0133 | 0.0083 |
| Uranus | 12093-02-08 01:55 G | 6137976.33 | 6137976.58 | 6137976.84 | 0.0133 | 0.0032 |
| Uranus | 12094-02-12 05:16 G | 6138345.47 | 6138345.72 | 6138345.97 | 0.0133 | 0.0001 |
| Uranus | 12095-02-16 18:43 G | 6138715.04 | 6138715.28 | 6138715.53 | 0.0133 | 0.0042 |
| Jupiter | 12095-03-31 07:11 G | 6138757.67 | 6138757.80 | 6138757.94 | 0.0544 | 0.0430 |
| Mars | 12095-07-22 02:09 G | 6138870.47 | 6138870.59 | 6138870.71 | 0.1624 | 0.1191 |
| Uranus | 12096-02-20 20:38 G | 6139084.19 | 6139084.36 | 6139084.56 | 0.0133 | 0.0087 |
| Uranus | 12097-02-24 10:19 G | 6139453.83 | 6139453.93 | 6139454.07 | 0.0133 | 0.0118 |
| Jupiter | 12101-10-12 19:55 G | 6141144.11 | 6141144.33 | 6141144.56 | 0.0486 | 0.0093 |
| Saturn | 12104-04-03 16:04 G | 6142047.96 | 6142048.17 | 6142048.39 | 0.0277 | 0.0148 |
| Jupiter | 12107-04-06 19:55 G | 6143146.12 | 6143146.33 | 6143146.55 | 0.0544 | 0.0230 |
| Jupiter | 12113-10-16 20:38 G | 6145531.14 | 6145531.36 | 6145531.59 | 0.0487 | 0.0190 |
| Neptune | 12114-05-03 22:04 G | 6145730.32 | 6145730.42 | 6145730.56 | 0.0089 | 0.0079 |
| Neptune | 12115-05-06 15:50 G | 6146098.05 | 6146098.16 | 6146098.32 | 0.0089 | 0.0077 |
| Neptune | 12116-05-07 23:02 G | 6146465.29 | 6146465.46 | 6146465.66 | 0.0089 | 0.0059 |
| Neptune | 12117-05-10 13:11 G | 6146832.87 | 6146833.05 | 6146833.28 | 0.0089 | 0.0057 |
| Neptune | 12118-05-13 00:43 G | 6147200.32 | 6147200.53 | 6147200.77 | 0.0089 | 0.0039 |
| Saturn | 12118-10-01 20:23 G | 6147342.14 | 6147342.35 | 6147342.58 | 0.0282 | 0.0123 |
| Jupiter | 12119-04-11 23:16 G | 6147534.25 | 6147534.47 | 6147534.71 | 0.0543 | 0.0094 |

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| Neptune | 12119-05-15 10:33 G | 6147567.72 | 6147567.94 | 6147568.20 | 0.0089 | 0.0036 |
| Neptune | 12120-05-17 03:07 G | 6147935.38 | 6147935.63 | 6147935.87 | 0.0089 | 0.0017 |
| Neptune | 12121-05-19 08:38 G | 6148302.61 | 6148302.86 | 6148303.12 | 0.0089 | 0.0014 |
| Neptune | 12122-05-22 03:07 G | 6148670.37 | 6148670.63 | 6148670.88 | 0.0089 | 0.0004 |
| Neptune | 12123-05-24 07:26 G | 6149037.56 | 6149037.81 | 6149038.07 | 0.0089 | 0.0007 |
| Neptune | 12124-05-26 00:43 G | 6149405.29 | 6149405.53 | 6149405.79 | 0.0089 | 0.0024 |
| Neptune | 12125-05-28 07:11 G | 6149772.57 | 6149772.80 | 6149773.05 | 0.0089 | 0.0028 |
| Jupiter | 12125-10-21 04:48 G | 6149918.52 | 6149918.70 | 6149918.88 | 0.0488 | 0.0293 |
| Neptune | 12126-05-30 20:23 G | 6150140.14 | 6150140.35 | 6150140.60 | 0.0089 | 0.0045 |
| Neptune | 12127-06-02 07:26 G | 6150507.63 | 6150507.81 | 6150508.04 | 0.0089 | 0.0050 |
| Neptune | 12128-06-03 16:33 G | 6150875.03 | 6150875.19 | 6150875.38 | 0.0089 | 0.0065 |
| Neptune | 12129-06-06 07:55 G | 6151242.70 | 6151242.83 | 6151243.01 | 0.0089 | 0.0069 |
| Neptune | 12130-06-08 12:57 G | 6151609.99 | 6151610.04 | 6151610.14 | 0.0089 | 0.0085 |
| Jupiter | 12131-04-17 14:52 G | 6151922.90 | 6151923.12 | 6151923.34 | 0.0542 | 0.0094 |
| Neptune | 12131-06-11 06:57 G | 6151977.79 | 6151977.79 | 6151977.82 | 0.0089 | 0.0089 |
| Uranus | 12133-07-31 21:07 G | 6152759.26 | 6152759.38 | 6152759.54 | 0.0145 | 0.0120 |
| Saturn | 12134-04-11 01:55 G | 6153012.37 | 6153012.58 | 6153012.81 | 0.0277 | 0.0123 |
| Uranus | 12134-08-06 04:04 G | 6153129.46 | 6153129.67 | 6153129.88 | 0.0145 | 0.0081 |
| Uranus | 12135-08-10 20:52 G | 6153499.12 | 6153499.37 | 6153499.63 | 0.0145 | 0.0013 |
| Uranus | 12136-08-15 03:50 G | 6153869.42 | 6153869.66 | 6153869.91 | 0.0145 | 0.0028 |
| Jupiter | 12136-09-25 00:00 G | 6153910.41 | 6153910.50 | 6153910.59 | 0.0484 | 0.0440 |
| Uranus | 12137-08-19 21:21 G | 6154239.20 | 6154239.39 | 6154239.62 | 0.0145 | 0.0084 |
| Jupiter | 12137-10-25 14:38 G | 6154306.01 | 6154306.11 | 6154306.22 | 0.0490 | 0.0440 |
| Uranus | 12138-08-25 03:36 G | 6154609.59 | 6154609.65 | 6154609.74 | 0.0145 | 0.0139 |
| Jupiter | 12143-04-22 18:28 G | 6156311.07 | 6156311.27 | 6156311.46 | 0.0540 | 0.0320 |
| Jupiter | 12148-09-29 12:57 G | 6158297.88 | 6158298.04 | 6158298.20 | 0.0484 | 0.0353 |
| Saturn | 12148-10-08 07:26 G | 6158306.62 | 6158306.81 | 6158307.00 | 0.0281 | 0.0168 |
| Jupiter | 12155-04-27 16:04 G | 6160699.08 | 6160699.17 | 6160699.27 | 0.0539 | 0.0487 |
| Jupiter | 12160-10-03 10:48 G | 6162684.75 | 6162684.95 | 6162685.17 | 0.0485 | 0.0231 |
| Saturn | 12163-04-05 19:55 G | 6163599.09 | 6163599.33 | 6163599.56 | 0.0277 | 0.0089 |

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| Jupiter | 12172-10-07 19:26 G | 6167072.09 | 6167072.31 | 6167072.54 | 0.0485 | 0.0070 |
| Mars | 12174-07-24 19:40 G | 6167727.15 | 6167727.32 | 6167727.49 | 0.1622 | 0.0261 |
| Uranus | 12175-02-01 18:57 G | 6167919.18 | 6167919.29 | 6167919.42 | 0.0133 | 0.0119 |
| Uranus | 12176-02-05 23:45 G | 6168288.28 | 6168288.49 | 6168288.72 | 0.0133 | 0.0066 |
| Uranus | 12177-02-09 12:14 G | 6168657.77 | 6168658.01 | 6168658.27 | 0.0133 | 0.0038 |
| Saturn | 12177-10-03 03:36 G | 6168893.40 | 6168893.65 | 6168893.90 | 0.0282 | 0.0059 |
| Uranus | 12178-02-13 16:48 G | 6169026.95 | 6169027.20 | 6169027.45 | 0.0133 | 0.0010 |
| Jupiter | 12178-03-31 12:00 G | 6169072.88 | 6169073.00 | 6169073.14 | 0.0544 | 0.0452 |
| Uranus | 12179-02-18 05:16 G | 6169396.48 | 6169396.72 | 6169396.98 | 0.0133 | 0.0048 |
| Pluto | 12179-11-26 20:23 G | 6169678.19 | 6169678.35 | 6169678.57 | 0.0080 | 0.0054 |
| Uranus | 12180-02-22 08:52 G | 6169765.69 | 6169765.87 | 6169766.07 | 0.0133 | 0.0085 |
| Jupiter | 12184-10-11 21:50 G | 6171459.17 | 6171459.41 | 6171459.65 | 0.0486 | 0.0071 |
| Jupiter | 12190-04-05 16:33 G | 6173460.99 | 6173461.19 | 6173461.40 | 0.0544 | 0.0262 |
| Saturn | 12193-04-12 09:50 G | 6174563.73 | 6174563.91 | 6174564.10 | 0.0277 | 0.0187 |
| Jupiter | 12196-10-16 04:33 G | 6175846.48 | 6175846.69 | 6175846.90 | 0.0487 | 0.0168 |
| Neptune | 12196-10-30 16:33 G | 6175861.11 | 6175861.19 | 6175861.29 | 0.0088 | 0.0082 |
| Neptune | 12197-11-02 04:04 G | 6176228.58 | 6176228.67 | 6176228.82 | 0.0088 | 0.0077 |
| Neptune | 12198-11-04 12:28 G | 6176595.86 | 6176596.02 | 6176596.23 | 0.0088 | 0.0064 |
| Neptune | 12199-11-07 04:48 G | 6176963.54 | 6176963.70 | 6176963.92 | 0.0088 | 0.0058 |
| Neptune | 12200-11-09 10:04 G | 6177330.72 | 6177330.92 | 6177331.17 | 0.0088 | 0.0044 |
| Neptune | 12201-11-12 05:16 G | 6177698.49 | 6177698.72 | 6177698.96 | 0.0088 | 0.0037 |
| Jupiter | 12202-04-12 07:40 G | 6177849.61 | 6177849.82 | 6177850.05 | 0.0543 | 0.0126 |
| Neptune | 12202-11-14 09:50 G | 6178065.68 | 6178065.91 | 6178066.18 | 0.0088 | 0.0023 |
| Neptune | 12203-11-17 03:36 G | 6178433.40 | 6178433.65 | 6178433.92 | 0.0088 | 0.0018 |
| Neptune | 12204-11-18 11:45 G | 6178800.74 | 6178800.99 | 6178801.24 | 0.0088 | 0.0003 |
| Neptune | 12205-11-21 01:26 G | 6179168.29 | 6179168.56 | 6179168.83 | 0.0088 | 0.0002 |
| Neptune | 12206-11-23 13:40 G | 6179535.83 | 6179536.07 | 6179536.33 | 0.0088 | 0.0018 |
| Saturn | 12207-10-11 19:40 G | 6179858.19 | 6179858.32 | 6179858.47 | 0.0281 | 0.0229 |
| Neptune | 12207-11-25 22:04 G | 6179903.18 | 6179903.42 | 6179903.69 | 0.0088 | 0.0024 |
| Jupiter | 12208-10-21 14:52 G | 6180233.92 | 6180234.12 | 6180234.32 | 0.0488 | 0.0273 |

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| Neptune | 12208-11-27 15:07 G | 6180270.92 | 6180271.13 | 6180271.38 | 0.0088 | 0.0039 |
| Neptune | 12209-11-29 20:52 G | 6180638.16 | 6180638.37 | 6180638.62 | 0.0088 | 0.0043 |
| Neptune | 12210-12-02 16:33 G | 6181006.01 | 6181006.19 | 6181006.39 | 0.0088 | 0.0059 |
| Neptune | 12211-12-04 21:36 G | 6181373.25 | 6181373.40 | 6181373.61 | 0.0088 | 0.0063 |
| Neptune | 12212-12-06 16:04 G | 6181741.07 | 6181741.17 | 6181741.31 | 0.0088 | 0.0079 |
| Neptune | 12213-12-09 00:14 G | 6182108.45 | 6182108.51 | 6182108.63 | 0.0088 | 0.0083 |
| Jupiter | 12214-04-17 05:02 G | 6182237.47 | 6182237.71 | 6182237.95 | 0.0542 | 0.0053 |
| Uranus | 12217-08-02 08:52 G | 6183440.75 | 6183440.87 | 6183441.00 | 0.0145 | 0.0126 |
| Uranus | 12218-08-07 15:36 G | 6183810.92 | 6183811.15 | 6183811.38 | 0.0145 | 0.0062 |
| Uranus | 12219-08-12 08:38 G | 6184180.61 | 6184180.86 | 6184181.11 | 0.0145 | 0.0024 |
| Jupiter | 12219-09-26 15:36 G | 6184226.08 | 6184226.15 | 6184226.22 | 0.0484 | 0.0459 |
| Uranus | 12220-08-16 15:50 G | 6184550.92 | 6184551.16 | 6184551.40 | 0.0145 | 0.0041 |
| Jupiter | 12220-10-25 16:48 G | 6184621.10 | 6184621.20 | 6184621.31 | 0.0489 | 0.0429 |
| Uranus | 12221-08-21 08:52 G | 6184920.68 | 6184920.87 | 6184921.08 | 0.0145 | 0.0087 |
| Saturn | 12222-04-08 06:00 G | 6185150.51 | 6185150.75 | 6185150.98 | 0.0277 | 0.0026 |
| Uranus | 12222-08-26 15:07 G | 6185291.06 | 6185291.13 | 6185291.24 | 0.0145 | 0.0136 |
| Jupiter | 12226-04-22 10:33 G | 6186625.76 | 6186625.94 | 6186626.14 | 0.0541 | 0.0282 |
| Jupiter | 12231-09-30 10:48 G | 6188612.81 | 6188612.95 | 6188613.11 | 0.0484 | 0.0377 |
| Saturn | 12236-10-05 09:21 G | 6190444.64 | 6190444.89 | 6190445.14 | 0.0282 | 0.0006 |
| Jupiter | 12238-04-27 22:19 G | 6191014.30 | 6191014.43 | 6191014.56 | 0.0540 | 0.0447 |
| Jupiter | 12243-10-04 21:07 G | 6193000.18 | 6193000.38 | 6193000.57 | 0.0484 | 0.0247 |
| Saturn | 12251-04-03 00:00 G | 6195737.40 | 6195737.50 | 6195737.60 | 0.0277 | 0.0253 |
| Saturn | 12252-04-14 15:36 G | 6196115.05 | 6196115.15 | 6196115.26 | 0.0278 | 0.0250 |
| Mars | 12253-07-27 17:16 G | 6196584.08 | 6196584.22 | 6196584.36 | 0.1619 | 0.1088 |
| Jupiter | 12255-10-08 22:19 G | 6197387.20 | 6197387.43 | 6197387.67 | 0.0485 | 0.0086 |
| Uranus | 12259-02-03 05:45 G | 6198600.59 | 6198600.74 | 6198600.93 | 0.0133 | 0.0103 |
| Uranus | 12260-02-07 12:43 G | 6198969.83 | 6198970.03 | 6198970.24 | 0.0133 | 0.0075 |
| Uranus | 12261-02-11 00:14 G | 6199339.25 | 6199339.51 | 6199339.78 | 0.0133 | 0.0023 |
| Jupiter | 12261-03-31 06:43 G | 6199387.68 | 6199387.78 | 6199387.90 | 0.0544 | 0.0477 |
| Uranus | 12262-02-15 05:31 G | 6199708.48 | 6199708.73 | 6199708.98 | 0.0133 | 0.0008 |

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| Uranus | 12263-02-19 16:48 G | 6200077.96 | 6200078.20 | 6200078.45 | 0.0133 | 0.0052 |
| Uranus | 12264-02-23 20:23 G | 6200447.20 | 6200447.35 | 6200447.55 | 0.0133 | 0.0097 |
| Uranus | 12265-02-27 08:09 G | 6200816.80 | 6200816.84 | 6200816.94 | 0.0133 | 0.0128 |
| Saturn | 12265-09-29 22:19 G | 6201031.32 | 6201031.43 | 6201031.56 | 0.0282 | 0.0242 |
| Jupiter | 12267-10-13 05:31 G | 6201774.51 | 6201774.73 | 6201774.96 | 0.0486 | 0.0050 |
| Jupiter | 12273-04-05 18:00 G | 6203776.06 | 6203776.25 | 6203776.44 | 0.0543 | 0.0301 |
| Neptune | 12278-05-04 10:04 G | 6205630.90 | 6205630.92 | 6205631.00 | 0.0089 | 0.0088 |
| Neptune | 12279-05-06 18:57 G | 6205998.17 | 6205998.29 | 6205998.43 | 0.0089 | 0.0076 |
| Jupiter | 12279-10-17 13:40 G | 6206161.84 | 6206162.07 | 6206162.30 | 0.0487 | 0.0141 |
| Neptune | 12280-05-08 07:55 G | 6206365.69 | 6206365.83 | 6206366.03 | 0.0089 | 0.0069 |
| Saturn | 12281-04-09 19:40 G | 6206702.09 | 6206702.32 | 6206702.56 | 0.0278 | 0.0039 |
| Neptune | 12281-05-10 20:52 G | 6206733.20 | 6206733.37 | 6206733.58 | 0.0089 | 0.0056 |
| Neptune | 12282-05-13 05:02 G | 6207100.50 | 6207100.71 | 6207100.95 | 0.0089 | 0.0048 |
| Neptune | 12283-05-15 21:50 G | 6207468.20 | 6207468.41 | 6207468.66 | 0.0089 | 0.0035 |
| Neptune | 12284-05-17 03:07 G | 6207835.40 | 6207835.63 | 6207835.89 | 0.0089 | 0.0028 |
| Jupiter | 12285-04-10 18:14 G | 6208164.03 | 6208164.26 | 6208164.49 | 0.0543 | 0.0165 |
| Neptune | 12285-05-19 22:04 G | 6208203.17 | 6208203.42 | 6208203.68 | 0.0089 | 0.0014 |
| Neptune | 12286-05-22 03:07 G | 6208570.38 | 6208570.63 | 6208570.88 | 0.0089 | 0.0008 |
| Neptune | 12287-05-24 20:09 G | 6208938.08 | 6208938.34 | 6208938.61 | 0.0089 | 0.0007 |
| Neptune | 12288-05-26 04:19 G | 6209305.44 | 6209305.68 | 6209305.93 | 0.0089 | 0.0014 |
| Neptune | 12289-05-28 17:02 G | 6209672.97 | 6209673.21 | 6209673.47 | 0.0089 | 0.0028 |
| Neptune | 12290-05-31 05:45 G | 6210040.51 | 6210040.74 | 6210040.97 | 0.0089 | 0.0034 |
| Neptune | 12291-06-02 12:43 G | 6210407.83 | 6210408.03 | 6210408.27 | 0.0089 | 0.0048 |
| Jupiter | 12291-10-21 12:28 G | 6210548.83 | 6210549.02 | 6210549.22 | 0.0488 | 0.0246 |
| Neptune | 12292-06-04 05:02 G | 6210775.53 | 6210775.71 | 6210775.94 | 0.0089 | 0.0053 |
| Neptune | 12293-06-06 09:36 G | 6211142.76 | 6211142.90 | 6211143.09 | 0.0089 | 0.0068 |
| Mars | 12294-01-25 22:48 G | 6211376.26 | 6211376.45 | 6211376.64 | 0.1913 | 0.0459 |
| Neptune | 12294-06-09 03:50 G | 6211510.52 | 6211510.66 | 6211510.82 | 0.0089 | 0.0072 |
| Neptune | 12295-06-11 08:09 G | 6211877.83 | 6211877.84 | 6211877.89 | 0.0089 | 0.0088 |
| Saturn | 12295-10-07 21:07 G | 6211996.15 | 6211996.38 | 6211996.61 | 0.0282 | 0.0075 |

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| Jupiter | 12297-04-16 04:48 G | 6212552.47 | 6212552.70 | 6212552.92 | 0.0543 | 0.0024 |
| Mars | 12300-07-22 22:33 G | 6213745.35 | 6213745.44 | 6213745.54 | 0.1631 | 0.1422 |
| Uranus | 12301-08-03 20:52 G | 6214122.22 | 6214122.37 | 6214122.53 | 0.0145 | 0.0113 |
| Uranus | 12302-08-09 02:38 G | 6214492.40 | 6214492.61 | 6214492.84 | 0.0145 | 0.0072 |
| Uranus | 12303-08-13 19:26 G | 6214862.07 | 6214862.31 | 6214862.57 | 0.0145 | 0.0006 |
| Jupiter | 12303-10-27 02:23 G | 6214936.48 | 6214936.60 | 6214936.74 | 0.0489 | 0.0407 |
| Uranus | 12304-08-18 02:09 G | 6215232.36 | 6215232.59 | 6215232.84 | 0.0145 | 0.0036 |
| Uranus | 12305-08-22 18:57 G | 6215602.11 | 6215602.29 | 6215602.49 | 0.0145 | 0.0094 |
| Jupiter | 12309-04-22 16:33 G | 6216940.99 | 6216941.19 | 6216941.41 | 0.0541 | 0.0256 |
| Saturn | 12310-04-05 06:00 G | 6217288.57 | 6217288.75 | 6217288.94 | 0.0277 | 0.0189 |
| Jupiter | 12314-09-30 21:36 G | 6218928.28 | 6218928.40 | 6218928.53 | 0.0484 | 0.0400 |
| Jupiter | 12321-04-27 16:19 G | 6221329.04 | 6221329.18 | 6221329.33 | 0.0540 | 0.0416 |
| Saturn | 12324-10-02 09:21 G | 6222582.71 | 6222582.89 | 6222583.10 | 0.0282 | 0.0171 |
| Jupiter | 12326-10-05 00:14 G | 6223315.32 | 6223315.51 | 6223315.72 | 0.0485 | 0.0262 |
| Jupiter | 12333-05-03 00:00 G | 6225717.50 | 6225717.50 | 6225717.52 | 0.0538 | 0.0537 |
| Pluto | 12336-05-30 14:09 G | 6226841.00 | 6226841.09 | 6226841.25 | 0.0064 | 0.0056 |
| Pluto | 12337-05-31 19:26 G | 6227207.11 | 6227207.31 | 6227207.55 | 0.0064 | 0.0034 |
| Jupiter | 12338-10-09 05:16 G | 6227702.50 | 6227702.72 | 6227702.94 | 0.0485 | 0.0104 |
| Saturn | 12340-04-12 06:28 G | 6228253.54 | 6228253.77 | 6228254.00 | 0.0278 | 0.0103 |
| Uranus | 12343-02-04 15:36 G | 6229282.02 | 6229282.15 | 6229282.30 | 0.0133 | 0.0111 |
| Uranus | 12344-02-08 23:02 G | 6229651.25 | 6229651.46 | 6229651.70 | 0.0133 | 0.0059 |
| Jupiter | 12344-03-31 06:14 G | 6229702.68 | 6229702.76 | 6229702.84 | 0.0544 | 0.0510 |
| Uranus | 12345-02-12 09:21 G | 6230020.64 | 6230020.89 | 6230021.15 | 0.0133 | 0.0031 |
| Uranus | 12346-02-16 16:04 G | 6230389.92 | 6230390.17 | 6230390.42 | 0.0133 | 0.0019 |
| Uranus | 12347-02-21 02:09 G | 6230759.36 | 6230759.59 | 6230759.84 | 0.0133 | 0.0055 |
| Uranus | 12348-02-25 08:09 G | 6231128.67 | 6231128.84 | 6231129.02 | 0.0133 | 0.0095 |
| Jupiter | 12350-10-13 11:02 G | 6232089.72 | 6232089.96 | 6232090.20 | 0.0486 | 0.0019 |
| Saturn | 12354-10-10 13:40 G | 6233547.88 | 6233548.07 | 6233548.28 | 0.0282 | 0.0148 |
| Jupiter | 12356-04-05 06:57 G | 6234090.61 | 6234090.79 | 6234090.98 | 0.0544 | 0.0339 |
| Neptune | 12360-11-01 01:55 G | 6235761.51 | 6235761.58 | 6235761.67 | 0.0088 | 0.0083 |

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| Neptune | 12361-11-03 09:21 G | 6236128.81 | 6236128.89 | 6236129.00 | 0.0088 | 0.0082 |
| Jupiter | 12362-10-17 11:31 G | 6236476.76 | 6236476.98 | 6236477.21 | 0.0486 | 0.0108 |
| Neptune | 12362-11-06 02:38 G | 6236496.46 | 6236496.61 | 6236496.81 | 0.0088 | 0.0064 |
| Neptune | 12363-11-08 07:26 G | 6236863.65 | 6236863.81 | 6236864.01 | 0.0088 | 0.0063 |
| Neptune | 12364-11-10 02:09 G | 6237231.39 | 6237231.59 | 6237231.84 | 0.0088 | 0.0045 |
| Neptune | 12365-11-12 07:40 G | 6237598.62 | 6237598.82 | 6237599.06 | 0.0088 | 0.0044 |
| Neptune | 12366-11-15 00:14 G | 6237966.27 | 6237966.51 | 6237966.78 | 0.0088 | 0.0026 |
| Neptune | 12367-11-17 08:38 G | 6238333.63 | 6238333.86 | 6238334.12 | 0.0088 | 0.0024 |
| Jupiter | 12368-04-10 22:04 G | 6238479.22 | 6238479.42 | 6238479.63 | 0.0544 | 0.0200 |
| Neptune | 12368-11-18 20:52 G | 6238701.10 | 6238701.37 | 6238701.64 | 0.0088 | 0.0006 |
| Saturn | 12369-04-06 16:04 G | 6238839.96 | 6238840.17 | 6238840.39 | 0.0277 | 0.0121 |
| Neptune | 12369-11-21 10:33 G | 6239068.70 | 6239068.94 | 6239069.20 | 0.0088 | 0.0005 |
| Neptune | 12370-11-23 18:14 G | 6239436.00 | 6239436.26 | 6239436.53 | 0.0088 | 0.0014 |
| Neptune | 12371-11-26 12:00 G | 6239803.76 | 6239804.00 | 6239804.27 | 0.0088 | 0.0016 |
| Neptune | 12372-11-27 17:16 G | 6240170.98 | 6240171.22 | 6240171.47 | 0.0088 | 0.0033 |
| Neptune | 12373-11-30 12:14 G | 6240538.79 | 6240539.01 | 6240539.27 | 0.0088 | 0.0036 |
| Jupiter | 12374-10-22 00:28 G | 6240864.31 | 6240864.52 | 6240864.73 | 0.0487 | 0.0224 |
| Neptune | 12374-12-02 18:14 G | 6240906.07 | 6240906.26 | 6240906.47 | 0.0088 | 0.0053 |
| Neptune | 12375-12-05 11:02 G | 6241273.78 | 6241273.96 | 6241274.19 | 0.0088 | 0.0057 |
| Neptune | 12376-12-06 20:38 G | 6241641.22 | 6241641.36 | 6241641.50 | 0.0088 | 0.0073 |
| Neptune | 12377-12-09 08:38 G | 6242008.75 | 6242008.86 | 6242009.03 | 0.0088 | 0.0076 |
| Mars | 12379-07-26 08:09 G | 6242602.65 | 6242602.84 | 6242603.02 | 0.1628 | 0.0548 |
| Jupiter | 12380-04-16 07:55 G | 6242867.59 | 6242867.83 | 6242868.07 | 0.0543 | 0.0007 |
| Saturn | 12383-10-04 17:45 G | 6244134.00 | 6244134.24 | 6244134.48 | 0.0282 | 0.0100 |
| Uranus | 12385-08-04 07:26 G | 6244803.68 | 6244803.81 | 6244803.97 | 0.0145 | 0.0118 |
| Uranus | 12386-08-09 12:57 G | 6245173.81 | 6245174.04 | 6245174.28 | 0.0145 | 0.0055 |
| Jupiter | 12386-10-26 00:28 G | 6245251.38 | 6245251.52 | 6245251.67 | 0.0489 | 0.0384 |
| Uranus | 12387-08-14 06:28 G | 6245543.53 | 6245543.77 | 6245544.02 | 0.0145 | 0.0017 |
| Uranus | 12388-08-18 13:11 G | 6245913.81 | 6245914.05 | 6245914.29 | 0.0145 | 0.0049 |
| Uranus | 12389-08-23 06:00 G | 6246283.56 | 6246283.75 | 6246283.95 | 0.0145 | 0.0094 |

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| Uranus | 12390-08-28 12:43 G | 6246654.02 | 6246654.03 | 6246654.08 | 0.0145 | 0.0144 |
| Jupiter | 12392-04-21 05:45 G | 6247255.53 | 6247255.74 | 6247255.95 | 0.0541 | 0.0218 |
| Jupiter | 12397-09-30 01:11 G | 6249243.44 | 6249243.55 | 6249243.68 | 0.0484 | 0.0420 |
| Saturn | 12399-04-14 11:31 G | 6249804.78 | 6249804.98 | 6249805.19 | 0.0278 | 0.0168 |
| Jupiter | 12404-04-26 17:31 G | 6251644.06 | 6251644.23 | 6251644.39 | 0.0540 | 0.0375 |
| Jupiter | 12409-10-04 04:19 G | 6253630.50 | 6253630.68 | 6253630.87 | 0.0484 | 0.0286 |
| Saturn | 12413-10-12 04:04 G | 6255099.53 | 6255099.67 | 6255099.84 | 0.0281 | 0.0219 |
| Jupiter | 12416-05-01 15:07 G | 6256032.05 | 6256032.13 | 6256032.22 | 0.0539 | 0.0500 |
| Jupiter | 12421-10-08 12:00 G | 6258017.77 | 6258018.00 | 6258018.24 | 0.0485 | 0.0124 |
| Pluto | 12425-11-29 19:26 G | 6259531.07 | 6259531.31 | 6259531.56 | 0.0080 | 0.0025 |
| Uranus | 12427-02-05 01:26 G | 6259963.41 | 6259963.56 | 6259963.77 | 0.0133 | 0.0098 |
| Jupiter | 12427-03-30 21:07 G | 6260017.38 | 6260017.38 | 6260017.40 | 0.0545 | 0.0544 |
| Uranus | 12428-02-09 11:02 G | 6260332.76 | 6260332.96 | 6260333.18 | 0.0133 | 0.0069 |
| Saturn | 12428-04-08 05:31 G | 6260391.50 | 6260391.73 | 6260391.96 | 0.0277 | 0.0052 |
| Uranus | 12429-02-12 20:09 G | 6260702.08 | 6260702.34 | 6260702.61 | 0.0133 | 0.0016 |
| Uranus | 12430-02-17 03:50 G | 6261071.42 | 6261071.66 | 6261071.91 | 0.0133 | 0.0015 |
| Uranus | 12431-02-21 12:43 G | 6261440.80 | 6261441.03 | 6261441.27 | 0.0133 | 0.0061 |
| Uranus | 12432-02-25 19:11 G | 6261810.16 | 6261810.30 | 6261810.47 | 0.0133 | 0.0103 |
| Jupiter | 12433-10-12 11:02 G | 6262404.73 | 6262404.96 | 6262405.19 | 0.0485 | 0.0011 |
| Jupiter | 12439-04-05 14:09 G | 6264405.92 | 6264406.09 | 6264406.25 | 0.0544 | 0.0370 |
| Saturn | 12442-10-06 02:38 G | 6265685.36 | 6265685.61 | 6265685.85 | 0.0282 | 0.0030 |
| Neptune | 12443-05-07 03:07 G | 6265898.51 | 6265898.63 | 6265898.79 | 0.0089 | 0.0076 |
| Neptune | 12444-05-08 17:16 G | 6266266.10 | 6266266.22 | 6266266.37 | 0.0089 | 0.0075 |
| Neptune | 12445-05-11 00:57 G | 6266633.35 | 6266633.54 | 6266633.76 | 0.0089 | 0.0056 |
| Jupiter | 12445-10-17 00:43 G | 6266792.30 | 6266792.53 | 6266792.76 | 0.0486 | 0.0081 |
| Neptune | 12446-05-13 18:28 G | 6267001.10 | 6267001.27 | 6267001.49 | 0.0089 | 0.0056 |
| Neptune | 12447-05-15 23:45 G | 6267368.27 | 6267368.49 | 6267368.74 | 0.0089 | 0.0036 |
| Neptune | 12448-05-17 18:14 G | 6267736.04 | 6267736.26 | 6267736.52 | 0.0089 | 0.0036 |
| Neptune | 12449-05-20 00:00 G | 6268103.27 | 6268103.50 | 6268103.76 | 0.0089 | 0.0017 |
| Neptune | 12450-05-22 16:19 G | 6268470.93 | 6268471.18 | 6268471.45 | 0.0089 | 0.0014 |

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| Jupiter | 12451-04-10 18:57 G | 6268794.08 | 6268794.29 | 6268794.51 | 0.0543 | 0.0236 |
| Neptune | 12451-05-25 01:26 G | 6268838.31 | 6268838.56 | 6268838.81 | 0.0089 | 0.0004 |
| Neptune | 12452-05-26 12:28 G | 6269205.77 | 6269206.02 | 6269206.29 | 0.0089 | 0.0007 |
| Neptune | 12453-05-29 02:09 G | 6269573.37 | 6269573.59 | 6269573.85 | 0.0089 | 0.0025 |
| Neptune | 12454-05-31 09:21 G | 6269940.65 | 6269940.89 | 6269941.15 | 0.0089 | 0.0025 |
| Neptune | 12455-06-03 02:38 G | 6270308.41 | 6270308.61 | 6270308.85 | 0.0089 | 0.0045 |
| Neptune | 12456-06-04 07:40 G | 6270675.60 | 6270675.82 | 6270676.04 | 0.0089 | 0.0046 |
| Saturn | 12457-04-02 23:16 G | 6270978.43 | 6270978.47 | 6270978.54 | 0.0277 | 0.0270 |
| Neptune | 12457-06-07 01:26 G | 6271043.39 | 6271043.56 | 6271043.75 | 0.0089 | 0.0064 |
| Jupiter | 12457-10-20 23:02 G | 6271179.24 | 6271179.46 | 6271179.67 | 0.0487 | 0.0200 |
| Saturn | 12458-04-15 16:33 G | 6271356.05 | 6271356.19 | 6271356.32 | 0.0278 | 0.0231 |
| Neptune | 12458-06-09 06:28 G | 6271410.62 | 6271410.77 | 6271410.96 | 0.0089 | 0.0065 |
| Mars | 12458-07-28 12:00 G | 6271459.86 | 6271460.00 | 6271460.15 | 0.1625 | 0.1008 |
| Neptune | 12459-06-11 21:36 G | 6271778.33 | 6271778.40 | 6271778.54 | 0.0089 | 0.0082 |
| Neptune | 12460-06-13 06:28 G | 6272145.71 | 6272145.77 | 6272145.87 | 0.0089 | 0.0084 |
| Jupiter | 12463-04-15 21:07 G | 6273182.16 | 6273182.38 | 6273182.61 | 0.0542 | 0.0041 |
| Uranus | 12469-08-04 19:40 G | 6275485.16 | 6275485.32 | 6275485.48 | 0.0145 | 0.0108 |
| Jupiter | 12469-10-25 10:48 G | 6275566.80 | 6275566.95 | 6275567.11 | 0.0488 | 0.0358 |
| Uranus | 12470-08-09 23:31 G | 6275855.26 | 6275855.48 | 6275855.72 | 0.0145 | 0.0066 |
| Uranus | 12471-08-14 17:16 G | 6276224.98 | 6276225.22 | 6276225.47 | 0.0145 | 0.0003 |
| Saturn | 12471-10-01 06:43 G | 6276272.67 | 6276272.78 | 6276272.91 | 0.0282 | 0.0244 |
| Uranus | 12472-08-18 23:02 G | 6276595.23 | 6276595.46 | 6276595.72 | 0.0145 | 0.0042 |
| Uranus | 12473-08-23 15:50 G | 6276965.00 | 6276965.16 | 6276965.35 | 0.0145 | 0.0102 |
| Jupiter | 12475-04-21 09:50 G | 6277570.69 | 6277570.91 | 6277571.13 | 0.0542 | 0.0182 |
| Jupiter | 12480-09-29 06:57 G | 6279558.70 | 6279558.79 | 6279558.88 | 0.0484 | 0.0442 |
| Saturn | 12487-04-10 17:31 G | 6281942.99 | 6281943.23 | 6281943.47 | 0.0277 | 0.0013 |
| Jupiter | 12487-04-26 10:48 G | 6281958.77 | 6281958.95 | 6281959.14 | 0.0541 | 0.0341 |
| Jupiter | 12492-10-03 13:26 G | 6283945.87 | 6283946.06 | 6283946.25 | 0.0484 | 0.0295 |
| Jupiter | 12499-05-01 23:31 G | 6286347.38 | 6286347.48 | 6286347.59 | 0.0539 | 0.0475 |
| Saturn | 12501-10-08 14:23 G | 6287236.87 | 6287237.10 | 6287237.34 | 0.0282 | 0.0038 |

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| Jupiter | 12504-10-08 13:11 G | 6288332.83 | 6288333.05 | 6288333.27 | 0.0485 | 0.0141 |
| Uranus | 12511-02-06 10:04 G | 6290644.78 | 6290644.92 | 6290645.11 | 0.0133 | 0.0106 |
| Uranus | 12512-02-10 20:38 G | 6291014.15 | 6291014.36 | 6291014.60 | 0.0133 | 0.0053 |
| Uranus | 12513-02-14 04:04 G | 6291383.42 | 6291383.67 | 6291383.94 | 0.0133 | 0.0025 |
| Uranus | 12514-02-18 13:26 G | 6291752.82 | 6291753.06 | 6291753.31 | 0.0133 | 0.0027 |
| Uranus | 12515-02-22 21:21 G | 6292122.16 | 6292122.39 | 6292122.63 | 0.0133 | 0.0061 |
| Uranus | 12516-02-27 05:31 G | 6292491.60 | 6292491.73 | 6292491.90 | 0.0133 | 0.0104 |
| Saturn | 12516-04-05 02:23 G | 6292529.45 | 6292529.60 | 6292529.77 | 0.0277 | 0.0211 |
| Jupiter | 12516-10-13 01:11 G | 6292720.31 | 6292720.55 | 6292720.78 | 0.0486 | 0.0034 |
| Jupiter | 12522-04-05 07:11 G | 6294720.65 | 6294720.80 | 6294720.97 | 0.0544 | 0.0408 |
| Neptune | 12525-11-04 00:14 G | 6296029.43 | 6296029.51 | 6296029.64 | 0.0088 | 0.0080 |
| Neptune | 12526-11-06 05:02 G | 6296396.57 | 6296396.71 | 6296396.87 | 0.0088 | 0.0071 |
| Neptune | 12527-11-08 22:48 G | 6296764.29 | 6296764.45 | 6296764.66 | 0.0088 | 0.0061 |
| Jupiter | 12528-10-16 22:04 G | 6297107.18 | 6297107.42 | 6297107.65 | 0.0486 | 0.0054 |
| Neptune | 12528-11-10 04:48 G | 6297131.51 | 6297131.70 | 6297131.91 | 0.0088 | 0.0054 |
| Neptune | 12529-11-12 20:38 G | 6297499.13 | 6297499.36 | 6297499.60 | 0.0088 | 0.0042 |
| Saturn | 12530-10-03 12:28 G | 6297823.84 | 6297824.02 | 6297824.23 | 0.0282 | 0.0182 |
| Neptune | 12530-11-15 06:28 G | 6297866.55 | 6297866.77 | 6297867.01 | 0.0088 | 0.0035 |
| Neptune | 12531-11-17 17:31 G | 6298233.99 | 6298234.23 | 6298234.51 | 0.0088 | 0.0023 |
| Neptune | 12532-11-19 08:52 G | 6298601.62 | 6298601.87 | 6298602.12 | 0.0088 | 0.0015 |
| Neptune | 12533-11-21 15:21 G | 6298968.88 | 6298969.14 | 6298969.41 | 0.0088 | 0.0004 |
| Jupiter | 12534-04-10 11:16 G | 6299108.78 | 6299108.97 | 6299109.16 | 0.0544 | 0.0281 |
| Neptune | 12534-11-24 09:36 G | 6299336.65 | 6299336.90 | 6299337.16 | 0.0088 | 0.0003 |
| Neptune | 12535-11-26 14:09 G | 6299703.85 | 6299704.09 | 6299704.36 | 0.0088 | 0.0016 |
| Neptune | 12536-11-28 09:07 G | 6300071.63 | 6300071.88 | 6300072.14 | 0.0088 | 0.0022 |
| Neptune | 12537-11-30 15:07 G | 6300438.90 | 6300439.13 | 6300439.37 | 0.0088 | 0.0037 |
| Neptune | 12538-12-03 06:43 G | 6300806.56 | 6300806.78 | 6300807.03 | 0.0088 | 0.0042 |
| Neptune | 12539-12-05 17:31 G | 6301174.04 | 6301174.23 | 6301174.43 | 0.0088 | 0.0056 |
| Jupiter | 12540-10-21 11:16 G | 6301494.76 | 6301494.97 | 6301495.18 | 0.0487 | 0.0180 |
| Neptune | 12540-12-07 05:02 G | 6301541.53 | 6301541.71 | 6301541.92 | 0.0088 | 0.0061 |

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| Neptune | 12541-12-09 20:38 G | 6301909.23 | 6301909.36 | 6301909.50 | 0.0088 | 0.0075 |
| Neptune | 12542-12-12 03:36 G | 6302276.56 | 6302276.65 | 6302276.79 | 0.0088 | 0.0080 |
| Saturn | 12546-04-12 23:45 G | 6303494.25 | 6303494.49 | 6303494.74 | 0.0277 | 0.0075 |
| Jupiter | 12546-04-16 03:50 G | 6303497.43 | 6303497.66 | 6303497.89 | 0.0544 | 0.0069 |
| Jupiter | 12552-10-25 12:00 G | 6305881.84 | 6305882.00 | 6305882.18 | 0.0488 | 0.0340 |
| Uranus | 12553-08-06 05:31 G | 6306166.59 | 6306166.73 | 6306166.90 | 0.0145 | 0.0111 |
| Uranus | 12554-08-11 08:52 G | 6306536.63 | 6306536.87 | 6306537.12 | 0.0145 | 0.0049 |
| Uranus | 12555-08-16 03:50 G | 6306906.42 | 6306906.66 | 6306906.91 | 0.0145 | 0.0010 |
| Uranus | 12556-08-20 08:52 G | 6307276.65 | 6307276.87 | 6307277.12 | 0.0145 | 0.0058 |
| Uranus | 12557-08-25 02:38 G | 6307646.43 | 6307646.61 | 6307646.79 | 0.0145 | 0.0100 |
| Jupiter | 12558-04-21 06:14 G | 6307885.53 | 6307885.76 | 6307885.98 | 0.0542 | 0.0155 |
| Saturn | 12560-10-10 02:23 G | 6308788.38 | 6308788.60 | 6308788.83 | 0.0282 | 0.0101 |
| Jupiter | 12563-09-30 17:16 G | 6309874.15 | 6309874.22 | 6309874.31 | 0.0484 | 0.0453 |
| Jupiter | 12564-10-29 21:50 G | 6310269.38 | 6310269.41 | 6310269.45 | 0.0489 | 0.0484 |
| Jupiter | 12570-04-26 18:14 G | 6312274.07 | 6312274.26 | 6312274.44 | 0.0541 | 0.0303 |
| Saturn | 12575-04-07 09:36 G | 6314080.70 | 6314080.90 | 6314081.10 | 0.0277 | 0.0154 |
| Jupiter | 12575-10-04 15:36 G | 6314260.98 | 6314261.15 | 6314261.33 | 0.0484 | 0.0308 |
| Mars | 12578-01-27 17:45 G | 6315107.04 | 6315107.24 | 6315107.43 | 0.1906 | 0.0363 |
| Jupiter | 12582-05-01 19:40 G | 6316662.19 | 6316662.32 | 6316662.47 | 0.0539 | 0.0435 |
| Pluto | 12582-06-02 12:14 G | 6316693.97 | 6316694.01 | 6316694.08 | 0.0064 | 0.0062 |
| Pluto | 12583-06-03 22:33 G | 6317060.24 | 6317060.44 | 6317060.68 | 0.0064 | 0.0029 |
| Mars | 12584-07-25 05:02 G | 6317477.55 | 6317477.71 | 6317477.86 | 0.1634 | 0.0783 |
| Jupiter | 12587-10-09 03:21 G | 6318648.42 | 6318648.64 | 6318648.86 | 0.0484 | 0.0158 |
| Saturn | 12589-10-04 13:55 G | 6319374.86 | 6319375.08 | 6319375.31 | 0.0282 | 0.0125 |
| Uranus | 12595-02-06 19:40 G | 6321326.15 | 6321326.32 | 6321326.54 | 0.0133 | 0.0093 |
| Uranus | 12596-02-11 07:55 G | 6321695.62 | 6321695.83 | 6321696.06 | 0.0133 | 0.0063 |
| Uranus | 12597-02-14 14:09 G | 6322064.83 | 6322065.09 | 6322065.36 | 0.0133 | 0.0009 |
| Uranus | 12598-02-19 00:28 G | 6322434.28 | 6322434.52 | 6322434.77 | 0.0133 | 0.0021 |
| Uranus | 12599-02-23 06:28 G | 6322803.56 | 6322803.77 | 6322804.02 | 0.0133 | 0.0070 |
| Jupiter | 12599-10-13 01:26 G | 6323035.32 | 6323035.56 | 6323035.79 | 0.0485 | 0.0054 |

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| Uranus | 12600-02-27 16:04 G | 6323173.05 | 6323173.17 | 6323173.34 | 0.0133 | 0.0109 |
| Jupiter | 12605-04-05 05:16 G | 6325035.60 | 6325035.72 | 6325035.85 | 0.0545 | 0.0451 |
| Saturn | 12605-04-15 00:43 G | 6325045.32 | 6325045.53 | 6325045.76 | 0.0276 | 0.0133 |
| Neptune | 12607-05-08 14:52 G | 6325799.05 | 6325799.12 | 6325799.24 | 0.0089 | 0.0083 |
| Neptune | 12608-05-09 21:36 G | 6326166.28 | 6326166.40 | 6326166.57 | 0.0089 | 0.0074 |
| Neptune | 12609-05-12 16:04 G | 6326534.01 | 6326534.17 | 6326534.36 | 0.0089 | 0.0065 |
| Neptune | 12610-05-14 21:07 G | 6326901.20 | 6326901.38 | 6326901.60 | 0.0089 | 0.0055 |
| Neptune | 12611-05-17 15:21 G | 6327268.94 | 6327269.14 | 6327269.38 | 0.0089 | 0.0046 |
| Jupiter | 12611-10-18 12:28 G | 6327422.80 | 6327423.02 | 6327423.25 | 0.0486 | 0.0037 |
| Neptune | 12612-05-18 21:50 G | 6327636.18 | 6327636.41 | 6327636.64 | 0.0089 | 0.0034 |
| Neptune | 12613-05-21 12:43 G | 6328003.79 | 6328004.03 | 6328004.29 | 0.0089 | 0.0025 |
| Neptune | 12614-05-23 23:16 G | 6328371.23 | 6328371.47 | 6328371.72 | 0.0089 | 0.0014 |
| Neptune | 12615-05-26 09:50 G | 6328738.66 | 6328738.91 | 6328739.18 | 0.0089 | 0.0007 |
| Neptune | 12616-05-28 01:11 G | 6329106.30 | 6329106.55 | 6329106.80 | 0.0089 | 0.0005 |
| Jupiter | 12617-04-10 22:04 G | 6329424.23 | 6329424.42 | 6329424.62 | 0.0544 | 0.0306 |
| Neptune | 12617-05-30 07:11 G | 6329473.55 | 6329473.80 | 6329474.06 | 0.0089 | 0.0014 |
| Neptune | 12618-06-02 01:11 G | 6329841.31 | 6329841.55 | 6329841.80 | 0.0089 | 0.0026 |
| Neptune | 12619-06-04 05:45 G | 6330208.51 | 6330208.74 | 6330208.98 | 0.0089 | 0.0034 |
| Saturn | 12619-10-13 07:55 G | 6330339.63 | 6330339.83 | 6330340.04 | 0.0282 | 0.0158 |
| Neptune | 12620-06-05 23:16 G | 6330576.27 | 6330576.47 | 6330576.71 | 0.0089 | 0.0046 |
| Neptune | 12621-06-08 05:02 G | 6330943.53 | 6330943.71 | 6330943.94 | 0.0089 | 0.0052 |
| Neptune | 12622-06-10 19:26 G | 6331311.15 | 6331311.31 | 6331311.51 | 0.0089 | 0.0064 |
| Neptune | 12623-06-13 06:00 G | 6331678.61 | 6331678.75 | 6331678.90 | 0.0089 | 0.0071 |
| Jupiter | 12623-10-22 14:38 G | 6331809.88 | 6331810.11 | 6331810.33 | 0.0487 | 0.0167 |
| Neptune | 12624-06-14 15:21 G | 6332046.07 | 6332046.14 | 6332046.25 | 0.0089 | 0.0083 |
| Jupiter | 12629-04-15 23:16 G | 6333812.24 | 6333812.47 | 6333812.70 | 0.0543 | 0.0100 |
| Saturn | 12634-04-09 18:14 G | 6335632.05 | 6335632.26 | 6335632.49 | 0.0277 | 0.0099 |
| Jupiter | 12635-10-26 22:33 G | 6336197.27 | 6336197.44 | 6336197.60 | 0.0488 | 0.0331 |
| Uranus | 12637-08-07 17:02 G | 6336848.05 | 6336848.21 | 6336848.39 | 0.0145 | 0.0103 |
| Uranus | 12638-08-12 18:57 G | 6337218.06 | 6337218.29 | 6337218.54 | 0.0145 | 0.0057 |

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| Uranus | 12639-08-17 14:23 G | 6337587.86 | 6337588.10 | 6337588.35 | 0.0145 | 0.0009 |
| Uranus | 12640-08-21 18:28 G | 6337958.04 | 6337958.27 | 6337958.53 | 0.0145 | 0.0048 |
| Jupiter | 12641-04-21 12:57 G | 6338200.82 | 6338201.04 | 6338201.26 | 0.0542 | 0.0121 |
| Uranus | 12641-08-26 12:28 G | 6338327.87 | 6338328.02 | 6338328.19 | 0.0145 | 0.0111 |
| Jupiter | 12646-09-30 20:23 G | 6340189.31 | 6340189.35 | 6340189.41 | 0.0484 | 0.0470 |
| Jupiter | 12647-10-31 07:26 G | 6340584.73 | 6340584.81 | 6340584.91 | 0.0488 | 0.0455 |
| Saturn | 12648-10-06 17:45 G | 6340926.01 | 6340926.24 | 6340926.48 | 0.0282 | 0.0071 |
| Jupiter | 12653-04-26 12:14 G | 6342588.80 | 6342589.01 | 6342589.22 | 0.0542 | 0.0258 |
| Jupiter | 12658-10-05 08:38 G | 6344576.69 | 6344576.86 | 6344577.05 | 0.0484 | 0.0311 |
| Mars | 12663-07-29 04:19 G | 6346334.49 | 6346334.68 | 6346334.87 | 0.1631 | 0.0067 |
| Saturn | 12664-04-16 04:33 G | 6346596.51 | 6346596.69 | 6346596.86 | 0.0276 | 0.0189 |
| Jupiter | 12665-05-01 19:40 G | 6346977.18 | 6346977.32 | 6346977.48 | 0.0541 | 0.0404 |
| Jupiter | 12670-10-09 05:16 G | 6348963.50 | 6348963.72 | 6348963.94 | 0.0484 | 0.0171 |
| Pluto | 12671-12-03 12:14 G | 6349383.74 | 6349384.01 | 6349384.28 | 0.0080 | 0.0009 |
| Saturn | 12678-10-14 06:43 G | 6351890.62 | 6351890.78 | 6351890.95 | 0.0282 | 0.0212 |
| Uranus | 12679-02-08 03:36 G | 6352007.49 | 6352007.65 | 6352007.85 | 0.0133 | 0.0098 |
| Uranus | 12680-02-12 17:02 G | 6352376.98 | 6352377.21 | 6352377.44 | 0.0133 | 0.0047 |
| Uranus | 12681-02-15 21:21 G | 6352746.14 | 6352746.39 | 6352746.66 | 0.0133 | 0.0019 |
| Uranus | 12682-02-20 09:21 G | 6353115.66 | 6353115.89 | 6353116.14 | 0.0133 | 0.0036 |
| Jupiter | 12682-10-13 17:02 G | 6353350.98 | 6353351.21 | 6353351.43 | 0.0485 | 0.0073 |
| Uranus | 12683-02-24 14:52 G | 6353484.90 | 6353485.12 | 6353485.36 | 0.0133 | 0.0066 |
| Uranus | 12684-02-29 02:23 G | 6353854.47 | 6353854.60 | 6353854.73 | 0.0133 | 0.0113 |
| Jupiter | 12688-04-04 14:52 G | 6355351.02 | 6355351.12 | 6355351.24 | 0.0544 | 0.0479 |
| Neptune | 12689-11-04 04:04 G | 6355929.56 | 6355929.67 | 6355929.79 | 0.0088 | 0.0078 |
| Neptune | 12690-11-06 21:07 G | 6356297.30 | 6356297.38 | 6356297.53 | 0.0088 | 0.0079 |
| Neptune | 12691-11-09 04:04 G | 6356664.51 | 6356664.67 | 6356664.87 | 0.0088 | 0.0061 |
| Neptune | 12692-11-10 18:28 G | 6357032.10 | 6357032.27 | 6357032.49 | 0.0088 | 0.0060 |
| Saturn | 12693-04-10 21:36 G | 6357183.15 | 6357183.40 | 6357183.64 | 0.0277 | 0.0044 |
| Neptune | 12693-11-13 05:31 G | 6357399.52 | 6357399.73 | 6357399.96 | 0.0088 | 0.0042 |
| Jupiter | 12694-10-17 18:00 G | 6357738.01 | 6357738.25 | 6357738.49 | 0.0486 | 0.0019 |

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| Neptune | 12694-11-15 14:52 G | 6357766.89 | 6357767.12 | 6357767.36 | 0.0088 | 0.0041 |
| Neptune | 12695-11-18 06:28 G | 6358134.54 | 6358134.77 | 6358135.03 | 0.0088 | 0.0024 |
| Neptune | 12696-11-19 12:28 G | 6358501.78 | 6358502.02 | 6358502.29 | 0.0088 | 0.0023 |
| Neptune | 12697-11-22 07:26 G | 6358869.55 | 6358869.81 | 6358870.07 | 0.0088 | 0.0005 |
| Neptune | 12698-11-24 12:14 G | 6359236.75 | 6359237.01 | 6359237.27 | 0.0088 | 0.0004 |
| Neptune | 12699-11-27 06:14 G | 6359604.51 | 6359604.76 | 6359605.04 | 0.0088 | 0.0015 |
| Jupiter | 12700-04-10 16:19 G | 6359739.00 | 6359739.18 | 6359739.36 | 0.0544 | 0.0337 |
| Neptune | 12700-11-29 13:40 G | 6359971.82 | 6359972.07 | 6359972.32 | 0.0088 | 0.0015 |
| Neptune | 12701-12-02 04:04 G | 6360339.44 | 6360339.67 | 6360339.94 | 0.0088 | 0.0033 |
| Neptune | 12702-12-04 15:36 G | 6360706.93 | 6360707.15 | 6360707.39 | 0.0088 | 0.0034 |
| Neptune | 12703-12-07 00:57 G | 6361074.35 | 6361074.54 | 6361074.78 | 0.0088 | 0.0052 |
| Neptune | 12704-12-08 17:16 G | 6361442.03 | 6361442.22 | 6361442.43 | 0.0088 | 0.0053 |
| Neptune | 12705-12-10 23:16 G | 6361809.34 | 6361809.47 | 6361809.65 | 0.0088 | 0.0072 |
| Jupiter | 12706-10-23 00:57 G | 6362125.33 | 6362125.54 | 6362125.76 | 0.0486 | 0.0157 |
| Neptune | 12706-12-13 19:11 G | 6362177.15 | 6362177.30 | 6362177.45 | 0.0088 | 0.0072 |
| Saturn | 12707-10-09 23:02 G | 6362477.23 | 6362477.46 | 6362477.70 | 0.0282 | 0.0020 |
| Jupiter | 12712-04-16 03:36 G | 6364127.43 | 6364127.65 | 6364127.88 | 0.0544 | 0.0133 |
| Jupiter | 12718-10-27 10:48 G | 6366512.77 | 6366512.95 | 6366513.13 | 0.0487 | 0.0318 |
| Uranus | 12721-08-09 02:52 G | 6367529.46 | 6367529.62 | 6367529.80 | 0.0145 | 0.0102 |
| Saturn | 12722-04-06 13:55 G | 6367769.99 | 6367770.08 | 6367770.17 | 0.0276 | 0.0255 |
| Uranus | 12722-08-14 03:21 G | 6367899.40 | 6367899.64 | 6367899.89 | 0.0145 | 0.0044 |
| Saturn | 12723-04-19 12:14 G | 6368147.92 | 6368148.01 | 6368148.13 | 0.0276 | 0.0246 |
| Uranus | 12723-08-19 00:28 G | 6368269.27 | 6368269.52 | 6368269.76 | 0.0145 | 0.0003 |
| Jupiter | 12724-04-21 07:40 G | 6368515.58 | 6368515.82 | 6368516.06 | 0.0543 | 0.0086 |
| Uranus | 12724-08-23 03:21 G | 6368639.43 | 6368639.64 | 6368639.89 | 0.0145 | 0.0065 |
| Uranus | 12725-08-27 22:33 G | 6369009.29 | 6369009.44 | 6369009.62 | 0.0145 | 0.0106 |
| Jupiter | 12729-10-01 14:23 G | 6370505.06 | 6370505.10 | 6370505.14 | 0.0484 | 0.0474 |
| Jupiter | 12730-10-31 11:16 G | 6370899.87 | 6370899.97 | 6370900.07 | 0.0488 | 0.0439 |
| Jupiter | 12736-04-26 19:40 G | 6372904.12 | 6372904.32 | 6372904.52 | 0.0542 | 0.0230 |
| Saturn | 12736-10-02 23:02 G | 6373063.40 | 6373063.46 | 6373063.54 | 0.0283 | 0.0270 |

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| Saturn | 12737-10-16 06:28 G | 6373441.70 | 6373441.77 | 6373441.86 | 0.0282 | 0.0265 |
| Jupiter | 12741-10-05 11:31 G | 6374891.81 | 6374891.98 | 6374892.17 | 0.0484 | 0.0320 |
| Mars | 12742-08-01 12:28 G | 6375191.99 | 6375192.02 | 6375192.06 | 0.1628 | 0.1601 |
| Jupiter | 12748-05-02 06:57 G | 6377292.62 | 6377292.79 | 6377292.96 | 0.0540 | 0.0376 |
| Saturn | 12752-04-12 19:26 G | 6378734.06 | 6378734.31 | 6378734.57 | 0.0276 | 0.0011 |
| Jupiter | 12753-10-09 21:50 G | 6379279.20 | 6379279.41 | 6379279.62 | 0.0484 | 0.0187 |
| Uranus | 12763-02-09 12:43 G | 6382688.86 | 6382689.03 | 6382689.25 | 0.0133 | 0.0088 |
| Uranus | 12764-02-14 03:21 G | 6383058.41 | 6383058.64 | 6383058.87 | 0.0133 | 0.0056 |
| Uranus | 12765-02-17 06:57 G | 6383427.53 | 6383427.79 | 6383428.06 | 0.0133 | 0.0003 |
| Jupiter | 12765-10-13 23:45 G | 6383666.25 | 6383666.49 | 6383666.73 | 0.0485 | 0.0093 |
| Uranus | 12766-02-21 20:09 G | 6383797.09 | 6383797.34 | 6383797.58 | 0.0133 | 0.0026 |
| Saturn | 12766-10-11 00:43 G | 6384028.28 | 6384028.53 | 6384028.77 | 0.0282 | 0.0030 |
| Uranus | 12767-02-25 23:45 G | 6384166.29 | 6384166.49 | 6384166.72 | 0.0133 | 0.0079 |
| Uranus | 12768-03-01 12:00 G | 6384535.89 | 6384536.00 | 6384536.14 | 0.0133 | 0.0114 |
| Jupiter | 12771-04-05 04:19 G | 6385665.61 | 6385665.68 | 6385665.76 | 0.0545 | 0.0513 |
| Neptune | 12772-05-10 13:11 G | 6386066.91 | 6386067.05 | 6386067.21 | 0.0089 | 0.0072 |
| Neptune | 12773-05-12 18:28 G | 6386434.13 | 6386434.27 | 6386434.43 | 0.0089 | 0.0072 |
| Neptune | 12774-05-15 12:43 G | 6386801.83 | 6386802.03 | 6386802.25 | 0.0089 | 0.0053 |
| Neptune | 12775-05-17 19:55 G | 6387169.15 | 6387169.33 | 6387169.55 | 0.0089 | 0.0053 |
| Neptune | 12776-05-19 10:48 G | 6387536.71 | 6387536.95 | 6387537.20 | 0.0089 | 0.0034 |
| Neptune | 12777-05-21 22:04 G | 6387904.20 | 6387904.42 | 6387904.66 | 0.0089 | 0.0034 |
| Jupiter | 12777-10-18 06:28 G | 6388053.54 | 6388053.77 | 6388053.99 | 0.0485 | 0.0010 |
| Neptune | 12778-05-24 07:11 G | 6388271.55 | 6388271.80 | 6388272.07 | 0.0089 | 0.0015 |
| Neptune | 12779-05-26 23:16 G | 6388639.23 | 6388639.47 | 6388639.72 | 0.0089 | 0.0014 |
| Neptune | 12780-05-28 04:48 G | 6389006.44 | 6389006.70 | 6389006.96 | 0.0089 | 0.0005 |
| Saturn | 12781-04-07 20:23 G | 6389321.20 | 6389321.35 | 6389321.52 | 0.0276 | 0.0202 |
| Neptune | 12781-05-30 23:16 G | 6389374.22 | 6389374.47 | 6389374.73 | 0.0089 | 0.0005 |
| Neptune | 12782-06-02 03:36 G | 6389741.42 | 6389741.65 | 6389741.91 | 0.0089 | 0.0025 |
| Jupiter | 12783-04-10 22:19 G | 6390054.26 | 6390054.43 | 6390054.60 | 0.0545 | 0.0367 |
| Neptune | 12783-06-04 21:07 G | 6390109.14 | 6390109.38 | 6390109.65 | 0.0089 | 0.0025 |

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| Neptune | 12784-06-06 04:33 G | 6390476.48 | 6390476.69 | 6390476.91 | 0.0089 | 0.0043 |
| Neptune | 12785-06-08 18:28 G | 6390844.05 | 6390844.27 | 6390844.51 | 0.0089 | 0.0043 |
| Neptune | 12786-06-11 05:31 G | 6391211.58 | 6391211.73 | 6391211.93 | 0.0089 | 0.0062 |
| Neptune | 12787-06-13 14:09 G | 6391578.92 | 6391579.09 | 6391579.30 | 0.0089 | 0.0062 |
| Neptune | 12788-06-15 05:31 G | 6391946.65 | 6391946.73 | 6391946.86 | 0.0089 | 0.0081 |
| Neptune | 12789-06-17 10:19 G | 6392313.85 | 6392313.93 | 6392314.08 | 0.0089 | 0.0080 |
| Jupiter | 12789-10-22 13:55 G | 6392440.85 | 6392441.08 | 6392441.31 | 0.0486 | 0.0150 |
| Jupiter | 12795-04-16 04:19 G | 6394442.45 | 6394442.68 | 6394442.91 | 0.0544 | 0.0146 |
| Saturn | 12795-10-04 22:19 G | 6394614.28 | 6394614.43 | 6394614.58 | 0.0283 | 0.0221 |
| Jupiter | 12801-10-26 14:52 G | 6396827.95 | 6396828.12 | 6396828.30 | 0.0487 | 0.0306 |
| Uranus | 12805-08-09 13:55 G | 6398210.91 | 6398211.08 | 6398211.26 | 0.0145 | 0.0098 |
| Uranus | 12806-08-14 12:43 G | 6398580.80 | 6398581.03 | 6398581.29 | 0.0145 | 0.0050 |
| Jupiter | 12807-04-21 17:16 G | 6398831.00 | 6398831.22 | 6398831.44 | 0.0543 | 0.0064 |
| Uranus | 12807-08-19 10:48 G | 6398950.71 | 6398950.95 | 6398951.20 | 0.0145 | 0.0015 |
| Uranus | 12808-08-23 12:43 G | 6399320.79 | 6399321.03 | 6399321.27 | 0.0145 | 0.0055 |
| Uranus | 12809-08-28 08:23 G | 6399690.73 | 6399690.85 | 6399691.00 | 0.0145 | 0.0119 |
| Saturn | 12811-04-14 20:09 G | 6400285.10 | 6400285.34 | 6400285.58 | 0.0276 | 0.0064 |
| Jupiter | 12812-09-30 18:00 G | 6400820.25 | 6400820.25 | 6400820.26 | 0.0484 | 0.0483 |
| Jupiter | 12813-10-31 05:02 G | 6401215.59 | 6401215.71 | 6401215.83 | 0.0488 | 0.0418 |
| Jupiter | 12819-04-27 02:38 G | 6403219.39 | 6403219.61 | 6403219.84 | 0.0542 | 0.0198 |
| Jupiter | 12824-10-05 04:48 G | 6405207.54 | 6405207.70 | 6405207.87 | 0.0484 | 0.0329 |
| Saturn | 12825-10-11 20:09 G | 6405579.10 | 6405579.34 | 6405579.59 | 0.0282 | 0.0077 |
| Pluto | 12829-06-06 23:45 G | 6406913.26 | 6406913.49 | 6406913.75 | 0.0064 | 0.0024 |
| Jupiter | 12831-05-01 22:19 G | 6407607.26 | 6407607.43 | 6407607.61 | 0.0541 | 0.0344 |
| Jupiter | 12836-10-09 06:57 G | 6409594.58 | 6409594.79 | 6409595.02 | 0.0484 | 0.0200 |
| Saturn | 12840-04-09 02:23 G | 6410872.40 | 6410872.60 | 6410872.81 | 0.0276 | 0.0149 |
| Uranus | 12846-02-05 18:14 G | 6413001.21 | 6413001.26 | 6413001.32 | 0.0133 | 0.0130 |
| Uranus | 12847-02-09 20:38 G | 6413370.18 | 6413370.36 | 6413370.56 | 0.0133 | 0.0091 |
| Uranus | 12848-02-14 11:31 G | 6413739.75 | 6413739.98 | 6413740.23 | 0.0133 | 0.0042 |
| Jupiter | 12848-10-13 10:33 G | 6413981.72 | 6413981.94 | 6413982.16 | 0.0484 | 0.0117 |

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| Uranus | 12849-02-17 14:09 G | 6414108.83 | 6414109.09 | 6414109.36 | 0.0133 | 0.0013 |
| Uranus | 12850-02-22 04:19 G | 6414478.46 | 6414478.68 | 6414478.93 | 0.0133 | 0.0043 |
| Uranus | 12851-02-26 07:26 G | 6414847.61 | 6414847.81 | 6414848.05 | 0.0133 | 0.0072 |
| Uranus | 12852-03-01 21:21 G | 6415217.31 | 6415217.39 | 6415217.51 | 0.0133 | 0.0121 |
| Neptune | 12853-11-04 20:09 G | 6415830.30 | 6415830.34 | 6415830.44 | 0.0088 | 0.0085 |
| Jupiter | 12854-04-04 18:00 G | 6415981.21 | 6415981.25 | 6415981.30 | 0.0545 | 0.0533 |
| Saturn | 12854-10-06 02:23 G | 6416165.42 | 6416165.60 | 6416165.79 | 0.0283 | 0.0172 |
| Neptune | 12854-11-07 03:21 G | 6416197.54 | 6416197.64 | 6416197.78 | 0.0088 | 0.0077 |
| Neptune | 12855-11-09 16:48 G | 6416565.03 | 6416565.20 | 6416565.37 | 0.0088 | 0.0066 |
| Neptune | 12856-11-11 04:19 G | 6416932.51 | 6416932.68 | 6416932.89 | 0.0088 | 0.0059 |
| Neptune | 12857-11-13 12:57 G | 6417299.83 | 6417300.04 | 6417300.28 | 0.0088 | 0.0049 |
| Neptune | 12858-11-16 05:45 G | 6417667.53 | 6417667.74 | 6417667.98 | 0.0088 | 0.0041 |
| Neptune | 12859-11-18 11:16 G | 6418034.73 | 6418034.97 | 6418035.22 | 0.0088 | 0.0031 |
| Jupiter | 12860-10-17 19:40 G | 6418369.08 | 6418369.32 | 6418369.56 | 0.0485 | 0.0011 |
| Neptune | 12860-11-20 06:00 G | 6418402.51 | 6418402.75 | 6418403.01 | 0.0088 | 0.0022 |
| Neptune | 12861-11-22 10:48 G | 6418769.71 | 6418769.95 | 6418770.21 | 0.0088 | 0.0013 |
| Mars | 12862-01-28 08:38 G | 6418836.64 | 6418836.86 | 6418837.08 | 0.1898 | 0.0291 |
| Neptune | 12862-11-25 04:33 G | 6419137.43 | 6419137.69 | 6419137.96 | 0.0088 | 0.0004 |
| Neptune | 12863-11-27 12:28 G | 6419504.76 | 6419505.02 | 6419505.27 | 0.0088 | 0.0005 |
| Neptune | 12864-11-29 01:40 G | 6419872.31 | 6419872.57 | 6419872.84 | 0.0088 | 0.0015 |
| Neptune | 12865-12-01 14:09 G | 6420239.85 | 6420240.09 | 6420240.34 | 0.0088 | 0.0023 |
| Jupiter | 12866-04-09 22:48 G | 6420369.29 | 6420369.45 | 6420369.63 | 0.0545 | 0.0384 |
| Neptune | 12866-12-03 23:02 G | 6420607.23 | 6420607.46 | 6420607.72 | 0.0088 | 0.0034 |
| Neptune | 12867-12-06 16:19 G | 6420974.97 | 6420975.18 | 6420975.42 | 0.0088 | 0.0042 |
| Mars | 12868-07-28 19:55 G | 6421210.15 | 6421210.33 | 6421210.51 | 0.1638 | 0.0031 |
| Neptune | 12868-12-07 21:50 G | 6421342.22 | 6421342.41 | 6421342.64 | 0.0088 | 0.0053 |
| Neptune | 12869-12-10 17:02 G | 6421710.03 | 6421710.21 | 6421710.41 | 0.0088 | 0.0060 |
| Saturn | 12870-04-16 01:26 G | 6421836.35 | 6421836.56 | 6421836.78 | 0.0276 | 0.0119 |
| Neptune | 12870-12-12 22:04 G | 6422077.30 | 6422077.42 | 6422077.60 | 0.0088 | 0.0072 |
| Neptune | 12871-12-15 16:33 G | 6422445.07 | 6422445.19 | 6422445.33 | 0.0088 | 0.0077 |

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| Jupiter | 12872-10-21 18:57 G | 6422756.07 | 6422756.29 | 6422756.51 | 0.0486 | 0.0138 |
| Jupiter | 12878-04-15 12:14 G | 6424757.80 | 6424758.01 | 6424758.22 | 0.0544 | 0.0160 |
| Saturn | 12884-10-12 16:04 G | 6427129.95 | 6427130.17 | 6427130.39 | 0.0282 | 0.0124 |
| Jupiter | 12884-10-26 09:21 G | 6427143.71 | 6427143.89 | 6427144.09 | 0.0487 | 0.0293 |
| Uranus | 12889-08-09 23:16 G | 6428892.29 | 6428892.47 | 6428892.66 | 0.0145 | 0.0095 |
| Jupiter | 12890-04-20 15:21 G | 6429145.90 | 6429146.14 | 6429146.38 | 0.0543 | 0.0031 |
| Uranus | 12890-08-14 20:52 G | 6429262.12 | 6429262.37 | 6429262.62 | 0.0145 | 0.0039 |
| Uranus | 12891-08-19 20:38 G | 6429632.12 | 6429632.36 | 6429632.60 | 0.0145 | 0.0005 |
| Uranus | 12892-08-23 21:07 G | 6430002.17 | 6430002.38 | 6430002.62 | 0.0145 | 0.0072 |
| Uranus | 12893-08-28 18:43 G | 6430372.14 | 6430372.28 | 6430372.44 | 0.0145 | 0.0112 |
| Jupiter | 12896-10-30 09:07 G | 6431530.75 | 6431530.88 | 6431531.02 | 0.0487 | 0.0398 |
| Saturn | 12899-04-11 03:36 G | 6432423.42 | 6432423.65 | 6432423.89 | 0.0276 | 0.0094 |
| Jupiter | 12902-04-26 19:11 G | 6433534.08 | 6433534.30 | 6433534.52 | 0.0543 | 0.0166 |
| Jupiter | 12907-10-06 12:14 G | 6435522.85 | 6435523.01 | 6435523.19 | 0.0484 | 0.0337 |
| Jupiter | 12908-11-04 20:38 G | 6435918.33 | 6435918.36 | 6435918.41 | 0.0488 | 0.0481 |
| Saturn | 12913-10-08 07:11 G | 6437716.59 | 6437716.80 | 6437717.03 | 0.0283 | 0.0121 |
| Jupiter | 12914-05-02 12:14 G | 6437922.83 | 6437923.01 | 6437923.20 | 0.0542 | 0.0328 |
| Pluto | 12917-12-06 04:48 G | 6439236.44 | 6439236.70 | 6439236.96 | 0.0080 | 0.0003 |
| Jupiter | 12919-10-10 16:19 G | 6439909.99 | 6439910.18 | 6439910.39 | 0.0484 | 0.0221 |
| Saturn | 12929-04-18 09:21 G | 6443387.71 | 6443387.89 | 6443388.08 | 0.0276 | 0.0175 |
| Uranus | 12930-02-07 03:07 G | 6443682.56 | 6443682.63 | 6443682.70 | 0.0133 | 0.0128 |
| Uranus | 12931-02-11 05:16 G | 6444051.53 | 6444051.72 | 6444051.93 | 0.0133 | 0.0084 |
| Jupiter | 12931-10-15 00:43 G | 6444297.30 | 6444297.53 | 6444297.76 | 0.0484 | 0.0138 |
| Uranus | 12932-02-15 20:52 G | 6444421.15 | 6444421.37 | 6444421.62 | 0.0133 | 0.0051 |
| Uranus | 12933-02-18 23:31 G | 6444790.22 | 6444790.48 | 6444790.74 | 0.0133 | 0.0004 |
| Uranus | 12934-02-23 14:38 G | 6445159.86 | 6445160.11 | 6445160.35 | 0.0133 | 0.0031 |
| Uranus | 12935-02-27 16:48 G | 6445529.00 | 6445529.20 | 6445529.40 | 0.0133 | 0.0086 |
| Neptune | 12935-05-09 11:31 G | 6445599.96 | 6445599.98 | 6445600.01 | 0.0089 | 0.0089 |
| Uranus | 12936-03-03 06:57 G | 6445898.70 | 6445898.79 | 6445898.92 | 0.0133 | 0.0119 |
| Neptune | 12936-05-10 16:33 G | 6445967.09 | 6445967.19 | 6445967.34 | 0.0089 | 0.0078 |

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| Neptune | 12937-05-13 10:33 G | 6446334.79 | 6446334.94 | 6446335.12 | 0.0089 | 0.0070 |
| Neptune | 12938-05-15 18:43 G | 6446702.11 | 6446702.28 | 6446702.48 | 0.0089 | 0.0060 |
| Neptune | 12939-05-18 08:09 G | 6447069.63 | 6447069.84 | 6447070.06 | 0.0089 | 0.0052 |
| Neptune | 12940-05-19 20:52 G | 6447437.16 | 6447437.37 | 6447437.60 | 0.0089 | 0.0042 |
| Neptune | 12941-05-22 05:31 G | 6447804.50 | 6447804.73 | 6447804.99 | 0.0089 | 0.0033 |
| Neptune | 12942-05-24 22:48 G | 6448172.21 | 6448172.45 | 6448172.70 | 0.0089 | 0.0022 |
| Neptune | 12943-05-27 04:04 G | 6448539.42 | 6448539.67 | 6448539.93 | 0.0089 | 0.0013 |
| Saturn | 12943-10-15 18:14 G | 6448681.09 | 6448681.26 | 6448681.46 | 0.0282 | 0.0177 |
| Jupiter | 12943-10-19 00:28 G | 6448684.29 | 6448684.52 | 6448684.76 | 0.0485 | 0.0027 |
| Neptune | 12944-05-28 22:33 G | 6448907.19 | 6448907.44 | 6448907.70 | 0.0089 | 0.0005 |
| Neptune | 12945-05-31 03:36 G | 6449274.41 | 6449274.65 | 6449274.91 | 0.0089 | 0.0005 |
| Neptune | 12946-06-02 20:38 G | 6449642.10 | 6449642.36 | 6449642.62 | 0.0089 | 0.0014 |
| Neptune | 12947-06-05 04:04 G | 6450009.44 | 6450009.67 | 6450009.92 | 0.0089 | 0.0024 |
| Mars | 12947-08-01 17:02 G | 6450067.06 | 6450067.21 | 6450067.36 | 0.1635 | 0.0835 |
| Neptune | 12948-06-06 16:19 G | 6450376.95 | 6450377.18 | 6450377.44 | 0.0089 | 0.0033 |
| Jupiter | 12949-04-10 00:00 G | 6450684.36 | 6450684.50 | 6450684.65 | 0.0544 | 0.0414 |
| Neptune | 12949-06-09 04:48 G | 6450744.50 | 6450744.70 | 6450744.93 | 0.0089 | 0.0044 |
| Neptune | 12950-06-11 12:43 G | 6451111.83 | 6451112.03 | 6451112.26 | 0.0089 | 0.0052 |
| Neptune | 12951-06-14 05:31 G | 6451479.57 | 6451479.73 | 6451479.93 | 0.0089 | 0.0061 |
| Neptune | 12952-06-15 10:33 G | 6451846.79 | 6451846.94 | 6451847.11 | 0.0089 | 0.0068 |
| Neptune | 12953-06-18 04:33 G | 6452214.60 | 6452214.69 | 6452214.83 | 0.0089 | 0.0079 |
| Neptune | 12954-06-20 09:36 G | 6452581.85 | 6452581.90 | 6452581.96 | 0.0089 | 0.0086 |
| Jupiter | 12955-10-23 13:55 G | 6453071.86 | 6453072.08 | 6453072.31 | 0.0485 | 0.0131 |
| Saturn | 12958-04-13 03:36 G | 6453974.40 | 6453974.65 | 6453974.89 | 0.0276 | 0.0039 |
| Jupiter | 12961-04-15 07:26 G | 6455072.58 | 6455072.81 | 6455073.04 | 0.0544 | 0.0188 |
| Jupiter | 12967-10-27 10:33 G | 6457458.75 | 6457458.94 | 6457459.14 | 0.0486 | 0.0273 |
| Uranus | 12972-08-06 06:57 G | 6459203.74 | 6459203.79 | 6459203.87 | 0.0145 | 0.0140 |
| Saturn | 12972-10-09 08:09 G | 6459267.59 | 6459267.84 | 6459268.09 | 0.0283 | 0.0063 |
| Jupiter | 12973-04-20 16:04 G | 6459460.94 | 6459461.17 | 6459461.39 | 0.0544 | 0.0011 |
| Uranus | 12973-08-11 09:50 G | 6459573.73 | 6459573.91 | 6459574.09 | 0.0145 | 0.0095 |

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| Uranus | 12974-08-16 05:45 G | 6459943.50 | 6459943.74 | 6459944.00 | 0.0145 | 0.0043 |
| Uranus | 12975-08-21 06:43 G | 6460313.55 | 6460313.78 | 6460314.03 | 0.0145 | 0.0020 |
| Uranus | 12976-08-25 05:45 G | 6460683.52 | 6460683.74 | 6460683.99 | 0.0145 | 0.0060 |
| Uranus | 12977-08-30 04:33 G | 6461053.58 | 6461053.69 | 6461053.82 | 0.0145 | 0.0126 |
| Jupiter | 12979-10-31 23:02 G | 6461846.32 | 6461846.46 | 6461846.61 | 0.0487 | 0.0371 |
| Jupiter | 12985-04-26 08:52 G | 6463849.65 | 6463849.87 | 6463850.10 | 0.0543 | 0.0138 |
| Saturn | 12987-04-07 20:52 G | 6464561.33 | 6464561.37 | 6464561.42 | 0.0276 | 0.0270 |
| Saturn | 12988-04-19 14:09 G | 6464938.97 | 6464939.09 | 6464939.23 | 0.0276 | 0.0233 |
| Jupiter | 12990-10-05 21:07 G | 6465838.23 | 6465838.38 | 6465838.54 | 0.0484 | 0.0347 |
| Jupiter | 12991-11-05 02:23 G | 6466233.53 | 6466233.60 | 6466233.69 | 0.0488 | 0.0459 |
| Jupiter | 12997-05-01 08:52 G | 6468237.68 | 6468237.87 | 6468238.07 | 0.0542 | 0.0305 |

14TH MILLENNIUM CE

This is a list of transits of Moon in the 14th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|------------|------------|------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Jupiter | 13002-10-11 06:57 G | 6470225.58 | 6470225.79 | 6470226.00 | 0.0484 | 0.0238 | | |
| Saturn | 13002-10-18 01:40 G | 6470232.44 | 6470232.57 | 6470232.71 | 0.0282 | 0.0232 | | |
| Jupiter | 13009-05-07 14:23 G | 6472626.04 | 6472626.10 | 6472626.17 | 0.0540 | 0.0516 | | |
| Uranus | 13014-02-08 11:02 G | 6474363.90 | 6474363.96 | 6474364.04 | 0.0133 | 0.0128 | | |
| Jupiter | 13014-10-15 05:02 G | 6474612.50 | 6474612.71 | 6474612.94 | 0.0484 | 0.0155 | | |
| Uranus | 13015-02-12 12:43 G | 6474732.85 | 6474733.03 | 6474733.24 | 0.0133 | 0.0087 | | |
| Uranus | 13016-02-17 04:48 G | 6475102.47 | 6475102.70 | 6475102.96 | 0.0133 | 0.0038 | | |
| Uranus | 13017-02-20 06:43 G | 6475471.53 | 6475471.78 | 6475472.04 | 0.0133 | 0.0008 | | |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Saturn | 13017-04-15 10:04 G | 6475525.68 | 6475525.92 | 6475526.16 | 0.0276 | 0.0023 |
| Uranus | 13018-02-24 22:33 G | 6475841.21 | 6475841.44 | 6475841.68 | 0.0133 | 0.0048 |
| Neptune | 13018-11-08 15:50 G | 6476098.04 | 6476098.16 | 6476098.33 | 0.0088 | 0.0074 |
| Uranus | 13019-03-01 00:14 G | 6476210.32 | 6476210.51 | 6476210.74 | 0.0133 | 0.0077 |
| Neptune | 13019-11-11 05:02 G | 6476465.59 | 6476465.71 | 6476465.86 | 0.0088 | 0.0074 |
| Uranus | 13020-03-04 15:36 G | 6476580.10 | 6476580.15 | 6476580.24 | 0.0133 | 0.0128 |
| Neptune | 13020-11-12 12:14 G | 6476832.82 | 6476833.01 | 6476833.23 | 0.0088 | 0.0057 |
| Neptune | 13021-11-15 05:16 G | 6477200.54 | 6477200.72 | 6477200.92 | 0.0088 | 0.0057 |
| Neptune | 13022-11-17 09:50 G | 6477567.69 | 6477567.91 | 6477568.16 | 0.0088 | 0.0039 |
| Neptune | 13023-11-20 04:19 G | 6477935.46 | 6477935.68 | 6477935.93 | 0.0088 | 0.0039 |
| Neptune | 13024-11-21 09:21 G | 6478302.65 | 6478302.89 | 6478303.15 | 0.0088 | 0.0021 |
| Neptune | 13025-11-24 01:55 G | 6478670.33 | 6478670.58 | 6478670.85 | 0.0088 | 0.0021 |
| Jupiter | 13026-10-19 15:50 G | 6478999.93 | 6479000.16 | 6479000.40 | 0.0485 | 0.0041 |
| Neptune | 13026-11-26 11:02 G | 6479037.72 | 6479037.96 | 6479038.22 | 0.0088 | 0.0004 |
| Neptune | 13027-11-28 23:45 G | 6479405.22 | 6479405.49 | 6479405.76 | 0.0088 | 0.0003 |
| Neptune | 13028-11-30 13:26 G | 6479772.82 | 6479773.06 | 6479773.32 | 0.0088 | 0.0015 |
| Neptune | 13029-12-02 21:21 G | 6480140.13 | 6480140.39 | 6480140.65 | 0.0088 | 0.0015 |
| Neptune | 13030-12-05 14:52 G | 6480507.89 | 6480508.12 | 6480508.36 | 0.0088 | 0.0034 |
| Saturn | 13031-10-12 08:52 G | 6480818.62 | 6480818.87 | 6480819.12 | 0.0283 | 0.0004 |
| Neptune | 13031-12-07 19:55 G | 6480875.10 | 6480875.33 | 6480875.58 | 0.0088 | 0.0033 |
| Jupiter | 13032-04-09 23:45 G | 6480999.35 | 6480999.49 | 6480999.64 | 0.0545 | 0.0436 |
| Neptune | 13032-12-09 14:38 G | 6481242.92 | 6481243.11 | 6481243.34 | 0.0088 | 0.0051 |
| Neptune | 13033-12-11 20:09 G | 6481610.16 | 6481610.34 | 6481610.57 | 0.0088 | 0.0052 |
| Neptune | 13034-12-14 13:40 G | 6481977.91 | 6481978.07 | 6481978.24 | 0.0088 | 0.0069 |
| Neptune | 13035-12-16 22:33 G | 6482345.30 | 6482345.44 | 6482345.61 | 0.0088 | 0.0070 |
| Neptune | 13036-12-18 11:16 G | 6482712.95 | 6482712.97 | 6482713.06 | 0.0088 | 0.0087 |
| Neptune | 13037-12-21 01:40 G | 6483080.54 | 6483080.57 | 6483080.64 | 0.0088 | 0.0087 |
| Jupiter | 13038-10-23 13:40 G | 6483386.84 | 6483387.07 | 6483387.30 | 0.0485 | 0.0115 |
| Jupiter | 13044-04-15 10:33 G | 6485387.73 | 6485387.94 | 6485388.15 | 0.0545 | 0.0210 |
| Saturn | 13046-04-10 02:09 G | 6486112.43 | 6486112.59 | 6486112.76 | 0.0276 | 0.0208 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Jupiter | 13050-10-28 00:43 G | 6487774.34 | 6487774.53 | 6487774.73 | 0.0486 | 0.0256 |
| Jupiter | 13056-04-21 00:57 G | 6489776.31 | 6489776.54 | 6489776.78 | 0.0544 | 0.0023 |
| Uranus | 13057-08-12 18:43 G | 6490255.09 | 6490255.28 | 6490255.48 | 0.0145 | 0.0089 |
| Uranus | 13058-08-17 13:55 G | 6490624.83 | 6490625.08 | 6490625.33 | 0.0145 | 0.0036 |
| Uranus | 13059-08-22 16:33 G | 6490994.95 | 6490995.19 | 6490995.43 | 0.0145 | 0.0011 |
| Uranus | 13060-08-26 14:23 G | 6491364.89 | 6491365.10 | 6491365.33 | 0.0145 | 0.0077 |
| Saturn | 13060-10-05 21:36 G | 6491405.29 | 6491405.40 | 6491405.51 | 0.0283 | 0.0249 |
| Uranus | 13061-08-31 14:23 G | 6491734.97 | 6491735.10 | 6491735.26 | 0.0145 | 0.0117 |
| Jupiter | 13062-11-01 05:16 G | 6492161.55 | 6492161.72 | 6492161.89 | 0.0487 | 0.0346 |
| Jupiter | 13068-04-25 20:09 G | 6494164.11 | 6494164.34 | 6494164.57 | 0.0543 | 0.0099 |
| Mars | 13073-07-29 10:48 G | 6496084.81 | 6496084.95 | 6496085.09 | 0.1645 | 0.1106 |
| Jupiter | 13073-10-06 11:31 G | 6496153.82 | 6496153.98 | 6496154.15 | 0.0484 | 0.0352 |
| Pluto | 13074-06-09 12:00 G | 6496400.00 | 6496400.00 | 6496400.03 | 0.0064 | 0.0064 |
| Jupiter | 13074-11-05 12:43 G | 6496548.94 | 6496549.03 | 6496549.12 | 0.0488 | 0.0444 |
| Pluto | 13075-06-10 20:38 G | 6496766.15 | 6496766.36 | 6496766.62 | 0.0064 | 0.0029 |
| Saturn | 13076-04-16 21:07 G | 6497077.16 | 6497077.38 | 6497077.61 | 0.0277 | 0.0087 |
| Jupiter | 13080-05-01 08:38 G | 6498552.66 | 6498552.86 | 6498553.05 | 0.0542 | 0.0271 |
| Jupiter | 13085-10-10 07:11 G | 6500540.61 | 6500540.80 | 6500541.00 | 0.0484 | 0.0257 |
| Saturn | 13090-10-13 17:02 G | 6502369.98 | 6502370.21 | 6502370.45 | 0.0283 | 0.0064 |
| Jupiter | 13092-05-06 14:23 G | 6502941.00 | 6502941.10 | 6502941.21 | 0.0541 | 0.0486 |
| Jupiter | 13097-10-14 19:11 G | 6504928.09 | 6504928.30 | 6504928.53 | 0.0484 | 0.0174 |
| Uranus | 13098-02-08 19:11 G | 6505045.21 | 6505045.30 | 6505045.41 | 0.0133 | 0.0123 |
| Uranus | 13099-02-12 21:07 G | 6505414.20 | 6505414.38 | 6505414.60 | 0.0133 | 0.0082 |
| Neptune | 13099-05-09 14:38 G | 6505500.06 | 6505500.11 | 6505500.21 | 0.0089 | 0.0086 |
| Uranus | 13100-02-17 13:55 G | 6505783.84 | 6505784.08 | 6505784.32 | 0.0133 | 0.0045 |
| Neptune | 13100-05-12 07:26 G | 6505867.74 | 6505867.81 | 6505867.91 | 0.0089 | 0.0085 |
| Uranus | 13101-02-21 15:36 G | 6506152.90 | 6506153.15 | 6506153.41 | 0.0133 | 0.0008 |
| Neptune | 13101-05-14 16:48 G | 6506235.07 | 6506235.20 | 6506235.39 | 0.0089 | 0.0069 |
| Uranus | 13102-02-26 07:40 G | 6506522.59 | 6506522.82 | 6506523.08 | 0.0133 | 0.0037 |
| Neptune | 13102-05-17 05:16 G | 6506602.58 | 6506602.72 | 6506602.92 | 0.0089 | 0.0068 |

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| Uranus | 13103-03-02 09:21 G | 6506891.71 | 6506891.89 | 6506892.08 | 0.0133 | 0.0092 |
| Neptune | 13103-05-19 19:40 G | 6506970.14 | 6506970.32 | 6506970.55 | 0.0089 | 0.0051 |
| Uranus | 13104-03-06 00:43 G | 6507261.45 | 6507261.53 | 6507261.64 | 0.0133 | 0.0123 |
| Neptune | 13104-05-21 03:21 G | 6507337.45 | 6507337.64 | 6507337.88 | 0.0089 | 0.0050 |
| Saturn | 13105-04-12 06:00 G | 6507663.54 | 6507663.75 | 6507663.97 | 0.0276 | 0.0143 |
| Neptune | 13105-05-23 21:21 G | 6507705.17 | 6507705.39 | 6507705.65 | 0.0089 | 0.0032 |
| Neptune | 13106-05-26 02:52 G | 6508072.38 | 6508072.62 | 6508072.86 | 0.0089 | 0.0031 |
| Neptune | 13107-05-28 21:36 G | 6508440.14 | 6508440.40 | 6508440.65 | 0.0089 | 0.0013 |
| Neptune | 13108-05-30 02:52 G | 6508807.38 | 6508807.62 | 6508807.87 | 0.0089 | 0.0013 |
| Neptune | 13109-06-01 19:11 G | 6509175.04 | 6509175.30 | 6509175.56 | 0.0089 | 0.0006 |
| Jupiter | 13109-10-19 15:50 G | 6509314.92 | 6509315.16 | 6509315.40 | 0.0485 | 0.0054 |
| Neptune | 13110-06-04 04:04 G | 6509542.43 | 6509542.67 | 6509542.92 | 0.0089 | 0.0006 |
| Neptune | 13111-06-06 15:36 G | 6509909.91 | 6509910.15 | 6509910.42 | 0.0089 | 0.0025 |
| Neptune | 13112-06-08 05:45 G | 6510277.51 | 6510277.74 | 6510277.98 | 0.0089 | 0.0024 |
| Neptune | 13113-06-10 12:28 G | 6510644.81 | 6510645.02 | 6510645.27 | 0.0089 | 0.0042 |
| Neptune | 13114-06-13 05:31 G | 6511012.53 | 6511012.73 | 6511012.98 | 0.0089 | 0.0043 |
| Jupiter | 13115-04-11 01:55 G | 6511314.46 | 6511314.58 | 6511314.70 | 0.0545 | 0.0461 |
| Neptune | 13115-06-15 10:04 G | 6511379.75 | 6511379.92 | 6511380.13 | 0.0089 | 0.0060 |
| Neptune | 13116-06-17 04:04 G | 6511747.51 | 6511747.67 | 6511747.89 | 0.0089 | 0.0061 |
| Neptune | 13117-06-19 09:21 G | 6512114.79 | 6512114.89 | 6512115.03 | 0.0089 | 0.0078 |
| Neptune | 13118-06-22 00:57 G | 6512482.43 | 6512482.54 | 6512482.69 | 0.0089 | 0.0077 |
| Saturn | 13119-10-09 04:33 G | 6512956.51 | 6512956.69 | 6512956.88 | 0.0283 | 0.0185 |
| Jupiter | 13121-10-24 03:36 G | 6513702.43 | 6513702.65 | 6513702.87 | 0.0485 | 0.0109 |
| Jupiter | 13127-04-16 09:36 G | 6515702.69 | 6515702.90 | 6515703.12 | 0.0544 | 0.0243 |
| Jupiter | 13133-10-28 06:14 G | 6518089.55 | 6518089.76 | 6518089.97 | 0.0486 | 0.0237 |
| Saturn | 13135-04-20 06:28 G | 6518628.57 | 6518628.77 | 6518628.98 | 0.0277 | 0.0151 |
| Jupiter | 13139-04-21 10:19 G | 6520090.70 | 6520090.93 | 6520091.16 | 0.0544 | 0.0063 |
| Uranus | 13140-08-09 00:00 G | 6520566.43 | 6520566.50 | 6520566.61 | 0.0145 | 0.0135 |
| Uranus | 13141-08-14 04:48 G | 6520936.52 | 6520936.70 | 6520936.90 | 0.0145 | 0.0092 |
| Uranus | 13142-08-18 23:02 G | 6521306.22 | 6521306.46 | 6521306.72 | 0.0145 | 0.0036 |

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| Uranus | 13143-08-24 02:38 G | 6521676.37 | 6521676.61 | 6521676.85 | 0.0145 | 0.0025 |
| Uranus | 13144-08-27 22:48 G | 6522046.23 | 6522046.45 | 6522046.69 | 0.0145 | 0.0066 |
| Uranus | 13145-09-02 00:00 G | 6522416.42 | 6522416.50 | 6522416.61 | 0.0145 | 0.0133 |
| Jupiter | 13145-11-01 10:04 G | 6522476.76 | 6522476.92 | 6522477.10 | 0.0487 | 0.0322 |
| Mars | 13146-01-30 11:45 G | 6522566.82 | 6522566.99 | 6522567.17 | 0.1890 | 0.0638 |
| Saturn | 13149-10-16 06:43 G | 6523921.58 | 6523921.78 | 6523922.00 | 0.0282 | 0.0135 |
| Jupiter | 13151-04-27 02:09 G | 6524479.37 | 6524479.59 | 6524479.82 | 0.0544 | 0.0062 |
| Mars | 13152-08-01 19:40 G | 6524942.13 | 6524942.32 | 6524942.51 | 0.1642 | 0.0531 |
| Jupiter | 13156-10-06 10:33 G | 6526468.80 | 6526468.94 | 6526469.09 | 0.0484 | 0.0369 |
| Jupiter | 13157-11-05 18:43 G | 6526864.16 | 6526864.28 | 6526864.41 | 0.0488 | 0.0418 |
| Jupiter | 13163-05-02 08:09 G | 6528867.63 | 6528867.84 | 6528868.06 | 0.0543 | 0.0242 |
| Pluto | 13163-12-10 12:14 G | 6529089.76 | 6529090.01 | 6529090.26 | 0.0080 | 0.0007 |
| Saturn | 13164-04-13 13:55 G | 6529214.85 | 6529215.08 | 6529215.31 | 0.0276 | 0.0078 |
| Jupiter | 13168-10-10 21:21 G | 6530856.20 | 6530856.39 | 6530856.58 | 0.0484 | 0.0276 |
| Jupiter | 13175-05-07 16:04 G | 6533256.06 | 6533256.17 | 6533256.29 | 0.0541 | 0.0461 |
| Saturn | 13178-10-10 10:33 G | 6534507.71 | 6534507.94 | 6534508.18 | 0.0283 | 0.0116 |
| Jupiter | 13180-10-14 18:57 G | 6535243.07 | 6535243.29 | 6535243.51 | 0.0484 | 0.0190 |
| Uranus | 13182-02-10 03:07 G | 6535726.55 | 6535726.63 | 6535726.73 | 0.0133 | 0.0125 |
| Neptune | 13182-11-09 04:48 G | 6535998.61 | 6535998.70 | 6535998.83 | 0.0088 | 0.0079 |
| Uranus | 13183-02-14 05:31 G | 6536095.53 | 6536095.73 | 6536095.94 | 0.0133 | 0.0081 |
| Neptune | 13183-11-11 11:16 G | 6536365.86 | 6536365.97 | 6536366.14 | 0.0088 | 0.0074 |
| Uranus | 13184-02-18 21:36 G | 6536465.16 | 6536465.40 | 6536465.66 | 0.0133 | 0.0034 |
| Neptune | 13184-11-13 05:02 G | 6536733.55 | 6536733.71 | 6536733.92 | 0.0088 | 0.0062 |
| Uranus | 13185-02-21 23:45 G | 6536834.23 | 6536834.49 | 6536834.74 | 0.0133 | 0.0003 |
| Neptune | 13185-11-15 09:36 G | 6537100.72 | 6537100.90 | 6537101.12 | 0.0088 | 0.0056 |
| Uranus | 13186-02-26 15:21 G | 6537203.92 | 6537204.14 | 6537204.39 | 0.0133 | 0.0053 |
| Neptune | 13186-11-18 04:04 G | 6537468.46 | 6537468.67 | 6537468.92 | 0.0088 | 0.0045 |
| Uranus | 13187-03-02 16:48 G | 6537573.02 | 6537573.20 | 6537573.42 | 0.0133 | 0.0082 |
| Neptune | 13187-11-20 09:36 G | 6537835.70 | 6537835.90 | 6537836.15 | 0.0088 | 0.0039 |
| Neptune | 13188-11-22 01:40 G | 6538203.33 | 6538203.57 | 6538203.83 | 0.0088 | 0.0029 |

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| Neptune | 13189-11-24 11:16 G | 6538570.73 | 6538570.97 | 6538571.22 | 0.0088 | 0.0021 |
| Neptune | 13190-11-26 22:04 G | 6538938.16 | 6538938.42 | 6538938.69 | 0.0088 | 0.0010 |
| Neptune | 13191-11-29 12:28 G | 6539305.77 | 6539306.02 | 6539306.28 | 0.0088 | 0.0003 |
| Jupiter | 13192-10-19 04:48 G | 6539630.48 | 6539630.70 | 6539630.93 | 0.0485 | 0.0063 |
| Neptune | 13192-11-30 19:11 G | 6539673.04 | 6539673.30 | 6539673.57 | 0.0088 | 0.0008 |
| Neptune | 13193-12-03 13:40 G | 6540040.82 | 6540041.07 | 6540041.33 | 0.0088 | 0.0015 |
| Saturn | 13194-04-21 12:00 G | 6540179.85 | 6540180.00 | 6540180.17 | 0.0277 | 0.0217 |
| Neptune | 13194-12-05 18:43 G | 6540408.04 | 6540408.28 | 6540408.54 | 0.0088 | 0.0024 |
| Neptune | 13195-12-08 13:40 G | 6540775.83 | 6540776.07 | 6540776.32 | 0.0088 | 0.0033 |
| Neptune | 13196-12-09 19:26 G | 6541143.11 | 6541143.31 | 6541143.56 | 0.0088 | 0.0043 |
| Neptune | 13197-12-12 12:00 G | 6541510.80 | 6541511.00 | 6541511.24 | 0.0088 | 0.0052 |
| Jupiter | 13198-04-09 20:38 G | 6541629.27 | 6541629.36 | 6541629.46 | 0.0544 | 0.0496 |
| Neptune | 13198-12-14 22:04 G | 6541878.25 | 6541878.42 | 6541878.62 | 0.0088 | 0.0060 |
| Neptune | 13199-12-17 09:50 G | 6542245.74 | 6542245.91 | 6542246.08 | 0.0088 | 0.0068 |
| Neptune | 13200-12-19 00:00 G | 6542613.39 | 6542613.50 | 6542613.65 | 0.0088 | 0.0076 |
| Neptune | 13201-12-21 07:26 G | 6542980.75 | 6542980.81 | 6542980.90 | 0.0088 | 0.0085 |
| Jupiter | 13204-10-23 05:02 G | 6544017.47 | 6544017.71 | 6544017.95 | 0.0485 | 0.0089 |
| Saturn | 13208-10-17 20:23 G | 6545473.20 | 6545473.35 | 6545473.53 | 0.0282 | 0.0203 |
| Jupiter | 13210-04-15 00:14 G | 6546017.31 | 6546017.51 | 6546017.71 | 0.0545 | 0.0280 |
| Jupiter | 13216-10-27 10:19 G | 6548404.73 | 6548404.93 | 6548405.14 | 0.0485 | 0.0212 |
| Jupiter | 13222-04-20 18:43 G | 6550406.05 | 6550406.28 | 6550406.51 | 0.0544 | 0.0099 |
| Saturn | 13223-04-16 03:21 G | 6550766.40 | 6550766.64 | 6550766.88 | 0.0276 | 0.0010 |
| Uranus | 13225-08-14 14:09 G | 6551617.89 | 6551618.09 | 6551618.30 | 0.0145 | 0.0082 |
| Uranus | 13226-08-19 07:11 G | 6551987.56 | 6551987.80 | 6551988.06 | 0.0145 | 0.0032 |
| Uranus | 13227-08-24 12:14 G | 6552357.76 | 6552358.01 | 6552358.25 | 0.0145 | 0.0018 |
| Uranus | 13228-08-28 07:26 G | 6552727.61 | 6552727.81 | 6552728.03 | 0.0145 | 0.0083 |
| Jupiter | 13228-10-31 17:45 G | 6552792.05 | 6552792.24 | 6552792.44 | 0.0486 | 0.0295 |
| Uranus | 13229-09-02 09:50 G | 6553097.80 | 6553097.91 | 6553098.06 | 0.0145 | 0.0123 |
| Mars | 13231-08-05 04:04 G | 6553799.61 | 6553799.67 | 6553799.73 | 0.1638 | 0.1536 |
| Jupiter | 13234-04-25 22:33 G | 6554794.20 | 6554794.44 | 6554794.68 | 0.0543 | 0.0030 |

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| Saturn | 13237-10-11 19:40 G | 6556059.08 | 6556059.32 | 6556059.56 | 0.0283 | 0.0046 |
| Jupiter | 13239-10-07 00:14 G | 6556784.38 | 6556784.51 | 6556784.66 | 0.0484 | 0.0385 |
| Jupiter | 13240-11-04 20:09 G | 6557179.22 | 6557179.34 | 6557179.48 | 0.0488 | 0.0403 |
| Jupiter | 13246-05-01 04:19 G | 6559182.48 | 6559182.68 | 6559182.89 | 0.0542 | 0.0207 |
| Jupiter | 13251-10-10 20:24 G | 6561171.16 | 6561171.35 | 6561171.54 | 0.0484 | 0.0297 |
| Saturn | 13252-04-10 00:57 G | 6561353.41 | 6561353.54 | 6561353.70 | 0.0277 | 0.0225 |
| Jupiter | 13258-05-06 11:02 G | 6563570.81 | 6563570.96 | 6563571.11 | 0.0541 | 0.0420 |
| Neptune | 13263-05-10 06:14 G | 6565400.75 | 6565400.76 | 6565400.81 | 0.0089 | 0.0089 |
| Jupiter | 13263-10-15 04:48 G | 6565558.50 | 6565558.70 | 6565558.90 | 0.0484 | 0.0216 |
| Neptune | 13264-05-11 16:33 G | 6565768.15 | 6565768.19 | 6565768.29 | 0.0089 | 0.0086 |
| Neptune | 13265-05-14 03:50 G | 6566135.52 | 6566135.66 | 6566135.83 | 0.0089 | 0.0072 |
| Uranus | 13266-02-10 10:48 G | 6566407.84 | 6566407.95 | 6566408.09 | 0.0133 | 0.0117 |
| Neptune | 13266-05-16 18:28 G | 6566503.13 | 6566503.27 | 6566503.46 | 0.0089 | 0.0068 |
| Saturn | 13266-10-07 00:57 G | 6566646.46 | 6566646.54 | 6566646.63 | 0.0283 | 0.0263 |
| Uranus | 13267-02-14 14:09 G | 6566776.89 | 6566777.09 | 6566777.30 | 0.0133 | 0.0078 |
| Neptune | 13267-05-19 01:55 G | 6566870.37 | 6566870.58 | 6566870.79 | 0.0089 | 0.0054 |
| Saturn | 13267-10-20 06:57 G | 6567024.76 | 6567024.79 | 6567024.86 | 0.0282 | 0.0277 |
| Uranus | 13268-02-19 05:45 G | 6567146.50 | 6567146.74 | 6567147.00 | 0.0133 | 0.0039 |
| Neptune | 13268-05-20 20:09 G | 6567238.15 | 6567238.34 | 6567238.57 | 0.0089 | 0.0050 |
| Uranus | 13269-02-22 08:38 G | 6567515.61 | 6567515.86 | 6567516.11 | 0.0133 | 0.0012 |
| Neptune | 13269-05-23 01:12 G | 6567605.33 | 6567605.55 | 6567605.79 | 0.0089 | 0.0038 |
| Uranus | 13270-02-27 00:14 G | 6567885.27 | 6567885.51 | 6567885.76 | 0.0133 | 0.0042 |
| Neptune | 13270-05-25 20:09 G | 6567973.10 | 6567973.34 | 6567973.59 | 0.0089 | 0.0032 |
| Uranus | 13271-03-03 01:40 G | 6568254.42 | 6568254.57 | 6568254.76 | 0.0133 | 0.0098 |
| Neptune | 13271-05-28 02:38 G | 6568340.37 | 6568340.61 | 6568340.86 | 0.0089 | 0.0020 |
| Uranus | 13272-03-06 17:02 G | 6568624.17 | 6568624.21 | 6568624.30 | 0.0133 | 0.0129 |
| Neptune | 13272-05-29 18:28 G | 6568708.01 | 6568708.27 | 6568708.54 | 0.0089 | 0.0013 |
| Neptune | 13273-06-01 04:48 G | 6569075.45 | 6569075.70 | 6569075.95 | 0.0089 | 0.0002 |
| Neptune | 13274-06-03 14:52 G | 6569442.86 | 6569443.12 | 6569443.39 | 0.0089 | 0.0006 |
| Neptune | 13275-06-06 05:31 G | 6569810.49 | 6569810.73 | 6569810.98 | 0.0089 | 0.0016 |

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| Jupiter | 13275-10-19 06:28 G | 6569945.53 | 6569945.77 | 6569946.01 | 0.0484 | 0.0081 |
| Neptune | 13276-06-07 11:45 G | 6570177.74 | 6570177.99 | 6570178.25 | 0.0089 | 0.0022 |
| Neptune | 13277-06-10 05:31 G | 6570545.51 | 6570545.73 | 6570545.98 | 0.0089 | 0.0033 |
| Neptune | 13278-06-12 09:50 G | 6570912.70 | 6570912.91 | 6570913.15 | 0.0089 | 0.0041 |
| Mars | 13278-07-29 22:33 G | 6570960.32 | 6570960.44 | 6570960.55 | 0.1653 | 0.1267 |
| Neptune | 13279-06-15 03:36 G | 6571280.46 | 6571280.65 | 6571280.89 | 0.0089 | 0.0052 |
| Neptune | 13280-06-16 09:36 G | 6571647.74 | 6571647.90 | 6571648.11 | 0.0089 | 0.0059 |
| Jupiter | 13281-04-08 14:52 G | 6571944.07 | 6571944.12 | 6571944.17 | 0.0545 | 0.0529 |
| Neptune | 13281-06-19 00:43 G | 6572015.38 | 6572015.53 | 6572015.73 | 0.0089 | 0.0068 |
| Saturn | 13282-04-17 17:31 G | 6572317.99 | 6572318.23 | 6572318.47 | 0.0276 | 0.0059 |
| Neptune | 13282-06-21 11:02 G | 6572382.84 | 6572382.96 | 6572383.09 | 0.0089 | 0.0075 |
| Neptune | 13283-06-23 20:38 G | 6572750.29 | 6572750.36 | 6572750.46 | 0.0089 | 0.0084 |
| Jupiter | 13287-10-23 10:19 G | 6574332.70 | 6574332.93 | 6574333.15 | 0.0485 | 0.0072 |
| Jupiter | 13293-04-14 08:38 G | 6576332.67 | 6576332.86 | 6576333.06 | 0.0545 | 0.0297 |
| Saturn | 13296-10-13 10:19 G | 6577610.70 | 6577610.93 | 6577611.17 | 0.0282 | 0.0029 |
| Jupiter | 13299-10-27 18:43 G | 6578720.06 | 6578720.28 | 6578720.50 | 0.0486 | 0.0190 |
| Jupiter | 13305-04-20 08:09 G | 6580720.61 | 6580720.84 | 6580721.07 | 0.0544 | 0.0136 |
| Uranus | 13308-08-10 17:45 G | 6581929.15 | 6581929.24 | 6581929.38 | 0.0145 | 0.0129 |
| Uranus | 13309-08-16 00:00 G | 6582299.31 | 6582299.50 | 6582299.70 | 0.0145 | 0.0087 |
| Uranus | 13310-08-20 16:33 G | 6582668.94 | 6582669.19 | 6582669.44 | 0.0145 | 0.0028 |
| Saturn | 13311-04-13 06:28 G | 6582904.57 | 6582904.77 | 6582904.97 | 0.0277 | 0.0157 |
| Uranus | 13311-08-25 21:50 G | 6583039.17 | 6583039.41 | 6583039.65 | 0.0145 | 0.0030 |
| Jupiter | 13311-11-01 19:12 G | 6583107.11 | 6583107.30 | 6583107.49 | 0.0487 | 0.0271 |
| Uranus | 13312-08-29 15:36 G | 6583408.93 | 6583409.15 | 6583409.38 | 0.0145 | 0.0073 |
| Uranus | 13313-09-03 18:57 G | 6583779.25 | 6583779.29 | 6583779.37 | 0.0145 | 0.0141 |
| Jupiter | 13317-04-25 18:28 G | 6585109.05 | 6585109.27 | 6585109.50 | 0.0543 | 0.0014 |
| Pluto | 13320-06-12 17:16 G | 6586253.15 | 6586253.22 | 6586253.34 | 0.0064 | 0.0059 |
| Pluto | 13321-06-13 23:31 G | 6586619.28 | 6586619.48 | 6586619.71 | 0.0064 | 0.0034 |
| Jupiter | 13322-10-06 21:21 G | 6587099.27 | 6587099.39 | 6587099.52 | 0.0484 | 0.0410 |
| Jupiter | 13323-11-06 05:45 G | 6587494.60 | 6587494.74 | 6587494.90 | 0.0487 | 0.0376 |

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| Saturn | 13325-10-09 09:50 G | 6588197.72 | 6588197.91 | 6588198.10 | 0.0283 | 0.0188 |
| Jupiter | 13329-05-01 00:57 G | 6589497.31 | 6589497.54 | 6589497.77 | 0.0543 | 0.0171 |
| Jupiter | 13334-10-11 06:57 G | 6591486.63 | 6591486.79 | 6591486.96 | 0.0484 | 0.0326 |
| Saturn | 13341-04-20 02:38 G | 6593869.39 | 6593869.61 | 6593869.83 | 0.0276 | 0.0128 |
| Jupiter | 13341-05-06 06:00 G | 6593885.61 | 6593885.75 | 6593885.92 | 0.0542 | 0.0393 |
| Neptune | 13345-11-07 05:45 G | 6595531.71 | 6595531.74 | 6595531.81 | 0.0088 | 0.0086 |
| Jupiter | 13346-10-15 07:55 G | 6595873.62 | 6595873.83 | 6595874.04 | 0.0484 | 0.0235 |
| Neptune | 13346-11-09 11:31 G | 6595898.93 | 6595898.98 | 6595899.06 | 0.0088 | 0.0085 |
| Neptune | 13347-11-12 05:16 G | 6596266.58 | 6596266.72 | 6596266.90 | 0.0088 | 0.0069 |
| Neptune | 13348-11-13 09:36 G | 6596633.76 | 6596633.90 | 6596634.08 | 0.0088 | 0.0069 |
| Neptune | 13349-11-16 03:21 G | 6597001.46 | 6597001.64 | 6597001.88 | 0.0088 | 0.0053 |
| Uranus | 13350-02-11 18:43 G | 6597089.19 | 6597089.28 | 6597089.41 | 0.0133 | 0.0122 |
| Neptune | 13350-11-18 09:36 G | 6597368.71 | 6597368.90 | 6597369.12 | 0.0088 | 0.0053 |
| Uranus | 13351-02-15 22:33 G | 6597458.25 | 6597458.44 | 6597458.66 | 0.0133 | 0.0075 |
| Neptune | 13351-11-21 00:14 G | 6597736.27 | 6597736.51 | 6597736.76 | 0.0088 | 0.0036 |
| Uranus | 13352-02-20 13:40 G | 6597827.82 | 6597828.07 | 6597828.33 | 0.0133 | 0.0030 |
| Neptune | 13352-11-22 10:33 G | 6598103.73 | 6598103.94 | 6598104.18 | 0.0088 | 0.0036 |
| Uranus | 13353-02-23 16:48 G | 6598196.95 | 6598197.20 | 6598197.45 | 0.0133 | 0.0005 |
| Jupiter | 13353-05-11 21:36 G | 6598274.37 | 6598274.40 | 6598274.43 | 0.0541 | 0.0535 |
| Neptune | 13353-11-24 20:38 G | 6598471.11 | 6598471.36 | 6598471.64 | 0.0088 | 0.0019 |
| Uranus | 13354-02-28 07:12 G | 6598566.57 | 6598566.80 | 6598567.04 | 0.0133 | 0.0058 |
| Neptune | 13354-11-27 12:28 G | 6598838.78 | 6598839.02 | 6598839.28 | 0.0088 | 0.0019 |
| Uranus | 13355-03-04 09:07 G | 6598935.71 | 6598935.88 | 6598936.09 | 0.0133 | 0.0088 |
| Saturn | 13355-10-17 02:24 G | 6599162.38 | 6599162.60 | 6599162.83 | 0.0282 | 0.0104 |
| Neptune | 13355-11-29 18:28 G | 6599206.01 | 6599206.27 | 6599206.54 | 0.0088 | 0.0002 |
| Neptune | 13356-12-01 13:12 G | 6599573.79 | 6599574.05 | 6599574.30 | 0.0088 | 0.0003 |
| Mars | 13357-08-01 19:40 G | 6599817.15 | 6599817.32 | 6599817.49 | 0.1649 | 0.0428 |
| Neptune | 13357-12-03 17:31 G | 6599940.99 | 6599941.23 | 6599941.50 | 0.0088 | 0.0017 |
| Jupiter | 13358-10-19 12:00 G | 6600260.78 | 6600261.00 | 6600261.22 | 0.0484 | 0.0096 |
| Neptune | 13358-12-06 12:14 G | 6600308.75 | 6600309.01 | 6600309.27 | 0.0088 | 0.0016 |

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| Neptune | 13359-12-08 18:43 G | 6600676.05 | 6600676.28 | 6600676.52 | 0.0088 | 0.0033 |
| Neptune | 13360-12-10 09:36 G | 6601043.66 | 6601043.90 | 6601044.16 | 0.0088 | 0.0033 |
| Neptune | 13361-12-12 20:38 G | 6601411.17 | 6601411.36 | 6601411.59 | 0.0088 | 0.0051 |
| Neptune | 13362-12-15 07:40 G | 6601778.60 | 6601778.82 | 6601779.05 | 0.0088 | 0.0050 |
| Neptune | 13363-12-17 23:16 G | 6602146.33 | 6602146.47 | 6602146.66 | 0.0088 | 0.0068 |
| Neptune | 13364-12-19 06:00 G | 6602513.60 | 6602513.75 | 6602513.95 | 0.0088 | 0.0067 |
| Neptune | 13365-12-22 00:57 G | 6602881.49 | 6602881.54 | 6602881.64 | 0.0088 | 0.0084 |
| Neptune | 13366-12-24 05:45 G | 6603248.69 | 6603248.74 | 6603248.86 | 0.0088 | 0.0084 |
| Saturn | 13370-04-14 16:19 G | 6604455.96 | 6604456.18 | 6604456.41 | 0.0277 | 0.0090 |
| Jupiter | 13370-10-23 19:12 G | 6604648.06 | 6604648.30 | 6604648.54 | 0.0485 | 0.0053 |
| Jupiter | 13376-04-13 19:12 G | 6606647.12 | 6606647.30 | 6606647.49 | 0.0544 | 0.0333 |
| Jupiter | 13382-10-27 17:45 G | 6609035.03 | 6609035.24 | 6609035.46 | 0.0485 | 0.0160 |
| Saturn | 13384-10-10 16:33 G | 6609748.97 | 6609749.19 | 6609749.43 | 0.0283 | 0.0116 |
| Jupiter | 13388-04-19 07:12 G | 6611035.59 | 6611035.80 | 6611036.02 | 0.0545 | 0.0177 |
| Uranus | 13392-08-11 02:52 G | 6612610.58 | 6612610.62 | 6612610.69 | 0.0145 | 0.0141 |
| Uranus | 13393-08-16 08:38 G | 6612980.67 | 6612980.86 | 6612981.09 | 0.0145 | 0.0076 |
| Uranus | 13394-08-21 01:12 G | 6613350.30 | 6613350.55 | 6613350.80 | 0.0145 | 0.0027 |
| Jupiter | 13394-11-01 06:14 G | 6613422.56 | 6613422.76 | 6613422.96 | 0.0486 | 0.0238 |
| Uranus | 13395-08-26 06:57 G | 6613720.55 | 6613720.79 | 6613721.04 | 0.0145 | 0.0026 |
| Uranus | 13396-08-30 00:00 G | 6614090.32 | 6614090.50 | 6614090.72 | 0.0145 | 0.0090 |
| Uranus | 13397-09-04 05:02 G | 6614460.61 | 6614460.71 | 6614460.83 | 0.0145 | 0.0129 |
| Saturn | 13400-04-22 07:12 G | 6615420.64 | 6615420.80 | 6615420.99 | 0.0276 | 0.0199 |
| Jupiter | 13400-04-25 16:04 G | 6615423.93 | 6615424.17 | 6615424.41 | 0.0544 | 0.0044 |
| Jupiter | 13405-10-07 09:07 G | 6617414.78 | 6617414.88 | 6617414.98 | 0.0484 | 0.0430 |
| Jupiter | 13406-11-06 03:36 G | 6617809.50 | 6617809.65 | 6617809.82 | 0.0487 | 0.0355 |
| Pluto | 13409-12-13 17:45 G | 6618942.99 | 6618943.24 | 6618943.51 | 0.0080 | 0.0019 |
| Jupiter | 13412-05-01 00:00 G | 6619812.29 | 6619812.50 | 6619812.72 | 0.0543 | 0.0152 |
| Saturn | 13414-10-19 12:00 G | 6620713.81 | 6620714.00 | 6620714.20 | 0.0282 | 0.0174 |
| Jupiter | 13417-10-11 11:02 G | 6621801.80 | 6621801.96 | 6621802.13 | 0.0484 | 0.0349 |
| Jupiter | 13424-05-06 12:14 G | 6624200.84 | 6624201.01 | 6624201.18 | 0.0542 | 0.0362 |

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| Neptune | 13428-05-13 01:26 G | 6625668.47 | 6625668.56 | 6625668.70 | 0.0089 | 0.0081 |
| Saturn | 13429-04-17 04:04 G | 6626007.44 | 6626007.67 | 6626007.91 | 0.0277 | 0.0025 |
| Neptune | 13429-05-15 17:45 G | 6626036.16 | 6626036.24 | 6626036.39 | 0.0089 | 0.0080 |
| Jupiter | 13429-10-15 13:26 G | 6626188.87 | 6626189.06 | 6626189.25 | 0.0484 | 0.0257 |
| Mars | 13430-02-01 06:00 G | 6626297.56 | 6626297.75 | 6626297.93 | 0.1882 | 0.0774 |
| Neptune | 13430-05-18 00:14 G | 6626403.35 | 6626403.51 | 6626403.72 | 0.0089 | 0.0064 |
| Neptune | 13431-05-20 19:40 G | 6626771.14 | 6626771.32 | 6626771.50 | 0.0089 | 0.0063 |
| Neptune | 13432-05-22 00:28 G | 6627138.32 | 6627138.52 | 6627138.75 | 0.0089 | 0.0047 |
| Neptune | 13433-05-24 18:57 G | 6627506.07 | 6627506.29 | 6627506.52 | 0.0089 | 0.0046 |
| Uranus | 13434-02-13 02:09 G | 6627770.46 | 6627770.59 | 6627770.75 | 0.0133 | 0.0112 |
| Neptune | 13434-05-27 01:55 G | 6627873.35 | 6627873.58 | 6627873.82 | 0.0089 | 0.0029 |
| Uranus | 13435-02-17 07:26 G | 6628139.61 | 6628139.81 | 6628140.02 | 0.0133 | 0.0075 |
| Neptune | 13435-05-29 16:19 G | 6628240.93 | 6628241.18 | 6628241.44 | 0.0089 | 0.0028 |
| Uranus | 13436-02-21 21:21 G | 6628509.14 | 6628509.39 | 6628509.66 | 0.0133 | 0.0032 |
| Jupiter | 13436-05-11 09:07 G | 6628588.80 | 6628588.88 | 6628588.98 | 0.0541 | 0.0499 |
| Neptune | 13436-05-31 03:50 G | 6628608.42 | 6628608.66 | 6628608.91 | 0.0089 | 0.0011 |
| Mars | 13436-08-04 17:02 G | 6628674.08 | 6628674.21 | 6628674.35 | 0.1646 | 0.1083 |
| Uranus | 13437-02-25 01:40 G | 6628878.32 | 6628878.57 | 6628878.82 | 0.0133 | 0.0016 |
| Neptune | 13437-06-02 13:40 G | 6628975.81 | 6628976.07 | 6628976.34 | 0.0089 | 0.0011 |
| Uranus | 13438-03-01 15:21 G | 6629247.91 | 6629248.14 | 6629248.40 | 0.0133 | 0.0049 |
| Neptune | 13438-06-05 06:00 G | 6629343.50 | 6629343.75 | 6629344.00 | 0.0089 | 0.0006 |
| Uranus | 13439-03-05 18:14 G | 6629617.13 | 6629617.26 | 6629617.44 | 0.0133 | 0.0105 |
| Neptune | 13439-06-07 12:00 G | 6629710.74 | 6629711.00 | 6629711.26 | 0.0089 | 0.0007 |
| Uranus | 13440-03-09 08:52 G | 6629986.87 | 6629986.87 | 6629986.88 | 0.0133 | 0.0133 |
| Neptune | 13440-06-09 06:14 G | 6630078.52 | 6630078.76 | 6630079.01 | 0.0089 | 0.0024 |
| Neptune | 13441-06-11 10:48 G | 6630445.72 | 6630445.95 | 6630446.20 | 0.0089 | 0.0024 |
| Jupiter | 13441-10-19 20:38 G | 6630576.13 | 6630576.36 | 6630576.59 | 0.0484 | 0.0114 |
| Neptune | 13442-06-14 04:33 G | 6630813.46 | 6630813.69 | 6630813.92 | 0.0089 | 0.0042 |
| Neptune | 13443-06-16 10:48 G | 6631180.75 | 6631180.95 | 6631181.19 | 0.0089 | 0.0041 |
| Saturn | 13443-10-14 02:38 G | 6631300.37 | 6631300.61 | 6631300.84 | 0.0283 | 0.0049 |

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| Neptune | 13444-06-18 00:14 G | 6631548.34 | 6631548.51 | 6631548.74 | 0.0089 | 0.0058 |
| Neptune | 13445-06-20 11:02 G | 6631915.80 | 6631915.96 | 6631916.17 | 0.0089 | 0.0059 |
| Neptune | 13446-06-22 19:55 G | 6632283.22 | 6632283.33 | 6632283.50 | 0.0089 | 0.0075 |
| Neptune | 13447-06-25 12:14 G | 6632650.88 | 6632651.01 | 6632651.15 | 0.0089 | 0.0075 |
| Jupiter | 13453-10-23 20:24 G | 6634963.12 | 6634963.35 | 6634963.58 | 0.0484 | 0.0033 |
| Saturn | 13458-04-11 20:52 G | 6636594.26 | 6636594.37 | 6636594.51 | 0.0275 | 0.0239 |
| Jupiter | 13459-04-14 22:48 G | 6636962.29 | 6636962.45 | 6636962.62 | 0.0545 | 0.0365 |
| Saturn | 13459-04-24 14:09 G | 6636972.04 | 6636972.09 | 6636972.17 | 0.0276 | 0.0265 |
| Jupiter | 13465-10-28 07:12 G | 6639350.57 | 6639350.80 | 6639351.02 | 0.0485 | 0.0133 |
| Jupiter | 13471-04-20 07:26 G | 6641350.58 | 6641350.81 | 6641351.03 | 0.0545 | 0.0201 |
| Saturn | 13473-10-20 16:04 G | 6642265.06 | 6642265.17 | 6642265.31 | 0.0282 | 0.0244 |
| Uranus | 13476-08-12 12:14 G | 6643291.89 | 6643292.01 | 6643292.15 | 0.0145 | 0.0124 |
| Uranus | 13477-08-17 18:00 G | 6643662.06 | 6643662.25 | 6643662.47 | 0.0145 | 0.0084 |
| Jupiter | 13477-11-01 05:31 G | 6643737.52 | 6643737.73 | 6643737.95 | 0.0486 | 0.0217 |
| Uranus | 13478-08-22 10:04 G | 6644031.68 | 6644031.92 | 6644032.18 | 0.0145 | 0.0022 |
| Uranus | 13479-08-27 16:04 G | 6644401.94 | 6644402.17 | 6644402.42 | 0.0145 | 0.0035 |
| Uranus | 13480-08-31 08:24 G | 6644771.65 | 6644771.85 | 6644772.07 | 0.0145 | 0.0080 |
| Jupiter | 13483-04-25 15:36 G | 6645738.92 | 6645739.15 | 6645739.37 | 0.0544 | 0.0076 |
| Saturn | 13488-04-18 11:31 G | 6647558.74 | 6647558.98 | 6647559.23 | 0.0276 | 0.0038 |
| Jupiter | 13488-10-06 13:55 G | 6647730.00 | 6647730.08 | 6647730.18 | 0.0484 | 0.0449 |
| Jupiter | 13489-11-05 18:00 G | 6648125.09 | 6648125.25 | 6648125.41 | 0.0487 | 0.0339 |
| Jupiter | 13495-05-01 03:36 G | 6650127.42 | 6650127.65 | 6650127.88 | 0.0543 | 0.0124 |
| Jupiter | 13500-10-11 16:48 G | 6652117.06 | 6652117.20 | 6652117.35 | 0.0484 | 0.0375 |
| Jupiter | 13501-11-10 18:28 G | 6652512.26 | 6652512.27 | 6652512.30 | 0.0487 | 0.0486 |
| Saturn | 13502-10-16 12:43 G | 6652851.79 | 6652852.03 | 6652852.27 | 0.0283 | 0.0015 |
| Jupiter | 13507-05-07 00:00 G | 6654515.32 | 6654515.50 | 6654515.69 | 0.0543 | 0.0324 |
| Mars | 13509-02-05 14:52 G | 6655156.04 | 6655156.12 | 6655156.21 | 0.1889 | 0.1665 |
| Neptune | 13509-11-08 11:02 G | 6655431.95 | 6655431.96 | 6655432.03 | 0.0088 | 0.0087 |
| Neptune | 13510-11-11 05:02 G | 6655799.67 | 6655799.71 | 6655799.81 | 0.0088 | 0.0085 |
| Neptune | 13511-11-13 09:50 G | 6656166.77 | 6656166.91 | 6656167.06 | 0.0088 | 0.0072 |

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| Jupiter | 13512-10-16 01:26 G | 6656504.37 | 6656504.56 | 6656504.76 | 0.0484 | 0.0269 |
| Neptune | 13512-11-15 03:07 G | 6656534.48 | 6656534.63 | 6656534.80 | 0.0088 | 0.0069 |
| Neptune | 13513-11-17 10:04 G | 6656901.75 | 6656901.92 | 6656902.13 | 0.0088 | 0.0057 |
| Neptune | 13514-11-19 23:45 G | 6657269.30 | 6657269.49 | 6657269.73 | 0.0088 | 0.0053 |
| Neptune | 13515-11-22 11:45 G | 6657636.78 | 6657636.99 | 6657637.22 | 0.0088 | 0.0040 |
| Neptune | 13516-11-23 20:24 G | 6658004.12 | 6658004.35 | 6658004.61 | 0.0088 | 0.0036 |
| Saturn | 13517-04-14 02:24 G | 6658145.42 | 6658145.60 | 6658145.79 | 0.0275 | 0.0178 |
| Neptune | 13517-11-26 12:43 G | 6658371.79 | 6658372.03 | 6658372.28 | 0.0088 | 0.0024 |
| Uranus | 13518-02-14 10:04 G | 6658451.82 | 6658451.92 | 6658452.05 | 0.0133 | 0.0119 |
| Neptune | 13518-11-28 17:45 G | 6658738.99 | 6658739.24 | 6658739.50 | 0.0088 | 0.0020 |
| Uranus | 13519-02-18 16:04 G | 6658820.98 | 6658821.17 | 6658821.40 | 0.0133 | 0.0070 |
| Jupiter | 13519-05-12 16:19 G | 6658904.07 | 6658904.18 | 6658904.29 | 0.0542 | 0.0467 |
| Neptune | 13519-12-01 12:14 G | 6659106.76 | 6659107.01 | 6659107.28 | 0.0088 | 0.0009 |
| Uranus | 13520-02-23 05:02 G | 6659190.45 | 6659190.71 | 6659190.97 | 0.0133 | 0.0027 |
| Neptune | 13520-12-02 17:02 G | 6659473.96 | 6659474.21 | 6659474.47 | 0.0088 | 0.0003 |
| Uranus | 13521-02-26 09:50 G | 6659559.67 | 6659559.91 | 6659560.16 | 0.0133 | 0.0011 |
| Neptune | 13521-12-05 10:33 G | 6659841.68 | 6659841.94 | 6659842.21 | 0.0088 | 0.0009 |
| Uranus | 13522-03-02 22:19 G | 6659929.20 | 6659929.43 | 6659929.67 | 0.0133 | 0.0062 |
| Neptune | 13522-12-07 18:00 G | 6660209.01 | 6660209.25 | 6660209.50 | 0.0088 | 0.0015 |
| Uranus | 13523-03-07 02:24 G | 6660298.43 | 6660298.60 | 6660298.78 | 0.0133 | 0.0093 |
| Neptune | 13523-12-10 08:09 G | 6660576.59 | 6660576.84 | 6660577.10 | 0.0088 | 0.0025 |
| Jupiter | 13524-10-19 23:16 G | 6660891.25 | 6660891.47 | 6660891.69 | 0.0484 | 0.0126 |
| Neptune | 13524-12-11 20:24 G | 6660944.13 | 6660944.35 | 6660944.60 | 0.0088 | 0.0031 |
| Neptune | 13525-12-14 05:16 G | 6661311.51 | 6661311.72 | 6661311.98 | 0.0088 | 0.0043 |
| Neptune | 13526-12-16 21:50 G | 6661679.22 | 6661679.41 | 6661679.64 | 0.0088 | 0.0049 |
| Neptune | 13527-12-19 03:36 G | 6662046.48 | 6662046.65 | 6662046.87 | 0.0088 | 0.0060 |
| Neptune | 13528-12-20 23:31 G | 6662414.31 | 6662414.48 | 6662414.65 | 0.0088 | 0.0066 |
| Neptune | 13529-12-23 04:04 G | 6662781.56 | 6662781.67 | 6662781.83 | 0.0088 | 0.0075 |
| Neptune | 13530-12-25 22:04 G | 6663149.35 | 6663149.42 | 6663149.55 | 0.0088 | 0.0082 |
| Saturn | 13531-10-10 13:12 G | 6663437.92 | 6663438.05 | 6663438.20 | 0.0283 | 0.0236 |

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| Jupiter | 13536-10-24 11:02 G | 6665278.72 | 6665278.96 | 6665279.19 | 0.0484 | 0.0021 |
| Jupiter | 13542-04-14 21:36 G | 6667277.23 | 6667277.40 | 6667277.57 | 0.0544 | 0.0388 |
| Saturn | 13547-04-21 12:57 G | 6669109.80 | 6669110.04 | 6669110.28 | 0.0276 | 0.0097 |
| Jupiter | 13548-10-28 08:09 G | 6669665.61 | 6669665.84 | 6669666.08 | 0.0485 | 0.0111 |
| Jupiter | 13554-04-20 07:12 G | 6671665.60 | 6671665.80 | 6671666.00 | 0.0544 | 0.0238 |
| Uranus | 13560-08-13 20:52 G | 6673973.32 | 6673973.37 | 6673973.47 | 0.0145 | 0.0138 |
| Jupiter | 13560-11-01 19:40 G | 6674053.12 | 6674053.32 | 6674053.54 | 0.0485 | 0.0196 |
| Uranus | 13561-08-19 02:38 G | 6674343.39 | 6674343.61 | 6674343.84 | 0.0145 | 0.0070 |
| Saturn | 13561-10-17 18:57 G | 6674403.06 | 6674403.29 | 6674403.53 | 0.0283 | 0.0073 |
| Mars | 13562-08-02 19:55 G | 6674692.15 | 6674692.33 | 6674692.51 | 0.1658 | 0.0728 |
| Uranus | 13562-08-23 18:43 G | 6674713.03 | 6674713.28 | 6674713.53 | 0.0145 | 0.0024 |
| Uranus | 13563-08-29 00:43 G | 6675083.29 | 6675083.53 | 6675083.78 | 0.0145 | 0.0032 |
| Uranus | 13564-09-01 17:16 G | 6675453.03 | 6675453.22 | 6675453.41 | 0.0145 | 0.0094 |
| Uranus | 13565-09-06 23:02 G | 6675823.39 | 6675823.46 | 6675823.57 | 0.0145 | 0.0135 |
| Jupiter | 13566-04-25 15:07 G | 6676053.90 | 6676054.13 | 6676054.37 | 0.0544 | 0.0115 |
| Pluto | 13566-06-16 16:48 G | 6676106.05 | 6676106.20 | 6676106.42 | 0.0064 | 0.0046 |
| Pluto | 13567-06-18 09:50 G | 6676472.76 | 6676472.91 | 6676473.11 | 0.0064 | 0.0047 |
| Jupiter | 13571-10-07 22:48 G | 6678045.40 | 6678045.45 | 6678045.52 | 0.0484 | 0.0465 |
| Jupiter | 13572-11-05 21:21 G | 6678440.21 | 6678440.39 | 6678440.58 | 0.0486 | 0.0321 |
| Saturn | 13576-04-15 11:16 G | 6679696.76 | 6679696.97 | 6679697.19 | 0.0275 | 0.0117 |
| Jupiter | 13578-04-30 18:28 G | 6680442.04 | 6680442.27 | 6680442.50 | 0.0544 | 0.0090 |
| Jupiter | 13583-10-12 06:28 G | 6682432.63 | 6682432.77 | 6682432.91 | 0.0483 | 0.0387 |
| Jupiter | 13584-11-10 04:19 G | 6682827.65 | 6682827.68 | 6682827.74 | 0.0487 | 0.0477 |
| Jupiter | 13590-05-06 13:26 G | 6684830.87 | 6684831.06 | 6684831.25 | 0.0543 | 0.0304 |
| Saturn | 13590-10-11 15:07 G | 6684988.95 | 6684989.13 | 6684989.33 | 0.0283 | 0.0178 |
| Neptune | 13592-05-13 16:33 G | 6685569.12 | 6685569.19 | 6685569.32 | 0.0089 | 0.0083 |
| Neptune | 13593-05-15 22:19 G | 6685936.35 | 6685936.43 | 6685936.57 | 0.0089 | 0.0082 |
| Neptune | 13594-05-18 17:45 G | 6686304.09 | 6686304.24 | 6686304.43 | 0.0089 | 0.0067 |
| Neptune | 13595-05-20 23:31 G | 6686671.30 | 6686671.48 | 6686671.66 | 0.0089 | 0.0064 |
| Jupiter | 13595-10-16 04:33 G | 6686819.51 | 6686819.69 | 6686819.88 | 0.0484 | 0.0282 |

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| Neptune | 13596-05-22 16:48 G | 6687039.00 | 6687039.20 | 6687039.43 | 0.0089 | 0.0050 |
| Neptune | 13597-05-25 00:43 G | 6687406.33 | 6687406.53 | 6687406.76 | 0.0089 | 0.0047 |
| Neptune | 13598-05-27 14:38 G | 6687773.88 | 6687774.11 | 6687774.37 | 0.0089 | 0.0033 |
| Neptune | 13599-05-30 03:21 G | 6688141.42 | 6688141.64 | 6688141.89 | 0.0089 | 0.0031 |
| Neptune | 13600-05-31 12:14 G | 6688508.76 | 6688509.01 | 6688509.28 | 0.0089 | 0.0017 |
| Neptune | 13601-06-03 05:02 G | 6688876.46 | 6688876.71 | 6688876.96 | 0.0089 | 0.0012 |
| Uranus | 13602-02-14 17:16 G | 6689133.07 | 6689133.22 | 6689133.39 | 0.0133 | 0.0107 |
| Jupiter | 13602-05-11 16:33 G | 6689219.05 | 6689219.19 | 6689219.34 | 0.0542 | 0.0433 |
| Neptune | 13602-06-05 10:33 G | 6689243.68 | 6689243.94 | 6689244.20 | 0.0089 | 0.0001 |
| Uranus | 13603-02-19 00:43 G | 6689502.34 | 6689502.53 | 6689502.76 | 0.0133 | 0.0073 |
| Neptune | 13603-06-08 05:16 G | 6689611.47 | 6689611.72 | 6689611.98 | 0.0089 | 0.0006 |
| Uranus | 13604-02-23 12:14 G | 6689871.76 | 6689872.01 | 6689872.28 | 0.0133 | 0.0026 |
| Neptune | 13604-06-09 10:19 G | 6689978.68 | 6689978.93 | 6689979.18 | 0.0089 | 0.0018 |
| Uranus | 13605-02-26 18:43 G | 6690241.04 | 6690241.28 | 6690241.53 | 0.0133 | 0.0019 |
| Neptune | 13605-06-12 03:07 G | 6690346.39 | 6690346.63 | 6690346.90 | 0.0089 | 0.0023 |
| Uranus | 13606-03-03 06:14 G | 6690610.53 | 6690610.76 | 6690611.01 | 0.0133 | 0.0053 |
| Saturn | 13606-04-22 13:12 G | 6690660.85 | 6690661.05 | 6690661.26 | 0.0276 | 0.0155 |
| Neptune | 13606-06-14 11:02 G | 6690713.73 | 6690713.96 | 6690714.19 | 0.0089 | 0.0034 |
| Uranus | 13607-03-07 11:45 G | 6690979.86 | 6690979.99 | 6690980.14 | 0.0133 | 0.0108 |
| Neptune | 13607-06-17 00:00 G | 6691081.28 | 6691081.50 | 6691081.75 | 0.0089 | 0.0040 |
| Jupiter | 13607-10-20 15:21 G | 6691206.91 | 6691207.14 | 6691207.36 | 0.0484 | 0.0130 |
| Neptune | 13608-06-18 12:14 G | 6691448.83 | 6691449.01 | 6691449.23 | 0.0089 | 0.0051 |
| Neptune | 13609-06-20 20:24 G | 6691816.16 | 6691816.35 | 6691816.57 | 0.0089 | 0.0056 |
| Neptune | 13610-06-23 12:28 G | 6692183.88 | 6692184.02 | 6692184.21 | 0.0089 | 0.0067 |
| Neptune | 13611-06-25 17:45 G | 6692551.09 | 6692551.24 | 6692551.39 | 0.0089 | 0.0072 |
| Neptune | 13612-06-27 12:00 G | 6692918.90 | 6692919.00 | 6692919.10 | 0.0089 | 0.0082 |
| Neptune | 13613-06-29 15:50 G | 6693286.15 | 6693286.16 | 6693286.21 | 0.0089 | 0.0088 |
| Jupiter | 13619-10-24 13:12 G | 6695593.82 | 6695594.05 | 6695594.29 | 0.0484 | 0.0008 |
| Saturn | 13620-10-18 17:16 G | 6695954.00 | 6695954.22 | 6695954.45 | 0.0283 | 0.0130 |
| Jupiter | 13625-04-13 18:57 G | 6697592.16 | 6697592.29 | 6697592.44 | 0.0545 | 0.0424 |

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| Jupiter | 13631-10-29 00:57 G | 6699981.31 | 6699981.54 | 6699981.76 | 0.0484 | 0.0092 |
| Saturn | 13635-04-17 19:26 G | 6701248.07 | 6701248.31 | 6701248.55 | 0.0275 | 0.0058 |
| Jupiter | 13637-04-19 07:26 G | 6701980.61 | 6701980.81 | 6701981.02 | 0.0545 | 0.0276 |
| Mars | 13641-08-05 05:31 G | 6703549.54 | 6703549.73 | 6703549.91 | 0.1654 | 0.0301 |
| Jupiter | 13643-11-02 00:43 G | 6704368.31 | 6704368.53 | 6704368.76 | 0.0485 | 0.0180 |
| Uranus | 13644-08-14 06:28 G | 6704654.64 | 6704654.77 | 6704654.91 | 0.0145 | 0.0120 |
| Uranus | 13645-08-19 11:16 G | 6705024.76 | 6705024.97 | 6705025.19 | 0.0145 | 0.0080 |
| Uranus | 13646-08-24 03:36 G | 6705394.41 | 6705394.65 | 6705394.91 | 0.0145 | 0.0016 |
| Uranus | 13647-08-29 09:50 G | 6705764.67 | 6705764.91 | 6705765.15 | 0.0145 | 0.0038 |
| Uranus | 13648-09-02 01:40 G | 6706134.38 | 6706134.57 | 6706134.78 | 0.0145 | 0.0086 |
| Jupiter | 13649-04-24 14:24 G | 6706368.88 | 6706369.10 | 6706369.33 | 0.0545 | 0.0138 |
| Saturn | 13649-10-12 21:21 G | 6706540.18 | 6706540.39 | 6706540.61 | 0.0283 | 0.0118 |
| Jupiter | 13654-10-07 13:26 G | 6708361.03 | 6708361.06 | 6708361.11 | 0.0484 | 0.0476 |
| Jupiter | 13655-11-06 08:24 G | 6708755.68 | 6708755.85 | 6708756.02 | 0.0486 | 0.0316 |
| Pluto | 13655-12-16 19:40 G | 6708796.12 | 6708796.32 | 6708796.55 | 0.0080 | 0.0047 |
| Jupiter | 13661-04-30 08:52 G | 6710757.64 | 6710757.87 | 6710758.10 | 0.0544 | 0.0073 |
| Saturn | 13665-04-23 17:31 G | 6712212.10 | 6712212.23 | 6712212.40 | 0.0276 | 0.0213 |
| Jupiter | 13666-10-11 10:04 G | 6712747.80 | 6712747.92 | 6712748.05 | 0.0484 | 0.0404 |
| Jupiter | 13667-11-10 16:48 G | 6713143.14 | 6713143.20 | 6713143.28 | 0.0487 | 0.0466 |
| Jupiter | 13673-05-05 10:19 G | 6715145.72 | 6715145.93 | 6715146.14 | 0.0543 | 0.0272 |
| Neptune | 13674-11-10 10:04 G | 6715699.85 | 6715699.92 | 6715700.05 | 0.0088 | 0.0081 |
| Neptune | 13675-11-13 02:38 G | 6716067.53 | 6716067.61 | 6716067.75 | 0.0088 | 0.0080 |
| Neptune | 13676-11-14 10:33 G | 6716434.79 | 6716434.94 | 6716435.12 | 0.0088 | 0.0065 |
| Neptune | 13677-11-16 23:02 G | 6716802.27 | 6716802.46 | 6716802.64 | 0.0088 | 0.0063 |
| Jupiter | 13678-10-15 22:04 G | 6717135.24 | 6717135.42 | 6717135.61 | 0.0484 | 0.0287 |
| Neptune | 13678-11-19 11:02 G | 6717169.77 | 6717169.96 | 6717170.18 | 0.0088 | 0.0049 |
| Saturn | 13679-10-20 13:12 G | 6717504.87 | 6717505.05 | 6717505.24 | 0.0283 | 0.0185 |
| Neptune | 13679-11-21 18:57 G | 6717537.08 | 6717537.29 | 6717537.52 | 0.0088 | 0.0048 |
| Neptune | 13680-11-23 12:28 G | 6717904.78 | 6717905.02 | 6717905.26 | 0.0088 | 0.0033 |
| Neptune | 13681-11-25 16:48 G | 6718271.98 | 6718272.20 | 6718272.46 | 0.0088 | 0.0033 |

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| Neptune | 13682-11-28 11:45 G | 6718639.74 | 6718639.99 | 6718640.26 | 0.0088 | 0.0017 |
| Neptune | 13683-11-30 17:02 G | 6719006.96 | 6719007.21 | 6719007.47 | 0.0088 | 0.0016 |
| Neptune | 13684-12-02 10:04 G | 6719374.66 | 6719374.92 | 6719375.19 | 0.0088 | 0.0002 |
| Jupiter | 13685-05-10 14:52 G | 6719533.97 | 6719534.12 | 6719534.27 | 0.0542 | 0.0395 |
| Neptune | 13685-12-04 18:28 G | 6719742.02 | 6719742.27 | 6719742.52 | 0.0088 | 0.0001 |
| Uranus | 13686-02-15 00:57 G | 6719814.43 | 6719814.54 | 6719814.69 | 0.0133 | 0.0116 |
| Neptune | 13686-12-07 06:28 G | 6720109.51 | 6720109.77 | 6720110.05 | 0.0088 | 0.0016 |
| Uranus | 13687-02-19 10:04 G | 6720183.71 | 6720183.92 | 6720184.15 | 0.0133 | 0.0063 |
| Neptune | 13687-12-09 19:40 G | 6720477.08 | 6720477.32 | 6720477.57 | 0.0088 | 0.0016 |
| Uranus | 13688-02-23 19:40 G | 6720553.06 | 6720553.32 | 6720553.59 | 0.0133 | 0.0025 |
| Neptune | 13688-12-11 03:36 G | 6720844.41 | 6720844.65 | 6720844.91 | 0.0088 | 0.0033 |
| Uranus | 13689-02-27 03:21 G | 6720922.39 | 6720922.64 | 6720922.89 | 0.0133 | 0.0017 |
| Neptune | 13689-12-13 20:52 G | 6721212.15 | 6721212.37 | 6721212.62 | 0.0088 | 0.0033 |
| Uranus | 13690-03-03 12:43 G | 6721291.81 | 6721292.03 | 6721292.27 | 0.0133 | 0.0066 |
| Jupiter | 13690-10-19 20:38 G | 6721522.13 | 6721522.36 | 6721522.59 | 0.0484 | 0.0133 |
| Neptune | 13690-12-16 02:24 G | 6721579.40 | 6721579.60 | 6721579.83 | 0.0088 | 0.0050 |
| Uranus | 13691-03-07 19:26 G | 6721661.16 | 6721661.31 | 6721661.50 | 0.0133 | 0.0099 |
| Neptune | 13691-12-18 21:50 G | 6721947.20 | 6721947.41 | 6721947.63 | 0.0088 | 0.0048 |
| Neptune | 13692-12-20 03:07 G | 6722314.48 | 6722314.63 | 6722314.82 | 0.0088 | 0.0066 |
| Neptune | 13693-12-22 20:52 G | 6722682.21 | 6722682.37 | 6722682.57 | 0.0088 | 0.0064 |
| Saturn | 13694-04-18 20:38 G | 6722799.10 | 6722799.36 | 6722799.61 | 0.0275 | 0.0004 |
| Neptune | 13694-12-25 05:31 G | 6723049.66 | 6723049.73 | 6723049.85 | 0.0088 | 0.0081 |
| Neptune | 13695-12-27 18:28 G | 6723417.19 | 6723417.27 | 6723417.42 | 0.0088 | 0.0081 |
| Jupiter | 13697-05-16 02:24 G | 6723922.56 | 6723922.60 | 6723922.65 | 0.0541 | 0.0530 |
| Jupiter | 13702-10-25 05:31 G | 6725909.50 | 6725909.73 | 6725909.96 | 0.0484 | 0.0010 |
| Jupiter | 13708-04-14 01:40 G | 6727907.43 | 6727907.57 | 6727907.72 | 0.0545 | 0.0437 |
| Saturn | 13708-10-15 01:40 G | 6728091.33 | 6728091.57 | 6728091.81 | 0.0283 | 0.0062 |
| Mars | 13714-02-01 18:28 G | 6730027.18 | 6730027.27 | 6730027.35 | 0.1873 | 0.1701 |
| Jupiter | 13714-10-29 06:57 G | 6730296.55 | 6730296.79 | 6730297.03 | 0.0484 | 0.0076 |
| Jupiter | 13720-04-19 09:21 G | 6732295.70 | 6732295.89 | 6732296.08 | 0.0545 | 0.0302 |

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| Saturn | 13723-04-14 02:38 G | 6733385.50 | 6733385.61 | 6733385.75 | 0.0275 | 0.0233 |
| Saturn | 13724-04-26 00:57 G | 6733763.50 | 6733763.54 | 6733763.60 | 0.0276 | 0.0270 |
| Jupiter | 13726-11-02 12:43 G | 6734683.82 | 6734684.03 | 6734684.24 | 0.0485 | 0.0168 |
| Uranus | 13728-08-15 15:36 G | 6735336.08 | 6735336.15 | 6735336.27 | 0.0145 | 0.0133 |
| Uranus | 13729-08-20 19:40 G | 6735706.10 | 6735706.32 | 6735706.56 | 0.0145 | 0.0064 |
| Uranus | 13730-08-25 12:43 G | 6736075.79 | 6736076.03 | 6736076.28 | 0.0145 | 0.0020 |
| Uranus | 13731-08-30 18:14 G | 6736446.02 | 6736446.26 | 6736446.51 | 0.0145 | 0.0039 |
| Jupiter | 13732-04-25 02:24 G | 6736684.38 | 6736684.60 | 6736684.82 | 0.0544 | 0.0160 |
| Uranus | 13732-09-03 10:48 G | 6736815.78 | 6736815.95 | 6736816.14 | 0.0145 | 0.0099 |
| Uranus | 13733-09-08 17:16 G | 6737186.18 | 6737186.22 | 6737186.29 | 0.0145 | 0.0141 |
| Saturn | 13738-10-22 14:24 G | 6739055.98 | 6739056.10 | 6739056.24 | 0.0283 | 0.0238 |
| Jupiter | 13738-11-06 22:04 G | 6739071.23 | 6739071.42 | 6739071.60 | 0.0486 | 0.0311 |
| Jupiter | 13744-04-29 22:19 G | 6741072.19 | 6741072.43 | 6741072.66 | 0.0544 | 0.0038 |
| Jupiter | 13749-10-12 06:14 G | 6743063.65 | 6743063.76 | 6743063.88 | 0.0484 | 0.0415 |
| Jupiter | 13750-11-10 22:48 G | 6743458.38 | 6743458.45 | 6743458.53 | 0.0486 | 0.0457 |
| Saturn | 13753-04-20 18:28 G | 6744350.02 | 6744350.27 | 6744350.52 | 0.0275 | 0.0059 |
| Jupiter | 13756-05-05 11:31 G | 6745460.78 | 6745460.98 | 6745461.18 | 0.0544 | 0.0241 |
| Neptune | 13757-05-16 15:50 G | 6745837.04 | 6745837.16 | 6745837.32 | 0.0089 | 0.0076 |
| Neptune | 13758-05-18 22:04 G | 6746204.30 | 6746204.42 | 6746204.58 | 0.0089 | 0.0074 |
| Neptune | 13759-05-21 15:50 G | 6746571.97 | 6746572.16 | 6746572.36 | 0.0089 | 0.0059 |
| Neptune | 13760-05-23 00:43 G | 6746939.35 | 6746939.53 | 6746939.73 | 0.0089 | 0.0058 |
| Neptune | 13761-05-25 12:57 G | 6747306.83 | 6747307.04 | 6747307.29 | 0.0089 | 0.0044 |
| Jupiter | 13761-10-16 02:52 G | 6747450.43 | 6747450.62 | 6747450.81 | 0.0483 | 0.0292 |
| Neptune | 13762-05-28 02:52 G | 6747674.40 | 6747674.62 | 6747674.84 | 0.0089 | 0.0042 |
| Neptune | 13763-05-30 10:33 G | 6748041.69 | 6748041.94 | 6748042.19 | 0.0089 | 0.0027 |
| Neptune | 13764-06-01 04:04 G | 6748409.44 | 6748409.67 | 6748409.92 | 0.0089 | 0.0025 |
| Neptune | 13765-06-03 09:21 G | 6748776.64 | 6748776.89 | 6748777.15 | 0.0089 | 0.0009 |
| Neptune | 13766-06-06 04:19 G | 6749144.42 | 6749144.68 | 6749144.94 | 0.0089 | 0.0009 |
| Neptune | 13767-06-08 09:50 G | 6749511.66 | 6749511.91 | 6749512.16 | 0.0089 | 0.0007 |
| Saturn | 13767-10-16 23:45 G | 6749642.24 | 6749642.49 | 6749642.75 | 0.0283 | 0.0009 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Jupiter | 13768-05-11 00:28 G | 6749849.34 | 6749849.52 | 6749849.70 | 0.0543 | 0.0364 |
| Neptune | 13768-06-10 02:38 G | 6749879.35 | 6749879.61 | 6749879.87 | 0.0089 | 0.0008 |
| Neptune | 13769-06-12 11:31 G | 6750246.74 | 6750246.98 | 6750247.22 | 0.0089 | 0.0024 |
| Uranus | 13770-02-16 07:55 G | 6750495.69 | 6750495.83 | 6750496.03 | 0.0133 | 0.0102 |
| Neptune | 13770-06-14 23:31 G | 6750614.23 | 6750614.48 | 6750614.74 | 0.0089 | 0.0025 |
| Uranus | 13771-02-20 18:57 G | 6750865.08 | 6750865.29 | 6750865.51 | 0.0133 | 0.0069 |
| Neptune | 13771-06-17 12:14 G | 6750981.81 | 6750982.01 | 6750982.25 | 0.0089 | 0.0041 |
| Uranus | 13772-02-25 03:07 G | 6751234.37 | 6751234.63 | 6751234.90 | 0.0133 | 0.0020 |
| Neptune | 13772-06-18 19:55 G | 6751349.10 | 6751349.33 | 6751349.56 | 0.0089 | 0.0041 |
| Uranus | 13773-02-28 12:28 G | 6751603.78 | 6751604.02 | 6751604.27 | 0.0133 | 0.0023 |
| Neptune | 13773-06-21 12:28 G | 6751716.85 | 6751717.02 | 6751717.24 | 0.0089 | 0.0057 |
| Jupiter | 13773-10-20 12:14 G | 6751837.79 | 6751838.01 | 6751838.23 | 0.0483 | 0.0141 |
| Uranus | 13774-03-04 20:52 G | 6751973.15 | 6751973.37 | 6751973.63 | 0.0133 | 0.0061 |
| Neptune | 13774-06-23 17:02 G | 6752084.04 | 6752084.21 | 6752084.44 | 0.0089 | 0.0057 |
| Uranus | 13775-03-09 05:31 G | 6752342.62 | 6752342.73 | 6752342.87 | 0.0133 | 0.0114 |
| Neptune | 13775-06-26 11:31 G | 6752451.85 | 6752451.98 | 6752452.14 | 0.0089 | 0.0073 |
| Neptune | 13776-06-27 16:19 G | 6752819.06 | 6752819.18 | 6752819.35 | 0.0089 | 0.0072 |
| Neptune | 13777-06-30 08:09 G | 6753186.83 | 6753186.84 | 6753186.91 | 0.0089 | 0.0088 |
| Neptune | 13778-07-02 17:02 G | 6753554.18 | 6753554.21 | 6753554.28 | 0.0089 | 0.0087 |
| Jupiter | 13780-05-16 03:50 G | 6754237.60 | 6754237.66 | 6754237.74 | 0.0541 | 0.0511 |
| Saturn | 13782-04-15 09:21 G | 6754936.72 | 6754936.89 | 6754937.09 | 0.0275 | 0.0176 |
| Jupiter | 13785-10-24 12:57 G | 6756224.80 | 6756225.04 | 6756225.28 | 0.0484 | 0.0025 |
| Jupiter | 13791-04-14 02:24 G | 6758222.48 | 6758222.60 | 6758222.73 | 0.0545 | 0.0457 |
| Mars | 13793-02-05 22:33 G | 6758886.28 | 6758886.44 | 6758886.61 | 0.1881 | 0.1212 |
| Saturn | 13796-10-10 04:19 G | 6760228.58 | 6760228.68 | 6760228.78 | 0.0283 | 0.0254 |
| Jupiter | 13797-10-28 19:12 G | 6760612.08 | 6760612.30 | 6760612.52 | 0.0484 | 0.0056 |
| Jupiter | 13803-04-20 13:12 G | 6762610.87 | 6762611.05 | 6762611.24 | 0.0545 | 0.0333 |
| Jupiter | 13809-11-03 04:04 G | 6764999.44 | 6764999.67 | 6764999.90 | 0.0485 | 0.0158 |
| Saturn | 13812-04-22 21:50 G | 6765901.20 | 6765901.41 | 6765901.64 | 0.0276 | 0.0115 |
| Pluto | 13812-06-19 21:07 G | 6765959.19 | 6765959.38 | 6765959.61 | 0.0064 | 0.0034 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Uranus | 13812-08-17 01:26 G | 6766017.42 | 6766017.56 | 6766017.71 | 0.0145 | 0.0115 |
| Pluto | 13813-06-21 11:16 G | 6766325.87 | 6766325.97 | 6766326.14 | 0.0064 | 0.0056 |
| Uranus | 13813-08-22 04:04 G | 6766387.47 | 6766387.67 | 6766387.91 | 0.0145 | 0.0075 |
| Uranus | 13814-08-26 22:33 G | 6766757.19 | 6766757.44 | 6766757.68 | 0.0145 | 0.0009 |
| Jupiter | 13815-04-25 15:07 G | 6766998.91 | 6766999.13 | 6766999.35 | 0.0545 | 0.0191 |
| Uranus | 13815-09-01 03:21 G | 6767127.40 | 6767127.64 | 6767127.89 | 0.0145 | 0.0043 |
| Uranus | 13816-09-04 20:09 G | 6767497.17 | 6767497.34 | 6767497.54 | 0.0145 | 0.0094 |
| Jupiter | 13821-11-07 01:55 G | 6769386.40 | 6769386.58 | 6769386.76 | 0.0485 | 0.0301 |
| Saturn | 13826-10-18 20:38 G | 6771193.11 | 6771193.36 | 6771193.61 | 0.0283 | 0.0048 |
| Jupiter | 13827-05-01 08:38 G | 6771387.64 | 6771387.86 | 6771388.09 | 0.0545 | 0.0027 |
| Jupiter | 13832-10-12 10:19 G | 6773378.83 | 6773378.93 | 6773379.05 | 0.0483 | 0.0427 |
| Jupiter | 13833-11-11 15:36 G | 6773774.05 | 6773774.15 | 6773774.24 | 0.0486 | 0.0443 |
| Neptune | 13838-11-12 02:09 G | 6775600.52 | 6775600.59 | 6775600.72 | 0.0088 | 0.0081 |
| Jupiter | 13839-05-06 20:24 G | 6775776.13 | 6775776.35 | 6775776.57 | 0.0544 | 0.0218 |
| Neptune | 13839-11-14 10:48 G | 6775967.87 | 6775967.95 | 6775968.08 | 0.0088 | 0.0080 |
| Neptune | 13840-11-15 22:19 G | 6776335.27 | 6776335.43 | 6776335.62 | 0.0088 | 0.0066 |
| Saturn | 13841-04-17 12:43 G | 6776487.82 | 6776488.03 | 6776488.27 | 0.0275 | 0.0121 |
| Neptune | 13841-11-18 11:31 G | 6776702.84 | 6776702.98 | 6776703.18 | 0.0088 | 0.0066 |
| Neptune | 13842-11-20 18:57 G | 6777070.08 | 6777070.29 | 6777070.50 | 0.0088 | 0.0051 |
| Neptune | 13843-11-23 12:00 G | 6777437.81 | 6777438.00 | 6777438.23 | 0.0088 | 0.0050 |
| Jupiter | 13844-10-16 17:45 G | 6777766.07 | 6777766.24 | 6777766.43 | 0.0484 | 0.0299 |
| Neptune | 13844-11-24 16:19 G | 6777804.96 | 6777805.18 | 6777805.43 | 0.0088 | 0.0036 |
| Neptune | 13845-11-27 11:02 G | 6778172.72 | 6778172.96 | 6778173.20 | 0.0088 | 0.0033 |
| Mars | 13846-08-05 15:07 G | 6778423.94 | 6778424.13 | 6778424.31 | 0.1663 | 0.0202 |
| Neptune | 13846-11-29 16:19 G | 6778539.94 | 6778540.18 | 6778540.43 | 0.0088 | 0.0020 |
| Neptune | 13847-12-02 08:09 G | 6778907.58 | 6778907.84 | 6778908.11 | 0.0088 | 0.0018 |
| Neptune | 13848-12-03 17:31 G | 6779274.98 | 6779275.23 | 6779275.48 | 0.0088 | 0.0005 |
| Neptune | 13849-12-06 05:02 G | 6779642.44 | 6779642.71 | 6779642.98 | 0.0088 | 0.0002 |
| Neptune | 13850-12-08 19:26 G | 6780010.06 | 6780010.31 | 6780010.56 | 0.0088 | 0.0011 |
| Jupiter | 13851-05-11 23:45 G | 6780164.31 | 6780164.49 | 6780164.67 | 0.0543 | 0.0340 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 13851-12-11 02:24 G | 6780377.35 | 6780377.60 | 6780377.87 | 0.0088 | 0.0015 |
| Neptune | 13852-12-12 20:09 G | 6780745.11 | 6780745.34 | 6780745.59 | 0.0088 | 0.0027 |
| Neptune | 13853-12-15 00:43 G | 6781112.30 | 6781112.53 | 6781112.79 | 0.0088 | 0.0031 |
| Uranus | 13854-02-17 16:19 G | 6781177.05 | 6781177.18 | 6781177.35 | 0.0133 | 0.0112 |
| Neptune | 13854-12-17 19:55 G | 6781480.10 | 6781480.33 | 6781480.56 | 0.0088 | 0.0042 |
| Uranus | 13855-02-22 04:19 G | 6781546.46 | 6781546.68 | 6781546.91 | 0.0133 | 0.0057 |
| Saturn | 13855-10-13 08:52 G | 6781779.70 | 6781779.87 | 6781780.04 | 0.0283 | 0.0200 |
| Neptune | 13855-12-20 01:26 G | 6781847.36 | 6781847.56 | 6781847.79 | 0.0088 | 0.0046 |
| Uranus | 13856-02-26 10:33 G | 6781915.69 | 6781915.94 | 6781916.21 | 0.0133 | 0.0021 |
| Jupiter | 13856-10-20 20:52 G | 6782153.14 | 6782153.37 | 6782153.60 | 0.0484 | 0.0150 |
| Neptune | 13856-12-21 17:45 G | 6782215.05 | 6782215.24 | 6782215.46 | 0.0088 | 0.0058 |
| Uranus | 13857-03-01 21:07 G | 6782285.14 | 6782285.38 | 6782285.63 | 0.0133 | 0.0024 |
| Neptune | 13857-12-24 03:07 G | 6782582.48 | 6782582.63 | 6782582.83 | 0.0088 | 0.0063 |
| Uranus | 13858-03-06 03:50 G | 6782654.45 | 6782654.66 | 6782654.90 | 0.0133 | 0.0071 |
| Neptune | 13858-12-26 15:21 G | 6782950.02 | 6782950.14 | 6782950.32 | 0.0088 | 0.0073 |
| Uranus | 13859-03-10 13:26 G | 6783023.93 | 6783024.06 | 6783024.23 | 0.0133 | 0.0106 |
| Neptune | 13859-12-29 06:43 G | 6783317.68 | 6783317.78 | 6783317.91 | 0.0088 | 0.0078 |
| Neptune | 13860-12-30 14:09 G | 6783685.08 | 6783685.09 | 6783685.15 | 0.0088 | 0.0088 |
| Jupiter | 13863-05-17 07:55 G | 6784552.74 | 6784552.83 | 6784552.95 | 0.0542 | 0.0481 |
| Jupiter | 13868-10-25 01:26 G | 6786540.33 | 6786540.56 | 6786540.78 | 0.0484 | 0.0041 |
| Saturn | 13871-04-25 05:31 G | 6787452.55 | 6787452.73 | 6787452.92 | 0.0276 | 0.0171 |
| Jupiter | 13874-04-14 04:33 G | 6788537.58 | 6788537.69 | 6788537.80 | 0.0544 | 0.0482 |
| Jupiter | 13880-10-29 08:24 G | 6790927.61 | 6790927.85 | 6790928.09 | 0.0484 | 0.0033 |
| Saturn | 13885-10-19 23:16 G | 6792744.25 | 6792744.47 | 6792744.70 | 0.0283 | 0.0103 |
| Jupiter | 13886-04-19 08:52 G | 6792925.69 | 6792925.87 | 6792926.05 | 0.0545 | 0.0354 |
| Jupiter | 13892-11-02 06:43 G | 6795314.56 | 6795314.78 | 6795315.01 | 0.0484 | 0.0143 |
| Uranus | 13896-08-17 11:31 G | 6796698.87 | 6796698.98 | 6796699.10 | 0.0145 | 0.0126 |
| Uranus | 13897-08-22 12:43 G | 6797068.80 | 6797069.03 | 6797069.28 | 0.0145 | 0.0058 |
| Jupiter | 13898-04-25 04:19 G | 6797314.47 | 6797314.68 | 6797314.89 | 0.0545 | 0.0206 |
| Uranus | 13898-08-27 08:09 G | 6797438.59 | 6797438.84 | 6797439.08 | 0.0145 | 0.0014 |

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| Uranus | 13899-09-01 12:00 G | 6797808.76 | 6797809.00 | 6797809.25 | 0.0145 | 0.0047 |
| Saturn | 13900-04-19 13:40 G | 6798038.82 | 6798039.07 | 6798039.32 | 0.0275 | 0.0061 |
| Uranus | 13900-09-06 05:45 G | 6798178.58 | 6798178.74 | 6798178.92 | 0.0145 | 0.0106 |
| Pluto | 13901-12-21 01:40 G | 6798649.46 | 6798649.57 | 6798649.71 | 0.0080 | 0.0069 |
| Jupiter | 13904-11-07 19:26 G | 6799702.12 | 6799702.31 | 6799702.50 | 0.0485 | 0.0292 |
| Jupiter | 13910-05-01 12:00 G | 6801702.76 | 6801703.00 | 6801703.25 | 0.0544 | 0.0018 |
| Saturn | 13914-10-15 10:19 G | 6803330.73 | 6803330.93 | 6803331.16 | 0.0283 | 0.0145 |
| Jupiter | 13915-10-14 00:28 G | 6803694.44 | 6803694.52 | 6803694.62 | 0.0484 | 0.0440 |
| Jupiter | 13916-11-11 18:28 G | 6804089.17 | 6804089.27 | 6804089.39 | 0.0486 | 0.0427 |
| Neptune | 13921-05-17 19:55 G | 6805737.21 | 6805737.33 | 6805737.47 | 0.0089 | 0.0076 |
| Jupiter | 13922-05-06 12:00 G | 6806090.79 | 6806091.00 | 6806091.22 | 0.0544 | 0.0187 |
| Neptune | 13922-05-20 12:00 G | 6806104.88 | 6806105.00 | 6806105.16 | 0.0089 | 0.0076 |
| Neptune | 13923-05-22 22:04 G | 6806472.26 | 6806472.42 | 6806472.62 | 0.0089 | 0.0062 |
| Neptune | 13924-05-24 09:50 G | 6806839.74 | 6806839.91 | 6806840.13 | 0.0089 | 0.0061 |
| Neptune | 13925-05-27 01:12 G | 6807207.36 | 6807207.55 | 6807207.79 | 0.0089 | 0.0046 |
| Mars | 13925-08-08 21:21 G | 6807281.22 | 6807281.39 | 6807281.56 | 0.1659 | 0.0885 |
| Neptune | 13926-05-29 08:52 G | 6807574.65 | 6807574.87 | 6807575.11 | 0.0089 | 0.0044 |
| Neptune | 13927-06-01 03:21 G | 6807942.40 | 6807942.64 | 6807942.88 | 0.0089 | 0.0029 |
| Jupiter | 13927-10-18 03:21 G | 6808081.46 | 6808081.64 | 6808081.83 | 0.0484 | 0.0303 |
| Neptune | 13928-06-02 08:09 G | 6808309.60 | 6808309.84 | 6808310.09 | 0.0089 | 0.0028 |
| Saturn | 13929-04-14 15:07 G | 6808626.10 | 6808626.13 | 6808626.18 | 0.0276 | 0.0272 |
| Neptune | 13929-06-05 02:52 G | 6808677.37 | 6808677.62 | 6808677.88 | 0.0089 | 0.0014 |
| Saturn | 13930-04-27 12:43 G | 6809003.89 | 6809004.03 | 6809004.17 | 0.0276 | 0.0227 |
| Neptune | 13930-06-07 08:52 G | 6809044.62 | 6809044.87 | 6809045.12 | 0.0089 | 0.0012 |
| Neptune | 13931-06-10 00:28 G | 6809412.25 | 6809412.52 | 6809412.78 | 0.0089 | 0.0003 |
| Neptune | 13932-06-11 10:04 G | 6809779.67 | 6809779.92 | 6809780.17 | 0.0089 | 0.0006 |
| Neptune | 13933-06-13 21:07 G | 6810147.13 | 6810147.38 | 6810147.65 | 0.0089 | 0.0019 |
| Jupiter | 13934-05-12 01:55 G | 6810479.39 | 6810479.58 | 6810479.77 | 0.0543 | 0.0306 |
| Neptune | 13934-06-16 12:00 G | 6810514.76 | 6810515.00 | 6810515.25 | 0.0089 | 0.0022 |
| Neptune | 13935-06-18 18:57 G | 6810882.05 | 6810882.29 | 6810882.54 | 0.0089 | 0.0035 |

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| Neptune | 13936-06-20 12:43 G | 6811249.81 | 6811250.03 | 6811250.27 | 0.0089 | 0.0038 |
| Neptune | 13937-06-22 17:31 G | 6811617.03 | 6811617.23 | 6811617.45 | 0.0089 | 0.0051 |
| Uranus | 13938-02-19 00:00 G | 6811858.34 | 6811858.50 | 6811858.70 | 0.0133 | 0.0096 |
| Neptune | 13938-06-25 11:31 G | 6811984.79 | 6811984.98 | 6811985.20 | 0.0089 | 0.0054 |
| Uranus | 13939-02-23 13:12 G | 6812227.85 | 6812228.05 | 6812228.28 | 0.0133 | 0.0065 |
| Neptune | 13939-06-27 16:48 G | 6812352.06 | 6812352.20 | 6812352.39 | 0.0089 | 0.0067 |
| Jupiter | 13939-10-22 05:16 G | 6812468.51 | 6812468.72 | 6812468.94 | 0.0483 | 0.0165 |
| Uranus | 13940-02-27 18:43 G | 6812597.02 | 6812597.28 | 6812597.55 | 0.0133 | 0.0012 |
| Neptune | 13940-06-29 07:40 G | 6812719.68 | 6812719.82 | 6812720.01 | 0.0089 | 0.0070 |
| Uranus | 13941-03-03 06:57 G | 6812966.55 | 6812966.79 | 6812967.04 | 0.0133 | 0.0027 |
| Neptune | 13941-07-01 17:02 G | 6813087.13 | 6813087.21 | 6813087.34 | 0.0089 | 0.0081 |
| Uranus | 13942-03-07 12:57 G | 6813335.81 | 6813336.04 | 6813336.27 | 0.0133 | 0.0067 |
| Neptune | 13942-07-04 03:21 G | 6813454.57 | 6813454.64 | 6813454.75 | 0.0089 | 0.0083 |
| Uranus | 13943-03-12 00:00 G | 6813705.41 | 6813705.50 | 6813705.62 | 0.0133 | 0.0119 |
| Saturn | 13944-10-22 08:09 G | 6814295.65 | 6814295.84 | 6814296.03 | 0.0283 | 0.0162 |
| Jupiter | 13946-05-17 04:33 G | 6814867.57 | 6814867.69 | 6814867.82 | 0.0542 | 0.0459 |
| Jupiter | 13951-10-26 13:40 G | 6816855.83 | 6816856.07 | 6816856.31 | 0.0484 | 0.0065 |
| Jupiter | 13957-04-14 01:40 G | 6818852.49 | 6818852.57 | 6818852.67 | 0.0545 | 0.0503 |
| Saturn | 13959-04-21 17:02 G | 6819589.96 | 6819590.21 | 6819590.45 | 0.0275 | 0.0004 |
| Jupiter | 13963-10-30 10:48 G | 6821242.72 | 6821242.95 | 6821243.18 | 0.0484 | 0.0013 |
| Jupiter | 13969-04-19 20:09 G | 6823241.18 | 6823241.34 | 6823241.50 | 0.0545 | 0.0379 |
| Saturn | 13973-10-16 10:04 G | 6824881.68 | 6824881.92 | 6824882.17 | 0.0283 | 0.0083 |
| Jupiter | 13975-11-04 00:14 G | 6825630.29 | 6825630.51 | 6825630.74 | 0.0485 | 0.0131 |
| Uranus | 13980-08-18 20:52 G | 6827380.23 | 6827380.37 | 6827380.54 | 0.0145 | 0.0111 |
| Jupiter | 13981-04-24 20:24 G | 6827629.13 | 6827629.35 | 6827629.57 | 0.0544 | 0.0235 |
| Uranus | 13981-08-23 21:36 G | 6827750.18 | 6827750.40 | 6827750.63 | 0.0145 | 0.0069 |
| Uranus | 13982-08-28 18:14 G | 6828120.02 | 6828120.26 | 6828120.51 | 0.0145 | 0.0001 |
| Uranus | 13983-09-02 21:21 G | 6828490.15 | 6828490.39 | 6828490.64 | 0.0145 | 0.0048 |
| Uranus | 13984-09-06 16:19 G | 6828860.01 | 6828860.18 | 6828860.36 | 0.0145 | 0.0103 |
| Jupiter | 13987-11-07 21:50 G | 6830017.22 | 6830017.41 | 6830017.61 | 0.0485 | 0.0278 |

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| Saturn | 13988-04-15 23:45 G | 6830177.33 | 6830177.49 | 6830177.65 | 0.0276 | 0.0208 |
| Jupiter | 13993-04-30 03:36 G | 6832017.43 | 6832017.65 | 6832017.88 | 0.0544 | 0.0020 |
| Jupiter | 13998-10-13 07:26 G | 6834009.72 | 6834009.81 | 6834009.89 | 0.0484 | 0.0451 |
| Jupiter | 13999-11-12 07:26 G | 6834404.69 | 6834404.81 | 6834404.94 | 0.0486 | 0.0405 |

15TH MILLENNIUM CE

This is a list of transits of Moon in the 15th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Neptune | 14002-11-12 12:00 G | | 6835500.98 | 6835501.00 | 6835501.04 | 0.0088 | 0.0087 | |
| Saturn | 14003-10-24 17:02 G | | 6835847.07 | 6835847.21 | 6835847.37 | 0.0283 | 0.0225 | |
| Neptune | 14003-11-14 22:04 G | | 6835868.29 | 6835868.42 | 6835868.56 | 0.0088 | 0.0075 | |
| Neptune | 14004-11-16 11:31 G | | 6836235.87 | 6836235.98 | 6836236.15 | 0.0088 | 0.0074 | |
| Jupiter | 14005-05-05 18:57 G | | 6836406.07 | 6836406.29 | 6836406.52 | 0.0544 | 0.0159 | |
| Neptune | 14005-11-18 17:45 G | | 6836603.06 | 6836603.24 | 6836603.43 | 0.0088 | 0.0061 | |
| Neptune | 14006-11-21 11:16 G | | 6836970.80 | 6836970.97 | 6836971.18 | 0.0088 | 0.0059 | |
| Neptune | 14007-11-23 15:50 G | | 6837337.94 | 6837338.16 | 6837338.38 | 0.0088 | 0.0045 | |
| Neptune | 14008-11-25 09:21 G | | 6837705.68 | 6837705.89 | 6837706.14 | 0.0088 | 0.0044 | |
| Neptune | 14009-11-27 15:36 G | | 6838072.92 | 6838073.15 | 6838073.39 | 0.0088 | 0.0030 | |
| Jupiter | 14010-10-17 10:04 G | | 6838396.75 | 6838396.92 | 6838397.09 | 0.0483 | 0.0314 | |
| Neptune | 14010-11-30 06:43 G | | 6838440.54 | 6838440.78 | 6838441.05 | 0.0088 | 0.0029 | |
| Jupiter | 14011-11-16 09:50 G | | 6838791.89 | 6838791.91 | 6838791.95 | 0.0487 | 0.0483 | |
| Neptune | 14011-12-02 17:31 G | | 6838807.98 | 6838808.23 | 6838808.48 | 0.0088 | 0.0015 | |
| Neptune | 14012-12-04 03:36 G | | 6839175.38 | 6839175.65 | 6839175.91 | 0.0088 | 0.0013 | |

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| Neptune | 14013-12-06 18:43 G | 6839543.02 | 6839543.28 | 6839543.53 | 0.0088 | 0.0001 |
| Neptune | 14014-12-09 00:43 G | 6839910.27 | 6839910.53 | 6839910.79 | 0.0088 | 0.0002 |
| Neptune | 14015-12-11 18:43 G | 6840278.04 | 6840278.28 | 6840278.55 | 0.0088 | 0.0017 |
| Neptune | 14016-12-12 23:31 G | 6840645.23 | 6840645.48 | 6840645.74 | 0.0088 | 0.0017 |
| Jupiter | 14017-05-10 23:02 G | 6840794.26 | 6840794.46 | 6840794.66 | 0.0543 | 0.0279 |
| Neptune | 14017-12-15 17:45 G | 6841013.00 | 6841013.24 | 6841013.50 | 0.0088 | 0.0032 |
| Saturn | 14018-04-23 03:36 G | 6841141.42 | 6841141.65 | 6841141.88 | 0.0276 | 0.0064 |
| Neptune | 14018-12-18 00:28 G | 6841380.29 | 6841380.52 | 6841380.76 | 0.0088 | 0.0032 |
| Neptune | 14019-12-20 16:04 G | 6841747.95 | 6841748.17 | 6841748.40 | 0.0088 | 0.0048 |
| Neptune | 14020-12-22 02:24 G | 6842115.41 | 6842115.60 | 6842115.83 | 0.0088 | 0.0048 |
| Neptune | 14021-12-24 13:12 G | 6842482.87 | 6842483.05 | 6842483.25 | 0.0088 | 0.0063 |
| Uranus | 14022-02-19 08:52 G | 6842539.73 | 6842539.87 | 6842540.04 | 0.0133 | 0.0107 |
| Jupiter | 14022-10-21 17:16 G | 6842784.00 | 6842784.22 | 6842784.44 | 0.0484 | 0.0174 |
| Neptune | 14022-12-27 04:33 G | 6842850.53 | 6842850.69 | 6842850.89 | 0.0088 | 0.0063 |
| Uranus | 14023-02-23 23:02 G | 6842909.24 | 6842909.46 | 6842909.70 | 0.0133 | 0.0051 |
| Neptune | 14023-12-29 11:02 G | 6843217.85 | 6843217.96 | 6843218.10 | 0.0088 | 0.0078 |
| Uranus | 14024-02-28 02:52 G | 6843278.37 | 6843278.62 | 6843278.89 | 0.0133 | 0.0017 |
| Neptune | 14024-12-31 06:14 G | 6843585.64 | 6843585.76 | 6843585.89 | 0.0088 | 0.0077 |
| Uranus | 14025-03-03 16:04 G | 6843647.93 | 6843648.17 | 6843648.42 | 0.0133 | 0.0031 |
| Uranus | 14026-03-07 20:09 G | 6844017.14 | 6844017.34 | 6844017.58 | 0.0133 | 0.0075 |
| Uranus | 14027-03-12 08:38 G | 6844386.75 | 6844386.86 | 6844387.01 | 0.0133 | 0.0112 |
| Jupiter | 14029-05-16 13:40 G | 6845182.95 | 6845183.07 | 6845183.20 | 0.0542 | 0.0443 |
| Saturn | 14032-10-17 15:21 G | 6846432.89 | 6846433.14 | 6846433.38 | 0.0283 | 0.0019 |
| Jupiter | 14034-10-25 15:21 G | 6847170.91 | 6847171.14 | 6847171.37 | 0.0484 | 0.0084 |
| Jupiter | 14040-04-13 05:45 G | 6849167.70 | 6849167.74 | 6849167.78 | 0.0544 | 0.0532 |
| Jupiter | 14046-10-30 03:21 G | 6851558.41 | 6851558.64 | 6851558.88 | 0.0484 | 0.0006 |
| Saturn | 14047-04-18 03:07 G | 6851728.43 | 6851728.63 | 6851728.86 | 0.0276 | 0.0145 |
| Mars | 14051-08-06 00:57 G | 6853299.41 | 6853299.54 | 6853299.68 | 0.1672 | 0.1166 |
| Jupiter | 14052-04-18 07:26 G | 6853555.66 | 6853555.81 | 6853555.97 | 0.0544 | 0.0415 |
| Pluto | 14058-06-23 10:04 G | 6855812.68 | 6855812.92 | 6855813.17 | 0.0064 | 0.0014 |

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| Jupiter | 14058-11-02 22:33 G | 6855945.21 | 6855945.44 | 6855945.67 | 0.0484 | 0.0110 |
| Saturn | 14061-10-12 17:16 G | 6857020.09 | 6857020.22 | 6857020.35 | 0.0283 | 0.0237 |
| Jupiter | 14064-04-23 18:57 G | 6857944.09 | 6857944.29 | 6857944.48 | 0.0545 | 0.0265 |
| Uranus | 14064-08-19 06:57 G | 6858061.67 | 6858061.79 | 6858061.94 | 0.0145 | 0.0121 |
| Uranus | 14065-08-24 06:00 G | 6858431.51 | 6858431.75 | 6858432.00 | 0.0145 | 0.0052 |
| Uranus | 14066-08-29 04:04 G | 6858801.43 | 6858801.67 | 6858801.91 | 0.0145 | 0.0010 |
| Uranus | 14067-09-03 05:45 G | 6859171.51 | 6859171.74 | 6859172.00 | 0.0145 | 0.0055 |
| Uranus | 14068-09-07 01:40 G | 6859541.43 | 6859541.57 | 6859541.75 | 0.0145 | 0.0111 |
| Jupiter | 14070-11-07 09:36 G | 6860332.71 | 6860332.90 | 6860333.09 | 0.0485 | 0.0264 |
| Jupiter | 14076-04-29 10:48 G | 6862332.71 | 6862332.95 | 6862333.18 | 0.0545 | 0.0043 |
| Mars | 14077-02-06 15:07 G | 6862615.95 | 6862616.13 | 6862616.31 | 0.1871 | 0.0755 |
| Saturn | 14077-04-24 16:33 G | 6862692.98 | 6862693.19 | 6862693.41 | 0.0276 | 0.0131 |
| Jupiter | 14081-10-12 12:43 G | 6864324.97 | 6864325.03 | 6864325.09 | 0.0484 | 0.0465 |
| Jupiter | 14082-11-11 10:33 G | 6864719.80 | 6864719.94 | 6864720.10 | 0.0486 | 0.0382 |
| Neptune | 14084-05-14 17:16 G | 6865270.18 | 6865270.22 | 6865270.31 | 0.0089 | 0.0087 |
| Neptune | 14085-05-17 08:52 G | 6865637.79 | 6865637.87 | 6865637.99 | 0.0089 | 0.0083 |
| Neptune | 14086-05-19 20:38 G | 6866005.24 | 6866005.36 | 6866005.53 | 0.0089 | 0.0073 |
| Neptune | 14087-05-22 07:26 G | 6866372.65 | 6866372.81 | 6866372.99 | 0.0089 | 0.0068 |
| Jupiter | 14088-05-04 14:09 G | 6866720.87 | 6866721.09 | 6866721.32 | 0.0544 | 0.0132 |
| Neptune | 14088-05-23 23:45 G | 6866740.30 | 6866740.49 | 6866740.69 | 0.0089 | 0.0056 |
| Neptune | 14089-05-26 05:45 G | 6867107.55 | 6867107.74 | 6867107.97 | 0.0089 | 0.0053 |
| Neptune | 14090-05-29 01:12 G | 6867475.33 | 6867475.55 | 6867475.78 | 0.0089 | 0.0040 |
| Neptune | 14091-05-31 06:00 G | 6867842.53 | 6867842.75 | 6867842.99 | 0.0089 | 0.0038 |
| Saturn | 14091-10-20 04:04 G | 6867984.44 | 6867984.67 | 6867984.90 | 0.0283 | 0.0048 |
| Neptune | 14092-06-02 00:28 G | 6868210.28 | 6868210.52 | 6868210.78 | 0.0089 | 0.0025 |
| Neptune | 14093-06-04 07:26 G | 6868577.58 | 6868577.81 | 6868578.06 | 0.0089 | 0.0022 |
| Jupiter | 14093-10-16 21:36 G | 6868712.22 | 6868712.40 | 6868712.58 | 0.0484 | 0.0316 |
| Neptune | 14094-06-06 22:33 G | 6868945.18 | 6868945.44 | 6868945.71 | 0.0089 | 0.0008 |
| Jupiter | 14094-11-15 17:45 G | 6869107.18 | 6869107.24 | 6869107.32 | 0.0487 | 0.0463 |
| Neptune | 14095-06-09 09:36 G | 6869312.66 | 6869312.90 | 6869313.15 | 0.0089 | 0.0007 |

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| Neptune | 14096-06-10 19:40 G | 6869680.06 | 6869680.32 | 6869680.59 | 0.0089 | 0.0008 |
| Neptune | 14097-06-13 11:02 G | 6870047.72 | 6870047.96 | 6870048.21 | 0.0089 | 0.0009 |
| Neptune | 14098-06-15 16:33 G | 6870414.96 | 6870415.19 | 6870415.46 | 0.0089 | 0.0024 |
| Neptune | 14099-06-18 11:02 G | 6870782.72 | 6870782.96 | 6870783.21 | 0.0089 | 0.0024 |
| Jupiter | 14100-05-11 00:43 G | 6871109.33 | 6871109.53 | 6871109.74 | 0.0543 | 0.0240 |
| Neptune | 14100-06-20 15:36 G | 6871149.93 | 6871150.15 | 6871150.39 | 0.0089 | 0.0039 |
| Neptune | 14101-06-23 09:21 G | 6871517.67 | 6871517.89 | 6871518.14 | 0.0089 | 0.0040 |
| Neptune | 14102-06-25 15:50 G | 6871884.98 | 6871885.16 | 6871885.37 | 0.0089 | 0.0055 |
| Neptune | 14103-06-28 06:43 G | 6872252.58 | 6872252.78 | 6872252.99 | 0.0089 | 0.0055 |
| Neptune | 14104-06-29 17:31 G | 6872620.09 | 6872620.23 | 6872620.40 | 0.0089 | 0.0069 |
| Neptune | 14105-07-02 02:52 G | 6872987.47 | 6872987.62 | 6872987.80 | 0.0089 | 0.0069 |
| Jupiter | 14105-10-21 18:00 G | 6873099.04 | 6873099.25 | 6873099.46 | 0.0484 | 0.0190 |
| Uranus | 14106-02-20 17:31 G | 6873221.05 | 6873221.23 | 6873221.43 | 0.0133 | 0.0091 |
| Saturn | 14106-04-20 07:55 G | 6873279.59 | 6873279.83 | 6873280.07 | 0.0276 | 0.0078 |
| Neptune | 14106-07-04 18:14 G | 6873355.19 | 6873355.26 | 6873355.34 | 0.0089 | 0.0084 |
| Uranus | 14107-02-25 08:24 G | 6873590.64 | 6873590.85 | 6873591.08 | 0.0133 | 0.0060 |
| Neptune | 14107-07-06 22:48 G | 6873722.40 | 6873722.45 | 6873722.56 | 0.0089 | 0.0084 |
| Uranus | 14108-02-29 11:45 G | 6873959.73 | 6873959.99 | 6873960.26 | 0.0133 | 0.0007 |
| Uranus | 14109-03-05 02:24 G | 6874329.36 | 6874329.60 | 6874329.85 | 0.0133 | 0.0031 |
| Uranus | 14110-03-09 06:00 G | 6874698.54 | 6874698.75 | 6874698.97 | 0.0133 | 0.0075 |
| Uranus | 14111-03-13 19:26 G | 6875068.24 | 6875068.31 | 6875068.41 | 0.0133 | 0.0124 |
| Jupiter | 14112-05-16 01:55 G | 6875497.42 | 6875497.58 | 6875497.74 | 0.0542 | 0.0403 |
| Jupiter | 14117-10-26 04:33 G | 6877486.46 | 6877486.69 | 6877486.91 | 0.0484 | 0.0108 |
| Saturn | 14120-10-15 00:43 G | 6878571.33 | 6878571.53 | 6878571.73 | 0.0283 | 0.0168 |
| Jupiter | 14129-10-30 00:57 G | 6881873.31 | 6881873.54 | 6881873.78 | 0.0484 | 0.0025 |
| Mars | 14130-08-09 03:21 G | 6882156.47 | 6882156.64 | 6882156.81 | 0.1668 | 0.0469 |
| Jupiter | 14135-04-19 10:19 G | 6883870.81 | 6883870.93 | 6883871.05 | 0.0545 | 0.0453 |
| Saturn | 14136-04-27 01:12 G | 6884244.38 | 6884244.55 | 6884244.73 | 0.0276 | 0.0197 |
| Jupiter | 14141-11-03 10:33 G | 6886260.72 | 6886260.94 | 6886261.16 | 0.0484 | 0.0100 |
| Pluto | 14146-12-22 06:57 G | 6888135.70 | 6888135.79 | 6888135.91 | 0.0080 | 0.0074 |

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| Jupiter | 14147-04-24 23:16 G | 6888259.27 | 6888259.47 | 6888259.68 | 0.0545 | 0.0286 |
| Uranus | 14148-08-20 16:33 G | 6888743.05 | 6888743.19 | 6888743.37 | 0.0145 | 0.0108 |
| Uranus | 14149-08-25 14:38 G | 6889112.89 | 6889113.11 | 6889113.35 | 0.0145 | 0.0065 |
| Uranus | 14150-08-30 14:24 G | 6889482.86 | 6889483.10 | 6889483.35 | 0.0145 | 0.0005 |
| Saturn | 14150-10-22 18:28 G | 6889536.05 | 6889536.27 | 6889536.49 | 0.0283 | 0.0118 |
| Uranus | 14151-09-04 15:21 G | 6889852.90 | 6889853.14 | 6889853.38 | 0.0145 | 0.0052 |
| Uranus | 14152-09-08 12:28 G | 6890222.87 | 6890223.02 | 6890223.19 | 0.0145 | 0.0110 |
| Jupiter | 14153-11-07 12:43 G | 6890647.83 | 6890648.03 | 6890648.24 | 0.0485 | 0.0251 |
| Jupiter | 14159-04-30 00:00 G | 6892647.27 | 6892647.50 | 6892647.73 | 0.0544 | 0.0080 |
| Jupiter | 14164-10-12 23:31 G | 6894640.43 | 6894640.48 | 6894640.52 | 0.0484 | 0.0475 |
| Saturn | 14165-04-21 17:31 G | 6894831.00 | 6894831.23 | 6894831.47 | 0.0277 | 0.0015 |
| Jupiter | 14165-11-11 17:45 G | 6895035.09 | 6895035.24 | 6895035.39 | 0.0486 | 0.0362 |
| Neptune | 14167-11-15 11:31 G | 6895768.87 | 6895768.98 | 6895769.14 | 0.0088 | 0.0075 |
| Neptune | 14168-11-16 16:33 G | 6896136.09 | 6896136.19 | 6896136.35 | 0.0088 | 0.0076 |
| Neptune | 14169-11-19 11:16 G | 6896503.78 | 6896503.97 | 6896504.16 | 0.0088 | 0.0060 |
| Neptune | 14170-11-21 15:21 G | 6896870.96 | 6896871.14 | 6896871.33 | 0.0088 | 0.0061 |
| Jupiter | 14171-05-05 13:40 G | 6897035.84 | 6897036.07 | 6897036.30 | 0.0544 | 0.0087 |
| Neptune | 14171-11-24 08:24 G | 6897238.65 | 6897238.85 | 6897239.09 | 0.0088 | 0.0047 |
| Neptune | 14172-11-25 15:07 G | 6897605.93 | 6897606.13 | 6897606.35 | 0.0088 | 0.0047 |
| Neptune | 14173-11-28 04:48 G | 6897973.45 | 6897973.70 | 6897973.95 | 0.0088 | 0.0032 |
| Neptune | 14174-11-30 15:21 G | 6898340.93 | 6898341.14 | 6898341.39 | 0.0088 | 0.0032 |
| Neptune | 14175-12-03 00:14 G | 6898708.26 | 6898708.51 | 6898708.79 | 0.0088 | 0.0017 |
| Jupiter | 14176-10-16 19:26 G | 6899027.15 | 6899027.31 | 6899027.48 | 0.0484 | 0.0334 |
| Neptune | 14176-12-04 16:33 G | 6899075.95 | 6899076.19 | 6899076.45 | 0.0088 | 0.0017 |
| Jupiter | 14177-11-16 00:00 G | 6899422.40 | 6899422.50 | 6899422.61 | 0.0486 | 0.0431 |
| Neptune | 14177-12-06 22:19 G | 6899443.17 | 6899443.43 | 6899443.70 | 0.0088 | 0.0003 |
| Neptune | 14178-12-09 17:16 G | 6899810.96 | 6899811.22 | 6899811.48 | 0.0088 | 0.0002 |
| Saturn | 14179-10-17 09:36 G | 6900122.67 | 6900122.90 | 6900123.13 | 0.0283 | 0.0096 |
| Neptune | 14179-12-11 22:04 G | 6900178.17 | 6900178.42 | 6900178.67 | 0.0088 | 0.0013 |
| Neptune | 14180-12-13 15:50 G | 6900545.90 | 6900546.16 | 6900546.43 | 0.0088 | 0.0014 |

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| Neptune | 14181-12-15 23:02 G | 6900913.23 | 6900913.46 | 6900913.71 | 0.0088 | 0.0028 |
| Neptune | 14182-12-18 12:57 G | 6901280.80 | 6901281.04 | 6901281.31 | 0.0088 | 0.0030 |
| Jupiter | 14183-05-10 15:21 G | 6901423.92 | 6901424.14 | 6901424.36 | 0.0544 | 0.0199 |
| Neptune | 14183-12-21 00:28 G | 6901648.31 | 6901648.52 | 6901648.75 | 0.0088 | 0.0042 |
| Neptune | 14184-12-22 09:50 G | 6902015.68 | 6902015.91 | 6902016.15 | 0.0088 | 0.0044 |
| Neptune | 14185-12-25 02:09 G | 6902383.42 | 6902383.59 | 6902383.81 | 0.0088 | 0.0057 |
| Neptune | 14186-12-27 07:55 G | 6902750.66 | 6902750.83 | 6902751.05 | 0.0088 | 0.0060 |
| Neptune | 14187-12-30 03:36 G | 6903118.51 | 6903118.65 | 6903118.81 | 0.0088 | 0.0072 |
| Jupiter | 14188-10-21 06:57 G | 6903414.59 | 6903414.79 | 6903415.01 | 0.0484 | 0.0209 |
| Neptune | 14188-12-31 08:09 G | 6903485.73 | 6903485.84 | 6903486.01 | 0.0088 | 0.0075 |
| Uranus | 14189-02-17 00:28 G | 6903533.52 | 6903533.52 | 6903533.52 | 0.0133 | 0.0133 |
| Neptune | 14190-01-03 03:21 G | 6903853.58 | 6903853.64 | 6903853.72 | 0.0088 | 0.0085 |
| Uranus | 14190-02-21 02:24 G | 6903902.46 | 6903902.60 | 6903902.79 | 0.0133 | 0.0103 |
| Neptune | 14191-01-05 11:02 G | 6904220.95 | 6904220.96 | 6904221.00 | 0.0088 | 0.0088 |
| Uranus | 14191-02-25 18:43 G | 6904272.04 | 6904272.28 | 6904272.52 | 0.0133 | 0.0045 |
| Uranus | 14192-02-29 20:52 G | 6904641.11 | 6904641.37 | 6904641.63 | 0.0133 | 0.0013 |
| Uranus | 14193-03-05 12:00 G | 6905010.76 | 6905011.00 | 6905011.24 | 0.0133 | 0.0038 |
| Uranus | 14194-03-09 14:24 G | 6905379.90 | 6905380.10 | 6905380.31 | 0.0133 | 0.0079 |
| Saturn | 14194-04-16 17:02 G | 6905418.08 | 6905418.21 | 6905418.35 | 0.0276 | 0.0230 |
| Uranus | 14195-03-14 04:19 G | 6905749.59 | 6905749.68 | 6905749.82 | 0.0133 | 0.0119 |
| Saturn | 14195-04-29 07:12 G | 6905795.74 | 6905795.80 | 6905795.89 | 0.0276 | 0.0263 |
| Jupiter | 14195-05-16 04:33 G | 6905812.53 | 6905812.69 | 6905812.85 | 0.0543 | 0.0377 |
| Jupiter | 14200-10-26 02:24 G | 6907801.37 | 6907801.60 | 6907801.83 | 0.0484 | 0.0125 |
| Mars | 14209-08-11 23:31 G | 6911013.42 | 6911013.48 | 6911013.54 | 0.1664 | 0.1549 |
| Saturn | 14209-10-25 05:02 G | 6911087.52 | 6911087.71 | 6911087.90 | 0.0283 | 0.0187 |
| Jupiter | 14212-10-30 12:43 G | 6912188.81 | 6912189.03 | 6912189.26 | 0.0484 | 0.0041 |
| Jupiter | 14218-04-19 07:55 G | 6914185.73 | 6914185.83 | 6914185.94 | 0.0544 | 0.0484 |
| Saturn | 14224-04-24 06:28 G | 6916382.54 | 6916382.77 | 6916383.01 | 0.0277 | 0.0053 |
| Jupiter | 14224-11-03 13:26 G | 6916575.83 | 6916576.06 | 6916576.30 | 0.0485 | 0.0088 |
| Jupiter | 14230-04-24 11:31 G | 6918573.80 | 6918573.98 | 6918574.16 | 0.0544 | 0.0328 |

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| Uranus | 14232-08-22 03:07 G | 6919424.49 | 6919424.63 | 6919424.78 | 0.0145 | 0.0115 |
| Uranus | 14233-08-26 23:31 G | 6919794.24 | 6919794.48 | 6919794.73 | 0.0145 | 0.0047 |
| Uranus | 14234-09-01 00:28 G | 6920164.28 | 6920164.52 | 6920164.76 | 0.0145 | 0.0005 |
| Uranus | 14235-09-05 23:45 G | 6920534.26 | 6920534.49 | 6920534.74 | 0.0145 | 0.0062 |
| Uranus | 14236-09-09 22:19 G | 6920904.30 | 6920904.43 | 6920904.59 | 0.0145 | 0.0116 |
| Jupiter | 14236-11-07 16:33 G | 6920962.99 | 6920963.19 | 6920963.39 | 0.0485 | 0.0231 |
| Saturn | 14238-10-19 22:33 G | 6921674.21 | 6921674.44 | 6921674.68 | 0.0283 | 0.0025 |
| Jupiter | 14242-04-30 00:57 G | 6922962.31 | 6922962.54 | 6922962.77 | 0.0545 | 0.0114 |
| Neptune | 14248-05-16 05:02 G | 6925170.64 | 6925170.71 | 6925170.81 | 0.0089 | 0.0085 |
| Jupiter | 14248-11-12 00:28 G | 6925350.35 | 6925350.52 | 6925350.70 | 0.0485 | 0.0335 |
| Neptune | 14249-05-18 17:31 G | 6925538.19 | 6925538.23 | 6925538.32 | 0.0089 | 0.0087 |
| Neptune | 14250-05-21 03:07 G | 6925905.48 | 6925905.63 | 6925905.80 | 0.0089 | 0.0070 |
| Neptune | 14251-05-23 20:09 G | 6926273.21 | 6926273.34 | 6926273.51 | 0.0089 | 0.0072 |
| Neptune | 14252-05-25 02:24 G | 6926640.41 | 6926640.60 | 6926640.82 | 0.0089 | 0.0056 |
| Saturn | 14253-04-18 23:02 G | 6926969.26 | 6926969.46 | 6926969.67 | 0.0276 | 0.0160 |
| Neptune | 14253-05-27 22:04 G | 6927008.22 | 6927008.42 | 6927008.62 | 0.0089 | 0.0057 |
| Jupiter | 14254-05-05 05:16 G | 6927350.49 | 6927350.72 | 6927350.96 | 0.0545 | 0.0051 |
| Neptune | 14254-05-30 03:07 G | 6927375.43 | 6927375.63 | 6927375.87 | 0.0089 | 0.0041 |
| Neptune | 14255-06-01 21:21 G | 6927743.18 | 6927743.39 | 6927743.64 | 0.0089 | 0.0042 |
| Neptune | 14256-06-03 05:45 G | 6928110.51 | 6928110.74 | 6928110.99 | 0.0089 | 0.0026 |
| Neptune | 14257-06-05 19:26 G | 6928478.07 | 6928478.31 | 6928478.58 | 0.0089 | 0.0026 |
| Neptune | 14258-06-08 07:55 G | 6928845.58 | 6928845.83 | 6928846.08 | 0.0089 | 0.0010 |
| Neptune | 14259-06-10 16:48 G | 6929212.94 | 6929213.20 | 6929213.46 | 0.0089 | 0.0011 |
| Jupiter | 14259-10-18 08:52 G | 6929342.71 | 6929342.87 | 6929343.04 | 0.0484 | 0.0344 |
| Neptune | 14260-06-12 09:36 G | 6929580.65 | 6929580.90 | 6929581.15 | 0.0089 | 0.0005 |
| Jupiter | 14260-11-16 00:00 G | 6929737.38 | 6929737.50 | 6929737.62 | 0.0486 | 0.0411 |
| Neptune | 14261-06-14 15:07 G | 6929947.87 | 6929948.13 | 6929948.39 | 0.0089 | 0.0005 |
| Neptune | 14262-06-17 09:36 G | 6930315.65 | 6930315.90 | 6930316.15 | 0.0089 | 0.0020 |
| Neptune | 14263-06-19 14:24 G | 6930682.87 | 6930683.10 | 6930683.36 | 0.0089 | 0.0021 |
| Neptune | 14264-06-21 07:55 G | 6931050.60 | 6931050.83 | 6931051.09 | 0.0089 | 0.0035 |

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| Neptune | 14265-06-23 15:21 G | 6931417.93 | 6931418.14 | 6931418.38 | 0.0089 | 0.0036 |
| Jupiter | 14266-05-10 20:38 G | 6931739.15 | 6931739.36 | 6931739.57 | 0.0544 | 0.0171 |
| Neptune | 14266-06-26 04:33 G | 6931785.49 | 6931785.69 | 6931785.93 | 0.0089 | 0.0049 |
| Neptune | 14267-06-28 16:19 G | 6932153.00 | 6932153.18 | 6932153.40 | 0.0089 | 0.0051 |
| Saturn | 14267-10-14 08:52 G | 6932260.80 | 6932260.87 | 6932260.97 | 0.0283 | 0.0266 |
| Neptune | 14268-06-30 00:57 G | 6932520.37 | 6932520.54 | 6932520.73 | 0.0089 | 0.0064 |
| Saturn | 14268-10-26 12:57 G | 6932638.95 | 6932639.04 | 6932639.15 | 0.0283 | 0.0257 |
| Neptune | 14269-07-02 17:31 G | 6932888.06 | 6932888.23 | 6932888.40 | 0.0089 | 0.0066 |
| Neptune | 14270-07-04 22:04 G | 6933255.32 | 6933255.42 | 6933255.56 | 0.0089 | 0.0078 |
| Neptune | 14271-07-07 16:04 G | 6933623.08 | 6933623.17 | 6933623.31 | 0.0089 | 0.0079 |
| Jupiter | 14271-10-22 05:16 G | 6933729.51 | 6933729.72 | 6933729.94 | 0.0484 | 0.0225 |
| Uranus | 14274-02-22 12:28 G | 6934583.83 | 6934584.02 | 6934584.23 | 0.0133 | 0.0085 |
| Uranus | 14275-02-27 04:19 G | 6934953.46 | 6934953.68 | 6934953.93 | 0.0133 | 0.0055 |
| Uranus | 14276-03-02 06:43 G | 6935322.52 | 6935322.78 | 6935323.04 | 0.0133 | 0.0002 |
| Uranus | 14277-03-06 22:33 G | 6935692.20 | 6935692.44 | 6935692.69 | 0.0133 | 0.0036 |
| Uranus | 14278-03-11 00:28 G | 6936061.32 | 6936061.52 | 6936061.73 | 0.0133 | 0.0082 |
| Jupiter | 14278-05-16 01:55 G | 6936127.40 | 6936127.58 | 6936127.77 | 0.0543 | 0.0341 |
| Uranus | 14279-03-15 15:36 G | 6936431.11 | 6936431.15 | 6936431.22 | 0.0133 | 0.0130 |
| Saturn | 14283-04-26 17:31 G | 6937934.01 | 6937934.23 | 6937934.45 | 0.0277 | 0.0118 |
| Jupiter | 14283-10-26 13:55 G | 6938116.87 | 6938117.08 | 6938117.30 | 0.0484 | 0.0150 |
| Jupiter | 14295-10-30 14:24 G | 6942503.86 | 6942504.10 | 6942504.34 | 0.0484 | 0.0064 |
| Saturn | 14297-10-21 13:55 G | 6943225.84 | 6943226.08 | 6943226.31 | 0.0283 | 0.0046 |
| Jupiter | 14301-04-18 21:36 G | 6944500.34 | 6944500.40 | 6944500.46 | 0.0544 | 0.0522 |
| Pluto | 14304-06-27 13:40 G | 6945665.80 | 6945666.07 | 6945666.33 | 0.0064 | 0.0001 |
| Jupiter | 14307-11-04 18:28 G | 6946891.05 | 6946891.27 | 6946891.49 | 0.0484 | 0.0073 |
| Saturn | 14312-04-21 06:57 G | 6948520.56 | 6948520.79 | 6948521.02 | 0.0276 | 0.0092 |
| Jupiter | 14313-04-24 14:24 G | 6948888.92 | 6948889.10 | 6948889.28 | 0.0545 | 0.0354 |
| Uranus | 14316-08-23 13:12 G | 6950105.90 | 6950106.05 | 6950106.24 | 0.0145 | 0.0103 |
| Uranus | 14317-08-28 09:07 G | 6950475.65 | 6950475.88 | 6950476.12 | 0.0145 | 0.0059 |
| Uranus | 14318-09-02 11:45 G | 6950845.74 | 6950845.99 | 6950846.23 | 0.0145 | 0.0012 |

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| Uranus | 14319-09-07 09:50 G | 6951215.67 | 6951215.91 | 6951216.15 | 0.0145 | 0.0058 |
| Jupiter | 14319-11-09 01:12 G | 6951278.34 | 6951278.55 | 6951278.77 | 0.0484 | 0.0214 |
| Uranus | 14320-09-11 09:21 G | 6951585.77 | 6951585.89 | 6951586.05 | 0.0145 | 0.0119 |
| Jupiter | 14325-04-29 19:40 G | 6953277.09 | 6953277.32 | 6953277.55 | 0.0545 | 0.0135 |
| Saturn | 14326-10-16 15:21 G | 6953811.97 | 6953812.14 | 6953812.33 | 0.0283 | 0.0195 |
| Neptune | 14330-11-14 10:33 G | 6955301.91 | 6955301.94 | 6955302.04 | 0.0088 | 0.0085 |
| Jupiter | 14331-11-13 01:12 G | 6955665.39 | 6955665.55 | 6955665.73 | 0.0485 | 0.0317 |
| Neptune | 14331-11-16 15:21 G | 6955669.06 | 6955669.14 | 6955669.27 | 0.0088 | 0.0080 |
| Neptune | 14332-11-18 09:36 G | 6956036.76 | 6956036.90 | 6956037.07 | 0.0088 | 0.0070 |
| Neptune | 14333-11-20 14:09 G | 6956403.94 | 6956404.09 | 6956404.26 | 0.0088 | 0.0067 |
| Neptune | 14334-11-23 06:28 G | 6956771.59 | 6956771.77 | 6956771.99 | 0.0088 | 0.0057 |
| Mars | 14335-08-09 16:33 G | 6957031.01 | 6957031.19 | 6957031.37 | 0.1678 | 0.0625 |
| Neptune | 14335-11-25 13:55 G | 6957138.89 | 6957139.08 | 6957139.29 | 0.0088 | 0.0054 |
| Neptune | 14336-11-27 02:24 G | 6957506.38 | 6957506.60 | 6957506.85 | 0.0088 | 0.0043 |
| Jupiter | 14337-05-05 09:50 G | 6957665.68 | 6957665.91 | 6957666.13 | 0.0544 | 0.0019 |
| Neptune | 14337-11-29 15:21 G | 6957873.92 | 6957874.14 | 6957874.37 | 0.0088 | 0.0039 |
| Neptune | 14338-12-01 23:02 G | 6958241.21 | 6958241.46 | 6958241.72 | 0.0088 | 0.0028 |
| Neptune | 14339-12-04 15:21 G | 6958608.91 | 6958609.14 | 6958609.40 | 0.0088 | 0.0026 |
| Neptune | 14340-12-05 20:09 G | 6958976.09 | 6958976.34 | 6958976.60 | 0.0088 | 0.0014 |
| Neptune | 14341-12-08 14:38 G | 6959343.86 | 6959344.11 | 6959344.38 | 0.0088 | 0.0012 |
| Saturn | 14342-04-28 22:04 G | 6959485.23 | 6959485.42 | 6959485.62 | 0.0276 | 0.0181 |
| Jupiter | 14342-10-18 07:12 G | 6959657.65 | 6959657.80 | 6959657.96 | 0.0484 | 0.0363 |
| Neptune | 14342-12-10 19:40 G | 6959711.07 | 6959711.32 | 6959711.58 | 0.0088 | 0.0001 |
| Jupiter | 14343-11-17 12:43 G | 6960052.90 | 6960053.03 | 6960053.18 | 0.0486 | 0.0385 |
| Neptune | 14343-12-13 12:28 G | 6960078.75 | 6960079.02 | 6960079.28 | 0.0088 | 0.0003 |
| Neptune | 14344-12-14 20:24 G | 6960446.11 | 6960446.35 | 6960446.61 | 0.0088 | 0.0017 |
| Neptune | 14345-12-17 09:21 G | 6960813.64 | 6960813.89 | 6960814.16 | 0.0088 | 0.0018 |
| Neptune | 14346-12-19 22:48 G | 6961181.22 | 6961181.45 | 6961181.69 | 0.0088 | 0.0030 |
| Neptune | 14347-12-22 06:43 G | 6961548.55 | 6961548.78 | 6961549.05 | 0.0088 | 0.0032 |
| Neptune | 14348-12-24 00:14 G | 6961916.30 | 6961916.51 | 6961916.74 | 0.0088 | 0.0046 |

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| Jupiter | 14349-05-10 14:24 G | 6962053.87 | 6962054.10 | 6962054.34 | 0.0544 | 0.0134 |
| Neptune | 14349-12-26 05:02 G | 6962283.51 | 6962283.71 | 6962283.95 | 0.0088 | 0.0047 |
| Neptune | 14350-12-29 00:14 G | 6962651.33 | 6962651.51 | 6962651.71 | 0.0088 | 0.0061 |
| Neptune | 14351-12-31 05:31 G | 6963018.55 | 6963018.73 | 6963018.92 | 0.0088 | 0.0061 |
| Neptune | 14353-01-01 22:19 G | 6963386.31 | 6963386.43 | 6963386.60 | 0.0088 | 0.0074 |
| Neptune | 14354-01-04 06:57 G | 6963753.68 | 6963753.79 | 6963753.95 | 0.0088 | 0.0074 |
| Jupiter | 14354-10-22 16:19 G | 6964044.99 | 6964045.18 | 6964045.38 | 0.0484 | 0.0251 |
| Neptune | 14355-01-06 20:24 G | 6964121.34 | 6964121.35 | 6964121.39 | 0.0088 | 0.0088 |
| Neptune | 14356-01-09 10:04 G | 6964488.92 | 6964488.92 | 6964488.96 | 0.0088 | 0.0088 |
| Saturn | 14356-10-24 01:55 G | 6964777.35 | 6964777.58 | 6964777.80 | 0.0283 | 0.0114 |
| Uranus | 14357-02-19 20:38 G | 6964896.30 | 6964896.36 | 6964896.44 | 0.0133 | 0.0128 |
| Uranus | 14358-02-23 22:33 G | 6965265.27 | 6965265.44 | 6965265.63 | 0.0133 | 0.0096 |
| Uranus | 14359-02-28 15:07 G | 6965634.89 | 6965635.13 | 6965635.38 | 0.0133 | 0.0038 |
| Uranus | 14360-03-03 17:02 G | 6966003.95 | 6966004.21 | 6966004.46 | 0.0133 | 0.0007 |
| Mars | 14361-02-09 17:45 G | 6966347.08 | 6966347.24 | 6966347.41 | 0.1863 | 0.0893 |
| Uranus | 14361-03-08 08:38 G | 6966373.63 | 6966373.86 | 6966374.11 | 0.0133 | 0.0046 |
| Jupiter | 14361-05-15 17:45 G | 6966442.06 | 6966442.24 | 6966442.42 | 0.0544 | 0.0309 |
| Uranus | 14362-03-12 10:04 G | 6966742.72 | 6966742.92 | 6966743.12 | 0.0133 | 0.0085 |
| Uranus | 14363-03-17 00:57 G | 6967112.48 | 6967112.54 | 6967112.63 | 0.0133 | 0.0127 |
| Jupiter | 14366-10-26 18:28 G | 6968432.04 | 6968432.27 | 6968432.50 | 0.0484 | 0.0174 |
| Saturn | 14371-04-23 19:12 G | 6970072.06 | 6970072.30 | 6970072.54 | 0.0275 | 0.0027 |
| Jupiter | 14373-05-21 09:21 G | 6970830.82 | 6970830.89 | 6970830.96 | 0.0543 | 0.0516 |
| Jupiter | 14378-10-30 20:38 G | 6972819.13 | 6972819.36 | 6972819.58 | 0.0484 | 0.0081 |
| Jupiter | 14384-04-18 04:33 G | 6974815.68 | 6974815.69 | 6974815.71 | 0.0544 | 0.0543 |
| Saturn | 14385-10-17 23:31 G | 6975363.27 | 6975363.48 | 6975363.70 | 0.0283 | 0.0129 |
| Jupiter | 14390-11-04 04:48 G | 6977206.46 | 6977206.70 | 6977206.94 | 0.0484 | 0.0061 |
| Pluto | 14392-12-25 16:04 G | 6977988.97 | 6977989.17 | 6977989.38 | 0.0080 | 0.0046 |
| Jupiter | 14396-04-23 08:38 G | 6979203.69 | 6979203.86 | 6979204.03 | 0.0544 | 0.0377 |
| Saturn | 14400-04-17 08:52 G | 6980658.77 | 6980658.87 | 6980658.99 | 0.0276 | 0.0247 |
| Uranus | 14400-08-24 00:14 G | 6980787.36 | 6980787.51 | 6980787.68 | 0.0145 | 0.0108 |

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| Saturn | 14401-04-30 00:57 G | 6981036.43 | 6981036.54 | 6981036.67 | 0.0276 | 0.0242 |
| Uranus | 14401-08-28 18:28 G | 6981157.03 | 6981157.27 | 6981157.53 | 0.0145 | 0.0041 |
| Uranus | 14402-09-02 22:04 G | 6981527.17 | 6981527.42 | 6981527.66 | 0.0145 | 0.0002 |
| Jupiter | 14402-11-08 02:52 G | 6981593.41 | 6981593.62 | 6981593.83 | 0.0485 | 0.0196 |
| Uranus | 14403-09-07 18:43 G | 6981897.06 | 6981897.28 | 6981897.51 | 0.0145 | 0.0071 |
| Uranus | 14404-09-11 19:40 G | 6982267.21 | 6982267.32 | 6982267.47 | 0.0145 | 0.0123 |
| Jupiter | 14408-04-28 23:16 G | 6983592.26 | 6983592.47 | 6983592.69 | 0.0544 | 0.0163 |
| Neptune | 14412-05-16 15:07 G | 6985071.13 | 6985071.13 | 6985071.16 | 0.0089 | 0.0089 |
| Neptune | 14413-05-18 23:31 G | 6985438.39 | 6985438.48 | 6985438.61 | 0.0089 | 0.0082 |
| Neptune | 14414-05-21 18:00 G | 6985806.12 | 6985806.25 | 6985806.38 | 0.0089 | 0.0076 |
| Mars | 14414-08-12 06:28 G | 6985888.62 | 6985888.77 | 6985888.92 | 0.1673 | 0.1087 |
| Jupiter | 14414-11-12 14:09 G | 6985980.91 | 6985981.09 | 6985981.28 | 0.0485 | 0.0286 |
| Neptune | 14415-05-23 22:48 G | 6986173.31 | 6986173.45 | 6986173.65 | 0.0089 | 0.0069 |
| Saturn | 14415-10-26 05:16 G | 6986328.52 | 6986328.72 | 6986328.92 | 0.0283 | 0.0174 |
| Neptune | 14416-05-25 18:14 G | 6986541.10 | 6986541.26 | 6986541.46 | 0.0089 | 0.0064 |
| Neptune | 14417-05-28 00:00 G | 6986908.32 | 6986908.50 | 6986908.72 | 0.0089 | 0.0054 |
| Neptune | 14418-05-30 17:02 G | 6987276.01 | 6987276.21 | 6987276.45 | 0.0089 | 0.0048 |
| Neptune | 14419-06-02 02:24 G | 6987643.38 | 6987643.60 | 6987643.83 | 0.0089 | 0.0038 |
| Jupiter | 14420-05-04 00:00 G | 6987980.26 | 6987980.50 | 6987980.74 | 0.0545 | 0.0020 |
| Neptune | 14420-06-03 14:52 G | 6988010.89 | 6988011.12 | 6988011.39 | 0.0089 | 0.0034 |
| Neptune | 14421-06-06 05:16 G | 6988378.49 | 6988378.72 | 6988378.97 | 0.0089 | 0.0024 |
| Neptune | 14422-06-08 13:26 G | 6988745.82 | 6988746.06 | 6988746.33 | 0.0089 | 0.0020 |
| Neptune | 14423-06-11 07:12 G | 6989113.56 | 6989113.80 | 6989114.06 | 0.0089 | 0.0009 |
| Neptune | 14424-06-12 12:28 G | 6989480.77 | 6989481.02 | 6989481.28 | 0.0089 | 0.0004 |
| Neptune | 14425-06-15 07:12 G | 6989848.55 | 6989848.80 | 6989849.06 | 0.0089 | 0.0008 |
| Jupiter | 14425-10-17 21:36 G | 6989973.26 | 6989973.40 | 6989973.54 | 0.0484 | 0.0373 |
| Neptune | 14426-06-17 12:28 G | 6990215.77 | 6990216.02 | 6990216.27 | 0.0089 | 0.0011 |
| Jupiter | 14426-11-16 12:28 G | 6990367.87 | 6990368.02 | 6990368.18 | 0.0485 | 0.0360 |
| Neptune | 14427-06-20 05:02 G | 6990583.45 | 6990583.71 | 6990583.97 | 0.0089 | 0.0023 |
| Neptune | 14428-06-21 12:57 G | 6990950.82 | 6990951.04 | 6990951.29 | 0.0089 | 0.0025 |

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| Neptune | 14429-06-24 00:57 G | 6991318.32 | 6991318.54 | 6991318.80 | 0.0089 | 0.0038 |
| Saturn | 14430-04-25 06:28 G | 6991623.53 | 6991623.77 | 6991624.01 | 0.0275 | 0.0036 |
| Neptune | 14430-06-26 14:38 G | 6991685.90 | 6991686.11 | 6991686.35 | 0.0089 | 0.0040 |
| Neptune | 14431-06-28 22:04 G | 6992053.23 | 6992053.42 | 6992053.65 | 0.0089 | 0.0053 |
| Jupiter | 14432-05-09 11:02 G | 6992368.74 | 6992368.96 | 6992369.18 | 0.0545 | 0.0103 |
| Neptune | 14432-06-30 15:21 G | 6992420.96 | 6992421.14 | 6992421.36 | 0.0089 | 0.0054 |
| Neptune | 14433-07-02 19:55 G | 6992788.18 | 6992788.33 | 6992788.52 | 0.0089 | 0.0066 |
| Neptune | 14434-07-05 14:38 G | 6993155.95 | 6993156.11 | 6993156.29 | 0.0089 | 0.0066 |
| Neptune | 14435-07-07 19:26 G | 6993523.23 | 6993523.31 | 6993523.44 | 0.0089 | 0.0080 |
| Neptune | 14436-07-09 11:31 G | 6993890.88 | 6993890.98 | 6993891.11 | 0.0089 | 0.0080 |
| Jupiter | 14437-10-21 22:19 G | 6994360.23 | 6994360.43 | 6994360.64 | 0.0484 | 0.0268 |
| Jupiter | 14438-11-20 23:31 G | 6994755.45 | 6994755.48 | 6994755.52 | 0.0486 | 0.0480 |
| Uranus | 14442-02-24 09:21 G | 6995946.70 | 6995946.89 | 6995947.11 | 0.0133 | 0.0079 |
| Uranus | 14443-03-01 01:26 G | 6996316.33 | 6996316.56 | 6996316.81 | 0.0133 | 0.0048 |
| Uranus | 14444-03-04 03:21 G | 6996685.39 | 6996685.64 | 6996685.90 | 0.0133 | 0.0010 |
| Jupiter | 14444-05-15 03:21 G | 6996757.44 | 6996757.64 | 6996757.83 | 0.0544 | 0.0296 |
| Saturn | 14444-10-19 10:48 G | 6996914.72 | 6996914.95 | 6996915.17 | 0.0283 | 0.0069 |
| Uranus | 14445-03-08 19:12 G | 6997055.06 | 6997055.30 | 6997055.55 | 0.0133 | 0.0043 |
| Uranus | 14446-03-12 20:24 G | 6997424.17 | 6997424.35 | 6997424.54 | 0.0133 | 0.0091 |
| Jupiter | 14449-10-26 00:57 G | 6998747.34 | 6998747.54 | 6998747.75 | 0.0484 | 0.0197 |
| Jupiter | 14456-05-20 04:19 G | 7001145.59 | 7001145.68 | 7001145.78 | 0.0543 | 0.0489 |
| Saturn | 14459-04-19 11:31 G | 7002209.80 | 7002209.98 | 7002210.16 | 0.0276 | 0.0187 |
| Jupiter | 14461-10-30 08:09 G | 7003134.61 | 7003134.84 | 7003135.08 | 0.0484 | 0.0097 |
| Jupiter | 14473-11-03 06:43 G | 7007521.55 | 7007521.78 | 7007522.01 | 0.0484 | 0.0044 |
| Saturn | 14474-10-27 06:00 G | 7007879.62 | 7007879.75 | 7007879.90 | 0.0283 | 0.0230 |
| Jupiter | 14479-04-23 09:07 G | 7009518.73 | 7009518.88 | 7009519.04 | 0.0545 | 0.0404 |
| Uranus | 14484-08-24 11:16 G | 7011468.80 | 7011468.97 | 7011469.17 | 0.0145 | 0.0097 |
| Uranus | 14485-08-29 05:16 G | 7011838.48 | 7011838.72 | 7011838.96 | 0.0145 | 0.0051 |
| Jupiter | 14485-11-07 18:43 G | 7011909.07 | 7011909.28 | 7011909.50 | 0.0484 | 0.0181 |
| Uranus | 14486-09-03 09:50 G | 7012208.67 | 7012208.91 | 7012209.15 | 0.0145 | 0.0021 |

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| Uranus | 14487-09-08 05:16 G | 7012578.49 | 7012578.72 | 7012578.96 | 0.0145 | 0.0065 |
| Uranus | 14488-09-12 07:55 G | 7012948.72 | 7012948.83 | 7012948.94 | 0.0145 | 0.0129 |
| Saturn | 14489-04-26 11:31 G | 7013174.74 | 7013174.98 | 7013175.22 | 0.0275 | 0.0093 |
| Jupiter | 14491-04-28 14:38 G | 7013906.89 | 7013907.11 | 7013907.34 | 0.0545 | 0.0192 |
| Neptune | 14494-11-13 13:40 G | 7015201.97 | 7015202.07 | 7015202.16 | 0.0088 | 0.0081 |
| Neptune | 14495-11-16 07:12 G | 7015569.74 | 7015569.80 | 7015569.88 | 0.0088 | 0.0084 |
| Neptune | 14496-11-17 12:14 G | 7015936.86 | 7015937.01 | 7015937.17 | 0.0088 | 0.0069 |
| Jupiter | 14497-11-11 15:21 G | 7016295.95 | 7016296.14 | 7016296.35 | 0.0484 | 0.0263 |
| Neptune | 14497-11-20 03:50 G | 7016304.52 | 7016304.66 | 7016304.83 | 0.0088 | 0.0071 |
| Neptune | 14498-11-22 12:28 G | 7016671.84 | 7016672.02 | 7016672.23 | 0.0088 | 0.0056 |
| Neptune | 14499-11-24 23:45 G | 7017039.30 | 7017039.49 | 7017039.70 | 0.0088 | 0.0057 |
| Neptune | 14500-11-27 13:12 G | 7017406.83 | 7017407.05 | 7017407.27 | 0.0088 | 0.0042 |
| Neptune | 14501-11-29 19:26 G | 7017774.09 | 7017774.31 | 7017774.55 | 0.0088 | 0.0044 |
| Neptune | 14502-12-02 12:43 G | 7018141.80 | 7018142.03 | 7018142.28 | 0.0088 | 0.0029 |
| Jupiter | 14503-05-05 05:45 G | 7018295.52 | 7018295.74 | 7018295.96 | 0.0545 | 0.0045 |
| Saturn | 14503-10-22 18:14 G | 7018466.02 | 7018466.26 | 7018466.50 | 0.0283 | 0.0011 |
| Neptune | 14503-12-04 17:16 G | 7018508.98 | 7018509.22 | 7018509.47 | 0.0088 | 0.0030 |
| Neptune | 14504-12-06 11:45 G | 7018876.73 | 7018876.99 | 7018877.25 | 0.0088 | 0.0014 |
| Neptune | 14505-12-08 17:02 G | 7019243.96 | 7019244.21 | 7019244.46 | 0.0088 | 0.0015 |
| Neptune | 14506-12-11 08:52 G | 7019611.61 | 7019611.87 | 7019612.14 | 0.0088 | 0.0002 |
| Neptune | 14507-12-13 18:28 G | 7019979.02 | 7019979.27 | 7019979.52 | 0.0088 | 0.0002 |
| Jupiter | 14508-10-18 04:19 G | 7020288.54 | 7020288.68 | 7020288.84 | 0.0484 | 0.0379 |
| Neptune | 14508-12-15 05:45 G | 7020346.48 | 7020346.74 | 7020347.01 | 0.0088 | 0.0013 |
| Jupiter | 14509-11-17 03:07 G | 7020683.47 | 7020683.63 | 7020683.79 | 0.0485 | 0.0344 |
| Neptune | 14509-12-17 19:40 G | 7020714.07 | 7020714.32 | 7020714.57 | 0.0088 | 0.0013 |
| Neptune | 14510-12-20 02:24 G | 7021081.36 | 7021081.60 | 7021081.86 | 0.0088 | 0.0028 |
| Neptune | 14511-12-22 20:24 G | 7021449.12 | 7021449.35 | 7021449.61 | 0.0088 | 0.0028 |
| Neptune | 14512-12-24 01:26 G | 7021816.35 | 7021816.56 | 7021816.80 | 0.0088 | 0.0042 |
| Neptune | 14513-12-26 20:24 G | 7022184.13 | 7022184.35 | 7022184.59 | 0.0088 | 0.0041 |
| Neptune | 14514-12-29 01:55 G | 7022551.40 | 7022551.58 | 7022551.80 | 0.0088 | 0.0056 |

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| Jupiter | 14515-05-10 19:40 G | 7022684.08 | 7022684.32 | 7022684.56 | 0.0544 | 0.0077 |
| Neptune | 14515-12-31 18:43 G | 7022919.08 | 7022919.28 | 7022919.50 | 0.0088 | 0.0056 |
| Neptune | 14517-01-02 04:33 G | 7023286.55 | 7023286.69 | 7023286.86 | 0.0088 | 0.0069 |
| Neptune | 14518-01-04 16:19 G | 7023654.03 | 7023654.18 | 7023654.36 | 0.0088 | 0.0070 |
| Saturn | 14518-04-21 17:31 G | 7023761.03 | 7023761.23 | 7023761.44 | 0.0276 | 0.0132 |
| Neptune | 14519-01-07 06:43 G | 7024021.71 | 7024021.78 | 7024021.88 | 0.0088 | 0.0083 |
| Neptune | 14520-01-09 13:26 G | 7024389.00 | 7024389.06 | 7024389.19 | 0.0088 | 0.0083 |
| Jupiter | 14520-10-22 05:16 G | 7024675.54 | 7024675.72 | 7024675.90 | 0.0484 | 0.0289 |
| Jupiter | 14521-11-21 03:50 G | 7025070.60 | 7025070.66 | 7025070.75 | 0.0486 | 0.0463 |
| Uranus | 14525-02-21 18:14 G | 7026259.16 | 7026259.26 | 7026259.37 | 0.0133 | 0.0122 |
| Uranus | 14526-02-25 20:24 G | 7026628.18 | 7026628.35 | 7026628.56 | 0.0133 | 0.0088 |
| Uranus | 14527-03-02 12:28 G | 7026997.78 | 7026998.02 | 7026998.28 | 0.0133 | 0.0031 |
| Jupiter | 14527-05-15 20:52 G | 7027072.17 | 7027072.37 | 7027072.57 | 0.0544 | 0.0271 |
| Uranus | 14528-03-05 14:38 G | 7027366.86 | 7027367.11 | 7027367.36 | 0.0133 | 0.0001 |
| Uranus | 14529-03-10 05:45 G | 7027736.51 | 7027736.74 | 7027736.98 | 0.0133 | 0.0055 |
| Uranus | 14530-03-14 06:28 G | 7028105.61 | 7028105.77 | 7028105.97 | 0.0133 | 0.0093 |
| Saturn | 14532-10-15 23:31 G | 7029052.36 | 7029052.48 | 7029052.62 | 0.0283 | 0.0239 |
| Jupiter | 14532-10-26 14:24 G | 7029062.89 | 7029063.10 | 7029063.32 | 0.0484 | 0.0215 |
| Saturn | 14533-10-29 10:48 G | 7029430.93 | 7029430.95 | 7029430.98 | 0.0283 | 0.0281 |
| Jupiter | 14539-05-21 07:40 G | 7031460.70 | 7031460.82 | 7031460.94 | 0.0543 | 0.0460 |
| Mars | 14540-08-08 18:28 G | 7031906.14 | 7031906.27 | 7031906.41 | 0.1687 | 0.1105 |
| Jupiter | 14544-10-30 13:12 G | 7033449.83 | 7033450.05 | 7033450.28 | 0.0484 | 0.0107 |
| Saturn | 14548-04-28 12:00 G | 7034725.79 | 7034726.00 | 7034726.22 | 0.0275 | 0.0148 |
| Pluto | 14550-06-30 17:45 G | 7035519.01 | 7035519.24 | 7035519.48 | 0.0064 | 0.0026 |
| Jupiter | 14556-11-03 23:31 G | 7037837.25 | 7037837.48 | 7037837.72 | 0.0484 | 0.0040 |
| Jupiter | 14562-04-23 07:40 G | 7039833.68 | 7039833.82 | 7039833.98 | 0.0545 | 0.0419 |
| Saturn | 14562-10-23 18:57 G | 7040017.04 | 7040017.29 | 7040017.54 | 0.0283 | 0.0041 |
| Uranus | 14568-08-25 21:50 G | 7042150.26 | 7042150.41 | 7042150.61 | 0.0145 | 0.0101 |
| Jupiter | 14568-11-07 21:07 G | 7042224.16 | 7042224.38 | 7042224.61 | 0.0484 | 0.0166 |
| Uranus | 14569-08-30 15:07 G | 7042519.88 | 7042520.13 | 7042520.38 | 0.0145 | 0.0035 |

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| Uranus | 14570-09-04 20:09 G | 7042890.10 | 7042890.34 | 7042890.59 | 0.0145 | 0.0010 |
| Uranus | 14571-09-09 14:38 G | 7043259.91 | 7043260.11 | 7043260.34 | 0.0145 | 0.0081 |
| Uranus | 14572-09-13 18:14 G | 7043630.17 | 7043630.26 | 7043630.39 | 0.0145 | 0.0130 |
| Jupiter | 14574-04-29 00:00 G | 7044222.29 | 7044222.50 | 7044222.71 | 0.0545 | 0.0212 |
| Saturn | 14577-04-23 01:40 G | 7045312.34 | 7045312.57 | 7045312.80 | 0.0275 | 0.0076 |
| Neptune | 14577-05-19 12:43 G | 7045338.93 | 7045339.03 | 7045339.18 | 0.0089 | 0.0079 |
| Neptune | 14578-05-21 18:14 G | 7045706.18 | 7045706.26 | 7045706.39 | 0.0089 | 0.0082 |
| Neptune | 14579-05-24 13:55 G | 7046073.91 | 7046074.08 | 7046074.27 | 0.0089 | 0.0065 |
| Neptune | 14580-05-25 19:55 G | 7046441.20 | 7046441.33 | 7046441.53 | 0.0089 | 0.0068 |
| Jupiter | 14580-11-12 06:57 G | 7046611.60 | 7046611.79 | 7046611.99 | 0.0485 | 0.0243 |
| Neptune | 14581-05-28 12:57 G | 7046808.83 | 7046809.04 | 7046809.26 | 0.0089 | 0.0051 |
| Neptune | 14582-05-30 23:45 G | 7047176.29 | 7047176.49 | 7047176.69 | 0.0089 | 0.0053 |
| Neptune | 14583-06-02 10:48 G | 7047543.73 | 7047543.95 | 7047544.21 | 0.0089 | 0.0038 |
| Neptune | 14584-06-04 01:40 G | 7047911.37 | 7047911.57 | 7047911.82 | 0.0089 | 0.0040 |
| Neptune | 14585-06-06 08:52 G | 7048278.63 | 7048278.87 | 7048279.13 | 0.0089 | 0.0023 |
| Jupiter | 14586-05-04 10:33 G | 7048610.70 | 7048610.94 | 7048611.18 | 0.0545 | 0.0075 |
| Neptune | 14586-06-09 03:07 G | 7048646.40 | 7048646.63 | 7048646.89 | 0.0089 | 0.0025 |
| Neptune | 14587-06-11 08:38 G | 7049013.61 | 7049013.86 | 7049014.12 | 0.0089 | 0.0008 |
| Neptune | 14588-06-13 03:21 G | 7049381.39 | 7049381.64 | 7049381.90 | 0.0089 | 0.0010 |
| Neptune | 14589-06-15 09:36 G | 7049748.65 | 7049748.90 | 7049749.15 | 0.0089 | 0.0006 |
| Neptune | 14590-06-18 01:40 G | 7050116.31 | 7050116.57 | 7050116.84 | 0.0089 | 0.0005 |
| Neptune | 14591-06-20 11:45 G | 7050483.75 | 7050483.99 | 7050484.23 | 0.0089 | 0.0020 |
| Saturn | 14591-10-18 01:40 G | 7050603.40 | 7050603.57 | 7050603.75 | 0.0283 | 0.0191 |
| Jupiter | 14591-10-18 12:14 G | 7050603.88 | 7050604.01 | 7050604.15 | 0.0484 | 0.0389 |
| Neptune | 14592-06-21 22:33 G | 7050851.20 | 7050851.44 | 7050851.71 | 0.0089 | 0.0020 |
| Jupiter | 14592-11-16 09:07 G | 7050998.70 | 7050998.88 | 7050999.06 | 0.0485 | 0.0326 |
| Neptune | 14593-06-24 12:43 G | 7051218.82 | 7051219.03 | 7051219.28 | 0.0089 | 0.0035 |
| Neptune | 14594-06-26 19:26 G | 7051586.07 | 7051586.31 | 7051586.55 | 0.0089 | 0.0033 |
| Neptune | 14595-06-29 12:57 G | 7051953.84 | 7051954.04 | 7051954.27 | 0.0089 | 0.0049 |
| Neptune | 14596-06-30 17:16 G | 7052321.02 | 7052321.22 | 7052321.45 | 0.0089 | 0.0048 |

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| Neptune | 14597-07-03 11:16 G | 7052688.80 | 7052688.97 | 7052689.17 | 0.0089 | 0.0062 |
| Jupiter | 14598-05-09 08:52 G | 7052998.64 | 7052998.87 | 7052999.10 | 0.0545 | 0.0044 |
| Neptune | 14598-07-05 16:48 G | 7053056.05 | 7053056.20 | 7053056.41 | 0.0089 | 0.0063 |
| Neptune | 14599-07-08 08:24 G | 7053423.73 | 7053423.85 | 7053424.00 | 0.0089 | 0.0075 |
| Neptune | 14600-07-10 18:14 G | 7053791.15 | 7053791.26 | 7053791.41 | 0.0089 | 0.0075 |
| Neptune | 14601-07-13 04:19 G | 7054158.67 | 7054158.68 | 7054158.76 | 0.0089 | 0.0088 |
| Neptune | 14602-07-15 18:57 G | 7054526.26 | 7054526.29 | 7054526.35 | 0.0089 | 0.0087 |
| Jupiter | 14603-10-23 22:33 G | 7054991.26 | 7054991.44 | 7054991.63 | 0.0484 | 0.0300 |
| Jupiter | 14604-11-21 16:48 G | 7055386.13 | 7055386.20 | 7055386.27 | 0.0486 | 0.0458 |
| Saturn | 14607-05-01 14:24 G | 7056276.95 | 7056277.10 | 7056277.27 | 0.0275 | 0.0202 |
| Uranus | 14609-02-23 05:16 G | 7056940.67 | 7056940.72 | 7056940.82 | 0.0133 | 0.0128 |
| Uranus | 14610-02-27 08:24 G | 7057309.66 | 7057309.85 | 7057310.08 | 0.0133 | 0.0073 |
| Jupiter | 14610-05-16 02:09 G | 7057387.39 | 7057387.59 | 7057387.80 | 0.0544 | 0.0247 |
| Uranus | 14611-03-03 23:45 G | 7057679.24 | 7057679.49 | 7057679.74 | 0.0133 | 0.0040 |
| Uranus | 14612-03-07 01:55 G | 7058048.33 | 7058048.58 | 7058048.83 | 0.0133 | 0.0018 |
| Uranus | 14613-03-11 16:33 G | 7058417.96 | 7058418.19 | 7058418.44 | 0.0133 | 0.0050 |
| Uranus | 14614-03-15 18:14 G | 7058787.10 | 7058787.26 | 7058787.43 | 0.0133 | 0.0100 |
| Jupiter | 14615-10-27 18:57 G | 7059378.09 | 7059378.29 | 7059378.50 | 0.0483 | 0.0227 |
| Mars | 14619-08-12 17:31 G | 7060763.06 | 7060763.23 | 7060763.41 | 0.1683 | 0.0069 |
| Saturn | 14621-10-25 16:04 G | 7061567.93 | 7061568.17 | 7061568.41 | 0.0283 | 0.0090 |
| Jupiter | 14622-05-21 07:55 G | 7061775.69 | 7061775.83 | 7061775.97 | 0.0544 | 0.0437 |
| Jupiter | 14627-11-01 06:28 G | 7063765.55 | 7063765.77 | 7063766.00 | 0.0483 | 0.0112 |
| Saturn | 14636-04-25 06:28 G | 7066863.53 | 7066863.77 | 7066864.02 | 0.0275 | 0.0022 |
| Pluto | 14638-12-30 10:48 G | 7067842.69 | 7067842.95 | 7067843.21 | 0.0080 | 0.0001 |
| Jupiter | 14639-11-05 02:52 G | 7068152.39 | 7068152.62 | 7068152.86 | 0.0484 | 0.0034 |
| Mars | 14645-02-11 02:38 G | 7070077.41 | 7070077.61 | 7070077.82 | 0.1854 | 0.0721 |
| Jupiter | 14645-04-23 16:48 G | 7070149.07 | 7070149.20 | 7070149.34 | 0.0544 | 0.0434 |
| Saturn | 14650-10-20 05:31 G | 7072154.53 | 7072154.73 | 7072154.94 | 0.0283 | 0.0142 |
| Jupiter | 14651-11-09 13:40 G | 7072539.85 | 7072540.07 | 7072540.29 | 0.0484 | 0.0151 |
| Uranus | 14652-08-27 08:52 G | 7072831.69 | 7072831.87 | 7072832.07 | 0.0145 | 0.0092 |

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| Uranus | 14653-09-01 01:40 G | 7073201.33 | 7073201.57 | 7073201.81 | 0.0145 | 0.0044 |
| Uranus | 14654-09-06 07:40 G | 7073571.58 | 7073571.82 | 7073572.07 | 0.0145 | 0.0028 |
| Uranus | 14655-09-11 01:12 G | 7073941.34 | 7073941.55 | 7073941.79 | 0.0145 | 0.0072 |
| Uranus | 14656-09-15 06:00 G | 7074311.70 | 7074311.75 | 7074311.85 | 0.0145 | 0.0139 |
| Jupiter | 14657-04-28 19:40 G | 7074537.10 | 7074537.32 | 7074537.54 | 0.0545 | 0.0240 |
| Neptune | 14658-11-15 04:48 G | 7075102.69 | 7075102.70 | 7075102.76 | 0.0088 | 0.0087 |
| Neptune | 14659-11-17 09:50 G | 7075469.85 | 7075469.91 | 7075470.04 | 0.0088 | 0.0081 |
| Neptune | 14660-11-19 00:43 G | 7075837.40 | 7075837.53 | 7075837.68 | 0.0088 | 0.0074 |
| Neptune | 14661-11-21 09:50 G | 7076204.76 | 7076204.91 | 7076205.08 | 0.0088 | 0.0067 |
| Neptune | 14662-11-23 19:26 G | 7076572.14 | 7076572.31 | 7076572.52 | 0.0088 | 0.0061 |
| Jupiter | 14663-11-13 15:50 G | 7076926.95 | 7076927.16 | 7076927.38 | 0.0484 | 0.0228 |
| Neptune | 14663-11-26 10:04 G | 7076939.75 | 7076939.92 | 7076940.14 | 0.0088 | 0.0055 |
| Neptune | 14664-11-27 16:19 G | 7077306.97 | 7077307.18 | 7077307.41 | 0.0088 | 0.0049 |
| Saturn | 14665-04-19 22:33 G | 7077450.31 | 7077450.44 | 7077450.59 | 0.0276 | 0.0225 |
| Neptune | 14665-11-30 10:19 G | 7077674.71 | 7077674.93 | 7077675.17 | 0.0088 | 0.0041 |
| Saturn | 14666-05-02 21:07 G | 7077828.29 | 7077828.38 | 7077828.47 | 0.0275 | 0.0254 |
| Neptune | 14666-12-02 14:09 G | 7078041.88 | 7078042.09 | 7078042.35 | 0.0088 | 0.0036 |
| Neptune | 14667-12-05 08:38 G | 7078409.61 | 7078409.86 | 7078410.11 | 0.0088 | 0.0026 |
| Neptune | 14668-12-06 14:24 G | 7078776.86 | 7078777.10 | 7078777.35 | 0.0088 | 0.0022 |
| Jupiter | 14669-05-04 02:09 G | 7078925.37 | 7078925.59 | 7078925.82 | 0.0545 | 0.0111 |
| Neptune | 14669-12-09 04:48 G | 7079144.44 | 7079144.70 | 7079144.97 | 0.0088 | 0.0013 |
| Neptune | 14670-12-11 14:52 G | 7079511.87 | 7079512.12 | 7079512.37 | 0.0088 | 0.0009 |
| Neptune | 14671-12-14 00:43 G | 7079879.26 | 7079879.53 | 7079879.80 | 0.0088 | 0.0001 |
| Neptune | 14672-12-15 16:04 G | 7080246.92 | 7080247.17 | 7080247.42 | 0.0088 | 0.0005 |
| Neptune | 14673-12-17 21:50 G | 7080614.16 | 7080614.41 | 7080614.68 | 0.0088 | 0.0015 |
| Jupiter | 14674-10-19 05:31 G | 7080919.59 | 7080919.73 | 7080919.87 | 0.0484 | 0.0393 |
| Neptune | 14674-12-20 16:19 G | 7080981.94 | 7080982.18 | 7080982.44 | 0.0088 | 0.0019 |
| Jupiter | 14675-11-17 20:38 G | 7081314.19 | 7081314.36 | 7081314.53 | 0.0485 | 0.0316 |
| Neptune | 14675-12-22 20:52 G | 7081349.14 | 7081349.37 | 7081349.63 | 0.0088 | 0.0029 |
| Neptune | 14676-12-24 15:36 G | 7081716.91 | 7081717.15 | 7081717.41 | 0.0088 | 0.0031 |

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| Neptune | 14677-12-26 22:04 G | 7082084.21 | 7082084.42 | 7082084.65 | 0.0088 | 0.0043 |
| Neptune | 14678-12-29 12:57 G | 7082451.83 | 7082452.04 | 7082452.29 | 0.0088 | 0.0045 |
| Neptune | 14679-12-31 23:31 G | 7082819.31 | 7082819.48 | 7082819.70 | 0.0088 | 0.0058 |
| Saturn | 14680-10-26 16:04 G | 7083118.97 | 7083119.17 | 7083119.38 | 0.0283 | 0.0139 |
| Neptune | 14681-01-02 09:50 G | 7083186.73 | 7083186.91 | 7083187.13 | 0.0088 | 0.0059 |
| Jupiter | 14681-05-09 22:04 G | 7083314.19 | 7083314.42 | 7083314.66 | 0.0545 | 0.0026 |
| Neptune | 14682-01-05 01:40 G | 7083554.44 | 7083554.57 | 7083554.75 | 0.0088 | 0.0070 |
| Neptune | 14683-01-07 08:09 G | 7083921.71 | 7083921.84 | 7083922.03 | 0.0088 | 0.0072 |
| Neptune | 14684-01-10 03:36 G | 7084289.57 | 7084289.65 | 7084289.75 | 0.0088 | 0.0083 |
| Neptune | 14685-01-11 08:38 G | 7084656.79 | 7084656.86 | 7084656.96 | 0.0088 | 0.0084 |
| Jupiter | 14686-10-23 02:24 G | 7085306.43 | 7085306.60 | 7085306.78 | 0.0484 | 0.0312 |
| Jupiter | 14687-11-22 04:33 G | 7085701.61 | 7085701.69 | 7085701.78 | 0.0485 | 0.0451 |
| Uranus | 14693-02-23 16:19 G | 7087622.07 | 7087622.18 | 7087622.32 | 0.0133 | 0.0117 |
| Jupiter | 14693-05-15 03:07 G | 7087702.42 | 7087702.63 | 7087702.85 | 0.0544 | 0.0225 |
| Uranus | 14694-02-27 20:09 G | 7087991.15 | 7087991.34 | 7087991.55 | 0.0133 | 0.0081 |
| Uranus | 14695-03-04 10:48 G | 7088360.70 | 7088360.95 | 7088361.21 | 0.0133 | 0.0023 |
| Saturn | 14695-04-27 05:31 G | 7088414.48 | 7088414.73 | 7088414.98 | 0.0275 | 0.0030 |
| Uranus | 14696-03-07 13:40 G | 7088729.82 | 7088730.07 | 7088730.32 | 0.0133 | 0.0008 |
| Uranus | 14697-03-12 03:50 G | 7089099.43 | 7089099.66 | 7089099.89 | 0.0133 | 0.0063 |
| Uranus | 14698-03-16 05:45 G | 7089468.58 | 7089468.74 | 7089468.91 | 0.0133 | 0.0099 |
| Mars | 14698-08-14 21:36 G | 7089620.34 | 7089620.40 | 7089620.47 | 0.1678 | 0.1570 |
| Jupiter | 14698-10-27 12:43 G | 7089693.83 | 7089694.03 | 7089694.24 | 0.0484 | 0.0239 |
| Jupiter | 14705-05-21 16:19 G | 7092091.04 | 7092091.18 | 7092091.33 | 0.0544 | 0.0413 |
| Saturn | 14709-10-22 04:33 G | 7093705.46 | 7093705.69 | 7093705.93 | 0.0283 | 0.0097 |
| Jupiter | 14710-11-01 11:02 G | 7094080.73 | 7094080.96 | 7094081.20 | 0.0484 | 0.0115 |
| Jupiter | 14717-05-26 19:12 G | 7096479.23 | 7096479.30 | 7096479.38 | 0.0543 | 0.0513 |
| Jupiter | 14722-11-05 20:52 G | 7098468.14 | 7098468.37 | 7098468.60 | 0.0484 | 0.0032 |
| Saturn | 14724-04-22 06:00 G | 7099001.57 | 7099001.75 | 7099001.93 | 0.0276 | 0.0173 |
| Jupiter | 14728-04-23 10:48 G | 7100463.82 | 7100463.95 | 7100464.08 | 0.0544 | 0.0458 |
| Jupiter | 14734-11-09 21:36 G | 7102855.17 | 7102855.40 | 7102855.63 | 0.0484 | 0.0136 |

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| Uranus | 14736-08-28 18:57 G | 7103513.12 | 7103513.29 | 7103513.50 | 0.0145 | 0.0094 |
| Uranus | 14737-09-02 11:31 G | 7103882.74 | 7103882.98 | 7103883.23 | 0.0145 | 0.0029 |
| Uranus | 14738-09-07 17:45 G | 7104253.00 | 7104253.24 | 7104253.49 | 0.0145 | 0.0016 |
| Uranus | 14739-09-12 10:48 G | 7104622.76 | 7104622.95 | 7104623.17 | 0.0145 | 0.0088 |
| Saturn | 14739-10-29 21:21 G | 7104670.22 | 7104670.39 | 7104670.58 | 0.0283 | 0.0186 |
| Jupiter | 14740-04-28 21:21 G | 7104852.20 | 7104852.39 | 7104852.59 | 0.0545 | 0.0262 |
| Uranus | 14740-09-16 16:48 G | 7104993.12 | 7104993.20 | 7104993.29 | 0.0145 | 0.0135 |
| Neptune | 14741-05-20 13:26 G | 7105238.98 | 7105239.06 | 7105239.17 | 0.0089 | 0.0083 |
| Neptune | 14742-05-23 08:09 G | 7105606.74 | 7105606.84 | 7105607.00 | 0.0089 | 0.0078 |
| Neptune | 14743-05-25 16:04 G | 7105974.03 | 7105974.17 | 7105974.34 | 0.0089 | 0.0070 |
| Neptune | 14744-05-27 07:12 G | 7106341.63 | 7106341.80 | 7106342.00 | 0.0089 | 0.0064 |
| Neptune | 14745-05-29 18:28 G | 7106709.10 | 7106709.27 | 7106709.48 | 0.0089 | 0.0058 |
| Neptune | 14746-06-01 04:33 G | 7107076.50 | 7107076.69 | 7107076.93 | 0.0089 | 0.0052 |
| Jupiter | 14746-11-14 02:24 G | 7107242.40 | 7107242.60 | 7107242.81 | 0.0484 | 0.0211 |
| Neptune | 14747-06-03 21:21 G | 7107444.18 | 7107444.39 | 7107444.62 | 0.0089 | 0.0044 |
| Neptune | 14748-06-05 03:36 G | 7107811.43 | 7107811.65 | 7107811.90 | 0.0089 | 0.0037 |
| Neptune | 14749-06-07 22:48 G | 7108179.22 | 7108179.45 | 7108179.70 | 0.0089 | 0.0030 |
| Neptune | 14750-06-10 04:19 G | 7108546.43 | 7108546.68 | 7108546.92 | 0.0089 | 0.0022 |
| Neptune | 14751-06-12 22:33 G | 7108914.19 | 7108914.44 | 7108914.70 | 0.0089 | 0.0017 |
| Jupiter | 14752-05-04 17:16 G | 7109240.99 | 7109241.22 | 7109241.44 | 0.0545 | 0.0137 |
| Neptune | 14752-06-14 05:45 G | 7109281.50 | 7109281.74 | 7109282.00 | 0.0089 | 0.0008 |
| Neptune | 14753-06-16 20:38 G | 7109649.10 | 7109649.36 | 7109649.63 | 0.0089 | 0.0003 |
| Saturn | 14754-04-29 05:31 G | 7109965.49 | 7109965.73 | 7109965.97 | 0.0275 | 0.0081 |
| Neptune | 14754-06-19 07:40 G | 7110016.58 | 7110016.82 | 7110017.08 | 0.0089 | 0.0008 |
| Neptune | 14755-06-21 17:45 G | 7110383.98 | 7110384.24 | 7110384.50 | 0.0089 | 0.0012 |
| Neptune | 14756-06-23 09:21 G | 7110751.66 | 7110751.89 | 7110752.14 | 0.0089 | 0.0021 |
| Neptune | 14757-06-25 15:21 G | 7111118.90 | 7111119.14 | 7111119.40 | 0.0089 | 0.0026 |
| Jupiter | 14757-10-19 08:38 G | 7111234.73 | 7111234.86 | 7111234.98 | 0.0484 | 0.0404 |
| Neptune | 14758-06-28 10:04 G | 7111486.69 | 7111486.92 | 7111487.16 | 0.0089 | 0.0035 |
| Jupiter | 14758-11-18 09:36 G | 7111629.72 | 7111629.90 | 7111630.09 | 0.0485 | 0.0305 |

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| Neptune | 14759-06-30 14:38 G | 7111853.88 | 7111854.11 | 7111854.34 | 0.0089 | 0.0038 |
| Neptune | 14760-07-02 08:09 G | 7112221.64 | 7112221.84 | 7112222.07 | 0.0089 | 0.0049 |
| Neptune | 14761-07-04 15:07 G | 7112588.94 | 7112589.13 | 7112589.34 | 0.0089 | 0.0052 |
| Neptune | 14762-07-07 05:02 G | 7112956.53 | 7112956.71 | 7112956.91 | 0.0089 | 0.0062 |
| Neptune | 14763-07-09 15:21 G | 7113324.00 | 7113324.14 | 7113324.33 | 0.0089 | 0.0065 |
| Jupiter | 14764-05-09 19:40 G | 7113629.08 | 7113629.32 | 7113629.56 | 0.0545 | 0.0004 |
| Neptune | 14764-07-11 00:43 G | 7113691.39 | 7113691.53 | 7113691.68 | 0.0089 | 0.0074 |
| Neptune | 14765-07-13 16:04 G | 7114059.07 | 7114059.17 | 7114059.31 | 0.0089 | 0.0077 |
| Neptune | 14766-07-15 21:21 G | 7114426.38 | 7114426.39 | 7114426.46 | 0.0089 | 0.0088 |
| Saturn | 14768-10-22 23:31 G | 7115256.24 | 7115256.48 | 7115256.73 | 0.0283 | 0.0054 |
| Jupiter | 14769-10-23 20:38 G | 7115622.20 | 7115622.36 | 7115622.54 | 0.0484 | 0.0328 |
| Jupiter | 14770-11-22 10:33 G | 7116016.86 | 7116016.94 | 7116017.03 | 0.0485 | 0.0449 |
| Jupiter | 14776-05-15 05:02 G | 7118017.50 | 7118017.71 | 7118017.92 | 0.0544 | 0.0199 |
| Uranus | 14777-02-25 04:33 G | 7118303.58 | 7118303.69 | 7118303.81 | 0.0133 | 0.0119 |
| Uranus | 14778-03-01 08:52 G | 7118672.66 | 7118672.87 | 7118673.10 | 0.0133 | 0.0066 |
| Uranus | 14779-03-05 22:04 G | 7119042.18 | 7119042.42 | 7119042.69 | 0.0133 | 0.0033 |
| Uranus | 14780-03-09 01:40 G | 7119411.32 | 7119411.57 | 7119411.82 | 0.0133 | 0.0025 |
| Uranus | 14781-03-13 14:52 G | 7119780.89 | 7119781.12 | 7119781.37 | 0.0133 | 0.0057 |
| Jupiter | 14781-10-27 18:43 G | 7120009.08 | 7120009.28 | 7120009.49 | 0.0484 | 0.0248 |
| Uranus | 14782-03-17 17:45 G | 7120150.11 | 7120150.24 | 7120150.39 | 0.0133 | 0.0109 |
| Saturn | 14783-04-24 12:00 G | 7120552.78 | 7120553.00 | 7120553.22 | 0.0276 | 0.0119 |
| Jupiter | 14788-05-20 12:00 G | 7122405.83 | 7122406.00 | 7122406.18 | 0.0544 | 0.0378 |
| Jupiter | 14793-11-01 02:24 G | 7124396.38 | 7124396.60 | 7124396.82 | 0.0483 | 0.0119 |
| Pluto | 14795-07-03 19:26 G | 7125006.13 | 7125006.31 | 7125006.50 | 0.0064 | 0.0046 |
| Pluto | 14796-07-04 05:31 G | 7125372.57 | 7125372.73 | 7125372.92 | 0.0064 | 0.0046 |
| Saturn | 14797-10-17 15:50 G | 7125843.13 | 7125843.16 | 7125843.21 | 0.0283 | 0.0278 |
| Saturn | 14798-10-31 01:40 G | 7126221.44 | 7126221.57 | 7126221.71 | 0.0283 | 0.0233 |
| Jupiter | 14800-05-25 19:40 G | 7126794.23 | 7126794.32 | 7126794.42 | 0.0543 | 0.0489 |
| Jupiter | 14805-11-05 04:33 G | 7128783.45 | 7128783.69 | 7128783.93 | 0.0483 | 0.0021 |
| Jupiter | 14811-04-23 16:48 G | 7130779.09 | 7130779.20 | 7130779.31 | 0.0544 | 0.0469 |

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| Saturn | 14813-04-30 12:28 G | 7131516.82 | 7131517.02 | 7131517.24 | 0.0275 | 0.0132 |
| Jupiter | 14817-11-09 07:40 G | 7133170.60 | 7133170.82 | 7133171.04 | 0.0484 | 0.0120 |
| Uranus | 14819-08-25 00:00 G | 7133824.47 | 7133824.50 | 7133824.58 | 0.0145 | 0.0141 |
| Uranus | 14820-08-29 06:28 G | 7134194.57 | 7134194.77 | 7134194.97 | 0.0145 | 0.0087 |
| Uranus | 14821-09-02 22:33 G | 7134564.21 | 7134564.44 | 7134564.69 | 0.0145 | 0.0037 |
| Neptune | 14821-11-13 00:57 G | 7134635.54 | 7134635.54 | 7134635.58 | 0.0088 | 0.0088 |
| Uranus | 14822-09-08 05:31 G | 7134934.49 | 7134934.73 | 7134934.98 | 0.0145 | 0.0035 |
| Jupiter | 14823-04-29 08:52 G | 7135167.67 | 7135167.87 | 7135168.08 | 0.0545 | 0.0277 |
| Uranus | 14823-09-12 22:33 G | 7135304.23 | 7135304.44 | 7135304.66 | 0.0145 | 0.0078 |
| Neptune | 14823-11-17 20:24 G | 7135370.24 | 7135370.35 | 7135370.50 | 0.0088 | 0.0076 |
| Mars | 14824-08-11 19:40 G | 7135638.13 | 7135638.32 | 7135638.51 | 0.1693 | 0.0487 |
| Neptune | 14824-11-19 07:12 G | 7135737.72 | 7135737.80 | 7135737.93 | 0.0088 | 0.0079 |
| Neptune | 14825-11-21 15:50 G | 7136105.00 | 7136105.16 | 7136105.36 | 0.0088 | 0.0064 |
| Neptune | 14826-11-24 07:12 G | 7136472.65 | 7136472.80 | 7136472.98 | 0.0088 | 0.0067 |
| Saturn | 14827-10-25 00:00 G | 7136807.26 | 7136807.50 | 7136807.74 | 0.0283 | 0.0008 |
| Neptune | 14827-11-26 11:45 G | 7136839.80 | 7136839.99 | 7136840.22 | 0.0088 | 0.0052 |
| Neptune | 14828-11-28 06:00 G | 7137207.56 | 7137207.75 | 7137207.96 | 0.0088 | 0.0054 |
| Jupiter | 14829-11-13 16:19 G | 7137557.96 | 7137558.18 | 7137558.41 | 0.0484 | 0.0191 |
| Neptune | 14829-11-30 10:04 G | 7137574.71 | 7137574.92 | 7137575.16 | 0.0088 | 0.0039 |
| Neptune | 14830-12-03 03:07 G | 7137942.41 | 7137942.63 | 7137942.88 | 0.0088 | 0.0041 |
| Neptune | 14831-12-05 10:19 G | 7138309.70 | 7138309.93 | 7138310.18 | 0.0088 | 0.0026 |
| Neptune | 14832-12-06 23:31 G | 7138677.24 | 7138677.48 | 7138677.75 | 0.0088 | 0.0028 |
| Neptune | 14833-12-09 11:31 G | 7139044.74 | 7139044.98 | 7139045.24 | 0.0088 | 0.0013 |
| Neptune | 14834-12-11 20:09 G | 7139412.09 | 7139412.34 | 7139412.61 | 0.0088 | 0.0015 |
| Jupiter | 14835-05-04 05:45 G | 7139555.51 | 7139555.74 | 7139555.96 | 0.0544 | 0.0165 |
| Neptune | 14835-12-14 12:28 G | 7139779.77 | 7139780.02 | 7139780.28 | 0.0088 | 0.0002 |
| Neptune | 14836-12-15 17:31 G | 7140146.97 | 7140147.23 | 7140147.49 | 0.0088 | 0.0001 |
| Neptune | 14837-12-18 11:45 G | 7140514.74 | 7140514.99 | 7140515.25 | 0.0088 | 0.0014 |
| Neptune | 14838-12-20 16:19 G | 7140881.94 | 7140882.18 | 7140882.44 | 0.0088 | 0.0012 |
| Neptune | 14839-12-23 09:36 G | 7141249.66 | 7141249.90 | 7141250.17 | 0.0088 | 0.0028 |

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| Jupiter | 14840-10-19 03:21 G | 7141550.53 | 7141550.64 | 7141550.76 | 0.0485 | 0.0416 |
| Neptune | 14840-12-24 16:48 G | 7141616.98 | 7141617.20 | 7141617.46 | 0.0088 | 0.0026 |
| Jupiter | 14841-11-17 15:36 G | 7141944.98 | 7141945.15 | 7141945.34 | 0.0485 | 0.0298 |
| Neptune | 14841-12-27 06:28 G | 7141984.55 | 7141984.77 | 7141985.03 | 0.0088 | 0.0041 |
| Saturn | 14842-04-25 13:12 G | 7142103.80 | 7142104.05 | 7142104.30 | 0.0276 | 0.0067 |
| Neptune | 14842-12-29 19:26 G | 7142352.09 | 7142352.31 | 7142352.54 | 0.0088 | 0.0039 |
| Neptune | 14844-01-01 04:33 G | 7142719.49 | 7142719.69 | 7142719.91 | 0.0088 | 0.0054 |
| Neptune | 14845-01-02 21:36 G | 7143087.20 | 7143087.40 | 7143087.61 | 0.0088 | 0.0052 |
| Neptune | 14846-01-05 02:52 G | 7143454.46 | 7143454.62 | 7143454.80 | 0.0088 | 0.0067 |
| Neptune | 14847-01-07 22:04 G | 7143822.25 | 7143822.42 | 7143822.60 | 0.0088 | 0.0065 |
| Jupiter | 14847-05-09 21:21 G | 7143944.16 | 7143944.39 | 7143944.62 | 0.0545 | 0.0026 |
| Neptune | 14848-01-10 02:52 G | 7144189.53 | 7144189.62 | 7144189.75 | 0.0088 | 0.0080 |
| Neptune | 14849-01-11 20:24 G | 7144557.25 | 7144557.35 | 7144557.51 | 0.0088 | 0.0078 |
| Jupiter | 14852-10-23 00:14 G | 7145937.36 | 7145937.51 | 7145937.69 | 0.0484 | 0.0348 |
| Jupiter | 14853-11-22 02:38 G | 7146332.51 | 7146332.61 | 7146332.71 | 0.0485 | 0.0438 |
| Saturn | 14856-10-18 20:52 G | 7147394.23 | 7147394.37 | 7147394.53 | 0.0283 | 0.0222 |
| Saturn | 14857-11-01 01:40 G | 7147772.57 | 7147772.57 | 7147772.59 | 0.0283 | 0.0283 |
| Jupiter | 14859-05-15 05:16 G | 7148332.50 | 7148332.72 | 7148332.95 | 0.0545 | 0.0181 |
| Uranus | 14861-02-25 15:50 G | 7148985.02 | 7148985.16 | 7148985.32 | 0.0133 | 0.0110 |
| Uranus | 14862-03-01 21:36 G | 7149354.19 | 7149354.40 | 7149354.61 | 0.0133 | 0.0072 |
| Uranus | 14863-03-06 10:04 G | 7149723.66 | 7149723.92 | 7149724.19 | 0.0133 | 0.0015 |
| Uranus | 14864-03-09 14:38 G | 7150092.86 | 7150093.11 | 7150093.36 | 0.0133 | 0.0016 |
| Jupiter | 14864-10-27 08:24 G | 7150324.66 | 7150324.85 | 7150325.04 | 0.0484 | 0.0261 |
| Uranus | 14865-03-14 03:07 G | 7150462.41 | 7150462.63 | 7150462.85 | 0.0133 | 0.0072 |
| Uranus | 14866-03-18 06:14 G | 7150831.63 | 7150831.76 | 7150831.93 | 0.0133 | 0.0108 |
| Jupiter | 14871-05-20 15:36 G | 7152720.98 | 7152721.15 | 7152721.32 | 0.0544 | 0.0356 |
| Saturn | 14872-05-01 21:36 G | 7153068.23 | 7153068.40 | 7153068.58 | 0.0275 | 0.0186 |
| Jupiter | 14876-10-31 10:04 G | 7154711.68 | 7154711.92 | 7154712.15 | 0.0484 | 0.0127 |
| Jupiter | 14883-05-26 07:12 G | 7157109.68 | 7157109.80 | 7157109.92 | 0.0543 | 0.0463 |
| Pluto | 14885-01-01 19:26 G | 7157696.10 | 7157696.31 | 7157696.57 | 0.0080 | 0.0040 |

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| Saturn | 14886-10-26 06:57 G | 7158358.56 | 7158358.79 | 7158359.03 | 0.0283 | 0.0046 |
| Jupiter | 14888-11-04 13:40 G | 7159098.85 | 7159099.07 | 7159099.30 | 0.0484 | 0.0011 |
| Jupiter | 14894-04-22 18:14 G | 7161094.15 | 7161094.26 | 7161094.37 | 0.0543 | 0.0484 |
| Jupiter | 14900-11-09 21:50 G | 7163486.18 | 7163486.41 | 7163486.65 | 0.0484 | 0.0099 |
| Saturn | 14901-04-27 14:09 G | 7163654.84 | 7163655.09 | 7163655.34 | 0.0276 | 0.0012 |
| Mars | 14903-08-16 04:04 G | 7164495.51 | 7164495.67 | 7164495.83 | 0.1688 | 0.0842 |
| Uranus | 14903-08-26 11:31 G | 7164505.97 | 7164505.98 | 7164506.01 | 0.0145 | 0.0144 |
| Neptune | 14904-05-18 06:43 G | 7164771.73 | 7164771.78 | 7164771.87 | 0.0089 | 0.0086 |
| Uranus | 14904-08-30 16:48 G | 7164876.01 | 7164876.20 | 7164876.42 | 0.0145 | 0.0086 |
| Neptune | 14905-05-21 00:28 G | 7165139.50 | 7165139.52 | 7165139.60 | 0.0089 | 0.0088 |
| Uranus | 14905-09-04 09:50 G | 7165245.66 | 7165245.91 | 7165246.15 | 0.0145 | 0.0023 |
| Jupiter | 14906-04-28 19:26 G | 7165482.12 | 7165482.31 | 7165482.50 | 0.0544 | 0.0307 |
| Neptune | 14906-05-23 09:36 G | 7165506.78 | 7165506.90 | 7165507.06 | 0.0089 | 0.0074 |
| Uranus | 14906-09-09 16:19 G | 7165615.93 | 7165616.18 | 7165616.43 | 0.0145 | 0.0024 |
| Neptune | 14907-05-25 23:31 G | 7165874.37 | 7165874.48 | 7165874.65 | 0.0089 | 0.0076 |
| Uranus | 14907-09-14 09:07 G | 7165985.69 | 7165985.88 | 7165986.07 | 0.0146 | 0.0097 |
| Neptune | 14908-05-27 13:55 G | 7166241.91 | 7166242.08 | 7166242.27 | 0.0089 | 0.0061 |
| Uranus | 14908-09-18 15:36 G | 7166356.13 | 7166356.15 | 7166356.22 | 0.0146 | 0.0143 |
| Neptune | 14909-05-29 23:02 G | 7166609.29 | 7166609.46 | 7166609.67 | 0.0089 | 0.0063 |
| Neptune | 14910-06-01 16:33 G | 7166977.00 | 7166977.19 | 7166977.43 | 0.0089 | 0.0048 |
| Neptune | 14911-06-03 22:19 G | 7167344.23 | 7167344.43 | 7167344.66 | 0.0089 | 0.0050 |
| Neptune | 14912-06-05 17:45 G | 7167712.01 | 7167712.24 | 7167712.49 | 0.0089 | 0.0034 |
| Jupiter | 14912-11-13 18:28 G | 7167873.06 | 7167873.27 | 7167873.49 | 0.0484 | 0.0168 |
| Neptune | 14913-06-07 23:02 G | 7168079.25 | 7168079.46 | 7168079.71 | 0.0089 | 0.0037 |
| Neptune | 14914-06-10 16:48 G | 7168446.95 | 7168447.20 | 7168447.46 | 0.0089 | 0.0021 |
| Neptune | 14915-06-13 00:43 G | 7168814.30 | 7168814.53 | 7168814.78 | 0.0089 | 0.0023 |
| Saturn | 14915-10-21 23:31 G | 7168945.28 | 7168945.48 | 7168945.69 | 0.0283 | 0.0165 |
| Neptune | 14916-06-14 14:24 G | 7169181.84 | 7169182.10 | 7169182.37 | 0.0089 | 0.0007 |
| Neptune | 14917-06-17 03:36 G | 7169549.40 | 7169549.65 | 7169549.89 | 0.0089 | 0.0009 |
| Jupiter | 14918-05-04 13:26 G | 7169870.85 | 7169871.06 | 7169871.28 | 0.0545 | 0.0193 |

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| Neptune | 14918-06-19 12:28 G | 7169916.76 | 7169917.02 | 7169917.29 | 0.0089 | 0.0007 |
| Neptune | 14919-06-22 05:31 G | 7170284.48 | 7170284.73 | 7170284.98 | 0.0089 | 0.0005 |
| Neptune | 14920-06-23 10:48 G | 7170651.71 | 7170651.95 | 7170652.21 | 0.0089 | 0.0021 |
| Neptune | 14921-06-26 05:31 G | 7171019.49 | 7171019.73 | 7171019.99 | 0.0089 | 0.0019 |
| Neptune | 14922-06-28 10:33 G | 7171386.72 | 7171386.94 | 7171387.18 | 0.0089 | 0.0034 |
| Neptune | 14923-07-01 03:21 G | 7171754.41 | 7171754.64 | 7171754.90 | 0.0089 | 0.0033 |
| Jupiter | 14923-10-20 06:00 G | 7171865.65 | 7171865.75 | 7171865.86 | 0.0485 | 0.0433 |
| Neptune | 14924-07-02 10:48 G | 7172121.76 | 7172121.95 | 7172122.18 | 0.0089 | 0.0048 |
| Jupiter | 14924-11-18 06:28 G | 7172260.59 | 7172260.77 | 7172260.97 | 0.0484 | 0.0283 |
| Neptune | 14925-07-05 00:00 G | 7172489.28 | 7172489.50 | 7172489.74 | 0.0089 | 0.0045 |
| Neptune | 14926-07-07 12:43 G | 7172856.85 | 7172857.03 | 7172857.21 | 0.0089 | 0.0060 |
| Neptune | 14927-07-09 20:38 G | 7173224.17 | 7173224.36 | 7173224.57 | 0.0089 | 0.0057 |
| Neptune | 14928-07-11 12:43 G | 7173591.92 | 7173592.03 | 7173592.20 | 0.0089 | 0.0073 |
| Mars | 14929-02-12 10:33 G | 7173807.76 | 7173807.94 | 7173808.12 | 0.1844 | 0.0528 |
| Neptune | 14929-07-13 17:31 G | 7173959.10 | 7173959.23 | 7173959.42 | 0.0089 | 0.0070 |
| Saturn | 14930-04-22 07:55 G | 7174241.70 | 7174241.83 | 7174241.97 | 0.0276 | 0.0227 |
| Jupiter | 14930-05-09 21:21 G | 7174259.15 | 7174259.39 | 7174259.63 | 0.0545 | 0.0045 |
| Neptune | 14930-07-16 12:00 G | 7174326.93 | 7174327.00 | 7174327.09 | 0.0089 | 0.0084 |
| Saturn | 14931-05-05 03:50 G | 7174619.55 | 7174619.66 | 7174619.78 | 0.0275 | 0.0243 |
| Neptune | 14931-07-18 16:19 G | 7174694.11 | 7174694.18 | 7174694.31 | 0.0089 | 0.0082 |
| Jupiter | 14935-10-24 12:14 G | 7176252.87 | 7176253.01 | 7176253.16 | 0.0484 | 0.0369 |
| Jupiter | 14936-11-22 03:07 G | 7176647.51 | 7176647.63 | 7176647.74 | 0.0485 | 0.0421 |
| Jupiter | 14942-05-15 08:09 G | 7178647.63 | 7178647.84 | 7178648.06 | 0.0545 | 0.0168 |
| Uranus | 14945-02-27 04:04 G | 7179666.54 | 7179666.67 | 7179666.85 | 0.0133 | 0.0110 |
| Saturn | 14945-10-28 16:04 G | 7179909.95 | 7179910.17 | 7179910.40 | 0.0283 | 0.0104 |
| Uranus | 14946-03-03 10:48 G | 7180035.74 | 7180035.95 | 7180036.19 | 0.0133 | 0.0058 |
| Uranus | 14947-03-07 21:50 G | 7180405.16 | 7180405.41 | 7180405.68 | 0.0133 | 0.0024 |
| Jupiter | 14947-10-28 15:50 G | 7180639.96 | 7180640.16 | 7180640.36 | 0.0484 | 0.0271 |
| Uranus | 14948-03-11 02:52 G | 7180774.40 | 7180774.62 | 7180774.88 | 0.0133 | 0.0035 |
| Uranus | 14949-03-15 14:24 G | 7181143.88 | 7181144.10 | 7181144.34 | 0.0133 | 0.0066 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Uranus | 14950-03-19 18:57 G | 7181513.21 | 7181513.29 | 7181513.42 | 0.0133 | 0.0120 |
| Jupiter | 14954-05-20 16:48 G | 7183036.02 | 7183036.20 | 7183036.40 | 0.0544 | 0.0323 |
| Jupiter | 14959-11-01 18:00 G | 7185027.03 | 7185027.25 | 7185027.46 | 0.0484 | 0.0138 |
| Saturn | 14960-04-28 19:55 G | 7185206.10 | 7185206.33 | 7185206.57 | 0.0276 | 0.0047 |
| Jupiter | 14966-05-25 16:33 G | 7187424.05 | 7187424.19 | 7187424.33 | 0.0543 | 0.0431 |
| Jupiter | 14971-11-06 00:43 G | 7189414.29 | 7189414.53 | 7189414.77 | 0.0484 | 0.0008 |
| Saturn | 14974-10-23 04:19 G | 7190496.46 | 7190496.68 | 7190496.92 | 0.0283 | 0.0104 |
| Jupiter | 14977-04-22 08:52 G | 7191408.81 | 7191408.87 | 7191408.96 | 0.0544 | 0.0512 |
| Jupiter | 14983-11-09 22:33 G | 7193801.21 | 7193801.44 | 7193801.67 | 0.0484 | 0.0075 |
| Neptune | 14986-11-15 16:33 G | 7194903.17 | 7194903.19 | 7194903.25 | 0.0088 | 0.0087 |
| Uranus | 14987-08-27 00:00 G | 7195187.41 | 7195187.50 | 7195187.61 | 0.0145 | 0.0132 |
| Neptune | 14987-11-18 03:50 G | 7195270.59 | 7195270.66 | 7195270.80 | 0.0088 | 0.0080 |
| Uranus | 14988-08-31 05:02 G | 7195557.50 | 7195557.71 | 7195557.93 | 0.0145 | 0.0079 |
| Neptune | 14988-11-19 10:48 G | 7195637.85 | 7195637.95 | 7195638.11 | 0.0088 | 0.0077 |
| Saturn | 14989-04-23 16:33 G | 7195792.99 | 7195793.19 | 7195793.40 | 0.0276 | 0.0165 |
| Jupiter | 14989-04-28 05:16 G | 7195797.54 | 7195797.72 | 7195797.91 | 0.0545 | 0.0331 |
| Uranus | 14989-09-04 22:04 G | 7195927.18 | 7195927.42 | 7195927.67 | 0.0145 | 0.0027 |
| Neptune | 14989-11-22 03:36 G | 7196005.50 | 7196005.65 | 7196005.81 | 0.0088 | 0.0068 |
| Uranus | 14990-09-10 04:33 G | 7196297.46 | 7196297.69 | 7196297.94 | 0.0145 | 0.0044 |
| Neptune | 14990-11-24 07:40 G | 7196372.66 | 7196372.82 | 7196373.01 | 0.0088 | 0.0064 |
| Uranus | 14991-09-14 21:50 G | 7196667.22 | 7196667.41 | 7196667.62 | 0.0146 | 0.0087 |
| Neptune | 14991-11-27 01:26 G | 7196740.38 | 7196740.56 | 7196740.78 | 0.0088 | 0.0056 |
| Neptune | 14992-11-28 05:31 G | 7197107.55 | 7197107.73 | 7197107.96 | 0.0088 | 0.0052 |
| Neptune | 14993-11-30 22:19 G | 7197475.21 | 7197475.43 | 7197475.67 | 0.0088 | 0.0044 |
| Neptune | 14994-12-03 06:14 G | 7197842.55 | 7197842.76 | 7197843.00 | 0.0088 | 0.0040 |
| Jupiter | 14995-11-14 09:07 G | 7198188.66 | 7198188.88 | 7198189.10 | 0.0484 | 0.0149 |
| Neptune | 14995-12-05 18:00 G | 7198210.01 | 7198210.25 | 7198210.51 | 0.0088 | 0.0032 |
| Neptune | 14996-12-07 06:57 G | 7198577.55 | 7198577.79 | 7198578.03 | 0.0088 | 0.0026 |
| Neptune | 14997-12-09 13:55 G | 7198944.82 | 7198945.08 | 7198945.34 | 0.0088 | 0.0018 |
| Neptune | 14998-12-12 06:57 G | 7199312.55 | 7199312.79 | 7199313.05 | 0.0088 | 0.0013 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 14999-12-14 11:45 G | 7199679.73 | 7199679.99 | 7199680.25 | 0.0088 | 0.0006 |
| Neptune | 15000-12-17 06:00 G | 7200047.49 | 7200047.75 | 7200048.01 | 0.0088 | 0.0001 |

16TH MILLENNIUM CE

This is a list of transits of Moon in the 16th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Jupiter | 15001-05-04 10:19 G | | 7200185.71 | 7200185.93 | 7200186.15 | 0.0545 | 0.0214 | |
| Neptune | 15001-12-19 11:02 G | | 7200414.71 | 7200414.96 | 7200415.22 | 0.0088 | 0.0006 | |
| Neptune | 15002-12-22 03:36 G | | 7200782.39 | 7200782.65 | 7200782.92 | 0.0088 | 0.0013 | |
| Neptune | 15003-12-24 12:28 G | | 7201149.77 | 7201150.02 | 7201150.26 | 0.0088 | 0.0019 | |
| Saturn | 15004-10-30 23:02 G | | 7201461.26 | 7201461.46 | 7201461.67 | 0.0283 | 0.0166 | |
| Neptune | 15004-12-26 00:14 G | | 7201517.26 | 7201517.51 | 7201517.77 | 0.0088 | 0.0026 | |
| Neptune | 15005-12-28 13:26 G | | 7201884.84 | 7201885.06 | 7201885.31 | 0.0088 | 0.0032 | |
| Jupiter | 15006-10-20 16:19 G | | 7202181.11 | 7202181.18 | 7202181.26 | 0.0485 | 0.0454 | |
| Neptune | 15006-12-30 20:52 G | | 7202252.14 | 7202252.37 | 7202252.62 | 0.0088 | 0.0039 | |
| Jupiter | 15007-11-19 06:57 G | | 7202575.59 | 7202575.79 | 7202575.98 | 0.0484 | 0.0267 | |
| Neptune | 15008-01-02 14:24 G | | 7202619.90 | 7202620.10 | 7202620.34 | 0.0088 | 0.0044 | |
| Neptune | 15009-01-03 19:26 G | | 7202987.12 | 7202987.31 | 7202987.54 | 0.0088 | 0.0052 | |
| Neptune | 15010-01-06 14:52 G | | 7203354.93 | 7203355.12 | 7203355.33 | 0.0088 | 0.0057 | |
| Neptune | 15011-01-08 20:24 G | | 7203722.20 | 7203722.35 | 7203722.54 | 0.0088 | 0.0066 | |
| Neptune | 15012-01-11 13:12 G | | 7204089.91 | 7204090.05 | 7204090.25 | 0.0088 | 0.0069 | |
| Neptune | 15013-01-12 22:33 G | | 7204457.35 | 7204457.44 | 7204457.59 | 0.0088 | 0.0078 | |
| Jupiter | 15013-05-09 18:43 G | | 7204574.05 | 7204574.28 | 7204574.50 | 0.0544 | 0.0074 | |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 15014-01-15 11:31 G | 7204824.89 | 7204824.98 | 7204825.11 | 0.0088 | 0.0080 |
| Jupiter | 15018-10-24 18:57 G | 7206568.15 | 7206568.29 | 7206568.44 | 0.0485 | 0.0387 |
| Saturn | 15019-05-02 07:12 G | 7206757.59 | 7206757.80 | 7206758.03 | 0.0277 | 0.0106 |
| Jupiter | 15019-11-23 17:45 G | 7206963.13 | 7206963.24 | 7206963.36 | 0.0485 | 0.0410 |
| Jupiter | 15025-05-15 04:48 G | 7208962.47 | 7208962.70 | 7208962.94 | 0.0544 | 0.0134 |
| Uranus | 15029-02-28 16:19 G | 7210348.02 | 7210348.18 | 7210348.36 | 0.0133 | 0.0102 |
| Uranus | 15030-03-05 00:14 G | 7210717.30 | 7210717.51 | 7210717.74 | 0.0133 | 0.0062 |
| Jupiter | 15030-10-28 20:09 G | 7210955.16 | 7210955.34 | 7210955.52 | 0.0484 | 0.0291 |
| Uranus | 15031-03-09 10:33 G | 7211086.67 | 7211086.94 | 7211087.20 | 0.0133 | 0.0006 |
| Uranus | 15032-03-12 17:02 G | 7211455.97 | 7211456.21 | 7211456.46 | 0.0133 | 0.0026 |
| Uranus | 15033-03-17 03:07 G | 7211825.45 | 7211825.63 | 7211825.86 | 0.0133 | 0.0083 |
| Saturn | 15033-10-25 16:19 G | 7212047.94 | 7212048.18 | 7212048.41 | 0.0283 | 0.0039 |
| Uranus | 15034-03-21 08:52 G | 7212194.77 | 7212194.87 | 7212195.01 | 0.0133 | 0.0117 |
| Jupiter | 15037-05-20 07:12 G | 7213350.61 | 7213350.80 | 7213350.99 | 0.0544 | 0.0293 |
| Pluto | 15041-07-07 00:14 G | 7214859.27 | 7214859.51 | 7214859.77 | 0.0064 | 0.0020 |
| Jupiter | 15042-11-02 04:19 G | 7215342.46 | 7215342.68 | 7215342.91 | 0.0484 | 0.0147 |
| Saturn | 15048-04-25 20:52 G | 7217344.14 | 7217344.37 | 7217344.61 | 0.0276 | 0.0105 |
| Jupiter | 15049-05-26 01:55 G | 7217739.43 | 7217739.58 | 7217739.73 | 0.0544 | 0.0401 |
| Jupiter | 15054-11-06 00:43 G | 7219729.30 | 7219729.53 | 7219729.76 | 0.0484 | 0.0025 |
| Jupiter | 15060-04-22 18:57 G | 7221724.25 | 7221724.29 | 7221724.36 | 0.0543 | 0.0526 |
| Saturn | 15062-10-20 01:40 G | 7222634.51 | 7222634.57 | 7222634.63 | 0.0283 | 0.0273 |
| Saturn | 15063-11-02 05:16 G | 7223012.58 | 7223012.72 | 7223012.87 | 0.0283 | 0.0228 |
| Jupiter | 15066-11-10 12:28 G | 7224116.79 | 7224117.02 | 7224117.25 | 0.0484 | 0.0053 |
| Neptune | 15068-05-18 16:48 G | 7224672.15 | 7224672.20 | 7224672.27 | 0.0090 | 0.0087 |
| Neptune | 15069-05-21 03:21 G | 7225039.60 | 7225039.64 | 7225039.71 | 0.0089 | 0.0087 |
| Neptune | 15070-05-23 15:50 G | 7225407.03 | 7225407.16 | 7225407.31 | 0.0089 | 0.0076 |
| Neptune | 15071-05-26 06:28 G | 7225774.65 | 7225774.77 | 7225774.93 | 0.0089 | 0.0075 |
| Uranus | 15071-08-28 12:14 G | 7225868.94 | 7225869.01 | 7225869.09 | 0.0145 | 0.0138 |
| Jupiter | 15072-04-27 18:57 G | 7226112.12 | 7226112.29 | 7226112.47 | 0.0543 | 0.0361 |
| Neptune | 15072-05-27 14:38 G | 7226141.93 | 7226142.11 | 7226142.30 | 0.0089 | 0.0063 |

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| Uranus | 15072-09-01 16:33 G | 7226238.97 | 7226239.19 | 7226239.41 | 0.0145 | 0.0076 |
| Neptune | 15073-05-30 09:36 G | 7226509.72 | 7226509.90 | 7226510.09 | 0.0089 | 0.0061 |
| Uranus | 15073-09-06 10:19 G | 7226608.69 | 7226608.93 | 7226609.18 | 0.0145 | 0.0015 |
| Neptune | 15074-06-01 14:38 G | 7226876.92 | 7226877.11 | 7226877.34 | 0.0089 | 0.0052 |
| Uranus | 15074-09-11 16:19 G | 7226978.94 | 7226979.18 | 7226979.43 | 0.0146 | 0.0033 |
| Neptune | 15075-06-04 10:19 G | 7227244.73 | 7227244.93 | 7227245.16 | 0.0089 | 0.0049 |
| Uranus | 15075-09-16 09:36 G | 7227348.73 | 7227348.90 | 7227349.07 | 0.0146 | 0.0107 |
| Neptune | 15076-06-05 16:33 G | 7227611.98 | 7227612.19 | 7227612.43 | 0.0089 | 0.0040 |
| Neptune | 15077-06-08 09:50 G | 7227979.67 | 7227979.91 | 7227980.16 | 0.0089 | 0.0035 |
| Saturn | 15078-05-03 18:43 G | 7228309.09 | 7228309.28 | 7228309.48 | 0.0277 | 0.0166 |
| Neptune | 15078-06-10 19:55 G | 7228347.09 | 7228347.33 | 7228347.57 | 0.0089 | 0.0026 |
| Jupiter | 15078-11-14 08:38 G | 7228503.63 | 7228503.86 | 7228504.09 | 0.0484 | 0.0130 |
| Neptune | 15079-06-13 07:40 G | 7228714.58 | 7228714.82 | 7228715.10 | 0.0089 | 0.0022 |
| Neptune | 15080-06-14 22:04 G | 7229082.18 | 7229082.42 | 7229082.67 | 0.0089 | 0.0013 |
| Neptune | 15081-06-17 05:45 G | 7229449.48 | 7229449.74 | 7229450.00 | 0.0089 | 0.0009 |
| Neptune | 15082-06-19 23:31 G | 7229817.23 | 7229817.48 | 7229817.73 | 0.0089 | 0.0001 |
| Neptune | 15083-06-22 04:33 G | 7230184.44 | 7230184.69 | 7230184.95 | 0.0089 | 0.0005 |
| Jupiter | 15084-05-03 06:57 G | 7230500.60 | 7230500.79 | 7230500.99 | 0.0544 | 0.0255 |
| Neptune | 15084-06-23 23:31 G | 7230552.23 | 7230552.48 | 7230552.74 | 0.0089 | 0.0013 |
| Neptune | 15085-06-26 05:16 G | 7230919.48 | 7230919.72 | 7230919.97 | 0.0089 | 0.0020 |
| Neptune | 15086-06-28 22:04 G | 7231287.17 | 7231287.42 | 7231287.67 | 0.0089 | 0.0026 |
| Neptune | 15087-07-01 07:12 G | 7231654.58 | 7231654.80 | 7231655.04 | 0.0089 | 0.0032 |
| Neptune | 15088-07-02 18:57 G | 7232022.07 | 7232022.29 | 7232022.55 | 0.0089 | 0.0038 |
| Neptune | 15089-07-05 08:38 G | 7232389.66 | 7232389.86 | 7232390.09 | 0.0089 | 0.0046 |
| Jupiter | 15089-10-19 21:07 G | 7232496.34 | 7232496.38 | 7232496.43 | 0.0485 | 0.0474 |
| Neptune | 15090-07-07 15:21 G | 7232756.95 | 7232757.14 | 7232757.37 | 0.0089 | 0.0052 |
| Jupiter | 15090-11-18 17:45 G | 7232891.05 | 7232891.24 | 7232891.44 | 0.0484 | 0.0249 |
| Neptune | 15091-07-10 08:52 G | 7233124.69 | 7233124.87 | 7233125.07 | 0.0089 | 0.0058 |
| Neptune | 15092-07-11 13:12 G | 7233491.89 | 7233492.05 | 7233492.25 | 0.0089 | 0.0063 |
| Saturn | 15092-10-27 08:09 G | 7233599.60 | 7233599.84 | 7233600.07 | 0.0283 | 0.0027 |

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| Neptune | 15093-07-14 07:12 G | 7233859.66 | 7233859.80 | 7233859.98 | 0.0089 | 0.0070 |
| Neptune | 15094-07-16 12:14 G | 7234226.90 | 7234227.01 | 7234227.18 | 0.0089 | 0.0074 |
| Neptune | 15095-07-19 04:33 G | 7234594.59 | 7234594.69 | 7234594.80 | 0.0089 | 0.0081 |
| Jupiter | 15096-05-08 15:21 G | 7234888.90 | 7234889.14 | 7234889.38 | 0.0545 | 0.0106 |
| Neptune | 15096-07-20 12:57 G | 7234962.01 | 7234962.04 | 7234962.14 | 0.0089 | 0.0086 |
| Jupiter | 15101-10-24 23:02 G | 7236883.34 | 7236883.46 | 7236883.59 | 0.0485 | 0.0406 |
| Jupiter | 15102-11-23 18:28 G | 7237278.13 | 7237278.27 | 7237278.42 | 0.0485 | 0.0389 |
| Saturn | 15107-04-29 05:16 G | 7238895.48 | 7238895.72 | 7238895.97 | 0.0276 | 0.0043 |
| Jupiter | 15108-05-14 22:04 G | 7239277.20 | 7239277.42 | 7239277.64 | 0.0545 | 0.0104 |
| Mars | 15108-08-15 06:57 G | 7239369.60 | 7239369.79 | 7239369.98 | 0.1700 | 0.0185 |
| Uranus | 15113-03-02 05:31 G | 7241029.57 | 7241029.73 | 7241029.92 | 0.0133 | 0.0099 |
| Jupiter | 15113-10-29 06:28 G | 7241270.59 | 7241270.77 | 7241270.96 | 0.0484 | 0.0299 |
| Uranus | 15114-03-06 14:38 G | 7241398.88 | 7241399.11 | 7241399.34 | 0.0133 | 0.0050 |
| Uranus | 15115-03-10 23:16 G | 7241768.20 | 7241768.47 | 7241768.73 | 0.0133 | 0.0013 |
| Uranus | 15116-03-14 06:43 G | 7242137.55 | 7242137.78 | 7242138.02 | 0.0133 | 0.0044 |
| Uranus | 15117-03-18 15:36 G | 7242506.95 | 7242507.15 | 7242507.39 | 0.0133 | 0.0076 |
| Uranus | 15118-03-22 22:33 G | 7242876.42 | 7242876.44 | 7242876.51 | 0.0133 | 0.0131 |
| Jupiter | 15120-05-20 16:33 G | 7243665.99 | 7243666.19 | 7243666.39 | 0.0544 | 0.0265 |
| Saturn | 15121-10-22 08:38 G | 7244185.71 | 7244185.86 | 7244186.04 | 0.0283 | 0.0210 |
| Jupiter | 15125-11-02 03:50 G | 7245657.44 | 7245657.66 | 7245657.88 | 0.0484 | 0.0157 |
| Pluto | 15130-01-05 08:38 G | 7247182.75 | 7247182.86 | 7247182.98 | 0.0080 | 0.0071 |
| Jupiter | 15132-05-25 15:36 G | 7248053.97 | 7248054.15 | 7248054.33 | 0.0543 | 0.0363 |
| Saturn | 15136-04-23 05:31 G | 7249482.63 | 7249482.73 | 7249482.85 | 0.0277 | 0.0247 |
| Saturn | 15137-05-06 00:28 G | 7249860.37 | 7249860.52 | 7249860.67 | 0.0277 | 0.0223 |
| Jupiter | 15137-11-06 13:55 G | 7250044.85 | 7250045.08 | 7250045.31 | 0.0484 | 0.0044 |
| Jupiter | 15144-05-31 00:28 G | 7252442.47 | 7252442.52 | 7252442.58 | 0.0543 | 0.0524 |
| Jupiter | 15149-11-10 09:36 G | 7254431.66 | 7254431.90 | 7254432.14 | 0.0484 | 0.0031 |
| Neptune | 15150-11-17 00:43 G | 7254803.45 | 7254803.53 | 7254803.62 | 0.0088 | 0.0082 |
| Saturn | 15151-10-30 21:07 G | 7255151.15 | 7255151.38 | 7255151.61 | 0.0283 | 0.0093 |
| Neptune | 15151-11-19 06:14 G | 7255170.72 | 7255170.76 | 7255170.86 | 0.0088 | 0.0085 |

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| Neptune | 15152-11-20 23:31 G | 7255538.35 | 7255538.48 | 7255538.65 | 0.0088 | 0.0071 |
| Neptune | 15153-11-23 03:36 G | 7255905.52 | 7255905.65 | 7255905.80 | 0.0088 | 0.0073 |
| Neptune | 15154-11-25 21:07 G | 7256273.20 | 7256273.38 | 7256273.59 | 0.0088 | 0.0059 |
| Jupiter | 15155-04-28 17:31 G | 7256427.08 | 7256427.23 | 7256427.38 | 0.0544 | 0.0400 |
| Uranus | 15155-08-30 00:57 G | 7256550.44 | 7256550.54 | 7256550.69 | 0.0145 | 0.0124 |
| Neptune | 15155-11-28 01:55 G | 7256640.42 | 7256640.58 | 7256640.77 | 0.0088 | 0.0062 |
| Uranus | 15156-09-03 04:33 G | 7256920.47 | 7256920.69 | 7256920.92 | 0.0145 | 0.0073 |
| Neptune | 15156-11-29 16:48 G | 7257007.99 | 7257008.20 | 7257008.43 | 0.0088 | 0.0048 |
| Uranus | 15157-09-07 23:16 G | 7257290.23 | 7257290.47 | 7257290.72 | 0.0145 | 0.0017 |
| Neptune | 15157-12-02 01:12 G | 7257375.37 | 7257375.55 | 7257375.78 | 0.0088 | 0.0051 |
| Uranus | 15158-09-13 05:16 G | 7257660.48 | 7257660.72 | 7257660.96 | 0.0146 | 0.0052 |
| Neptune | 15158-12-04 11:31 G | 7257742.75 | 7257742.98 | 7257743.24 | 0.0088 | 0.0036 |
| Uranus | 15159-09-17 23:02 G | 7258030.29 | 7258030.46 | 7258030.66 | 0.0146 | 0.0097 |
| Neptune | 15159-12-07 01:55 G | 7258110.37 | 7258110.58 | 7258110.82 | 0.0088 | 0.0038 |
| Neptune | 15160-12-08 08:09 G | 7258477.59 | 7258477.84 | 7258478.10 | 0.0088 | 0.0023 |
| Jupiter | 15161-11-14 19:40 G | 7258819.11 | 7258819.32 | 7258819.55 | 0.0484 | 0.0113 |
| Neptune | 15161-12-11 01:55 G | 7258845.34 | 7258845.58 | 7258845.83 | 0.0088 | 0.0026 |
| Neptune | 15162-12-13 06:28 G | 7259212.51 | 7259212.77 | 7259213.02 | 0.0088 | 0.0011 |
| Neptune | 15163-12-16 00:14 G | 7259580.26 | 7259580.51 | 7259580.78 | 0.0088 | 0.0014 |
| Neptune | 15164-12-17 06:14 G | 7259947.51 | 7259947.76 | 7259948.01 | 0.0088 | 0.0001 |
| Neptune | 15165-12-19 21:07 G | 7260315.12 | 7260315.38 | 7260315.65 | 0.0088 | 0.0001 |
| Saturn | 15166-04-30 19:12 G | 7260447.07 | 7260447.30 | 7260447.54 | 0.0276 | 0.0022 |
| Neptune | 15166-12-22 06:43 G | 7260682.53 | 7260682.78 | 7260683.03 | 0.0088 | 0.0014 |
| Jupiter | 15167-05-04 03:07 G | 7260815.43 | 7260815.63 | 7260815.84 | 0.0545 | 0.0290 |
| Neptune | 15167-12-24 17:02 G | 7261049.94 | 7261050.21 | 7261050.47 | 0.0088 | 0.0011 |
| Neptune | 15168-12-26 07:40 G | 7261417.59 | 7261417.82 | 7261418.07 | 0.0088 | 0.0026 |
| Neptune | 15169-12-28 14:24 G | 7261784.84 | 7261785.10 | 7261785.35 | 0.0088 | 0.0023 |
| Neptune | 15170-12-31 08:09 G | 7262152.63 | 7262152.84 | 7262153.09 | 0.0088 | 0.0040 |
| Neptune | 15172-01-02 12:43 G | 7262519.81 | 7262520.03 | 7262520.28 | 0.0088 | 0.0037 |
| Neptune | 15173-01-04 07:26 G | 7262887.61 | 7262887.81 | 7262888.03 | 0.0088 | 0.0051 |

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| Jupiter | 15173-11-18 19:12 G | 7263206.10 | 7263206.30 | 7263206.52 | 0.0484 | 0.0237 |
| Neptune | 15174-01-06 13:55 G | 7263254.88 | 7263255.08 | 7263255.30 | 0.0088 | 0.0048 |
| Neptune | 15175-01-09 05:16 G | 7263622.54 | 7263622.72 | 7263622.92 | 0.0088 | 0.0063 |
| Neptune | 15176-01-11 15:21 G | 7263989.98 | 7263990.14 | 7263990.34 | 0.0088 | 0.0061 |
| Neptune | 15177-01-13 02:24 G | 7264357.47 | 7264357.60 | 7264357.75 | 0.0088 | 0.0075 |
| Neptune | 15178-01-15 17:45 G | 7264725.12 | 7264725.24 | 7264725.41 | 0.0088 | 0.0073 |
| Neptune | 15179-01-18 00:43 G | 7265092.50 | 7265092.53 | 7265092.61 | 0.0088 | 0.0087 |
| Jupiter | 15179-05-09 12:14 G | 7265203.79 | 7265204.01 | 7265204.23 | 0.0545 | 0.0131 |
| Neptune | 15180-01-20 19:40 G | 7265460.25 | 7265460.32 | 7265460.42 | 0.0088 | 0.0083 |
| Saturn | 15180-10-23 20:52 G | 7265737.16 | 7265737.37 | 7265737.58 | 0.0283 | 0.0142 |
| Jupiter | 15184-10-24 09:21 G | 7267198.77 | 7267198.89 | 7267199.01 | 0.0485 | 0.0421 |
| Jupiter | 15185-11-23 00:28 G | 7267593.38 | 7267593.52 | 7267593.66 | 0.0485 | 0.0378 |
| Mars | 15187-08-18 20:38 G | 7268227.25 | 7268227.36 | 7268227.47 | 0.1694 | 0.1412 |
| Jupiter | 15191-05-15 02:52 G | 7269592.39 | 7269592.62 | 7269592.86 | 0.0544 | 0.0074 |
| Saturn | 15195-04-25 12:28 G | 7271033.84 | 7271034.02 | 7271034.22 | 0.0277 | 0.0184 |
| Jupiter | 15196-10-28 04:48 G | 7271585.53 | 7271585.70 | 7271585.88 | 0.0485 | 0.0315 |
| Uranus | 15197-03-02 17:45 G | 7271711.07 | 7271711.24 | 7271711.45 | 0.0133 | 0.0095 |
| Jupiter | 15197-11-27 07:55 G | 7271980.78 | 7271980.83 | 7271980.90 | 0.0485 | 0.0466 |
| Uranus | 15198-03-07 04:19 G | 7272080.46 | 7272080.68 | 7272080.92 | 0.0133 | 0.0052 |
| Uranus | 15199-03-11 12:14 G | 7272449.75 | 7272450.01 | 7272450.28 | 0.0133 | 0.0003 |
| Uranus | 15200-03-14 21:21 G | 7272819.15 | 7272819.39 | 7272819.63 | 0.0133 | 0.0036 |
| Uranus | 15201-03-19 05:16 G | 7273188.55 | 7273188.72 | 7273188.93 | 0.0133 | 0.0093 |
| Uranus | 15202-03-23 13:40 G | 7273557.99 | 7273558.07 | 7273558.14 | 0.0133 | 0.0126 |
| Jupiter | 15203-05-20 02:38 G | 7273980.40 | 7273980.61 | 7273980.83 | 0.0544 | 0.0224 |
| Jupiter | 15208-11-01 15:36 G | 7275972.93 | 7275973.15 | 7275973.36 | 0.0484 | 0.0171 |
| Saturn | 15210-11-01 04:19 G | 7276702.48 | 7276702.68 | 7276702.90 | 0.0283 | 0.0158 |
| Mars | 15213-02-14 18:43 G | 7277539.10 | 7277539.28 | 7277539.46 | 0.1836 | 0.0672 |
| Jupiter | 15215-05-25 13:40 G | 7278368.89 | 7278369.07 | 7278369.25 | 0.0544 | 0.0326 |
| Jupiter | 15220-11-05 12:43 G | 7280359.80 | 7280360.03 | 7280360.27 | 0.0484 | 0.0061 |
| Saturn | 15225-05-02 09:21 G | 7281998.66 | 7281998.89 | 7281999.12 | 0.0276 | 0.0085 |

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| Jupiter | 15227-05-30 23:16 G | 7282757.38 | 7282757.47 | 7282757.58 | 0.0544 | 0.0492 |
| Jupiter | 15232-11-09 21:21 G | 7284747.16 | 7284747.39 | 7284747.62 | 0.0483 | 0.0012 |
| Neptune | 15233-05-21 06:14 G | 7284939.66 | 7284939.76 | 7284939.89 | 0.0090 | 0.0081 |
| Neptune | 15234-05-23 22:33 G | 7285307.37 | 7285307.44 | 7285307.57 | 0.0090 | 0.0082 |
| Neptune | 15235-05-26 05:45 G | 7285674.60 | 7285674.74 | 7285674.94 | 0.0090 | 0.0069 |
| Neptune | 15236-05-28 01:40 G | 7286042.42 | 7286042.57 | 7286042.74 | 0.0089 | 0.0070 |
| Neptune | 15237-05-30 07:12 G | 7286409.62 | 7286409.80 | 7286410.01 | 0.0089 | 0.0057 |
| Jupiter | 15238-04-27 16:04 G | 7286742.02 | 7286742.17 | 7286742.32 | 0.0544 | 0.0423 |
| Neptune | 15238-06-02 02:09 G | 7286777.42 | 7286777.59 | 7286777.81 | 0.0089 | 0.0059 |
| Neptune | 15239-06-04 09:50 G | 7287144.71 | 7287144.91 | 7287145.14 | 0.0089 | 0.0045 |
| Uranus | 15239-08-30 13:12 G | 7287231.96 | 7287232.05 | 7287232.16 | 0.0145 | 0.0131 |
| Saturn | 15239-10-26 12:00 G | 7287288.77 | 7287289.00 | 7287289.22 | 0.0283 | 0.0074 |
| Neptune | 15240-06-06 01:26 G | 7287512.35 | 7287512.56 | 7287512.81 | 0.0089 | 0.0046 |
| Uranus | 15240-09-03 15:21 G | 7287601.92 | 7287602.14 | 7287602.38 | 0.0145 | 0.0067 |
| Neptune | 15241-06-08 12:43 G | 7287879.81 | 7287880.03 | 7287880.28 | 0.0089 | 0.0032 |
| Uranus | 15241-09-08 11:31 G | 7287971.74 | 7287971.98 | 7287972.22 | 0.0145 | 0.0008 |
| Neptune | 15242-06-10 23:31 G | 7288247.24 | 7288247.48 | 7288247.73 | 0.0089 | 0.0033 |
| Uranus | 15242-09-13 16:19 G | 7288341.94 | 7288342.18 | 7288342.43 | 0.0146 | 0.0042 |
| Neptune | 15243-06-13 15:36 G | 7288614.91 | 7288615.15 | 7288615.40 | 0.0089 | 0.0019 |
| Uranus | 15243-09-18 10:33 G | 7288711.81 | 7288711.94 | 7288712.10 | 0.0146 | 0.0116 |
| Neptune | 15244-06-14 22:33 G | 7288982.19 | 7288982.44 | 7288982.69 | 0.0089 | 0.0021 |
| Jupiter | 15244-11-13 22:04 G | 7289134.18 | 7289134.42 | 7289134.66 | 0.0484 | 0.0097 |
| Neptune | 15245-06-17 17:16 G | 7289349.96 | 7289350.22 | 7289350.47 | 0.0089 | 0.0006 |
| Neptune | 15246-06-19 22:04 G | 7289717.17 | 7289717.42 | 7289717.68 | 0.0089 | 0.0008 |
| Neptune | 15247-06-22 16:48 G | 7290084.94 | 7290085.20 | 7290085.46 | 0.0089 | 0.0008 |
| Neptune | 15248-06-23 23:31 G | 7290452.23 | 7290452.48 | 7290452.73 | 0.0089 | 0.0005 |
| Neptune | 15249-06-26 14:52 G | 7290819.86 | 7290820.12 | 7290820.38 | 0.0089 | 0.0020 |
| Jupiter | 15250-05-03 00:43 G | 7291130.35 | 7291130.53 | 7291130.71 | 0.0544 | 0.0322 |
| Neptune | 15250-06-29 00:57 G | 7291187.30 | 7291187.54 | 7291187.79 | 0.0089 | 0.0017 |
| Neptune | 15251-07-01 11:16 G | 7291554.73 | 7291554.97 | 7291555.23 | 0.0089 | 0.0032 |

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| Neptune | 15252-07-03 02:38 G | 7291922.39 | 7291922.61 | 7291922.86 | 0.0089 | 0.0031 |
| Neptune | 15253-07-05 09:07 G | 7292289.67 | 7292289.88 | 7292290.12 | 0.0089 | 0.0045 |
| Saturn | 15254-04-26 17:16 G | 7292585.01 | 7292585.22 | 7292585.46 | 0.0277 | 0.0124 |
| Neptune | 15254-07-08 03:21 G | 7292657.43 | 7292657.64 | 7292657.88 | 0.0089 | 0.0042 |
| Neptune | 15255-07-10 08:09 G | 7293024.66 | 7293024.84 | 7293025.05 | 0.0089 | 0.0057 |
| Neptune | 15256-07-12 01:55 G | 7293392.40 | 7293392.58 | 7293392.81 | 0.0089 | 0.0054 |
| Jupiter | 15256-11-18 01:12 G | 7293521.36 | 7293521.55 | 7293521.75 | 0.0484 | 0.0228 |
| Neptune | 15257-07-14 08:09 G | 7293759.71 | 7293759.84 | 7293760.02 | 0.0089 | 0.0069 |
| Neptune | 15258-07-16 22:33 G | 7294127.29 | 7294127.44 | 7294127.65 | 0.0089 | 0.0066 |
| Neptune | 15259-07-19 08:52 G | 7294494.78 | 7294494.87 | 7294494.99 | 0.0089 | 0.0080 |
| Neptune | 15260-07-20 18:43 G | 7294862.15 | 7294862.28 | 7294862.41 | 0.0089 | 0.0076 |
| Jupiter | 15262-05-08 13:55 G | 7295518.85 | 7295519.08 | 7295519.31 | 0.0544 | 0.0162 |
| Neptune | 15262-07-25 14:38 G | 7295597.08 | 7295597.11 | 7295597.19 | 0.0089 | 0.0087 |
| Jupiter | 15267-10-24 07:26 G | 7297513.73 | 7297513.81 | 7297513.91 | 0.0485 | 0.0443 |
| Saturn | 15268-10-20 06:57 G | 7297875.76 | 7297875.79 | 7297875.85 | 0.0282 | 0.0277 |
| Jupiter | 15268-11-22 08:24 G | 7297908.70 | 7297908.85 | 7297909.02 | 0.0484 | 0.0358 |
| Saturn | 15269-11-02 11:16 G | 7298253.82 | 7298253.97 | 7298254.13 | 0.0283 | 0.0220 |
| Jupiter | 15274-05-13 11:45 G | 7299906.76 | 7299906.99 | 7299907.23 | 0.0545 | 0.0038 |
| Jupiter | 15279-10-28 19:26 G | 7301901.15 | 7301901.31 | 7301901.49 | 0.0484 | 0.0321 |
| Jupiter | 15280-11-26 07:55 G | 7302295.75 | 7302295.83 | 7302295.92 | 0.0485 | 0.0448 |
| Uranus | 15281-03-03 07:40 G | 7302392.64 | 7302392.82 | 7302393.03 | 0.0133 | 0.0090 |
| Uranus | 15282-03-07 18:57 G | 7302762.06 | 7302762.29 | 7302762.53 | 0.0133 | 0.0041 |
| Uranus | 15283-03-12 01:26 G | 7303131.30 | 7303131.56 | 7303131.83 | 0.0133 | 0.0004 |
| Uranus | 15284-03-15 11:16 G | 7303500.76 | 7303500.97 | 7303501.21 | 0.0133 | 0.0054 |
| Saturn | 15284-05-03 18:43 G | 7303550.07 | 7303550.28 | 7303550.50 | 0.0276 | 0.0149 |
| Uranus | 15285-03-19 18:28 G | 7303870.07 | 7303870.27 | 7303870.48 | 0.0133 | 0.0085 |
| Jupiter | 15286-05-19 05:02 G | 7304295.50 | 7304295.71 | 7304295.93 | 0.0545 | 0.0188 |
| Pluto | 15287-07-10 11:02 G | 7304712.71 | 7304712.96 | 7304713.21 | 0.0064 | 0.0001 |
| Jupiter | 15291-11-01 15:36 G | 7306287.93 | 7306288.15 | 7306288.37 | 0.0484 | 0.0183 |
| Jupiter | 15298-05-24 14:24 G | 7308683.90 | 7308684.10 | 7308684.31 | 0.0544 | 0.0298 |

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| Saturn | 15298-10-28 00:28 G | 7308840.28 | 7308840.52 | 7308840.77 | 0.0283 | 0.0011 |
| Jupiter | 15303-11-07 00:57 G | 7310675.31 | 7310675.54 | 7310675.76 | 0.0484 | 0.0078 |
| Jupiter | 15310-05-30 21:07 G | 7313072.27 | 7313072.38 | 7313072.50 | 0.0543 | 0.0466 |
| Saturn | 15313-04-29 01:55 G | 7314136.35 | 7314136.58 | 7314136.82 | 0.0276 | 0.0064 |
| Mars | 15313-08-15 08:24 G | 7314244.71 | 7314244.85 | 7314244.99 | 0.1711 | 0.1119 |
| Neptune | 15314-11-17 01:26 G | 7314703.49 | 7314703.56 | 7314703.67 | 0.0088 | 0.0082 |
| Jupiter | 15315-11-11 00:14 G | 7315062.27 | 7315062.51 | 7315062.76 | 0.0484 | 0.0015 |
| Neptune | 15315-11-19 19:12 G | 7315071.21 | 7315071.30 | 7315071.38 | 0.0088 | 0.0082 |
| Neptune | 15316-11-20 22:19 G | 7315438.31 | 7315438.43 | 7315438.60 | 0.0088 | 0.0072 |
| Neptune | 15317-11-23 15:21 G | 7315806.01 | 7315806.14 | 7315806.31 | 0.0088 | 0.0072 |
| Neptune | 15318-11-25 21:21 G | 7316173.22 | 7316173.39 | 7316173.57 | 0.0088 | 0.0062 |
| Neptune | 15319-11-28 10:48 G | 7316540.78 | 7316540.95 | 7316541.16 | 0.0088 | 0.0061 |
| Neptune | 15320-11-29 21:07 G | 7316908.20 | 7316908.38 | 7316908.61 | 0.0088 | 0.0051 |
| Jupiter | 15321-04-27 13:40 G | 7317056.95 | 7317057.07 | 7317057.19 | 0.0543 | 0.0454 |
| Neptune | 15321-12-02 06:14 G | 7317275.55 | 7317275.76 | 7317275.99 | 0.0088 | 0.0049 |
| Neptune | 15322-12-04 21:21 G | 7317643.17 | 7317643.39 | 7317643.62 | 0.0088 | 0.0039 |
| Uranus | 15323-09-01 02:24 G | 7317913.46 | 7317913.60 | 7317913.75 | 0.0145 | 0.0116 |
| Neptune | 15323-12-07 01:55 G | 7318010.35 | 7318010.58 | 7318010.82 | 0.0088 | 0.0038 |
| Uranus | 15324-09-05 03:36 G | 7318283.43 | 7318283.65 | 7318283.89 | 0.0145 | 0.0066 |
| Neptune | 15324-12-08 19:55 G | 7318378.09 | 7318378.33 | 7318378.58 | 0.0088 | 0.0028 |
| Uranus | 15325-09-10 00:43 G | 7318653.28 | 7318653.53 | 7318653.77 | 0.0145 | 0.0008 |
| Neptune | 15325-12-11 00:00 G | 7318745.26 | 7318745.50 | 7318745.75 | 0.0088 | 0.0026 |
| Uranus | 15326-09-15 04:48 G | 7319023.47 | 7319023.70 | 7319023.94 | 0.0146 | 0.0059 |
| Neptune | 15326-12-13 17:02 G | 7319112.95 | 7319113.21 | 7319113.47 | 0.0088 | 0.0016 |
| Uranus | 15327-09-20 00:00 G | 7319393.35 | 7319393.50 | 7319393.68 | 0.0146 | 0.0106 |
| Saturn | 15327-10-23 11:31 G | 7319426.83 | 7319426.98 | 7319427.14 | 0.0283 | 0.0219 |
| Jupiter | 15327-11-15 03:50 G | 7319449.44 | 7319449.66 | 7319449.89 | 0.0484 | 0.0081 |
| Neptune | 15327-12-15 23:31 G | 7319480.24 | 7319480.48 | 7319480.74 | 0.0088 | 0.0013 |
| Neptune | 15328-12-17 13:26 G | 7319847.80 | 7319848.06 | 7319848.33 | 0.0088 | 0.0004 |
| Neptune | 15329-12-20 01:12 G | 7320215.30 | 7320215.55 | 7320215.80 | 0.0088 | 0.0001 |

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| Neptune | 15330-12-22 10:04 G | 7320582.66 | 7320582.92 | 7320583.20 | 0.0088 | 0.0008 |
| Neptune | 15331-12-25 01:55 G | 7320950.34 | 7320950.58 | 7320950.84 | 0.0088 | 0.0011 |
| Neptune | 15332-12-26 07:12 G | 7321317.55 | 7321317.80 | 7321318.06 | 0.0088 | 0.0020 |
| Jupiter | 15333-05-02 21:21 G | 7321445.22 | 7321445.39 | 7321445.58 | 0.0544 | 0.0353 |
| Neptune | 15333-12-29 01:40 G | 7321685.33 | 7321685.57 | 7321685.82 | 0.0088 | 0.0024 |
| Neptune | 15334-12-31 06:00 G | 7322052.52 | 7322052.75 | 7322053.00 | 0.0088 | 0.0032 |
| Neptune | 15336-01-02 23:16 G | 7322420.25 | 7322420.47 | 7322420.73 | 0.0088 | 0.0036 |
| Neptune | 15337-01-04 06:28 G | 7322787.57 | 7322787.77 | 7322788.01 | 0.0088 | 0.0043 |
| Neptune | 15338-01-06 20:38 G | 7323155.14 | 7323155.36 | 7323155.60 | 0.0088 | 0.0047 |
| Neptune | 15339-01-09 08:38 G | 7323522.68 | 7323522.86 | 7323523.07 | 0.0088 | 0.0055 |
| Jupiter | 15339-11-19 12:28 G | 7323836.81 | 7323837.02 | 7323837.24 | 0.0484 | 0.0218 |
| Neptune | 15340-01-11 18:14 G | 7323890.07 | 7323890.26 | 7323890.47 | 0.0088 | 0.0060 |
| Neptune | 15341-01-13 10:33 G | 7324257.80 | 7324257.94 | 7324258.13 | 0.0088 | 0.0067 |
| Neptune | 15342-01-15 16:33 G | 7324625.05 | 7324625.19 | 7324625.36 | 0.0088 | 0.0071 |
| Saturn | 15342-04-24 06:14 G | 7324723.68 | 7324723.76 | 7324723.85 | 0.0276 | 0.0259 |
| Neptune | 15343-01-18 11:45 G | 7324992.87 | 7324992.99 | 7324993.13 | 0.0088 | 0.0076 |
| Saturn | 15343-05-06 22:33 G | 7325101.28 | 7325101.44 | 7325101.62 | 0.0276 | 0.0205 |
| Neptune | 15344-01-20 16:48 G | 7325360.12 | 7325360.20 | 7325360.31 | 0.0088 | 0.0082 |
| Neptune | 15345-01-22 10:48 G | 7325727.92 | 7325727.95 | 7325728.03 | 0.0088 | 0.0087 |
| Jupiter | 15345-05-08 01:55 G | 7325833.37 | 7325833.58 | 7325833.80 | 0.0545 | 0.0194 |
| Jupiter | 15350-10-24 23:02 G | 7327829.38 | 7327829.46 | 7327829.54 | 0.0485 | 0.0455 |
| Jupiter | 15351-11-23 09:50 G | 7328223.75 | 7328223.91 | 7328224.08 | 0.0484 | 0.0344 |
| Jupiter | 15357-05-13 21:36 G | 7330222.18 | 7330222.40 | 7330222.63 | 0.0545 | 0.0023 |
| Saturn | 15357-10-30 06:57 G | 7330391.54 | 7330391.79 | 7330392.04 | 0.0283 | 0.0051 |
| Jupiter | 15362-10-28 20:38 G | 7332216.18 | 7332216.36 | 7332216.53 | 0.0484 | 0.0331 |
| Jupiter | 15363-11-27 21:50 G | 7332611.31 | 7332611.41 | 7332611.53 | 0.0485 | 0.0426 |
| Uranus | 15364-02-29 15:21 G | 7332705.08 | 7332705.14 | 7332705.22 | 0.0133 | 0.0128 |
| Uranus | 15365-03-04 20:52 G | 7333074.18 | 7333074.37 | 7333074.58 | 0.0133 | 0.0086 |
| Uranus | 15366-03-09 09:36 G | 7333443.67 | 7333443.90 | 7333444.14 | 0.0133 | 0.0042 |
| Uranus | 15367-03-13 15:21 G | 7333812.88 | 7333813.14 | 7333813.41 | 0.0133 | 0.0012 |

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| Uranus | 15368-03-17 02:38 G | 7334182.39 | 7334182.61 | 7334182.85 | 0.0133 | 0.0046 |
| Uranus | 15369-03-21 08:38 G | 7334551.71 | 7334551.86 | 7334552.04 | 0.0133 | 0.0103 |
| Jupiter | 15369-05-19 04:19 G | 7334610.45 | 7334610.68 | 7334610.91 | 0.0544 | 0.0158 |
| Saturn | 15372-04-30 13:26 G | 7335687.82 | 7335688.06 | 7335688.30 | 0.0276 | 0.0010 |
| Jupiter | 15374-11-02 03:36 G | 7336603.45 | 7336603.65 | 7336603.86 | 0.0484 | 0.0198 |
| Pluto | 15376-01-08 18:57 G | 7337036.06 | 7337036.29 | 7337036.56 | 0.0080 | 0.0032 |
| Jupiter | 15381-05-24 12:14 G | 7338998.82 | 7338999.01 | 7338999.21 | 0.0544 | 0.0270 |
| Saturn | 15386-10-24 18:43 G | 7340978.09 | 7340978.28 | 7340978.48 | 0.0283 | 0.0167 |
| Jupiter | 15386-11-06 05:16 G | 7340990.49 | 7340990.72 | 7340990.96 | 0.0484 | 0.0100 |
| Mars | 15392-08-17 10:48 G | 7343101.78 | 7343101.95 | 7343102.12 | 0.1706 | 0.0424 |
| Jupiter | 15393-05-29 20:09 G | 7343387.20 | 7343387.34 | 7343387.48 | 0.0544 | 0.0438 |
| Neptune | 15397-05-21 14:09 G | 7344840.00 | 7344840.09 | 7344840.23 | 0.0090 | 0.0080 |
| Neptune | 15398-05-23 20:38 G | 7345207.27 | 7345207.36 | 7345207.48 | 0.0090 | 0.0082 |
| Jupiter | 15398-11-10 09:21 G | 7345377.66 | 7345377.89 | 7345378.11 | 0.0484 | 0.0031 |
| Neptune | 15399-05-26 16:04 G | 7345575.03 | 7345575.17 | 7345575.36 | 0.0090 | 0.0070 |
| Neptune | 15400-05-28 22:04 G | 7345942.29 | 7345942.42 | 7345942.60 | 0.0090 | 0.0071 |
| Saturn | 15401-04-26 08:52 G | 7346274.71 | 7346274.87 | 7346275.05 | 0.0276 | 0.0205 |
| Neptune | 15401-05-31 16:33 G | 7346310.00 | 7346310.19 | 7346310.40 | 0.0090 | 0.0058 |
| Saturn | 15402-05-09 03:07 G | 7346652.56 | 7346652.63 | 7346652.72 | 0.0276 | 0.0260 |
| Neptune | 15402-06-03 01:12 G | 7346677.36 | 7346677.55 | 7346677.74 | 0.0089 | 0.0058 |
| Neptune | 15403-06-05 15:21 G | 7347044.92 | 7347045.14 | 7347045.38 | 0.0089 | 0.0046 |
| Jupiter | 15404-04-27 11:02 G | 7347371.86 | 7347371.96 | 7347372.08 | 0.0543 | 0.0478 |
| Neptune | 15404-06-07 04:33 G | 7347412.50 | 7347412.69 | 7347412.93 | 0.0089 | 0.0047 |
| Neptune | 15405-06-09 14:24 G | 7347779.87 | 7347780.10 | 7347780.36 | 0.0089 | 0.0035 |
| Neptune | 15406-06-12 07:55 G | 7348147.61 | 7348147.83 | 7348148.08 | 0.0089 | 0.0034 |
| Neptune | 15407-06-14 14:24 G | 7348514.85 | 7348515.10 | 7348515.35 | 0.0089 | 0.0022 |
| Uranus | 15407-09-02 14:52 G | 7348595.01 | 7348595.12 | 7348595.25 | 0.0145 | 0.0124 |
| Neptune | 15408-06-16 09:21 G | 7348882.65 | 7348882.89 | 7348883.15 | 0.0089 | 0.0021 |
| Uranus | 15408-09-06 15:07 G | 7348964.89 | 7348965.13 | 7348965.37 | 0.0145 | 0.0058 |
| Neptune | 15409-06-18 14:52 G | 7349249.88 | 7349250.12 | 7349250.38 | 0.0089 | 0.0010 |

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| Uranus | 15409-09-11 13:12 G | 7349334.81 | 7349335.05 | 7349335.29 | 0.0145 | 0.0000 |
| Neptune | 15410-06-21 08:38 G | 7349617.61 | 7349617.86 | 7349618.13 | 0.0089 | 0.0009 |
| Uranus | 15410-09-16 16:04 G | 7349704.93 | 7349705.17 | 7349705.42 | 0.0146 | 0.0052 |
| Jupiter | 15410-11-15 16:33 G | 7349764.96 | 7349765.19 | 7349765.43 | 0.0483 | 0.0069 |
| Neptune | 15411-06-23 16:33 G | 7349984.94 | 7349985.19 | 7349985.44 | 0.0089 | 0.0002 |
| Uranus | 15411-09-21 11:45 G | 7350074.88 | 7350074.99 | 7350075.13 | 0.0146 | 0.0125 |
| Neptune | 15412-06-25 06:28 G | 7350352.51 | 7350352.77 | 7350353.04 | 0.0089 | 0.0004 |
| Neptune | 15413-06-27 18:43 G | 7350720.05 | 7350720.28 | 7350720.54 | 0.0089 | 0.0015 |
| Neptune | 15414-06-30 04:04 G | 7351087.42 | 7351087.67 | 7351087.94 | 0.0089 | 0.0017 |
| Neptune | 15415-07-02 20:52 G | 7351455.14 | 7351455.37 | 7351455.62 | 0.0089 | 0.0027 |
| Jupiter | 15416-05-02 18:43 G | 7351760.12 | 7351760.28 | 7351760.45 | 0.0544 | 0.0374 |
| Neptune | 15416-07-04 02:09 G | 7351822.36 | 7351822.59 | 7351822.85 | 0.0089 | 0.0029 |
| Saturn | 15416-11-01 07:40 G | 7351942.59 | 7351942.82 | 7351943.06 | 0.0283 | 0.0103 |
| Neptune | 15417-07-06 21:07 G | 7352190.16 | 7352190.38 | 7352190.62 | 0.0089 | 0.0037 |
| Neptune | 15418-07-09 01:55 G | 7352557.37 | 7352557.58 | 7352557.82 | 0.0089 | 0.0041 |
| Neptune | 15419-07-11 19:12 G | 7352925.11 | 7352925.30 | 7352925.54 | 0.0089 | 0.0049 |
| Neptune | 15420-07-13 02:52 G | 7353292.43 | 7353292.62 | 7353292.82 | 0.0089 | 0.0053 |
| Neptune | 15421-07-15 16:04 G | 7353659.99 | 7353660.17 | 7353660.37 | 0.0089 | 0.0061 |
| Neptune | 15422-07-18 04:19 G | 7354027.51 | 7354027.68 | 7354027.85 | 0.0089 | 0.0065 |
| Jupiter | 15422-11-19 14:38 G | 7354151.90 | 7354152.11 | 7354152.31 | 0.0484 | 0.0205 |
| Neptune | 15423-07-20 12:28 G | 7354394.89 | 7354395.02 | 7354395.20 | 0.0089 | 0.0071 |
| Neptune | 15424-07-22 04:33 G | 7354762.58 | 7354762.69 | 7354762.84 | 0.0089 | 0.0075 |
| Neptune | 15425-07-24 09:50 G | 7355129.81 | 7355129.91 | 7355130.01 | 0.0089 | 0.0081 |
| Neptune | 15426-07-27 03:50 G | 7355497.61 | 7355497.66 | 7355497.72 | 0.0089 | 0.0086 |
| Jupiter | 15428-05-08 14:09 G | 7356148.87 | 7356149.09 | 7356149.30 | 0.0544 | 0.0204 |
| Saturn | 15431-05-03 20:52 G | 7357239.12 | 7357239.37 | 7357239.61 | 0.0276 | 0.0043 |
| Jupiter | 15433-10-25 00:00 G | 7358144.45 | 7358144.50 | 7358144.58 | 0.0485 | 0.0468 |
| Jupiter | 15434-11-24 01:26 G | 7358539.39 | 7358539.56 | 7358539.73 | 0.0484 | 0.0328 |
| Jupiter | 15440-05-13 17:31 G | 7360536.99 | 7360537.23 | 7360537.47 | 0.0545 | 0.0001 |
| Saturn | 15445-10-27 02:24 G | 7362529.39 | 7362529.60 | 7362529.83 | 0.0283 | 0.0118 |

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| Jupiter | 15445-10-29 09:21 G | 7362531.74 | 7362531.89 | 7362532.06 | 0.0485 | 0.0341 |
| Jupiter | 15446-11-27 23:02 G | 7362926.34 | 7362926.46 | 7362926.60 | 0.0485 | 0.0403 |
| Uranus | 15448-03-02 06:28 G | 7363386.74 | 7363386.77 | 7363386.84 | 0.0133 | 0.0131 |
| Uranus | 15449-03-06 11:16 G | 7363755.77 | 7363755.97 | 7363756.19 | 0.0133 | 0.0079 |
| Uranus | 15450-03-11 00:14 G | 7364125.28 | 7364125.51 | 7364125.77 | 0.0133 | 0.0033 |
| Uranus | 15451-03-15 05:02 G | 7364494.45 | 7364494.71 | 7364494.98 | 0.0133 | 0.0008 |
| Uranus | 15452-03-18 17:02 G | 7364864.00 | 7364864.21 | 7364864.44 | 0.0133 | 0.0064 |
| Jupiter | 15452-05-18 23:45 G | 7364925.27 | 7364925.49 | 7364925.71 | 0.0545 | 0.0127 |
| Uranus | 15453-03-22 21:36 G | 7365233.24 | 7365233.40 | 7365233.60 | 0.0133 | 0.0096 |
| Jupiter | 15457-11-02 12:28 G | 7366918.80 | 7366919.02 | 7366919.24 | 0.0484 | 0.0205 |
| Jupiter | 15458-12-02 10:48 G | 7367313.91 | 7367313.95 | 7367314.00 | 0.0485 | 0.0475 |
| Saturn | 15460-04-27 12:43 G | 7367825.84 | 7367826.03 | 7367826.24 | 0.0276 | 0.0153 |
| Jupiter | 15464-05-24 12:14 G | 7369313.79 | 7369314.01 | 7369314.22 | 0.0545 | 0.0240 |
| Jupiter | 15469-11-06 14:24 G | 7371305.89 | 7371306.10 | 7371306.32 | 0.0484 | 0.0120 |
| Saturn | 15475-11-03 10:33 G | 7373493.74 | 7373493.94 | 7373494.14 | 0.0283 | 0.0154 |
| Jupiter | 15476-05-29 18:57 G | 7373702.15 | 7373702.29 | 7373702.43 | 0.0544 | 0.0426 |
| Neptune | 15477-11-14 20:38 G | 7374236.34 | 7374236.36 | 7374236.44 | 0.0088 | 0.0086 |
| Neptune | 15478-11-17 14:09 G | 7374604.08 | 7374604.09 | 7374604.14 | 0.0088 | 0.0087 |
| Neptune | 15479-11-19 18:14 G | 7374971.15 | 7374971.26 | 7374971.39 | 0.0088 | 0.0076 |
| Neptune | 15480-11-21 10:19 G | 7375338.83 | 7375338.93 | 7375339.08 | 0.0088 | 0.0078 |
| Jupiter | 15481-11-10 23:02 G | 7375693.22 | 7375693.46 | 7375693.70 | 0.0483 | 0.0050 |
| Neptune | 15481-11-23 17:16 G | 7375706.08 | 7375706.22 | 7375706.40 | 0.0088 | 0.0067 |
| Neptune | 15482-11-26 05:31 G | 7376073.58 | 7376073.73 | 7376073.92 | 0.0088 | 0.0067 |
| Neptune | 15483-11-28 16:48 G | 7376441.03 | 7376441.20 | 7376441.41 | 0.0088 | 0.0056 |
| Neptune | 15484-11-30 00:00 G | 7376808.32 | 7376808.50 | 7376808.72 | 0.0088 | 0.0056 |
| Neptune | 15485-12-02 16:04 G | 7377175.97 | 7377176.17 | 7377176.41 | 0.0088 | 0.0045 |
| Neptune | 15486-12-04 20:24 G | 7377543.14 | 7377543.35 | 7377543.59 | 0.0088 | 0.0046 |
| Jupiter | 15487-04-27 12:28 G | 7377686.93 | 7377687.02 | 7377687.11 | 0.0543 | 0.0497 |
| Neptune | 15487-12-07 14:09 G | 7377910.87 | 7377911.09 | 7377911.35 | 0.0088 | 0.0034 |
| Neptune | 15488-12-08 18:43 G | 7378278.06 | 7378278.28 | 7378278.53 | 0.0088 | 0.0035 |

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| Neptune | 15489-12-11 11:02 G | 7378645.72 | 7378645.96 | 7378646.23 | 0.0088 | 0.0022 |
| Saturn | 15490-05-04 21:21 G | 7378790.15 | 7378790.39 | 7378790.63 | 0.0276 | 0.0093 |
| Neptune | 15490-12-13 18:57 G | 7379013.05 | 7379013.29 | 7379013.54 | 0.0088 | 0.0023 |
| Uranus | 15491-09-03 04:48 G | 7379276.55 | 7379276.70 | 7379276.88 | 0.0145 | 0.0107 |
| Neptune | 15491-12-16 06:57 G | 7379380.52 | 7379380.79 | 7379381.06 | 0.0088 | 0.0010 |
| Uranus | 15492-09-07 03:50 G | 7379646.43 | 7379646.66 | 7379646.90 | 0.0145 | 0.0058 |
| Neptune | 15492-12-17 19:12 G | 7379748.06 | 7379748.30 | 7379748.55 | 0.0088 | 0.0012 |
| Uranus | 15493-09-12 03:07 G | 7380016.39 | 7380016.63 | 7380016.87 | 0.0145 | 0.0002 |
| Jupiter | 15493-11-14 19:26 G | 7380080.08 | 7380080.31 | 7380080.54 | 0.0484 | 0.0054 |
| Neptune | 15493-12-20 02:24 G | 7380115.34 | 7380115.60 | 7380115.87 | 0.0088 | 0.0002 |
| Uranus | 15494-09-17 04:48 G | 7380386.48 | 7380386.70 | 7380386.94 | 0.0146 | 0.0069 |
| Neptune | 15494-12-22 19:12 G | 7380483.05 | 7380483.30 | 7380483.56 | 0.0088 | 0.0002 |
| Uranus | 15495-09-22 01:55 G | 7380756.45 | 7380756.58 | 7380756.74 | 0.0146 | 0.0116 |
| Neptune | 15495-12-24 23:45 G | 7380850.24 | 7380850.49 | 7380850.76 | 0.0088 | 0.0014 |
| Neptune | 15496-12-26 18:28 G | 7381218.01 | 7381218.27 | 7381218.53 | 0.0088 | 0.0011 |
| Mars | 15497-02-16 02:52 G | 7381269.40 | 7381269.62 | 7381269.83 | 0.1826 | 0.0249 |
| Neptune | 15497-12-28 23:16 G | 7381585.24 | 7381585.47 | 7381585.72 | 0.0088 | 0.0025 |
| Neptune | 15498-12-31 16:04 G | 7381952.92 | 7381953.17 | 7381953.43 | 0.0088 | 0.0023 |
| Jupiter | 15499-05-03 05:02 G | 7382075.56 | 7382075.71 | 7382075.87 | 0.0544 | 0.0394 |
| Neptune | 15500-01-03 00:43 G | 7382320.30 | 7382320.53 | 7382320.76 | 0.0088 | 0.0036 |
| Neptune | 15501-01-05 12:43 G | 7382687.79 | 7382688.03 | 7382688.29 | 0.0088 | 0.0034 |
| Neptune | 15502-01-08 01:55 G | 7383055.38 | 7383055.58 | 7383055.80 | 0.0088 | 0.0048 |
| Neptune | 15503-01-10 09:21 G | 7383422.66 | 7383422.89 | 7383423.12 | 0.0088 | 0.0046 |
| Neptune | 15504-01-13 02:38 G | 7383790.43 | 7383790.61 | 7383790.81 | 0.0088 | 0.0060 |
| Saturn | 15504-10-29 03:07 G | 7384080.39 | 7384080.63 | 7384080.87 | 0.0283 | 0.0070 |
| Neptune | 15505-01-14 07:26 G | 7384157.63 | 7384157.81 | 7384158.03 | 0.0088 | 0.0057 |
| Jupiter | 15505-11-20 07:40 G | 7384467.61 | 7384467.82 | 7384468.03 | 0.0484 | 0.0197 |
| Neptune | 15506-01-17 02:24 G | 7384525.46 | 7384525.60 | 7384525.78 | 0.0088 | 0.0071 |
| Neptune | 15507-01-19 07:55 G | 7384892.69 | 7384892.83 | 7384893.02 | 0.0088 | 0.0068 |
| Neptune | 15508-01-22 01:12 G | 7385260.48 | 7385260.55 | 7385260.69 | 0.0088 | 0.0082 |

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| Neptune | 15509-01-23 11:16 G | 7385627.85 | 7385627.97 | 7385628.08 | 0.0088 | 0.0078 |
| Neptune | 15511-01-28 13:12 G | 7386363.04 | 7386363.05 | 7386363.11 | 0.0088 | 0.0088 |
| Jupiter | 15511-05-09 02:09 G | 7386463.38 | 7386463.59 | 7386463.81 | 0.0544 | 0.0230 |
| Jupiter | 15516-10-25 16:19 G | 7388460.15 | 7388460.18 | 7388460.24 | 0.0486 | 0.0474 |
| Jupiter | 15517-11-24 05:31 G | 7388854.56 | 7388854.73 | 7388854.92 | 0.0484 | 0.0314 |
| Saturn | 15519-04-30 20:09 G | 7389377.12 | 7389377.34 | 7389377.57 | 0.0276 | 0.0101 |
| Jupiter | 15523-05-14 16:33 G | 7390851.96 | 7390852.19 | 7390852.41 | 0.0545 | 0.0028 |
| Jupiter | 15528-10-29 18:57 G | 7392847.12 | 7392847.29 | 7392847.47 | 0.0485 | 0.0340 |
| Jupiter | 15529-11-28 14:52 G | 7393241.99 | 7393242.12 | 7393242.26 | 0.0484 | 0.0381 |
| Uranus | 15532-03-03 21:07 G | 7394068.26 | 7394068.38 | 7394068.50 | 0.0134 | 0.0117 |
| Pluto | 15532-07-13 05:02 G | 7394199.62 | 7394199.71 | 7394199.88 | 0.0064 | 0.0056 |
| Uranus | 15533-03-08 00:43 G | 7394437.33 | 7394437.53 | 7394437.76 | 0.0133 | 0.0077 |
| Pluto | 15533-07-14 23:45 G | 7394566.27 | 7394566.49 | 7394566.75 | 0.0064 | 0.0024 |
| Uranus | 15534-03-12 15:07 G | 7394806.89 | 7394807.13 | 7394807.38 | 0.0133 | 0.0030 |
| Saturn | 15534-11-05 17:02 G | 7395045.06 | 7395045.21 | 7395045.38 | 0.0283 | 0.0205 |
| Uranus | 15535-03-16 19:12 G | 7395176.04 | 7395176.30 | 7395176.56 | 0.0133 | 0.0022 |
| Jupiter | 15535-05-20 06:00 G | 7395240.52 | 7395240.75 | 7395240.99 | 0.0545 | 0.0104 |
| Uranus | 15536-03-20 08:24 G | 7395545.63 | 7395545.85 | 7395546.08 | 0.0133 | 0.0057 |
| Uranus | 15537-03-24 11:45 G | 7395914.88 | 7395914.99 | 7395915.15 | 0.0133 | 0.0115 |
| Jupiter | 15540-11-02 21:21 G | 7397234.19 | 7397234.39 | 7397234.59 | 0.0484 | 0.0214 |
| Jupiter | 15541-12-02 16:48 G | 7397629.12 | 7397629.20 | 7397629.28 | 0.0485 | 0.0457 |
| Jupiter | 15547-05-25 13:55 G | 7399628.88 | 7399629.08 | 7399629.29 | 0.0545 | 0.0222 |
| Saturn | 15549-05-06 21:21 G | 7400341.18 | 7400341.39 | 7400341.60 | 0.0276 | 0.0140 |
| Jupiter | 15552-11-07 05:02 G | 7401621.48 | 7401621.71 | 7401621.94 | 0.0484 | 0.0137 |
| Jupiter | 15559-05-31 06:14 G | 7404017.61 | 7404017.76 | 7404017.91 | 0.0544 | 0.0413 |
| Neptune | 15560-05-20 04:33 G | 7404372.63 | 7404372.69 | 7404372.77 | 0.0090 | 0.0086 |
| Neptune | 15561-05-22 10:19 G | 7404739.87 | 7404739.93 | 7404740.03 | 0.0090 | 0.0085 |
| Neptune | 15562-05-25 06:14 G | 7405107.64 | 7405107.76 | 7405107.92 | 0.0090 | 0.0076 |
| Neptune | 15563-05-27 12:57 G | 7405474.92 | 7405475.04 | 7405475.20 | 0.0090 | 0.0075 |
| Saturn | 15563-10-30 21:50 G | 7405631.16 | 7405631.41 | 7405631.66 | 0.0283 | 0.0026 |

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| Neptune | 15564-05-29 06:14 G | 7405842.60 | 7405842.76 | 7405842.97 | 0.0090 | 0.0065 |
| Jupiter | 15564-11-11 02:52 G | 7406008.39 | 7406008.62 | 7406008.85 | 0.0484 | 0.0063 |
| Neptune | 15565-05-31 16:33 G | 7406210.04 | 7406210.19 | 7406210.39 | 0.0090 | 0.0064 |
| Neptune | 15566-06-03 05:45 G | 7406577.53 | 7406577.74 | 7406577.96 | 0.0090 | 0.0053 |
| Neptune | 15567-06-05 20:24 G | 7406945.15 | 7406945.35 | 7406945.55 | 0.0090 | 0.0053 |
| Neptune | 15568-06-07 03:50 G | 7407312.45 | 7407312.66 | 7407312.91 | 0.0090 | 0.0043 |
| Neptune | 15569-06-09 22:33 G | 7407680.23 | 7407680.44 | 7407680.67 | 0.0089 | 0.0042 |
| Jupiter | 15570-04-27 15:07 G | 7408002.07 | 7408002.13 | 7408002.19 | 0.0543 | 0.0523 |
| Neptune | 15570-06-12 04:19 G | 7408047.45 | 7408047.68 | 7408047.93 | 0.0089 | 0.0030 |
| Neptune | 15571-06-14 23:45 G | 7408415.26 | 7408415.49 | 7408415.75 | 0.0089 | 0.0030 |
| Neptune | 15572-06-16 06:00 G | 7408782.52 | 7408782.75 | 7408783.01 | 0.0089 | 0.0018 |
| Neptune | 15573-06-18 23:31 G | 7409150.23 | 7409150.48 | 7409150.75 | 0.0089 | 0.0018 |
| Neptune | 15574-06-21 09:21 G | 7409517.64 | 7409517.89 | 7409518.14 | 0.0089 | 0.0006 |
| Neptune | 15575-06-23 22:04 G | 7409885.16 | 7409885.42 | 7409885.69 | 0.0089 | 0.0006 |
| Uranus | 15575-09-04 18:28 G | 7409958.13 | 7409958.27 | 7409958.42 | 0.0145 | 0.0115 |
| Neptune | 15576-06-25 11:45 G | 7410252.75 | 7410252.99 | 7410253.24 | 0.0089 | 0.0007 |
| Uranus | 15576-09-08 16:04 G | 7410327.93 | 7410328.17 | 7410328.42 | 0.0145 | 0.0047 |
| Jupiter | 15576-11-15 15:36 G | 7410395.91 | 7410396.15 | 7410396.38 | 0.0484 | 0.0052 |
| Neptune | 15577-06-27 19:26 G | 7410620.05 | 7410620.31 | 7410620.58 | 0.0089 | 0.0006 |
| Uranus | 15577-09-13 16:19 G | 7410697.94 | 7410698.18 | 7410698.42 | 0.0145 | 0.0009 |
| Saturn | 15578-05-02 03:07 G | 7410928.39 | 7410928.63 | 7410928.87 | 0.0276 | 0.0050 |
| Neptune | 15578-06-30 12:57 G | 7410987.81 | 7410988.04 | 7410988.30 | 0.0089 | 0.0020 |
| Uranus | 15578-09-18 16:33 G | 7411067.97 | 7411068.19 | 7411068.44 | 0.0146 | 0.0064 |
| Neptune | 15579-07-02 18:14 G | 7411355.01 | 7411355.26 | 7411355.52 | 0.0089 | 0.0017 |
| Uranus | 15579-09-23 14:38 G | 7411438.03 | 7411438.11 | 7411438.20 | 0.0146 | 0.0135 |
| Neptune | 15580-07-04 13:12 G | 7411722.81 | 7411723.05 | 7411723.29 | 0.0089 | 0.0031 |
| Neptune | 15581-07-06 18:28 G | 7412090.04 | 7412090.27 | 7412090.52 | 0.0089 | 0.0029 |
| Jupiter | 15582-05-02 17:45 G | 7412390.09 | 7412390.24 | 7412390.38 | 0.0544 | 0.0422 |
| Neptune | 15582-07-09 11:31 G | 7412457.75 | 7412457.98 | 7412458.21 | 0.0089 | 0.0043 |
| Neptune | 15583-07-11 20:38 G | 7412825.15 | 7412825.36 | 7412825.59 | 0.0089 | 0.0041 |

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| Neptune | 15584-07-13 08:24 G | 7413192.67 | 7413192.85 | 7413193.09 | 0.0089 | 0.0054 |
| Neptune | 15585-07-15 22:04 G | 7413560.24 | 7413560.42 | 7413560.64 | 0.0089 | 0.0052 |
| Neptune | 15586-07-18 05:31 G | 7413927.56 | 7413927.73 | 7413927.92 | 0.0089 | 0.0065 |
| Neptune | 15587-07-20 22:48 G | 7414295.28 | 7414295.45 | 7414295.64 | 0.0089 | 0.0062 |
| Neptune | 15588-07-22 02:52 G | 7414662.52 | 7414662.62 | 7414662.79 | 0.0089 | 0.0076 |
| Jupiter | 15588-11-19 11:31 G | 7414782.76 | 7414782.98 | 7414783.20 | 0.0483 | 0.0188 |
| Neptune | 15589-07-24 21:21 G | 7415030.26 | 7415030.39 | 7415030.56 | 0.0089 | 0.0072 |
| Neptune | 15590-07-27 02:09 G | 7415397.56 | 7415397.59 | 7415397.69 | 0.0089 | 0.0086 |
| Neptune | 15591-07-29 18:28 G | 7415765.18 | 7415765.27 | 7415765.40 | 0.0089 | 0.0081 |
| Saturn | 15592-10-24 10:48 G | 7416217.85 | 7416217.95 | 7416218.07 | 0.0283 | 0.0250 |
| Saturn | 15593-11-06 19:40 G | 7416596.22 | 7416596.32 | 7416596.43 | 0.0283 | 0.0252 |
| Jupiter | 15594-05-08 11:31 G | 7416778.78 | 7416778.98 | 7416779.18 | 0.0545 | 0.0242 |
| Mars | 15597-08-17 18:43 G | 7417976.08 | 7417976.28 | 7417976.47 | 0.1718 | 0.0581 |
| Jupiter | 15599-10-26 02:24 G | 7418775.56 | 7418775.60 | 7418775.66 | 0.0485 | 0.0474 |
| Jupiter | 15600-11-23 21:21 G | 7419170.22 | 7419170.39 | 7419170.57 | 0.0484 | 0.0297 |
| Jupiter | 15606-05-13 23:45 G | 7421167.25 | 7421167.49 | 7421167.74 | 0.0545 | 0.0046 |
| Saturn | 15607-04-26 03:36 G | 7421514.62 | 7421514.65 | 7421514.71 | 0.0276 | 0.0270 |
| Saturn | 15608-05-08 01:55 G | 7421892.42 | 7421892.58 | 7421892.76 | 0.0276 | 0.0193 |
| Jupiter | 15611-10-30 02:52 G | 7423162.47 | 7423162.62 | 7423162.79 | 0.0485 | 0.0342 |
| Jupiter | 15612-11-27 22:19 G | 7423557.27 | 7423557.43 | 7423557.59 | 0.0484 | 0.0361 |
| Uranus | 15616-03-04 12:14 G | 7424749.91 | 7424750.01 | 7424750.12 | 0.0134 | 0.0121 |
| Uranus | 15617-03-08 15:21 G | 7425118.92 | 7425119.14 | 7425119.38 | 0.0133 | 0.0068 |
| Uranus | 15618-03-13 06:14 G | 7425488.51 | 7425488.76 | 7425489.01 | 0.0133 | 0.0022 |
| Jupiter | 15618-05-19 07:12 G | 7425555.58 | 7425555.80 | 7425556.02 | 0.0545 | 0.0078 |
| Uranus | 15619-03-17 08:52 G | 7425857.62 | 7425857.87 | 7425858.14 | 0.0133 | 0.0020 |
| Uranus | 15620-03-20 22:48 G | 7426227.24 | 7426227.45 | 7426227.65 | 0.0133 | 0.0075 |
| Uranus | 15621-03-25 01:12 G | 7426596.41 | 7426596.55 | 7426596.72 | 0.0133 | 0.0107 |
| Pluto | 15622-01-12 04:19 G | 7426889.43 | 7426889.68 | 7426889.95 | 0.0080 | 0.0017 |
| Saturn | 15622-10-31 19:40 G | 7427182.08 | 7427182.32 | 7427182.56 | 0.0283 | 0.0020 |
| Jupiter | 15623-11-03 13:12 G | 7427549.84 | 7427550.05 | 7427550.27 | 0.0484 | 0.0221 |

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| Jupiter | 15624-12-02 04:48 G | 7427944.63 | 7427944.70 | 7427944.79 | 0.0485 | 0.0450 |
| Jupiter | 15630-05-24 17:16 G | 7429944.01 | 7429944.22 | 7429944.44 | 0.0545 | 0.0193 |
| Jupiter | 15635-11-07 10:48 G | 7431936.73 | 7431936.95 | 7431937.17 | 0.0484 | 0.0146 |
| Saturn | 15637-05-03 04:48 G | 7432479.45 | 7432479.70 | 7432479.96 | 0.0276 | 0.0005 |
| Neptune | 15641-11-15 10:19 G | 7434136.87 | 7434136.93 | 7434137.02 | 0.0088 | 0.0084 |
| Jupiter | 15642-05-29 19:26 G | 7434332.14 | 7434332.31 | 7434332.48 | 0.0545 | 0.0382 |
| Neptune | 15642-11-17 14:24 G | 7434504.10 | 7434504.10 | 7434504.13 | 0.0088 | 0.0088 |
| Neptune | 15643-11-20 05:16 G | 7434871.60 | 7434871.72 | 7434871.87 | 0.0088 | 0.0075 |
| Neptune | 15644-11-21 12:28 G | 7435238.93 | 7435239.02 | 7435239.16 | 0.0088 | 0.0078 |
| Neptune | 15645-11-23 23:16 G | 7435606.31 | 7435606.47 | 7435606.67 | 0.0088 | 0.0065 |
| Neptune | 15646-11-26 12:14 G | 7435973.87 | 7435974.01 | 7435974.19 | 0.0088 | 0.0068 |
| Jupiter | 15647-11-11 21:50 G | 7436324.18 | 7436324.41 | 7436324.64 | 0.0484 | 0.0074 |
| Neptune | 15647-11-28 18:57 G | 7436341.09 | 7436341.29 | 7436341.50 | 0.0088 | 0.0055 |
| Neptune | 15648-11-30 11:31 G | 7436708.81 | 7436708.98 | 7436709.19 | 0.0088 | 0.0058 |
| Neptune | 15649-12-02 15:21 G | 7437075.94 | 7437076.14 | 7437076.38 | 0.0088 | 0.0045 |
| Neptune | 15650-12-05 09:21 G | 7437443.68 | 7437443.89 | 7437444.12 | 0.0088 | 0.0046 |
| Saturn | 15651-10-26 12:57 G | 7437768.88 | 7437769.04 | 7437769.23 | 0.0283 | 0.0202 |
| Neptune | 15651-12-07 14:09 G | 7437810.87 | 7437811.09 | 7437811.33 | 0.0088 | 0.0034 |
| Neptune | 15652-12-09 05:02 G | 7438178.47 | 7438178.71 | 7438178.96 | 0.0088 | 0.0035 |
| Neptune | 15653-12-11 13:26 G | 7438545.83 | 7438546.06 | 7438546.31 | 0.0088 | 0.0024 |
| Neptune | 15654-12-13 23:45 G | 7438913.24 | 7438913.49 | 7438913.76 | 0.0088 | 0.0025 |
| Neptune | 15655-12-16 13:55 G | 7439280.84 | 7439281.08 | 7439281.33 | 0.0088 | 0.0013 |
| Neptune | 15656-12-17 20:09 G | 7439648.08 | 7439648.34 | 7439648.61 | 0.0088 | 0.0013 |
| Neptune | 15657-12-20 13:40 G | 7440015.81 | 7440016.07 | 7440016.33 | 0.0088 | 0.0001 |
| Neptune | 15658-12-22 17:45 G | 7440382.99 | 7440383.24 | 7440383.50 | 0.0088 | 0.0002 |
| Uranus | 15659-09-05 08:38 G | 7440639.69 | 7440639.86 | 7440640.06 | 0.0145 | 0.0097 |
| Jupiter | 15659-11-15 18:57 G | 7440711.05 | 7440711.29 | 7440711.53 | 0.0483 | 0.0045 |
| Neptune | 15659-12-25 12:00 G | 7440750.74 | 7440751.00 | 7440751.27 | 0.0088 | 0.0009 |
| Uranus | 15660-09-09 05:16 G | 7441009.48 | 7441009.72 | 7441009.97 | 0.0145 | 0.0050 |
| Neptune | 15660-12-26 17:45 G | 7441117.99 | 7441118.24 | 7441118.49 | 0.0088 | 0.0009 |

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| Uranus | 15661-09-14 06:28 G | 7441379.54 | 7441379.77 | 7441380.02 | 0.0145 | 0.0015 |
| Neptune | 15661-12-29 08:52 G | 7441485.61 | 7441485.87 | 7441486.13 | 0.0088 | 0.0020 |
| Uranus | 15662-09-19 06:00 G | 7441749.54 | 7441749.75 | 7441749.97 | 0.0146 | 0.0078 |
| Neptune | 15662-12-31 18:14 G | 7441853.02 | 7441853.26 | 7441853.51 | 0.0088 | 0.0021 |
| Uranus | 15663-09-24 05:16 G | 7442119.61 | 7442119.72 | 7442119.84 | 0.0146 | 0.0127 |
| Neptune | 15664-01-03 04:33 G | 7442220.46 | 7442220.69 | 7442220.96 | 0.0088 | 0.0032 |
| Neptune | 15665-01-04 19:40 G | 7442588.09 | 7442588.32 | 7442588.56 | 0.0088 | 0.0032 |
| Jupiter | 15665-05-02 06:57 G | 7442705.67 | 7442705.79 | 7442705.93 | 0.0544 | 0.0441 |
| Neptune | 15666-01-07 01:55 G | 7442955.36 | 7442955.58 | 7442955.82 | 0.0088 | 0.0042 |
| Saturn | 15666-04-27 08:38 G | 7443065.72 | 7443065.86 | 7443066.00 | 0.0276 | 0.0221 |
| Neptune | 15667-01-09 19:55 G | 7443323.12 | 7443323.33 | 7443323.57 | 0.0088 | 0.0043 |
| Saturn | 15667-05-10 09:36 G | 7443443.79 | 7443443.90 | 7443444.02 | 0.0276 | 0.0242 |
| Neptune | 15668-01-12 00:28 G | 7443690.34 | 7443690.52 | 7443690.75 | 0.0088 | 0.0053 |
| Neptune | 15669-01-13 19:12 G | 7444058.11 | 7444058.30 | 7444058.52 | 0.0088 | 0.0055 |
| Neptune | 15670-01-16 00:57 G | 7444425.39 | 7444425.54 | 7444425.74 | 0.0088 | 0.0064 |
| Neptune | 15671-01-18 16:33 G | 7444793.03 | 7444793.19 | 7444793.39 | 0.0088 | 0.0066 |
| Jupiter | 15671-11-20 03:07 G | 7445098.42 | 7445098.63 | 7445098.84 | 0.0484 | 0.0185 |
| Neptune | 15672-01-21 02:38 G | 7445160.49 | 7445160.61 | 7445160.77 | 0.0088 | 0.0073 |
| Neptune | 15673-01-22 13:40 G | 7445527.95 | 7445528.07 | 7445528.23 | 0.0088 | 0.0075 |
| Neptune | 15674-01-25 05:16 G | 7445895.64 | 7445895.72 | 7445895.81 | 0.0088 | 0.0083 |
| Neptune | 15675-01-27 12:28 G | 7446262.96 | 7446263.02 | 7446263.10 | 0.0088 | 0.0085 |
| Mars | 15676-08-20 12:14 G | 7446833.86 | 7446834.01 | 7446834.17 | 0.1712 | 0.1007 |
| Jupiter | 15677-05-07 15:21 G | 7447093.93 | 7447094.14 | 7447094.35 | 0.0544 | 0.0253 |
| Saturn | 15681-11-01 22:19 G | 7448733.20 | 7448733.43 | 7448733.66 | 0.0283 | 0.0069 |
| Jupiter | 15682-10-25 10:19 G | 7449090.89 | 7449090.93 | 7449090.96 | 0.0486 | 0.0478 |
| Jupiter | 15683-11-24 06:14 G | 7449485.56 | 7449485.76 | 7449485.96 | 0.0484 | 0.0282 |
| Jupiter | 15689-05-12 18:28 G | 7451482.05 | 7451482.27 | 7451482.49 | 0.0544 | 0.0074 |
| Jupiter | 15694-10-29 20:52 G | 7453478.20 | 7453478.37 | 7453478.54 | 0.0485 | 0.0338 |
| Jupiter | 15695-11-28 11:16 G | 7453872.82 | 7453872.97 | 7453873.13 | 0.0484 | 0.0350 |
| Saturn | 15696-05-04 03:07 G | 7454030.38 | 7454030.63 | 7454030.88 | 0.0276 | 0.0046 |

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| Uranus | 15700-03-06 02:24 G | 7455431.46 | 7455431.60 | 7455431.76 | 0.0134 | 0.0107 |
| Uranus | 15701-03-10 05:02 G | 7455800.49 | 7455800.71 | 7455800.94 | 0.0133 | 0.0068 |
| Jupiter | 15701-05-19 09:07 G | 7455870.65 | 7455870.88 | 7455871.12 | 0.0545 | 0.0042 |
| Uranus | 15702-03-14 20:38 G | 7456170.11 | 7456170.36 | 7456170.61 | 0.0133 | 0.0019 |
| Uranus | 15703-03-18 23:02 G | 7456539.21 | 7456539.46 | 7456539.72 | 0.0133 | 0.0032 |
| Uranus | 15704-03-22 13:12 G | 7456908.85 | 7456909.05 | 7456909.28 | 0.0133 | 0.0069 |
| Uranus | 15705-03-26 15:21 G | 7457278.08 | 7457278.14 | 7457278.24 | 0.0133 | 0.0126 |
| Jupiter | 15706-11-03 17:02 G | 7457865.01 | 7457865.21 | 7457865.42 | 0.0484 | 0.0232 |
| Jupiter | 15707-12-03 17:31 G | 7458260.12 | 7458260.23 | 7458260.33 | 0.0484 | 0.0436 |
| Saturn | 15710-10-28 11:02 G | 7459319.76 | 7459319.96 | 7459320.19 | 0.0283 | 0.0152 |
| Jupiter | 15713-05-24 13:40 G | 7460258.85 | 7460259.07 | 7460259.30 | 0.0545 | 0.0169 |
| Jupiter | 15718-11-08 05:02 G | 7462252.49 | 7462252.71 | 7462252.93 | 0.0484 | 0.0161 |
| Neptune | 15724-05-19 23:45 G | 7464272.41 | 7464272.49 | 7464272.61 | 0.0090 | 0.0083 |
| Saturn | 15725-04-29 16:48 G | 7464617.02 | 7464617.20 | 7464617.40 | 0.0276 | 0.0172 |
| Neptune | 15725-05-22 19:12 G | 7464640.26 | 7464640.30 | 7464640.39 | 0.0090 | 0.0087 |
| Jupiter | 15725-05-30 08:52 G | 7464647.70 | 7464647.87 | 7464648.03 | 0.0545 | 0.0370 |
| Neptune | 15726-05-25 03:36 G | 7465007.52 | 7465007.65 | 7465007.81 | 0.0090 | 0.0073 |
| Neptune | 15727-05-27 19:26 G | 7465375.19 | 7465375.31 | 7465375.47 | 0.0090 | 0.0076 |
| Neptune | 15728-05-29 07:12 G | 7465742.64 | 7465742.80 | 7465742.99 | 0.0090 | 0.0063 |
| Neptune | 15729-05-31 18:14 G | 7466110.10 | 7466110.26 | 7466110.46 | 0.0090 | 0.0066 |
| Neptune | 15730-06-03 10:48 G | 7466477.77 | 7466477.95 | 7466478.18 | 0.0090 | 0.0053 |
| Jupiter | 15730-11-12 00:57 G | 7466639.31 | 7466639.54 | 7466639.78 | 0.0484 | 0.0084 |
| Neptune | 15731-06-05 18:14 G | 7466845.07 | 7466845.26 | 7466845.48 | 0.0090 | 0.0055 |
| Neptune | 15732-06-07 13:40 G | 7467212.85 | 7467213.07 | 7467213.31 | 0.0090 | 0.0041 |
| Neptune | 15733-06-09 19:12 G | 7467580.09 | 7467580.30 | 7467580.54 | 0.0090 | 0.0044 |
| Neptune | 15734-06-12 14:38 G | 7467947.87 | 7467948.11 | 7467948.36 | 0.0090 | 0.0030 |
| Neptune | 15735-06-14 21:36 G | 7468315.19 | 7468315.40 | 7468315.65 | 0.0089 | 0.0033 |
| Neptune | 15736-06-16 13:26 G | 7468682.82 | 7468683.06 | 7468683.34 | 0.0089 | 0.0020 |
| Jupiter | 15737-06-04 16:33 G | 7469036.14 | 7469036.19 | 7469036.23 | 0.0544 | 0.0533 |
| Neptune | 15737-06-19 00:28 G | 7469050.29 | 7469050.52 | 7469050.77 | 0.0089 | 0.0021 |

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| Neptune | 15738-06-21 11:45 G | 7469417.73 | 7469417.99 | 7469418.26 | 0.0089 | 0.0007 |
| Neptune | 15739-06-24 03:36 G | 7469785.41 | 7469785.65 | 7469785.91 | 0.0089 | 0.0009 |
| Neptune | 15740-06-25 10:48 G | 7470152.69 | 7470152.95 | 7470153.22 | 0.0089 | 0.0005 |
| Saturn | 15740-11-04 02:24 G | 7470284.38 | 7470284.60 | 7470284.82 | 0.0283 | 0.0117 |
| Neptune | 15741-06-28 05:45 G | 7470520.48 | 7470520.74 | 7470520.99 | 0.0089 | 0.0003 |
| Neptune | 15742-06-30 10:33 G | 7470887.70 | 7470887.94 | 7470888.20 | 0.0089 | 0.0016 |
| Jupiter | 15742-11-16 10:19 G | 7471026.71 | 7471026.93 | 7471027.16 | 0.0484 | 0.0048 |
| Neptune | 15743-07-03 05:16 G | 7471255.48 | 7471255.72 | 7471255.99 | 0.0089 | 0.0016 |
| Uranus | 15743-09-06 21:36 G | 7471321.25 | 7471321.40 | 7471321.58 | 0.0145 | 0.0107 |
| Neptune | 15744-07-04 12:00 G | 7471622.76 | 7471623.00 | 7471623.24 | 0.0089 | 0.0027 |
| Uranus | 15744-09-10 17:02 G | 7471690.97 | 7471691.21 | 7471691.47 | 0.0145 | 0.0037 |
| Neptune | 15745-07-07 03:36 G | 7471990.39 | 7471990.65 | 7471990.90 | 0.0089 | 0.0027 |
| Uranus | 15745-09-15 19:26 G | 7472061.07 | 7472061.31 | 7472061.56 | 0.0145 | 0.0018 |
| Neptune | 15746-07-09 13:26 G | 7472357.84 | 7472358.06 | 7472358.29 | 0.0089 | 0.0037 |
| Uranus | 15746-09-20 17:16 G | 7472431.01 | 7472431.22 | 7472431.46 | 0.0146 | 0.0075 |
| Neptune | 15747-07-11 23:31 G | 7472725.26 | 7472725.48 | 7472725.74 | 0.0089 | 0.0038 |
| Uranus | 15747-09-25 17:31 G | 7472801.22 | 7472801.23 | 7472801.26 | 0.0146 | 0.0145 |
| Jupiter | 15748-05-02 00:57 G | 7473020.43 | 7473020.54 | 7473020.68 | 0.0543 | 0.0463 |
| Neptune | 15748-07-13 14:38 G | 7473092.92 | 7473093.11 | 7473093.34 | 0.0089 | 0.0048 |
| Neptune | 15749-07-15 21:21 G | 7473460.19 | 7473460.39 | 7473460.63 | 0.0089 | 0.0049 |
| Neptune | 15750-07-18 15:36 G | 7473827.98 | 7473828.15 | 7473828.36 | 0.0089 | 0.0060 |
| Neptune | 15751-07-20 20:52 G | 7474195.18 | 7474195.37 | 7474195.56 | 0.0089 | 0.0059 |
| Neptune | 15752-07-22 14:52 G | 7474562.97 | 7474563.12 | 7474563.30 | 0.0089 | 0.0068 |
| Neptune | 15753-07-24 20:52 G | 7474930.23 | 7474930.37 | 7474930.54 | 0.0089 | 0.0070 |
| Neptune | 15754-07-27 11:45 G | 7475297.88 | 7475297.99 | 7475298.14 | 0.0089 | 0.0078 |
| Jupiter | 15754-11-20 13:26 G | 7475413.83 | 7475414.06 | 7475414.28 | 0.0484 | 0.0178 |
| Saturn | 15755-05-07 05:16 G | 7475581.50 | 7475581.72 | 7475581.96 | 0.0276 | 0.0097 |
| Neptune | 15755-07-29 21:36 G | 7475665.30 | 7475665.40 | 7475665.52 | 0.0089 | 0.0079 |
| Neptune | 15756-07-31 07:12 G | 7476032.77 | 7476032.80 | 7476032.86 | 0.0089 | 0.0087 |
| Neptune | 15757-08-02 21:50 G | 7476400.41 | 7476400.41 | 7476400.44 | 0.0089 | 0.0089 |

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| Jupiter | 15760-05-07 10:33 G | 7477408.75 | 7477408.94 | 7477409.13 | 0.0544 | 0.0282 |
| Jupiter | 15765-10-26 02:24 G | 7479406.58 | 7479406.60 | 7479406.63 | 0.0486 | 0.0482 |
| Jupiter | 15766-11-24 15:36 G | 7479800.96 | 7479801.15 | 7479801.34 | 0.0484 | 0.0266 |
| Saturn | 15769-10-29 10:19 G | 7480870.71 | 7480870.93 | 7480871.16 | 0.0282 | 0.0100 |
| Jupiter | 15772-05-13 01:26 G | 7481797.33 | 7481797.56 | 7481797.80 | 0.0545 | 0.0097 |
| Jupiter | 15777-10-29 23:31 G | 7483793.32 | 7483793.48 | 7483793.64 | 0.0485 | 0.0348 |
| Pluto | 15778-07-16 14:24 G | 7484052.92 | 7484053.10 | 7484053.30 | 0.0064 | 0.0041 |
| Jupiter | 15778-11-28 23:02 G | 7484188.29 | 7484188.46 | 7484188.64 | 0.0484 | 0.0329 |
| Pluto | 15779-07-18 01:26 G | 7484419.37 | 7484419.56 | 7484419.79 | 0.0064 | 0.0040 |
| Mars | 15781-02-17 19:55 G | 7485000.14 | 7485000.33 | 7485000.51 | 0.1817 | 0.0110 |
| Uranus | 15784-03-06 16:33 G | 7486113.07 | 7486113.19 | 7486113.35 | 0.0134 | 0.0113 |
| Saturn | 15784-04-30 22:04 G | 7486168.20 | 7486168.42 | 7486168.65 | 0.0276 | 0.0119 |
| Jupiter | 15784-05-18 07:40 G | 7486185.58 | 7486185.82 | 7486186.05 | 0.0545 | 0.0017 |
| Uranus | 15785-03-10 18:57 G | 7486482.07 | 7486482.29 | 7486482.54 | 0.0133 | 0.0058 |
| Uranus | 15786-03-15 11:02 G | 7486851.71 | 7486851.96 | 7486852.21 | 0.0133 | 0.0012 |
| Uranus | 15787-03-19 12:43 G | 7487220.78 | 7487221.03 | 7487221.28 | 0.0133 | 0.0031 |
| Uranus | 15788-03-23 03:07 G | 7487590.45 | 7487590.63 | 7487590.84 | 0.0133 | 0.0086 |
| Uranus | 15789-03-27 04:19 G | 7487959.59 | 7487959.68 | 7487959.83 | 0.0133 | 0.0118 |
| Jupiter | 15789-11-03 10:04 G | 7488180.73 | 7488180.92 | 7488181.13 | 0.0485 | 0.0245 |
| Jupiter | 15790-12-02 21:21 G | 7488575.30 | 7488575.39 | 7488575.51 | 0.0484 | 0.0430 |
| Jupiter | 15796-05-24 01:55 G | 7490574.36 | 7490574.58 | 7490574.80 | 0.0545 | 0.0153 |
| Saturn | 15799-11-06 03:21 G | 7491835.45 | 7491835.64 | 7491835.85 | 0.0283 | 0.0171 |
| Jupiter | 15801-11-08 07:55 G | 7492567.61 | 7492567.83 | 7492568.06 | 0.0484 | 0.0176 |
| Neptune | 15806-11-19 00:57 G | 7494404.46 | 7494404.54 | 7494404.67 | 0.0088 | 0.0080 |
| Neptune | 15807-11-21 10:19 G | 7494771.84 | 7494771.93 | 7494772.05 | 0.0088 | 0.0079 |
| Jupiter | 15808-05-30 01:40 G | 7494962.38 | 7494962.57 | 7494962.76 | 0.0544 | 0.0338 |
| Neptune | 15808-11-22 19:26 G | 7495139.18 | 7495139.31 | 7495139.49 | 0.0088 | 0.0071 |
| Neptune | 15809-11-25 09:21 G | 7495506.75 | 7495506.89 | 7495507.05 | 0.0088 | 0.0070 |
| Neptune | 15810-11-27 14:09 G | 7495873.92 | 7495874.09 | 7495874.29 | 0.0088 | 0.0062 |
| Neptune | 15811-11-30 07:26 G | 7496241.64 | 7496241.81 | 7496242.00 | 0.0088 | 0.0061 |

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| Neptune | 15812-12-01 10:48 G | 7496608.76 | 7496608.95 | 7496609.17 | 0.0088 | 0.0052 |
| Jupiter | 15813-11-12 16:19 G | 7496954.96 | 7496955.18 | 7496955.40 | 0.0484 | 0.0093 |
| Neptune | 15813-12-04 03:50 G | 7496976.46 | 7496976.66 | 7496976.89 | 0.0088 | 0.0051 |
| Saturn | 15814-05-09 14:09 G | 7497132.89 | 7497133.09 | 7497133.29 | 0.0277 | 0.0150 |
| Neptune | 15814-12-06 09:36 G | 7497343.68 | 7497343.90 | 7497344.13 | 0.0088 | 0.0041 |
| Neptune | 15815-12-08 23:16 G | 7497711.25 | 7497711.47 | 7497711.73 | 0.0088 | 0.0041 |
| Neptune | 15816-12-10 09:36 G | 7498078.69 | 7498078.90 | 7498079.15 | 0.0088 | 0.0032 |
| Neptune | 15817-12-12 18:28 G | 7498446.04 | 7498446.27 | 7498446.54 | 0.0088 | 0.0031 |
| Neptune | 15818-12-15 09:50 G | 7498813.67 | 7498813.91 | 7498814.16 | 0.0088 | 0.0020 |
| Neptune | 15819-12-17 14:24 G | 7499180.86 | 7499181.10 | 7499181.37 | 0.0088 | 0.0020 |
| Jupiter | 15820-06-04 09:07 G | 7499350.79 | 7499350.88 | 7499350.96 | 0.0544 | 0.0501 |
| Neptune | 15820-12-19 08:09 G | 7499548.59 | 7499548.84 | 7499549.10 | 0.0088 | 0.0009 |
| Neptune | 15821-12-21 12:14 G | 7499915.76 | 7499916.01 | 7499916.27 | 0.0088 | 0.0009 |
| Neptune | 15822-12-24 05:31 G | 7500283.46 | 7500283.73 | 7500283.99 | 0.0088 | 0.0002 |
| Neptune | 15823-12-26 11:31 G | 7500650.73 | 7500650.98 | 7500651.24 | 0.0088 | 0.0002 |
| Neptune | 15824-12-28 01:12 G | 7501018.30 | 7501018.55 | 7501018.83 | 0.0088 | 0.0013 |
| Jupiter | 15825-11-16 18:00 G | 7501342.01 | 7501342.25 | 7501342.50 | 0.0484 | 0.0037 |
| Neptune | 15825-12-30 12:28 G | 7501385.78 | 7501386.02 | 7501386.28 | 0.0088 | 0.0013 |
| Neptune | 15827-01-01 21:36 G | 7501753.16 | 7501753.40 | 7501753.68 | 0.0088 | 0.0024 |
| Uranus | 15827-09-08 10:48 G | 7502002.77 | 7502002.95 | 7502003.16 | 0.0145 | 0.0088 |
| Neptune | 15828-01-04 13:40 G | 7502120.83 | 7502121.07 | 7502121.32 | 0.0088 | 0.0023 |
| Uranus | 15828-09-12 05:16 G | 7502372.48 | 7502372.72 | 7502372.97 | 0.0145 | 0.0042 |
| Saturn | 15828-10-31 17:45 G | 7502422.01 | 7502422.24 | 7502422.48 | 0.0282 | 0.0041 |
| Neptune | 15829-01-05 18:43 G | 7502488.05 | 7502488.28 | 7502488.53 | 0.0088 | 0.0034 |
| Uranus | 15829-09-17 08:38 G | 7502742.62 | 7502742.86 | 7502743.10 | 0.0145 | 0.0024 |
| Neptune | 15830-01-08 12:57 G | 7502855.82 | 7502856.04 | 7502856.30 | 0.0088 | 0.0033 |
| Uranus | 15830-09-22 05:31 G | 7503112.53 | 7503112.73 | 7503112.95 | 0.0146 | 0.0086 |
| Neptune | 15831-01-10 17:45 G | 7503223.03 | 7503223.24 | 7503223.47 | 0.0088 | 0.0045 |
| Jupiter | 15831-05-03 02:52 G | 7503335.53 | 7503335.62 | 7503335.72 | 0.0543 | 0.0487 |
| Uranus | 15831-09-27 07:12 G | 7503482.73 | 7503482.80 | 7503482.90 | 0.0146 | 0.0137 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 15832-01-13 11:31 G | 7503590.76 | 7503590.98 | 7503591.22 | 0.0088 | 0.0043 |
| Neptune | 15833-01-14 18:00 G | 7503958.08 | 7503958.25 | 7503958.47 | 0.0088 | 0.0057 |
| Neptune | 15834-01-17 08:24 G | 7504325.65 | 7504325.85 | 7504326.08 | 0.0088 | 0.0054 |
| Neptune | 15835-01-19 20:24 G | 7504693.19 | 7504693.35 | 7504693.53 | 0.0088 | 0.0066 |
| Neptune | 15836-01-22 05:31 G | 7505060.57 | 7505060.73 | 7505060.95 | 0.0088 | 0.0064 |
| Neptune | 15837-01-23 22:33 G | 7505428.31 | 7505428.44 | 7505428.56 | 0.0088 | 0.0076 |
| Jupiter | 15837-11-20 20:38 G | 7505729.16 | 7505729.36 | 7505729.58 | 0.0483 | 0.0166 |
| Neptune | 15838-01-26 03:36 G | 7505795.53 | 7505795.65 | 7505795.83 | 0.0088 | 0.0073 |
| Neptune | 15839-01-28 23:02 G | 7506163.41 | 7506163.46 | 7506163.53 | 0.0088 | 0.0086 |
| Neptune | 15840-01-31 04:19 G | 7506530.59 | 7506530.68 | 7506530.78 | 0.0088 | 0.0082 |
| Saturn | 15843-05-03 23:45 G | 7507719.24 | 7507719.49 | 7507719.74 | 0.0276 | 0.0063 |
| Jupiter | 15843-05-08 17:45 G | 7507724.04 | 7507724.24 | 7507724.44 | 0.0544 | 0.0291 |
| Jupiter | 15849-11-25 03:36 G | 7510116.44 | 7510116.65 | 7510116.85 | 0.0484 | 0.0246 |
| Jupiter | 15855-05-13 23:02 G | 7512112.24 | 7512112.46 | 7512112.69 | 0.0544 | 0.0115 |
| Saturn | 15857-10-26 01:12 G | 7513008.50 | 7513008.55 | 7513008.63 | 0.0282 | 0.0272 |
| Saturn | 15858-11-08 03:36 G | 7513386.52 | 7513386.65 | 7513386.81 | 0.0283 | 0.0230 |
| Jupiter | 15860-10-30 15:21 G | 7514108.99 | 7514109.14 | 7514109.30 | 0.0486 | 0.0357 |
| Jupiter | 15861-11-29 02:52 G | 7514503.45 | 7514503.62 | 7514503.80 | 0.0484 | 0.0314 |
| Jupiter | 15867-05-19 12:14 G | 7516500.78 | 7516501.01 | 7516501.24 | 0.0544 | 0.0014 |
| Pluto | 15868-01-16 15:07 G | 7516742.93 | 7516743.13 | 7516743.37 | 0.0080 | 0.0041 |
| Uranus | 15868-03-08 06:14 G | 7516794.61 | 7516794.76 | 7516794.96 | 0.0134 | 0.0098 |
| Uranus | 15869-03-12 08:38 G | 7517163.63 | 7517163.86 | 7517164.10 | 0.0133 | 0.0059 |
| Uranus | 15870-03-17 00:43 G | 7517533.28 | 7517533.53 | 7517533.79 | 0.0133 | 0.0009 |
| Uranus | 15871-03-21 02:09 G | 7517902.36 | 7517902.59 | 7517902.85 | 0.0133 | 0.0042 |
| Uranus | 15872-03-24 17:16 G | 7518272.03 | 7518272.22 | 7518272.44 | 0.0133 | 0.0079 |
| Saturn | 15872-04-27 20:24 G | 7518306.29 | 7518306.35 | 7518306.44 | 0.0277 | 0.0263 |
| Jupiter | 15872-11-03 12:28 G | 7518495.82 | 7518496.02 | 7518496.23 | 0.0485 | 0.0262 |
| Saturn | 15873-05-10 22:19 G | 7518684.28 | 7518684.43 | 7518684.61 | 0.0277 | 0.0205 |
| Jupiter | 15873-12-03 14:38 G | 7518891.00 | 7518891.11 | 7518891.22 | 0.0485 | 0.0422 |
| Jupiter | 15879-05-24 14:09 G | 7520888.86 | 7520889.09 | 7520889.33 | 0.0544 | 0.0120 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Mars | 15881-08-20 09:21 G | 7521707.71 | 7521707.89 | 7521708.08 | 0.1725 | 0.0077 |
| Jupiter | 15884-11-07 19:55 G | 7522883.12 | 7522883.33 | 7522883.53 | 0.0484 | 0.0202 |
| Saturn | 15887-11-03 05:31 G | 7523973.49 | 7523973.73 | 7523973.97 | 0.0282 | 0.0023 |
| Neptune | 15888-05-20 07:26 G | 7524172.76 | 7524172.81 | 7524172.92 | 0.0090 | 0.0086 |
| Neptune | 15889-05-22 17:16 G | 7524540.12 | 7524540.22 | 7524540.33 | 0.0090 | 0.0081 |
| Neptune | 15890-05-25 07:55 G | 7524907.70 | 7524907.83 | 7524907.98 | 0.0090 | 0.0076 |
| Neptune | 15891-05-27 21:50 G | 7525275.28 | 7525275.41 | 7525275.57 | 0.0090 | 0.0072 |
| Jupiter | 15891-05-30 01:40 G | 7525277.39 | 7525277.57 | 7525277.75 | 0.0545 | 0.0318 |
| Neptune | 15892-05-29 07:55 G | 7525642.66 | 7525642.83 | 7525643.01 | 0.0090 | 0.0067 |
| Neptune | 15893-06-01 01:40 G | 7526010.41 | 7526010.57 | 7526010.78 | 0.0090 | 0.0062 |
| Neptune | 15894-06-03 07:55 G | 7526377.65 | 7526377.83 | 7526378.05 | 0.0090 | 0.0057 |
| Neptune | 15895-06-06 03:36 G | 7526745.46 | 7526745.65 | 7526745.89 | 0.0090 | 0.0050 |
| Neptune | 15896-06-07 09:36 G | 7527112.70 | 7527112.90 | 7527113.13 | 0.0090 | 0.0047 |
| Jupiter | 15896-11-11 23:16 G | 7527270.24 | 7527270.47 | 7527270.71 | 0.0484 | 0.0106 |
| Neptune | 15897-06-10 04:04 G | 7527480.44 | 7527480.67 | 7527480.92 | 0.0090 | 0.0039 |
| Neptune | 15898-06-12 12:28 G | 7527847.80 | 7527848.02 | 7527848.25 | 0.0090 | 0.0037 |
| Neptune | 15899-06-15 02:38 G | 7528215.37 | 7528215.61 | 7528215.88 | 0.0090 | 0.0029 |
| Neptune | 15900-06-17 15:50 G | 7528582.94 | 7528583.16 | 7528583.41 | 0.0090 | 0.0026 |
| Neptune | 15901-06-20 01:55 G | 7528950.33 | 7528950.58 | 7528950.85 | 0.0089 | 0.0017 |
| Saturn | 15902-05-06 05:16 G | 7529270.47 | 7529270.72 | 7529270.97 | 0.0276 | 0.0005 |
| Neptune | 15902-06-22 19:12 G | 7529318.06 | 7529318.30 | 7529318.55 | 0.0089 | 0.0015 |
| Jupiter | 15903-06-05 17:45 G | 7529666.12 | 7529666.24 | 7529666.35 | 0.0544 | 0.0474 |
| Neptune | 15903-06-25 01:26 G | 7529685.30 | 7529685.56 | 7529685.82 | 0.0089 | 0.0005 |
| Neptune | 15904-06-26 20:52 G | 7530053.11 | 7530053.37 | 7530053.63 | 0.0089 | 0.0005 |
| Neptune | 15905-06-29 02:24 G | 7530420.35 | 7530420.60 | 7530420.86 | 0.0089 | 0.0006 |
| Neptune | 15906-07-01 20:38 G | 7530788.10 | 7530788.36 | 7530788.62 | 0.0089 | 0.0007 |
| Neptune | 15907-07-04 03:50 G | 7531155.43 | 7531155.66 | 7531155.92 | 0.0089 | 0.0019 |
| Neptune | 15908-07-05 18:00 G | 7531523.01 | 7531523.25 | 7531523.53 | 0.0089 | 0.0019 |
| Jupiter | 15908-11-17 00:00 G | 7531657.28 | 7531657.50 | 7531657.73 | 0.0484 | 0.0027 |
| Neptune | 15909-07-08 06:43 G | 7531890.55 | 7531890.78 | 7531891.02 | 0.0089 | 0.0029 |

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| Neptune | 15910-07-10 15:50 G | 7532257.93 | 7532258.16 | 7532258.43 | 0.0089 | 0.0029 |
| Uranus | 15910-09-04 17:45 G | 7532314.21 | 7532314.24 | 7532314.31 | 0.0145 | 0.0142 |
| Neptune | 15911-07-13 08:38 G | 7532625.64 | 7532625.86 | 7532626.09 | 0.0089 | 0.0039 |
| Uranus | 15911-09-09 23:02 G | 7532684.29 | 7532684.46 | 7532684.65 | 0.0145 | 0.0099 |
| Neptune | 15912-07-14 13:55 G | 7532992.87 | 7532993.08 | 7532993.33 | 0.0089 | 0.0039 |
| Uranus | 15912-09-13 16:33 G | 7533053.95 | 7533054.19 | 7533054.45 | 0.0145 | 0.0027 |
| Neptune | 15913-07-17 08:24 G | 7533360.67 | 7533360.85 | 7533361.09 | 0.0089 | 0.0052 |
| Uranus | 15913-09-18 20:38 G | 7533424.13 | 7533424.36 | 7533424.61 | 0.0145 | 0.0026 |
| Jupiter | 15914-05-03 07:55 G | 7533650.74 | 7533650.83 | 7533650.93 | 0.0543 | 0.0498 |
| Neptune | 15914-07-19 13:26 G | 7533727.87 | 7533728.06 | 7533728.29 | 0.0089 | 0.0050 |
| Uranus | 15914-09-23 16:19 G | 7533793.98 | 7533794.18 | 7533794.41 | 0.0145 | 0.0085 |
| Neptune | 15915-07-22 07:26 G | 7534095.62 | 7534095.81 | 7534096.00 | 0.0089 | 0.0061 |
| Neptune | 15916-07-23 14:24 G | 7534462.92 | 7534463.10 | 7534463.30 | 0.0089 | 0.0058 |
| Saturn | 15916-10-28 05:16 G | 7534559.56 | 7534559.72 | 7534559.89 | 0.0282 | 0.0209 |
| Neptune | 15917-07-26 03:50 G | 7534830.52 | 7534830.66 | 7534830.85 | 0.0089 | 0.0070 |
| Neptune | 15918-07-28 16:04 G | 7535198.02 | 7535198.17 | 7535198.34 | 0.0089 | 0.0068 |
| Neptune | 15919-07-31 00:43 G | 7535565.44 | 7535565.53 | 7535565.67 | 0.0089 | 0.0080 |
| Neptune | 15920-08-01 17:02 G | 7535933.10 | 7535933.21 | 7535933.35 | 0.0089 | 0.0077 |
| Jupiter | 15920-11-21 08:24 G | 7536044.63 | 7536044.85 | 7536045.09 | 0.0484 | 0.0152 |
| Neptune | 15921-08-03 22:19 G | 7536300.41 | 7536300.43 | 7536300.46 | 0.0089 | 0.0088 |
| Neptune | 15922-08-06 15:50 G | 7536668.11 | 7536668.16 | 7536668.26 | 0.0089 | 0.0085 |
| Jupiter | 15926-05-08 09:36 G | 7538038.72 | 7538038.90 | 7538039.09 | 0.0543 | 0.0315 |
| Saturn | 15931-05-01 05:45 G | 7539857.58 | 7539857.74 | 7539857.91 | 0.0277 | 0.0204 |
| Saturn | 15932-05-13 02:09 G | 7540235.53 | 7540235.59 | 7540235.68 | 0.0277 | 0.0264 |
| Jupiter | 15932-11-25 06:14 G | 7540431.55 | 7540431.76 | 7540431.96 | 0.0484 | 0.0224 |
| Jupiter | 15938-05-14 00:43 G | 7542427.31 | 7542427.53 | 7542427.76 | 0.0544 | 0.0147 |
| Jupiter | 15943-10-31 15:07 G | 7544423.99 | 7544424.13 | 7544424.29 | 0.0486 | 0.0374 |
| Jupiter | 15944-11-29 16:04 G | 7544818.99 | 7544819.17 | 7544819.36 | 0.0484 | 0.0289 |
| Saturn | 15946-11-05 15:07 G | 7545524.89 | 7545525.13 | 7545525.37 | 0.0282 | 0.0088 |
| Jupiter | 15950-05-19 01:55 G | 7546815.35 | 7546815.58 | 7546815.82 | 0.0545 | 0.0043 |

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| Uranus | 15952-03-09 19:40 G | 7547476.18 | 7547476.32 | 7547476.50 | 0.0134 | 0.0104 |
| Uranus | 15953-03-13 22:04 G | 7547845.19 | 7547845.42 | 7547845.67 | 0.0133 | 0.0047 |
| Uranus | 15954-03-18 14:24 G | 7548214.85 | 7548215.10 | 7548215.36 | 0.0133 | 0.0004 |
| Uranus | 15955-03-22 15:36 G | 7548583.91 | 7548584.15 | 7548584.40 | 0.0133 | 0.0041 |
| Jupiter | 15955-11-04 23:45 G | 7548811.31 | 7548811.49 | 7548811.67 | 0.0485 | 0.0286 |
| Uranus | 15956-03-26 06:57 G | 7548953.62 | 7548953.79 | 7548953.97 | 0.0133 | 0.0095 |
| Jupiter | 15956-12-03 13:12 G | 7549205.92 | 7549206.05 | 7549206.18 | 0.0484 | 0.0401 |
| Uranus | 15957-03-30 07:40 G | 7549322.77 | 7549322.82 | 7549322.91 | 0.0133 | 0.0128 |
| Mars | 15960-08-23 19:26 G | 7550565.18 | 7550565.31 | 7550565.44 | 0.1719 | 0.1263 |
| Saturn | 15961-05-07 16:19 G | 7550821.95 | 7550822.18 | 7550822.41 | 0.0276 | 0.0059 |
| Jupiter | 15962-05-24 18:00 G | 7551204.03 | 7551204.25 | 7551204.47 | 0.0545 | 0.0100 |
| Jupiter | 15967-11-09 02:09 G | 7553198.38 | 7553198.59 | 7553198.81 | 0.0484 | 0.0220 |
| Neptune | 15968-11-14 08:09 G | 7553569.81 | 7553569.84 | 7553569.94 | 0.0088 | 0.0085 |
| Neptune | 15970-11-19 07:26 G | 7554304.70 | 7554304.81 | 7554304.94 | 0.0088 | 0.0076 |
| Neptune | 15971-11-21 15:21 G | 7554672.04 | 7554672.14 | 7554672.25 | 0.0088 | 0.0080 |
| Neptune | 15972-11-23 05:45 G | 7555039.60 | 7555039.74 | 7555039.92 | 0.0088 | 0.0068 |
| Neptune | 15973-11-25 10:04 G | 7555406.79 | 7555406.92 | 7555407.09 | 0.0088 | 0.0072 |
| Jupiter | 15974-05-30 07:12 G | 7555592.61 | 7555592.80 | 7555593.00 | 0.0545 | 0.0304 |
| Neptune | 15974-11-28 03:50 G | 7555774.47 | 7555774.66 | 7555774.86 | 0.0088 | 0.0058 |
| Saturn | 15975-10-30 15:36 G | 7556110.95 | 7556111.15 | 7556111.36 | 0.0282 | 0.0144 |
| Neptune | 15975-11-30 07:26 G | 7556141.64 | 7556141.81 | 7556142.00 | 0.0088 | 0.0062 |
| Neptune | 15976-12-01 23:45 G | 7556509.29 | 7556509.49 | 7556509.73 | 0.0088 | 0.0049 |
| Neptune | 15977-12-04 06:14 G | 7556876.58 | 7556876.76 | 7556876.98 | 0.0088 | 0.0053 |
| Neptune | 15978-12-06 18:43 G | 7557244.06 | 7557244.28 | 7557244.54 | 0.0088 | 0.0040 |
| Jupiter | 15979-11-13 03:50 G | 7557585.44 | 7557585.66 | 7557585.88 | 0.0484 | 0.0120 |
| Neptune | 15979-12-09 06:00 G | 7557611.54 | 7557611.75 | 7557611.98 | 0.0088 | 0.0043 |
| Neptune | 15980-12-10 13:12 G | 7557978.82 | 7557979.05 | 7557979.32 | 0.0088 | 0.0030 |
| Neptune | 15981-12-13 05:16 G | 7558346.50 | 7558346.72 | 7558346.97 | 0.0088 | 0.0033 |
| Neptune | 15982-12-15 10:04 G | 7558713.67 | 7558713.92 | 7558714.17 | 0.0088 | 0.0019 |
| Neptune | 15983-12-18 03:36 G | 7559081.41 | 7559081.65 | 7559081.92 | 0.0088 | 0.0023 |

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| Neptune | 15984-12-19 08:09 G | 7559448.59 | 7559448.84 | 7559449.10 | 0.0088 | 0.0010 |
| Neptune | 15985-12-22 00:43 G | 7559816.27 | 7559816.53 | 7559816.80 | 0.0088 | 0.0012 |
| Jupiter | 15986-06-04 06:43 G | 7559980.65 | 7559980.78 | 7559980.91 | 0.0544 | 0.0445 |
| Neptune | 15986-12-24 08:09 G | 7560183.59 | 7560183.84 | 7560184.09 | 0.0088 | 0.0002 |
| Neptune | 15987-12-26 20:24 G | 7560551.09 | 7560551.35 | 7560551.62 | 0.0088 | 0.0002 |
| Neptune | 15988-12-28 08:24 G | 7560918.60 | 7560918.85 | 7560919.09 | 0.0088 | 0.0011 |
| Neptune | 15989-12-30 15:21 G | 7561285.89 | 7561286.14 | 7561286.42 | 0.0088 | 0.0009 |
| Saturn | 15990-05-02 12:00 G | 7561408.78 | 7561409.00 | 7561409.22 | 0.0277 | 0.0144 |
| Neptune | 15991-01-02 08:09 G | 7561653.60 | 7561653.84 | 7561654.09 | 0.0088 | 0.0021 |
| Jupiter | 15991-11-17 11:02 G | 7561972.72 | 7561972.96 | 7561973.20 | 0.0484 | 0.0014 |
| Neptune | 15992-01-04 12:43 G | 7562020.78 | 7562021.03 | 7562021.29 | 0.0088 | 0.0019 |
| Neptune | 15993-01-06 07:12 G | 7562388.57 | 7562388.80 | 7562389.05 | 0.0088 | 0.0032 |
| Neptune | 15994-01-08 12:14 G | 7562755.78 | 7562756.01 | 7562756.26 | 0.0088 | 0.0030 |
| Neptune | 15995-01-11 04:48 G | 7563123.49 | 7563123.70 | 7563123.96 | 0.0088 | 0.0042 |
| Uranus | 15995-09-10 12:00 G | 7563365.81 | 7563366.00 | 7563366.22 | 0.0145 | 0.0079 |
| Neptune | 15996-01-13 13:26 G | 7563490.85 | 7563491.06 | 7563491.30 | 0.0088 | 0.0040 |
| Uranus | 15996-09-14 04:48 G | 7563735.45 | 7563735.70 | 7563735.95 | 0.0145 | 0.0034 |
| Neptune | 15997-01-15 01:40 G | 7563858.37 | 7563858.57 | 7563858.81 | 0.0088 | 0.0051 |
| Jupiter | 15997-05-01 22:19 G | 7563965.39 | 7563965.43 | 7563965.48 | 0.0542 | 0.0528 |
| Uranus | 15997-09-19 09:36 G | 7564105.67 | 7564105.90 | 7564106.15 | 0.0145 | 0.0034 |
| Neptune | 15998-01-17 14:24 G | 7564225.92 | 7564226.10 | 7564226.33 | 0.0088 | 0.0051 |
| Jupiter | 15998-06-09 20:38 G | 7564369.34 | 7564369.36 | 7564369.40 | 0.0543 | 0.0538 |
| Uranus | 15998-09-24 04:33 G | 7564475.50 | 7564475.69 | 7564475.89 | 0.0145 | 0.0094 |
| Neptune | 15999-01-19 22:19 G | 7564593.26 | 7564593.43 | 7564593.64 | 0.0088 | 0.0061 |
| Neptune | 16000-01-22 15:07 G | 7564960.97 | 7564961.13 | 7564961.34 | 0.0088 | 0.0061 |

17TH MILLENNIUM CE

This is a list of transits of Moon in the 17th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Neptune | 16001-01-23 20:38 | G | 7565328.21 | 7565328.36 | 7565328.52 | 0.0088 | 0.0071 | |
| Neptune | 16002-01-26 15:07 | G | 7565695.99 | 7565696.13 | 7565696.32 | 0.0088 | 0.0069 | |
| Neptune | 16003-01-28 20:52 | G | 7566063.27 | 7566063.37 | 7566063.49 | 0.0088 | 0.0079 | |
| Jupiter | 16003-11-21 07:55 | G | 7566359.61 | 7566359.83 | 7566360.05 | 0.0484 | 0.0129 | |
| Neptune | 16004-01-31 13:40 | G | 7566430.98 | 7566431.07 | 7566431.23 | 0.0088 | 0.0079 | |
| Neptune | 16005-02-01 23:02 | G | 7566798.45 | 7566798.46 | 7566798.50 | 0.0088 | 0.0088 | |
| Saturn | 16005-11-06 22:04 | G | 7567076.22 | 7567076.42 | 7567076.64 | 0.0282 | 0.0157 | |
| Neptune | 16006-02-04 11:45 | G | 7567165.98 | 7567165.99 | 7567166.07 | 0.0088 | 0.0088 | |
| Jupiter | 16009-05-07 11:16 | G | 7568353.80 | 7568353.97 | 7568354.16 | 0.0543 | 0.0339 | |
| Jupiter | 16015-11-25 18:57 | G | 7570747.08 | 7570747.29 | 7570747.50 | 0.0484 | 0.0197 | |
| Saturn | 16020-05-09 05:45 | G | 7572373.53 | 7572373.74 | 7572373.97 | 0.0276 | 0.0121 | |
| Jupiter | 16021-05-12 15:07 | G | 7572741.91 | 7572742.13 | 7572742.36 | 0.0544 | 0.0173 | |
| Pluto | 16024-07-20 01:12 | G | 7573906.32 | 7573906.55 | 7573906.79 | 0.0064 | 0.0026 | |
| Pluto | 16025-07-21 06:14 | G | 7574272.66 | 7574272.76 | 7574272.89 | 0.0064 | 0.0057 | |
| Jupiter | 16026-10-31 01:12 | G | 7574739.42 | 7574739.55 | 7574739.69 | 0.0486 | 0.0386 | |
| Jupiter | 16027-11-29 14:52 | G | 7575133.92 | 7575134.12 | 7575134.32 | 0.0484 | 0.0270 | |
| Jupiter | 16033-05-18 08:38 | G | 7577130.64 | 7577130.86 | 7577131.09 | 0.0545 | 0.0067 | |
| Saturn | 16034-11-01 07:12 | G | 7577662.57 | 7577662.80 | 7577663.03 | 0.0282 | 0.0075 | |
| Uranus | 16036-03-10 09:07 | G | 7578157.69 | 7578157.88 | 7578158.08 | 0.0134 | 0.0087 | |
| Uranus | 16037-03-14 11:16 | G | 7578526.74 | 7578526.97 | 7578527.21 | 0.0134 | 0.0050 | |
| Uranus | 16038-03-19 03:36 | G | 7578896.39 | 7578896.65 | 7578896.90 | 0.0133 | 0.0003 | |
| Jupiter | 16038-11-04 05:16 | G | 7579126.54 | 7579126.72 | 7579126.91 | 0.0485 | 0.0303 | |

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| Uranus | 16039-03-23 04:48 G | 7579265.47 | 7579265.70 | 7579265.94 | 0.0133 | 0.0051 |
| Jupiter | 16039-12-04 01:26 G | 7579521.44 | 7579521.56 | 7579521.70 | 0.0484 | 0.0391 |
| Uranus | 16040-03-26 20:09 G | 7579635.17 | 7579635.34 | 7579635.55 | 0.0133 | 0.0090 |
| Jupiter | 16045-05-23 16:04 G | 7581518.93 | 7581519.17 | 7581519.41 | 0.0544 | 0.0073 |
| Saturn | 16049-05-03 16:04 G | 7582959.94 | 7582960.17 | 7582960.42 | 0.0277 | 0.0086 |
| Jupiter | 16050-11-08 04:48 G | 7583513.51 | 7583513.70 | 7583513.90 | 0.0485 | 0.0242 |
| Neptune | 16051-05-18 21:21 G | 7583705.32 | 7583705.39 | 7583705.50 | 0.0090 | 0.0084 |
| Neptune | 16052-05-20 08:24 G | 7584072.84 | 7584072.85 | 7584072.91 | 0.0090 | 0.0089 |
| Neptune | 16053-05-22 21:07 G | 7584440.26 | 7584440.38 | 7584440.54 | 0.0090 | 0.0076 |
| Neptune | 16054-05-25 12:43 G | 7584807.93 | 7584808.03 | 7584808.15 | 0.0090 | 0.0080 |
| Neptune | 16055-05-27 20:24 G | 7585175.20 | 7585175.35 | 7585175.55 | 0.0090 | 0.0067 |
| Neptune | 16056-05-29 15:36 G | 7585543.02 | 7585543.15 | 7585543.33 | 0.0090 | 0.0071 |
| Jupiter | 16057-05-28 18:28 G | 7585907.08 | 7585907.27 | 7585907.48 | 0.0544 | 0.0269 |
| Neptune | 16057-05-31 22:33 G | 7585910.24 | 7585910.44 | 7585910.64 | 0.0090 | 0.0056 |
| Neptune | 16058-06-03 18:00 G | 7586278.08 | 7586278.25 | 7586278.46 | 0.0090 | 0.0061 |
| Neptune | 16059-06-06 00:43 G | 7586645.33 | 7586645.53 | 7586645.76 | 0.0090 | 0.0047 |
| Neptune | 16060-06-07 18:28 G | 7587013.07 | 7587013.27 | 7587013.51 | 0.0090 | 0.0051 |
| Neptune | 16061-06-10 04:48 G | 7587380.49 | 7587380.70 | 7587380.94 | 0.0090 | 0.0037 |
| Neptune | 16062-06-12 17:45 G | 7587748.01 | 7587748.24 | 7587748.49 | 0.0090 | 0.0040 |
| Jupiter | 16062-11-12 12:57 G | 7587900.81 | 7587901.04 | 7587901.27 | 0.0484 | 0.0137 |
| Neptune | 16063-06-15 08:24 G | 7588115.61 | 7588115.85 | 7588116.09 | 0.0090 | 0.0026 |
| Saturn | 16063-10-27 04:33 G | 7588249.66 | 7588249.69 | 7588249.76 | 0.0282 | 0.0276 |
| Neptune | 16064-06-16 16:19 G | 7588482.94 | 7588483.18 | 7588483.44 | 0.0090 | 0.0030 |
| Saturn | 16064-11-08 06:57 G | 7588627.66 | 7588627.79 | 7588627.95 | 0.0282 | 0.0224 |
| Mars | 16065-02-20 09:36 G | 7588731.70 | 7588731.90 | 7588732.09 | 0.1808 | 0.0291 |
| Neptune | 16065-06-19 10:33 G | 7588850.70 | 7588850.94 | 7588851.20 | 0.0090 | 0.0016 |
| Neptune | 16066-06-21 16:19 G | 7589217.94 | 7589218.18 | 7589218.44 | 0.0090 | 0.0019 |
| Neptune | 16067-06-24 11:45 G | 7589585.73 | 7589585.99 | 7589586.25 | 0.0089 | 0.0005 |
| Neptune | 16068-06-25 18:00 G | 7589953.00 | 7589953.25 | 7589953.50 | 0.0089 | 0.0008 |
| Jupiter | 16069-06-03 08:52 G | 7590295.72 | 7590295.87 | 7590296.02 | 0.0545 | 0.0412 |

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| Neptune | 16069-06-28 11:16 G | 7590320.72 | 7590320.97 | 7590321.24 | 0.0089 | 0.0007 |
| Neptune | 16070-06-30 20:52 G | 7590688.12 | 7590688.37 | 7590688.62 | 0.0089 | 0.0003 |
| Neptune | 16071-07-03 09:50 G | 7591055.66 | 7591055.91 | 7591056.18 | 0.0089 | 0.0016 |
| Neptune | 16072-07-04 23:45 G | 7591423.25 | 7591423.49 | 7591423.74 | 0.0089 | 0.0013 |
| Neptune | 16073-07-07 07:12 G | 7591790.57 | 7591790.80 | 7591791.07 | 0.0089 | 0.0028 |
| Neptune | 16074-07-10 00:57 G | 7592158.31 | 7592158.54 | 7592158.80 | 0.0089 | 0.0025 |
| Jupiter | 16074-11-16 10:48 G | 7592287.72 | 7592287.95 | 7592288.19 | 0.0484 | 0.0010 |
| Neptune | 16075-07-12 06:14 G | 7592525.54 | 7592525.76 | 7592526.00 | 0.0089 | 0.0038 |
| Neptune | 16076-07-14 01:12 G | 7592893.32 | 7592893.55 | 7592893.80 | 0.0089 | 0.0034 |
| Neptune | 16077-07-16 06:43 G | 7593260.57 | 7593260.78 | 7593261.00 | 0.0089 | 0.0047 |
| Neptune | 16078-07-18 23:16 G | 7593628.26 | 7593628.47 | 7593628.71 | 0.0089 | 0.0045 |
| Uranus | 16078-09-05 19:12 G | 7593677.21 | 7593677.30 | 7593677.40 | 0.0145 | 0.0133 |
| Saturn | 16079-05-11 17:02 G | 7593925.04 | 7593925.21 | 7593925.41 | 0.0276 | 0.0184 |
| Neptune | 16079-07-21 08:09 G | 7593995.66 | 7593995.84 | 7593996.04 | 0.0089 | 0.0057 |
| Uranus | 16079-09-11 00:43 G | 7594047.34 | 7594047.53 | 7594047.73 | 0.0145 | 0.0089 |
| Neptune | 16080-07-22 21:07 G | 7594363.17 | 7594363.38 | 7594363.59 | 0.0089 | 0.0055 |
| Uranus | 16080-09-14 17:02 G | 7594416.96 | 7594417.21 | 7594417.46 | 0.0145 | 0.0016 |
| Jupiter | 16081-06-08 12:43 G | 7594683.94 | 7594684.03 | 7594684.11 | 0.0544 | 0.0509 |
| Neptune | 16081-07-25 09:50 G | 7594730.76 | 7594730.91 | 7594731.09 | 0.0089 | 0.0067 |
| Uranus | 16081-09-19 22:19 G | 7594787.20 | 7594787.43 | 7594787.68 | 0.0145 | 0.0034 |
| Neptune | 16082-07-27 17:31 G | 7595098.06 | 7595098.23 | 7595098.42 | 0.0089 | 0.0064 |
| Uranus | 16082-09-24 16:19 G | 7595157.00 | 7595157.18 | 7595157.38 | 0.0145 | 0.0096 |
| Neptune | 16083-07-30 11:02 G | 7595465.82 | 7595465.96 | 7595466.09 | 0.0089 | 0.0075 |
| Neptune | 16084-07-31 15:21 G | 7595833.01 | 7595833.14 | 7595833.31 | 0.0089 | 0.0073 |
| Neptune | 16085-08-03 09:50 G | 7596200.84 | 7596200.91 | 7596201.02 | 0.0089 | 0.0083 |
| Neptune | 16086-08-05 14:24 G | 7596568.03 | 7596568.10 | 7596568.23 | 0.0089 | 0.0082 |
| Mars | 16086-08-20 04:33 G | 7596582.57 | 7596582.69 | 7596582.81 | 0.1737 | 0.1363 |
| Jupiter | 16086-11-20 20:38 G | 7596675.14 | 7596675.36 | 7596675.59 | 0.0484 | 0.0111 |
| Jupiter | 16092-05-06 04:33 G | 7598668.52 | 7598668.69 | 7598668.87 | 0.0543 | 0.0361 |
| Saturn | 16093-11-02 22:04 G | 7599214.17 | 7599214.42 | 7599214.66 | 0.0282 | 0.0008 |

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| Jupiter | 16098-11-24 17:45 G | 7601062.02 | 7601062.24 | 7601062.46 | 0.0484 | 0.0178 |
| Jupiter | 16104-05-12 20:38 G | 7603057.15 | 7603057.36 | 7603057.57 | 0.0543 | 0.0203 |
| Saturn | 16108-05-06 01:40 G | 7604511.33 | 7604511.57 | 7604511.81 | 0.0277 | 0.0025 |
| Jupiter | 16109-10-31 05:31 G | 7605054.59 | 7605054.73 | 7605054.87 | 0.0487 | 0.0399 |
| Jupiter | 16110-11-30 02:24 G | 7605449.41 | 7605449.60 | 7605449.80 | 0.0484 | 0.0254 |
| Pluto | 16114-01-20 05:02 G | 7606596.63 | 7606596.71 | 7606596.85 | 0.0080 | 0.0072 |
| Jupiter | 16116-05-18 01:12 G | 7607445.31 | 7607445.55 | 7607445.79 | 0.0544 | 0.0104 |
| Uranus | 16119-03-08 05:02 G | 7608469.65 | 7608469.71 | 7608469.79 | 0.0134 | 0.0128 |
| Uranus | 16120-03-11 21:36 G | 7608839.21 | 7608839.40 | 7608839.58 | 0.0134 | 0.0094 |
| Uranus | 16121-03-16 00:14 G | 7609208.27 | 7609208.51 | 7609208.76 | 0.0134 | 0.0037 |
| Jupiter | 16121-11-04 06:14 G | 7609441.60 | 7609441.76 | 7609441.94 | 0.0486 | 0.0326 |
| Uranus | 16122-03-20 16:19 G | 7609577.92 | 7609578.18 | 7609578.44 | 0.0133 | 0.0006 |
| Saturn | 16122-10-29 13:12 G | 7609800.90 | 7609801.05 | 7609801.22 | 0.0282 | 0.0209 |
| Jupiter | 16122-12-04 01:55 G | 7609836.43 | 7609836.58 | 7609836.74 | 0.0484 | 0.0370 |
| Uranus | 16123-03-24 17:45 G | 7609947.01 | 7609947.24 | 7609947.48 | 0.0133 | 0.0052 |
| Uranus | 16124-03-28 09:07 G | 7610316.74 | 7610316.88 | 7610317.05 | 0.0133 | 0.0106 |
| Jupiter | 16128-05-23 04:48 G | 7611833.47 | 7611833.70 | 7611833.92 | 0.0545 | 0.0039 |
| Neptune | 16132-11-14 17:16 G | 7613470.19 | 7613470.22 | 7613470.30 | 0.0088 | 0.0086 |
| Jupiter | 16133-11-08 16:19 G | 7613828.98 | 7613829.18 | 7613829.39 | 0.0485 | 0.0256 |
| Neptune | 16133-11-17 05:02 G | 7613837.65 | 7613837.71 | 7613837.82 | 0.0088 | 0.0083 |
| Neptune | 16134-11-19 12:14 G | 7614204.91 | 7614205.01 | 7614205.14 | 0.0088 | 0.0079 |
| Neptune | 16135-11-22 03:50 G | 7614572.56 | 7614572.66 | 7614572.82 | 0.0088 | 0.0075 |
| Neptune | 16136-11-23 07:26 G | 7614939.69 | 7614939.81 | 7614939.99 | 0.0088 | 0.0071 |
| Saturn | 16137-05-01 04:04 G | 7615098.53 | 7615098.67 | 7615098.84 | 0.0277 | 0.0221 |
| Neptune | 16137-11-26 01:12 G | 7615307.39 | 7615307.55 | 7615307.74 | 0.0088 | 0.0065 |
| Saturn | 16138-05-13 23:16 G | 7615476.36 | 7615476.47 | 7615476.59 | 0.0276 | 0.0246 |
| Neptune | 16138-11-28 05:02 G | 7615674.55 | 7615674.71 | 7615674.90 | 0.0088 | 0.0062 |
| Neptune | 16139-11-30 20:09 G | 7616042.16 | 7616042.34 | 7616042.57 | 0.0088 | 0.0057 |
| Jupiter | 16140-05-28 22:19 G | 7616222.22 | 7616222.43 | 7616222.64 | 0.0545 | 0.0241 |
| Neptune | 16140-12-02 03:21 G | 7616409.46 | 7616409.64 | 7616409.85 | 0.0088 | 0.0054 |

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| Neptune | 16141-12-04 14:24 G | 7616776.89 | 7616777.10 | 7616777.34 | 0.0088 | 0.0048 |
| Neptune | 16142-12-07 02:52 G | 7617144.42 | 7617144.62 | 7617144.85 | 0.0088 | 0.0045 |
| Neptune | 16143-12-09 09:21 G | 7617511.67 | 7617511.89 | 7617512.14 | 0.0088 | 0.0038 |
| Neptune | 16144-12-11 02:09 G | 7617879.37 | 7617879.59 | 7617879.83 | 0.0088 | 0.0035 |
| Jupiter | 16145-11-12 12:43 G | 7618215.81 | 7618216.03 | 7618216.25 | 0.0484 | 0.0148 |
| Neptune | 16145-12-13 05:45 G | 7618246.52 | 7618246.74 | 7618247.00 | 0.0088 | 0.0029 |
| Neptune | 16146-12-16 00:00 G | 7618614.25 | 7618614.50 | 7618614.75 | 0.0088 | 0.0026 |
| Neptune | 16147-12-18 04:33 G | 7618981.45 | 7618981.69 | 7618981.95 | 0.0088 | 0.0019 |
| Neptune | 16148-12-19 19:55 G | 7619349.07 | 7619349.33 | 7619349.60 | 0.0088 | 0.0016 |
| Neptune | 16149-12-22 04:19 G | 7619716.43 | 7619716.68 | 7619716.93 | 0.0088 | 0.0008 |
| Neptune | 16150-12-24 14:52 G | 7620083.86 | 7620084.12 | 7620084.39 | 0.0088 | 0.0006 |
| Neptune | 16151-12-27 04:33 G | 7620451.44 | 7620451.69 | 7620451.94 | 0.0088 | 0.0002 |
| Jupiter | 16152-06-03 02:38 G | 7620610.45 | 7620610.61 | 7620610.77 | 0.0545 | 0.0387 |
| Saturn | 16152-11-05 07:12 G | 7620765.56 | 7620765.80 | 7620766.05 | 0.0282 | 0.0063 |
| Neptune | 16152-12-28 11:02 G | 7620818.70 | 7620818.96 | 7620819.23 | 0.0088 | 0.0004 |
| Neptune | 16153-12-31 04:19 G | 7621186.43 | 7621186.68 | 7621186.94 | 0.0088 | 0.0012 |
| Neptune | 16155-01-02 08:24 G | 7621553.60 | 7621553.85 | 7621554.11 | 0.0088 | 0.0014 |
| Neptune | 16156-01-05 02:24 G | 7621921.36 | 7621921.60 | 7621921.86 | 0.0088 | 0.0023 |
| Neptune | 16157-01-06 07:40 G | 7622288.59 | 7622288.82 | 7622289.08 | 0.0088 | 0.0024 |
| Jupiter | 16157-11-16 23:31 G | 7622603.25 | 7622603.48 | 7622603.72 | 0.0484 | 0.0012 |
| Neptune | 16158-01-08 23:31 G | 7622656.23 | 7622656.48 | 7622656.73 | 0.0088 | 0.0032 |
| Neptune | 16159-01-11 08:09 G | 7623023.63 | 7623023.84 | 7623024.09 | 0.0088 | 0.0033 |
| Neptune | 16160-01-13 18:57 G | 7623391.07 | 7623391.29 | 7623391.55 | 0.0088 | 0.0042 |
| Neptune | 16161-01-15 10:04 G | 7623758.70 | 7623758.92 | 7623759.14 | 0.0088 | 0.0042 |
| Neptune | 16162-01-17 16:33 G | 7624126.00 | 7624126.19 | 7624126.42 | 0.0088 | 0.0052 |
| Uranus | 16162-09-07 08:38 G | 7624358.82 | 7624358.86 | 7624358.92 | 0.0144 | 0.0141 |
| Neptune | 16163-01-20 10:33 G | 7624493.75 | 7624493.94 | 7624494.17 | 0.0088 | 0.0052 |
| Uranus | 16163-09-12 14:09 G | 7624728.87 | 7624729.09 | 7624729.31 | 0.0145 | 0.0069 |
| Neptune | 16164-01-22 15:21 G | 7624860.97 | 7624861.14 | 7624861.34 | 0.0088 | 0.0062 |
| Jupiter | 16164-06-08 16:04 G | 7624999.07 | 7624999.17 | 7624999.29 | 0.0544 | 0.0477 |

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| Uranus | 16164-09-16 05:45 G | 7625098.49 | 7625098.74 | 7625098.99 | 0.0145 | 0.0025 |
| Neptune | 16165-01-24 09:36 G | 7625228.74 | 7625228.90 | 7625229.12 | 0.0088 | 0.0061 |
| Mars | 16165-08-23 15:50 G | 7625440.00 | 7625440.16 | 7625440.33 | 0.1731 | 0.0663 |
| Uranus | 16165-09-21 11:31 G | 7625468.75 | 7625468.98 | 7625469.23 | 0.0145 | 0.0045 |
| Neptune | 16166-01-26 15:50 G | 7625596.03 | 7625596.16 | 7625596.33 | 0.0088 | 0.0070 |
| Uranus | 16166-09-26 04:48 G | 7625838.54 | 7625838.70 | 7625838.90 | 0.0145 | 0.0103 |
| Neptune | 16167-01-29 07:55 G | 7625963.67 | 7625963.83 | 7625964.01 | 0.0088 | 0.0069 |
| Saturn | 16167-05-08 15:36 G | 7626062.92 | 7626063.15 | 7626063.39 | 0.0277 | 0.0039 |
| Neptune | 16168-01-31 17:16 G | 7626331.12 | 7626331.22 | 7626331.34 | 0.0088 | 0.0080 |
| Neptune | 16169-02-02 04:19 G | 7626698.57 | 7626698.68 | 7626698.83 | 0.0088 | 0.0078 |
| Jupiter | 16169-11-20 18:57 G | 7626990.06 | 7626990.29 | 7626990.53 | 0.0484 | 0.0092 |
| Neptune | 16170-02-04 19:26 G | 7627066.30 | 7627066.31 | 7627066.36 | 0.0088 | 0.0088 |
| Neptune | 16171-02-07 02:38 G | 7627433.56 | 7627433.61 | 7627433.71 | 0.0088 | 0.0085 |
| Jupiter | 16175-05-07 08:38 G | 7628983.70 | 7628983.86 | 7628984.02 | 0.0542 | 0.0387 |
| Saturn | 16181-10-31 01:55 G | 7631352.39 | 7631352.58 | 7631352.79 | 0.0282 | 0.0144 |
| Jupiter | 16181-11-25 04:04 G | 7631377.46 | 7631377.67 | 7631377.89 | 0.0484 | 0.0157 |
| Jupiter | 16187-05-12 07:40 G | 7633371.60 | 7633371.82 | 7633372.04 | 0.0543 | 0.0237 |
| Jupiter | 16192-10-30 09:36 G | 7635369.79 | 7635369.90 | 7635370.02 | 0.0487 | 0.0411 |
| Jupiter | 16193-11-29 05:02 G | 7635764.50 | 7635764.71 | 7635764.92 | 0.0484 | 0.0238 |
| Saturn | 16196-05-02 10:48 G | 7636649.74 | 7636649.95 | 7636650.16 | 0.0277 | 0.0157 |
| Jupiter | 16199-05-17 18:28 G | 7637760.06 | 7637760.27 | 7637760.49 | 0.0544 | 0.0139 |
| Uranus | 16204-03-13 09:50 G | 7639520.71 | 7639520.91 | 7639521.14 | 0.0134 | 0.0078 |
| Jupiter | 16204-11-04 18:43 G | 7639757.12 | 7639757.28 | 7639757.45 | 0.0486 | 0.0339 |
| Uranus | 16205-03-17 12:57 G | 7639889.81 | 7639890.04 | 7639890.29 | 0.0134 | 0.0042 |
| Jupiter | 16205-12-04 08:38 G | 7640151.72 | 7640151.86 | 7640152.01 | 0.0484 | 0.0365 |
| Uranus | 16206-03-22 04:33 G | 7640259.43 | 7640259.69 | 7640259.95 | 0.0133 | 0.0013 |
| Uranus | 16207-03-26 06:28 G | 7640628.56 | 7640628.77 | 7640629.01 | 0.0133 | 0.0061 |
| Uranus | 16208-03-29 22:04 G | 7640998.26 | 7640998.42 | 7640998.60 | 0.0133 | 0.0101 |
| Jupiter | 16211-05-24 12:14 G | 7642148.77 | 7642149.01 | 7642149.25 | 0.0545 | 0.0019 |
| Saturn | 16211-11-08 13:12 G | 7642316.84 | 7642317.05 | 7642317.28 | 0.0282 | 0.0131 |

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| Neptune | 16215-05-19 23:31 G | 7643605.42 | 7643605.48 | 7643605.57 | 0.0090 | 0.0085 |
| Neptune | 16216-05-21 10:48 G | 7643972.88 | 7643972.95 | 7643973.04 | 0.0090 | 0.0085 |
| Jupiter | 16216-11-08 16:04 G | 7644143.98 | 7644144.17 | 7644144.36 | 0.0485 | 0.0270 |
| Neptune | 16217-05-24 03:36 G | 7644340.55 | 7644340.65 | 7644340.80 | 0.0090 | 0.0077 |
| Neptune | 16218-05-26 11:02 G | 7644707.84 | 7644707.96 | 7644708.12 | 0.0090 | 0.0076 |
| Neptune | 16219-05-29 06:57 G | 7645075.64 | 7645075.79 | 7645075.97 | 0.0090 | 0.0068 |
| Neptune | 16220-05-30 12:57 G | 7645442.89 | 7645443.04 | 7645443.23 | 0.0090 | 0.0067 |
| Neptune | 16221-06-02 08:38 G | 7645810.68 | 7645810.86 | 7645811.07 | 0.0090 | 0.0060 |
| Neptune | 16222-06-04 16:04 G | 7646178.00 | 7646178.17 | 7646178.39 | 0.0090 | 0.0058 |
| Jupiter | 16223-05-29 15:07 G | 7646536.92 | 7646537.13 | 7646537.35 | 0.0544 | 0.0212 |
| Neptune | 16223-06-07 08:24 G | 7646545.65 | 7646545.85 | 7646546.09 | 0.0090 | 0.0051 |
| Neptune | 16224-06-08 20:09 G | 7646913.14 | 7646913.34 | 7646913.57 | 0.0090 | 0.0047 |
| Neptune | 16225-06-11 07:40 G | 7647280.59 | 7647280.82 | 7647281.07 | 0.0090 | 0.0040 |
| Saturn | 16226-05-11 02:24 G | 7647614.37 | 7647614.60 | 7647614.84 | 0.0277 | 0.0099 |
| Neptune | 16226-06-14 00:00 G | 7647648.29 | 7647648.50 | 7647648.74 | 0.0090 | 0.0037 |
| Neptune | 16227-06-16 07:40 G | 7648015.58 | 7648015.82 | 7648016.07 | 0.0090 | 0.0031 |
| Neptune | 16228-06-18 02:52 G | 7648383.39 | 7648383.62 | 7648383.88 | 0.0090 | 0.0027 |
| Jupiter | 16228-11-13 01:12 G | 7648531.33 | 7648531.55 | 7648531.77 | 0.0485 | 0.0155 |
| Neptune | 16229-06-20 08:24 G | 7648750.62 | 7648750.85 | 7648751.11 | 0.0090 | 0.0022 |
| Neptune | 16230-06-23 03:36 G | 7649118.41 | 7649118.65 | 7649118.92 | 0.0090 | 0.0016 |
| Neptune | 16231-06-25 11:02 G | 7649485.71 | 7649485.96 | 7649486.21 | 0.0089 | 0.0011 |
| Neptune | 16232-06-27 03:07 G | 7649853.36 | 7649853.63 | 7649853.90 | 0.0089 | 0.0004 |
| Neptune | 16233-06-29 13:26 G | 7650220.82 | 7650221.06 | 7650221.31 | 0.0089 | 0.0002 |
| Neptune | 16234-07-02 00:43 G | 7650588.27 | 7650588.53 | 7650588.80 | 0.0089 | 0.0005 |
| Jupiter | 16235-06-04 05:31 G | 7650925.56 | 7650925.73 | 7650925.91 | 0.0544 | 0.0350 |
| Neptune | 16235-07-04 16:33 G | 7650955.94 | 7650956.19 | 7650956.44 | 0.0089 | 0.0009 |
| Neptune | 16236-07-05 23:45 G | 7651323.24 | 7651323.49 | 7651323.76 | 0.0089 | 0.0017 |
| Neptune | 16237-07-08 18:43 G | 7651691.04 | 7651691.28 | 7651691.53 | 0.0089 | 0.0019 |
| Neptune | 16238-07-10 23:31 G | 7652058.26 | 7652058.48 | 7652058.74 | 0.0089 | 0.0028 |
| Neptune | 16239-07-13 18:28 G | 7652426.04 | 7652426.27 | 7652426.54 | 0.0089 | 0.0029 |

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| Neptune | 16240-07-15 01:12 G | 7652793.33 | 7652793.55 | 7652793.79 | 0.0089 | 0.0037 |
| Saturn | 16240-11-02 14:09 G | 7652903.87 | 7652904.09 | 7652904.33 | 0.0282 | 0.0080 |
| Jupiter | 16240-11-16 22:33 G | 7652918.20 | 7652918.44 | 7652918.68 | 0.0484 | 0.0022 |
| Neptune | 16241-07-17 16:48 G | 7653160.97 | 7653161.20 | 7653161.45 | 0.0089 | 0.0038 |
| Neptune | 16242-07-20 02:09 G | 7653528.41 | 7653528.59 | 7653528.83 | 0.0089 | 0.0048 |
| Neptune | 16243-07-22 13:26 G | 7653895.84 | 7653896.06 | 7653896.29 | 0.0089 | 0.0048 |
| Neptune | 16244-07-24 04:04 G | 7654263.49 | 7654263.67 | 7654263.87 | 0.0089 | 0.0056 |
| Neptune | 16245-07-26 10:33 G | 7654630.76 | 7654630.94 | 7654631.16 | 0.0089 | 0.0056 |
| Neptune | 16246-07-29 04:33 G | 7654998.54 | 7654998.69 | 7654998.89 | 0.0089 | 0.0066 |
| Uranus | 16246-09-08 21:07 G | 7655040.26 | 7655040.38 | 7655040.51 | 0.0144 | 0.0125 |
| Jupiter | 16247-06-09 06:43 G | 7655313.65 | 7655313.78 | 7655313.93 | 0.0544 | 0.0439 |
| Neptune | 16247-07-31 09:36 G | 7655365.74 | 7655365.90 | 7655366.09 | 0.0089 | 0.0064 |
| Uranus | 16247-09-14 02:24 G | 7655410.40 | 7655410.60 | 7655410.82 | 0.0145 | 0.0080 |
| Neptune | 16248-08-02 04:04 G | 7655733.54 | 7655733.67 | 7655733.82 | 0.0089 | 0.0074 |
| Uranus | 16248-09-17 18:14 G | 7655780.01 | 7655780.26 | 7655780.52 | 0.0145 | 0.0007 |
| Neptune | 16249-08-04 09:50 G | 7656100.79 | 7656100.91 | 7656101.07 | 0.0089 | 0.0074 |
| Uranus | 16249-09-23 00:28 G | 7656150.29 | 7656150.52 | 7656150.77 | 0.0145 | 0.0043 |
| Neptune | 16250-08-07 01:26 G | 7656468.47 | 7656468.56 | 7656468.67 | 0.0089 | 0.0082 |
| Uranus | 16250-09-27 17:02 G | 7656520.06 | 7656520.21 | 7656520.41 | 0.0145 | 0.0108 |
| Neptune | 16251-08-09 11:16 G | 7656835.87 | 7656835.97 | 7656836.07 | 0.0089 | 0.0080 |
| Jupiter | 16252-11-21 08:24 G | 7657305.62 | 7657305.85 | 7657306.07 | 0.0484 | 0.0077 |
| Neptune | 16253-08-13 11:02 G | 7657570.95 | 7657570.96 | 7657571.03 | 0.0089 | 0.0088 |
| Saturn | 16255-05-05 18:28 G | 7658201.04 | 7658201.27 | 7658201.50 | 0.0277 | 0.0097 |
| Jupiter | 16258-05-06 20:09 G | 7659298.19 | 7659298.34 | 7659298.50 | 0.0542 | 0.0414 |
| Jupiter | 16264-11-25 08:09 G | 7661692.61 | 7661692.84 | 7661693.07 | 0.0483 | 0.0139 |
| Mars | 16270-02-18 20:52 G | 7663604.34 | 7663604.37 | 7663604.41 | 0.1791 | 0.1754 |
| Jupiter | 16270-05-12 10:48 G | 7663686.76 | 7663686.95 | 7663687.15 | 0.0544 | 0.0264 |
| Pluto | 16270-07-24 01:12 G | 7663759.30 | 7663759.55 | 7663759.82 | 0.0064 | 0.0016 |
| Saturn | 16270-11-09 22:04 G | 7663868.26 | 7663868.42 | 7663868.60 | 0.0282 | 0.0195 |
| Jupiter | 16275-10-31 22:19 G | 7665685.32 | 7665685.43 | 7665685.56 | 0.0487 | 0.0420 |

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| Jupiter | 16276-11-29 12:14 G | 7666079.82 | 7666080.01 | 7666080.21 | 0.0484 | 0.0229 |
| Jupiter | 16282-05-18 01:55 G | 7668075.35 | 7668075.58 | 7668075.81 | 0.0544 | 0.0164 |
| Saturn | 16285-05-12 07:40 G | 7669165.62 | 7669165.82 | 7669166.03 | 0.0277 | 0.0159 |
| Uranus | 16287-03-10 05:45 G | 7669832.65 | 7669832.74 | 7669832.86 | 0.0134 | 0.0121 |
| Jupiter | 16287-11-04 17:45 G | 7670072.09 | 7670072.24 | 7670072.40 | 0.0486 | 0.0357 |
| Uranus | 16288-03-13 20:52 G | 7670202.18 | 7670202.37 | 7670202.58 | 0.0134 | 0.0087 |
| Jupiter | 16288-12-03 18:43 G | 7670467.12 | 7670467.28 | 7670467.44 | 0.0484 | 0.0356 |
| Uranus | 16289-03-18 01:12 G | 7670571.31 | 7670571.55 | 7670571.80 | 0.0134 | 0.0028 |
| Uranus | 16290-03-22 16:33 G | 7670940.93 | 7670941.19 | 7670941.45 | 0.0133 | 0.0014 |
| Uranus | 16291-03-26 19:12 G | 7671310.09 | 7671310.30 | 7671310.53 | 0.0133 | 0.0063 |
| Uranus | 16292-03-30 09:50 G | 7671679.80 | 7671679.91 | 7671680.06 | 0.0133 | 0.0115 |
| Jupiter | 16294-05-23 03:50 G | 7672463.43 | 7672463.66 | 7672463.89 | 0.0544 | 0.0011 |
| Neptune | 16295-11-13 15:21 G | 7673003.07 | 7673003.14 | 7673003.24 | 0.0088 | 0.0083 |
| Neptune | 16297-11-17 09:21 G | 7673737.77 | 7673737.89 | 7673738.03 | 0.0088 | 0.0076 |
| Neptune | 16298-11-20 01:40 G | 7674105.49 | 7674105.57 | 7674105.67 | 0.0088 | 0.0081 |
| Saturn | 16299-11-04 20:09 G | 7674455.09 | 7674455.34 | 7674455.59 | 0.0282 | 0.0022 |
| Jupiter | 16299-11-09 05:16 G | 7674459.54 | 7674459.72 | 7674459.91 | 0.0485 | 0.0285 |
| Neptune | 16299-11-22 05:02 G | 7674472.57 | 7674472.71 | 7674472.89 | 0.0088 | 0.0068 |
| Neptune | 16300-11-24 22:19 G | 7674840.30 | 7674840.43 | 7674840.59 | 0.0088 | 0.0073 |
| Jupiter | 16300-12-08 17:02 G | 7674854.17 | 7674854.21 | 7674854.26 | 0.0484 | 0.0474 |
| Neptune | 16301-11-27 02:38 G | 7675207.45 | 7675207.61 | 7675207.82 | 0.0088 | 0.0061 |
| Neptune | 16302-11-29 17:31 G | 7675575.07 | 7675575.23 | 7675575.42 | 0.0088 | 0.0065 |
| Neptune | 16303-12-02 02:09 G | 7675942.41 | 7675942.59 | 7675942.81 | 0.0088 | 0.0053 |
| Neptune | 16304-12-03 12:28 G | 7676309.82 | 7676310.02 | 7676310.23 | 0.0088 | 0.0056 |
| Neptune | 16305-12-06 01:55 G | 7676677.36 | 7676677.58 | 7676677.80 | 0.0088 | 0.0043 |
| Jupiter | 16306-05-29 15:21 G | 7676851.92 | 7676852.14 | 7676852.35 | 0.0545 | 0.0183 |
| Neptune | 16306-12-08 06:28 G | 7677044.57 | 7677044.77 | 7677045.01 | 0.0088 | 0.0048 |
| Neptune | 16307-12-11 00:00 G | 7677412.27 | 7677412.50 | 7677412.73 | 0.0088 | 0.0034 |
| Neptune | 16308-12-12 03:21 G | 7677779.42 | 7677779.64 | 7677779.88 | 0.0088 | 0.0039 |
| Neptune | 16309-12-14 20:38 G | 7678147.12 | 7678147.36 | 7678147.62 | 0.0088 | 0.0025 |

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| Neptune | 16310-12-17 01:55 G | 7678514.35 | 7678514.58 | 7678514.82 | 0.0088 | 0.0029 |
| Jupiter | 16311-11-14 04:19 G | 7678846.45 | 7678846.68 | 7678846.90 | 0.0485 | 0.0160 |
| Neptune | 16311-12-19 16:04 G | 7678881.92 | 7678882.17 | 7678882.44 | 0.0088 | 0.0016 |
| Neptune | 16312-12-21 01:55 G | 7679249.35 | 7679249.58 | 7679249.84 | 0.0088 | 0.0020 |
| Neptune | 16313-12-23 12:00 G | 7679616.73 | 7679617.00 | 7679617.27 | 0.0088 | 0.0006 |
| Saturn | 16314-05-08 04:48 G | 7679752.46 | 7679752.70 | 7679752.94 | 0.0277 | 0.0037 |
| Neptune | 16314-12-26 02:09 G | 7679984.35 | 7679984.59 | 7679984.85 | 0.0088 | 0.0011 |
| Neptune | 16315-12-28 07:40 G | 7680351.56 | 7680351.82 | 7680352.08 | 0.0088 | 0.0003 |
| Neptune | 16316-12-30 01:12 G | 7680719.29 | 7680719.55 | 7680719.81 | 0.0088 | 0.0001 |
| Neptune | 16318-01-01 05:02 G | 7681086.46 | 7681086.71 | 7681086.97 | 0.0088 | 0.0013 |
| Jupiter | 16318-06-03 20:38 G | 7681240.17 | 7681240.36 | 7681240.56 | 0.0545 | 0.0316 |
| Neptune | 16319-01-03 22:33 G | 7681454.18 | 7681454.44 | 7681454.70 | 0.0088 | 0.0009 |
| Neptune | 16320-01-06 04:04 G | 7681821.44 | 7681821.67 | 7681821.93 | 0.0088 | 0.0022 |
| Neptune | 16321-01-07 18:28 G | 7682189.02 | 7682189.27 | 7682189.54 | 0.0088 | 0.0018 |
| Neptune | 16322-01-10 05:16 G | 7682556.49 | 7682556.72 | 7682556.96 | 0.0088 | 0.0031 |
| Neptune | 16323-01-12 14:38 G | 7682923.87 | 7682924.11 | 7682924.38 | 0.0088 | 0.0028 |
| Jupiter | 16323-11-18 12:14 G | 7683233.79 | 7683234.01 | 7683234.24 | 0.0484 | 0.0032 |
| Neptune | 16324-01-15 06:00 G | 7683291.54 | 7683291.75 | 7683291.98 | 0.0088 | 0.0041 |
| Neptune | 16325-01-16 11:31 G | 7683658.76 | 7683658.98 | 7683659.23 | 0.0088 | 0.0037 |
| Neptune | 16326-01-19 05:45 G | 7684026.55 | 7684026.74 | 7684026.97 | 0.0088 | 0.0050 |
| Neptune | 16327-01-21 10:19 G | 7684393.73 | 7684393.93 | 7684394.17 | 0.0088 | 0.0046 |
| Neptune | 16328-01-24 04:33 G | 7684761.50 | 7684761.69 | 7684761.89 | 0.0088 | 0.0058 |
| Saturn | 16328-10-29 23:16 G | 7685041.37 | 7685041.47 | 7685041.59 | 0.0282 | 0.0249 |
| Neptune | 16329-01-25 11:16 G | 7685128.78 | 7685128.97 | 7685129.17 | 0.0088 | 0.0056 |
| Saturn | 16329-11-12 08:24 G | 7685419.76 | 7685419.85 | 7685419.96 | 0.0282 | 0.0256 |
| Neptune | 16330-01-28 01:40 G | 7685496.41 | 7685496.57 | 7685496.76 | 0.0088 | 0.0067 |
| Jupiter | 16330-06-09 10:19 G | 7685628.79 | 7685628.93 | 7685629.07 | 0.0545 | 0.0419 |
| Uranus | 16330-09-10 09:21 G | 7685721.81 | 7685721.89 | 7685722.01 | 0.0144 | 0.0133 |
| Neptune | 16331-01-30 12:43 G | 7685863.88 | 7685864.03 | 7685864.22 | 0.0088 | 0.0065 |
| Uranus | 16331-09-15 14:38 G | 7686091.89 | 7686092.11 | 7686092.35 | 0.0145 | 0.0061 |

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| Neptune | 16332-02-01 22:48 G | 7686231.34 | 7686231.45 | 7686231.61 | 0.0088 | 0.0076 |
| Uranus | 16332-09-19 06:28 G | 7686461.52 | 7686461.77 | 7686462.02 | 0.0145 | 0.0017 |
| Neptune | 16333-02-03 14:38 G | 7686598.99 | 7686599.11 | 7686599.28 | 0.0088 | 0.0072 |
| Uranus | 16333-09-24 12:43 G | 7686831.81 | 7686832.03 | 7686832.27 | 0.0145 | 0.0055 |
| Neptune | 16334-02-05 20:38 G | 7686966.30 | 7686966.36 | 7686966.47 | 0.0088 | 0.0084 |
| Uranus | 16334-09-29 05:02 G | 7687201.57 | 7687201.71 | 7687201.89 | 0.0145 | 0.0111 |
| Neptune | 16335-02-08 15:21 G | 7687334.06 | 7687334.14 | 7687334.27 | 0.0088 | 0.0081 |
| Jupiter | 16335-11-22 13:26 G | 7687620.82 | 7687621.06 | 7687621.31 | 0.0484 | 0.0060 |
| Neptune | 16337-02-12 15:07 G | 7688069.12 | 7688069.13 | 7688069.18 | 0.0088 | 0.0088 |
| Jupiter | 16341-05-07 04:19 G | 7689613.55 | 7689613.68 | 7689613.82 | 0.0542 | 0.0425 |
| Saturn | 16343-05-02 15:21 G | 7690339.04 | 7690339.14 | 7690339.24 | 0.0277 | 0.0254 |
| Saturn | 16344-05-14 10:19 G | 7690716.78 | 7690716.93 | 7690717.10 | 0.0276 | 0.0214 |
| Jupiter | 16347-11-26 15:50 G | 7692007.94 | 7692008.16 | 7692008.38 | 0.0484 | 0.0120 |
| Mars | 16349-02-23 00:14 G | 7692462.30 | 7692462.51 | 7692462.72 | 0.1799 | 0.0168 |
| Jupiter | 16353-05-12 14:38 G | 7694001.91 | 7694002.11 | 7694002.32 | 0.0543 | 0.0285 |
| Jupiter | 16358-10-31 22:33 G | 7696000.34 | 7696000.44 | 7696000.55 | 0.0487 | 0.0435 |
| Saturn | 16358-11-06 19:26 G | 7696006.06 | 7696006.31 | 7696006.56 | 0.0282 | 0.0034 |
| Pluto | 16359-01-22 01:12 G | 7696082.55 | 7696082.55 | 7696082.57 | 0.0081 | 0.0080 |
| Jupiter | 16359-12-01 00:00 G | 7696395.28 | 7696395.50 | 7696395.71 | 0.0484 | 0.0217 |
| Jupiter | 16365-05-17 12:57 G | 7698389.83 | 7698390.04 | 7698390.26 | 0.0544 | 0.0192 |
| Mars | 16370-08-23 09:50 G | 7700313.77 | 7700313.91 | 7700314.06 | 0.1745 | 0.1126 |
| Jupiter | 16370-11-05 11:16 G | 7700387.83 | 7700387.97 | 7700388.12 | 0.0486 | 0.0375 |
| Uranus | 16371-03-11 18:28 G | 7700514.24 | 7700514.27 | 7700514.34 | 0.0134 | 0.0131 |
| Jupiter | 16371-12-04 22:33 G | 7700782.29 | 7700782.44 | 7700782.61 | 0.0484 | 0.0350 |
| Uranus | 16372-03-15 08:52 G | 7700883.65 | 7700883.87 | 7700884.10 | 0.0134 | 0.0070 |
| Uranus | 16373-03-19 13:55 G | 7701252.84 | 7701253.08 | 7701253.32 | 0.0134 | 0.0034 |
| Saturn | 16373-05-09 15:36 G | 7701303.91 | 7701304.15 | 7701304.40 | 0.0277 | 0.0019 |
| Uranus | 16374-03-24 03:50 G | 7701622.40 | 7701622.66 | 7701622.92 | 0.0133 | 0.0022 |
| Uranus | 16375-03-28 07:40 G | 7701991.61 | 7701991.82 | 7701992.04 | 0.0133 | 0.0068 |
| Uranus | 16376-03-31 21:36 G | 7702361.28 | 7702361.40 | 7702361.57 | 0.0133 | 0.0110 |

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| Jupiter | 16377-05-23 06:28 G | 7702778.54 | 7702778.77 | 7702779.00 | 0.0545 | 0.0034 |
| Neptune | 16378-05-17 16:04 G | 7703138.13 | 7703138.17 | 7703138.27 | 0.0090 | 0.0086 |
| Neptune | 16379-05-20 02:09 G | 7703505.56 | 7703505.59 | 7703505.67 | 0.0090 | 0.0088 |
| Neptune | 16380-05-21 20:38 G | 7703873.25 | 7703873.36 | 7703873.51 | 0.0090 | 0.0077 |
| Neptune | 16381-05-24 03:07 G | 7704240.53 | 7704240.63 | 7704240.76 | 0.0090 | 0.0080 |
| Neptune | 16382-05-26 23:16 G | 7704608.31 | 7704608.47 | 7704608.65 | 0.0090 | 0.0068 |
| Jupiter | 16382-11-09 09:36 G | 7704774.71 | 7704774.90 | 7704775.09 | 0.0485 | 0.0294 |
| Neptune | 16383-05-29 05:02 G | 7704975.59 | 7704975.71 | 7704975.89 | 0.0090 | 0.0073 |
| Jupiter | 16383-12-09 09:21 G | 7705169.83 | 7705169.89 | 7705169.97 | 0.0484 | 0.0460 |
| Neptune | 16384-05-31 00:00 G | 7705343.32 | 7705343.50 | 7705343.71 | 0.0090 | 0.0060 |
| Neptune | 16385-06-02 08:38 G | 7705710.70 | 7705710.86 | 7705711.05 | 0.0090 | 0.0064 |
| Neptune | 16386-06-04 23:31 G | 7706078.27 | 7706078.48 | 7706078.71 | 0.0090 | 0.0051 |
| Neptune | 16387-06-07 12:57 G | 7706445.86 | 7706446.04 | 7706446.26 | 0.0090 | 0.0055 |
| Saturn | 16387-11-01 07:12 G | 7706592.64 | 7706592.80 | 7706592.98 | 0.0282 | 0.0193 |
| Neptune | 16388-06-08 23:16 G | 7706813.25 | 7706813.47 | 7706813.72 | 0.0090 | 0.0042 |
| Jupiter | 16389-05-28 13:12 G | 7707166.82 | 7707167.05 | 7707167.28 | 0.0545 | 0.0166 |
| Neptune | 16389-06-11 17:02 G | 7707181.01 | 7707181.21 | 7707181.44 | 0.0090 | 0.0046 |
| Neptune | 16390-06-13 23:31 G | 7707548.25 | 7707548.48 | 7707548.74 | 0.0090 | 0.0032 |
| Neptune | 16391-06-16 19:12 G | 7707916.09 | 7707916.30 | 7707916.56 | 0.0090 | 0.0037 |
| Neptune | 16392-06-18 01:12 G | 7708283.32 | 7708283.55 | 7708283.81 | 0.0090 | 0.0023 |
| Neptune | 16393-06-20 19:40 G | 7708651.08 | 7708651.32 | 7708651.58 | 0.0090 | 0.0026 |
| Neptune | 16394-06-23 03:50 G | 7709018.42 | 7709018.66 | 7709018.91 | 0.0090 | 0.0013 |
| Jupiter | 16394-11-13 18:00 G | 7709162.04 | 7709162.25 | 7709162.46 | 0.0485 | 0.0166 |
| Neptune | 16395-06-25 18:43 G | 7709386.02 | 7709386.28 | 7709386.55 | 0.0090 | 0.0017 |
| Neptune | 16396-06-27 07:26 G | 7709753.56 | 7709753.81 | 7709754.06 | 0.0090 | 0.0003 |
| Neptune | 16397-06-29 17:31 G | 7710120.97 | 7710121.23 | 7710121.50 | 0.0089 | 0.0007 |
| Neptune | 16398-07-02 10:19 G | 7710488.68 | 7710488.93 | 7710489.18 | 0.0089 | 0.0008 |
| Neptune | 16399-07-04 16:33 G | 7710855.93 | 7710856.19 | 7710856.45 | 0.0089 | 0.0003 |
| Neptune | 16400-07-06 11:31 G | 7711223.74 | 7711223.98 | 7711224.24 | 0.0089 | 0.0018 |
| Jupiter | 16401-06-03 04:04 G | 7711555.48 | 7711555.67 | 7711555.86 | 0.0545 | 0.0293 |

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| Neptune | 16401-07-08 17:02 G | 7711590.96 | 7711591.21 | 7711591.46 | 0.0089 | 0.0013 |
| Saturn | 16402-05-03 16:19 G | 7711890.02 | 7711890.18 | 7711890.36 | 0.0277 | 0.0202 |
| Neptune | 16402-07-11 11:16 G | 7711958.73 | 7711958.97 | 7711959.23 | 0.0089 | 0.0027 |
| Saturn | 16403-05-16 15:50 G | 7712268.12 | 7712268.16 | 7712268.23 | 0.0276 | 0.0270 |
| Neptune | 16403-07-13 18:57 G | 7712326.05 | 7712326.29 | 7712326.53 | 0.0089 | 0.0023 |
| Neptune | 16404-07-15 09:07 G | 7712693.66 | 7712693.88 | 7712694.14 | 0.0089 | 0.0037 |
| Neptune | 16405-07-17 21:36 G | 7713061.17 | 7713061.40 | 7713061.63 | 0.0089 | 0.0033 |
| Neptune | 16406-07-20 07:26 G | 7713428.59 | 7713428.81 | 7713429.04 | 0.0089 | 0.0046 |
| Jupiter | 16406-11-17 18:28 G | 7713549.03 | 7713549.27 | 7713549.51 | 0.0484 | 0.0042 |
| Neptune | 16407-07-22 23:31 G | 7713796.27 | 7713796.48 | 7713796.71 | 0.0089 | 0.0041 |
| Neptune | 16408-07-24 05:16 G | 7714163.53 | 7714163.72 | 7714163.94 | 0.0089 | 0.0055 |
| Neptune | 16409-07-26 23:45 G | 7714531.29 | 7714531.49 | 7714531.71 | 0.0089 | 0.0050 |
| Neptune | 16410-07-29 04:33 G | 7714898.53 | 7714898.69 | 7714898.88 | 0.0089 | 0.0064 |
| Neptune | 16411-07-31 22:19 G | 7715266.25 | 7715266.43 | 7715266.64 | 0.0089 | 0.0059 |
| Neptune | 16412-08-02 04:48 G | 7715633.57 | 7715633.70 | 7715633.87 | 0.0089 | 0.0072 |
| Jupiter | 16413-06-08 15:21 G | 7715943.98 | 7715944.14 | 7715944.31 | 0.0544 | 0.0394 |
| Neptune | 16413-08-04 18:43 G | 7716001.13 | 7716001.28 | 7716001.48 | 0.0089 | 0.0067 |
| Neptune | 16414-08-07 06:14 G | 7716368.67 | 7716368.76 | 7716368.90 | 0.0089 | 0.0079 |
| Uranus | 16414-09-10 21:07 G | 7716403.24 | 7716403.38 | 7716403.52 | 0.0144 | 0.0119 |
| Neptune | 16415-08-09 15:36 G | 7716736.04 | 7716736.15 | 7716736.33 | 0.0089 | 0.0075 |
| Uranus | 16415-09-16 01:12 G | 7716773.35 | 7716773.55 | 7716773.79 | 0.0144 | 0.0073 |
| Neptune | 16416-08-11 08:24 G | 7717103.79 | 7717103.85 | 7717103.90 | 0.0089 | 0.0086 |
| Uranus | 16416-09-19 18:00 G | 7717143.00 | 7717143.25 | 7717143.50 | 0.0145 | 0.0002 |
| Neptune | 16417-08-13 12:57 G | 7717470.97 | 7717471.04 | 7717471.16 | 0.0089 | 0.0082 |
| Uranus | 16417-09-25 00:14 G | 7717513.28 | 7717513.51 | 7717513.75 | 0.0145 | 0.0050 |
| Saturn | 16417-11-07 18:43 G | 7717557.05 | 7717557.28 | 7717557.51 | 0.0282 | 0.0085 |
| Uranus | 16418-09-29 16:19 G | 7717883.05 | 7717883.18 | 7717883.35 | 0.0145 | 0.0116 |
| Jupiter | 16418-11-21 22:04 G | 7717936.20 | 7717936.42 | 7717936.65 | 0.0484 | 0.0042 |
| Neptune | 16419-08-18 11:45 G | 7718205.98 | 7718205.99 | 7718206.03 | 0.0089 | 0.0088 |
| Jupiter | 16424-05-05 23:16 G | 7719928.34 | 7719928.47 | 7719928.62 | 0.0541 | 0.0442 |

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| Jupiter | 16430-11-26 07:26 G | 7722323.58 | 7722323.81 | 7722324.05 | 0.0484 | 0.0104 |
| Saturn | 16432-05-10 20:24 G | 7722855.11 | 7722855.35 | 7722855.60 | 0.0277 | 0.0072 |
| Jupiter | 16436-05-11 05:02 G | 7724316.53 | 7724316.71 | 7724316.90 | 0.0543 | 0.0309 |
| Jupiter | 16441-10-31 16:48 G | 7726316.12 | 7726316.20 | 7726316.29 | 0.0487 | 0.0450 |
| Jupiter | 16442-11-30 03:50 G | 7726710.46 | 7726710.66 | 7726710.88 | 0.0483 | 0.0207 |
| Saturn | 16446-11-02 11:45 G | 7728143.78 | 7728143.99 | 7728144.21 | 0.0282 | 0.0139 |
| Jupiter | 16448-05-17 00:00 G | 7728705.29 | 7728705.50 | 7728705.72 | 0.0544 | 0.0211 |
| Mars | 16449-08-26 05:16 G | 7729171.57 | 7729171.72 | 7729171.87 | 0.1739 | 0.1185 |
| Jupiter | 16453-11-04 16:04 G | 7730703.03 | 7730703.17 | 7730703.32 | 0.0486 | 0.0388 |
| Jupiter | 16454-12-04 16:04 G | 7731098.00 | 7731098.17 | 7731098.33 | 0.0484 | 0.0341 |
| Uranus | 16455-03-12 05:16 G | 7731195.61 | 7731195.72 | 7731195.87 | 0.0134 | 0.0115 |
| Uranus | 16456-03-15 18:43 G | 7731565.08 | 7731565.28 | 7731565.50 | 0.0134 | 0.0080 |
| Uranus | 16457-03-20 01:26 G | 7731934.31 | 7731934.56 | 7731934.80 | 0.0134 | 0.0020 |
| Uranus | 16458-03-24 14:38 G | 7732303.86 | 7732304.11 | 7732304.38 | 0.0133 | 0.0021 |
| Uranus | 16459-03-28 19:40 G | 7732673.12 | 7732673.32 | 7732673.54 | 0.0133 | 0.0071 |
| Neptune | 16459-11-14 02:38 G | 7732903.55 | 7732903.61 | 7732903.69 | 0.0088 | 0.0084 |
| Uranus | 16460-04-01 08:52 G | 7733042.78 | 7733042.87 | 7733042.99 | 0.0133 | 0.0121 |
| Jupiter | 16460-05-22 06:28 G | 7733093.53 | 7733093.77 | 7733094.01 | 0.0544 | 0.0043 |
| Neptune | 16460-11-15 07:26 G | 7733270.75 | 7733270.81 | 7733270.92 | 0.0088 | 0.0083 |
| Saturn | 16461-05-04 22:19 G | 7733441.23 | 7733441.43 | 7733441.64 | 0.0277 | 0.0147 |
| Neptune | 16461-11-18 00:00 G | 7733638.41 | 7733638.50 | 7733638.66 | 0.0088 | 0.0077 |
| Neptune | 16462-11-20 04:04 G | 7734005.54 | 7734005.67 | 7734005.80 | 0.0088 | 0.0075 |
| Neptune | 16463-11-22 20:38 G | 7734373.22 | 7734373.36 | 7734373.53 | 0.0088 | 0.0070 |
| Neptune | 16464-11-24 01:40 G | 7734740.44 | 7734740.57 | 7734740.75 | 0.0088 | 0.0069 |
| Jupiter | 16465-11-08 22:33 G | 7735090.27 | 7735090.44 | 7735090.62 | 0.0486 | 0.0304 |
| Neptune | 16465-11-26 15:21 G | 7735107.97 | 7735108.14 | 7735108.34 | 0.0088 | 0.0063 |
| Neptune | 16466-11-29 00:28 G | 7735475.37 | 7735475.52 | 7735475.73 | 0.0088 | 0.0061 |
| Jupiter | 16466-12-08 11:31 G | 7735484.90 | 7735484.98 | 7735485.08 | 0.0484 | 0.0445 |
| Neptune | 16467-12-01 09:07 G | 7735842.69 | 7735842.88 | 7735843.11 | 0.0088 | 0.0054 |
| Neptune | 16468-12-02 23:45 G | 7736210.31 | 7736210.49 | 7736210.71 | 0.0088 | 0.0052 |

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| Neptune | 16469-12-05 04:33 G | 7736577.48 | 7736577.69 | 7736577.92 | 0.0088 | 0.0046 |
| Neptune | 16470-12-07 21:50 G | 7736945.21 | 7736945.41 | 7736945.65 | 0.0088 | 0.0044 |
| Neptune | 16471-12-10 01:26 G | 7737312.35 | 7737312.56 | 7737312.81 | 0.0088 | 0.0039 |
| Jupiter | 16472-05-27 20:52 G | 7737482.15 | 7737482.37 | 7737482.59 | 0.0545 | 0.0151 |
| Neptune | 16472-12-11 18:43 G | 7737680.04 | 7737680.28 | 7737680.52 | 0.0088 | 0.0034 |
| Neptune | 16473-12-14 00:43 G | 7738047.30 | 7738047.53 | 7738047.77 | 0.0088 | 0.0029 |
| Neptune | 16474-12-16 13:40 G | 7738414.82 | 7738415.07 | 7738415.33 | 0.0088 | 0.0025 |
| Neptune | 16475-12-19 00:00 G | 7738782.26 | 7738782.50 | 7738782.75 | 0.0088 | 0.0021 |
| Saturn | 16476-11-08 21:36 G | 7739108.20 | 7739108.40 | 7739108.61 | 0.0282 | 0.0136 |
| Neptune | 16476-12-20 07:55 G | 7739149.58 | 7739149.83 | 7739150.10 | 0.0088 | 0.0017 |
| Jupiter | 16477-11-13 02:09 G | 7739477.36 | 7739477.59 | 7739477.82 | 0.0485 | 0.0171 |
| Neptune | 16477-12-22 23:31 G | 7739517.23 | 7739517.48 | 7739517.74 | 0.0088 | 0.0012 |
| Neptune | 16478-12-25 04:33 G | 7739884.43 | 7739884.69 | 7739884.95 | 0.0088 | 0.0007 |
| Neptune | 16479-12-27 22:33 G | 7740252.18 | 7740252.44 | 7740252.70 | 0.0088 | 0.0002 |
| Neptune | 16480-12-29 02:52 G | 7740619.36 | 7740619.62 | 7740619.87 | 0.0088 | 0.0003 |
| Neptune | 16481-12-31 19:55 G | 7740987.07 | 7740987.33 | 7740987.60 | 0.0088 | 0.0006 |
| Neptune | 16483-01-03 02:38 G | 7741354.37 | 7741354.61 | 7741354.87 | 0.0088 | 0.0012 |
| Neptune | 16484-01-05 15:50 G | 7741721.90 | 7741722.16 | 7741722.43 | 0.0088 | 0.0015 |
| Jupiter | 16484-06-02 00:43 G | 7741870.32 | 7741870.53 | 7741870.74 | 0.0545 | 0.0263 |
| Neptune | 16485-01-07 03:07 G | 7742089.39 | 7742089.63 | 7742089.88 | 0.0088 | 0.0021 |
| Neptune | 16486-01-09 10:48 G | 7742456.71 | 7742456.95 | 7742457.22 | 0.0088 | 0.0025 |
| Neptune | 16487-01-12 02:52 G | 7742824.40 | 7742824.62 | 7742824.87 | 0.0088 | 0.0031 |
| Neptune | 16488-01-14 07:55 G | 7743191.60 | 7743191.83 | 7743192.08 | 0.0088 | 0.0033 |
| Neptune | 16489-01-16 02:24 G | 7743559.38 | 7743559.60 | 7743559.85 | 0.0088 | 0.0039 |
| Jupiter | 16489-11-17 06:00 G | 7743864.53 | 7743864.75 | 7743864.97 | 0.0484 | 0.0050 |
| Neptune | 16490-01-18 07:12 G | 7743926.58 | 7743926.80 | 7743927.03 | 0.0088 | 0.0041 |
| Neptune | 16491-01-21 00:28 G | 7744294.31 | 7744294.52 | 7744294.75 | 0.0088 | 0.0048 |
| Saturn | 16491-05-12 19:12 G | 7744406.08 | 7744406.30 | 7744406.53 | 0.0277 | 0.0127 |
| Neptune | 16492-01-23 08:24 G | 7744661.65 | 7744661.85 | 7744662.06 | 0.0088 | 0.0050 |
| Neptune | 16493-01-24 21:36 G | 7745029.21 | 7745029.40 | 7745029.62 | 0.0088 | 0.0057 |

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| Neptune | 16494-01-27 09:36 G | 7745396.73 | 7745396.90 | 7745397.11 | 0.0088 | 0.0059 |
| Neptune | 16495-01-29 18:14 G | 7745764.09 | 7745764.26 | 7745764.45 | 0.0088 | 0.0064 |
| Neptune | 16496-02-01 10:48 G | 7746131.80 | 7746131.95 | 7746132.14 | 0.0088 | 0.0066 |
| Jupiter | 16496-06-07 06:43 G | 7746258.62 | 7746258.78 | 7746258.95 | 0.0545 | 0.0370 |
| Neptune | 16497-02-02 16:04 G | 7746499.05 | 7746499.17 | 7746499.34 | 0.0088 | 0.0073 |
| Neptune | 16498-02-05 11:02 G | 7746866.84 | 7746866.96 | 7746867.13 | 0.0088 | 0.0073 |
| Uranus | 16498-09-11 09:07 G | 7747084.77 | 7747084.88 | 7747085.01 | 0.0144 | 0.0124 |
| Neptune | 16499-02-07 16:04 G | 7747234.10 | 7747234.17 | 7747234.29 | 0.0088 | 0.0082 |
| Uranus | 16499-09-16 12:43 G | 7747454.81 | 7747455.03 | 7747455.28 | 0.0144 | 0.0054 |
| Neptune | 16500-02-10 10:04 G | 7747601.82 | 7747601.92 | 7747602.05 | 0.0088 | 0.0080 |
| Uranus | 16500-09-21 05:31 G | 7747824.49 | 7747824.73 | 7747824.98 | 0.0145 | 0.0010 |
| Neptune | 16501-02-12 18:14 G | 7747969.26 | 7747969.26 | 7747969.30 | 0.0088 | 0.0088 |
| Uranus | 16501-09-26 11:02 G | 7748194.74 | 7748194.96 | 7748195.19 | 0.0145 | 0.0063 |
| Jupiter | 16501-11-22 14:09 G | 7748251.85 | 7748252.09 | 7748252.33 | 0.0484 | 0.0020 |
| Neptune | 16502-02-15 08:24 G | 7748336.79 | 7748336.85 | 7748336.91 | 0.0088 | 0.0086 |
| Uranus | 16502-10-01 03:36 G | 7748564.50 | 7748564.65 | 7748564.79 | 0.0145 | 0.0118 |
| Saturn | 16505-11-04 08:52 G | 7749694.64 | 7749694.87 | 7749695.12 | 0.0282 | 0.0084 |
| Jupiter | 16507-05-07 00:14 G | 7750243.40 | 7750243.51 | 7750243.63 | 0.0542 | 0.0457 |
| Jupiter | 16513-11-26 11:16 G | 7752638.75 | 7752638.97 | 7752639.20 | 0.0484 | 0.0089 |
| Pluto | 16516-07-27 04:19 G | 7753612.43 | 7753612.68 | 7753612.93 | 0.0064 | 0.0007 |
| Jupiter | 16519-05-12 18:57 G | 7754632.11 | 7754632.29 | 7754632.48 | 0.0543 | 0.0326 |
| Saturn | 16520-05-07 06:14 G | 7754992.54 | 7754992.76 | 7754992.99 | 0.0277 | 0.0092 |
| Jupiter | 16524-10-31 20:52 G | 7756631.31 | 7756631.37 | 7756631.46 | 0.0488 | 0.0461 |
| Jupiter | 16525-11-30 21:50 G | 7757026.20 | 7757026.41 | 7757026.63 | 0.0484 | 0.0200 |
| Jupiter | 16531-05-17 22:33 G | 7759020.22 | 7759020.44 | 7759020.65 | 0.0543 | 0.0227 |
| Saturn | 16535-11-12 00:43 G | 7760659.36 | 7760659.53 | 7760659.72 | 0.0282 | 0.0187 |
| Jupiter | 16536-11-05 05:31 G | 7761018.61 | 7761018.73 | 7761018.85 | 0.0487 | 0.0402 |
| Jupiter | 16537-12-04 19:26 G | 7761413.15 | 7761413.31 | 7761413.49 | 0.0484 | 0.0332 |
| Uranus | 16539-03-13 17:45 G | 7761877.17 | 7761877.24 | 7761877.35 | 0.0134 | 0.0124 |
| Uranus | 16540-03-17 05:45 G | 7762246.52 | 7762246.74 | 7762246.99 | 0.0134 | 0.0063 |

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| Neptune | 16540-05-12 16:48 G | 7762303.19 | 7762303.20 | 7762303.27 | 0.0089 | 0.0089 |
| Uranus | 16541-03-21 13:26 G | 7762615.81 | 7762616.06 | 7762616.30 | 0.0134 | 0.0027 |
| Uranus | 16542-03-26 01:12 G | 7762985.30 | 7762985.55 | 7762985.81 | 0.0133 | 0.0031 |
| Neptune | 16542-05-17 16:48 G | 7763038.12 | 7763038.20 | 7763038.34 | 0.0089 | 0.0082 |
| Uranus | 16543-03-30 07:26 G | 7763354.61 | 7763354.81 | 7763355.02 | 0.0133 | 0.0075 |
| Neptune | 16543-05-20 12:28 G | 7763405.97 | 7763406.02 | 7763406.12 | 0.0090 | 0.0086 |
| Jupiter | 16543-05-23 08:09 G | 7763408.62 | 7763408.84 | 7763409.07 | 0.0544 | 0.0062 |
| Uranus | 16544-04-02 19:26 G | 7763724.22 | 7763724.31 | 7763724.45 | 0.0133 | 0.0120 |
| Neptune | 16544-05-21 18:57 G | 7763773.17 | 7763773.29 | 7763773.45 | 0.0090 | 0.0075 |
| Neptune | 16545-05-24 15:21 G | 7764141.02 | 7764141.14 | 7764141.28 | 0.0090 | 0.0078 |
| Neptune | 16546-05-26 22:33 G | 7764508.28 | 7764508.44 | 7764508.61 | 0.0090 | 0.0068 |
| Neptune | 16547-05-29 16:04 G | 7764876.03 | 7764876.17 | 7764876.36 | 0.0090 | 0.0070 |
| Neptune | 16548-05-31 02:38 G | 7765243.44 | 7765243.61 | 7765243.81 | 0.0090 | 0.0060 |
| Jupiter | 16548-11-09 10:19 G | 7765405.74 | 7765405.93 | 7765406.11 | 0.0486 | 0.0305 |
| Neptune | 16549-06-02 15:50 G | 7765610.98 | 7765611.16 | 7765611.38 | 0.0090 | 0.0061 |
| Jupiter | 16549-12-09 06:28 G | 7765800.67 | 7765800.77 | 7765800.88 | 0.0484 | 0.0431 |
| Saturn | 16550-05-14 20:24 G | 7765957.18 | 7765957.35 | 7765957.54 | 0.0277 | 0.0182 |
| Neptune | 16550-06-05 06:43 G | 7765978.59 | 7765978.78 | 7765979.00 | 0.0090 | 0.0052 |
| Neptune | 16551-06-07 15:07 G | 7766345.94 | 7766346.13 | 7766346.36 | 0.0090 | 0.0053 |
| Neptune | 16552-06-09 09:50 G | 7766713.71 | 7766713.91 | 7766714.15 | 0.0090 | 0.0044 |
| Neptune | 16553-06-11 15:50 G | 7767080.96 | 7767081.16 | 7767081.41 | 0.0090 | 0.0044 |
| Mars | 16554-02-21 16:19 G | 7767336.04 | 7767336.18 | 7767336.31 | 0.1784 | 0.1197 |
| Neptune | 16554-06-14 12:14 G | 7767448.77 | 7767449.01 | 7767449.26 | 0.0090 | 0.0034 |
| Jupiter | 16555-05-28 16:04 G | 7767796.93 | 7767797.17 | 7767797.40 | 0.0545 | 0.0124 |
| Neptune | 16555-06-16 18:43 G | 7767816.05 | 7767816.28 | 7767816.52 | 0.0090 | 0.0033 |
| Neptune | 16556-06-18 12:43 G | 7768183.79 | 7768184.03 | 7768184.30 | 0.0090 | 0.0026 |
| Neptune | 16557-06-20 22:48 G | 7768551.21 | 7768551.45 | 7768551.69 | 0.0090 | 0.0024 |
| Neptune | 16558-06-23 12:14 G | 7768918.76 | 7768919.01 | 7768919.28 | 0.0090 | 0.0017 |
| Neptune | 16559-06-26 02:09 G | 7769286.35 | 7769286.59 | 7769286.84 | 0.0090 | 0.0014 |
| Neptune | 16560-06-27 10:48 G | 7769653.69 | 7769653.95 | 7769654.22 | 0.0090 | 0.0007 |

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| Jupiter | 16560-11-13 12:14 G | 7769792.81 | 7769793.01 | 7769793.23 | 0.0485 | 0.0175 |
| Neptune | 16561-06-30 04:33 G | 7770021.44 | 7770021.69 | 7770021.95 | 0.0090 | 0.0004 |
| Jupiter | 16561-12-13 06:43 G | 7770187.78 | 7770187.78 | 7770187.81 | 0.0484 | 0.0483 |
| Neptune | 16562-07-02 10:33 G | 7770388.68 | 7770388.94 | 7770389.20 | 0.0089 | 0.0002 |
| Neptune | 16563-07-05 06:00 G | 7770756.49 | 7770756.75 | 7770757.01 | 0.0089 | 0.0005 |
| Neptune | 16564-07-06 11:31 G | 7771123.73 | 7771123.98 | 7771124.23 | 0.0089 | 0.0011 |
| Saturn | 16564-11-05 05:45 G | 7771245.49 | 7771245.74 | 7771245.98 | 0.0282 | 0.0030 |
| Neptune | 16565-07-09 05:02 G | 7771491.46 | 7771491.71 | 7771491.98 | 0.0089 | 0.0016 |
| Neptune | 16566-07-11 14:09 G | 7771858.86 | 7771859.09 | 7771859.34 | 0.0089 | 0.0020 |
| Jupiter | 16567-06-03 02:09 G | 7772185.39 | 7772185.59 | 7772185.79 | 0.0545 | 0.0242 |
| Neptune | 16567-07-14 03:36 G | 7772226.41 | 7772226.65 | 7772226.92 | 0.0089 | 0.0025 |
| Neptune | 16568-07-15 16:48 G | 7772593.98 | 7772594.20 | 7772594.45 | 0.0089 | 0.0030 |
| Neptune | 16569-07-18 01:12 G | 7772961.32 | 7772961.55 | 7772961.81 | 0.0089 | 0.0034 |
| Neptune | 16570-07-20 18:28 G | 7773329.06 | 7773329.27 | 7773329.51 | 0.0089 | 0.0037 |
| Neptune | 16571-07-23 00:14 G | 7773696.29 | 7773696.51 | 7773696.74 | 0.0089 | 0.0043 |
| Neptune | 16572-07-24 18:43 G | 7774064.08 | 7774064.28 | 7774064.52 | 0.0089 | 0.0046 |
| Jupiter | 16572-11-17 21:50 G | 7774180.17 | 7774180.41 | 7774180.65 | 0.0484 | 0.0061 |
| Neptune | 16573-07-27 00:00 G | 7774431.31 | 7774431.50 | 7774431.71 | 0.0089 | 0.0053 |
| Neptune | 16574-07-29 17:02 G | 7774799.02 | 7774799.21 | 7774799.44 | 0.0089 | 0.0054 |
| Neptune | 16575-08-01 01:12 G | 7775166.39 | 7775166.55 | 7775166.75 | 0.0089 | 0.0061 |
| Neptune | 16576-08-02 14:24 G | 7775533.92 | 7775534.10 | 7775534.31 | 0.0089 | 0.0061 |
| Neptune | 16577-08-05 02:52 G | 7775901.48 | 7775901.62 | 7775901.80 | 0.0089 | 0.0068 |
| Neptune | 16578-08-07 11:02 G | 7776268.80 | 7776268.96 | 7776269.13 | 0.0089 | 0.0070 |
| Saturn | 16579-05-09 10:33 G | 7776543.70 | 7776543.94 | 7776544.19 | 0.0277 | 0.0040 |
| Jupiter | 16579-06-08 21:21 G | 7776574.22 | 7776574.39 | 7776574.57 | 0.0545 | 0.0353 |
| Neptune | 16579-08-10 03:36 G | 7776636.53 | 7776636.65 | 7776636.79 | 0.0089 | 0.0077 |
| Neptune | 16580-08-11 08:24 G | 7777003.73 | 7777003.85 | 7777003.99 | 0.0089 | 0.0077 |
| Neptune | 16581-08-14 02:38 G | 7777371.55 | 7777371.61 | 7777371.73 | 0.0089 | 0.0083 |
| Neptune | 16582-08-16 07:40 G | 7777738.75 | 7777738.82 | 7777738.94 | 0.0089 | 0.0082 |
| Uranus | 16582-09-12 20:38 G | 7777766.22 | 7777766.36 | 7777766.52 | 0.0144 | 0.0113 |

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| Uranus | 16583-09-17 23:31 G | 7778136.25 | 7778136.48 | 7778136.71 | 0.0144 | 0.0064 |
| Neptune | 16584-08-20 08:38 G | 7778473.86 | 7778473.86 | 7778473.89 | 0.0089 | 0.0089 |
| Uranus | 16584-09-21 17:02 G | 7778505.96 | 7778506.21 | 7778506.46 | 0.0145 | 0.0010 |
| Jupiter | 16584-11-21 17:31 G | 7778567.00 | 7778567.23 | 7778567.46 | 0.0484 | 0.0007 |
| Uranus | 16585-09-26 22:04 G | 7778876.19 | 7778876.42 | 7778876.66 | 0.0145 | 0.0057 |
| Uranus | 16586-10-01 14:38 G | 7779246.00 | 7779246.11 | 7779246.24 | 0.0145 | 0.0125 |
| Jupiter | 16590-05-06 12:28 G | 7780558.90 | 7780559.02 | 7780559.15 | 0.0541 | 0.0462 |
| Jupiter | 16591-06-14 00:14 G | 7780962.48 | 7780962.51 | 7780962.56 | 0.0544 | 0.0535 |
| Saturn | 16593-10-30 19:26 G | 7781832.22 | 7781832.31 | 7781832.41 | 0.0281 | 0.0259 |
| Saturn | 16594-11-12 22:04 G | 7782210.29 | 7782210.42 | 7782210.56 | 0.0282 | 0.0236 |
| Jupiter | 16596-11-26 06:14 G | 7782954.53 | 7782954.76 | 7782954.98 | 0.0484 | 0.0080 |
| Jupiter | 16602-05-12 09:36 G | 7784946.73 | 7784946.90 | 7784947.09 | 0.0542 | 0.0352 |
| Pluto | 16605-01-25 12:43 G | 7785935.87 | 7785936.03 | 7785936.24 | 0.0080 | 0.0056 |
| Jupiter | 16607-11-02 11:16 G | 7786946.93 | 7786946.97 | 7786947.02 | 0.0488 | 0.0476 |
| Saturn | 16608-05-03 22:33 G | 7787130.33 | 7787130.44 | 7787130.57 | 0.0278 | 0.0242 |
| Jupiter | 16608-12-01 03:21 G | 7787341.43 | 7787341.64 | 7787341.86 | 0.0484 | 0.0194 |
| Saturn | 16609-05-17 02:24 G | 7787508.49 | 7787508.60 | 7787508.73 | 0.0277 | 0.0236 |
| Jupiter | 16614-05-18 00:57 G | 7789335.34 | 7789335.54 | 7789335.74 | 0.0543 | 0.0255 |
| Jupiter | 16619-11-06 16:19 G | 7791334.06 | 7791334.18 | 7791334.31 | 0.0487 | 0.0413 |
| Neptune | 16620-11-08 03:36 G | 7791701.65 | 7791701.65 | 7791701.70 | 0.0088 | 0.0088 |
| Jupiter | 16620-12-05 12:14 G | 7791728.85 | 7791729.01 | 7791729.18 | 0.0483 | 0.0325 |
| Neptune | 16622-11-13 03:07 G | 7792436.54 | 7792436.63 | 7792436.72 | 0.0088 | 0.0081 |
| Uranus | 16623-03-15 04:19 G | 7792558.54 | 7792558.68 | 7792558.82 | 0.0134 | 0.0109 |
| Saturn | 16623-11-08 09:21 G | 7792796.66 | 7792796.89 | 7792797.13 | 0.0282 | 0.0023 |
| Neptune | 16623-11-15 06:43 G | 7792803.75 | 7792803.78 | 7792803.86 | 0.0088 | 0.0086 |
| Uranus | 16624-03-18 14:52 G | 7792927.91 | 7792928.12 | 7792928.36 | 0.0134 | 0.0073 |
| Neptune | 16624-11-17 00:14 G | 7793171.38 | 7793171.51 | 7793171.65 | 0.0088 | 0.0074 |
| Uranus | 16625-03-23 00:14 G | 7793297.26 | 7793297.51 | 7793297.76 | 0.0134 | 0.0012 |
| Neptune | 16625-11-19 03:07 G | 7793538.55 | 7793538.63 | 7793538.76 | 0.0088 | 0.0080 |
| Uranus | 16626-03-27 11:16 G | 7793666.71 | 7793666.97 | 7793667.23 | 0.0134 | 0.0027 |

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| Jupiter | 16626-05-23 08:52 G | 7793723.63 | 7793723.87 | 7793724.11 | 0.0544 | 0.0079 |
| Neptune | 16626-11-21 19:26 G | 7793906.16 | 7793906.31 | 7793906.49 | 0.0088 | 0.0068 |
| Uranus | 16627-03-31 18:43 G | 7794036.09 | 7794036.28 | 7794036.48 | 0.0133 | 0.0081 |
| Neptune | 16627-11-24 01:26 G | 7794273.43 | 7794273.56 | 7794273.70 | 0.0088 | 0.0073 |
| Uranus | 16628-04-04 05:16 G | 7794405.67 | 7794405.72 | 7794405.81 | 0.0133 | 0.0128 |
| Neptune | 16628-11-25 13:26 G | 7794640.89 | 7794641.06 | 7794641.27 | 0.0088 | 0.0061 |
| Neptune | 16629-11-28 00:43 G | 7795008.37 | 7795008.53 | 7795008.70 | 0.0088 | 0.0065 |
| Neptune | 16630-11-30 08:24 G | 7795375.64 | 7795375.85 | 7795376.06 | 0.0088 | 0.0053 |
| Jupiter | 16631-11-10 18:57 G | 7795721.12 | 7795721.29 | 7795721.47 | 0.0486 | 0.0310 |
| Neptune | 16631-12-02 23:45 G | 7795743.31 | 7795743.49 | 7795743.69 | 0.0088 | 0.0058 |
| Neptune | 16632-12-04 03:36 G | 7796110.45 | 7796110.65 | 7796110.89 | 0.0088 | 0.0046 |
| Jupiter | 16632-12-09 13:55 G | 7796115.96 | 7796116.08 | 7796116.21 | 0.0484 | 0.0410 |
| Mars | 16633-02-25 02:24 G | 7796193.42 | 7796193.60 | 7796193.78 | 0.1790 | 0.0354 |
| Neptune | 16633-12-06 21:07 G | 7796478.19 | 7796478.38 | 7796478.61 | 0.0088 | 0.0051 |
| Neptune | 16634-12-09 00:57 G | 7796845.33 | 7796845.54 | 7796845.79 | 0.0088 | 0.0038 |
| Neptune | 16635-12-11 17:02 G | 7797212.99 | 7797213.21 | 7797213.46 | 0.0088 | 0.0042 |
| Neptune | 16636-12-13 00:00 G | 7797580.27 | 7797580.50 | 7797580.74 | 0.0088 | 0.0029 |
| Neptune | 16637-12-15 11:16 G | 7797947.74 | 7797947.97 | 7797948.23 | 0.0088 | 0.0034 |
| Saturn | 16638-05-11 10:04 G | 7798094.66 | 7798094.92 | 7798095.18 | 0.0277 | 0.0016 |
| Jupiter | 16638-05-28 21:36 G | 7798112.18 | 7798112.40 | 7798112.62 | 0.0545 | 0.0108 |
| Neptune | 16638-12-17 23:16 G | 7798315.24 | 7798315.47 | 7798315.73 | 0.0088 | 0.0022 |
| Neptune | 16639-12-20 06:28 G | 7798682.53 | 7798682.77 | 7798683.04 | 0.0088 | 0.0026 |
| Neptune | 16640-12-21 23:02 G | 7799050.21 | 7799050.46 | 7799050.71 | 0.0088 | 0.0012 |
| Neptune | 16641-12-24 02:52 G | 7799417.37 | 7799417.62 | 7799417.88 | 0.0088 | 0.0017 |
| Neptune | 16642-12-26 20:52 G | 7799785.11 | 7799785.37 | 7799785.63 | 0.0088 | 0.0003 |
| Jupiter | 16643-11-15 03:36 G | 7800108.43 | 7800108.65 | 7800108.87 | 0.0485 | 0.0172 |
| Neptune | 16643-12-29 01:12 G | 7800152.30 | 7800152.55 | 7800152.81 | 0.0088 | 0.0008 |
| Jupiter | 16644-12-13 17:31 G | 7800503.18 | 7800503.23 | 7800503.28 | 0.0484 | 0.0470 |
| Neptune | 16644-12-30 17:16 G | 7800519.96 | 7800520.22 | 7800520.49 | 0.0088 | 0.0005 |
| Neptune | 16646-01-02 00:43 G | 7800887.28 | 7800887.53 | 7800887.78 | 0.0088 | 0.0001 |

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| Neptune | 16647-01-04 12:14 G | 7801254.75 | 7801255.01 | 7801255.28 | 0.0088 | 0.0014 |
| Neptune | 16648-01-07 01:26 G | 7801622.31 | 7801622.56 | 7801622.81 | 0.0088 | 0.0010 |
| Neptune | 16649-01-08 08:24 G | 7801989.61 | 7801989.85 | 7801990.12 | 0.0088 | 0.0023 |
| Neptune | 16650-01-11 01:40 G | 7802357.32 | 7802357.57 | 7802357.82 | 0.0088 | 0.0018 |
| Jupiter | 16650-06-03 13:55 G | 7802500.86 | 7802501.08 | 7802501.30 | 0.0545 | 0.0215 |
| Neptune | 16651-01-13 06:00 G | 7802724.51 | 7802724.75 | 7802724.99 | 0.0088 | 0.0031 |
| Neptune | 16652-01-16 00:00 G | 7803092.27 | 7803092.50 | 7803092.76 | 0.0088 | 0.0027 |
| Saturn | 16652-11-01 17:16 G | 7803383.06 | 7803383.22 | 7803383.40 | 0.0281 | 0.0208 |
| Neptune | 16653-01-17 05:02 G | 7803459.50 | 7803459.71 | 7803459.95 | 0.0088 | 0.0040 |
| Neptune | 16654-01-19 20:52 G | 7803827.14 | 7803827.37 | 7803827.63 | 0.0088 | 0.0036 |
| Mars | 16654-08-26 08:52 G | 7804045.71 | 7804045.87 | 7804046.04 | 0.1752 | 0.0578 |
| Neptune | 16655-01-22 05:31 G | 7804194.53 | 7804194.73 | 7804194.94 | 0.0088 | 0.0048 |
| Jupiter | 16655-11-19 00:57 G | 7804495.32 | 7804495.54 | 7804495.78 | 0.0485 | 0.0070 |
| Neptune | 16656-01-24 17:16 G | 7804561.99 | 7804562.22 | 7804562.46 | 0.0088 | 0.0044 |
| Neptune | 16657-01-26 06:43 G | 7804929.60 | 7804929.78 | 7804929.99 | 0.0088 | 0.0056 |
| Neptune | 16658-01-28 14:24 G | 7805296.90 | 7805297.10 | 7805297.33 | 0.0088 | 0.0051 |
| Neptune | 16659-01-31 08:09 G | 7805664.68 | 7805664.84 | 7805665.03 | 0.0088 | 0.0065 |
| Neptune | 16660-02-02 13:12 G | 7806031.87 | 7806032.05 | 7806032.26 | 0.0088 | 0.0059 |
| Neptune | 16661-02-04 08:24 G | 7806399.70 | 7806399.85 | 7806400.01 | 0.0088 | 0.0072 |
| Neptune | 16662-02-06 13:40 G | 7806766.92 | 7806767.07 | 7806767.25 | 0.0088 | 0.0067 |
| Jupiter | 16662-06-08 11:02 G | 7806888.77 | 7806888.96 | 7806889.15 | 0.0544 | 0.0324 |
| Neptune | 16663-02-09 06:00 G | 7807134.66 | 7807134.75 | 7807134.90 | 0.0088 | 0.0078 |
| Neptune | 16664-02-11 15:21 G | 7807502.01 | 7807502.14 | 7807502.28 | 0.0088 | 0.0074 |
| Neptune | 16665-02-13 03:36 G | 7807869.58 | 7807869.65 | 7807869.72 | 0.0088 | 0.0085 |
| Neptune | 16666-02-15 17:16 G | 7808237.13 | 7808237.22 | 7808237.33 | 0.0088 | 0.0081 |
| Uranus | 16666-09-14 09:21 G | 7808447.75 | 7808447.89 | 7808448.03 | 0.0144 | 0.0115 |
| Saturn | 16667-05-06 04:48 G | 7808681.54 | 7808681.70 | 7808681.89 | 0.0278 | 0.0188 |
| Uranus | 16667-09-19 10:48 G | 7808817.71 | 7808817.95 | 7808818.20 | 0.0144 | 0.0047 |
| Jupiter | 16667-11-23 13:12 G | 7808882.82 | 7808883.05 | 7808883.28 | 0.0484 | 0.0010 |
| Neptune | 16668-02-20 19:12 G | 7808972.27 | 7808972.30 | 7808972.38 | 0.0088 | 0.0087 |

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| Uranus | 16668-09-23 05:02 G | 7809187.46 | 7809187.71 | 7809187.95 | 0.0145 | 0.0003 |
| Uranus | 16669-09-28 08:38 G | 7809557.65 | 7809557.86 | 7809558.09 | 0.0145 | 0.0073 |
| Uranus | 16670-10-03 01:40 G | 7809927.45 | 7809927.57 | 7809927.70 | 0.0145 | 0.0125 |
| Jupiter | 16673-05-06 02:38 G | 7810873.51 | 7810873.61 | 7810873.70 | 0.0540 | 0.0489 |
| Jupiter | 16674-06-14 01:55 G | 7811277.50 | 7811277.58 | 7811277.66 | 0.0544 | 0.0510 |
| Jupiter | 16679-11-27 09:21 G | 7813269.66 | 7813269.89 | 7813270.13 | 0.0484 | 0.0068 |
| Saturn | 16682-11-09 15:36 G | 7814347.93 | 7814348.15 | 7814348.38 | 0.0282 | 0.0077 |
| Jupiter | 16685-05-11 18:43 G | 7815262.11 | 7815262.28 | 7815262.44 | 0.0542 | 0.0381 |
| Jupiter | 16690-11-01 22:19 G | 7817262.42 | 7817262.43 | 7817262.46 | 0.0488 | 0.0486 |
| Jupiter | 16691-12-01 18:43 G | 7817657.08 | 7817657.28 | 7817657.49 | 0.0484 | 0.0192 |
| Saturn | 16697-05-12 10:48 G | 7819645.71 | 7819645.95 | 7819646.19 | 0.0277 | 0.0070 |
| Jupiter | 16697-05-17 02:24 G | 7819650.39 | 7819650.60 | 7819650.81 | 0.0543 | 0.0272 |
| Jupiter | 16702-11-06 23:16 G | 7821649.37 | 7821649.47 | 7821649.58 | 0.0487 | 0.0425 |
| Jupiter | 16703-12-06 19:40 G | 7822044.14 | 7822044.32 | 7822044.51 | 0.0484 | 0.0316 |
| Neptune | 16705-05-16 10:33 G | 7822570.87 | 7822570.94 | 7822571.06 | 0.0089 | 0.0084 |
| Neptune | 16706-05-19 06:28 G | 7822938.71 | 7822938.77 | 7822938.88 | 0.0089 | 0.0085 |
| Uranus | 16707-03-16 15:50 G | 7823240.06 | 7823240.16 | 7823240.30 | 0.0134 | 0.0117 |
| Neptune | 16707-05-21 13:12 G | 7823305.93 | 7823306.05 | 7823306.19 | 0.0089 | 0.0077 |
| Uranus | 16708-03-20 01:12 G | 7823609.32 | 7823609.55 | 7823609.80 | 0.0134 | 0.0056 |
| Neptune | 16708-05-23 08:38 G | 7823673.76 | 7823673.86 | 7823674.01 | 0.0090 | 0.0079 |
| Uranus | 16709-03-24 11:16 G | 7823978.74 | 7823978.97 | 7823979.23 | 0.0134 | 0.0021 |
| Jupiter | 16709-05-23 15:07 G | 7824038.90 | 7824039.13 | 7824039.35 | 0.0544 | 0.0091 |
| Neptune | 16709-05-25 17:02 G | 7824041.06 | 7824041.21 | 7824041.37 | 0.0090 | 0.0070 |
| Uranus | 16710-03-28 20:38 G | 7824348.12 | 7824348.36 | 7824348.63 | 0.0134 | 0.0040 |
| Neptune | 16710-05-28 09:21 G | 7824408.74 | 7824408.89 | 7824409.07 | 0.0090 | 0.0071 |
| Uranus | 16711-04-02 05:16 G | 7824717.54 | 7824717.72 | 7824717.93 | 0.0133 | 0.0082 |
| Neptune | 16711-05-30 20:52 G | 7824776.21 | 7824776.37 | 7824776.57 | 0.0090 | 0.0062 |
| Saturn | 16711-11-04 15:36 G | 7824933.94 | 7824934.15 | 7824934.36 | 0.0281 | 0.0153 |
| Uranus | 16712-04-05 15:21 G | 7825087.08 | 7825087.14 | 7825087.21 | 0.0133 | 0.0129 |
| Neptune | 16712-06-01 09:07 G | 7825143.69 | 7825143.88 | 7825144.07 | 0.0090 | 0.0063 |

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| Neptune | 16713-06-04 01:26 G | 7825511.37 | 7825511.56 | 7825511.77 | 0.0090 | 0.0054 |
| Neptune | 16714-06-06 08:52 G | 7825878.69 | 7825878.87 | 7825879.10 | 0.0090 | 0.0057 |
| Jupiter | 16714-11-11 10:04 G | 7826036.74 | 7826036.92 | 7826037.10 | 0.0486 | 0.0308 |
| Neptune | 16715-06-09 04:33 G | 7826246.49 | 7826246.69 | 7826246.93 | 0.0090 | 0.0046 |
| Jupiter | 16715-12-11 00:00 G | 7826431.37 | 7826431.50 | 7826431.62 | 0.0484 | 0.0398 |
| Neptune | 16716-06-10 10:33 G | 7826613.73 | 7826613.94 | 7826614.16 | 0.0090 | 0.0048 |
| Neptune | 16717-06-13 06:28 G | 7826981.53 | 7826981.77 | 7826982.01 | 0.0090 | 0.0036 |
| Neptune | 16718-06-15 13:12 G | 7827348.84 | 7827349.05 | 7827349.29 | 0.0090 | 0.0040 |
| Neptune | 16719-06-18 06:00 G | 7827716.51 | 7827716.75 | 7827717.01 | 0.0090 | 0.0028 |
| Neptune | 16720-06-19 16:33 G | 7828083.97 | 7828084.19 | 7828084.44 | 0.0090 | 0.0031 |
| Jupiter | 16721-05-28 23:45 G | 7828427.25 | 7828427.49 | 7828427.73 | 0.0544 | 0.0079 |
| Neptune | 16721-06-22 05:02 G | 7828451.45 | 7828451.71 | 7828451.97 | 0.0090 | 0.0019 |
| Neptune | 16722-06-24 20:52 G | 7828819.12 | 7828819.37 | 7828819.61 | 0.0090 | 0.0022 |
| Neptune | 16723-06-27 04:48 G | 7829186.44 | 7829186.70 | 7829186.97 | 0.0090 | 0.0009 |
| Neptune | 16724-06-28 23:45 G | 7829554.24 | 7829554.49 | 7829554.75 | 0.0090 | 0.0013 |
| Neptune | 16725-07-01 05:31 G | 7829921.48 | 7829921.73 | 7829921.99 | 0.0089 | 0.0001 |
| Saturn | 16726-05-08 11:31 G | 7830232.78 | 7830232.98 | 7830233.21 | 0.0278 | 0.0134 |
| Neptune | 16726-07-04 00:57 G | 7830289.28 | 7830289.54 | 7830289.80 | 0.0089 | 0.0005 |
| Jupiter | 16726-11-15 06:43 G | 7830423.57 | 7830423.78 | 7830424.00 | 0.0486 | 0.0181 |
| Neptune | 16727-07-06 07:26 G | 7830656.56 | 7830656.81 | 7830657.06 | 0.0089 | 0.0009 |
| Jupiter | 16727-12-15 08:09 G | 7830818.76 | 7830818.84 | 7830818.92 | 0.0484 | 0.0452 |
| Neptune | 16728-07-08 00:00 G | 7831024.24 | 7831024.50 | 7831024.77 | 0.0089 | 0.0005 |
| Neptune | 16729-07-10 09:36 G | 7831391.67 | 7831391.90 | 7831392.16 | 0.0089 | 0.0019 |
| Neptune | 16730-07-12 21:36 G | 7831759.14 | 7831759.40 | 7831759.67 | 0.0089 | 0.0014 |
| Neptune | 16731-07-15 12:28 G | 7832126.78 | 7832127.02 | 7832127.26 | 0.0089 | 0.0027 |
| Neptune | 16732-07-16 19:55 G | 7832494.09 | 7832494.33 | 7832494.60 | 0.0089 | 0.0022 |
| Jupiter | 16733-06-03 01:40 G | 7832815.35 | 7832815.57 | 7832815.79 | 0.0544 | 0.0181 |
| Neptune | 16733-07-19 14:24 G | 7832861.88 | 7832862.10 | 7832862.35 | 0.0089 | 0.0036 |
| Mars | 16733-08-29 14:38 G | 7832903.04 | 7832903.11 | 7832903.17 | 0.1746 | 0.1630 |
| Neptune | 16734-07-21 20:09 G | 7833229.10 | 7833229.34 | 7833229.58 | 0.0089 | 0.0031 |

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| Neptune | 16735-07-24 14:52 G | 7833596.91 | 7833597.12 | 7833597.36 | 0.0089 | 0.0044 |
| Neptune | 16736-07-25 20:52 G | 7833964.16 | 7833964.37 | 7833964.61 | 0.0089 | 0.0040 |
| Neptune | 16737-07-28 13:12 G | 7834331.86 | 7834332.05 | 7834332.29 | 0.0089 | 0.0052 |
| Neptune | 16738-07-30 22:33 G | 7834699.24 | 7834699.44 | 7834699.66 | 0.0089 | 0.0047 |
| Jupiter | 16738-11-19 18:14 G | 7834811.03 | 7834811.26 | 7834811.49 | 0.0485 | 0.0086 |
| Neptune | 16739-08-02 10:04 G | 7835066.73 | 7835066.92 | 7835067.13 | 0.0089 | 0.0060 |
| Neptune | 16740-08-04 00:00 G | 7835434.32 | 7835434.50 | 7835434.71 | 0.0089 | 0.0055 |
| Neptune | 16741-08-06 07:26 G | 7835801.65 | 7835801.81 | 7835801.98 | 0.0089 | 0.0068 |
| Saturn | 16741-11-11 19:40 G | 7835899.11 | 7835899.32 | 7835899.55 | 0.0281 | 0.0132 |
| Neptune | 16742-08-09 00:57 G | 7836169.38 | 7836169.54 | 7836169.74 | 0.0089 | 0.0062 |
| Neptune | 16743-08-11 05:31 G | 7836536.61 | 7836536.73 | 7836536.89 | 0.0089 | 0.0075 |
| Neptune | 16744-08-13 00:14 G | 7836904.35 | 7836904.51 | 7836904.68 | 0.0089 | 0.0069 |
| Jupiter | 16745-06-08 18:57 G | 7837204.11 | 7837204.29 | 7837204.49 | 0.0545 | 0.0303 |
| Neptune | 16745-08-15 05:31 G | 7837271.65 | 7837271.73 | 7837271.85 | 0.0089 | 0.0081 |
| Neptune | 16746-08-17 21:07 G | 7837639.27 | 7837639.38 | 7837639.54 | 0.0089 | 0.0076 |
| Neptune | 16747-08-20 06:28 G | 7838006.74 | 7838006.77 | 7838006.82 | 0.0089 | 0.0087 |
| Neptune | 16748-08-21 17:16 G | 7838374.12 | 7838374.22 | 7838374.34 | 0.0089 | 0.0081 |
| Neptune | 16750-08-26 13:26 G | 7839109.02 | 7839109.06 | 7839109.14 | 0.0089 | 0.0086 |
| Uranus | 16750-09-15 20:52 G | 7839129.22 | 7839129.37 | 7839129.55 | 0.0144 | 0.0106 |
| Jupiter | 16750-11-23 15:50 G | 7839197.92 | 7839198.16 | 7839198.39 | 0.0484 | 0.0023 |
| Uranus | 16751-09-20 21:21 G | 7839499.15 | 7839499.39 | 7839499.63 | 0.0144 | 0.0055 |
| Uranus | 16752-09-24 16:33 G | 7839868.95 | 7839869.19 | 7839869.44 | 0.0145 | 0.0019 |
| Uranus | 16753-09-29 19:40 G | 7840239.10 | 7840239.32 | 7840239.56 | 0.0145 | 0.0065 |
| Uranus | 16754-10-04 13:40 G | 7840608.98 | 7840609.07 | 7840609.15 | 0.0145 | 0.0135 |
| Jupiter | 16756-05-06 13:26 G | 7841188.99 | 7841189.06 | 7841189.15 | 0.0540 | 0.0503 |
| Saturn | 16756-05-14 18:00 G | 7841197.05 | 7841197.25 | 7841197.47 | 0.0277 | 0.0129 |
| Jupiter | 16757-06-14 03:21 G | 7841592.53 | 7841592.64 | 7841592.74 | 0.0545 | 0.0488 |
| Pluto | 16762-07-31 12:43 G | 7843465.78 | 7843466.03 | 7843466.28 | 0.0064 | 0.0004 |
| Jupiter | 16762-11-27 23:16 G | 7843585.25 | 7843585.47 | 7843585.70 | 0.0484 | 0.0061 |
| Jupiter | 16768-05-11 18:43 G | 7845577.12 | 7845577.28 | 7845577.44 | 0.0542 | 0.0399 |

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| Saturn | 16770-11-05 19:40 G | 7846485.10 | 7846485.32 | 7846485.55 | 0.0281 | 0.0097 |
| Jupiter | 16774-12-02 02:24 G | 7847972.38 | 7847972.60 | 7847972.82 | 0.0484 | 0.0189 |
| Jupiter | 16780-05-17 03:21 G | 7849965.46 | 7849965.64 | 7849965.83 | 0.0542 | 0.0298 |
| Neptune | 16784-11-08 11:02 G | 7851601.90 | 7851601.96 | 7851602.05 | 0.0088 | 0.0084 |
| Saturn | 16785-05-09 13:55 G | 7851783.84 | 7851784.08 | 7851784.33 | 0.0278 | 0.0075 |
| Jupiter | 16785-11-06 13:12 G | 7851964.95 | 7851965.05 | 7851965.16 | 0.0488 | 0.0439 |
| Neptune | 16785-11-11 02:09 G | 7851969.58 | 7851969.59 | 7851969.65 | 0.0088 | 0.0087 |
| Neptune | 16786-11-13 06:00 G | 7852336.66 | 7852336.75 | 7852336.89 | 0.0088 | 0.0079 |
| Jupiter | 16786-12-06 04:33 G | 7852359.52 | 7852359.69 | 7852359.87 | 0.0484 | 0.0307 |
| Neptune | 16787-11-16 00:00 G | 7852704.40 | 7852704.50 | 7852704.59 | 0.0088 | 0.0081 |
| Neptune | 16788-11-17 03:21 G | 7853071.52 | 7853071.64 | 7853071.79 | 0.0088 | 0.0074 |
| Neptune | 16789-11-19 18:57 G | 7853439.17 | 7853439.29 | 7853439.44 | 0.0088 | 0.0075 |
| Neptune | 16790-11-22 01:40 G | 7853806.44 | 7853806.57 | 7853806.75 | 0.0088 | 0.0068 |
| Uranus | 16791-03-17 01:26 G | 7853921.43 | 7853921.56 | 7853921.74 | 0.0134 | 0.0104 |
| Neptune | 16791-11-24 13:12 G | 7854173.90 | 7854174.05 | 7854174.24 | 0.0088 | 0.0068 |
| Uranus | 16792-03-20 10:04 G | 7854290.69 | 7854290.92 | 7854291.15 | 0.0134 | 0.0066 |
| Jupiter | 16792-05-22 12:43 G | 7854353.79 | 7854354.03 | 7854354.27 | 0.0543 | 0.0117 |
| Neptune | 16792-11-26 00:43 G | 7854541.37 | 7854541.53 | 7854541.73 | 0.0088 | 0.0061 |
| Uranus | 16793-03-24 21:50 G | 7854660.16 | 7854660.41 | 7854660.66 | 0.0134 | 0.0005 |
| Neptune | 16793-11-28 06:57 G | 7854908.62 | 7854908.79 | 7854908.99 | 0.0088 | 0.0062 |
| Uranus | 16794-03-29 06:00 G | 7855029.50 | 7855029.75 | 7855030.01 | 0.0134 | 0.0033 |
| Neptune | 16794-11-30 22:33 G | 7855276.27 | 7855276.44 | 7855276.67 | 0.0088 | 0.0055 |
| Uranus | 16795-04-02 15:50 G | 7855398.99 | 7855399.16 | 7855399.36 | 0.0134 | 0.0090 |
| Neptune | 16795-12-03 02:38 G | 7855643.42 | 7855643.61 | 7855643.82 | 0.0088 | 0.0055 |
| Neptune | 16796-12-04 19:55 G | 7856011.13 | 7856011.33 | 7856011.57 | 0.0088 | 0.0047 |
| Jupiter | 16797-11-10 10:33 G | 7856351.77 | 7856351.94 | 7856352.11 | 0.0487 | 0.0322 |
| Neptune | 16797-12-07 00:28 G | 7856378.31 | 7856378.52 | 7856378.74 | 0.0088 | 0.0046 |
| Neptune | 16798-12-09 15:36 G | 7856745.93 | 7856746.15 | 7856746.40 | 0.0088 | 0.0039 |
| Jupiter | 16798-12-10 11:45 G | 7856746.84 | 7856746.99 | 7856747.14 | 0.0484 | 0.0375 |
| Neptune | 16799-12-11 23:45 G | 7857113.29 | 7857113.49 | 7857113.73 | 0.0088 | 0.0039 |

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| Saturn | 16800-11-12 22:04 G | 7857450.24 | 7857450.42 | 7857450.61 | 0.0281 | 0.0191 |
| Neptune | 16800-12-13 10:33 G | 7857480.71 | 7857480.94 | 7857481.21 | 0.0088 | 0.0032 |
| Neptune | 16801-12-15 23:45 G | 7857848.26 | 7857848.49 | 7857848.73 | 0.0088 | 0.0031 |
| Neptune | 16802-12-18 05:31 G | 7858215.48 | 7858215.73 | 7858215.99 | 0.0088 | 0.0023 |
| Neptune | 16803-12-20 22:19 G | 7858583.19 | 7858583.43 | 7858583.68 | 0.0088 | 0.0022 |
| Jupiter | 16804-05-27 16:04 G | 7858741.95 | 7858742.17 | 7858742.40 | 0.0544 | 0.0053 |
| Neptune | 16804-12-22 01:55 G | 7858950.34 | 7858950.58 | 7858950.84 | 0.0088 | 0.0015 |
| Neptune | 16805-12-24 19:26 G | 7859318.06 | 7859318.31 | 7859318.58 | 0.0088 | 0.0014 |
| Neptune | 16806-12-27 00:14 G | 7859685.26 | 7859685.51 | 7859685.77 | 0.0088 | 0.0008 |
| Neptune | 16807-12-29 15:21 G | 7860052.88 | 7860053.14 | 7860053.42 | 0.0088 | 0.0006 |
| Neptune | 16808-12-31 00:28 G | 7860420.27 | 7860420.52 | 7860420.77 | 0.0088 | 0.0001 |
| Jupiter | 16809-11-14 23:02 G | 7860739.25 | 7860739.46 | 7860739.67 | 0.0486 | 0.0190 |
| Neptune | 16810-01-02 11:02 G | 7860787.70 | 7860787.96 | 7860788.23 | 0.0088 | 0.0004 |
| Jupiter | 16810-12-14 10:19 G | 7861133.83 | 7861133.93 | 7861134.02 | 0.0484 | 0.0436 |
| Neptune | 16811-01-05 00:57 G | 7861155.29 | 7861155.54 | 7861155.79 | 0.0088 | 0.0010 |
| Neptune | 16812-01-07 06:57 G | 7861522.53 | 7861522.79 | 7861523.05 | 0.0088 | 0.0011 |
| Neptune | 16813-01-09 00:14 G | 7861890.27 | 7861890.51 | 7861890.77 | 0.0088 | 0.0017 |
| Neptune | 16814-01-11 04:19 G | 7862257.44 | 7862257.68 | 7862257.94 | 0.0088 | 0.0020 |
| Neptune | 16815-01-13 22:19 G | 7862625.19 | 7862625.43 | 7862625.69 | 0.0088 | 0.0025 |
| Saturn | 16815-05-17 05:02 G | 7862748.55 | 7862748.71 | 7862748.90 | 0.0277 | 0.0191 |
| Neptune | 16816-01-16 03:36 G | 7862992.43 | 7862992.65 | 7862992.90 | 0.0088 | 0.0029 |
| Jupiter | 16816-06-02 12:00 G | 7863130.78 | 7863131.00 | 7863131.22 | 0.0545 | 0.0153 |
| Neptune | 16817-01-17 18:57 G | 7863360.05 | 7863360.29 | 7863360.54 | 0.0088 | 0.0033 |
| Neptune | 16818-01-20 04:33 G | 7863727.47 | 7863727.69 | 7863727.93 | 0.0088 | 0.0037 |
| Neptune | 16819-01-22 15:36 G | 7864094.91 | 7864095.15 | 7864095.39 | 0.0088 | 0.0041 |
| Neptune | 16820-01-25 06:00 G | 7864462.53 | 7864462.75 | 7864462.97 | 0.0088 | 0.0045 |
| Neptune | 16821-01-26 11:31 G | 7864829.79 | 7864829.98 | 7864830.22 | 0.0088 | 0.0049 |
| Jupiter | 16821-11-18 19:26 G | 7865126.08 | 7865126.31 | 7865126.55 | 0.0485 | 0.0100 |
| Neptune | 16822-01-29 05:45 G | 7865197.55 | 7865197.74 | 7865197.95 | 0.0088 | 0.0053 |
| Neptune | 16823-01-31 10:19 G | 7865564.75 | 7865564.93 | 7865565.14 | 0.0088 | 0.0056 |

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| Neptune | 16824-02-03 05:02 G | 7865932.52 | 7865932.71 | 7865932.90 | 0.0088 | 0.0061 |
| Neptune | 16825-02-04 10:33 G | 7866299.78 | 7866299.94 | 7866300.14 | 0.0088 | 0.0063 |
| Neptune | 16826-02-07 02:09 G | 7866667.44 | 7866667.59 | 7866667.79 | 0.0088 | 0.0068 |
| Neptune | 16827-02-09 12:57 G | 7867034.90 | 7867035.04 | 7867035.21 | 0.0088 | 0.0070 |
| Neptune | 16828-02-12 00:00 G | 7867402.38 | 7867402.50 | 7867402.66 | 0.0088 | 0.0075 |
| Jupiter | 16828-06-07 17:45 G | 7867519.03 | 7867519.24 | 7867519.44 | 0.0545 | 0.0282 |
| Neptune | 16829-02-13 14:52 G | 7867770.02 | 7867770.12 | 7867770.28 | 0.0088 | 0.0077 |
| Saturn | 16829-11-07 06:57 G | 7868036.55 | 7868036.79 | 7868037.02 | 0.0281 | 0.0034 |
| Neptune | 16830-02-15 21:50 G | 7868137.32 | 7868137.41 | 7868137.53 | 0.0088 | 0.0081 |
| Neptune | 16831-02-18 16:19 G | 7868505.09 | 7868505.18 | 7868505.30 | 0.0088 | 0.0081 |
| Neptune | 16832-02-20 21:07 G | 7868872.35 | 7868872.38 | 7868872.45 | 0.0088 | 0.0087 |
| Neptune | 16833-02-22 16:19 G | 7869240.13 | 7869240.18 | 7869240.25 | 0.0088 | 0.0086 |
| Jupiter | 16833-11-23 04:19 G | 7869513.46 | 7869513.68 | 7869513.91 | 0.0485 | 0.0040 |
| Uranus | 16834-09-16 08:52 G | 7869810.72 | 7869810.87 | 7869811.04 | 0.0144 | 0.0107 |
| Uranus | 16835-09-21 07:55 G | 7870180.59 | 7870180.83 | 7870181.09 | 0.0144 | 0.0040 |
| Uranus | 16836-09-25 04:04 G | 7870550.43 | 7870550.67 | 7870550.92 | 0.0145 | 0.0008 |
| Uranus | 16837-09-30 05:45 G | 7870920.53 | 7870920.74 | 7870920.96 | 0.0145 | 0.0081 |
| Mars | 16838-02-23 20:09 G | 7871067.16 | 7871067.34 | 7871067.52 | 0.1775 | 0.0931 |
| Uranus | 16838-10-05 00:14 G | 7871290.42 | 7871290.51 | 7871290.62 | 0.0145 | 0.0132 |
| Jupiter | 16839-05-06 07:12 G | 7871503.75 | 7871503.80 | 7871503.86 | 0.0539 | 0.0522 |
| Jupiter | 16840-06-13 01:40 G | 7871907.46 | 7871907.57 | 7871907.69 | 0.0544 | 0.0463 |
| Saturn | 16844-05-10 15:21 G | 7873334.89 | 7873335.14 | 7873335.39 | 0.0278 | 0.0012 |
| Jupiter | 16845-11-27 06:14 G | 7873900.52 | 7873900.76 | 7873901.01 | 0.0484 | 0.0049 |
| Pluto | 16851-01-28 10:04 G | 7875788.74 | 7875788.92 | 7875789.15 | 0.0080 | 0.0053 |
| Jupiter | 16851-05-11 18:00 G | 7875892.12 | 7875892.25 | 7875892.40 | 0.0540 | 0.0430 |
| Jupiter | 16857-12-01 07:26 G | 7878287.60 | 7878287.81 | 7878288.02 | 0.0484 | 0.0176 |
| Saturn | 16858-11-02 03:21 G | 7878623.50 | 7878623.64 | 7878623.79 | 0.0280 | 0.0229 |
| Mars | 16859-08-25 06:57 G | 7878919.72 | 7878919.79 | 7878919.87 | 0.1767 | 0.1641 |
| Saturn | 16859-11-15 03:36 G | 7879001.56 | 7879001.65 | 7879001.76 | 0.0281 | 0.0255 |
| Jupiter | 16863-05-17 00:14 G | 7880280.32 | 7880280.51 | 7880280.71 | 0.0542 | 0.0321 |

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| Neptune | 16865-05-06 18:00 G | 7881001.25 | 7881001.25 | 7881001.29 | 0.0089 | 0.0089 |
| Neptune | 16867-05-11 22:19 G | 7881736.36 | 7881736.43 | 7881736.54 | 0.0089 | 0.0084 |
| Jupiter | 16868-11-05 13:55 G | 7882280.00 | 7882280.08 | 7882280.17 | 0.0488 | 0.0452 |
| Neptune | 16869-05-16 00:43 G | 7882471.44 | 7882471.53 | 7882471.69 | 0.0089 | 0.0079 |
| Jupiter | 16869-12-05 15:50 G | 7882674.97 | 7882675.16 | 7882675.35 | 0.0484 | 0.0290 |
| Neptune | 16870-05-18 07:12 G | 7882838.74 | 7882838.80 | 7882838.91 | 0.0089 | 0.0085 |
| Neptune | 16871-05-21 02:24 G | 7883206.45 | 7883206.60 | 7883206.76 | 0.0089 | 0.0072 |
| Neptune | 16872-05-22 11:16 G | 7883573.85 | 7883573.97 | 7883574.10 | 0.0089 | 0.0077 |
| Saturn | 16873-05-05 12:00 G | 7883921.87 | 7883922.00 | 7883922.16 | 0.0278 | 0.0221 |
| Neptune | 16873-05-25 02:52 G | 7883941.43 | 7883941.62 | 7883941.80 | 0.0089 | 0.0065 |
| Saturn | 16874-05-18 13:55 G | 7884299.99 | 7884300.08 | 7884300.19 | 0.0277 | 0.0254 |
| Neptune | 16874-05-27 16:19 G | 7884309.03 | 7884309.18 | 7884309.34 | 0.0089 | 0.0070 |
| Uranus | 16875-03-17 12:28 G | 7884602.90 | 7884603.02 | 7884603.18 | 0.0134 | 0.0112 |
| Jupiter | 16875-05-22 07:55 G | 7884668.61 | 7884668.83 | 7884669.05 | 0.0543 | 0.0136 |
| Neptune | 16875-05-30 02:38 G | 7884676.44 | 7884676.61 | 7884676.84 | 0.0090 | 0.0059 |
| Uranus | 16876-03-20 19:12 G | 7884972.06 | 7884972.30 | 7884972.55 | 0.0134 | 0.0051 |
| Neptune | 16876-05-31 20:52 G | 7885044.19 | 7885044.37 | 7885044.55 | 0.0090 | 0.0063 |
| Uranus | 16877-03-25 08:09 G | 7885341.59 | 7885341.84 | 7885342.09 | 0.0134 | 0.0015 |
| Neptune | 16877-06-03 03:50 G | 7885411.45 | 7885411.66 | 7885411.88 | 0.0090 | 0.0051 |
| Uranus | 16878-03-29 14:38 G | 7885710.87 | 7885711.11 | 7885711.37 | 0.0134 | 0.0047 |
| Neptune | 16878-06-05 23:31 G | 7885779.30 | 7885779.48 | 7885779.70 | 0.0090 | 0.0055 |
| Uranus | 16879-04-03 01:55 G | 7886080.40 | 7886080.58 | 7886080.78 | 0.0134 | 0.0087 |
| Neptune | 16879-06-08 05:16 G | 7886146.52 | 7886146.72 | 7886146.97 | 0.0090 | 0.0044 |
| Neptune | 16880-06-10 00:28 G | 7886514.32 | 7886514.52 | 7886514.77 | 0.0090 | 0.0047 |
| Jupiter | 16880-11-10 01:12 G | 7886667.39 | 7886667.55 | 7886667.72 | 0.0487 | 0.0329 |
| Neptune | 16881-06-12 08:38 G | 7886881.64 | 7886881.86 | 7886882.10 | 0.0090 | 0.0037 |
| Jupiter | 16881-12-09 12:43 G | 7887061.88 | 7887062.03 | 7887062.19 | 0.0484 | 0.0358 |
| Neptune | 16882-06-15 00:14 G | 7887249.28 | 7887249.51 | 7887249.77 | 0.0090 | 0.0039 |
| Neptune | 16883-06-17 12:43 G | 7887616.81 | 7887617.03 | 7887617.28 | 0.0090 | 0.0029 |
| Neptune | 16884-06-18 23:45 G | 7887984.26 | 7887984.49 | 7887984.76 | 0.0090 | 0.0030 |

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| Neptune | 16885-06-21 16:48 G | 7888351.96 | 7888352.20 | 7888352.45 | 0.0090 | 0.0020 |
| Neptune | 16886-06-23 23:31 G | 7888719.24 | 7888719.48 | 7888719.75 | 0.0090 | 0.0022 |
| Jupiter | 16887-05-28 02:52 G | 7889057.38 | 7889057.62 | 7889057.85 | 0.0544 | 0.0033 |
| Neptune | 16887-06-26 19:12 G | 7889087.05 | 7889087.30 | 7889087.56 | 0.0090 | 0.0012 |
| Neptune | 16888-06-28 00:57 G | 7889454.29 | 7889454.54 | 7889454.80 | 0.0090 | 0.0013 |
| Saturn | 16888-11-08 18:28 G | 7889588.03 | 7889588.27 | 7889588.51 | 0.0281 | 0.0031 |
| Neptune | 16889-06-30 20:09 G | 7889822.08 | 7889822.34 | 7889822.60 | 0.0089 | 0.0003 |
| Neptune | 16890-07-03 03:21 G | 7890189.39 | 7890189.64 | 7890189.89 | 0.0089 | 0.0003 |
| Neptune | 16891-07-05 18:57 G | 7890557.03 | 7890557.29 | 7890557.56 | 0.0089 | 0.0006 |
| Neptune | 16892-07-07 06:43 G | 7890924.53 | 7890924.78 | 7890925.03 | 0.0089 | 0.0006 |
| Jupiter | 16892-11-13 23:16 G | 7891054.26 | 7891054.47 | 7891054.69 | 0.0486 | 0.0203 |
| Neptune | 16893-07-09 17:31 G | 7891291.98 | 7891292.23 | 7891292.51 | 0.0089 | 0.0014 |
| Jupiter | 16893-12-14 00:14 G | 7891449.40 | 7891449.51 | 7891449.63 | 0.0484 | 0.0420 |
| Neptune | 16894-07-12 09:36 G | 7891659.66 | 7891659.90 | 7891660.16 | 0.0089 | 0.0014 |
| Neptune | 16895-07-14 16:04 G | 7892026.92 | 7892027.17 | 7892027.43 | 0.0089 | 0.0022 |
| Neptune | 16896-07-16 10:48 G | 7892394.72 | 7892394.95 | 7892395.21 | 0.0089 | 0.0024 |
| Neptune | 16897-07-18 16:04 G | 7892761.94 | 7892762.17 | 7892762.42 | 0.0089 | 0.0030 |
| Neptune | 16898-07-21 10:19 G | 7893129.70 | 7893129.93 | 7893130.19 | 0.0089 | 0.0033 |
| Jupiter | 16899-06-02 03:07 G | 7893445.40 | 7893445.63 | 7893445.86 | 0.0544 | 0.0125 |
| Neptune | 16899-07-23 17:02 G | 7893497.00 | 7893497.21 | 7893497.45 | 0.0089 | 0.0038 |
| Neptune | 16900-07-26 08:38 G | 7893864.63 | 7893864.86 | 7893865.11 | 0.0089 | 0.0040 |
| Neptune | 16901-07-28 19:26 G | 7894232.12 | 7894232.31 | 7894232.55 | 0.0089 | 0.0046 |
| Neptune | 16902-07-31 06:28 G | 7894599.57 | 7894599.77 | 7894600.01 | 0.0089 | 0.0048 |
| Saturn | 16903-05-13 23:31 G | 7894886.24 | 7894886.48 | 7894886.72 | 0.0278 | 0.0050 |
| Neptune | 16903-08-02 21:50 G | 7894967.23 | 7894967.41 | 7894967.63 | 0.0089 | 0.0053 |
| Neptune | 16904-08-04 04:19 G | 7895334.49 | 7895334.68 | 7895334.90 | 0.0089 | 0.0056 |
| Jupiter | 16904-11-19 06:00 G | 7895441.54 | 7895441.75 | 7895441.97 | 0.0486 | 0.0125 |
| Neptune | 16905-08-06 22:19 G | 7895702.27 | 7895702.43 | 7895702.65 | 0.0089 | 0.0059 |
| Neptune | 16906-08-09 03:07 G | 7896069.46 | 7896069.63 | 7896069.82 | 0.0089 | 0.0062 |
| Neptune | 16907-08-11 20:52 G | 7896437.22 | 7896437.37 | 7896437.57 | 0.0089 | 0.0066 |

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| Neptune | 16908-08-13 03:07 G | 7896804.50 | 7896804.63 | 7896804.80 | 0.0089 | 0.0070 |
| Neptune | 16909-08-15 17:45 G | 7897172.11 | 7897172.24 | 7897172.42 | 0.0089 | 0.0072 |
| Neptune | 16910-08-18 04:33 G | 7897539.57 | 7897539.69 | 7897539.82 | 0.0089 | 0.0076 |
| Jupiter | 16911-06-08 14:38 G | 7897833.92 | 7897834.11 | 7897834.31 | 0.0544 | 0.0253 |
| Neptune | 16911-08-20 14:24 G | 7897906.99 | 7897907.10 | 7897907.25 | 0.0089 | 0.0077 |
| Neptune | 16912-08-22 06:00 G | 7898274.66 | 7898274.75 | 7898274.86 | 0.0089 | 0.0081 |
| Neptune | 16913-08-24 11:16 G | 7898641.91 | 7898641.97 | 7898642.10 | 0.0089 | 0.0083 |
| Neptune | 16914-08-27 05:02 G | 7899009.71 | 7899009.71 | 7899009.79 | 0.0089 | 0.0088 |
| Neptune | 16915-08-29 09:50 G | 7899376.89 | 7899376.91 | 7899376.96 | 0.0089 | 0.0088 |
| Jupiter | 16916-11-23 08:52 G | 7899828.63 | 7899828.87 | 7899829.12 | 0.0485 | 0.0065 |
| Mars | 16917-02-27 19:40 G | 7899925.15 | 7899925.32 | 7899925.50 | 0.1782 | 0.0791 |
| Saturn | 16917-11-04 11:16 G | 7900174.78 | 7900174.97 | 7900175.17 | 0.0280 | 0.0164 |
| Uranus | 16918-09-17 18:57 G | 7900492.14 | 7900492.29 | 7900492.48 | 0.0144 | 0.0102 |
| Uranus | 16919-09-22 17:02 G | 7900861.96 | 7900862.21 | 7900862.45 | 0.0144 | 0.0048 |
| Uranus | 16920-09-26 14:24 G | 7901231.87 | 7901232.10 | 7901232.35 | 0.0145 | 0.0025 |
| Uranus | 16921-10-01 15:21 G | 7901601.92 | 7901602.14 | 7901602.37 | 0.0145 | 0.0071 |
| Uranus | 16922-10-06 10:48 G | 7901971.94 | 7901971.95 | 7901972.00 | 0.0145 | 0.0144 |
| Jupiter | 16923-06-13 22:48 G | 7902222.32 | 7902222.45 | 7902222.60 | 0.0545 | 0.0438 |
| Jupiter | 16928-11-27 10:48 G | 7904215.73 | 7904215.95 | 7904216.18 | 0.0484 | 0.0035 |
| Saturn | 16932-05-07 21:50 G | 7905473.21 | 7905473.41 | 7905473.62 | 0.0278 | 0.0158 |
| Jupiter | 16934-05-11 13:55 G | 7906206.96 | 7906207.08 | 7906207.23 | 0.0541 | 0.0450 |
| Mars | 16938-08-29 05:16 G | 7907777.52 | 7907777.72 | 7907777.91 | 0.1759 | 0.0120 |
| Jupiter | 16940-12-01 18:28 G | 7908603.04 | 7908603.27 | 7908603.49 | 0.0484 | 0.0165 |
| Neptune | 16945-11-02 16:33 G | 7910400.19 | 7910400.19 | 7910400.24 | 0.0088 | 0.0088 |
| Jupiter | 16946-05-16 23:31 G | 7910595.30 | 7910595.48 | 7910595.66 | 0.0542 | 0.0338 |
| Neptune | 16947-11-07 10:33 G | 7911134.89 | 7911134.94 | 7911135.07 | 0.0088 | 0.0083 |
| Saturn | 16947-11-12 01:55 G | 7911139.35 | 7911139.58 | 7911139.82 | 0.0281 | 0.0096 |
| Neptune | 16948-11-09 03:36 G | 7911502.61 | 7911502.65 | 7911502.69 | 0.0088 | 0.0086 |
| Neptune | 16949-11-11 06:14 G | 7911869.68 | 7911869.76 | 7911869.91 | 0.0088 | 0.0078 |
| Neptune | 16950-11-14 00:00 G | 7912237.43 | 7912237.50 | 7912237.61 | 0.0088 | 0.0082 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Jupiter | 16951-11-07 02:52 G | 7912595.56 | 7912595.62 | 7912595.70 | 0.0488 | 0.0464 |
| Neptune | 16951-11-16 04:19 G | 7912604.56 | 7912604.68 | 7912604.84 | 0.0088 | 0.0073 |
| Neptune | 16952-11-17 19:26 G | 7912972.19 | 7912972.31 | 7912972.45 | 0.0088 | 0.0076 |
| Jupiter | 16952-12-05 16:04 G | 7912989.98 | 7912990.17 | 7912990.36 | 0.0484 | 0.0275 |
| Neptune | 16953-11-20 02:38 G | 7913339.48 | 7913339.61 | 7913339.80 | 0.0088 | 0.0067 |
| Neptune | 16954-11-22 12:28 G | 7913706.89 | 7913707.02 | 7913707.21 | 0.0088 | 0.0070 |
| Neptune | 16955-11-25 01:55 G | 7914074.41 | 7914074.58 | 7914074.77 | 0.0088 | 0.0060 |
| Neptune | 16956-11-26 07:26 G | 7914441.65 | 7914441.81 | 7914442.00 | 0.0088 | 0.0064 |
| Neptune | 16957-11-29 00:00 G | 7914809.32 | 7914809.50 | 7914809.72 | 0.0088 | 0.0054 |
| Jupiter | 16958-05-22 14:09 G | 7914983.86 | 7914984.09 | 7914984.31 | 0.0542 | 0.0152 |
| Neptune | 16958-12-01 03:21 G | 7915176.47 | 7915176.64 | 7915176.85 | 0.0088 | 0.0058 |
| Uranus | 16959-03-18 21:36 G | 7915284.25 | 7915284.40 | 7915284.57 | 0.0134 | 0.0100 |
| Neptune | 16959-12-03 20:52 G | 7915544.16 | 7915544.37 | 7915544.60 | 0.0088 | 0.0046 |
| Uranus | 16960-03-22 03:07 G | 7915653.41 | 7915653.63 | 7915653.87 | 0.0134 | 0.0061 |
| Neptune | 16960-12-05 01:12 G | 7915911.37 | 7915911.55 | 7915911.78 | 0.0088 | 0.0051 |
| Uranus | 16961-03-26 17:45 G | 7916022.99 | 7916023.24 | 7916023.49 | 0.0134 | 0.0002 |
| Neptune | 16961-12-07 16:04 G | 7916278.93 | 7916279.17 | 7916279.40 | 0.0088 | 0.0039 |
| Uranus | 16962-03-30 23:02 G | 7916392.21 | 7916392.46 | 7916392.72 | 0.0134 | 0.0037 |
| Saturn | 16962-05-15 12:14 G | 7916437.80 | 7916438.01 | 7916438.23 | 0.0278 | 0.0114 |
| Neptune | 16962-12-10 00:14 G | 7916646.31 | 7916646.51 | 7916646.74 | 0.0088 | 0.0044 |
| Uranus | 16963-04-04 11:31 G | 7916761.83 | 7916761.98 | 7916762.17 | 0.0134 | 0.0097 |
| Jupiter | 16963-11-10 23:16 G | 7916982.30 | 7916982.47 | 7916982.64 | 0.0488 | 0.0345 |
| Neptune | 16963-12-12 09:21 G | 7917013.66 | 7917013.89 | 7917014.16 | 0.0088 | 0.0033 |
| Jupiter | 16964-12-10 01:55 G | 7917377.42 | 7917377.58 | 7917377.76 | 0.0484 | 0.0332 |
| Neptune | 16964-12-13 23:31 G | 7917381.26 | 7917381.48 | 7917381.72 | 0.0088 | 0.0036 |
| Neptune | 16965-12-16 05:02 G | 7917748.46 | 7917748.71 | 7917748.97 | 0.0088 | 0.0024 |
| Neptune | 16966-12-18 22:33 G | 7918116.20 | 7918116.44 | 7918116.68 | 0.0088 | 0.0028 |
| Neptune | 16967-12-21 01:55 G | 7918483.34 | 7918483.58 | 7918483.85 | 0.0088 | 0.0017 |
| Neptune | 16968-12-22 19:26 G | 7918851.06 | 7918851.31 | 7918851.57 | 0.0088 | 0.0021 |
| Neptune | 16969-12-25 00:57 G | 7919218.29 | 7919218.54 | 7919218.79 | 0.0088 | 0.0009 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Jupiter | 16970-05-27 13:40 G | 7919371.83 | 7919372.07 | 7919372.30 | 0.0543 | 0.0008 |
| Neptune | 16970-12-27 14:52 G | 7919585.87 | 7919586.12 | 7919586.39 | 0.0088 | 0.0013 |
| Neptune | 16971-12-30 00:28 G | 7919953.27 | 7919953.52 | 7919953.77 | 0.0088 | 0.0001 |
| Neptune | 16972-12-31 09:21 G | 7920320.63 | 7920320.89 | 7920321.16 | 0.0088 | 0.0005 |
| Neptune | 16974-01-03 00:00 G | 7920688.25 | 7920688.50 | 7920688.75 | 0.0088 | 0.0007 |
| Neptune | 16975-01-05 05:31 G | 7921055.47 | 7921055.73 | 7921055.99 | 0.0088 | 0.0003 |
| Jupiter | 16975-11-15 07:40 G | 7921369.62 | 7921369.82 | 7921370.02 | 0.0487 | 0.0223 |
| Neptune | 16976-01-07 23:16 G | 7921423.22 | 7921423.47 | 7921423.73 | 0.0088 | 0.0015 |
| Saturn | 16976-11-06 01:26 G | 7921726.34 | 7921726.56 | 7921726.78 | 0.0281 | 0.0100 |
| Jupiter | 16976-12-13 22:04 G | 7921764.29 | 7921764.42 | 7921764.56 | 0.0484 | 0.0396 |
| Neptune | 16977-01-09 03:21 G | 7921790.39 | 7921790.64 | 7921790.90 | 0.0088 | 0.0011 |
| Neptune | 16978-01-11 20:52 G | 7922158.13 | 7922158.37 | 7922158.64 | 0.0088 | 0.0024 |
| Neptune | 16979-01-14 03:36 G | 7922525.41 | 7922525.65 | 7922525.90 | 0.0088 | 0.0019 |
| Neptune | 16980-01-16 17:31 G | 7922892.99 | 7922893.23 | 7922893.49 | 0.0088 | 0.0031 |
| Neptune | 16981-01-18 04:19 G | 7923260.44 | 7923260.68 | 7923260.92 | 0.0088 | 0.0026 |
| Neptune | 16982-01-20 12:43 G | 7923627.81 | 7923628.03 | 7923628.30 | 0.0088 | 0.0039 |
| Jupiter | 16982-06-02 01:55 G | 7923760.36 | 7923760.58 | 7923760.80 | 0.0544 | 0.0095 |
| Neptune | 16983-01-23 04:19 G | 7923995.46 | 7923995.68 | 7923995.93 | 0.0088 | 0.0034 |
| Neptune | 16984-01-25 09:50 G | 7924362.71 | 7924362.91 | 7924363.15 | 0.0088 | 0.0047 |
| Neptune | 16985-01-27 04:19 G | 7924730.46 | 7924730.68 | 7924730.92 | 0.0088 | 0.0041 |
| Neptune | 16986-01-29 08:38 G | 7925097.68 | 7925097.86 | 7925098.09 | 0.0088 | 0.0054 |
| Neptune | 16987-02-01 02:38 G | 7925465.41 | 7925465.61 | 7925465.85 | 0.0088 | 0.0049 |
| Jupiter | 16987-11-19 12:14 G | 7925756.78 | 7925757.01 | 7925757.24 | 0.0486 | 0.0145 |
| Neptune | 16988-02-03 10:04 G | 7925832.74 | 7925832.92 | 7925833.10 | 0.0088 | 0.0061 |
| Neptune | 16989-02-05 00:14 G | 7926200.32 | 7926200.51 | 7926200.74 | 0.0088 | 0.0056 |
| Neptune | 16990-02-07 12:00 G | 7926567.84 | 7926568.00 | 7926568.16 | 0.0088 | 0.0068 |
| Neptune | 16991-02-09 20:52 G | 7926935.20 | 7926935.37 | 7926935.58 | 0.0088 | 0.0062 |
| Saturn | 16991-05-10 05:02 G | 7927024.47 | 7927024.71 | 7927024.95 | 0.0278 | 0.0091 |
| Neptune | 16992-02-12 12:43 G | 7927302.93 | 7927303.03 | 7927303.20 | 0.0088 | 0.0075 |
| Neptune | 16993-02-13 19:12 G | 7927670.15 | 7927670.30 | 7927670.48 | 0.0088 | 0.0068 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 16994-02-16 14:09 G | 7928038.00 | 7928038.09 | 7928038.22 | 0.0088 | 0.0080 |
| Jupiter | 16994-06-07 11:16 G | 7928148.75 | 7928148.97 | 7928149.19 | 0.0545 | 0.0229 |
| Neptune | 16995-02-18 19:12 G | 7928405.18 | 7928405.30 | 7928405.46 | 0.0088 | 0.0074 |
| Neptune | 16996-02-21 13:12 G | 7928773.01 | 7928773.05 | 7928773.15 | 0.0088 | 0.0086 |
| Neptune | 16997-02-22 20:38 G | 7929140.28 | 7929140.36 | 7929140.50 | 0.0088 | 0.0080 |
| Neptune | 16999-02-27 23:31 G | 7929875.42 | 7929875.48 | 7929875.57 | 0.0088 | 0.0084 |
| Jupiter | 16999-11-23 12:43 G | 7930143.81 | 7930144.03 | 7930144.25 | 0.0485 | 0.0083 |

18TH MILLENNIUM CE

This is a list of transits of Moon in the 18th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Neptune | 17001-03-05 01:55 G | | 7930610.58 | 7930610.58 | 7930610.60 | 0.0089 | 0.0088 | |
| Uranus | 17002-09-19 05:16 G | | 7931173.56 | 7931173.72 | 7931173.91 | 0.0144 | 0.0101 | |
| Uranus | 17003-09-24 01:40 G | | 7931543.32 | 7931543.57 | 7931543.82 | 0.0144 | 0.0036 | |
| Uranus | 17004-09-28 00:28 G | | 7931913.28 | 7931913.52 | 7931913.77 | 0.0145 | 0.0013 | |
| Uranus | 17005-10-02 23:31 G | | 7932283.27 | 7932283.48 | 7932283.69 | 0.0145 | 0.0087 | |
| Jupiter | 17006-06-13 19:55 G | | 7932537.19 | 7932537.33 | 7932537.47 | 0.0545 | 0.0423 | |
| Uranus | 17006-10-07 20:24 G | | 7932653.28 | 7932653.35 | 7932653.43 | 0.0145 | 0.0137 | |
| Saturn | 17006-11-14 10:04 G | | 7932690.73 | 7932690.92 | 7932691.13 | 0.0281 | 0.0163 | |
| Pluto | 17008-08-03 13:26 G | | 7933318.80 | 7933319.06 | 7933319.33 | 0.0064 | 0.0006 | |
| Jupiter | 17011-11-28 21:21 G | | 7934531.16 | 7934531.39 | 7934531.63 | 0.0484 | 0.0024 | |
| Jupiter | 17017-05-11 13:40 G | | 7936521.97 | 7936522.07 | 7936522.18 | 0.0540 | 0.0477 | |
| Saturn | 17021-05-18 00:00 G | | 7937989.32 | 7937989.50 | 7937989.70 | 0.0278 | 0.0175 | |

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| Jupiter | 17023-12-02 17:16 G | 7938918.00 | 7938918.22 | 7938918.44 | 0.0484 | 0.0148 |
| Neptune | 17029-05-07 22:19 G | 7940901.40 | 7940901.43 | 7940901.50 | 0.0089 | 0.0088 |
| Jupiter | 17029-05-17 00:57 G | 7940910.37 | 7940910.54 | 7940910.72 | 0.0541 | 0.0360 |
| Neptune | 17030-05-10 17:31 G | 7941269.20 | 7941269.23 | 7941269.32 | 0.0089 | 0.0087 |
| Neptune | 17031-05-12 23:45 G | 7941636.43 | 7941636.49 | 7941636.60 | 0.0089 | 0.0085 |
| Neptune | 17032-05-14 20:09 G | 7942004.26 | 7942004.34 | 7942004.47 | 0.0089 | 0.0082 |
| Neptune | 17033-05-17 03:21 G | 7942371.54 | 7942371.64 | 7942371.77 | 0.0089 | 0.0080 |
| Neptune | 17034-05-19 21:36 G | 7942739.27 | 7942739.40 | 7942739.56 | 0.0089 | 0.0075 |
| Jupiter | 17034-11-06 23:45 G | 7942910.46 | 7942910.49 | 7942910.55 | 0.0489 | 0.0479 |
| Neptune | 17035-05-22 07:40 G | 7943106.70 | 7943106.82 | 7943106.98 | 0.0089 | 0.0074 |
| Saturn | 17035-11-09 16:19 G | 7943277.94 | 7943278.18 | 7943278.41 | 0.0281 | 0.0034 |
| Jupiter | 17035-12-07 03:36 G | 7943305.45 | 7943305.65 | 7943305.85 | 0.0484 | 0.0251 |
| Neptune | 17036-05-23 21:21 G | 7943474.24 | 7943474.39 | 7943474.58 | 0.0090 | 0.0069 |
| Neptune | 17037-05-26 11:31 G | 7943841.85 | 7943841.98 | 7943842.17 | 0.0090 | 0.0069 |
| Neptune | 17038-05-28 21:07 G | 7944209.20 | 7944209.38 | 7944209.58 | 0.0090 | 0.0063 |
| Neptune | 17039-05-31 15:50 G | 7944576.98 | 7944577.16 | 7944577.34 | 0.0090 | 0.0062 |
| Neptune | 17040-06-01 22:19 G | 7944944.23 | 7944944.43 | 7944944.64 | 0.0090 | 0.0055 |
| Jupiter | 17041-05-21 21:50 G | 7945298.20 | 7945298.41 | 7945298.64 | 0.0542 | 0.0184 |
| Neptune | 17041-06-04 18:28 G | 7945312.08 | 7945312.27 | 7945312.49 | 0.0090 | 0.0055 |
| Neptune | 17042-06-07 01:12 G | 7945679.34 | 7945679.55 | 7945679.77 | 0.0090 | 0.0047 |
| Uranus | 17043-03-20 07:40 G | 7945965.68 | 7945965.82 | 7945965.99 | 0.0134 | 0.0106 |
| Neptune | 17043-06-09 19:55 G | 7946047.11 | 7946047.33 | 7946047.56 | 0.0090 | 0.0048 |
| Uranus | 17044-03-23 12:00 G | 7946334.76 | 7946335.00 | 7946335.25 | 0.0134 | 0.0047 |
| Neptune | 17044-06-11 05:31 G | 7946414.51 | 7946414.73 | 7946414.96 | 0.0090 | 0.0040 |
| Uranus | 17045-03-28 03:07 G | 7946704.38 | 7946704.63 | 7946704.88 | 0.0134 | 0.0011 |
| Neptune | 17045-06-13 19:40 G | 7946782.10 | 7946782.32 | 7946782.57 | 0.0090 | 0.0041 |
| Uranus | 17046-04-01 07:12 G | 7947073.57 | 7947073.80 | 7947074.05 | 0.0134 | 0.0053 |
| Neptune | 17046-06-16 09:21 G | 7947149.66 | 7947149.89 | 7947150.13 | 0.0090 | 0.0032 |
| Jupiter | 17046-11-11 10:04 G | 7947297.76 | 7947297.92 | 7947298.07 | 0.0488 | 0.0351 |
| Uranus | 17047-04-05 20:52 G | 7947443.20 | 7947443.37 | 7947443.57 | 0.0134 | 0.0091 |

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| Neptune | 17047-06-18 18:14 G | 7947517.03 | 7947517.26 | 7947517.53 | 0.0090 | 0.0033 |
| Jupiter | 17047-12-11 00:57 G | 7947692.36 | 7947692.54 | 7947692.73 | 0.0484 | 0.0309 |
| Neptune | 17048-06-20 12:43 G | 7947884.78 | 7947885.03 | 7947885.27 | 0.0090 | 0.0023 |
| Neptune | 17049-06-22 18:43 G | 7948252.05 | 7948252.28 | 7948252.55 | 0.0090 | 0.0026 |
| Saturn | 17050-05-12 13:12 G | 7948575.81 | 7948576.05 | 7948576.30 | 0.0278 | 0.0027 |
| Neptune | 17050-06-25 14:52 G | 7948619.86 | 7948620.12 | 7948620.37 | 0.0090 | 0.0015 |
| Neptune | 17051-06-27 20:38 G | 7948987.12 | 7948987.36 | 7948987.62 | 0.0090 | 0.0018 |
| Neptune | 17052-06-29 15:21 G | 7949354.88 | 7949355.14 | 7949355.41 | 0.0089 | 0.0007 |
| Jupiter | 17053-05-27 15:21 G | 7949686.91 | 7949687.14 | 7949687.37 | 0.0544 | 0.0026 |
| Neptune | 17053-07-02 00:00 G | 7949722.26 | 7949722.50 | 7949722.76 | 0.0089 | 0.0010 |
| Neptune | 17054-07-04 15:07 G | 7950089.86 | 7950090.13 | 7950090.40 | 0.0089 | 0.0002 |
| Neptune | 17055-07-07 03:50 G | 7950457.41 | 7950457.66 | 7950457.91 | 0.0089 | 0.0002 |
| Neptune | 17056-07-08 13:26 G | 7950824.80 | 7950825.06 | 7950825.33 | 0.0089 | 0.0010 |
| Neptune | 17057-07-11 06:43 G | 7951192.53 | 7951192.78 | 7951193.03 | 0.0089 | 0.0006 |
| Neptune | 17058-07-13 12:43 G | 7951559.78 | 7951560.03 | 7951560.29 | 0.0089 | 0.0019 |
| Jupiter | 17058-11-15 13:40 G | 7951684.86 | 7951685.07 | 7951685.29 | 0.0486 | 0.0233 |
| Neptune | 17059-07-16 08:09 G | 7951927.59 | 7951927.84 | 7951928.09 | 0.0089 | 0.0015 |
| Jupiter | 17059-12-15 09:21 G | 7952079.75 | 7952079.89 | 7952080.03 | 0.0484 | 0.0382 |
| Neptune | 17060-07-17 13:12 G | 7952294.83 | 7952295.05 | 7952295.31 | 0.0089 | 0.0028 |
| Neptune | 17061-07-20 07:26 G | 7952662.57 | 7952662.81 | 7952663.08 | 0.0089 | 0.0023 |
| Neptune | 17062-07-22 15:21 G | 7953029.93 | 7953030.14 | 7953030.38 | 0.0089 | 0.0035 |
| Neptune | 17063-07-25 06:14 G | 7953397.51 | 7953397.76 | 7953398.01 | 0.0089 | 0.0030 |
| Neptune | 17064-07-26 18:00 G | 7953765.04 | 7953765.25 | 7953765.48 | 0.0089 | 0.0042 |
| Saturn | 17064-11-02 20:38 G | 7953864.26 | 7953864.36 | 7953864.48 | 0.0280 | 0.0251 |
| Jupiter | 17065-06-01 23:45 G | 7954075.25 | 7954075.49 | 7954075.73 | 0.0544 | 0.0071 |
| Neptune | 17065-07-29 03:21 G | 7954132.41 | 7954132.64 | 7954132.88 | 0.0089 | 0.0038 |
| Saturn | 17065-11-15 22:33 G | 7954242.32 | 7954242.44 | 7954242.59 | 0.0281 | 0.0229 |
| Neptune | 17066-07-31 19:26 G | 7954500.12 | 7954500.31 | 7954500.53 | 0.0089 | 0.0050 |
| Neptune | 17067-08-03 01:26 G | 7954867.35 | 7954867.56 | 7954867.80 | 0.0089 | 0.0045 |
| Neptune | 17068-08-04 20:38 G | 7955235.17 | 7955235.36 | 7955235.56 | 0.0089 | 0.0057 |

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| Neptune | 17069-08-07 01:12 G | 7955602.36 | 7955602.55 | 7955602.78 | 0.0089 | 0.0051 |
| Neptune | 17070-08-09 19:12 G | 7955970.13 | 7955970.30 | 7955970.49 | 0.0089 | 0.0064 |
| Jupiter | 17070-11-19 14:52 G | 7956071.91 | 7956072.12 | 7956072.33 | 0.0486 | 0.0164 |
| Neptune | 17071-08-12 02:24 G | 7956337.43 | 7956337.60 | 7956337.81 | 0.0089 | 0.0058 |
| Neptune | 17072-08-13 16:33 G | 7956705.04 | 7956705.19 | 7956705.36 | 0.0089 | 0.0070 |
| Neptune | 17073-08-16 03:50 G | 7957072.51 | 7957072.66 | 7957072.85 | 0.0089 | 0.0064 |
| Neptune | 17074-08-18 12:14 G | 7957439.89 | 7957440.01 | 7957440.17 | 0.0089 | 0.0075 |
| Neptune | 17075-08-21 04:19 G | 7957807.54 | 7957807.68 | 7957807.85 | 0.0089 | 0.0069 |
| Neptune | 17076-08-22 09:36 G | 7958174.81 | 7958174.90 | 7958175.02 | 0.0089 | 0.0081 |
| Jupiter | 17077-06-07 08:09 G | 7958463.64 | 7958463.84 | 7958464.05 | 0.0544 | 0.0208 |
| Neptune | 17077-08-25 03:21 G | 7958542.53 | 7958542.64 | 7958542.81 | 0.0089 | 0.0075 |
| Neptune | 17078-08-27 08:09 G | 7958909.80 | 7958909.84 | 7958909.92 | 0.0089 | 0.0086 |
| Saturn | 17079-05-07 06:57 G | 7959162.68 | 7959162.79 | 7959162.93 | 0.0279 | 0.0240 |
| Neptune | 17079-08-30 01:12 G | 7959277.46 | 7959277.55 | 7959277.70 | 0.0089 | 0.0079 |
| Saturn | 17080-05-19 07:40 G | 7959540.70 | 7959540.82 | 7959540.97 | 0.0278 | 0.0238 |
| Neptune | 17081-09-02 22:19 G | 7960012.35 | 7960012.43 | 7960012.53 | 0.0089 | 0.0083 |
| Jupiter | 17082-11-23 22:04 G | 7960459.19 | 7960459.42 | 7960459.66 | 0.0485 | 0.0102 |
| Neptune | 17083-09-07 17:31 G | 7960747.19 | 7960747.23 | 7960747.29 | 0.0089 | 0.0087 |
| Uranus | 17086-09-19 14:38 G | 7961854.95 | 7961855.11 | 7961855.30 | 0.0144 | 0.0099 |
| Uranus | 17087-09-24 09:36 G | 7962224.66 | 7962224.90 | 7962225.16 | 0.0144 | 0.0042 |
| Uranus | 17088-09-28 10:19 G | 7962594.69 | 7962594.93 | 7962595.16 | 0.0144 | 0.0029 |
| Jupiter | 17089-06-12 21:50 G | 7962852.25 | 7962852.41 | 7962852.58 | 0.0544 | 0.0394 |
| Uranus | 17089-10-03 07:55 G | 7962964.62 | 7962964.83 | 7962965.06 | 0.0145 | 0.0076 |
| Saturn | 17094-11-11 02:38 G | 7964829.36 | 7964829.61 | 7964829.86 | 0.0281 | 0.0030 |
| Jupiter | 17094-11-27 19:12 G | 7964846.07 | 7964846.30 | 7964846.53 | 0.0485 | 0.0006 |
| Pluto | 17097-01-31 11:16 G | 7965641.79 | 7965641.97 | 7965642.19 | 0.0080 | 0.0049 |
| Jupiter | 17100-05-11 08:52 G | 7966836.79 | 7966836.87 | 7966836.95 | 0.0540 | 0.0505 |
| Jupiter | 17101-06-18 18:57 G | 7967240.23 | 7967240.29 | 7967240.36 | 0.0544 | 0.0522 |
| Jupiter | 17106-12-03 06:57 G | 7969233.57 | 7969233.79 | 7969234.01 | 0.0484 | 0.0141 |
| Neptune | 17107-10-31 07:12 G | 7969565.80 | 7969565.80 | 7969565.87 | 0.0088 | 0.0088 |

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| Saturn | 17109-05-15 02:38 G | 7970127.38 | 7970127.61 | 7970127.85 | 0.0278 | 0.0040 |
| Neptune | 17109-11-04 06:57 G | 7970300.71 | 7970300.79 | 7970300.88 | 0.0088 | 0.0082 |
| Neptune | 17110-11-06 12:14 G | 7970667.99 | 7970668.01 | 7970668.04 | 0.0088 | 0.0088 |
| Neptune | 17111-11-09 04:04 G | 7971035.59 | 7971035.67 | 7971035.81 | 0.0088 | 0.0079 |
| Jupiter | 17112-05-16 11:02 G | 7971224.81 | 7971224.96 | 7971225.13 | 0.0541 | 0.0389 |
| Neptune | 17112-11-10 07:12 G | 7971402.76 | 7971402.80 | 7971402.91 | 0.0088 | 0.0084 |
| Neptune | 17113-11-13 00:43 G | 7971770.40 | 7971770.53 | 7971770.67 | 0.0088 | 0.0074 |
| Neptune | 17114-11-15 05:02 G | 7972137.61 | 7972137.71 | 7972137.83 | 0.0088 | 0.0078 |
| Neptune | 17115-11-17 18:28 G | 7972505.13 | 7972505.27 | 7972505.46 | 0.0088 | 0.0069 |
| Neptune | 17116-11-19 03:36 G | 7972872.54 | 7972872.65 | 7972872.81 | 0.0088 | 0.0073 |
| Jupiter | 17117-11-07 10:48 G | 7973225.93 | 7973225.95 | 7973225.98 | 0.0489 | 0.0485 |
| Neptune | 17117-11-21 13:26 G | 7973239.88 | 7973240.06 | 7973240.25 | 0.0088 | 0.0063 |
| Neptune | 17118-11-24 02:52 G | 7973607.49 | 7973607.62 | 7973607.81 | 0.0088 | 0.0068 |
| Jupiter | 17118-12-07 03:07 G | 7973620.42 | 7973620.63 | 7973620.84 | 0.0484 | 0.0233 |
| Neptune | 17119-11-26 07:55 G | 7973974.66 | 7973974.83 | 7973975.05 | 0.0088 | 0.0058 |
| Neptune | 17120-11-28 00:57 G | 7974342.37 | 7974342.54 | 7974342.74 | 0.0088 | 0.0061 |
| Neptune | 17121-11-30 04:33 G | 7974709.49 | 7974709.69 | 7974709.90 | 0.0088 | 0.0051 |
| Mars | 17122-02-26 16:33 G | 7974798.03 | 7974798.19 | 7974798.35 | 0.1766 | 0.0885 |
| Neptune | 17122-12-02 21:07 G | 7975077.19 | 7975077.38 | 7975077.60 | 0.0088 | 0.0054 |
| Saturn | 17123-11-06 07:55 G | 7975415.66 | 7975415.83 | 7975416.01 | 0.0280 | 0.0186 |
| Neptune | 17123-12-05 01:55 G | 7975444.39 | 7975444.58 | 7975444.82 | 0.0088 | 0.0046 |
| Jupiter | 17124-05-22 06:14 G | 7975613.55 | 7975613.76 | 7975613.98 | 0.0543 | 0.0201 |
| Neptune | 17124-12-06 15:21 G | 7975811.93 | 7975812.14 | 7975812.38 | 0.0088 | 0.0048 |
| Neptune | 17125-12-09 01:26 G | 7976179.35 | 7976179.56 | 7976179.79 | 0.0088 | 0.0039 |
| Neptune | 17126-12-11 10:04 G | 7976546.70 | 7976546.92 | 7976547.17 | 0.0088 | 0.0041 |
| Uranus | 17127-03-21 15:50 G | 7976646.99 | 7976647.16 | 7976647.34 | 0.0134 | 0.0097 |
| Neptune | 17127-12-14 00:43 G | 7976914.31 | 7976914.53 | 7976914.78 | 0.0088 | 0.0032 |
| Uranus | 17128-03-24 19:12 G | 7977016.08 | 7977016.30 | 7977016.56 | 0.0134 | 0.0057 |
| Neptune | 17128-12-15 05:16 G | 7977281.49 | 7977281.72 | 7977281.98 | 0.0088 | 0.0034 |
| Uranus | 17129-03-29 12:00 G | 7977385.74 | 7977386.00 | 7977386.25 | 0.0134 | 0.0006 |

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| Jupiter | 17129-11-11 15:50 G | 7977612.99 | 7977613.16 | 7977613.33 | 0.0488 | 0.0352 |
| Neptune | 17129-12-17 22:48 G | 7977649.22 | 7977649.45 | 7977649.71 | 0.0088 | 0.0025 |
| Uranus | 17130-04-02 15:07 G | 7977754.89 | 7977755.13 | 7977755.39 | 0.0134 | 0.0042 |
| Jupiter | 17130-12-11 12:14 G | 7978007.83 | 7978008.01 | 7978008.19 | 0.0484 | 0.0291 |
| Neptune | 17130-12-20 02:38 G | 7978016.38 | 7978016.61 | 7978016.87 | 0.0088 | 0.0027 |
| Uranus | 17131-04-07 06:14 G | 7978124.61 | 7978124.76 | 7978124.93 | 0.0134 | 0.0103 |
| Neptune | 17131-12-22 19:26 G | 7978384.06 | 7978384.31 | 7978384.58 | 0.0088 | 0.0018 |
| Neptune | 17132-12-24 01:26 G | 7978751.32 | 7978751.56 | 7978751.81 | 0.0088 | 0.0019 |
| Neptune | 17133-12-26 14:24 G | 7979118.84 | 7979119.10 | 7979119.37 | 0.0088 | 0.0010 |
| Neptune | 17134-12-29 01:12 G | 7979486.31 | 7979486.55 | 7979486.81 | 0.0088 | 0.0011 |
| Neptune | 17135-12-31 09:50 G | 7979853.64 | 7979853.91 | 7979854.18 | 0.0088 | 0.0003 |
| Jupiter | 17136-05-27 11:45 G | 7980001.75 | 7980001.99 | 7980002.23 | 0.0543 | 0.0052 |
| Neptune | 17137-01-02 01:26 G | 7980221.30 | 7980221.56 | 7980221.81 | 0.0088 | 0.0004 |
| Neptune | 17138-01-04 05:45 G | 7980588.49 | 7980588.74 | 7980589.01 | 0.0088 | 0.0005 |
| Saturn | 17138-05-09 13:55 G | 7980713.89 | 7980714.08 | 7980714.29 | 0.0278 | 0.0174 |
| Neptune | 17139-01-06 23:45 G | 7980956.23 | 7980956.49 | 7980956.75 | 0.0088 | 0.0005 |
| Neptune | 17140-01-09 03:36 G | 7981323.40 | 7981323.65 | 7981323.91 | 0.0088 | 0.0013 |
| Neptune | 17141-01-10 20:09 G | 7981691.09 | 7981691.34 | 7981691.62 | 0.0088 | 0.0013 |
| Jupiter | 17141-11-15 14:52 G | 7981999.92 | 7982000.12 | 7982000.31 | 0.0487 | 0.0248 |
| Neptune | 17142-01-13 03:07 G | 7982058.39 | 7982058.63 | 7982058.88 | 0.0088 | 0.0019 |
| Jupiter | 17142-12-15 11:16 G | 7982394.82 | 7982394.97 | 7982395.13 | 0.0484 | 0.0365 |
| Neptune | 17143-01-15 15:50 G | 7982425.90 | 7982426.16 | 7982426.43 | 0.0088 | 0.0019 |
| Mars | 17143-08-28 14:24 G | 7982650.99 | 7982651.10 | 7982651.21 | 0.1775 | 0.1403 |
| Neptune | 17144-01-18 03:50 G | 7982793.42 | 7982793.66 | 7982793.90 | 0.0088 | 0.0026 |
| Neptune | 17145-01-19 12:00 G | 7983160.76 | 7983161.00 | 7983161.27 | 0.0088 | 0.0027 |
| Neptune | 17146-01-22 04:33 G | 7983528.47 | 7983528.69 | 7983528.94 | 0.0088 | 0.0034 |
| Neptune | 17147-01-24 09:21 G | 7983895.67 | 7983895.89 | 7983896.15 | 0.0088 | 0.0035 |
| Neptune | 17148-01-27 03:50 G | 7984263.44 | 7984263.66 | 7984263.90 | 0.0088 | 0.0040 |
| Jupiter | 17148-06-01 20:52 G | 7984390.14 | 7984390.37 | 7984390.59 | 0.0543 | 0.0040 |
| Neptune | 17149-01-28 08:24 G | 7984630.64 | 7984630.85 | 7984631.09 | 0.0088 | 0.0042 |

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| Neptune | 17150-01-31 01:40 G | 7984998.35 | 7984998.57 | 7984998.80 | 0.0088 | 0.0046 |
| Neptune | 17151-02-02 08:38 G | 7985365.67 | 7985365.86 | 7985366.08 | 0.0088 | 0.0049 |
| Neptune | 17152-02-04 21:21 G | 7985733.20 | 7985733.39 | 7985733.63 | 0.0088 | 0.0054 |
| Neptune | 17153-02-06 09:50 G | 7986100.74 | 7986100.91 | 7986101.12 | 0.0088 | 0.0056 |
| Saturn | 17153-11-13 06:57 G | 7986380.56 | 7986380.79 | 7986381.04 | 0.0281 | 0.0091 |
| Jupiter | 17153-11-20 00:43 G | 7986387.32 | 7986387.53 | 7986387.76 | 0.0486 | 0.0182 |
| Neptune | 17154-02-08 18:28 G | 7986468.10 | 7986468.27 | 7986468.49 | 0.0088 | 0.0060 |
| Neptune | 17155-02-11 12:00 G | 7986835.83 | 7986836.00 | 7986836.19 | 0.0088 | 0.0062 |
| Neptune | 17156-02-13 17:02 G | 7987203.05 | 7987203.21 | 7987203.40 | 0.0088 | 0.0066 |
| Neptune | 17157-02-15 12:14 G | 7987570.86 | 7987571.01 | 7987571.19 | 0.0088 | 0.0068 |
| Neptune | 17158-02-17 17:31 G | 7987938.10 | 7987938.23 | 7987938.40 | 0.0088 | 0.0072 |
| Neptune | 17159-02-20 11:16 G | 7988305.84 | 7988305.97 | 7988306.12 | 0.0088 | 0.0075 |
| Neptune | 17160-02-22 18:57 G | 7988673.19 | 7988673.29 | 7988673.44 | 0.0088 | 0.0076 |
| Jupiter | 17160-06-07 05:16 G | 7988778.49 | 7988778.72 | 7988778.94 | 0.0544 | 0.0177 |
| Neptune | 17161-02-24 08:38 G | 7989040.76 | 7989040.86 | 7989041.00 | 0.0088 | 0.0079 |
| Neptune | 17162-02-26 21:21 G | 7989408.31 | 7989408.39 | 7989408.52 | 0.0088 | 0.0081 |
| Neptune | 17163-03-01 06:43 G | 7989775.71 | 7989775.78 | 7989775.88 | 0.0088 | 0.0084 |
| Neptune | 17164-03-02 23:45 G | 7990143.46 | 7990143.49 | 7990143.59 | 0.0088 | 0.0086 |
| Jupiter | 17165-11-23 23:16 G | 7990774.24 | 7990774.47 | 7990774.69 | 0.0485 | 0.0113 |
| Neptune | 17166-03-08 01:26 G | 7990878.55 | 7990878.56 | 7990878.61 | 0.0089 | 0.0088 |
| Saturn | 17168-05-16 17:31 G | 7991679.01 | 7991679.23 | 7991679.46 | 0.0278 | 0.0106 |
| Uranus | 17170-09-21 00:57 G | 7992536.37 | 7992536.54 | 7992536.74 | 0.0144 | 0.0094 |
| Uranus | 17171-09-25 18:43 G | 7992906.03 | 7992906.28 | 7992906.53 | 0.0144 | 0.0032 |
| Jupiter | 17172-06-12 08:24 G | 7993166.68 | 7993166.85 | 7993167.03 | 0.0545 | 0.0364 |
| Uranus | 17172-09-29 20:09 G | 7993276.10 | 7993276.34 | 7993276.58 | 0.0144 | 0.0019 |
| Uranus | 17173-10-04 15:50 G | 7993645.98 | 7993646.16 | 7993646.38 | 0.0145 | 0.0094 |
| Uranus | 17174-10-09 16:19 G | 7994016.14 | 7994016.18 | 7994016.22 | 0.0145 | 0.0142 |
| Jupiter | 17177-11-28 09:50 G | 7995161.68 | 7995161.91 | 7995162.14 | 0.0484 | 0.0004 |
| Saturn | 17182-11-07 21:21 G | 7996967.18 | 7996967.39 | 7996967.60 | 0.0281 | 0.0124 |
| Jupiter | 17183-05-11 03:21 G | 7997151.61 | 7997151.64 | 7997151.69 | 0.0540 | 0.0530 |

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| Jupiter | 17184-06-18 04:19 G | 7997555.59 | 7997555.68 | 7997555.77 | 0.0545 | 0.0497 |
| Jupiter | 17189-12-02 07:12 G | 7999548.57 | 7999548.80 | 7999549.03 | 0.0484 | 0.0131 |
| Neptune | 17190-05-01 16:19 G | 7999699.14 | 7999699.18 | 7999699.28 | 0.0089 | 0.0087 |
| Neptune | 17192-05-05 17:16 G | 8000434.15 | 8000434.22 | 8000434.35 | 0.0089 | 0.0082 |
| Neptune | 17193-05-08 13:40 G | 8000802.07 | 8000802.07 | 8000802.09 | 0.0089 | 0.0089 |
| Neptune | 17194-05-10 19:26 G | 8001169.21 | 8001169.31 | 8001169.46 | 0.0089 | 0.0079 |
| Neptune | 17195-05-13 16:04 G | 8001537.10 | 8001537.17 | 8001537.26 | 0.0089 | 0.0085 |
| Jupiter | 17195-05-16 22:04 G | 8001540.27 | 8001540.42 | 8001540.57 | 0.0541 | 0.0404 |
| Neptune | 17196-05-14 23:31 G | 8001904.36 | 8001904.48 | 8001904.64 | 0.0089 | 0.0074 |
| Saturn | 17197-05-10 19:12 G | 8002265.07 | 8002265.30 | 8002265.53 | 0.0278 | 0.0109 |
| Neptune | 17197-05-17 17:02 G | 8002272.09 | 8002272.21 | 8002272.33 | 0.0089 | 0.0079 |
| Neptune | 17198-05-20 04:04 G | 8002639.51 | 8002639.67 | 8002639.84 | 0.0089 | 0.0068 |
| Neptune | 17199-05-22 16:19 G | 8003007.04 | 8003007.18 | 8003007.34 | 0.0089 | 0.0074 |
| Neptune | 17200-05-24 08:24 G | 8003374.69 | 8003374.85 | 8003375.05 | 0.0089 | 0.0063 |
| Jupiter | 17200-11-06 15:21 G | 8003541.14 | 8003541.14 | 8003541.15 | 0.0489 | 0.0489 |
| Mars | 17201-03-01 13:55 G | 8003655.91 | 8003656.08 | 8003656.26 | 0.1773 | 0.0919 |
| Neptune | 17201-05-26 16:48 G | 8003742.05 | 8003742.20 | 8003742.39 | 0.0089 | 0.0069 |
| Jupiter | 17201-12-06 14:09 G | 8003935.89 | 8003936.09 | 8003936.29 | 0.0484 | 0.0216 |
| Neptune | 17202-05-29 12:28 G | 8004109.83 | 8004110.02 | 8004110.23 | 0.0090 | 0.0056 |
| Neptune | 17203-05-31 18:28 G | 8004477.10 | 8004477.27 | 8004477.47 | 0.0090 | 0.0062 |
| Neptune | 17204-06-02 14:24 G | 8004844.91 | 8004845.10 | 8004845.34 | 0.0090 | 0.0050 |
| Neptune | 17205-06-04 21:21 G | 8005212.22 | 8005212.39 | 8005212.61 | 0.0090 | 0.0056 |
| Neptune | 17206-06-07 14:52 G | 8005579.91 | 8005580.12 | 8005580.38 | 0.0090 | 0.0044 |
| Jupiter | 17207-05-21 23:16 G | 8005928.25 | 8005928.47 | 8005928.69 | 0.0542 | 0.0223 |
| Neptune | 17207-06-10 01:40 G | 8005947.36 | 8005947.57 | 8005947.79 | 0.0090 | 0.0048 |
| Neptune | 17208-06-11 14:38 G | 8006314.88 | 8006315.11 | 8006315.37 | 0.0090 | 0.0036 |
| Neptune | 17209-06-14 06:00 G | 8006682.54 | 8006682.75 | 8006682.99 | 0.0090 | 0.0041 |
| Neptune | 17210-06-16 14:52 G | 8007049.88 | 8007050.12 | 8007050.38 | 0.0090 | 0.0029 |
| Uranus | 17211-03-22 00:57 G | 8007328.39 | 8007328.54 | 8007328.72 | 0.0134 | 0.0100 |
| Neptune | 17211-06-19 09:50 G | 8007417.68 | 8007417.91 | 8007418.16 | 0.0090 | 0.0033 |

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| Uranus | 17212-03-25 04:04 G | 8007697.43 | 8007697.67 | 8007697.92 | 0.0134 | 0.0043 |
| Neptune | 17212-06-20 15:50 G | 8007784.92 | 8007785.16 | 8007785.43 | 0.0090 | 0.0022 |
| Jupiter | 17212-11-10 17:16 G | 8007928.07 | 8007928.22 | 8007928.37 | 0.0488 | 0.0361 |
| Saturn | 17212-11-14 11:16 G | 8007931.78 | 8007931.97 | 8007932.19 | 0.0281 | 0.0149 |
| Uranus | 17213-03-29 20:52 G | 8008067.12 | 8008067.37 | 8008067.62 | 0.0134 | 0.0005 |
| Neptune | 17213-06-23 11:31 G | 8008152.75 | 8008152.98 | 8008153.25 | 0.0090 | 0.0026 |
| Jupiter | 17213-12-10 15:21 G | 8008322.94 | 8008323.14 | 8008323.34 | 0.0484 | 0.0273 |
| Uranus | 17214-04-02 23:16 G | 8008436.25 | 8008436.47 | 8008436.72 | 0.0134 | 0.0059 |
| Neptune | 17214-06-25 18:14 G | 8008520.02 | 8008520.26 | 8008520.51 | 0.0090 | 0.0014 |
| Uranus | 17215-04-07 15:07 G | 8008805.96 | 8008806.13 | 8008806.31 | 0.0134 | 0.0095 |
| Neptune | 17215-06-28 11:45 G | 8008887.74 | 8008887.99 | 8008888.26 | 0.0090 | 0.0017 |
| Neptune | 17216-06-29 21:21 G | 8009255.14 | 8009255.39 | 8009255.64 | 0.0090 | 0.0007 |
| Neptune | 17217-07-02 10:19 G | 8009622.67 | 8009622.93 | 8009623.20 | 0.0090 | 0.0010 |
| Neptune | 17218-07-05 00:43 G | 8009990.28 | 8009990.53 | 8009990.78 | 0.0089 | 0.0001 |
| Jupiter | 17219-05-27 06:00 G | 8010316.53 | 8010316.75 | 8010316.97 | 0.0543 | 0.0085 |
| Neptune | 17219-07-07 09:36 G | 8010357.64 | 8010357.90 | 8010358.17 | 0.0089 | 0.0002 |
| Neptune | 17220-07-09 04:04 G | 8010725.42 | 8010725.67 | 8010725.92 | 0.0089 | 0.0009 |
| Neptune | 17221-07-11 09:50 G | 8011092.65 | 8011092.91 | 8011093.17 | 0.0089 | 0.0007 |
| Neptune | 17222-07-14 05:16 G | 8011460.47 | 8011460.72 | 8011460.98 | 0.0089 | 0.0016 |
| Mars | 17222-08-31 04:33 G | 8011508.49 | 8011508.69 | 8011508.89 | 0.1769 | 0.0106 |
| Neptune | 17223-07-16 11:16 G | 8011827.73 | 8011827.97 | 8011828.23 | 0.0089 | 0.0015 |
| Neptune | 17224-07-18 04:48 G | 8012195.46 | 8012195.70 | 8012195.97 | 0.0089 | 0.0023 |
| Jupiter | 17224-11-15 05:16 G | 8012315.53 | 8012315.72 | 8012315.93 | 0.0487 | 0.0256 |
| Neptune | 17225-07-20 13:26 G | 8012562.83 | 8012563.06 | 8012563.31 | 0.0089 | 0.0023 |
| Jupiter | 17225-12-14 20:24 G | 8012710.21 | 8012710.35 | 8012710.51 | 0.0484 | 0.0359 |
| Neptune | 17226-07-23 02:24 G | 8012930.36 | 8012930.60 | 8012930.86 | 0.0089 | 0.0031 |
| Saturn | 17227-05-19 01:55 G | 8013230.39 | 8013230.58 | 8013230.79 | 0.0278 | 0.0167 |
| Neptune | 17227-07-25 15:50 G | 8013297.93 | 8013298.16 | 8013298.40 | 0.0089 | 0.0030 |
| Neptune | 17228-07-27 00:28 G | 8013665.29 | 8013665.52 | 8013665.77 | 0.0089 | 0.0038 |
| Neptune | 17229-07-29 17:45 G | 8014033.03 | 8014033.24 | 8014033.49 | 0.0089 | 0.0037 |

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| Neptune | 17230-07-31 23:02 G | 8014400.26 | 8014400.46 | 8014400.71 | 0.0089 | 0.0045 |
| Jupiter | 17231-06-01 18:00 G | 8014705.00 | 8014705.25 | 8014705.49 | 0.0544 | 0.0011 |
| Neptune | 17231-08-03 18:28 G | 8014768.06 | 8014768.27 | 8014768.51 | 0.0089 | 0.0045 |
| Neptune | 17232-08-04 23:45 G | 8015135.31 | 8015135.49 | 8015135.72 | 0.0089 | 0.0052 |
| Neptune | 17233-08-07 17:02 G | 8015503.02 | 8015503.21 | 8015503.45 | 0.0089 | 0.0053 |
| Neptune | 17234-08-10 01:26 G | 8015870.39 | 8015870.56 | 8015870.77 | 0.0089 | 0.0057 |
| Neptune | 17235-08-12 14:09 G | 8016237.90 | 8016238.09 | 8016238.31 | 0.0089 | 0.0057 |
| Neptune | 17236-08-14 03:07 G | 8016605.47 | 8016605.63 | 8016605.82 | 0.0089 | 0.0062 |
| Jupiter | 17236-11-19 02:38 G | 8016702.40 | 8016702.61 | 8016702.82 | 0.0486 | 0.0194 |
| Neptune | 17237-08-16 10:48 G | 8016972.79 | 8016972.95 | 8016973.16 | 0.0089 | 0.0064 |
| Jupiter | 17237-12-19 02:24 G | 8017097.58 | 8017097.60 | 8017097.63 | 0.0484 | 0.0480 |
| Neptune | 17238-08-19 04:04 G | 8017340.53 | 8017340.67 | 8017340.85 | 0.0089 | 0.0069 |
| Neptune | 17239-08-21 09:21 G | 8017707.73 | 8017707.89 | 8017708.05 | 0.0089 | 0.0069 |
| Neptune | 17240-08-23 03:07 G | 8018075.51 | 8018075.63 | 8018075.81 | 0.0089 | 0.0073 |
| Neptune | 17241-08-25 08:24 G | 8018442.73 | 8018442.85 | 8018443.00 | 0.0089 | 0.0074 |
| Saturn | 17241-11-09 06:00 G | 8018518.51 | 8018518.75 | 8018518.99 | 0.0281 | 0.0066 |
| Neptune | 17242-08-28 00:57 G | 8018810.42 | 8018810.54 | 8018810.69 | 0.0089 | 0.0076 |
| Jupiter | 17243-06-07 00:14 G | 8019093.29 | 8019093.51 | 8019093.73 | 0.0545 | 0.0155 |
| Neptune | 17243-08-30 08:38 G | 8019177.77 | 8019177.86 | 8019177.99 | 0.0089 | 0.0079 |
| Neptune | 17244-08-31 20:38 G | 8019545.27 | 8019545.36 | 8019545.48 | 0.0089 | 0.0081 |
| Neptune | 17245-09-03 08:52 G | 8019912.82 | 8019912.87 | 8019912.98 | 0.0089 | 0.0084 |
| Neptune | 17246-09-05 16:33 G | 8020280.14 | 8020280.19 | 8020280.29 | 0.0089 | 0.0085 |
| Neptune | 17247-09-08 09:21 G | 8020647.87 | 8020647.89 | 8020647.98 | 0.0089 | 0.0087 |
| Neptune | 17248-09-09 14:09 G | 8021015.05 | 8021015.09 | 8021015.15 | 0.0089 | 0.0087 |
| Jupiter | 17248-11-23 14:09 G | 8021089.87 | 8021090.09 | 8021090.32 | 0.0485 | 0.0123 |
| Pluto | 17254-08-06 06:28 G | 8023171.52 | 8023171.77 | 8023172.03 | 0.0064 | 0.0013 |
| Uranus | 17254-09-21 10:48 G | 8023217.78 | 8023217.95 | 8023218.15 | 0.0144 | 0.0094 |
| Jupiter | 17255-06-12 19:55 G | 8023482.16 | 8023482.33 | 8023482.51 | 0.0544 | 0.0346 |
| Uranus | 17255-09-26 03:21 G | 8023587.40 | 8023587.64 | 8023587.90 | 0.0144 | 0.0034 |
| Saturn | 17256-05-12 04:04 G | 8023816.44 | 8023816.67 | 8023816.91 | 0.0278 | 0.0051 |

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| Uranus | 17256-09-30 06:14 G | 8023957.53 | 8023957.76 | 8023958.00 | 0.0144 | 0.0035 |
| Uranus | 17257-10-05 01:26 G | 8024327.36 | 8024327.56 | 8024327.79 | 0.0145 | 0.0083 |
| Jupiter | 17260-11-27 10:04 G | 8025476.68 | 8025476.92 | 8025477.16 | 0.0485 | 0.0008 |
| Jupiter | 17267-06-17 23:02 G | 8027870.34 | 8027870.46 | 8027870.59 | 0.0544 | 0.0465 |
| Neptune | 17268-10-23 10:48 G | 8028363.95 | 8028363.95 | 8028363.96 | 0.0088 | 0.0088 |
| Neptune | 17270-10-28 09:21 G | 8029098.85 | 8029098.89 | 8029098.97 | 0.0088 | 0.0086 |
| Saturn | 17270-11-03 14:09 G | 8029105.05 | 8029105.09 | 8029105.14 | 0.0280 | 0.0275 |
| Neptune | 17271-10-30 18:43 G | 8029466.24 | 8029466.28 | 8029466.33 | 0.0088 | 0.0086 |
| Saturn | 17271-11-16 18:57 G | 8029483.14 | 8029483.29 | 8029483.47 | 0.0281 | 0.0200 |
| Neptune | 17272-11-01 08:09 G | 8029833.76 | 8029833.84 | 8029833.95 | 0.0088 | 0.0081 |
| Jupiter | 17272-12-01 18:57 G | 8029864.07 | 8029864.29 | 8029864.51 | 0.0484 | 0.0122 |
| Neptune | 17273-11-03 13:12 G | 8030200.98 | 8030201.05 | 8030201.14 | 0.0088 | 0.0083 |
| Neptune | 17274-11-06 05:45 G | 8030568.66 | 8030568.74 | 8030568.89 | 0.0088 | 0.0078 |
| Neptune | 17275-11-08 09:36 G | 8030935.81 | 8030935.90 | 8030936.01 | 0.0088 | 0.0080 |
| Neptune | 17276-11-10 01:55 G | 8031303.46 | 8031303.58 | 8031303.75 | 0.0088 | 0.0073 |
| Neptune | 17277-11-12 07:12 G | 8031670.70 | 8031670.80 | 8031670.95 | 0.0088 | 0.0076 |
| Jupiter | 17278-05-15 07:40 G | 8031854.69 | 8031854.82 | 8031854.97 | 0.0540 | 0.0431 |
| Neptune | 17278-11-14 20:38 G | 8032038.21 | 8032038.36 | 8032038.54 | 0.0088 | 0.0068 |
| Neptune | 17279-11-17 06:14 G | 8032405.63 | 8032405.76 | 8032405.92 | 0.0088 | 0.0071 |
| Neptune | 17280-11-18 13:55 G | 8032772.92 | 8032773.08 | 8032773.28 | 0.0088 | 0.0064 |
| Neptune | 17281-11-21 04:19 G | 8033140.54 | 8033140.68 | 8033140.87 | 0.0088 | 0.0067 |
| Neptune | 17282-11-23 09:07 G | 8033507.69 | 8033507.88 | 8033508.08 | 0.0088 | 0.0058 |
| Neptune | 17283-11-26 01:55 G | 8033875.42 | 8033875.58 | 8033875.79 | 0.0088 | 0.0061 |
| Neptune | 17284-11-27 05:31 G | 8034242.55 | 8034242.73 | 8034242.96 | 0.0088 | 0.0052 |
| Jupiter | 17284-12-05 21:36 G | 8034251.18 | 8034251.40 | 8034251.62 | 0.0484 | 0.0202 |
| Saturn | 17285-05-07 06:57 G | 8034403.69 | 8034403.79 | 8034403.91 | 0.0279 | 0.0251 |
| Neptune | 17285-11-29 22:04 G | 8034610.23 | 8034610.42 | 8034610.64 | 0.0088 | 0.0055 |
| Saturn | 17286-05-20 05:02 G | 8034781.56 | 8034781.71 | 8034781.85 | 0.0278 | 0.0226 |
| Neptune | 17286-12-02 04:04 G | 8034977.48 | 8034977.67 | 8034977.91 | 0.0088 | 0.0047 |
| Neptune | 17287-12-04 16:48 G | 8035345.00 | 8035345.20 | 8035345.44 | 0.0088 | 0.0049 |

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| Neptune | 17288-12-06 03:36 G | 8035712.44 | 8035712.65 | 8035712.88 | 0.0088 | 0.0040 |
| Neptune | 17289-12-08 10:48 G | 8036079.73 | 8036079.95 | 8036080.19 | 0.0088 | 0.0042 |
| Jupiter | 17290-05-20 21:50 G | 8036243.21 | 8036243.41 | 8036243.61 | 0.0542 | 0.0247 |
| Neptune | 17290-12-11 01:55 G | 8036447.36 | 8036447.58 | 8036447.83 | 0.0088 | 0.0033 |
| Neptune | 17291-12-13 05:45 G | 8036814.52 | 8036814.74 | 8036814.99 | 0.0088 | 0.0036 |
| Neptune | 17292-12-14 23:16 G | 8037182.24 | 8037182.47 | 8037182.73 | 0.0088 | 0.0027 |
| Neptune | 17293-12-17 03:07 G | 8037549.41 | 8037549.63 | 8037549.88 | 0.0088 | 0.0030 |
| Neptune | 17294-12-19 19:12 G | 8037917.06 | 8037917.30 | 8037917.57 | 0.0088 | 0.0020 |
| Uranus | 17295-03-22 08:38 G | 8038009.69 | 8038009.86 | 8038010.05 | 0.0134 | 0.0094 |
| Jupiter | 17295-11-11 09:21 G | 8038243.74 | 8038243.89 | 8038244.05 | 0.0488 | 0.0363 |
| Neptune | 17295-12-22 02:38 G | 8038284.37 | 8038284.61 | 8038284.85 | 0.0088 | 0.0022 |
| Uranus | 17296-03-25 11:31 G | 8038378.75 | 8038378.98 | 8038379.23 | 0.0134 | 0.0050 |
| Jupiter | 17296-12-10 00:43 G | 8038638.35 | 8038638.53 | 8038638.72 | 0.0484 | 0.0259 |
| Neptune | 17296-12-23 14:52 G | 8038651.86 | 8038652.12 | 8038652.38 | 0.0088 | 0.0012 |
| Uranus | 17297-03-30 05:02 G | 8038748.45 | 8038748.71 | 8038748.96 | 0.0134 | 0.0010 |
| Neptune | 17297-12-26 02:24 G | 8039019.37 | 8039019.60 | 8039019.86 | 0.0088 | 0.0016 |
| Uranus | 17298-04-03 07:12 G | 8039117.57 | 8039117.80 | 8039118.05 | 0.0134 | 0.0047 |
| Neptune | 17298-12-28 09:36 G | 8039386.64 | 8039386.90 | 8039387.17 | 0.0088 | 0.0006 |
| Uranus | 17299-04-07 23:45 G | 8039487.35 | 8039487.49 | 8039487.64 | 0.0134 | 0.0109 |
| Neptune | 17299-12-31 01:40 G | 8039754.32 | 8039754.57 | 8039754.83 | 0.0088 | 0.0009 |
| Saturn | 17300-11-11 06:43 G | 8040069.53 | 8040069.78 | 8040070.03 | 0.0281 | 0.0014 |
| Neptune | 17301-01-02 06:00 G | 8040121.49 | 8040121.75 | 8040122.01 | 0.0088 | 0.0002 |
| Neptune | 17302-01-04 23:45 G | 8040489.23 | 8040489.49 | 8040489.75 | 0.0088 | 0.0002 |
| Jupiter | 17302-05-27 09:21 G | 8040631.66 | 8040631.89 | 8040632.13 | 0.0543 | 0.0109 |
| Neptune | 17303-01-07 03:50 G | 8040856.42 | 8040856.66 | 8040856.92 | 0.0088 | 0.0010 |
| Neptune | 17304-01-09 19:55 G | 8041224.07 | 8041224.33 | 8041224.60 | 0.0088 | 0.0006 |
| Neptune | 17305-01-11 04:04 G | 8041591.43 | 8041591.67 | 8041591.92 | 0.0088 | 0.0016 |
| Neptune | 17306-01-13 15:50 G | 8041958.90 | 8041959.16 | 8041959.43 | 0.0088 | 0.0013 |
| Neptune | 17307-01-16 04:33 G | 8042326.46 | 8042326.69 | 8042326.94 | 0.0088 | 0.0024 |
| Jupiter | 17307-11-16 07:12 G | 8042630.61 | 8042630.80 | 8042631.00 | 0.0487 | 0.0267 |

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| Neptune | 17308-01-18 11:16 G | 8042693.73 | 8042693.97 | 8042694.24 | 0.0088 | 0.0020 |
| Jupiter | 17308-12-15 07:55 G | 8043025.67 | 8043025.83 | 8043026.00 | 0.0484 | 0.0350 |
| Neptune | 17309-01-20 04:33 G | 8043061.45 | 8043061.69 | 8043061.93 | 0.0088 | 0.0031 |
| Neptune | 17310-01-22 09:07 G | 8043428.63 | 8043428.88 | 8043429.13 | 0.0088 | 0.0026 |
| Neptune | 17311-01-25 02:52 G | 8043796.40 | 8043796.62 | 8043796.87 | 0.0088 | 0.0038 |
| Neptune | 17312-01-27 07:55 G | 8044163.61 | 8044163.83 | 8044164.08 | 0.0088 | 0.0033 |
| Neptune | 17313-01-29 00:43 G | 8044531.30 | 8044531.53 | 8044531.76 | 0.0088 | 0.0044 |
| Neptune | 17314-01-31 08:52 G | 8044898.67 | 8044898.87 | 8044899.11 | 0.0088 | 0.0040 |
| Jupiter | 17314-06-01 17:16 G | 8045020.00 | 8045020.22 | 8045020.45 | 0.0544 | 0.0016 |
| Neptune | 17315-02-02 21:07 G | 8045266.18 | 8045266.38 | 8045266.62 | 0.0088 | 0.0051 |
| Saturn | 17315-05-15 14:38 G | 8045367.87 | 8045368.11 | 8045368.34 | 0.0278 | 0.0008 |
| Neptune | 17316-02-05 10:33 G | 8045633.74 | 8045633.94 | 8045634.17 | 0.0088 | 0.0046 |
| Neptune | 17317-02-06 17:31 G | 8046001.06 | 8046001.23 | 8046001.46 | 0.0088 | 0.0057 |
| Neptune | 17318-02-09 11:02 G | 8046368.77 | 8046368.96 | 8046369.19 | 0.0088 | 0.0052 |
| Neptune | 17319-02-11 15:36 G | 8046735.99 | 8046736.15 | 8046736.35 | 0.0088 | 0.0064 |
| Jupiter | 17319-11-20 17:16 G | 8047018.02 | 8047018.22 | 8047018.43 | 0.0486 | 0.0211 |
| Neptune | 17320-02-14 10:19 G | 8047103.76 | 8047103.93 | 8047104.15 | 0.0088 | 0.0058 |
| Jupiter | 17320-12-19 04:48 G | 8047412.67 | 8047412.70 | 8047412.75 | 0.0484 | 0.0475 |
| Neptune | 17321-02-15 15:50 G | 8047471.03 | 8047471.16 | 8047471.34 | 0.0088 | 0.0069 |
| Neptune | 17322-02-18 08:38 G | 8047838.69 | 8047838.86 | 8047839.07 | 0.0088 | 0.0063 |
| Neptune | 17323-02-20 18:14 G | 8048206.13 | 8048206.26 | 8048206.40 | 0.0088 | 0.0074 |
| Neptune | 17324-02-23 06:28 G | 8048573.63 | 8048573.77 | 8048573.97 | 0.0088 | 0.0068 |
| Neptune | 17325-02-24 21:07 G | 8048941.28 | 8048941.38 | 8048941.50 | 0.0088 | 0.0079 |
| Neptune | 17326-02-27 04:19 G | 8049308.56 | 8049308.68 | 8049308.87 | 0.0088 | 0.0073 |
| Jupiter | 17326-06-07 10:33 G | 8049408.72 | 8049408.94 | 8049409.17 | 0.0544 | 0.0139 |
| Neptune | 17327-03-01 22:19 G | 8049676.37 | 8049676.43 | 8049676.53 | 0.0088 | 0.0084 |
| Neptune | 17328-03-03 04:04 G | 8050043.54 | 8050043.67 | 8050043.80 | 0.0088 | 0.0076 |
| Neptune | 17329-03-05 23:02 G | 8050411.43 | 8050411.46 | 8050411.52 | 0.0089 | 0.0087 |
| Saturn | 17329-11-05 19:12 G | 8050656.17 | 8050656.30 | 8050656.45 | 0.0280 | 0.0228 |
| Neptune | 17330-03-08 04:33 G | 8050778.60 | 8050778.69 | 8050778.82 | 0.0089 | 0.0080 |

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| Saturn | 17330-11-19 00:57 G | 8051034.43 | 8051034.54 | 8051034.66 | 0.0281 | 0.0246 |
| Jupiter | 17331-11-24 15:50 G | 8051404.94 | 8051405.16 | 8051405.40 | 0.0486 | 0.0133 |
| Neptune | 17332-03-12 07:12 G | 8051513.74 | 8051513.80 | 8051513.90 | 0.0089 | 0.0084 |
| Neptune | 17334-03-17 11:16 G | 8052248.92 | 8052248.97 | 8052249.04 | 0.0089 | 0.0086 |
| Neptune | 17336-03-21 13:55 G | 8052984.07 | 8052984.08 | 8052984.13 | 0.0089 | 0.0088 |
| Jupiter | 17338-06-12 06:57 G | 8053796.61 | 8053796.79 | 8053796.99 | 0.0544 | 0.0317 |
| Uranus | 17338-09-22 21:21 G | 8053899.21 | 8053899.39 | 8053899.60 | 0.0144 | 0.0087 |
| Uranus | 17339-09-27 13:12 G | 8054268.80 | 8054269.05 | 8054269.31 | 0.0144 | 0.0028 |
| Uranus | 17340-10-01 17:02 G | 8054638.97 | 8054639.21 | 8054639.45 | 0.0144 | 0.0026 |
| Uranus | 17341-10-06 10:48 G | 8055008.77 | 8055008.95 | 8055009.14 | 0.0145 | 0.0100 |
| Pluto | 17343-02-04 13:12 G | 8055494.94 | 8055495.05 | 8055495.21 | 0.0080 | 0.0069 |
| Jupiter | 17343-11-29 01:26 G | 8055792.34 | 8055792.56 | 8055792.79 | 0.0485 | 0.0011 |
| Saturn | 17344-05-09 08:52 G | 8055954.69 | 8055954.87 | 8055955.06 | 0.0279 | 0.0191 |
| Neptune | 17350-04-22 21:50 G | 8058129.41 | 8058129.41 | 8058129.44 | 0.0089 | 0.0089 |
| Jupiter | 17350-06-17 20:38 G | 8058185.24 | 8058185.36 | 8058185.50 | 0.0545 | 0.0437 |
| Neptune | 17352-04-27 02:38 G | 8058864.58 | 8058864.61 | 8058864.70 | 0.0089 | 0.0087 |
| Neptune | 17353-04-29 13:26 G | 8059232.06 | 8059232.06 | 8059232.09 | 0.0089 | 0.0089 |
| Neptune | 17354-05-02 06:43 G | 8059599.72 | 8059599.78 | 8059599.89 | 0.0089 | 0.0084 |
| Neptune | 17355-05-04 13:40 G | 8059967.03 | 8059967.07 | 8059967.15 | 0.0089 | 0.0087 |
| Jupiter | 17355-12-03 03:21 G | 8060179.41 | 8060179.64 | 8060179.88 | 0.0484 | 0.0112 |
| Neptune | 17356-05-06 09:36 G | 8060334.82 | 8060334.90 | 8060335.03 | 0.0089 | 0.0081 |
| Neptune | 17357-05-08 15:36 G | 8060702.08 | 8060702.15 | 8060702.28 | 0.0089 | 0.0083 |
| Neptune | 17358-05-11 11:02 G | 8061069.85 | 8061069.96 | 8061070.12 | 0.0089 | 0.0077 |
| Neptune | 17359-05-13 19:55 G | 8061437.21 | 8061437.33 | 8061437.46 | 0.0089 | 0.0077 |
| Saturn | 17359-11-13 05:31 G | 8061620.49 | 8061620.73 | 8061620.98 | 0.0281 | 0.0035 |
| Neptune | 17360-05-15 11:16 G | 8061804.85 | 8061804.97 | 8061805.16 | 0.0089 | 0.0073 |
| Jupiter | 17361-05-15 16:48 G | 8062170.08 | 8062170.20 | 8062170.34 | 0.0540 | 0.0441 |
| Neptune | 17361-05-18 00:43 G | 8062172.41 | 8062172.53 | 8062172.70 | 0.0089 | 0.0073 |
| Neptune | 17362-05-20 12:28 G | 8062539.85 | 8062540.02 | 8062540.19 | 0.0089 | 0.0068 |
| Jupiter | 17362-06-23 11:02 G | 8062573.90 | 8062573.96 | 8062574.02 | 0.0545 | 0.0525 |

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| Neptune | 17363-05-23 05:45 G | 8062907.58 | 8062907.74 | 8062907.91 | 0.0089 | 0.0067 |
| Neptune | 17364-05-24 12:28 G | 8063274.86 | 8063275.02 | 8063275.24 | 0.0089 | 0.0063 |
| Neptune | 17365-05-27 08:52 G | 8063642.68 | 8063642.87 | 8063643.06 | 0.0089 | 0.0060 |
| Neptune | 17366-05-29 14:24 G | 8064009.93 | 8064010.10 | 8064010.32 | 0.0090 | 0.0058 |
| Neptune | 17367-06-01 10:33 G | 8064377.73 | 8064377.94 | 8064378.15 | 0.0090 | 0.0054 |
| Jupiter | 17367-12-07 06:57 G | 8064566.59 | 8064566.79 | 8064567.00 | 0.0484 | 0.0187 |
| Neptune | 17368-06-02 17:45 G | 8064745.05 | 8064745.24 | 8064745.46 | 0.0090 | 0.0053 |
| Neptune | 17369-06-05 10:19 G | 8065112.72 | 8065112.93 | 8065113.17 | 0.0090 | 0.0048 |
| Neptune | 17370-06-07 22:33 G | 8065480.23 | 8065480.44 | 8065480.66 | 0.0090 | 0.0046 |
| Neptune | 17371-06-10 10:19 G | 8065847.71 | 8065847.93 | 8065848.19 | 0.0090 | 0.0041 |
| Neptune | 17372-06-12 02:52 G | 8066215.41 | 8066215.62 | 8066215.87 | 0.0090 | 0.0040 |
| Jupiter | 17373-05-21 03:07 G | 8066558.41 | 8066558.63 | 8066558.85 | 0.0542 | 0.0252 |
| Neptune | 17373-06-14 10:48 G | 8066582.71 | 8066582.95 | 8066583.20 | 0.0090 | 0.0034 |
| Saturn | 17374-05-16 22:04 G | 8066919.18 | 8066919.42 | 8066919.66 | 0.0278 | 0.0062 |
| Neptune | 17374-06-17 06:14 G | 8066950.53 | 8066950.76 | 8066951.01 | 0.0090 | 0.0034 |
| Neptune | 17375-06-19 12:14 G | 8067317.78 | 8067318.01 | 8067318.27 | 0.0090 | 0.0027 |
| Neptune | 17376-06-21 07:55 G | 8067685.59 | 8067685.83 | 8067686.10 | 0.0090 | 0.0027 |
| Neptune | 17377-06-23 15:21 G | 8068052.89 | 8068053.14 | 8068053.39 | 0.0090 | 0.0018 |
| Neptune | 17378-06-26 07:55 G | 8068420.58 | 8068420.83 | 8068421.10 | 0.0090 | 0.0019 |
| Jupiter | 17378-11-11 10:19 G | 8068558.79 | 8068558.93 | 8068559.08 | 0.0489 | 0.0373 |
| Uranus | 17379-03-23 17:16 G | 8068691.05 | 8068691.22 | 8068691.42 | 0.0134 | 0.0094 |
| Neptune | 17379-06-28 18:57 G | 8068788.06 | 8068788.29 | 8068788.55 | 0.0090 | 0.0012 |
| Jupiter | 17379-12-11 13:12 G | 8068953.84 | 8068954.05 | 8068954.26 | 0.0484 | 0.0242 |
| Uranus | 17380-03-26 20:38 G | 8069060.12 | 8069060.36 | 8069060.61 | 0.0134 | 0.0040 |
| Neptune | 17380-06-30 07:26 G | 8069155.55 | 8069155.81 | 8069156.08 | 0.0090 | 0.0012 |
| Uranus | 17381-03-31 13:40 G | 8069429.81 | 8069430.07 | 8069430.33 | 0.0134 | 0.0000 |
| Neptune | 17381-07-02 23:02 G | 8069523.21 | 8069523.46 | 8069523.71 | 0.0090 | 0.0004 |
| Uranus | 17382-04-04 15:50 G | 8069798.94 | 8069799.16 | 8069799.39 | 0.0134 | 0.0063 |
| Neptune | 17382-07-05 06:43 G | 8069890.51 | 8069890.78 | 8069891.04 | 0.0090 | 0.0005 |
| Uranus | 17383-04-09 08:24 G | 8070168.69 | 8070168.85 | 8070169.03 | 0.0134 | 0.0099 |

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| Neptune | 17383-07-08 01:26 G | 8070258.31 | 8070258.56 | 8070258.82 | 0.0089 | 0.0005 |
| Neptune | 17384-07-09 06:57 G | 8070625.54 | 8070625.79 | 8070626.05 | 0.0089 | 0.0003 |
| Jupiter | 17385-05-26 09:50 G | 8070946.69 | 8070946.91 | 8070947.14 | 0.0542 | 0.0126 |
| Neptune | 17385-07-12 02:24 G | 8070993.35 | 8070993.60 | 8070993.86 | 0.0089 | 0.0012 |
| Neptune | 17386-07-14 08:52 G | 8071360.63 | 8071360.87 | 8071361.13 | 0.0089 | 0.0009 |
| Neptune | 17387-07-17 01:40 G | 8071728.32 | 8071728.57 | 8071728.84 | 0.0089 | 0.0019 |
| Neptune | 17388-07-18 12:14 G | 8072095.77 | 8072096.01 | 8072096.26 | 0.0089 | 0.0016 |
| Saturn | 17388-11-06 22:33 G | 8072207.27 | 8072207.44 | 8072207.64 | 0.0280 | 0.0179 |
| Neptune | 17389-07-21 00:28 G | 8072463.27 | 8072463.52 | 8072463.78 | 0.0089 | 0.0027 |
| Neptune | 17390-07-23 15:21 G | 8072830.91 | 8072831.14 | 8072831.39 | 0.0089 | 0.0024 |
| Jupiter | 17390-11-15 23:02 G | 8072946.28 | 8072946.46 | 8072946.65 | 0.0488 | 0.0281 |
| Neptune | 17391-07-25 22:48 G | 8073198.22 | 8073198.45 | 8073198.70 | 0.0089 | 0.0034 |
| Jupiter | 17391-12-15 11:45 G | 8073340.83 | 8073340.99 | 8073341.15 | 0.0484 | 0.0344 |
| Neptune | 17392-07-27 16:48 G | 8073565.97 | 8073566.20 | 8073566.45 | 0.0089 | 0.0029 |
| Neptune | 17393-07-29 21:50 G | 8073933.19 | 8073933.41 | 8073933.65 | 0.0089 | 0.0041 |
| Neptune | 17394-08-01 17:02 G | 8074300.97 | 8074301.21 | 8074301.44 | 0.0089 | 0.0036 |
| Neptune | 17395-08-03 22:33 G | 8074668.23 | 8074668.44 | 8074668.66 | 0.0089 | 0.0048 |
| Neptune | 17396-08-05 14:38 G | 8075035.89 | 8075036.11 | 8075036.36 | 0.0089 | 0.0043 |
| Jupiter | 17397-05-31 20:09 G | 8075335.11 | 8075335.34 | 8075335.58 | 0.0543 | 0.0040 |
| Neptune | 17397-08-08 00:14 G | 8075403.32 | 8075403.51 | 8075403.72 | 0.0089 | 0.0053 |
| Neptune | 17398-08-10 12:00 G | 8075770.80 | 8075771.00 | 8075771.25 | 0.0089 | 0.0049 |
| Neptune | 17399-08-13 02:38 G | 8076138.44 | 8076138.61 | 8076138.81 | 0.0089 | 0.0060 |
| Neptune | 17400-08-15 09:36 G | 8076505.72 | 8076505.90 | 8076506.13 | 0.0089 | 0.0054 |
| Neptune | 17401-08-18 03:36 G | 8076873.49 | 8076873.65 | 8076873.83 | 0.0089 | 0.0066 |
| Neptune | 17402-08-20 08:09 G | 8077240.67 | 8077240.84 | 8077241.05 | 0.0089 | 0.0060 |
| Jupiter | 17402-11-20 23:16 G | 8077333.26 | 8077333.47 | 8077333.68 | 0.0487 | 0.0225 |
| Saturn | 17403-05-12 10:33 G | 8077505.73 | 8077505.94 | 8077506.16 | 0.0279 | 0.0135 |
| Neptune | 17403-08-23 02:38 G | 8077608.47 | 8077608.61 | 8077608.78 | 0.0089 | 0.0070 |
| Jupiter | 17403-12-21 00:28 G | 8077728.48 | 8077728.52 | 8077728.57 | 0.0484 | 0.0471 |
| Neptune | 17404-08-24 07:40 G | 8077975.67 | 8077975.82 | 8077976.02 | 0.0089 | 0.0064 |

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| Neptune | 17405-08-26 23:45 G | 8078343.35 | 8078343.49 | 8078343.64 | 0.0089 | 0.0075 |
| Mars | 17406-03-01 12:43 G | 8078529.85 | 8078530.03 | 8078530.20 | 0.1758 | 0.0448 |
| Neptune | 17406-08-29 08:24 G | 8078710.72 | 8078710.85 | 8078711.03 | 0.0089 | 0.0069 |
| Neptune | 17407-08-31 19:55 G | 8079078.23 | 8079078.33 | 8079078.47 | 0.0089 | 0.0079 |
| Neptune | 17408-09-02 09:36 G | 8079445.79 | 8079445.90 | 8079446.07 | 0.0089 | 0.0073 |
| Jupiter | 17409-06-06 22:19 G | 8079723.20 | 8079723.43 | 8079723.66 | 0.0544 | 0.0113 |
| Neptune | 17409-09-04 16:04 G | 8079813.10 | 8079813.17 | 8079813.29 | 0.0089 | 0.0083 |
| Neptune | 17410-09-07 09:21 G | 8080180.79 | 8080180.89 | 8080181.05 | 0.0089 | 0.0076 |
| Neptune | 17411-09-09 14:09 G | 8080548.04 | 8080548.09 | 8080548.16 | 0.0089 | 0.0086 |
| Neptune | 17412-09-11 07:40 G | 8080915.73 | 8080915.82 | 8080915.96 | 0.0089 | 0.0079 |
| Neptune | 17414-09-16 04:04 G | 8081650.58 | 8081650.67 | 8081650.79 | 0.0089 | 0.0081 |
| Jupiter | 17414-11-25 07:12 G | 8081720.59 | 8081720.80 | 8081721.02 | 0.0486 | 0.0140 |
| Neptune | 17416-09-19 23:16 G | 8082385.40 | 8082385.47 | 8082385.59 | 0.0089 | 0.0083 |
| Neptune | 17418-09-24 18:57 G | 8083120.24 | 8083120.29 | 8083120.39 | 0.0089 | 0.0085 |
| Saturn | 17418-11-15 08:24 G | 8083171.62 | 8083171.85 | 8083172.08 | 0.0281 | 0.0082 |
| Neptune | 17420-09-28 15:36 G | 8083855.12 | 8083855.15 | 8083855.24 | 0.0089 | 0.0086 |
| Jupiter | 17421-06-12 15:50 G | 8084111.97 | 8084112.16 | 8084112.34 | 0.0545 | 0.0303 |
| Uranus | 17421-09-19 02:09 G | 8084210.56 | 8084210.59 | 8084210.65 | 0.0144 | 0.0141 |
| Uranus | 17422-09-24 06:28 G | 8084580.60 | 8084580.77 | 8084580.98 | 0.0144 | 0.0091 |
| Neptune | 17422-10-03 14:24 G | 8084590.05 | 8084590.10 | 8084590.16 | 0.0088 | 0.0086 |
| Uranus | 17423-09-28 22:04 G | 8084950.18 | 8084950.42 | 8084950.68 | 0.0144 | 0.0027 |
| Uranus | 17424-10-03 02:38 G | 8085320.38 | 8085320.61 | 8085320.86 | 0.0144 | 0.0040 |
| Neptune | 17424-10-07 13:12 G | 8085325.03 | 8085325.05 | 8085325.12 | 0.0088 | 0.0087 |
| Uranus | 17425-10-07 19:55 G | 8085690.14 | 8085690.33 | 8085690.55 | 0.0145 | 0.0089 |
| Neptune | 17426-10-12 13:12 G | 8086060.01 | 8086060.05 | 8086060.13 | 0.0088 | 0.0086 |
| Jupiter | 17426-11-29 10:48 G | 8086107.71 | 8086107.95 | 8086108.20 | 0.0485 | 0.0015 |
| Mars | 17427-08-31 12:28 G | 8086382.86 | 8086383.02 | 8086383.17 | 0.1783 | 0.0932 |
| Neptune | 17428-10-16 10:48 G | 8086794.91 | 8086794.95 | 8086795.06 | 0.0088 | 0.0085 |
| Neptune | 17430-10-21 07:26 G | 8087529.73 | 8087529.81 | 8087529.91 | 0.0088 | 0.0083 |
| Neptune | 17432-10-25 01:12 G | 8088264.46 | 8088264.55 | 8088264.68 | 0.0088 | 0.0081 |

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| Saturn | 17433-05-18 23:16 G | 8088470.24 | 8088470.47 | 8088470.70 | 0.0278 | 0.0118 |
| Jupiter | 17433-06-18 04:48 G | 8088500.55 | 8088500.70 | 8088500.86 | 0.0545 | 0.0413 |
| Neptune | 17433-10-27 11:16 G | 8088631.95 | 8088631.97 | 8088632.01 | 0.0088 | 0.0088 |
| Neptune | 17434-10-29 19:26 G | 8088999.20 | 8088999.31 | 8088999.45 | 0.0088 | 0.0078 |
| Neptune | 17435-11-01 10:04 G | 8089366.88 | 8089366.92 | 8089367.01 | 0.0088 | 0.0085 |
| Neptune | 17436-11-02 14:24 G | 8089733.99 | 8089734.10 | 8089734.26 | 0.0088 | 0.0075 |
| Neptune | 17437-11-05 07:40 G | 8090101.75 | 8090101.82 | 8090101.94 | 0.0088 | 0.0082 |
| Neptune | 17438-11-07 11:31 G | 8090468.84 | 8090468.98 | 8090469.14 | 0.0088 | 0.0071 |
| Jupiter | 17438-12-03 12:14 G | 8090494.80 | 8090495.01 | 8090495.24 | 0.0484 | 0.0102 |
| Neptune | 17439-11-10 03:36 G | 8090836.54 | 8090836.65 | 8090836.79 | 0.0088 | 0.0077 |
| Neptune | 17440-11-11 09:50 G | 8091203.75 | 8091203.91 | 8091204.07 | 0.0088 | 0.0067 |
| Neptune | 17441-11-13 21:21 G | 8091571.26 | 8091571.39 | 8091571.55 | 0.0088 | 0.0073 |
| Neptune | 17442-11-16 07:55 G | 8091938.68 | 8091938.83 | 8091939.02 | 0.0088 | 0.0064 |
| Neptune | 17443-11-18 15:07 G | 8092305.99 | 8092306.13 | 8092306.32 | 0.0088 | 0.0069 |
| Jupiter | 17444-05-15 20:09 G | 8092485.21 | 8092485.34 | 8092485.48 | 0.0540 | 0.0442 |
| Neptune | 17444-11-20 07:12 G | 8092673.61 | 8092673.80 | 8092673.99 | 0.0088 | 0.0058 |
| Jupiter | 17445-06-23 11:02 G | 8092888.89 | 8092888.96 | 8092889.04 | 0.0545 | 0.0510 |
| Neptune | 17445-11-22 10:33 G | 8093040.79 | 8093040.94 | 8093041.14 | 0.0088 | 0.0064 |
| Neptune | 17446-11-25 04:04 G | 8093408.47 | 8093408.67 | 8093408.88 | 0.0088 | 0.0053 |
| Saturn | 17447-11-09 20:09 G | 8093758.13 | 8093758.34 | 8093758.57 | 0.0280 | 0.0135 |
| Neptune | 17447-11-27 07:40 G | 8093775.65 | 8093775.82 | 8093776.02 | 0.0088 | 0.0059 |
| Neptune | 17448-11-28 23:16 G | 8094143.27 | 8094143.47 | 8094143.71 | 0.0088 | 0.0049 |
| Neptune | 17449-12-01 06:14 G | 8094510.57 | 8094510.76 | 8094510.97 | 0.0088 | 0.0053 |
| Neptune | 17450-12-03 17:16 G | 8094878.01 | 8094878.22 | 8094878.47 | 0.0088 | 0.0043 |
| Jupiter | 17450-12-07 21:07 G | 8094882.16 | 8094882.38 | 8094882.61 | 0.0484 | 0.0167 |
| Neptune | 17451-12-06 05:02 G | 8095245.52 | 8095245.71 | 8095245.94 | 0.0088 | 0.0047 |
| Neptune | 17452-12-07 12:14 G | 8095612.78 | 8095613.01 | 8095613.25 | 0.0088 | 0.0036 |
| Neptune | 17453-12-10 04:19 G | 8095980.47 | 8095980.68 | 8095980.91 | 0.0088 | 0.0041 |
| Neptune | 17454-12-12 07:55 G | 8096347.60 | 8096347.83 | 8096348.08 | 0.0088 | 0.0031 |
| Neptune | 17455-12-15 01:26 G | 8096715.33 | 8096715.56 | 8096715.81 | 0.0088 | 0.0035 |

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| Jupiter | 17456-05-20 22:33 G | 8096873.24 | 8096873.44 | 8096873.63 | 0.0541 | 0.0272 |
| Neptune | 17456-12-16 06:00 G | 8097082.50 | 8097082.75 | 8097082.99 | 0.0088 | 0.0024 |
| Neptune | 17457-12-18 20:52 G | 8097450.13 | 8097450.37 | 8097450.64 | 0.0088 | 0.0028 |
| Neptune | 17458-12-21 04:33 G | 8097817.45 | 8097817.69 | 8097817.94 | 0.0088 | 0.0018 |
| Neptune | 17459-12-23 14:52 G | 8098184.87 | 8098185.12 | 8098185.39 | 0.0088 | 0.0022 |
| Neptune | 17460-12-25 03:50 G | 8098552.41 | 8098552.66 | 8098552.91 | 0.0088 | 0.0012 |
| Jupiter | 17461-11-12 04:48 G | 8098874.57 | 8098874.70 | 8098874.85 | 0.0489 | 0.0379 |
| Neptune | 17461-12-27 10:04 G | 8098919.67 | 8098919.92 | 8098920.19 | 0.0088 | 0.0015 |
| Saturn | 17462-05-13 17:16 G | 8099056.99 | 8099057.22 | 8099057.45 | 0.0279 | 0.0079 |
| Jupiter | 17462-12-11 19:40 G | 8099269.12 | 8099269.32 | 8099269.53 | 0.0484 | 0.0230 |
| Neptune | 17462-12-30 03:07 G | 8099287.37 | 8099287.63 | 8099287.88 | 0.0088 | 0.0005 |
| Uranus | 17463-03-25 00:43 G | 8099372.35 | 8099372.53 | 8099372.73 | 0.0134 | 0.0092 |
| Neptune | 17464-01-01 06:57 G | 8099654.54 | 8099654.79 | 8099655.05 | 0.0088 | 0.0008 |
| Uranus | 17464-03-28 04:19 G | 8099741.45 | 8099741.68 | 8099741.92 | 0.0134 | 0.0045 |
| Neptune | 17465-01-03 00:57 G | 8100022.28 | 8100022.54 | 8100022.80 | 0.0088 | 0.0002 |
| Uranus | 17465-04-01 21:07 G | 8100111.13 | 8100111.38 | 8100111.65 | 0.0134 | 0.0014 |
| Neptune | 17466-01-05 05:45 G | 8100389.49 | 8100389.74 | 8100389.99 | 0.0088 | 0.0001 |
| Uranus | 17466-04-06 00:00 G | 8100480.27 | 8100480.50 | 8100480.74 | 0.0134 | 0.0051 |
| Neptune | 17467-01-07 20:52 G | 8100757.11 | 8100757.37 | 8100757.64 | 0.0088 | 0.0008 |
| Uranus | 17467-04-10 16:04 G | 8100850.07 | 8100850.17 | 8100850.33 | 0.0134 | 0.0115 |
| Neptune | 17468-01-10 05:16 G | 8101124.48 | 8101124.72 | 8101124.98 | 0.0088 | 0.0006 |
| Jupiter | 17468-05-26 12:28 G | 8101261.79 | 8101262.02 | 8101262.25 | 0.0542 | 0.0149 |
| Neptune | 17469-01-11 15:36 G | 8101491.89 | 8101492.15 | 8101492.42 | 0.0088 | 0.0015 |
| Neptune | 17470-01-14 05:02 G | 8101859.47 | 8101859.71 | 8101859.97 | 0.0088 | 0.0013 |
| Neptune | 17471-01-16 11:02 G | 8102226.72 | 8102226.96 | 8102227.23 | 0.0088 | 0.0022 |
| Neptune | 17472-01-19 04:48 G | 8102594.45 | 8102594.70 | 8102594.95 | 0.0088 | 0.0019 |
| Neptune | 17473-01-20 08:38 G | 8102961.63 | 8102961.86 | 8102962.12 | 0.0088 | 0.0028 |
| Jupiter | 17473-11-16 05:02 G | 8103261.53 | 8103261.71 | 8103261.90 | 0.0488 | 0.0297 |
| Neptune | 17474-01-23 02:38 G | 8103329.37 | 8103329.61 | 8103329.87 | 0.0088 | 0.0026 |
| Jupiter | 17474-12-16 06:43 G | 8103656.62 | 8103656.78 | 8103656.95 | 0.0484 | 0.0337 |

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| Neptune | 17475-01-25 08:24 G | 8103696.63 | 8103696.85 | 8103697.09 | 0.0088 | 0.0034 |
| Neptune | 17476-01-28 00:00 G | 8104064.26 | 8104064.50 | 8104064.75 | 0.0088 | 0.0033 |
| Neptune | 17477-01-29 09:36 G | 8104431.68 | 8104431.90 | 8104432.12 | 0.0088 | 0.0040 |
| Saturn | 17477-11-16 12:57 G | 8104722.83 | 8104723.04 | 8104723.25 | 0.0281 | 0.0128 |
| Neptune | 17478-01-31 19:40 G | 8104799.10 | 8104799.32 | 8104799.58 | 0.0088 | 0.0039 |
| Neptune | 17479-02-03 09:50 G | 8105166.72 | 8105166.91 | 8105167.15 | 0.0088 | 0.0046 |
| Neptune | 17480-02-05 16:48 G | 8105533.98 | 8105534.20 | 8105534.43 | 0.0088 | 0.0045 |
| Jupiter | 17480-05-31 16:04 G | 8105649.94 | 8105650.17 | 8105650.40 | 0.0543 | 0.0057 |
| Neptune | 17481-02-07 10:33 G | 8105901.76 | 8105901.94 | 8105902.17 | 0.0088 | 0.0052 |
| Neptune | 17482-02-09 15:21 G | 8106268.94 | 8106269.14 | 8106269.36 | 0.0088 | 0.0051 |
| Neptune | 17483-02-12 09:36 G | 8106636.72 | 8106636.90 | 8106637.12 | 0.0088 | 0.0057 |
| Neptune | 17484-02-14 15:36 G | 8107003.98 | 8107004.15 | 8107004.37 | 0.0088 | 0.0058 |
| Neptune | 17485-02-16 07:26 G | 8107371.64 | 8107371.81 | 8107372.03 | 0.0088 | 0.0062 |
| Mars | 17485-03-03 19:55 G | 8107387.21 | 8107387.33 | 8107387.45 | 0.1764 | 0.1323 |
| Jupiter | 17485-11-20 13:40 G | 8107648.88 | 8107649.07 | 8107649.27 | 0.0487 | 0.0241 |
| Neptune | 17486-02-18 17:16 G | 8107739.07 | 8107739.22 | 8107739.43 | 0.0088 | 0.0063 |
| Jupiter | 17486-12-20 03:21 G | 8108043.57 | 8108043.64 | 8108043.71 | 0.0484 | 0.0458 |
| Neptune | 17487-02-21 04:33 G | 8108106.52 | 8108106.69 | 8108106.87 | 0.0088 | 0.0067 |
| Neptune | 17488-02-23 19:26 G | 8108474.16 | 8108474.31 | 8108474.48 | 0.0088 | 0.0068 |
| Neptune | 17489-02-25 02:09 G | 8108841.46 | 8108841.59 | 8108841.77 | 0.0088 | 0.0072 |
| Neptune | 17490-02-27 20:52 G | 8109209.24 | 8109209.37 | 8109209.54 | 0.0088 | 0.0072 |
| Neptune | 17491-03-02 02:09 G | 8109576.47 | 8109576.59 | 8109576.75 | 0.0088 | 0.0075 |
| Neptune | 17492-03-03 21:21 G | 8109944.28 | 8109944.39 | 8109944.55 | 0.0088 | 0.0076 |
| Saturn | 17492-05-19 22:19 G | 8110021.25 | 8110021.43 | 8110021.63 | 0.0278 | 0.0174 |
| Jupiter | 17492-06-06 11:45 G | 8110038.77 | 8110038.99 | 8110039.21 | 0.0544 | 0.0111 |
| Neptune | 17493-03-06 04:19 G | 8110311.57 | 8110311.68 | 8110311.80 | 0.0088 | 0.0078 |
| Neptune | 17494-03-08 20:38 G | 8110679.26 | 8110679.36 | 8110679.48 | 0.0089 | 0.0080 |
| Neptune | 17495-03-11 06:28 G | 8111046.70 | 8111046.77 | 8111046.89 | 0.0089 | 0.0082 |
| Neptune | 17496-03-12 17:45 G | 8111414.18 | 8111414.24 | 8111414.37 | 0.0089 | 0.0083 |
| Neptune | 17497-03-15 09:21 G | 8111781.82 | 8111781.89 | 8111781.99 | 0.0089 | 0.0083 |

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| Jupiter | 17497-11-24 16:33 G | 8112035.96 | 8112036.19 | 8112036.43 | 0.0486 | 0.0145 |
| Neptune | 17498-03-17 16:19 G | 8112149.13 | 8112149.18 | 8112149.28 | 0.0089 | 0.0085 |
| Neptune | 17499-03-20 11:16 G | 8112516.93 | 8112516.97 | 8112517.07 | 0.0089 | 0.0086 |
| Neptune | 17500-03-22 17:31 G | 8112884.21 | 8112884.23 | 8112884.26 | 0.0089 | 0.0088 |
| Pluto | 17500-08-10 07:12 G | 8113024.58 | 8113024.80 | 8113025.04 | 0.0064 | 0.0024 |
| Neptune | 17501-03-25 12:43 G | 8113252.00 | 8113252.03 | 8113252.11 | 0.0089 | 0.0087 |
| Neptune | 17503-03-30 12:57 G | 8113987.01 | 8113987.04 | 8113987.12 | 0.0089 | 0.0087 |
| Jupiter | 17504-06-12 20:38 G | 8114427.16 | 8114427.36 | 8114427.57 | 0.0544 | 0.0290 |
| Neptune | 17505-04-03 11:45 G | 8114721.98 | 8114721.99 | 8114722.06 | 0.0089 | 0.0088 |
| Mars | 17506-09-03 20:24 G | 8115240.19 | 8115240.35 | 8115240.52 | 0.1776 | 0.0638 |
| Uranus | 17506-09-25 15:50 G | 8115261.96 | 8115262.16 | 8115262.37 | 0.0144 | 0.0081 |
| Saturn | 17506-11-11 14:52 G | 8115308.89 | 8115309.12 | 8115309.36 | 0.0280 | 0.0090 |
| Neptune | 17507-04-08 11:02 G | 8115456.95 | 8115456.96 | 8115457.02 | 0.0089 | 0.0088 |
| Uranus | 17507-09-30 06:43 G | 8115631.54 | 8115631.78 | 8115632.04 | 0.0144 | 0.0025 |
| Uranus | 17508-10-04 12:00 G | 8116001.76 | 8116002.00 | 8116002.25 | 0.0144 | 0.0032 |
| Neptune | 17509-04-12 11:45 G | 8116191.96 | 8116191.99 | 8116192.08 | 0.0089 | 0.0087 |
| Uranus | 17509-10-09 04:04 G | 8116371.51 | 8116371.67 | 8116371.86 | 0.0145 | 0.0105 |
| Jupiter | 17509-11-29 19:55 G | 8116423.10 | 8116423.33 | 8116423.55 | 0.0485 | 0.0017 |
| Neptune | 17511-04-17 14:38 G | 8116927.07 | 8116927.11 | 8116927.20 | 0.0089 | 0.0086 |
| Neptune | 17513-04-21 19:26 G | 8117662.24 | 8117662.31 | 8117662.39 | 0.0089 | 0.0084 |
| Neptune | 17514-04-24 08:52 G | 8118029.85 | 8118029.87 | 8118029.91 | 0.0089 | 0.0089 |
| Neptune | 17515-04-26 23:45 G | 8118397.40 | 8118397.49 | 8118397.60 | 0.0089 | 0.0082 |
| Neptune | 17516-04-28 08:38 G | 8118764.81 | 8118764.86 | 8118764.94 | 0.0089 | 0.0086 |
| Jupiter | 17516-06-17 23:02 G | 8118815.30 | 8118815.46 | 8118815.61 | 0.0544 | 0.0390 |
| Neptune | 17517-05-01 03:50 G | 8119132.54 | 8119132.66 | 8119132.78 | 0.0089 | 0.0079 |
| Neptune | 17518-05-03 10:04 G | 8119499.85 | 8119499.92 | 8119500.01 | 0.0089 | 0.0085 |
| Neptune | 17519-05-06 06:28 G | 8119867.64 | 8119867.77 | 8119867.92 | 0.0089 | 0.0076 |
| Neptune | 17520-05-07 12:43 G | 8120234.95 | 8120235.03 | 8120235.16 | 0.0089 | 0.0082 |
| Neptune | 17521-05-10 07:26 G | 8120602.68 | 8120602.81 | 8120602.99 | 0.0089 | 0.0072 |
| Saturn | 17521-05-15 23:31 G | 8120608.23 | 8120608.48 | 8120608.72 | 0.0279 | 0.0024 |

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| Jupiter | 17521-12-04 05:02 G | 8120810.48 | 8120810.71 | 8120810.95 | 0.0485 | 0.0091 |
| Neptune | 17522-05-12 17:16 G | 8120970.11 | 8120970.22 | 8120970.36 | 0.0089 | 0.0078 |
| Neptune | 17523-05-15 07:40 G | 8121337.67 | 8121337.82 | 8121338.02 | 0.0089 | 0.0068 |
| Neptune | 17524-05-16 22:04 G | 8121705.28 | 8121705.42 | 8121705.56 | 0.0089 | 0.0074 |
| Neptune | 17525-05-19 06:57 G | 8122072.63 | 8122072.79 | 8122073.01 | 0.0089 | 0.0064 |
| Neptune | 17526-05-22 01:26 G | 8122440.43 | 8122440.56 | 8122440.75 | 0.0089 | 0.0070 |
| Jupiter | 17527-05-16 17:16 G | 8122800.11 | 8122800.22 | 8122800.34 | 0.0539 | 0.0461 |
| Neptune | 17527-05-24 08:52 G | 8122807.68 | 8122807.87 | 8122808.08 | 0.0089 | 0.0058 |
| Neptune | 17528-05-26 05:31 G | 8123175.55 | 8123175.73 | 8123175.91 | 0.0089 | 0.0064 |
| Jupiter | 17528-06-23 13:26 G | 8123203.96 | 8123204.06 | 8123204.17 | 0.0545 | 0.0483 |
| Neptune | 17529-05-28 11:31 G | 8123542.80 | 8123542.98 | 8123543.21 | 0.0089 | 0.0053 |
| Neptune | 17530-05-31 06:57 G | 8123910.61 | 8123910.79 | 8123911.01 | 0.0089 | 0.0059 |
| Neptune | 17531-06-02 15:50 G | 8124277.97 | 8124278.16 | 8124278.40 | 0.0089 | 0.0048 |
| Neptune | 17532-06-04 07:12 G | 8124645.60 | 8124645.80 | 8124646.04 | 0.0090 | 0.0053 |
| Neptune | 17533-06-06 20:24 G | 8125013.13 | 8125013.35 | 8125013.58 | 0.0090 | 0.0041 |
| Jupiter | 17533-12-08 02:09 G | 8125197.38 | 8125197.59 | 8125197.82 | 0.0484 | 0.0148 |
| Neptune | 17534-06-09 06:14 G | 8125380.55 | 8125380.76 | 8125381.01 | 0.0090 | 0.0047 |
| Neptune | 17535-06-12 00:00 G | 8125748.28 | 8125748.50 | 8125748.74 | 0.0090 | 0.0035 |
| Neptune | 17536-06-13 06:57 G | 8126115.57 | 8126115.79 | 8126116.03 | 0.0090 | 0.0041 |
| Saturn | 17536-11-18 14:24 G | 8126273.91 | 8126274.10 | 8126274.30 | 0.0281 | 0.0175 |
| Neptune | 17537-06-16 02:52 G | 8126483.39 | 8126483.62 | 8126483.88 | 0.0090 | 0.0029 |
| Neptune | 17538-06-18 09:07 G | 8126850.65 | 8126850.88 | 8126851.12 | 0.0090 | 0.0034 |
| Jupiter | 17539-05-22 06:14 G | 8127188.56 | 8127188.76 | 8127188.97 | 0.0541 | 0.0284 |
| Neptune | 17539-06-21 04:19 G | 8127218.44 | 8127218.68 | 8127218.95 | 0.0090 | 0.0022 |
| Neptune | 17540-06-22 12:57 G | 8127585.81 | 8127586.04 | 8127586.28 | 0.0090 | 0.0027 |
| Neptune | 17541-06-25 04:48 G | 8127953.44 | 8127953.70 | 8127953.97 | 0.0090 | 0.0015 |
| Neptune | 17542-06-27 17:02 G | 8128320.97 | 8128321.21 | 8128321.46 | 0.0090 | 0.0020 |
| Neptune | 17543-06-30 03:50 G | 8128688.40 | 8128688.66 | 8128688.93 | 0.0090 | 0.0008 |
| Neptune | 17544-07-01 20:24 G | 8129056.10 | 8129056.35 | 8129056.60 | 0.0090 | 0.0013 |
| Jupiter | 17544-11-12 11:02 G | 8129189.81 | 8129189.96 | 8129190.11 | 0.0490 | 0.0383 |

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| Neptune | 17545-07-04 03:21 G | 8129423.38 | 8129423.64 | 8129423.90 | 0.0090 | 0.0002 |
| Jupiter | 17545-12-12 13:55 G | 8129584.88 | 8129585.08 | 8129585.29 | 0.0484 | 0.0218 |
| Neptune | 17546-07-06 22:48 G | 8129791.20 | 8129791.45 | 8129791.71 | 0.0090 | 0.0007 |
| Uranus | 17547-03-26 09:07 G | 8130053.70 | 8130053.88 | 8130054.09 | 0.0134 | 0.0089 |
| Neptune | 17547-07-09 04:33 G | 8130158.44 | 8130158.69 | 8130158.95 | 0.0090 | 0.0005 |
| Uranus | 17548-03-29 13:40 G | 8130422.83 | 8130423.07 | 8130423.31 | 0.0134 | 0.0038 |
| Neptune | 17548-07-10 23:45 G | 8130526.23 | 8130526.49 | 8130526.75 | 0.0089 | 0.0001 |
| Uranus | 17549-04-03 05:45 G | 8130792.48 | 8130792.74 | 8130793.00 | 0.0134 | 0.0005 |
| Neptune | 17549-07-13 07:12 G | 8130893.55 | 8130893.80 | 8130894.05 | 0.0089 | 0.0012 |
| Uranus | 17550-04-07 08:52 G | 8131161.66 | 8131161.87 | 8131162.09 | 0.0134 | 0.0067 |
| Saturn | 17550-05-09 22:04 G | 8131194.30 | 8131194.42 | 8131194.55 | 0.0279 | 0.0241 |
| Neptune | 17550-07-15 23:02 G | 8131261.20 | 8131261.46 | 8131261.73 | 0.0089 | 0.0009 |
| Uranus | 17551-04-12 00:43 G | 8131531.38 | 8131531.53 | 8131531.71 | 0.0134 | 0.0103 |
| Saturn | 17551-05-23 03:21 G | 8131572.52 | 8131572.64 | 8131572.79 | 0.0278 | 0.0228 |
| Jupiter | 17551-05-27 11:31 G | 8131576.77 | 8131576.98 | 8131577.21 | 0.0542 | 0.0167 |
| Neptune | 17551-07-18 10:33 G | 8131628.70 | 8131628.94 | 8131629.18 | 0.0089 | 0.0019 |
| Neptune | 17552-07-19 21:07 G | 8131996.12 | 8131996.38 | 8131996.65 | 0.0089 | 0.0015 |
| Neptune | 17553-07-22 12:57 G | 8132363.81 | 8132364.04 | 8132364.29 | 0.0089 | 0.0025 |
| Neptune | 17554-07-24 20:09 G | 8132731.09 | 8132731.34 | 8132731.60 | 0.0089 | 0.0022 |
| Neptune | 17555-07-27 15:07 G | 8133098.90 | 8133099.13 | 8133099.38 | 0.0089 | 0.0032 |
| Neptune | 17556-07-28 20:09 G | 8133466.12 | 8133466.34 | 8133466.60 | 0.0089 | 0.0030 |
| Jupiter | 17556-11-16 18:00 G | 8133577.08 | 8133577.25 | 8133577.42 | 0.0488 | 0.0313 |
| Neptune | 17557-07-31 15:21 G | 8133833.91 | 8133834.14 | 8133834.38 | 0.0089 | 0.0038 |
| Jupiter | 17557-12-16 09:36 G | 8133971.73 | 8133971.90 | 8133972.08 | 0.0484 | 0.0327 |
| Neptune | 17558-08-02 22:04 G | 8134201.20 | 8134201.42 | 8134201.66 | 0.0089 | 0.0035 |
| Neptune | 17559-08-05 13:26 G | 8134568.85 | 8134569.06 | 8134569.32 | 0.0089 | 0.0044 |
| Neptune | 17560-08-07 00:00 G | 8134936.30 | 8134936.50 | 8134936.74 | 0.0089 | 0.0042 |
| Neptune | 17561-08-09 10:19 G | 8135303.73 | 8135303.93 | 8135304.18 | 0.0089 | 0.0050 |
| Neptune | 17562-08-12 01:55 G | 8135671.38 | 8135671.58 | 8135671.80 | 0.0089 | 0.0048 |
| Jupiter | 17563-06-02 06:00 G | 8135965.52 | 8135965.75 | 8135965.97 | 0.0543 | 0.0071 |

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| Neptune | 17563-08-14 07:55 G | 8136038.65 | 8136038.83 | 8136039.06 | 0.0089 | 0.0056 |
| Neptune | 17564-08-16 02:24 G | 8136406.42 | 8136406.60 | 8136406.83 | 0.0089 | 0.0054 |
| Neptune | 17565-08-18 07:26 G | 8136773.64 | 8136773.81 | 8136774.02 | 0.0089 | 0.0059 |
| Saturn | 17565-11-12 14:38 G | 8136859.88 | 8136860.11 | 8136860.35 | 0.0280 | 0.0046 |
| Neptune | 17566-08-21 02:09 G | 8137141.40 | 8137141.59 | 8137141.80 | 0.0089 | 0.0058 |
| Neptune | 17567-08-23 08:38 G | 8137508.69 | 8137508.86 | 8137509.04 | 0.0089 | 0.0064 |
| Neptune | 17568-08-24 23:31 G | 8137876.31 | 8137876.48 | 8137876.68 | 0.0089 | 0.0063 |
| Jupiter | 17568-11-20 23:31 G | 8137964.28 | 8137964.48 | 8137964.69 | 0.0487 | 0.0250 |
| Neptune | 17569-08-27 10:04 G | 8138243.77 | 8138243.92 | 8138244.08 | 0.0089 | 0.0068 |
| Jupiter | 17569-12-20 20:24 G | 8138359.28 | 8138359.35 | 8138359.43 | 0.0484 | 0.0454 |
| Neptune | 17570-08-29 19:26 G | 8138611.16 | 8138611.31 | 8138611.51 | 0.0089 | 0.0067 |
| Neptune | 17571-09-01 10:33 G | 8138978.80 | 8138978.94 | 8138979.09 | 0.0089 | 0.0071 |
| Neptune | 17572-09-02 16:04 G | 8139346.02 | 8139346.17 | 8139346.34 | 0.0089 | 0.0070 |
| Neptune | 17573-09-05 09:50 G | 8139713.79 | 8139713.91 | 8139714.07 | 0.0089 | 0.0075 |
| Neptune | 17574-09-07 13:55 G | 8140080.97 | 8140081.08 | 8140081.24 | 0.0089 | 0.0075 |
| Jupiter | 17575-06-07 06:57 G | 8140353.55 | 8140353.79 | 8140354.03 | 0.0543 | 0.0089 |
| Neptune | 17575-09-10 07:40 G | 8140448.72 | 8140448.82 | 8140448.96 | 0.0089 | 0.0078 |
| Neptune | 17576-09-11 13:40 G | 8140815.97 | 8140816.07 | 8140816.20 | 0.0089 | 0.0078 |
| Neptune | 17577-09-14 04:04 G | 8141183.58 | 8141183.67 | 8141183.81 | 0.0089 | 0.0080 |
| Neptune | 17578-09-16 14:38 G | 8141551.02 | 8141551.11 | 8141551.23 | 0.0089 | 0.0080 |
| Neptune | 17579-09-18 23:45 G | 8141918.41 | 8141918.49 | 8141918.60 | 0.0089 | 0.0082 |
| Saturn | 17580-05-17 00:00 G | 8142159.25 | 8142159.50 | 8142159.76 | 0.0279 | 0.0029 |
| Neptune | 17580-09-20 14:09 G | 8142286.03 | 8142286.09 | 8142286.20 | 0.0089 | 0.0083 |
| Jupiter | 17580-11-25 01:55 G | 8142351.37 | 8142351.58 | 8142351.79 | 0.0487 | 0.0152 |
| Neptune | 17581-09-22 19:12 G | 8142653.25 | 8142653.30 | 8142653.41 | 0.0089 | 0.0085 |
| Neptune | 17582-09-25 13:12 G | 8143020.98 | 8143021.05 | 8143021.14 | 0.0089 | 0.0084 |
| Neptune | 17583-09-27 16:33 G | 8143388.14 | 8143388.19 | 8143388.29 | 0.0089 | 0.0085 |
| Neptune | 17584-09-29 09:21 G | 8143755.84 | 8143755.89 | 8143756.00 | 0.0089 | 0.0085 |
| Neptune | 17585-10-01 15:50 G | 8144123.10 | 8144123.16 | 8144123.24 | 0.0089 | 0.0085 |
| Neptune | 17586-10-04 05:02 G | 8144490.67 | 8144490.71 | 8144490.80 | 0.0088 | 0.0086 |

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| Jupiter | 17587-06-12 15:07 G | 8144741.94 | 8144742.13 | 8144742.33 | 0.0544 | 0.0264 |
| Neptune | 17587-10-06 15:36 G | 8144858.11 | 8144858.15 | 8144858.22 | 0.0088 | 0.0086 |
| Neptune | 17588-10-07 23:16 G | 8145225.43 | 8145225.47 | 8145225.57 | 0.0088 | 0.0086 |
| Uranus | 17589-09-20 18:57 G | 8145573.24 | 8145573.29 | 8145573.38 | 0.0144 | 0.0138 |
| Neptune | 17589-10-10 14:24 G | 8145593.05 | 8145593.10 | 8145593.20 | 0.0088 | 0.0085 |
| Pluto | 17590-02-09 11:45 G | 8145714.96 | 8145714.99 | 8145715.07 | 0.0080 | 0.0078 |
| Uranus | 17590-09-25 23:31 G | 8145943.30 | 8145943.48 | 8145943.70 | 0.0144 | 0.0089 |
| Neptune | 17590-10-12 18:43 G | 8145960.23 | 8145960.28 | 8145960.38 | 0.0088 | 0.0085 |
| Uranus | 17591-09-30 14:38 G | 8146312.87 | 8146313.11 | 8146313.37 | 0.0144 | 0.0022 |
| Neptune | 17591-10-15 12:14 G | 8146327.96 | 8146328.01 | 8146328.12 | 0.0088 | 0.0084 |
| Uranus | 17592-10-04 20:09 G | 8146683.11 | 8146683.34 | 8146683.59 | 0.0144 | 0.0042 |
| Neptune | 17592-10-16 16:04 G | 8146695.12 | 8146695.17 | 8146695.27 | 0.0088 | 0.0085 |
| Jupiter | 17592-11-29 11:16 G | 8146738.74 | 8146738.97 | 8146739.21 | 0.0486 | 0.0021 |
| Uranus | 17593-10-09 12:00 G | 8147052.82 | 8147053.00 | 8147053.21 | 0.0145 | 0.0094 |
| Neptune | 17593-10-19 08:09 G | 8147062.78 | 8147062.84 | 8147062.97 | 0.0088 | 0.0083 |
| Neptune | 17594-10-21 14:38 G | 8147430.06 | 8147430.11 | 8147430.22 | 0.0088 | 0.0083 |
| Saturn | 17594-11-07 15:50 G | 8147447.04 | 8147447.16 | 8147447.30 | 0.0279 | 0.0237 |
| Neptune | 17595-10-24 03:21 G | 8147797.55 | 8147797.64 | 8147797.77 | 0.0088 | 0.0080 |
| Saturn | 17595-11-20 11:31 G | 8147824.83 | 8147824.98 | 8147825.14 | 0.0281 | 0.0218 |
| Neptune | 17596-10-25 14:24 G | 8148165.02 | 8148165.10 | 8148165.22 | 0.0088 | 0.0080 |
| Neptune | 17597-10-27 21:36 G | 8148532.29 | 8148532.40 | 8148532.54 | 0.0088 | 0.0078 |
| Neptune | 17598-10-30 12:57 G | 8148899.93 | 8148900.04 | 8148900.15 | 0.0088 | 0.0079 |
| Jupiter | 17599-06-18 06:43 G | 8149130.60 | 8149130.78 | 8149130.96 | 0.0545 | 0.0362 |
| Neptune | 17599-11-01 16:33 G | 8149267.07 | 8149267.19 | 8149267.33 | 0.0088 | 0.0076 |
| Neptune | 17600-11-03 09:21 G | 8149634.79 | 8149634.89 | 8149635.05 | 0.0088 | 0.0076 |
| Neptune | 17601-11-05 13:12 G | 8150001.92 | 8150002.05 | 8150002.21 | 0.0088 | 0.0071 |
| Neptune | 17602-11-08 04:33 G | 8150369.57 | 8150369.69 | 8150369.87 | 0.0088 | 0.0072 |
| Neptune | 17603-11-10 11:31 G | 8150736.85 | 8150736.98 | 8150737.17 | 0.0088 | 0.0068 |
| Neptune | 17604-11-11 23:45 G | 8151104.33 | 8151104.49 | 8151104.66 | 0.0088 | 0.0068 |
| Jupiter | 17604-12-03 09:07 G | 8151125.65 | 8151125.88 | 8151126.11 | 0.0485 | 0.0077 |

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| Neptune | 17605-11-14 11:31 G | 8151471.82 | 8151471.98 | 8151472.16 | 0.0088 | 0.0064 |
| Neptune | 17606-11-16 17:45 G | 8151839.07 | 8151839.24 | 8151839.43 | 0.0088 | 0.0064 |
| Neptune | 17607-11-19 09:21 G | 8152206.72 | 8152206.89 | 8152207.09 | 0.0088 | 0.0059 |
| Neptune | 17608-11-20 12:43 G | 8152573.86 | 8152574.03 | 8152574.24 | 0.0088 | 0.0060 |
| Saturn | 17609-05-11 03:36 G | 8152745.48 | 8152745.65 | 8152745.82 | 0.0279 | 0.0189 |
| Neptune | 17609-11-23 06:00 G | 8152941.56 | 8152941.75 | 8152941.97 | 0.0088 | 0.0054 |
| Jupiter | 17610-05-16 02:09 G | 8153115.48 | 8153115.59 | 8153115.71 | 0.0539 | 0.0467 |
| Neptune | 17610-11-25 09:36 G | 8153308.73 | 8153308.90 | 8153309.11 | 0.0088 | 0.0056 |
| Jupiter | 17611-06-23 12:57 G | 8153518.93 | 8153519.04 | 8153519.16 | 0.0545 | 0.0468 |
| Neptune | 17611-11-28 00:28 G | 8153676.32 | 8153676.52 | 8153676.76 | 0.0088 | 0.0050 |
| Neptune | 17612-11-29 08:09 G | 8154043.66 | 8154043.84 | 8154044.06 | 0.0088 | 0.0051 |
| Neptune | 17613-12-01 18:57 G | 8154411.07 | 8154411.29 | 8154411.53 | 0.0088 | 0.0044 |
| Neptune | 17614-12-04 07:40 G | 8154778.62 | 8154778.82 | 8154779.05 | 0.0088 | 0.0045 |
| Neptune | 17615-12-06 13:26 G | 8155145.84 | 8155146.06 | 8155146.31 | 0.0088 | 0.0039 |
| Jupiter | 17616-12-07 19:40 G | 8155513.10 | 8155513.32 | 8155513.55 | 0.0484 | 0.0133 |
| Neptune | 17616-12-08 05:45 G | 8155513.54 | 8155513.74 | 8155513.99 | 0.0088 | 0.0041 * |
| Neptune | 17617-12-10 09:21 G | 8155880.67 | 8155880.89 | 8155881.14 | 0.0088 | 0.0034 |
| Neptune | 17618-12-13 02:38 G | 8156248.38 | 8156248.61 | 8156248.86 | 0.0088 | 0.0035 |
| Neptune | 17619-12-15 07:12 G | 8156615.57 | 8156615.80 | 8156616.05 | 0.0088 | 0.0027 |
| Neptune | 17620-12-16 21:36 G | 8156983.16 | 8156983.40 | 8156983.66 | 0.0088 | 0.0028 |
| Neptune | 17621-12-19 06:14 G | 8157350.53 | 8157350.76 | 8157351.01 | 0.0088 | 0.0021 |
| Jupiter | 17622-05-21 06:28 G | 8157503.58 | 8157503.77 | 8157503.96 | 0.0540 | 0.0296 |
| Neptune | 17622-12-21 16:04 G | 8157717.93 | 8157718.17 | 8157718.44 | 0.0088 | 0.0023 |
| Neptune | 17623-12-24 06:00 G | 8158085.51 | 8158085.75 | 8158086.01 | 0.0088 | 0.0015 |
| Saturn | 17624-11-13 21:07 G | 8158411.14 | 8158411.38 | 8158411.62 | 0.0280 | 0.0001 |
| Neptune | 17624-12-25 11:31 G | 8158452.72 | 8158452.98 | 8158453.24 | 0.0088 | 0.0016 |
| Neptune | 17625-12-28 04:19 G | 8158820.43 | 8158820.68 | 8158820.94 | 0.0088 | 0.0008 |
| Neptune | 17626-12-30 07:55 G | 8159187.58 | 8159187.83 | 8159188.09 | 0.0088 | 0.0010 |
| Jupiter | 17627-11-12 22:19 G | 8159505.31 | 8159505.43 | 8159505.57 | 0.0490 | 0.0392 |
| Neptune | 17628-01-02 01:26 G | 8159555.30 | 8159555.56 | 8159555.82 | 0.0088 | 0.0001 |

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| Jupiter | 17628-12-11 17:16 G | 8159900.00 | 8159900.22 | 8159900.43 | 0.0484 | 0.0208 |
| Neptune | 17629-01-03 06:43 G | 8159922.52 | 8159922.78 | 8159923.03 | 0.0088 | 0.0004 |
| Neptune | 17630-01-05 20:52 G | 8160290.10 | 8160290.37 | 8160290.64 | 0.0088 | 0.0005 |
| Uranus | 17630-03-22 00:43 G | 8160365.53 | 8160365.53 | 8160365.58 | 0.0135 | 0.0134 |
| Neptune | 17631-01-08 06:28 G | 8160657.53 | 8160657.77 | 8160658.02 | 0.0088 | 0.0003 |
| Uranus | 17631-03-26 16:19 G | 8160735.00 | 8160735.18 | 8160735.39 | 0.0134 | 0.0090 |
| Neptune | 17632-01-10 16:19 G | 8161024.92 | 8161025.18 | 8161025.45 | 0.0088 | 0.0012 |
| Uranus | 17632-03-29 21:21 G | 8161104.16 | 8161104.39 | 8161104.64 | 0.0134 | 0.0040 |
| Neptune | 17633-01-12 07:12 G | 8161392.55 | 8161392.80 | 8161393.05 | 0.0088 | 0.0009 |
| Uranus | 17633-04-03 12:57 G | 8161473.78 | 8161474.04 | 8161474.31 | 0.0134 | 0.0017 |
| Neptune | 17634-01-14 12:14 G | 8161759.76 | 8161760.01 | 8161760.28 | 0.0088 | 0.0018 |
| Uranus | 17634-04-07 17:02 G | 8161842.99 | 8161843.21 | 8161843.45 | 0.0134 | 0.0056 |
| Jupiter | 17634-05-26 19:12 G | 8161892.09 | 8161892.30 | 8161892.52 | 0.0541 | 0.0195 |
| Neptune | 17635-01-17 06:00 G | 8162127.50 | 8162127.75 | 8162128.01 | 0.0088 | 0.0014 |
| Uranus | 17635-04-12 08:24 G | 8162212.75 | 8162212.85 | 8162212.98 | 0.0134 | 0.0119 |
| Neptune | 17636-01-19 09:50 G | 8162494.68 | 8162494.91 | 8162495.17 | 0.0088 | 0.0024 |
| Neptune | 17637-01-21 03:36 G | 8162862.39 | 8162862.65 | 8162862.90 | 0.0088 | 0.0020 |
| Neptune | 17638-01-23 08:52 G | 8163229.65 | 8163229.87 | 8163230.12 | 0.0088 | 0.0031 |
| Neptune | 17639-01-25 23:02 G | 8163597.22 | 8163597.46 | 8163597.73 | 0.0088 | 0.0027 |
| Saturn | 17639-05-18 22:19 G | 8163710.19 | 8163710.43 | 8163710.67 | 0.0279 | 0.0082 |
| Jupiter | 17639-11-17 03:50 G | 8163892.49 | 8163892.66 | 8163892.85 | 0.0489 | 0.0328 |
| Neptune | 17640-01-28 09:21 G | 8163964.68 | 8163964.89 | 8163965.14 | 0.0088 | 0.0037 |
| Jupiter | 17640-12-16 03:07 G | 8164287.46 | 8164287.63 | 8164287.79 | 0.0484 | 0.0325 |
| Neptune | 17641-01-29 19:26 G | 8164332.07 | 8164332.31 | 8164332.57 | 0.0088 | 0.0032 |
| Neptune | 17642-02-01 10:48 G | 8164699.74 | 8164699.95 | 8164700.18 | 0.0088 | 0.0042 |
| Neptune | 17643-02-03 16:33 G | 8165066.97 | 8165067.19 | 8165067.44 | 0.0088 | 0.0038 |
| Neptune | 17644-02-06 11:16 G | 8165434.75 | 8165434.97 | 8165435.18 | 0.0088 | 0.0049 |
| Neptune | 17645-02-07 15:36 G | 8165801.93 | 8165802.15 | 8165802.38 | 0.0088 | 0.0044 |
| Neptune | 17646-02-10 09:07 G | 8166169.69 | 8166169.88 | 8166170.11 | 0.0088 | 0.0054 |
| Jupiter | 17646-05-31 21:21 G | 8166280.15 | 8166280.39 | 8166280.63 | 0.0542 | 0.0099 |

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| Neptune | 17647-02-12 15:36 G | 8166536.96 | 8166537.15 | 8166537.38 | 0.0088 | 0.0049 |
| Neptune | 17648-02-15 06:00 G | 8166904.56 | 8166904.75 | 8166904.97 | 0.0088 | 0.0058 |
| Neptune | 17649-02-16 17:02 G | 8167272.03 | 8167272.21 | 8167272.42 | 0.0088 | 0.0054 |
| Neptune | 17650-02-19 02:52 G | 8167639.45 | 8167639.62 | 8167639.82 | 0.0088 | 0.0064 |
| Neptune | 17651-02-21 18:43 G | 8168007.12 | 8168007.28 | 8168007.50 | 0.0088 | 0.0059 |
| Jupiter | 17651-11-21 06:28 G | 8168279.58 | 8168279.77 | 8168279.96 | 0.0488 | 0.0266 |
| Neptune | 17652-02-24 00:57 G | 8168374.40 | 8168374.54 | 8168374.73 | 0.0088 | 0.0069 |
| Jupiter | 17652-12-20 03:21 G | 8168674.55 | 8168674.64 | 8168674.75 | 0.0484 | 0.0439 |
| Neptune | 17653-02-25 19:40 G | 8168742.16 | 8168742.32 | 8168742.53 | 0.0088 | 0.0062 |
| Saturn | 17653-11-08 14:38 G | 8168997.93 | 8168998.11 | 8168998.30 | 0.0279 | 0.0190 |
| Neptune | 17654-02-28 00:43 G | 8169109.41 | 8169109.53 | 8169109.70 | 0.0088 | 0.0073 |
| Saturn | 17654-11-21 12:14 G | 8169375.94 | 8169376.01 | 8169376.09 | 0.0280 | 0.0266 |
| Neptune | 17655-03-02 19:26 G | 8169477.15 | 8169477.31 | 8169477.51 | 0.0088 | 0.0066 |
| Neptune | 17656-03-04 02:24 G | 8169844.50 | 8169844.60 | 8169844.75 | 0.0088 | 0.0077 |
| Neptune | 17657-03-06 17:16 G | 8170212.08 | 8170212.22 | 8170212.41 | 0.0088 | 0.0070 |
| Neptune | 17658-03-09 04:48 G | 8170579.61 | 8170579.70 | 8170579.83 | 0.0088 | 0.0080 |
| Jupiter | 17658-06-06 08:09 G | 8170668.62 | 8170668.84 | 8170669.07 | 0.0544 | 0.0072 |
| Neptune | 17659-03-11 15:36 G | 8170947.01 | 8170947.15 | 8170947.33 | 0.0089 | 0.0072 |
| Neptune | 17660-03-13 08:24 G | 8171314.76 | 8171314.85 | 8171314.95 | 0.0089 | 0.0082 |
| Neptune | 17661-03-15 15:07 G | 8171681.99 | 8171682.13 | 8171682.27 | 0.0089 | 0.0074 |
| Neptune | 17662-03-18 09:50 G | 8172049.86 | 8172049.91 | 8172050.00 | 0.0089 | 0.0085 |
| Neptune | 17663-03-20 15:07 G | 8172417.03 | 8172417.13 | 8172417.29 | 0.0089 | 0.0077 |
| Jupiter | 17663-11-25 17:16 G | 8172666.99 | 8172667.22 | 8172667.44 | 0.0487 | 0.0152 |
| Neptune | 17664-03-22 10:33 G | 8172784.89 | 8172784.94 | 8172785.01 | 0.0089 | 0.0086 |
| Neptune | 17665-03-24 17:45 G | 8173152.13 | 8173152.24 | 8173152.37 | 0.0089 | 0.0078 |
| Neptune | 17666-03-27 09:21 G | 8173519.86 | 8173519.89 | 8173519.96 | 0.0089 | 0.0087 |
| Neptune | 17667-03-29 20:38 G | 8173887.28 | 8173887.36 | 8173887.50 | 0.0089 | 0.0080 |
| Neptune | 17668-03-31 08:52 G | 8174254.85 | 8174254.87 | 8174254.90 | 0.0089 | 0.0088 |
| Saturn | 17668-05-12 12:28 G | 8174296.81 | 8174297.02 | 8174297.23 | 0.0279 | 0.0131 |
| Neptune | 17669-04-03 01:12 G | 8174622.45 | 8174622.55 | 8174622.67 | 0.0089 | 0.0080 |

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| Neptune | 17670-04-05 08:38 G | 8174989.86 | 8174989.86 | 8174989.90 | 0.0089 | 0.0089 |
| Jupiter | 17670-06-12 00:00 G | 8175057.28 | 8175057.50 | 8175057.71 | 0.0544 | 0.0244 |
| Neptune | 17671-04-08 04:04 G | 8175357.58 | 8175357.67 | 8175357.81 | 0.0089 | 0.0080 |
| Neptune | 17672-04-09 10:19 G | 8175724.91 | 8175724.93 | 8175724.96 | 0.0089 | 0.0088 |
| Neptune | 17673-04-12 05:31 G | 8176092.64 | 8176092.73 | 8176092.87 | 0.0089 | 0.0080 |
| Neptune | 17674-04-14 12:43 G | 8176460.02 | 8176460.03 | 8176460.09 | 0.0089 | 0.0088 |
| Uranus | 17674-09-26 08:24 G | 8176624.63 | 8176624.85 | 8176625.06 | 0.0144 | 0.0076 |
| Neptune | 17675-04-17 05:16 G | 8176827.62 | 8176827.72 | 8176827.86 | 0.0089 | 0.0079 |
| Uranus | 17675-09-30 23:31 G | 8176994.23 | 8176994.48 | 8176994.73 | 0.0144 | 0.0023 |
| Jupiter | 17675-11-29 13:40 G | 8177053.84 | 8177054.07 | 8177054.31 | 0.0486 | 0.0026 |
| Neptune | 17676-04-18 16:19 G | 8177195.14 | 8177195.18 | 8177195.26 | 0.0089 | 0.0086 |
| Uranus | 17676-10-05 05:02 G | 8177364.47 | 8177364.71 | 8177364.95 | 0.0144 | 0.0038 |
| Neptune | 17677-04-21 04:33 G | 8177562.57 | 8177562.69 | 8177562.84 | 0.0089 | 0.0077 |
| Uranus | 17677-10-09 20:09 G | 8177734.19 | 8177734.34 | 8177734.52 | 0.0145 | 0.0109 |
| Neptune | 17678-04-23 20:52 G | 8177930.31 | 8177930.37 | 8177930.46 | 0.0089 | 0.0084 |
| Neptune | 17679-04-26 04:48 G | 8178297.60 | 8178297.70 | 8178297.87 | 0.0089 | 0.0077 |
| Neptune | 17680-04-28 00:43 G | 8178665.45 | 8178665.53 | 8178665.64 | 0.0089 | 0.0082 |
| Neptune | 17681-04-30 06:28 G | 8179032.66 | 8179032.77 | 8179032.95 | 0.0089 | 0.0075 |
| Neptune | 17682-05-03 03:21 G | 8179400.53 | 8179400.64 | 8179400.77 | 0.0089 | 0.0079 |
| Jupiter | 17682-06-17 05:31 G | 8179445.55 | 8179445.73 | 8179445.91 | 0.0545 | 0.0341 |
| Neptune | 17683-05-05 10:04 G | 8179767.79 | 8179767.92 | 8179768.10 | 0.0089 | 0.0071 |
| Saturn | 17683-11-16 02:24 G | 8179962.36 | 8179962.60 | 8179962.85 | 0.0280 | 0.0050 |
| Neptune | 17684-05-07 03:21 G | 8180135.53 | 8180135.64 | 8180135.82 | 0.0089 | 0.0076 |
| Neptune | 17685-05-09 14:09 G | 8180502.94 | 8180503.09 | 8180503.26 | 0.0089 | 0.0069 |
| Neptune | 17686-05-12 03:36 G | 8180870.50 | 8180870.65 | 8180870.81 | 0.0089 | 0.0072 |
| Neptune | 17687-05-14 18:28 G | 8181238.13 | 8181238.27 | 8181238.47 | 0.0089 | 0.0066 |
| Jupiter | 17687-12-04 01:55 G | 8181441.35 | 8181441.58 | 8181441.81 | 0.0485 | 0.0065 |
| Neptune | 17688-05-16 03:36 G | 8181605.50 | 8181605.65 | 8181605.84 | 0.0089 | 0.0068 |
| Neptune | 17689-05-18 22:48 G | 8181973.28 | 8181973.45 | 8181973.66 | 0.0089 | 0.0061 |
| Mars | 17690-03-02 20:24 G | 8182261.14 | 8182261.35 | 8182261.56 | 0.1750 | 0.0188 |

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| Neptune | 17690-05-21 05:16 G | 8182340.55 | 8182340.72 | 8182340.92 | 0.0089 | 0.0063 |
| Neptune | 17691-05-24 01:55 G | 8182708.38 | 8182708.58 | 8182708.78 | 0.0089 | 0.0057 |
| Neptune | 17692-05-25 08:09 G | 8183075.67 | 8183075.84 | 8183076.05 | 0.0089 | 0.0059 |
| Jupiter | 17693-05-14 22:04 G | 8183430.33 | 8183430.42 | 8183430.51 | 0.0538 | 0.0489 |
| Neptune | 17693-05-28 02:24 G | 8183443.40 | 8183443.60 | 8183443.83 | 0.0089 | 0.0053 |
| Neptune | 17694-05-30 12:43 G | 8183810.83 | 8183811.03 | 8183811.24 | 0.0089 | 0.0052 |
| Jupiter | 17694-06-22 18:00 G | 8183834.12 | 8183834.25 | 8183834.38 | 0.0544 | 0.0443 |
| Neptune | 17695-06-02 02:24 G | 8184178.39 | 8184178.60 | 8184178.85 | 0.0089 | 0.0047 |
| Neptune | 17696-06-03 17:02 G | 8184546.02 | 8184546.21 | 8184546.44 | 0.0089 | 0.0047 |
| Neptune | 17697-06-06 02:52 G | 8184913.40 | 8184913.62 | 8184913.87 | 0.0089 | 0.0042 |
| Saturn | 17698-05-20 01:12 G | 8185261.35 | 8185261.55 | 8185261.77 | 0.0279 | 0.0135 |
| Neptune | 17698-06-08 21:36 G | 8185281.19 | 8185281.40 | 8185281.64 | 0.0090 | 0.0041 |
| Neptune | 17699-06-11 03:50 G | 8185648.44 | 8185648.66 | 8185648.92 | 0.0090 | 0.0037 |
| Jupiter | 17699-12-07 22:33 G | 8185828.21 | 8185828.44 | 8185828.67 | 0.0485 | 0.0119 |
| Neptune | 17700-06-14 00:00 G | 8186016.28 | 8186016.50 | 8186016.76 | 0.0090 | 0.0034 |
| Neptune | 17701-06-16 06:28 G | 8186383.54 | 8186383.77 | 8186384.02 | 0.0090 | 0.0030 |
| Neptune | 17702-06-19 00:57 G | 8186751.30 | 8186751.54 | 8186751.81 | 0.0090 | 0.0027 |
| Neptune | 17703-06-21 10:04 G | 8187118.69 | 8187118.92 | 8187119.17 | 0.0090 | 0.0025 |
| Neptune | 17704-06-23 00:28 G | 8187486.26 | 8187486.52 | 8187486.78 | 0.0090 | 0.0021 |
| Jupiter | 17705-05-21 11:16 G | 8187818.79 | 8187818.97 | 8187819.16 | 0.0539 | 0.0320 |
| Neptune | 17705-06-25 14:24 G | 8187853.86 | 8187854.10 | 8187854.34 | 0.0090 | 0.0019 |
| Neptune | 17706-06-28 00:28 G | 8188221.26 | 8188221.52 | 8188221.79 | 0.0090 | 0.0014 |
| Neptune | 17707-06-30 18:43 G | 8188589.03 | 8188589.28 | 8188589.53 | 0.0090 | 0.0012 |
| Neptune | 17708-07-02 01:12 G | 8188956.29 | 8188956.55 | 8188956.81 | 0.0090 | 0.0007 |
| Neptune | 17709-07-04 21:07 G | 8189324.12 | 8189324.38 | 8189324.64 | 0.0090 | 0.0007 |
| Neptune | 17710-07-07 03:07 G | 8189691.37 | 8189691.63 | 8189691.88 | 0.0090 | 0.0001 |
| Jupiter | 17710-11-13 06:43 G | 8189820.65 | 8189820.78 | 8189820.92 | 0.0491 | 0.0404 |
| Neptune | 17711-07-09 21:36 G | 8190059.14 | 8190059.40 | 8190059.66 | 0.0090 | 0.0001 |
| Mars | 17711-09-02 13:55 G | 8190113.90 | 8190114.08 | 8190114.26 | 0.1792 | 0.0858 |
| Jupiter | 17711-12-13 07:26 G | 8190215.60 | 8190215.81 | 8190216.01 | 0.0484 | 0.0198 |

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| Neptune | 17712-07-11 05:31 G | 8190426.48 | 8190426.73 | 8190426.98 | 0.0090 | 0.0007 |
| Saturn | 17712-11-10 18:43 G | 8190549.07 | 8190549.28 | 8190549.49 | 0.0279 | 0.0136 |
| Neptune | 17713-07-13 19:55 G | 8190794.07 | 8190794.33 | 8190794.60 | 0.0089 | 0.0006 |
| Neptune | 17714-07-16 08:38 G | 8191161.62 | 8191161.86 | 8191162.11 | 0.0089 | 0.0014 |
| Uranus | 17715-03-28 00:28 G | 8191416.33 | 8191416.52 | 8191416.74 | 0.0134 | 0.0084 |
| Neptune | 17715-07-18 18:28 G | 8191529.01 | 8191529.27 | 8191529.54 | 0.0089 | 0.0012 |
| Uranus | 17716-03-31 07:12 G | 8191785.57 | 8191785.80 | 8191786.05 | 0.0134 | 0.0036 |
| Neptune | 17716-07-20 11:45 G | 8191896.75 | 8191896.99 | 8191897.24 | 0.0089 | 0.0020 |
| Uranus | 17717-04-04 21:36 G | 8192155.14 | 8192155.40 | 8192155.66 | 0.0134 | 0.0010 |
| Jupiter | 17717-05-26 11:16 G | 8192206.76 | 8192206.97 | 8192207.20 | 0.0541 | 0.0222 |
| Neptune | 17717-07-22 18:14 G | 8192264.01 | 8192264.26 | 8192264.52 | 0.0089 | 0.0018 |
| Uranus | 17718-04-09 02:24 G | 8192524.39 | 8192524.60 | 8192524.82 | 0.0134 | 0.0071 |
| Neptune | 17718-07-25 13:40 G | 8192631.83 | 8192632.07 | 8192632.32 | 0.0089 | 0.0027 |
| Uranus | 17719-04-13 16:19 G | 8192894.04 | 8192894.18 | 8192894.35 | 0.0134 | 0.0108 |
| Neptune | 17719-07-27 19:12 G | 8192999.06 | 8192999.30 | 8192999.55 | 0.0089 | 0.0024 |
| Neptune | 17720-07-29 13:26 G | 8193366.83 | 8193367.06 | 8193367.31 | 0.0089 | 0.0034 |
| Neptune | 17721-07-31 21:07 G | 8193734.15 | 8193734.38 | 8193734.62 | 0.0089 | 0.0030 |
| Neptune | 17722-08-03 11:16 G | 8194101.74 | 8194101.97 | 8194102.22 | 0.0089 | 0.0039 |
| Jupiter | 17722-11-17 10:19 G | 8194207.77 | 8194207.93 | 8194208.09 | 0.0489 | 0.0342 |
| Neptune | 17723-08-05 23:02 G | 8194469.25 | 8194469.46 | 8194469.70 | 0.0089 | 0.0036 |
| Jupiter | 17723-12-17 09:21 G | 8194602.71 | 8194602.89 | 8194603.07 | 0.0484 | 0.0319 |
| Neptune | 17724-08-07 08:52 G | 8194836.65 | 8194836.87 | 8194837.11 | 0.0089 | 0.0045 |
| Neptune | 17725-08-10 01:12 G | 8195204.35 | 8195204.55 | 8195204.80 | 0.0089 | 0.0042 |
| Neptune | 17726-08-12 07:12 G | 8195571.60 | 8195571.80 | 8195572.03 | 0.0089 | 0.0051 |
| Saturn | 17727-05-15 18:57 G | 8195848.05 | 8195848.29 | 8195848.54 | 0.0279 | 0.0074 |
| Neptune | 17727-08-15 01:55 G | 8195939.38 | 8195939.58 | 8195939.82 | 0.0089 | 0.0046 |
| Neptune | 17728-08-16 06:43 G | 8196306.60 | 8196306.78 | 8196307.00 | 0.0089 | 0.0056 |
| Jupiter | 17729-06-01 02:09 G | 8196595.37 | 8196595.59 | 8196595.81 | 0.0542 | 0.0120 |
| Neptune | 17729-08-19 00:43 G | 8196674.33 | 8196674.53 | 8196674.77 | 0.0089 | 0.0050 |
| Neptune | 17730-08-21 07:55 G | 8197041.66 | 8197041.83 | 8197042.03 | 0.0089 | 0.0061 |

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| Neptune | 17731-08-23 21:36 G | 8197409.21 | 8197409.40 | 8197409.63 | 0.0089 | 0.0055 |
| Neptune | 17732-08-25 09:07 G | 8197776.73 | 8197776.88 | 8197777.07 | 0.0089 | 0.0065 |
| Neptune | 17733-08-27 18:57 G | 8198144.10 | 8198144.29 | 8198144.49 | 0.0089 | 0.0059 |
| Neptune | 17734-08-30 11:02 G | 8198511.81 | 8198511.96 | 8198512.13 | 0.0089 | 0.0068 |
| Jupiter | 17734-11-21 20:09 G | 8198595.15 | 8198595.34 | 8198595.54 | 0.0488 | 0.0275 |
| Neptune | 17735-09-01 16:04 G | 8198879.01 | 8198879.17 | 8198879.38 | 0.0089 | 0.0062 |
| Jupiter | 17735-12-21 11:02 G | 8198989.86 | 8198989.96 | 8198990.06 | 0.0484 | 0.0431 |
| Neptune | 17736-09-03 11:02 G | 8199246.81 | 8199246.96 | 8199247.10 | 0.0089 | 0.0072 |
| Neptune | 17737-09-05 14:52 G | 8199613.97 | 8199614.12 | 8199614.31 | 0.0089 | 0.0066 |
| Neptune | 17738-09-08 07:55 G | 8199981.73 | 8199981.83 | 8199982.00 | 0.0089 | 0.0076 |
| Neptune | 17739-09-10 15:07 G | 8200348.98 | 8200349.13 | 8200349.30 | 0.0089 | 0.0068 |
| Neptune | 17740-09-12 03:36 G | 8200716.55 | 8200716.65 | 8200716.81 | 0.0089 | 0.0078 |
| Jupiter | 17741-06-06 15:07 G | 8200983.89 | 8200984.13 | 8200984.37 | 0.0543 | 0.0059 |
| Neptune | 17741-09-14 15:07 G | 8201084.00 | 8201084.13 | 8201084.30 | 0.0089 | 0.0071 |
| Neptune | 17742-09-16 23:31 G | 8201451.38 | 8201451.48 | 8201451.61 | 0.0089 | 0.0080 |
| Saturn | 17742-11-18 04:48 G | 8201513.47 | 8201513.70 | 8201513.94 | 0.0280 | 0.0103 |
| Neptune | 17743-09-19 15:36 G | 8201819.02 | 8201819.15 | 8201819.31 | 0.0089 | 0.0073 |
| Neptune | 17744-09-20 20:52 G | 8202186.28 | 8202186.37 | 8202186.47 | 0.0089 | 0.0082 |
| Neptune | 17745-09-23 14:24 G | 8202553.98 | 8202554.10 | 8202554.26 | 0.0089 | 0.0074 |
| Pluto | 17746-08-13 06:00 G | 8202877.57 | 8202877.75 | 8202877.97 | 0.0064 | 0.0041 |
| Neptune | 17746-09-25 18:28 G | 8202921.21 | 8202921.27 | 8202921.38 | 0.0089 | 0.0084 |
| Jupiter | 17746-11-25 18:14 G | 8202982.04 | 8202982.26 | 8202982.48 | 0.0487 | 0.0158 |
| Pluto | 17747-08-14 12:00 G | 8203243.85 | 8203244.00 | 8203244.19 | 0.0064 | 0.0048 |
| Neptune | 17747-09-28 11:16 G | 8203288.85 | 8203288.97 | 8203289.13 | 0.0089 | 0.0075 |
| Neptune | 17748-09-29 17:45 G | 8203656.19 | 8203656.24 | 8203656.34 | 0.0089 | 0.0085 |
| Neptune | 17749-10-02 06:00 G | 8204023.64 | 8204023.75 | 8204023.91 | 0.0089 | 0.0076 |
| Neptune | 17750-10-04 17:02 G | 8204391.16 | 8204391.21 | 8204391.30 | 0.0089 | 0.0085 |
| Neptune | 17751-10-07 00:14 G | 8204758.41 | 8204758.51 | 8204758.68 | 0.0088 | 0.0076 |
| Neptune | 17752-10-08 16:19 G | 8205126.13 | 8205126.18 | 8205126.28 | 0.0088 | 0.0085 |
| Jupiter | 17753-06-11 17:02 G | 8205372.00 | 8205372.21 | 8205372.42 | 0.0543 | 0.0216 |

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| Neptune | 17753-10-10 20:52 G | 8205493.24 | 8205493.37 | 8205493.51 | 0.0088 | 0.0075 |
| Neptune | 17754-10-13 13:55 G | 8205861.03 | 8205861.08 | 8205861.19 | 0.0088 | 0.0084 |
| Neptune | 17755-10-15 18:14 G | 8206228.14 | 8206228.26 | 8206228.41 | 0.0088 | 0.0075 |
| Saturn | 17756-05-09 00:00 G | 8206434.49 | 8206434.50 | 8206434.51 | 0.0280 | 0.0280 |
| Neptune | 17756-10-17 10:04 G | 8206595.85 | 8206595.92 | 8206596.03 | 0.0088 | 0.0083 |
| Saturn | 17757-05-22 10:19 G | 8206812.76 | 8206812.93 | 8206813.11 | 0.0279 | 0.0191 |
| Uranus | 17757-09-22 13:40 G | 8206935.98 | 8206936.07 | 8206936.16 | 0.0144 | 0.0133 |
| Neptune | 17757-10-19 17:16 G | 8206963.10 | 8206963.22 | 8206963.38 | 0.0088 | 0.0073 |
| Uranus | 17758-09-27 16:33 G | 8207305.99 | 8207306.19 | 8207306.40 | 0.0144 | 0.0085 |
| Neptune | 17758-10-22 04:19 G | 8207330.59 | 8207330.68 | 8207330.81 | 0.0088 | 0.0081 |
| Jupiter | 17758-11-30 04:48 G | 8207369.47 | 8207369.70 | 8207369.93 | 0.0486 | 0.0035 |
| Uranus | 17759-10-02 08:09 G | 8207675.60 | 8207675.84 | 8207676.09 | 0.0144 | 0.0016 |
| Neptune | 17759-10-24 16:19 G | 8207698.05 | 8207698.18 | 8207698.33 | 0.0088 | 0.0072 |
| Uranus | 17760-10-06 13:12 G | 8208045.81 | 8208046.05 | 8208046.29 | 0.0144 | 0.0046 |
| Neptune | 17760-10-25 22:33 G | 8208065.35 | 8208065.44 | 8208065.58 | 0.0088 | 0.0080 |
| Uranus | 17761-10-11 04:33 G | 8208415.52 | 8208415.69 | 8208415.88 | 0.0145 | 0.0100 |
| Neptune | 17761-10-28 14:52 G | 8208432.98 | 8208433.12 | 8208433.29 | 0.0088 | 0.0069 |
| Neptune | 17762-10-30 18:14 G | 8208800.16 | 8208800.26 | 8208800.41 | 0.0088 | 0.0077 |
| Neptune | 17763-11-02 11:31 G | 8209167.83 | 8209167.98 | 8209168.17 | 0.0088 | 0.0067 |
| Neptune | 17764-11-03 15:36 G | 8209535.04 | 8209535.15 | 8209535.31 | 0.0088 | 0.0074 |
| Jupiter | 17765-06-17 07:40 G | 8209760.63 | 8209760.82 | 8209761.01 | 0.0544 | 0.0303 |
| Neptune | 17765-11-06 06:43 G | 8209902.62 | 8209902.78 | 8209902.99 | 0.0088 | 0.0064 |
| Neptune | 17766-11-08 14:24 G | 8210269.97 | 8210270.10 | 8210270.26 | 0.0088 | 0.0071 |
| Neptune | 17767-11-11 00:57 G | 8210637.35 | 8210637.54 | 8210637.73 | 0.0088 | 0.0061 |
| Neptune | 17768-11-12 13:12 G | 8211004.90 | 8211005.05 | 8211005.22 | 0.0088 | 0.0067 |
| Neptune | 17769-11-14 18:57 G | 8211372.10 | 8211372.29 | 8211372.50 | 0.0088 | 0.0056 |
| Neptune | 17770-11-17 11:31 G | 8211739.82 | 8211739.98 | 8211740.17 | 0.0088 | 0.0063 |
| Jupiter | 17770-12-04 02:09 G | 8211756.35 | 8211756.59 | 8211756.83 | 0.0486 | 0.0047 |
| Saturn | 17771-11-13 05:02 G | 8212100.48 | 8212100.71 | 8212100.93 | 0.0279 | 0.0079 |
| Neptune | 17771-11-19 15:07 G | 8212106.93 | 8212107.13 | 8212107.34 | 0.0088 | 0.0052 |

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| Neptune | 17772-11-21 08:09 G | 8212474.66 | 8212474.84 | 8212475.04 | 0.0088 | 0.0059 |
| Neptune | 17773-11-23 12:28 G | 8212841.84 | 8212842.02 | 8212842.25 | 0.0088 | 0.0049 |
| Neptune | 17774-11-26 03:07 G | 8213209.44 | 8213209.63 | 8213209.85 | 0.0088 | 0.0054 |
| Neptune | 17775-11-28 11:31 G | 8213576.78 | 8213576.98 | 8213577.21 | 0.0088 | 0.0044 |
| Jupiter | 17776-05-15 01:55 G | 8213745.50 | 8213745.58 | 8213745.66 | 0.0537 | 0.0504 |
| Neptune | 17776-11-29 20:52 G | 8213944.16 | 8213944.37 | 8213944.60 | 0.0088 | 0.0049 |
| Jupiter | 17777-06-22 09:36 G | 8214148.75 | 8214148.90 | 8214149.06 | 0.0545 | 0.0415 |
| Neptune | 17777-12-02 09:50 G | 8214311.70 | 8214311.91 | 8214312.15 | 0.0088 | 0.0039 |
| Neptune | 17778-12-04 14:52 G | 8214678.91 | 8214679.12 | 8214679.36 | 0.0088 | 0.0045 |
| Neptune | 17779-12-07 07:55 G | 8215046.61 | 8215046.83 | 8215047.08 | 0.0088 | 0.0034 |
| Neptune | 17780-12-08 11:31 G | 8215413.75 | 8215413.98 | 8215414.21 | 0.0088 | 0.0039 |
| Neptune | 17781-12-11 04:19 G | 8215781.44 | 8215781.68 | 8215781.94 | 0.0088 | 0.0028 |
| Jupiter | 17782-12-08 11:45 G | 8216143.77 | 8216143.99 | 8216144.21 | 0.0485 | 0.0104 |
| Neptune | 17782-12-13 09:21 G | 8216148.68 | 8216148.89 | 8216149.14 | 0.0088 | 0.0034 |
| Neptune | 17783-12-15 23:45 G | 8216516.24 | 8216516.49 | 8216516.75 | 0.0088 | 0.0023 |
| Neptune | 17784-12-17 09:21 G | 8216883.66 | 8216883.89 | 8216884.13 | 0.0088 | 0.0028 |
| Neptune | 17785-12-19 17:31 G | 8217250.98 | 8217251.23 | 8217251.51 | 0.0088 | 0.0018 |
| Saturn | 17786-05-16 22:19 G | 8217399.17 | 8217399.43 | 8217399.68 | 0.0279 | 0.0014 |
| Neptune | 17786-12-22 08:09 G | 8217618.60 | 8217618.84 | 8217619.08 | 0.0088 | 0.0022 |
| Neptune | 17787-12-24 12:43 G | 8217985.78 | 8217986.03 | 8217986.29 | 0.0088 | 0.0011 |
| Jupiter | 17788-05-20 03:50 G | 8218133.48 | 8218133.66 | 8218133.85 | 0.0539 | 0.0340 |
| Neptune | 17788-12-26 06:00 G | 8218353.50 | 8218353.75 | 8218354.00 | 0.0088 | 0.0016 |
| Neptune | 17789-12-28 09:36 G | 8218720.65 | 8218720.90 | 8218721.16 | 0.0088 | 0.0006 |
| Mars | 17790-09-05 14:38 G | 8218971.97 | 8218972.11 | 8218972.26 | 0.1784 | 0.1145 |
| Neptune | 17790-12-31 02:09 G | 8219088.34 | 8219088.59 | 8219088.86 | 0.0088 | 0.0011 |
| Neptune | 17792-01-02 08:24 G | 8219455.60 | 8219455.85 | 8219456.10 | 0.0088 | 0.0000 |
| Neptune | 17793-01-03 21:50 G | 8219823.15 | 8219823.41 | 8219823.68 | 0.0088 | 0.0004 |
| Jupiter | 17793-11-12 11:02 G | 8220135.85 | 8220135.96 | 8220136.08 | 0.0491 | 0.0417 |
| Neptune | 17794-01-06 08:24 G | 8220190.60 | 8220190.85 | 8220191.10 | 0.0088 | 0.0006 |
| Jupiter | 17794-12-12 12:57 G | 8220530.81 | 8220531.04 | 8220531.26 | 0.0484 | 0.0188 |

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| Neptune | 17795-01-08 16:33 G | 8220557.93 | 8220558.19 | 8220558.46 | 0.0088 | 0.0002 |
| Neptune | 17796-01-11 07:40 G | 8220925.58 | 8220925.82 | 8220926.08 | 0.0088 | 0.0012 |
| Neptune | 17797-01-12 12:28 G | 8221292.76 | 8221293.02 | 8221293.28 | 0.0088 | 0.0007 |
| Neptune | 17798-01-15 06:14 G | 8221660.52 | 8221660.76 | 8221661.02 | 0.0088 | 0.0018 |
| Uranus | 17798-03-23 18:43 G | 8221728.23 | 8221728.28 | 8221728.37 | 0.0135 | 0.0129 |
| Neptune | 17799-01-17 10:19 G | 8222027.69 | 8222027.93 | 8222028.19 | 0.0088 | 0.0014 |
| Uranus | 17799-03-28 07:40 G | 8222097.63 | 8222097.82 | 8222098.04 | 0.0134 | 0.0087 |
| Neptune | 17800-01-20 03:07 G | 8222395.39 | 8222395.63 | 8222395.90 | 0.0088 | 0.0024 |
| Uranus | 17800-04-01 15:21 G | 8222466.90 | 8222467.14 | 8222467.39 | 0.0134 | 0.0034 |
| Jupiter | 17800-05-26 19:26 G | 8222522.11 | 8222522.31 | 8222522.51 | 0.0541 | 0.0246 |
| Neptune | 17801-01-22 10:19 G | 8222762.69 | 8222762.93 | 8222763.17 | 0.0088 | 0.0020 |
| Uranus | 17801-04-06 04:19 G | 8222836.42 | 8222836.68 | 8222836.94 | 0.0134 | 0.0020 |
| Saturn | 17801-11-20 09:50 G | 8223064.72 | 8223064.91 | 8223065.13 | 0.0280 | 0.0161 |
| Neptune | 17802-01-24 23:16 G | 8223130.23 | 8223130.47 | 8223130.74 | 0.0088 | 0.0029 |
| Uranus | 17802-04-10 10:33 G | 8223205.73 | 8223205.94 | 8223206.17 | 0.0134 | 0.0062 |
| Neptune | 17803-01-27 11:02 G | 8223497.73 | 8223497.96 | 8223498.21 | 0.0088 | 0.0025 |
| Uranus | 17803-04-14 23:31 G | 8223575.40 | 8223575.48 | 8223575.59 | 0.0134 | 0.0124 |
| Neptune | 17804-01-29 19:12 G | 8223865.06 | 8223865.30 | 8223865.55 | 0.0088 | 0.0034 |
| Neptune | 17805-01-31 10:48 G | 8224232.73 | 8224232.95 | 8224233.20 | 0.0088 | 0.0031 |
| Jupiter | 17805-11-17 22:33 G | 8224523.29 | 8224523.44 | 8224523.61 | 0.0489 | 0.0359 |
| Neptune | 17806-02-02 16:04 G | 8224599.94 | 8224600.17 | 8224600.40 | 0.0088 | 0.0040 |
| Jupiter | 17806-12-17 15:21 G | 8224917.97 | 8224918.14 | 8224918.31 | 0.0484 | 0.0316 |
| Neptune | 17807-02-05 10:04 G | 8224967.71 | 8224967.92 | 8224968.17 | 0.0088 | 0.0037 |
| Neptune | 17808-02-07 14:38 G | 8225334.91 | 8225335.11 | 8225335.35 | 0.0088 | 0.0045 |
| Neptune | 17809-02-09 08:24 G | 8225702.62 | 8225702.85 | 8225703.09 | 0.0088 | 0.0042 |
| Neptune | 17810-02-11 15:50 G | 8226069.97 | 8226070.16 | 8226070.38 | 0.0088 | 0.0050 |
| Neptune | 17811-02-14 05:31 G | 8226437.52 | 8226437.73 | 8226437.98 | 0.0088 | 0.0047 |
| Neptune | 17812-02-16 18:00 G | 8226805.06 | 8226805.25 | 8226805.46 | 0.0088 | 0.0055 |
| Jupiter | 17812-06-01 02:24 G | 8226910.37 | 8226910.60 | 8226910.84 | 0.0541 | 0.0143 |
| Neptune | 17813-02-18 02:24 G | 8227172.40 | 8227172.60 | 8227172.83 | 0.0088 | 0.0052 |

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| Neptune | 17814-02-20 18:43 G | 8227540.11 | 8227540.28 | 8227540.49 | 0.0088 | 0.0059 |
| Neptune | 17815-02-23 00:14 G | 8227907.32 | 8227907.51 | 8227907.73 | 0.0088 | 0.0055 |
| Saturn | 17815-05-12 11:02 G | 8227985.82 | 8227985.96 | 8227986.11 | 0.0280 | 0.0221 |
| Neptune | 17816-02-25 19:12 G | 8228275.12 | 8228275.30 | 8228275.49 | 0.0088 | 0.0062 |
| Saturn | 17816-05-24 19:55 G | 8228364.23 | 8228364.33 | 8228364.45 | 0.0279 | 0.0250 |
| Neptune | 17817-02-26 23:45 G | 8228642.32 | 8228642.49 | 8228642.69 | 0.0088 | 0.0061 |
| Jupiter | 17817-11-21 18:43 G | 8228910.09 | 8228910.28 | 8228910.46 | 0.0489 | 0.0292 |
| Neptune | 17818-03-01 17:45 G | 8229010.07 | 8229010.24 | 8229010.42 | 0.0088 | 0.0066 |
| Jupiter | 17818-12-21 23:02 G | 8229305.34 | 8229305.46 | 8229305.58 | 0.0484 | 0.0415 |
| Neptune | 17819-03-04 01:40 G | 8229377.41 | 8229377.57 | 8229377.75 | 0.0088 | 0.0065 |
| Neptune | 17820-03-05 15:36 G | 8229745.01 | 8229745.15 | 8229745.34 | 0.0088 | 0.0069 |
| Neptune | 17821-03-08 04:19 G | 8230112.54 | 8230112.68 | 8230112.87 | 0.0088 | 0.0068 |
| Neptune | 17822-03-10 13:40 G | 8230479.94 | 8230480.07 | 8230480.25 | 0.0088 | 0.0072 |
| Neptune | 17823-03-13 06:57 G | 8230847.65 | 8230847.79 | 8230847.96 | 0.0089 | 0.0071 |
| Neptune | 17824-03-14 12:28 G | 8231214.91 | 8231215.02 | 8231215.19 | 0.0089 | 0.0075 |
| Jupiter | 17824-06-06 06:14 G | 8231298.53 | 8231298.76 | 8231298.98 | 0.0542 | 0.0030 |
| Neptune | 17825-03-17 08:09 G | 8231582.71 | 8231582.84 | 8231582.99 | 0.0089 | 0.0074 |
| Neptune | 17826-03-19 13:26 G | 8231949.95 | 8231950.06 | 8231950.21 | 0.0089 | 0.0076 |
| Neptune | 17827-03-22 07:55 G | 8232317.70 | 8232317.83 | 8232317.98 | 0.0089 | 0.0075 |
| Neptune | 17828-03-23 15:50 G | 8232685.05 | 8232685.16 | 8232685.30 | 0.0089 | 0.0077 |
| Neptune | 17829-03-26 06:43 G | 8233052.66 | 8233052.78 | 8233052.92 | 0.0089 | 0.0077 |
| Jupiter | 17829-11-26 06:43 G | 8233297.57 | 8233297.78 | 8233298.00 | 0.0488 | 0.0169 |
| Neptune | 17830-03-28 19:26 G | 8233420.22 | 8233420.31 | 8233420.45 | 0.0089 | 0.0079 |
| Saturn | 17830-11-15 17:31 G | 8233652.00 | 8233652.23 | 8233652.47 | 0.0279 | 0.0019 |
| Jupiter | 17830-12-25 19:55 G | 8233692.29 | 8233692.33 | 8233692.38 | 0.0484 | 0.0474 |
| Neptune | 17831-03-31 05:16 G | 8233787.63 | 8233787.72 | 8233787.87 | 0.0089 | 0.0079 |
| Neptune | 17832-04-01 22:19 G | 8234155.34 | 8234155.43 | 8234155.57 | 0.0089 | 0.0079 |
| Neptune | 17833-04-04 04:48 G | 8234522.61 | 8234522.70 | 8234522.85 | 0.0089 | 0.0079 |
| Neptune | 17834-04-07 00:43 G | 8234890.43 | 8234890.53 | 8234890.68 | 0.0089 | 0.0078 |
| Neptune | 17835-04-09 06:43 G | 8235257.69 | 8235257.78 | 8235257.91 | 0.0089 | 0.0080 |

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| Pluto | 17836-02-13 04:48 G | 8235567.49 | 8235567.70 | 8235567.95 | 0.0080 | 0.0039 |
| Neptune | 17836-04-11 01:40 G | 8235625.47 | 8235625.57 | 8235625.72 | 0.0089 | 0.0078 |
| Jupiter | 17836-06-11 19:12 G | 8235687.08 | 8235687.30 | 8235687.52 | 0.0544 | 0.0187 |
| Neptune | 17837-04-13 10:04 G | 8235992.83 | 8235992.92 | 8235993.04 | 0.0089 | 0.0080 |
| Neptune | 17838-04-16 01:26 G | 8236360.46 | 8236360.56 | 8236360.73 | 0.0089 | 0.0077 |
| Neptune | 17839-04-18 14:24 G | 8236728.01 | 8236728.10 | 8236728.24 | 0.0089 | 0.0079 |
| Neptune | 17840-04-20 01:12 G | 8237095.43 | 8237095.55 | 8237095.72 | 0.0089 | 0.0076 |
| Neptune | 17841-04-22 18:28 G | 8237463.16 | 8237463.27 | 8237463.40 | 0.0089 | 0.0078 |
| Jupiter | 17841-11-30 05:45 G | 8237684.50 | 8237684.74 | 8237684.98 | 0.0486 | 0.0048 |
| Neptune | 17842-04-25 01:26 G | 8237830.43 | 8237830.56 | 8237830.72 | 0.0089 | 0.0074 |
| Uranus | 17842-09-29 01:40 G | 8237987.35 | 8237987.57 | 8237987.80 | 0.0144 | 0.0070 |
| Neptune | 17843-04-27 21:07 G | 8238198.27 | 8238198.38 | 8238198.53 | 0.0089 | 0.0078 |
| Uranus | 17843-10-03 18:14 G | 8238357.02 | 8238357.26 | 8238357.51 | 0.0144 | 0.0018 |
| Neptune | 17844-04-29 03:07 G | 8238565.50 | 8238565.63 | 8238565.81 | 0.0089 | 0.0072 |
| Uranus | 17844-10-07 22:33 G | 8238727.21 | 8238727.44 | 8238727.69 | 0.0144 | 0.0046 |
| Neptune | 17845-05-01 23:02 G | 8238933.32 | 8238933.46 | 8238933.61 | 0.0089 | 0.0075 |
| Saturn | 17845-05-19 04:33 G | 8238950.45 | 8238950.69 | 8238950.93 | 0.0279 | 0.0048 |
| Uranus | 17845-10-12 14:24 G | 8239096.96 | 8239097.10 | 8239097.26 | 0.0145 | 0.0114 |
| Neptune | 17846-05-04 06:28 G | 8239300.64 | 8239300.77 | 8239300.96 | 0.0089 | 0.0069 |
| Neptune | 17847-05-06 23:16 G | 8239668.34 | 8239668.47 | 8239668.66 | 0.0089 | 0.0073 |
| Neptune | 17848-05-08 12:00 G | 8240035.84 | 8240036.00 | 8240036.18 | 0.0089 | 0.0066 |
| Jupiter | 17848-06-16 23:31 G | 8240075.28 | 8240075.48 | 8240075.69 | 0.0544 | 0.0278 |
| Neptune | 17849-05-11 00:00 G | 8240403.35 | 8240403.50 | 8240403.69 | 0.0089 | 0.0069 |
| Neptune | 17850-05-13 16:33 G | 8240771.03 | 8240771.19 | 8240771.39 | 0.0089 | 0.0062 |
| Neptune | 17851-05-16 00:00 G | 8241138.35 | 8241138.50 | 8241138.70 | 0.0089 | 0.0066 |
| Neptune | 17852-05-17 19:55 G | 8241506.14 | 8241506.33 | 8241506.54 | 0.0089 | 0.0057 |
| Neptune | 17853-05-20 01:40 G | 8241873.41 | 8241873.57 | 8241873.78 | 0.0089 | 0.0063 |
| Jupiter | 17853-12-04 13:55 G | 8242071.85 | 8242072.08 | 8242072.30 | 0.0485 | 0.0030 |
| Neptune | 17854-05-22 21:50 G | 8242241.21 | 8242241.41 | 8242241.64 | 0.0089 | 0.0053 |
| Neptune | 17855-05-25 05:02 G | 8242608.54 | 8242608.71 | 8242608.92 | 0.0089 | 0.0059 |

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| Neptune | 17856-05-26 22:33 G | 8242976.22 | 8242976.44 | 8242976.67 | 0.0089 | 0.0048 |
| Neptune | 17857-05-29 09:50 G | 8243343.73 | 8243343.91 | 8243344.12 | 0.0089 | 0.0054 |
| Neptune | 17858-05-31 23:02 G | 8243711.23 | 8243711.46 | 8243711.70 | 0.0089 | 0.0043 |
| Jupiter | 17859-05-15 20:52 G | 8244060.32 | 8244060.37 | 8244060.45 | 0.0537 | 0.0516 |
| Neptune | 17859-06-03 14:52 G | 8244078.91 | 8244079.12 | 8244079.34 | 0.0089 | 0.0049 |
| Saturn | 17859-11-09 21:50 G | 8244238.28 | 8244238.41 | 8244238.57 | 0.0279 | 0.0227 |
| Neptune | 17860-06-04 22:48 G | 8244446.23 | 8244446.45 | 8244446.71 | 0.0089 | 0.0039 |
| Jupiter | 17860-06-22 16:19 G | 8244464.03 | 8244464.18 | 8244464.33 | 0.0545 | 0.0400 |
| Saturn | 17860-11-21 20:52 G | 8244616.25 | 8244616.37 | 8244616.53 | 0.0280 | 0.0224 |
| Neptune | 17861-06-07 18:14 G | 8244814.06 | 8244814.26 | 8244814.50 | 0.0089 | 0.0045 |
| Neptune | 17862-06-10 00:28 G | 8245181.30 | 8245181.52 | 8245181.78 | 0.0090 | 0.0033 |
| Neptune | 17863-06-12 20:24 G | 8245549.14 | 8245549.35 | 8245549.61 | 0.0090 | 0.0039 |
| Neptune | 17864-06-14 03:21 G | 8245916.41 | 8245916.64 | 8245916.90 | 0.0090 | 0.0027 |
| Neptune | 17865-06-16 21:07 G | 8246284.14 | 8246284.38 | 8246284.64 | 0.0090 | 0.0033 |
| Jupiter | 17865-12-08 16:19 G | 8246458.95 | 8246459.18 | 8246459.42 | 0.0485 | 0.0086 |
| Neptune | 17866-06-19 07:40 G | 8246651.59 | 8246651.82 | 8246652.07 | 0.0090 | 0.0022 |
| Neptune | 17867-06-21 21:07 G | 8247019.13 | 8247019.38 | 8247019.64 | 0.0090 | 0.0027 |
| Neptune | 17868-06-23 12:00 G | 8247386.76 | 8247387.00 | 8247387.25 | 0.0090 | 0.0015 |
| Neptune | 17869-06-25 20:38 G | 8247754.11 | 8247754.36 | 8247754.62 | 0.0090 | 0.0021 |
| Neptune | 17870-06-28 15:21 G | 8248121.89 | 8248122.14 | 8248122.39 | 0.0090 | 0.0009 |
| Jupiter | 17871-05-21 10:48 G | 8248448.79 | 8248448.95 | 8248449.12 | 0.0538 | 0.0360 |
| Neptune | 17871-06-30 21:21 G | 8248489.14 | 8248489.39 | 8248489.65 | 0.0090 | 0.0015 |
| Neptune | 17872-07-02 17:31 G | 8248856.97 | 8248857.23 | 8248857.49 | 0.0090 | 0.0003 |
| Neptune | 17873-07-05 00:00 G | 8249224.25 | 8249224.50 | 8249224.75 | 0.0089 | 0.0009 |
| Saturn | 17874-05-13 22:04 G | 8249537.22 | 8249537.42 | 8249537.63 | 0.0280 | 0.0160 |
| Neptune | 17874-07-07 18:00 G | 8249591.98 | 8249592.25 | 8249592.51 | 0.0089 | 0.0003 |
| Neptune | 17875-07-10 03:36 G | 8249959.40 | 8249959.65 | 8249959.90 | 0.0089 | 0.0002 |
| Neptune | 17876-07-11 17:16 G | 8250326.96 | 8250327.22 | 8250327.49 | 0.0089 | 0.0010 |
| Jupiter | 17876-11-12 20:09 G | 8250451.24 | 8250451.34 | 8250451.45 | 0.0492 | 0.0434 |
| Neptune | 17877-07-14 07:40 G | 8250694.57 | 8250694.82 | 8250695.07 | 0.0089 | 0.0004 |

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| Jupiter | 17877-12-12 16:48 G | 8250845.99 | 8250846.20 | 8250846.41 | 0.0485 | 0.0177 |
| Neptune | 17878-07-16 16:04 G | 8251061.92 | 8251062.17 | 8251062.44 | 0.0089 | 0.0015 |
| Neptune | 17879-07-19 10:04 G | 8251429.67 | 8251429.92 | 8251430.17 | 0.0089 | 0.0010 |
| Neptune | 17880-07-20 15:50 G | 8251796.91 | 8251797.16 | 8251797.41 | 0.0089 | 0.0022 |
| Neptune | 17881-07-23 11:16 G | 8252164.72 | 8252164.97 | 8252165.23 | 0.0089 | 0.0016 |
| Neptune | 17882-07-25 16:48 G | 8252531.97 | 8252532.20 | 8252532.46 | 0.0089 | 0.0027 |
| Uranus | 17883-03-29 16:04 G | 8252778.97 | 8252779.17 | 8252779.40 | 0.0134 | 0.0078 |
| Jupiter | 17883-05-26 14:09 G | 8252836.88 | 8252837.09 | 8252837.30 | 0.0540 | 0.0270 |
| Neptune | 17883-07-28 10:33 G | 8252899.69 | 8252899.94 | 8252900.20 | 0.0089 | 0.0022 |
| Uranus | 17884-04-02 01:26 G | 8253148.32 | 8253148.56 | 8253148.80 | 0.0134 | 0.0032 |
| Neptune | 17884-07-29 19:40 G | 8253267.09 | 8253267.32 | 8253267.55 | 0.0089 | 0.0032 |
| Uranus | 17885-04-06 12:43 G | 8253517.77 | 8253518.03 | 8253518.30 | 0.0134 | 0.0017 |
| Neptune | 17885-08-01 09:36 G | 8253634.65 | 8253634.90 | 8253635.16 | 0.0089 | 0.0028 |
| Uranus | 17886-04-10 20:09 G | 8253887.14 | 8253887.34 | 8253887.55 | 0.0134 | 0.0075 |
| Neptune | 17886-08-03 23:02 G | 8254002.24 | 8254002.46 | 8254002.69 | 0.0089 | 0.0038 |
| Uranus | 17887-04-15 07:12 G | 8254256.68 | 8254256.80 | 8254256.96 | 0.0134 | 0.0114 |
| Neptune | 17887-08-06 07:26 G | 8254369.58 | 8254369.81 | 8254370.07 | 0.0089 | 0.0034 |
| Neptune | 17888-08-08 01:12 G | 8254737.33 | 8254737.55 | 8254737.77 | 0.0089 | 0.0043 |
| Jupiter | 17888-11-16 18:57 G | 8254838.15 | 8254838.29 | 8254838.44 | 0.0490 | 0.0382 |
| Neptune | 17889-08-10 06:00 G | 8255104.54 | 8255104.75 | 8255105.01 | 0.0089 | 0.0039 |
| Saturn | 17889-11-17 03:50 G | 8255203.41 | 8255203.66 | 8255203.90 | 0.0279 | 0.0041 |
| Jupiter | 17889-12-17 00:57 G | 8255233.36 | 8255233.54 | 8255233.73 | 0.0484 | 0.0301 |
| Neptune | 17890-08-13 00:57 G | 8255472.34 | 8255472.54 | 8255472.78 | 0.0089 | 0.0047 |
| Neptune | 17891-08-15 06:14 G | 8255839.55 | 8255839.76 | 8255839.99 | 0.0089 | 0.0043 |
| Neptune | 17892-08-16 23:45 G | 8256207.27 | 8256207.49 | 8256207.70 | 0.0089 | 0.0052 |
| Neptune | 17893-08-19 07:55 G | 8256574.62 | 8256574.83 | 8256575.04 | 0.0089 | 0.0049 |
| Neptune | 17894-08-21 20:24 G | 8256942.17 | 8256942.35 | 8256942.59 | 0.0089 | 0.0057 |
| Jupiter | 17895-05-31 17:31 G | 8257225.01 | 8257225.23 | 8257225.44 | 0.0541 | 0.0170 |
| Neptune | 17895-08-24 09:50 G | 8257309.72 | 8257309.91 | 8257310.12 | 0.0089 | 0.0052 |
| Neptune | 17896-08-25 18:14 G | 8257677.07 | 8257677.26 | 8257677.46 | 0.0089 | 0.0059 |

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| Neptune | 17897-08-28 10:48 G | 8258044.77 | 8258044.95 | 8258045.16 | 0.0089 | 0.0057 |
| Neptune | 17898-08-30 15:36 G | 8258411.99 | 8258412.15 | 8258412.35 | 0.0089 | 0.0064 |
| Neptune | 17899-09-02 09:50 G | 8258779.75 | 8258779.91 | 8258780.13 | 0.0089 | 0.0061 |
| Neptune | 17900-09-04 15:21 G | 8259146.98 | 8259147.14 | 8259147.31 | 0.0089 | 0.0066 |
| Jupiter | 17900-11-22 08:38 G | 8259225.68 | 8259225.86 | 8259226.04 | 0.0489 | 0.0302 |
| Neptune | 17901-09-07 07:40 G | 8259514.65 | 8259514.82 | 8259515.02 | 0.0089 | 0.0063 |
| Jupiter | 17901-12-21 22:48 G | 8259620.33 | 8259620.45 | 8259620.58 | 0.0484 | 0.0401 |
| Neptune | 17902-09-09 14:52 G | 8259881.99 | 8259882.12 | 8259882.31 | 0.0089 | 0.0069 |
| Neptune | 17903-09-12 03:36 G | 8260249.50 | 8260249.65 | 8260249.85 | 0.0089 | 0.0066 |
| Saturn | 17904-05-21 17:45 G | 8260502.02 | 8260502.24 | 8260502.46 | 0.0279 | 0.0109 |
| Neptune | 17904-09-13 16:19 G | 8260617.06 | 8260617.18 | 8260617.35 | 0.0089 | 0.0072 |
| Neptune | 17905-09-15 23:31 G | 8260984.34 | 8260984.48 | 8260984.68 | 0.0089 | 0.0069 |
| Neptune | 17906-09-18 16:33 G | 8261352.06 | 8261352.19 | 8261352.34 | 0.0089 | 0.0073 |
| Jupiter | 17907-06-07 08:38 G | 8261613.62 | 8261613.86 | 8261614.10 | 0.0543 | 0.0014 |
| Neptune | 17907-09-20 20:38 G | 8261719.22 | 8261719.36 | 8261719.53 | 0.0089 | 0.0070 |
| Neptune | 17908-09-22 14:24 G | 8262086.98 | 8262087.10 | 8262087.27 | 0.0089 | 0.0074 |
| Neptune | 17909-09-24 19:12 G | 8262454.17 | 8262454.30 | 8262454.46 | 0.0089 | 0.0072 |
| Neptune | 17910-09-27 10:33 G | 8262821.84 | 8262821.94 | 8262822.11 | 0.0089 | 0.0076 |
| Neptune | 17911-09-29 18:57 G | 8263189.17 | 8263189.29 | 8263189.44 | 0.0089 | 0.0074 |
| Neptune | 17912-10-01 06:43 G | 8263556.66 | 8263556.78 | 8263556.93 | 0.0089 | 0.0076 |
| Jupiter | 17912-11-26 07:12 G | 8263612.58 | 8263612.80 | 8263613.02 | 0.0487 | 0.0180 |
| Neptune | 17913-10-03 19:26 G | 8263924.19 | 8263924.31 | 8263924.46 | 0.0089 | 0.0074 |
| Jupiter | 17913-12-26 08:52 G | 8264007.79 | 8264007.87 | 8264007.95 | 0.0484 | 0.0452 |
| Neptune | 17914-10-06 02:09 G | 8264291.47 | 8264291.59 | 8264291.74 | 0.0089 | 0.0076 |
| Neptune | 17915-10-08 18:57 G | 8264659.15 | 8264659.29 | 8264659.42 | 0.0088 | 0.0074 |
| Neptune | 17916-10-09 21:50 G | 8265026.32 | 8265026.41 | 8265026.57 | 0.0088 | 0.0077 |
| Neptune | 17917-10-12 15:36 G | 8265394.03 | 8265394.15 | 8265394.31 | 0.0088 | 0.0075 |
| Neptune | 17918-10-14 19:40 G | 8265761.22 | 8265761.32 | 8265761.48 | 0.0088 | 0.0076 |
| Saturn | 17918-11-12 10:33 G | 8265789.76 | 8265789.94 | 8265790.13 | 0.0279 | 0.0167 |
| Jupiter | 17919-06-12 13:26 G | 8266001.83 | 8266002.06 | 8266002.28 | 0.0544 | 0.0167 |

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| Neptune | 17919-10-17 11:16 G | 8266128.82 | 8266128.97 | 8266129.12 | 0.0088 | 0.0073 |
| Neptune | 17920-10-18 18:43 G | 8266496.17 | 8266496.28 | 8266496.44 | 0.0088 | 0.0074 |
| Neptune | 17921-10-21 05:31 G | 8266863.59 | 8266863.73 | 8266863.90 | 0.0088 | 0.0072 |
| Neptune | 17922-10-23 18:57 G | 8267231.16 | 8267231.29 | 8267231.44 | 0.0088 | 0.0073 |
| Neptune | 17923-10-26 00:43 G | 8267598.39 | 8267598.53 | 8267598.70 | 0.0088 | 0.0071 |
| Neptune | 17924-10-27 17:02 G | 8267966.09 | 8267966.21 | 8267966.39 | 0.0088 | 0.0071 |
| Jupiter | 17924-11-30 15:50 G | 8267999.94 | 8268000.16 | 8268000.38 | 0.0487 | 0.0062 |
| Uranus | 17925-09-25 09:21 G | 8268298.80 | 8268298.89 | 8268299.02 | 0.0144 | 0.0129 |
| Neptune | 17925-10-29 20:38 G | 8268333.22 | 8268333.36 | 8268333.54 | 0.0088 | 0.0068 |
| Uranus | 17926-09-30 10:48 G | 8268668.73 | 8268668.95 | 8268669.16 | 0.0144 | 0.0080 |
| Neptune | 17926-11-01 14:09 G | 8268700.93 | 8268701.09 | 8268701.27 | 0.0088 | 0.0067 |
| Uranus | 17927-10-05 03:50 G | 8269038.42 | 8269038.66 | 8269038.91 | 0.0144 | 0.0009 |
| Neptune | 17927-11-03 18:14 G | 8269068.12 | 8269068.26 | 8269068.45 | 0.0088 | 0.0066 |
| Uranus | 17928-10-09 07:26 G | 8269408.57 | 8269408.81 | 8269409.06 | 0.0144 | 0.0050 |
| Neptune | 17928-11-05 08:38 G | 8269435.69 | 8269435.86 | 8269436.05 | 0.0088 | 0.0065 |
| Uranus | 17929-10-13 23:31 G | 8269778.33 | 8269778.48 | 8269778.66 | 0.0145 | 0.0108 |
| Neptune | 17929-11-07 16:33 G | 8269803.05 | 8269803.19 | 8269803.38 | 0.0088 | 0.0064 |
| Neptune | 17930-11-10 01:55 G | 8270170.42 | 8270170.58 | 8270170.80 | 0.0088 | 0.0062 |
| Jupiter | 17931-06-18 04:19 G | 8270390.49 | 8270390.68 | 8270390.89 | 0.0543 | 0.0251 |
| Neptune | 17931-11-12 16:04 G | 8270538.00 | 8270538.17 | 8270538.37 | 0.0088 | 0.0060 |
| Neptune | 17932-11-13 20:52 G | 8270905.19 | 8270905.37 | 8270905.59 | 0.0088 | 0.0058 |
| Saturn | 17933-05-16 05:02 G | 8271088.48 | 8271088.71 | 8271088.96 | 0.0280 | 0.0100 |
| Neptune | 17933-11-16 13:40 G | 8271272.90 | 8271273.07 | 8271273.28 | 0.0088 | 0.0057 |
| Neptune | 17934-11-18 17:02 G | 8271640.03 | 8271640.21 | 8271640.42 | 0.0088 | 0.0055 |
| Neptune | 17935-11-21 09:50 G | 8272007.72 | 8272007.91 | 8272008.13 | 0.0088 | 0.0054 |
| Neptune | 17936-11-22 15:21 G | 8272374.93 | 8272375.14 | 8272375.34 | 0.0088 | 0.0050 |
| Jupiter | 17936-12-04 16:48 G | 8272386.95 | 8272387.20 | 8272387.44 | 0.0486 | 0.0007 |
| Neptune | 17937-11-25 04:04 G | 8272742.46 | 8272742.67 | 8272742.90 | 0.0088 | 0.0049 |
| Neptune | 17938-11-27 13:26 G | 8273109.87 | 8273110.06 | 8273110.29 | 0.0088 | 0.0046 |
| Neptune | 17939-11-29 22:04 G | 8273477.21 | 8273477.42 | 8273477.66 | 0.0088 | 0.0045 |

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| Neptune | 17940-12-01 12:28 G | 8273844.82 | 8273845.02 | 8273845.26 | 0.0088 | 0.0042 |
| Neptune | 17941-12-03 17:02 G | 8274211.99 | 8274212.21 | 8274212.45 | 0.0088 | 0.0041 |
| Jupiter | 17942-05-16 01:55 G | 8274375.54 | 8274375.58 | 8274375.63 | 0.0536 | 0.0525 |
| Neptune | 17942-12-06 10:33 G | 8274579.70 | 8274579.94 | 8274580.17 | 0.0088 | 0.0036 |
| Jupiter | 17943-06-23 09:21 G | 8274778.71 | 8274778.89 | 8274779.07 | 0.0544 | 0.0369 |
| Neptune | 17943-12-08 13:26 G | 8274946.84 | 8274947.06 | 8274947.31 | 0.0088 | 0.0036 |
| Neptune | 17944-12-10 06:00 G | 8275314.52 | 8275314.75 | 8275315.01 | 0.0088 | 0.0031 |
| Neptune | 17945-12-12 11:31 G | 8275681.76 | 8275681.98 | 8275682.23 | 0.0088 | 0.0031 |
| Neptune | 17946-12-15 00:14 G | 8276049.26 | 8276049.51 | 8276049.77 | 0.0088 | 0.0026 |
| Neptune | 17947-12-17 10:48 G | 8276416.71 | 8276416.95 | 8276417.19 | 0.0088 | 0.0026 |
| Saturn | 17948-11-19 09:36 G | 8276754.67 | 8276754.90 | 8276755.14 | 0.0279 | 0.0098 |
| Jupiter | 17948-12-08 18:28 G | 8276774.05 | 8276774.27 | 8276774.49 | 0.0485 | 0.0063 |
| Neptune | 17948-12-18 18:28 G | 8276784.02 | 8276784.27 | 8276784.53 | 0.0088 | 0.0021 |
| Neptune | 17949-12-21 10:04 G | 8277151.68 | 8277151.92 | 8277152.17 | 0.0088 | 0.0020 |
| Neptune | 17950-12-23 14:24 G | 8277518.85 | 8277519.10 | 8277519.36 | 0.0088 | 0.0015 |
| Neptune | 17951-12-26 08:09 G | 8277886.58 | 8277886.84 | 8277887.09 | 0.0088 | 0.0015 |
| Neptune | 17952-12-27 11:45 G | 8278253.74 | 8278253.99 | 8278254.25 | 0.0088 | 0.0010 |
| Neptune | 17953-12-30 04:04 G | 8278621.41 | 8278621.67 | 8278621.94 | 0.0088 | 0.0011 |
| Jupiter | 17954-05-20 23:16 G | 8278763.31 | 8278763.47 | 8278763.65 | 0.0538 | 0.0381 |
| Neptune | 17955-01-01 10:33 G | 8278988.69 | 8278988.94 | 8278989.19 | 0.0088 | 0.0004 |
| Neptune | 17956-01-03 22:33 G | 8279356.17 | 8279356.44 | 8279356.71 | 0.0088 | 0.0004 |
| Neptune | 17957-01-05 09:50 G | 8279723.66 | 8279723.91 | 8279724.16 | 0.0088 | 0.0002 |
| Neptune | 17958-01-07 17:16 G | 8280090.95 | 8280091.22 | 8280091.48 | 0.0088 | 0.0002 |
| Neptune | 17959-01-10 09:21 G | 8280458.64 | 8280458.89 | 8280459.14 | 0.0088 | 0.0007 |
| Jupiter | 17959-11-13 19:55 G | 8280766.23 | 8280766.33 | 8280766.42 | 0.0492 | 0.0448 |
| Neptune | 17960-01-12 13:40 G | 8280825.81 | 8280826.07 | 8280826.33 | 0.0088 | 0.0006 |
| Jupiter | 17960-12-13 04:19 G | 8281161.46 | 8281161.68 | 8281161.90 | 0.0485 | 0.0165 |
| Neptune | 17961-01-14 07:26 G | 8281193.56 | 8281193.81 | 8281194.07 | 0.0088 | 0.0014 |
| Neptune | 17962-01-16 12:00 G | 8281560.75 | 8281561.00 | 8281561.25 | 0.0088 | 0.0012 |
| Neptune | 17963-01-19 04:19 G | 8281928.43 | 8281928.68 | 8281928.95 | 0.0088 | 0.0020 |

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| Saturn | 17963-05-24 09:07 G | 8282053.70 | 8282053.88 | 8282054.08 | 0.0279 | 0.0171 |
| Neptune | 17964-01-21 11:45 G | 8282295.75 | 8282295.99 | 8282296.24 | 0.0088 | 0.0017 |
| Neptune | 17965-01-22 23:31 G | 8282663.23 | 8282663.48 | 8282663.74 | 0.0088 | 0.0024 |
| Neptune | 17966-01-25 11:45 G | 8283030.75 | 8283030.99 | 8283031.24 | 0.0088 | 0.0022 |
| Uranus | 17966-03-26 13:55 G | 8283091.00 | 8283091.08 | 8283091.18 | 0.0135 | 0.0124 |
| Jupiter | 17966-05-26 08:09 G | 8283151.66 | 8283151.84 | 8283152.03 | 0.0540 | 0.0295 |
| Neptune | 17967-01-27 18:43 G | 8283398.05 | 8283398.28 | 8283398.55 | 0.0088 | 0.0030 |
| Uranus | 17967-03-30 23:16 G | 8283460.28 | 8283460.47 | 8283460.69 | 0.0134 | 0.0084 |
| Neptune | 17968-01-30 12:00 G | 8283765.76 | 8283766.00 | 8283766.24 | 0.0088 | 0.0027 |
| Uranus | 17968-04-03 09:50 G | 8283829.67 | 8283829.91 | 8283830.16 | 0.0134 | 0.0027 |
| Neptune | 17969-01-31 16:04 G | 8284132.95 | 8284133.17 | 8284133.42 | 0.0088 | 0.0036 |
| Uranus | 17969-04-07 19:40 G | 8284199.06 | 8284199.32 | 8284199.59 | 0.0134 | 0.0023 |
| Neptune | 17970-02-03 10:33 G | 8284500.71 | 8284500.94 | 8284501.19 | 0.0088 | 0.0032 |
| Uranus | 17970-04-12 04:33 G | 8284568.49 | 8284568.69 | 8284568.91 | 0.0134 | 0.0069 |
| Neptune | 17971-02-05 15:21 G | 8284867.93 | 8284868.14 | 8284868.38 | 0.0088 | 0.0040 |
| Uranus | 17971-04-16 14:24 G | 8284938.05 | 8284938.10 | 8284938.19 | 0.0134 | 0.0129 |
| Jupiter | 17971-11-18 08:38 G | 8285153.74 | 8285153.86 | 8285154.00 | 0.0490 | 0.0399 |
| Neptune | 17972-02-08 07:55 G | 8285235.60 | 8285235.83 | 8285236.08 | 0.0088 | 0.0036 |
| Jupiter | 17972-12-17 00:28 G | 8285548.34 | 8285548.52 | 8285548.71 | 0.0484 | 0.0287 |
| Neptune | 17973-02-09 16:04 G | 8285602.96 | 8285603.17 | 8285603.39 | 0.0088 | 0.0045 |
| Neptune | 17974-02-12 04:04 G | 8285970.44 | 8285970.67 | 8285970.92 | 0.0088 | 0.0042 |
| Mars | 17974-03-05 21:36 G | 8285992.21 | 8285992.40 | 8285992.59 | 0.1741 | 0.0120 |
| Neptune | 17975-02-14 17:02 G | 8286338.02 | 8286338.21 | 8286338.43 | 0.0088 | 0.0050 |
| Neptune | 17976-02-17 00:57 G | 8286705.31 | 8286705.54 | 8286705.77 | 0.0088 | 0.0046 |
| Neptune | 17977-02-18 18:14 G | 8287073.07 | 8287073.26 | 8287073.47 | 0.0088 | 0.0054 |
| Saturn | 17977-11-14 02:24 G | 8287341.39 | 8287341.60 | 8287341.83 | 0.0279 | 0.0107 |
| Neptune | 17978-02-20 23:02 G | 8287440.27 | 8287440.46 | 8287440.70 | 0.0088 | 0.0050 |
| Jupiter | 17978-05-31 22:48 G | 8287540.23 | 8287540.45 | 8287540.68 | 0.0541 | 0.0184 |
| Neptune | 17979-02-23 18:00 G | 8287808.07 | 8287808.25 | 8287808.46 | 0.0088 | 0.0059 |
| Neptune | 17980-02-25 23:16 G | 8288175.29 | 8288175.47 | 8288175.70 | 0.0088 | 0.0054 |

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| Neptune | 17981-02-27 16:19 G | 8288543.01 | 8288543.18 | 8288543.39 | 0.0088 | 0.0063 |
| Neptune | 17982-03-02 01:12 G | 8288910.37 | 8288910.55 | 8288910.76 | 0.0088 | 0.0057 |
| Neptune | 17983-03-04 13:12 G | 8289277.90 | 8289278.05 | 8289278.26 | 0.0088 | 0.0066 |
| Jupiter | 17983-11-22 08:09 G | 8289540.66 | 8289540.84 | 8289541.03 | 0.0489 | 0.0312 |
| Neptune | 17984-03-06 02:52 G | 8289645.45 | 8289645.62 | 8289645.82 | 0.0088 | 0.0060 |
| Jupiter | 17984-12-21 11:31 G | 8289935.85 | 8289935.98 | 8289936.13 | 0.0484 | 0.0383 |
| Neptune | 17985-03-08 10:48 G | 8290012.81 | 8290012.95 | 8290013.14 | 0.0088 | 0.0069 |
| Neptune | 17986-03-11 04:48 G | 8290380.55 | 8290380.70 | 8290380.91 | 0.0088 | 0.0063 |
| Neptune | 17987-03-13 10:33 G | 8290747.81 | 8290747.94 | 8290748.11 | 0.0088 | 0.0072 |
| Neptune | 17988-03-15 06:28 G | 8291115.59 | 8291115.77 | 8291115.95 | 0.0089 | 0.0064 |
| Neptune | 17989-03-17 12:00 G | 8291482.88 | 8291483.00 | 8291483.16 | 0.0089 | 0.0074 |
| Neptune | 17990-03-20 06:00 G | 8291850.59 | 8291850.75 | 8291850.94 | 0.0089 | 0.0066 |
| Jupiter | 17990-06-06 01:55 G | 8291928.35 | 8291928.58 | 8291928.82 | 0.0542 | 0.0005 |
| Neptune | 17991-03-22 14:52 G | 8292218.02 | 8292218.12 | 8292218.27 | 0.0089 | 0.0076 |
| Neptune | 17992-03-24 04:04 G | 8292585.52 | 8292585.67 | 8292585.86 | 0.0089 | 0.0068 |
| Saturn | 17992-05-17 12:00 G | 8292639.75 | 8292640.00 | 8292640.25 | 0.0280 | 0.0038 |
| Pluto | 17992-08-15 17:02 G | 8292730.20 | 8292730.21 | 8292730.29 | 0.0064 | 0.0063 |
| Neptune | 17993-03-26 18:00 G | 8292953.13 | 8292953.25 | 8292953.38 | 0.0089 | 0.0077 |
| Pluto | 17993-08-17 11:02 G | 8293096.72 | 8293096.96 | 8293097.20 | 0.0064 | 0.0022 |
| Neptune | 17994-03-29 02:09 G | 8293320.45 | 8293320.59 | 8293320.79 | 0.0089 | 0.0069 |
| Neptune | 17995-03-31 20:24 G | 8293688.25 | 8293688.35 | 8293688.49 | 0.0089 | 0.0078 |
| Mars | 17995-09-04 16:19 G | 8293845.02 | 8293845.18 | 8293845.34 | 0.1800 | 0.0859 |
| Jupiter | 17995-11-26 14:38 G | 8293927.91 | 8293928.11 | 8293928.32 | 0.0488 | 0.0193 |
| Neptune | 17996-04-02 02:24 G | 8294055.46 | 8294055.60 | 8294055.79 | 0.0089 | 0.0069 |
| Jupiter | 17996-12-25 06:57 G | 8294322.68 | 8294322.79 | 8294322.90 | 0.0484 | 0.0429 |
| Neptune | 17997-04-04 22:04 G | 8294423.33 | 8294423.42 | 8294423.57 | 0.0089 | 0.0079 |
| Neptune | 17998-04-07 04:19 G | 8294790.55 | 8294790.68 | 8294790.86 | 0.0089 | 0.0070 |
| Neptune | 17999-04-09 23:02 G | 8295158.35 | 8295158.46 | 8295158.60 | 0.0089 | 0.0078 |
| Neptune | 18000-04-11 08:24 G | 8295525.70 | 8295525.85 | 8295526.01 | 0.0089 | 0.0069 |

19TH MILLENNIUM CE

This is a list of transits of Moon in the 19th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Neptune | 18001-04-13 22:33 | G | 8295893.32 | 8295893.44 | 8295893.59 | 0.0089 | 0.0077 | |
| Neptune | 18002-04-16 11:45 | G | 8296260.86 | 8296260.99 | 8296261.18 | 0.0089 | 0.0069 | |
| Jupiter | 18002-06-11 16:19 | G | 8296316.96 | 8296317.18 | 8296317.41 | 0.0543 | 0.0141 | |
| Neptune | 18003-04-18 21:07 | G | 8296628.28 | 8296628.38 | 8296628.55 | 0.0089 | 0.0077 | |
| Neptune | 18004-04-20 15:21 | G | 8296996.00 | 8296996.14 | 8296996.33 | 0.0089 | 0.0068 | |
| Neptune | 18005-04-22 21:50 | G | 8297363.31 | 8297363.41 | 8297363.58 | 0.0089 | 0.0076 | |
| Neptune | 18006-04-25 18:43 | G | 8297731.10 | 8297731.28 | 8297731.45 | 0.0089 | 0.0066 | |
| Neptune | 18007-04-28 00:28 | G | 8298098.39 | 8298098.52 | 8298098.68 | 0.0089 | 0.0074 | |
| Saturn | 18007-11-21 18:28 | G | 8298306.07 | 8298306.27 | 8298306.47 | 0.0280 | 0.0156 | |
| Jupiter | 18007-11-30 18:14 | G | 8298315.02 | 8298315.26 | 8298315.50 | 0.0487 | 0.0079 | |
| Neptune | 18008-04-29 19:12 | G | 8298466.14 | 8298466.30 | 8298466.51 | 0.0089 | 0.0064 | |
| Neptune | 18009-05-02 04:19 | G | 8298833.55 | 8298833.68 | 8298833.84 | 0.0089 | 0.0072 | |
| Uranus | 18009-09-25 18:43 | G | 8298980.25 | 8298980.28 | 8298980.34 | 0.0144 | 0.0141 | |
| Neptune | 18010-05-04 19:26 | G | 8299201.13 | 8299201.31 | 8299201.52 | 0.0089 | 0.0062 | |
| Uranus | 18010-09-30 18:43 | G | 8299350.06 | 8299350.28 | 8299350.53 | 0.0144 | 0.0065 | |
| Neptune | 18011-05-07 08:38 | G | 8299568.70 | 8299568.86 | 8299569.02 | 0.0089 | 0.0069 | |
| Uranus | 18011-10-05 13:55 | G | 8299719.83 | 8299720.08 | 8299720.32 | 0.0144 | 0.0014 | |
| Neptune | 18012-05-08 18:28 | G | 8299936.10 | 8299936.27 | 8299936.50 | 0.0089 | 0.0060 | |
| Uranus | 18012-10-09 16:19 | G | 8300089.95 | 8300090.18 | 8300090.43 | 0.0144 | 0.0053 | |
| Neptune | 18013-05-11 12:28 | G | 8300303.87 | 8300304.02 | 8300304.22 | 0.0089 | 0.0066 | |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Uranus | 18013-10-14 09:36 G | 8300459.78 | 8300459.90 | 8300460.06 | 0.0145 | 0.0119 |
| Neptune | 18014-05-13 19:40 G | 8300671.14 | 8300671.32 | 8300671.55 | 0.0089 | 0.0057 |
| Jupiter | 18014-06-16 15:50 G | 8300704.95 | 8300705.16 | 8300705.39 | 0.0544 | 0.0224 |
| Neptune | 18015-05-16 16:04 G | 8301039.01 | 8301039.17 | 8301039.38 | 0.0089 | 0.0062 |
| Neptune | 18016-05-17 22:19 G | 8301406.25 | 8301406.43 | 8301406.66 | 0.0089 | 0.0054 |
| Neptune | 18017-05-20 18:14 G | 8301774.07 | 8301774.26 | 8301774.48 | 0.0089 | 0.0058 |
| Neptune | 18018-05-23 02:38 G | 8302141.42 | 8302141.61 | 8302141.84 | 0.0089 | 0.0050 |
| Neptune | 18019-05-25 18:28 G | 8302509.07 | 8302509.27 | 8302509.51 | 0.0089 | 0.0053 |
| Jupiter | 18019-12-04 21:21 G | 8302702.17 | 8302702.39 | 8302702.62 | 0.0486 | 0.0016 |
| Neptune | 18020-05-27 06:57 G | 8302876.59 | 8302876.79 | 8302877.02 | 0.0089 | 0.0045 |
| Saturn | 18021-05-12 14:24 G | 8303226.97 | 8303227.10 | 8303227.24 | 0.0280 | 0.0231 |
| Neptune | 18021-05-29 18:14 G | 8303244.04 | 8303244.26 | 8303244.49 | 0.0089 | 0.0049 |
| Saturn | 18022-05-25 20:38 G | 8303605.23 | 8303605.36 | 8303605.51 | 0.0279 | 0.0233 |
| Neptune | 18022-06-01 11:02 G | 8303611.75 | 8303611.96 | 8303612.19 | 0.0089 | 0.0042 |
| Neptune | 18023-06-03 18:43 G | 8303979.06 | 8303979.28 | 8303979.52 | 0.0089 | 0.0044 |
| Neptune | 18024-06-05 14:38 G | 8304346.89 | 8304347.11 | 8304347.36 | 0.0089 | 0.0037 |
| Neptune | 18025-06-07 21:07 G | 8304714.16 | 8304714.38 | 8304714.62 | 0.0089 | 0.0038 |
| Neptune | 18026-06-10 17:02 G | 8305081.98 | 8305082.21 | 8305082.47 | 0.0089 | 0.0032 |
| Jupiter | 18026-06-22 02:38 G | 8305093.44 | 8305093.61 | 8305093.79 | 0.0544 | 0.0350 |
| Neptune | 18027-06-13 00:57 G | 8305449.32 | 8305449.54 | 8305449.79 | 0.0089 | 0.0033 |
| Neptune | 18028-06-14 18:00 G | 8305817.00 | 8305817.25 | 8305817.51 | 0.0089 | 0.0028 |
| Neptune | 18029-06-17 05:16 G | 8306184.50 | 8306184.72 | 8306184.98 | 0.0090 | 0.0028 |
| Neptune | 18030-06-19 17:02 G | 8306551.96 | 8306552.21 | 8306552.48 | 0.0090 | 0.0022 |
| Neptune | 18031-06-22 09:21 G | 8306919.65 | 8306919.89 | 8306920.14 | 0.0090 | 0.0021 |
| Jupiter | 18031-12-09 06:14 G | 8307089.53 | 8307089.76 | 8307090.00 | 0.0485 | 0.0048 |
| Neptune | 18032-06-23 17:02 G | 8307286.96 | 8307287.21 | 8307287.48 | 0.0090 | 0.0017 |
| Neptune | 18033-06-26 12:43 G | 8307654.78 | 8307655.03 | 8307655.29 | 0.0090 | 0.0015 |
| Neptune | 18034-06-28 18:43 G | 8308022.03 | 8308022.28 | 8308022.54 | 0.0090 | 0.0012 |
| Neptune | 18035-07-01 14:24 G | 8308389.84 | 8308390.10 | 8308390.36 | 0.0090 | 0.0009 |
| Neptune | 18036-07-02 21:36 G | 8308757.15 | 8308757.40 | 8308757.66 | 0.0090 | 0.0006 |

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| Saturn | 18036-11-15 14:24 G | 8308892.86 | 8308893.10 | 8308893.34 | 0.0279 | 0.0046 |
| Jupiter | 18037-05-20 01:26 G | 8309078.41 | 8309078.56 | 8309078.71 | 0.0538 | 0.0401 |
| Neptune | 18037-07-05 14:52 G | 8309124.86 | 8309125.12 | 8309125.39 | 0.0090 | 0.0003 |
| Jupiter | 18038-06-27 19:55 G | 8309482.28 | 8309482.33 | 8309482.38 | 0.0545 | 0.0531 |
| Neptune | 18038-07-08 01:40 G | 8309492.32 | 8309492.57 | 8309492.82 | 0.0089 | 0.0002 |
| Neptune | 18039-07-10 13:40 G | 8309859.81 | 8309860.07 | 8309860.34 | 0.0089 | 0.0003 |
| Neptune | 18040-07-12 05:02 G | 8310227.46 | 8310227.71 | 8310227.96 | 0.0089 | 0.0004 |
| Neptune | 18041-07-14 12:57 G | 8310594.78 | 8310595.04 | 8310595.31 | 0.0089 | 0.0009 |
| Neptune | 18042-07-17 07:55 G | 8310962.58 | 8310962.83 | 8310963.09 | 0.0089 | 0.0010 |
| Jupiter | 18042-11-13 08:09 G | 8311081.78 | 8311081.84 | 8311081.92 | 0.0492 | 0.0465 |
| Neptune | 18043-07-19 13:26 G | 8311329.81 | 8311330.06 | 8311330.32 | 0.0089 | 0.0015 |
| Jupiter | 18043-12-13 03:21 G | 8311476.42 | 8311476.64 | 8311476.86 | 0.0485 | 0.0151 |
| Neptune | 18044-07-21 08:52 G | 8311697.62 | 8311697.87 | 8311698.14 | 0.0089 | 0.0015 |
| Neptune | 18045-07-23 15:36 G | 8312064.90 | 8312065.15 | 8312065.39 | 0.0089 | 0.0021 |
| Neptune | 18046-07-26 08:24 G | 8312432.60 | 8312432.85 | 8312433.11 | 0.0089 | 0.0020 |
| Neptune | 18047-07-28 18:00 G | 8312800.03 | 8312800.25 | 8312800.50 | 0.0089 | 0.0027 |
| Neptune | 18048-07-30 06:14 G | 8313167.52 | 8313167.76 | 8313168.03 | 0.0089 | 0.0026 |
| Jupiter | 18049-05-25 13:12 G | 8313466.86 | 8313467.05 | 8313467.25 | 0.0539 | 0.0316 |
| Neptune | 18049-08-01 20:38 G | 8313535.14 | 8313535.36 | 8313535.60 | 0.0089 | 0.0032 |
| Neptune | 18050-08-04 04:33 G | 8313902.45 | 8313902.69 | 8313902.94 | 0.0089 | 0.0031 |
| Uranus | 18051-03-31 07:55 G | 8314141.62 | 8314141.83 | 8314142.07 | 0.0134 | 0.0072 |
| Saturn | 18051-05-19 23:02 G | 8314191.22 | 8314191.46 | 8314191.71 | 0.0280 | 0.0025 |
| Neptune | 18051-08-06 22:48 G | 8314270.24 | 8314270.45 | 8314270.70 | 0.0089 | 0.0037 |
| Uranus | 18052-04-03 20:09 G | 8314511.09 | 8314511.34 | 8314511.58 | 0.0134 | 0.0030 |
| Neptune | 18052-08-08 04:19 G | 8314637.46 | 8314637.68 | 8314637.93 | 0.0089 | 0.0035 |
| Uranus | 18053-04-08 04:19 G | 8314880.42 | 8314880.68 | 8314880.95 | 0.0134 | 0.0023 |
| Neptune | 18053-08-10 23:16 G | 8315005.26 | 8315005.47 | 8315005.72 | 0.0089 | 0.0043 |
| Uranus | 18054-04-12 14:09 G | 8315249.90 | 8315250.09 | 8315250.30 | 0.0134 | 0.0079 |
| Neptune | 18054-08-13 05:16 G | 8315372.51 | 8315372.72 | 8315372.97 | 0.0089 | 0.0040 |
| Jupiter | 18054-11-17 05:45 G | 8315468.62 | 8315468.74 | 8315468.88 | 0.0491 | 0.0412 |

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| Uranus | 18055-04-16 22:48 G | 8315619.33 | 8315619.45 | 8315619.57 | 0.0134 | 0.0119 |
| Neptune | 18055-08-15 22:04 G | 8315740.22 | 8315740.42 | 8315740.67 | 0.0089 | 0.0048 |
| Jupiter | 18055-12-17 12:28 G | 8315863.83 | 8315864.02 | 8315864.22 | 0.0485 | 0.0276 |
| Neptune | 18056-08-17 07:55 G | 8316107.61 | 8316107.83 | 8316108.05 | 0.0089 | 0.0044 |
| Neptune | 18057-08-19 18:57 G | 8316475.09 | 8316475.29 | 8316475.53 | 0.0089 | 0.0051 |
| Neptune | 18058-08-22 08:52 G | 8316842.67 | 8316842.87 | 8316843.10 | 0.0089 | 0.0047 |
| Neptune | 18059-08-24 16:33 G | 8317209.98 | 8317210.19 | 8317210.39 | 0.0089 | 0.0055 |
| Neptune | 18060-08-26 10:19 G | 8317577.72 | 8317577.93 | 8317578.14 | 0.0089 | 0.0051 |
| Jupiter | 18061-05-30 14:24 G | 8317854.89 | 8317855.10 | 8317855.32 | 0.0540 | 0.0205 |
| Neptune | 18061-08-28 14:52 G | 8317944.94 | 8317945.12 | 8317945.32 | 0.0089 | 0.0059 |
| Neptune | 18062-08-31 09:07 G | 8318312.70 | 8318312.88 | 8318313.11 | 0.0089 | 0.0054 |
| Neptune | 18063-09-02 15:07 G | 8318679.96 | 8318680.13 | 8318680.32 | 0.0089 | 0.0062 |
| Neptune | 18064-09-04 07:26 G | 8319047.62 | 8319047.81 | 8319048.03 | 0.0089 | 0.0056 |
| Neptune | 18065-09-06 16:19 G | 8319415.03 | 8319415.18 | 8319415.36 | 0.0089 | 0.0065 |
| Saturn | 18065-11-10 05:16 G | 8319479.60 | 8319479.72 | 8319479.86 | 0.0279 | 0.0233 |
| Neptune | 18066-09-09 03:36 G | 8319782.47 | 8319782.65 | 8319782.86 | 0.0089 | 0.0059 |
| Jupiter | 18066-11-21 15:21 G | 8319855.98 | 8319856.14 | 8319856.31 | 0.0490 | 0.0325 |
| Saturn | 18066-11-23 07:12 G | 8319857.65 | 8319857.80 | 8319857.95 | 0.0280 | 0.0214 |
| Neptune | 18067-09-11 17:02 G | 8320150.07 | 8320150.21 | 8320150.38 | 0.0089 | 0.0068 |
| Jupiter | 18067-12-21 09:21 G | 8320250.74 | 8320250.89 | 8320251.05 | 0.0484 | 0.0363 |
| Neptune | 18068-09-12 23:16 G | 8320517.31 | 8320517.47 | 8320517.69 | 0.0089 | 0.0062 |
| Neptune | 18069-09-15 16:48 G | 8320885.06 | 8320885.20 | 8320885.37 | 0.0089 | 0.0070 |
| Neptune | 18070-09-17 20:52 G | 8321252.21 | 8321252.37 | 8321252.58 | 0.0089 | 0.0063 |
| Neptune | 18071-09-20 15:21 G | 8321619.99 | 8321620.14 | 8321620.29 | 0.0089 | 0.0071 |
| Neptune | 18072-09-21 20:24 G | 8321987.19 | 8321987.35 | 8321987.53 | 0.0089 | 0.0064 |
| Jupiter | 18073-06-05 00:43 G | 8322243.30 | 8322243.53 | 8322243.76 | 0.0542 | 0.0029 |
| Neptune | 18073-09-24 11:31 G | 8322354.85 | 8322354.98 | 8322355.14 | 0.0089 | 0.0073 |
| Mars | 18074-09-07 11:16 G | 8322702.85 | 8322702.97 | 8322703.09 | 0.1794 | 0.1439 |
| Neptune | 18074-09-26 20:09 G | 8322722.20 | 8322722.34 | 8322722.53 | 0.0089 | 0.0066 |
| Neptune | 18075-09-29 07:12 G | 8323089.65 | 8323089.80 | 8323089.95 | 0.0089 | 0.0073 |

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| Neptune | 18076-09-30 20:09 G | 8323457.19 | 8323457.34 | 8323457.53 | 0.0089 | 0.0066 |
| Neptune | 18077-10-03 02:09 G | 8323824.46 | 8323824.59 | 8323824.75 | 0.0089 | 0.0074 |
| Neptune | 18078-10-05 19:12 G | 8324192.15 | 8324192.30 | 8324192.49 | 0.0089 | 0.0066 |
| Jupiter | 18078-11-25 21:07 G | 8324243.16 | 8324243.38 | 8324243.61 | 0.0488 | 0.0195 |
| Neptune | 18079-10-07 23:02 G | 8324559.34 | 8324559.46 | 8324559.62 | 0.0089 | 0.0075 |
| Jupiter | 18079-12-25 19:26 G | 8324638.19 | 8324638.31 | 8324638.43 | 0.0484 | 0.0411 |
| Saturn | 18080-05-14 02:38 G | 8324778.40 | 8324778.61 | 8324778.81 | 0.0280 | 0.0165 |
| Neptune | 18080-10-09 16:19 G | 8324927.03 | 8324927.18 | 8324927.38 | 0.0088 | 0.0066 |
| Neptune | 18081-10-11 21:36 G | 8325294.28 | 8325294.40 | 8325294.55 | 0.0088 | 0.0074 |
| Pluto | 18082-02-14 12:43 G | 8325419.76 | 8325420.03 | 8325420.29 | 0.0080 | 0.0004 |
| Neptune | 18082-10-14 12:00 G | 8325661.84 | 8325662.00 | 8325662.20 | 0.0088 | 0.0065 |
| Neptune | 18083-10-16 21:36 G | 8326029.26 | 8326029.40 | 8326029.54 | 0.0088 | 0.0073 |
| Neptune | 18084-10-18 06:43 G | 8326396.60 | 8326396.78 | 8326396.97 | 0.0088 | 0.0064 |
| Jupiter | 18085-06-10 04:04 G | 8326631.43 | 8326631.67 | 8326631.90 | 0.0543 | 0.0114 |
| Neptune | 18085-10-20 19:55 G | 8326764.21 | 8326764.33 | 8326764.50 | 0.0088 | 0.0073 |
| Neptune | 18086-10-23 00:57 G | 8327131.38 | 8327131.54 | 8327131.75 | 0.0088 | 0.0063 |
| Neptune | 18087-10-25 18:00 G | 8327499.12 | 8327499.25 | 8327499.43 | 0.0088 | 0.0071 |
| Neptune | 18088-10-26 21:36 G | 8327866.24 | 8327866.40 | 8327866.61 | 0.0088 | 0.0061 |
| Neptune | 18089-10-29 14:24 G | 8328233.96 | 8328234.10 | 8328234.29 | 0.0088 | 0.0068 |
| Neptune | 18090-10-31 20:09 G | 8328601.17 | 8328601.34 | 8328601.54 | 0.0088 | 0.0059 |
| Jupiter | 18090-11-29 23:16 G | 8328630.25 | 8328630.47 | 8328630.69 | 0.0487 | 0.0091 |
| Neptune | 18091-11-03 09:36 G | 8328968.75 | 8328968.90 | 8328969.10 | 0.0088 | 0.0066 |
| Jupiter | 18091-12-29 19:12 G | 8329025.27 | 8329025.30 | 8329025.33 | 0.0484 | 0.0479 |
| Neptune | 18092-11-04 19:26 G | 8329336.14 | 8329336.31 | 8329336.52 | 0.0088 | 0.0057 |
| Uranus | 18093-09-26 03:50 G | 8329661.56 | 8329661.66 | 8329661.79 | 0.0144 | 0.0126 |
| Neptune | 18093-11-07 03:36 G | 8329703.50 | 8329703.65 | 8329703.87 | 0.0088 | 0.0064 |
| Uranus | 18094-10-01 02:09 G | 8330031.38 | 8330031.59 | 8330031.82 | 0.0144 | 0.0077 |
| Neptune | 18094-11-09 18:28 G | 8330071.07 | 8330071.27 | 8330071.47 | 0.0088 | 0.0053 |
| Uranus | 18095-10-05 22:19 G | 8330401.19 | 8330401.43 | 8330401.68 | 0.0144 | 0.0003 |
| Neptune | 18095-11-11 22:19 G | 8330438.26 | 8330438.43 | 8330438.64 | 0.0088 | 0.0060 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Saturn | 18095-11-17 20:38 G | 8330444.10 | 8330444.36 | 8330444.61 | 0.0279 | 0.0012 |
| Uranus | 18096-10-09 23:31 G | 8330771.25 | 8330771.48 | 8330771.73 | 0.0144 | 0.0053 |
| Neptune | 18096-11-13 15:50 G | 8330805.95 | 8330806.16 | 8330806.37 | 0.0088 | 0.0049 |
| Jupiter | 18097-06-15 18:28 G | 8331020.06 | 8331020.27 | 8331020.48 | 0.0544 | 0.0201 |
| Uranus | 18097-10-14 18:00 G | 8331141.11 | 8331141.25 | 8331141.41 | 0.0145 | 0.0114 |
| Neptune | 18097-11-15 18:43 G | 8331173.11 | 8331173.28 | 8331173.49 | 0.0088 | 0.0057 |
| Neptune | 18098-11-18 11:02 G | 8331540.75 | 8331540.96 | 8331541.20 | 0.0088 | 0.0046 |
| Neptune | 18099-11-20 16:48 G | 8331908.02 | 8331908.20 | 8331908.42 | 0.0088 | 0.0053 |
| Neptune | 18100-11-23 05:45 G | 8332275.52 | 8332275.74 | 8332275.98 | 0.0088 | 0.0042 |
| Neptune | 18101-11-25 16:33 G | 8332642.99 | 8332643.19 | 8332643.40 | 0.0088 | 0.0049 |
| Neptune | 18102-11-28 00:14 G | 8333010.28 | 8333010.51 | 8333010.76 | 0.0088 | 0.0038 |
| Jupiter | 18102-12-05 09:21 G | 8333017.66 | 8333017.89 | 8333018.13 | 0.0486 | 0.0033 |
| Neptune | 18103-11-30 15:07 G | 8333377.92 | 8333378.13 | 8333378.35 | 0.0088 | 0.0045 |
| Neptune | 18104-12-01 18:57 G | 8333745.06 | 8333745.29 | 8333745.54 | 0.0088 | 0.0034 |
| Neptune | 18105-12-04 12:00 G | 8334112.79 | 8334113.00 | 8334113.24 | 0.0088 | 0.0041 |
| Neptune | 18106-12-06 15:50 G | 8334479.92 | 8334480.16 | 8334480.40 | 0.0088 | 0.0029 |
| Neptune | 18107-12-09 07:26 G | 8334847.58 | 8334847.81 | 8334848.06 | 0.0088 | 0.0036 |
| Neptune | 18108-12-10 14:09 G | 8335214.85 | 8335215.09 | 8335215.32 | 0.0088 | 0.0025 |
| Jupiter | 18109-06-22 09:07 G | 8335408.69 | 8335408.88 | 8335409.07 | 0.0544 | 0.0333 |
| Neptune | 18109-12-13 01:40 G | 8335582.34 | 8335582.57 | 8335582.83 | 0.0088 | 0.0032 |
| Saturn | 18110-05-22 13:12 G | 8335742.82 | 8335743.05 | 8335743.28 | 0.0279 | 0.0084 |
| Neptune | 18110-12-15 13:12 G | 8335949.82 | 8335950.05 | 8335950.31 | 0.0088 | 0.0021 |
| Neptune | 18111-12-17 20:09 G | 8336317.09 | 8336317.34 | 8336317.59 | 0.0088 | 0.0026 |
| Neptune | 18112-12-19 11:45 G | 8336684.74 | 8336684.99 | 8336685.24 | 0.0088 | 0.0015 |
| Neptune | 18113-12-21 15:21 G | 8337051.90 | 8337052.14 | 8337052.40 | 0.0088 | 0.0022 |
| Jupiter | 18114-12-09 04:19 G | 8337404.45 | 8337404.68 | 8337404.91 | 0.0486 | 0.0033 |
| Neptune | 18114-12-24 08:52 G | 8337419.62 | 8337419.87 | 8337420.13 | 0.0088 | 0.0011 |
| Neptune | 18115-12-26 12:43 G | 8337786.80 | 8337787.03 | 8337787.29 | 0.0088 | 0.0017 |
| Neptune | 18116-12-28 04:19 G | 8338154.42 | 8338154.68 | 8338154.95 | 0.0088 | 0.0005 |
| Neptune | 18117-12-30 12:00 G | 8338521.75 | 8338522.00 | 8338522.25 | 0.0088 | 0.0011 |

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| Neptune | 18119-01-01 23:16 G | 8338889.21 | 8338889.47 | 8338889.74 | 0.0088 | 0.0001 |
| Neptune | 18120-01-04 11:45 G | 8339256.75 | 8339256.99 | 8339257.24 | 0.0088 | 0.0006 |
| Jupiter | 18120-05-20 02:52 G | 8339393.47 | 8339393.62 | 8339393.78 | 0.0537 | 0.0415 |
| Neptune | 18121-01-05 18:14 G | 8339624.00 | 8339624.26 | 8339624.53 | 0.0088 | 0.0005 |
| Jupiter | 18121-06-27 10:19 G | 8339796.85 | 8339796.93 | 8339797.01 | 0.0544 | 0.0507 |
| Neptune | 18122-01-08 10:33 G | 8339991.69 | 8339991.94 | 8339992.20 | 0.0088 | 0.0002 |
| Neptune | 18123-01-10 14:09 G | 8340358.84 | 8340359.09 | 8340359.36 | 0.0088 | 0.0011 |
| Neptune | 18124-01-13 07:55 G | 8340726.57 | 8340726.83 | 8340727.09 | 0.0088 | 0.0005 |
| Saturn | 18124-11-12 15:07 G | 8341030.96 | 8341031.13 | 8341031.32 | 0.0279 | 0.0180 |
| Neptune | 18125-01-14 12:14 G | 8341093.77 | 8341094.01 | 8341094.27 | 0.0088 | 0.0016 |
| Jupiter | 18125-11-13 06:14 G | 8341396.70 | 8341396.76 | 8341396.82 | 0.0493 | 0.0475 |
| Saturn | 18125-11-25 17:31 G | 8341409.17 | 8341409.23 | 8341409.31 | 0.0280 | 0.0267 |
| Neptune | 18126-01-17 03:36 G | 8341461.39 | 8341461.65 | 8341461.92 | 0.0088 | 0.0010 |
| Jupiter | 18126-12-13 16:04 G | 8341791.95 | 8341792.17 | 8341792.39 | 0.0485 | 0.0143 |
| Neptune | 18127-01-19 12:00 G | 8341828.77 | 8341829.00 | 8341829.25 | 0.0088 | 0.0020 |
| Neptune | 18128-01-21 23:02 G | 8342196.21 | 8342196.46 | 8342196.73 | 0.0088 | 0.0015 |
| Neptune | 18129-01-23 12:43 G | 8342563.80 | 8342564.03 | 8342564.28 | 0.0088 | 0.0026 |
| Neptune | 18130-01-25 19:26 G | 8342931.06 | 8342931.31 | 8342931.57 | 0.0088 | 0.0020 |
| Neptune | 18131-01-28 12:14 G | 8343298.79 | 8343299.01 | 8343299.27 | 0.0088 | 0.0031 |
| Neptune | 18132-01-30 16:33 G | 8343665.95 | 8343666.19 | 8343666.45 | 0.0088 | 0.0025 |
| Jupiter | 18132-05-25 00:00 G | 8343781.33 | 8343781.50 | 8343781.68 | 0.0539 | 0.0345 |
| Neptune | 18133-02-01 10:48 G | 8344033.71 | 8344033.95 | 8344034.19 | 0.0088 | 0.0034 |
| Neptune | 18134-02-03 15:50 G | 8344400.93 | 8344401.16 | 8344401.40 | 0.0088 | 0.0029 |
| Uranus | 18134-03-28 08:38 G | 8344453.77 | 8344453.86 | 8344454.00 | 0.0135 | 0.0120 |
| Neptune | 18135-02-06 06:57 G | 8344768.56 | 8344768.79 | 8344769.04 | 0.0088 | 0.0039 |
| Uranus | 18135-04-01 15:21 G | 8344822.95 | 8344823.14 | 8344823.37 | 0.0134 | 0.0081 |
| Neptune | 18136-02-08 15:50 G | 8345135.95 | 8345136.16 | 8345136.40 | 0.0088 | 0.0035 |
| Uranus | 18136-04-05 04:33 G | 8345192.45 | 8345192.69 | 8345192.94 | 0.0134 | 0.0022 |
| Neptune | 18137-02-10 03:21 G | 8345503.41 | 8345503.64 | 8345503.87 | 0.0088 | 0.0044 |
| Uranus | 18137-04-09 11:31 G | 8345561.72 | 8345561.98 | 8345562.24 | 0.0134 | 0.0026 |

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| Jupiter | 18137-11-17 17:31 G | 8345784.13 | 8345784.23 | 8345784.35 | 0.0491 | 0.0423 |
| Neptune | 18138-02-12 17:45 G | 8345871.02 | 8345871.24 | 8345871.47 | 0.0088 | 0.0039 |
| Uranus | 18138-04-13 23:02 G | 8345931.27 | 8345931.46 | 8345931.68 | 0.0134 | 0.0075 |
| Jupiter | 18138-12-17 14:09 G | 8346178.90 | 8346179.09 | 8346179.29 | 0.0484 | 0.0267 |
| Neptune | 18139-02-15 00:14 G | 8346238.29 | 8346238.51 | 8346238.74 | 0.0088 | 0.0047 |
| Uranus | 18139-04-18 06:00 G | 8346300.74 | 8346300.75 | 8346300.80 | 0.0134 | 0.0133 |
| Saturn | 18139-05-17 07:55 G | 8346329.60 | 8346329.83 | 8346330.08 | 0.0280 | 0.0105 |
| Neptune | 18140-02-17 18:14 G | 8346606.04 | 8346606.26 | 8346606.49 | 0.0088 | 0.0043 |
| Neptune | 18141-02-18 23:02 G | 8346973.25 | 8346973.46 | 8346973.67 | 0.0088 | 0.0052 |
| Neptune | 18142-02-21 17:02 G | 8347341.01 | 8347341.21 | 8347341.45 | 0.0088 | 0.0048 |
| Neptune | 18143-02-23 22:48 G | 8347708.27 | 8347708.45 | 8347708.67 | 0.0088 | 0.0056 |
| Neptune | 18144-02-26 14:38 G | 8348075.90 | 8348076.11 | 8348076.34 | 0.0088 | 0.0050 |
| Jupiter | 18144-05-30 15:07 G | 8348169.92 | 8348170.13 | 8348170.34 | 0.0540 | 0.0228 |
| Neptune | 18145-02-28 00:14 G | 8348443.34 | 8348443.51 | 8348443.72 | 0.0088 | 0.0058 |
| Neptune | 18146-03-02 11:45 G | 8348810.79 | 8348810.99 | 8348811.22 | 0.0088 | 0.0053 |
| Neptune | 18147-03-05 02:52 G | 8349178.44 | 8349178.62 | 8349178.81 | 0.0088 | 0.0061 |
| Neptune | 18148-03-06 09:50 G | 8349545.72 | 8349545.91 | 8349546.12 | 0.0088 | 0.0057 |
| Neptune | 18149-03-09 03:50 G | 8349913.50 | 8349913.66 | 8349913.86 | 0.0088 | 0.0064 |
| Jupiter | 18149-11-21 23:31 G | 8350171.30 | 8350171.48 | 8350171.66 | 0.0490 | 0.0326 |
| Neptune | 18150-03-11 08:38 G | 8350280.69 | 8350280.86 | 8350281.08 | 0.0088 | 0.0060 |
| Jupiter | 18150-12-21 22:33 G | 8350566.28 | 8350566.44 | 8350566.60 | 0.0484 | 0.0345 |
| Neptune | 18151-03-14 03:50 G | 8350648.50 | 8350648.66 | 8350648.86 | 0.0088 | 0.0065 |
| Neptune | 18152-03-15 10:04 G | 8351015.75 | 8351015.92 | 8351016.11 | 0.0089 | 0.0062 |
| Neptune | 18153-03-18 02:24 G | 8351383.44 | 8351383.60 | 8351383.79 | 0.0089 | 0.0067 |
| Neptune | 18154-03-20 12:28 G | 8351750.87 | 8351751.02 | 8351751.21 | 0.0089 | 0.0065 |
| Saturn | 18154-11-20 00:14 G | 8351995.28 | 8351995.51 | 8351995.76 | 0.0279 | 0.0066 |
| Neptune | 18155-03-23 00:14 G | 8352118.37 | 8352118.51 | 8352118.71 | 0.0089 | 0.0069 |
| Neptune | 18156-03-24 15:50 G | 8352486.02 | 8352486.16 | 8352486.35 | 0.0089 | 0.0066 |
| Jupiter | 18156-06-04 18:57 G | 8352558.05 | 8352558.29 | 8352558.52 | 0.0542 | 0.0051 |
| Neptune | 18157-03-27 00:00 G | 8352853.35 | 8352853.50 | 8352853.68 | 0.0089 | 0.0069 |

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| Neptune | 18158-03-29 18:28 G | 8353221.12 | 8353221.27 | 8353221.46 | 0.0089 | 0.0067 |
| Neptune | 18159-04-01 00:00 G | 8353588.36 | 8353588.50 | 8353588.68 | 0.0089 | 0.0070 |
| Neptune | 18160-04-02 19:12 G | 8353956.17 | 8353956.30 | 8353956.50 | 0.0089 | 0.0069 |
| Neptune | 18161-04-05 02:09 G | 8354323.45 | 8354323.59 | 8354323.76 | 0.0089 | 0.0070 |
| Jupiter | 18161-11-26 02:09 G | 8354558.38 | 8354558.59 | 8354558.79 | 0.0488 | 0.0198 |
| Neptune | 18162-04-07 19:12 G | 8354691.14 | 8354691.30 | 8354691.48 | 0.0089 | 0.0068 |
| Jupiter | 18162-12-25 23:45 G | 8354953.35 | 8354953.49 | 8354953.63 | 0.0484 | 0.0393 |
| Neptune | 18163-04-10 04:48 G | 8355058.56 | 8355058.70 | 8355058.88 | 0.0089 | 0.0069 |
| Neptune | 18164-04-11 17:31 G | 8355426.09 | 8355426.23 | 8355426.43 | 0.0089 | 0.0068 |
| Neptune | 18165-04-14 09:07 G | 8355793.74 | 8355793.88 | 8355794.06 | 0.0089 | 0.0069 |
| Neptune | 18166-04-16 17:45 G | 8356161.09 | 8356161.24 | 8356161.43 | 0.0089 | 0.0068 |
| Neptune | 18167-04-19 13:12 G | 8356528.89 | 8356529.05 | 8356529.22 | 0.0089 | 0.0067 |
| Neptune | 18168-04-20 18:43 G | 8356896.14 | 8356896.28 | 8356896.48 | 0.0089 | 0.0067 |
| Jupiter | 18168-06-10 11:02 G | 8356946.74 | 8356946.96 | 8356947.18 | 0.0543 | 0.0092 |
| Neptune | 18169-04-23 15:21 G | 8357263.97 | 8357264.14 | 8357264.33 | 0.0089 | 0.0065 |
| Saturn | 18169-05-24 01:12 G | 8357294.34 | 8357294.55 | 8357294.77 | 0.0279 | 0.0143 |
| Neptune | 18170-04-25 22:04 G | 8357631.25 | 8357631.42 | 8357631.59 | 0.0089 | 0.0066 |
| Neptune | 18171-04-28 15:21 G | 8357998.98 | 8357999.14 | 8357999.35 | 0.0089 | 0.0063 |
| Neptune | 18172-04-30 00:57 G | 8358366.39 | 8358366.54 | 8358366.74 | 0.0089 | 0.0065 |
| Neptune | 18173-05-02 14:52 G | 8358733.95 | 8358734.12 | 8358734.34 | 0.0089 | 0.0061 |
| Jupiter | 18173-11-30 10:33 G | 8358945.71 | 8358945.94 | 8358946.18 | 0.0487 | 0.0103 |
| Neptune | 18174-05-05 05:45 G | 8359101.57 | 8359101.74 | 8359101.93 | 0.0089 | 0.0062 |
| Jupiter | 18174-12-30 02:38 G | 8359340.57 | 8359340.61 | 8359340.66 | 0.0484 | 0.0472 |
| Neptune | 18175-05-07 15:21 G | 8359468.95 | 8359469.14 | 8359469.35 | 0.0089 | 0.0058 |
| Neptune | 18176-05-09 10:04 G | 8359836.74 | 8359836.92 | 8359837.12 | 0.0089 | 0.0060 |
| Neptune | 18177-05-11 16:33 G | 8360203.99 | 8360204.19 | 8360204.40 | 0.0089 | 0.0055 |
| Uranus | 18177-09-27 12:14 G | 8360342.95 | 8360343.01 | 8360343.10 | 0.0144 | 0.0137 |
| Neptune | 18178-05-14 12:28 G | 8360571.85 | 8360572.02 | 8360572.24 | 0.0089 | 0.0058 |
| Uranus | 18178-10-02 09:36 G | 8360712.67 | 8360712.90 | 8360713.15 | 0.0144 | 0.0061 |
| Mars | 18179-03-05 12:00 G | 8360866.86 | 8360867.00 | 8360867.15 | 0.1729 | 0.1126 |

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| Neptune | 18179-05-16 19:12 G | 8360939.11 | 8360939.30 | 8360939.52 | 0.0089 | 0.0052 |
| Uranus | 18179-10-07 07:26 G | 8361082.57 | 8361082.81 | 8361083.06 | 0.0144 | 0.0012 |
| Neptune | 18180-05-18 13:55 G | 8361306.89 | 8361307.08 | 8361307.31 | 0.0089 | 0.0055 |
| Jupiter | 18180-06-15 21:07 G | 8361335.16 | 8361335.38 | 8361335.62 | 0.0543 | 0.0174 |
| Uranus | 18180-10-11 07:26 G | 8361452.59 | 8361452.81 | 8361453.06 | 0.0144 | 0.0059 |
| Neptune | 18181-05-20 23:02 G | 8361674.27 | 8361674.46 | 8361674.70 | 0.0089 | 0.0048 |
| Uranus | 18181-10-16 03:36 G | 8361822.53 | 8361822.65 | 8361822.79 | 0.0145 | 0.0122 |
| Neptune | 18182-05-23 13:40 G | 8362041.87 | 8362042.07 | 8362042.31 | 0.0089 | 0.0051 |
| Neptune | 18183-05-26 03:50 G | 8362409.45 | 8362409.66 | 8362409.89 | 0.0089 | 0.0044 |
| Saturn | 18183-11-14 23:45 G | 8362582.28 | 8362582.49 | 8362582.71 | 0.0279 | 0.0130 |
| Neptune | 18184-05-27 13:55 G | 8362776.88 | 8362777.08 | 8362777.33 | 0.0089 | 0.0048 |
| Neptune | 18185-05-30 08:09 G | 8363144.63 | 8363144.84 | 8363145.09 | 0.0089 | 0.0040 |
| Jupiter | 18185-12-04 08:09 G | 8363332.61 | 8363332.84 | 8363333.07 | 0.0487 | 0.0043 |
| Neptune | 18186-06-01 14:52 G | 8363511.91 | 8363512.12 | 8363512.37 | 0.0089 | 0.0044 |
| Neptune | 18187-06-04 11:16 G | 8363879.74 | 8363879.97 | 8363880.22 | 0.0089 | 0.0034 |
| Neptune | 18188-06-05 17:31 G | 8364247.01 | 8364247.23 | 8364247.47 | 0.0089 | 0.0039 |
| Neptune | 18189-06-08 12:43 G | 8364614.78 | 8364615.03 | 8364615.29 | 0.0089 | 0.0029 |
| Neptune | 18190-06-10 21:07 G | 8364982.15 | 8364982.38 | 8364982.62 | 0.0089 | 0.0035 |
| Neptune | 18191-06-13 12:14 G | 8365349.77 | 8365350.01 | 8365350.28 | 0.0089 | 0.0025 |
| Neptune | 18192-06-15 01:40 G | 8365717.35 | 8365717.57 | 8365717.82 | 0.0089 | 0.0030 |
| Jupiter | 18192-06-20 18:57 G | 8365723.11 | 8365723.29 | 8365723.48 | 0.0544 | 0.0304 |
| Neptune | 18193-06-17 12:57 G | 8366084.78 | 8366085.04 | 8366085.30 | 0.0089 | 0.0019 |
| Neptune | 18194-06-20 06:28 G | 8366452.54 | 8366452.77 | 8366453.02 | 0.0089 | 0.0025 |
| Neptune | 18195-06-22 13:40 G | 8366819.82 | 8366820.07 | 8366820.34 | 0.0090 | 0.0014 |
| Neptune | 18196-06-24 09:21 G | 8367187.65 | 8367187.89 | 8367188.16 | 0.0090 | 0.0021 |
| Neptune | 18197-06-26 15:36 G | 8367554.90 | 8367555.15 | 8367555.41 | 0.0090 | 0.0009 |
| Jupiter | 18197-12-08 21:36 G | 8367720.16 | 8367720.40 | 8367720.63 | 0.0486 | 0.0027 |
| Saturn | 18198-05-18 14:09 G | 8367880.85 | 8367881.09 | 8367881.33 | 0.0280 | 0.0048 |
| Neptune | 18198-06-29 10:33 G | 8367922.69 | 8367922.94 | 8367923.21 | 0.0090 | 0.0015 |
| Neptune | 18199-07-01 18:28 G | 8368290.02 | 8368290.27 | 8368290.53 | 0.0090 | 0.0003 |

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| Neptune | 18200-07-04 10:19 G | 8368657.66 | 8368657.93 | 8368658.19 | 0.0090 | 0.0009 |
| Neptune | 18201-07-06 22:19 G | 8369025.18 | 8369025.43 | 8369025.68 | 0.0090 | 0.0002 |
| Neptune | 18202-07-09 09:36 G | 8369392.63 | 8369392.90 | 8369393.17 | 0.0089 | 0.0004 |
| Jupiter | 18203-05-20 17:16 G | 8369708.10 | 8369708.22 | 8369708.35 | 0.0537 | 0.0441 |
| Neptune | 18203-07-12 02:38 G | 8369760.36 | 8369760.61 | 8369760.86 | 0.0089 | 0.0008 |
| Jupiter | 18204-06-27 12:28 G | 8370111.92 | 8370112.02 | 8370112.13 | 0.0544 | 0.0483 |
| Neptune | 18204-07-13 09:50 G | 8370127.65 | 8370127.91 | 8370128.18 | 0.0089 | 0.0002 |
| Neptune | 18205-07-16 05:16 G | 8370495.48 | 8370495.72 | 8370495.98 | 0.0089 | 0.0014 |
| Neptune | 18206-07-18 11:16 G | 8370862.71 | 8370862.97 | 8370863.22 | 0.0089 | 0.0007 |
| Neptune | 18207-07-21 06:14 G | 8371230.52 | 8371230.76 | 8371231.03 | 0.0089 | 0.0019 |
| Neptune | 18208-07-22 13:40 G | 8371597.82 | 8371598.07 | 8371598.32 | 0.0089 | 0.0012 |
| Jupiter | 18208-11-13 19:12 G | 8371712.29 | 8371712.30 | 8371712.32 | 0.0493 | 0.0491 |
| Neptune | 18209-07-25 05:02 G | 8371965.46 | 8371965.71 | 8371965.98 | 0.0089 | 0.0023 |
| Jupiter | 18209-12-13 18:43 G | 8372107.05 | 8372107.28 | 8372107.51 | 0.0485 | 0.0138 |
| Neptune | 18210-07-27 16:19 G | 8372332.94 | 8372333.18 | 8372333.43 | 0.0089 | 0.0017 |
| Neptune | 18211-07-30 03:21 G | 8372700.41 | 8372700.64 | 8372700.91 | 0.0089 | 0.0029 |
| Neptune | 18212-07-31 19:26 G | 8373068.08 | 8373068.31 | 8373068.57 | 0.0089 | 0.0022 |
| Neptune | 18213-08-03 02:38 G | 8373435.37 | 8373435.61 | 8373435.86 | 0.0089 | 0.0033 |
| Saturn | 18213-11-22 06:28 G | 8373546.56 | 8373546.77 | 8373546.99 | 0.0280 | 0.0118 |
| Neptune | 18214-08-05 21:21 G | 8373803.15 | 8373803.39 | 8373803.64 | 0.0089 | 0.0026 |
| Jupiter | 18215-05-26 08:38 G | 8374096.69 | 8374096.86 | 8374097.03 | 0.0539 | 0.0368 |
| Neptune | 18215-08-08 02:38 G | 8374170.39 | 8374170.61 | 8374170.85 | 0.0089 | 0.0037 |
| Neptune | 18216-08-09 21:36 G | 8374538.16 | 8374538.40 | 8374538.65 | 0.0089 | 0.0032 |
| Neptune | 18217-08-12 03:50 G | 8374905.46 | 8374905.66 | 8374905.90 | 0.0089 | 0.0042 |
| Uranus | 18218-03-29 18:43 G | 8375135.24 | 8375135.28 | 8375135.36 | 0.0135 | 0.0131 |
| Neptune | 18218-08-14 19:26 G | 8375273.09 | 8375273.31 | 8375273.57 | 0.0089 | 0.0036 |
| Uranus | 18219-04-03 00:28 G | 8375504.30 | 8375504.52 | 8375504.76 | 0.0134 | 0.0066 |
| Neptune | 18219-08-17 06:00 G | 8375640.55 | 8375640.75 | 8375640.98 | 0.0089 | 0.0046 |
| Uranus | 18220-04-06 14:52 G | 8375873.88 | 8375874.12 | 8375874.37 | 0.0134 | 0.0026 |
| Neptune | 18220-08-18 17:02 G | 8376007.99 | 8376008.21 | 8376008.46 | 0.0089 | 0.0040 |

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| Jupiter | 18220-11-18 01:55 G | 8376099.47 | 8376099.58 | 8376099.70 | 0.0491 | 0.0431 |
| Uranus | 18221-04-10 20:38 G | 8376243.10 | 8376243.36 | 8376243.62 | 0.0134 | 0.0030 |
| Neptune | 18221-08-21 08:24 G | 8376375.66 | 8376375.85 | 8376376.07 | 0.0089 | 0.0050 |
| Jupiter | 18221-12-18 03:36 G | 8376494.46 | 8376494.65 | 8376494.84 | 0.0484 | 0.0261 |
| Uranus | 18222-04-15 09:07 G | 8376612.70 | 8376612.88 | 8376613.09 | 0.0134 | 0.0083 |
| Neptune | 18222-08-23 15:21 G | 8376742.92 | 8376743.14 | 8376743.37 | 0.0089 | 0.0044 |
| Uranus | 18223-04-19 14:24 G | 8376982.04 | 8376982.10 | 8376982.21 | 0.0133 | 0.0126 |
| Neptune | 18223-08-26 09:07 G | 8377110.70 | 8377110.88 | 8377111.11 | 0.0089 | 0.0054 |
| Neptune | 18224-08-27 13:55 G | 8377477.88 | 8377478.08 | 8377478.32 | 0.0089 | 0.0047 |
| Neptune | 18225-08-30 08:09 G | 8377845.65 | 8377845.84 | 8377846.06 | 0.0089 | 0.0055 |
| Neptune | 18226-09-01 14:09 G | 8378212.90 | 8378213.09 | 8378213.32 | 0.0089 | 0.0051 |
| Saturn | 18227-05-14 01:26 G | 8378467.49 | 8378467.56 | 8378467.65 | 0.0280 | 0.0263 |
| Jupiter | 18227-05-31 12:28 G | 8378484.81 | 8378485.02 | 8378485.23 | 0.0540 | 0.0243 |
| Neptune | 18227-09-04 05:02 G | 8378580.53 | 8378580.71 | 8378580.94 | 0.0089 | 0.0058 |
| Saturn | 18228-05-26 05:31 G | 8378845.56 | 8378845.73 | 8378845.92 | 0.0279 | 0.0195 |
| Neptune | 18228-09-05 14:52 G | 8378947.95 | 8378948.12 | 8378948.34 | 0.0089 | 0.0054 |
| Neptune | 18229-09-08 01:26 G | 8379315.39 | 8379315.56 | 8379315.77 | 0.0089 | 0.0061 |
| Neptune | 18230-09-10 16:33 G | 8379683.02 | 8379683.19 | 8379683.41 | 0.0089 | 0.0056 |
| Neptune | 18231-09-12 22:48 G | 8380050.29 | 8380050.45 | 8380050.66 | 0.0089 | 0.0063 |
| Neptune | 18232-09-14 16:48 G | 8380418.03 | 8380418.20 | 8380418.41 | 0.0089 | 0.0058 |
| Jupiter | 18232-11-22 02:52 G | 8380486.46 | 8380486.62 | 8380486.79 | 0.0490 | 0.0331 |
| Neptune | 18233-09-16 20:52 G | 8380785.22 | 8380785.37 | 8380785.57 | 0.0089 | 0.0065 |
| Jupiter | 18233-12-22 03:36 G | 8380881.48 | 8380881.65 | 8380881.83 | 0.0484 | 0.0329 |
| Neptune | 18234-09-19 15:07 G | 8381152.95 | 8381153.13 | 8381153.33 | 0.0089 | 0.0060 |
| Neptune | 18235-09-21 20:52 G | 8381520.22 | 8381520.37 | 8381520.55 | 0.0089 | 0.0066 |
| Neptune | 18236-09-23 10:33 G | 8381887.78 | 8381887.94 | 8381888.16 | 0.0089 | 0.0062 |
| Neptune | 18237-09-25 20:24 G | 8382255.21 | 8382255.35 | 8382255.54 | 0.0089 | 0.0067 |
| Neptune | 18238-09-28 06:00 G | 8382622.58 | 8382622.75 | 8382622.96 | 0.0089 | 0.0062 |
| Jupiter | 18239-06-06 03:07 G | 8382873.41 | 8382873.63 | 8382873.86 | 0.0541 | 0.0064 |
| Pluto | 18239-08-20 22:48 G | 8382949.19 | 8382949.45 | 8382949.72 | 0.0064 | 0.0009 |

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| Neptune | 18239-09-30 20:38 G | 8382990.23 | 8382990.36 | 8382990.55 | 0.0089 | 0.0068 |
| Neptune | 18240-10-02 02:24 G | 8383357.43 | 8383357.60 | 8383357.80 | 0.0089 | 0.0063 |
| Neptune | 18241-10-04 19:55 G | 8383725.19 | 8383725.33 | 8383725.51 | 0.0089 | 0.0068 |
| Neptune | 18242-10-07 00:14 G | 8384092.34 | 8384092.51 | 8384092.69 | 0.0089 | 0.0063 |
| Saturn | 18242-11-17 00:57 G | 8384133.30 | 8384133.54 | 8384133.78 | 0.0279 | 0.0085 |
| Neptune | 18243-10-09 17:16 G | 8384460.07 | 8384460.22 | 8384460.41 | 0.0089 | 0.0067 |
| Neptune | 18244-10-10 23:02 G | 8384827.31 | 8384827.46 | 8384827.65 | 0.0088 | 0.0063 |
| Jupiter | 18244-11-26 14:38 G | 8384873.90 | 8384874.11 | 8384874.33 | 0.0489 | 0.0200 |
| Neptune | 18245-10-13 12:43 G | 8385194.86 | 8385195.03 | 8385195.22 | 0.0088 | 0.0066 |
| Jupiter | 18245-12-26 08:09 G | 8385268.71 | 8385268.84 | 8385268.98 | 0.0484 | 0.0383 |
| Neptune | 18246-10-15 22:33 G | 8385562.28 | 8385562.44 | 8385562.63 | 0.0088 | 0.0063 |
| Neptune | 18247-10-18 06:57 G | 8385929.63 | 8385929.79 | 8385929.98 | 0.0088 | 0.0066 |
| Neptune | 18248-10-19 21:50 G | 8386297.25 | 8386297.41 | 8386297.60 | 0.0088 | 0.0062 |
| Neptune | 18249-10-22 02:24 G | 8386664.44 | 8386664.60 | 8386664.80 | 0.0088 | 0.0064 |
| Neptune | 18250-10-24 19:55 G | 8387032.15 | 8387032.33 | 8387032.53 | 0.0088 | 0.0060 |
| Jupiter | 18251-06-11 04:48 G | 8387261.46 | 8387261.70 | 8387261.95 | 0.0542 | 0.0061 |
| Neptune | 18251-10-26 23:16 G | 8387399.32 | 8387399.47 | 8387399.67 | 0.0088 | 0.0063 |
| Neptune | 18252-10-28 15:36 G | 8387766.99 | 8387767.15 | 8387767.37 | 0.0088 | 0.0060 |
| Neptune | 18253-10-30 22:04 G | 8388134.25 | 8388134.42 | 8388134.61 | 0.0088 | 0.0061 |
| Neptune | 18254-11-02 10:33 G | 8388501.74 | 8388501.94 | 8388502.15 | 0.0088 | 0.0057 |
| Neptune | 18255-11-04 20:52 G | 8388869.20 | 8388869.37 | 8388869.57 | 0.0088 | 0.0058 |
| Neptune | 18256-11-06 04:33 G | 8389236.49 | 8389236.69 | 8389236.90 | 0.0088 | 0.0053 |
| Jupiter | 18256-11-30 13:40 G | 8389260.84 | 8389261.07 | 8389261.30 | 0.0488 | 0.0111 |
| Saturn | 18257-05-21 00:28 G | 8389432.28 | 8389432.52 | 8389432.76 | 0.0280 | 0.0006 |
| Neptune | 18257-11-08 19:40 G | 8389604.14 | 8389604.32 | 8389604.53 | 0.0088 | 0.0055 |
| Jupiter | 18257-12-30 16:04 G | 8389656.11 | 8389656.17 | 8389656.23 | 0.0484 | 0.0466 |
| Mars | 18258-03-08 22:04 G | 8389724.25 | 8389724.42 | 8389724.60 | 0.1735 | 0.0463 |
| Neptune | 18258-11-10 23:31 G | 8389971.30 | 8389971.48 | 8389971.72 | 0.0088 | 0.0053 |
| Neptune | 18259-11-13 17:16 G | 8390339.03 | 8390339.22 | 8390339.44 | 0.0088 | 0.0052 |
| Neptune | 18260-11-14 20:38 G | 8390706.17 | 8390706.36 | 8390706.59 | 0.0088 | 0.0049 |

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| Uranus | 18261-09-28 21:36 G | 8391024.29 | 8391024.40 | 8391024.54 | 0.0144 | 0.0123 |
| Neptune | 18261-11-17 12:43 G | 8391073.83 | 8391074.03 | 8391074.26 | 0.0088 | 0.0048 |
| Uranus | 18262-10-03 17:16 G | 8391394.00 | 8391394.22 | 8391394.45 | 0.0144 | 0.0073 |
| Neptune | 18262-11-19 19:26 G | 8391441.10 | 8391441.31 | 8391441.53 | 0.0088 | 0.0045 |
| Jupiter | 18263-06-16 10:19 G | 8391649.71 | 8391649.93 | 8391650.15 | 0.0543 | 0.0145 |
| Uranus | 18263-10-08 16:19 G | 8391763.93 | 8391764.18 | 8391764.42 | 0.0144 | 0.0003 |
| Neptune | 18263-11-22 06:14 G | 8391808.55 | 8391808.76 | 8391809.01 | 0.0088 | 0.0045 |
| Uranus | 18264-10-12 14:52 G | 8392133.88 | 8392134.12 | 8392134.36 | 0.0144 | 0.0056 |
| Neptune | 18264-11-23 17:31 G | 8392176.03 | 8392176.23 | 8392176.46 | 0.0088 | 0.0043 |
| Uranus | 18265-10-17 12:14 G | 8392503.89 | 8392504.01 | 8392504.15 | 0.0145 | 0.0121 |
| Neptune | 18265-11-26 00:00 G | 8392543.29 | 8392543.50 | 8392543.75 | 0.0088 | 0.0042 |
| Neptune | 18266-11-28 15:50 G | 8392910.95 | 8392911.16 | 8392911.41 | 0.0088 | 0.0039 |
| Neptune | 18267-11-30 19:55 G | 8393278.11 | 8393278.33 | 8393278.57 | 0.0088 | 0.0037 |
| Neptune | 18268-12-02 13:12 G | 8393645.82 | 8393646.05 | 8393646.30 | 0.0088 | 0.0034 |
| Jupiter | 18268-12-05 02:24 G | 8393648.37 | 8393648.60 | 8393648.82 | 0.0487 | 0.0058 |
| Neptune | 18269-12-04 17:16 G | 8394013.00 | 8394013.22 | 8394013.47 | 0.0088 | 0.0033 |
| Neptune | 18270-12-07 08:52 G | 8394380.63 | 8394380.87 | 8394381.13 | 0.0088 | 0.0031 |
| Neptune | 18271-12-09 16:19 G | 8394747.95 | 8394748.18 | 8394748.42 | 0.0088 | 0.0029 |
| Saturn | 18272-11-23 14:09 G | 8395097.90 | 8395098.09 | 8395098.29 | 0.0280 | 0.0164 |
| Neptune | 18272-12-11 02:52 G | 8395115.37 | 8395115.62 | 8395115.88 | 0.0088 | 0.0026 |
| Neptune | 18273-12-13 14:52 G | 8395482.89 | 8395483.12 | 8395483.37 | 0.0088 | 0.0024 |
| Neptune | 18274-12-15 20:38 G | 8395850.11 | 8395850.36 | 8395850.62 | 0.0088 | 0.0021 |
| Jupiter | 18275-06-22 05:31 G | 8396038.54 | 8396038.73 | 8396038.94 | 0.0544 | 0.0289 |
| Neptune | 18275-12-18 13:12 G | 8396217.81 | 8396218.05 | 8396218.30 | 0.0088 | 0.0019 |
| Neptune | 18276-12-19 16:33 G | 8396584.94 | 8396585.19 | 8396585.45 | 0.0088 | 0.0018 |
| Neptune | 18277-12-22 09:50 G | 8396952.66 | 8396952.91 | 8396953.18 | 0.0088 | 0.0015 |
| Neptune | 18278-12-24 14:38 G | 8397319.86 | 8397320.11 | 8397320.36 | 0.0088 | 0.0013 |
| Mars | 18279-09-07 11:45 G | 8397576.82 | 8397576.99 | 8397577.17 | 0.1808 | 0.0468 |
| Neptune | 18279-12-27 05:31 G | 8397687.47 | 8397687.73 | 8397687.99 | 0.0088 | 0.0009 |
| Jupiter | 18280-12-09 00:28 G | 8398035.29 | 8398035.52 | 8398035.76 | 0.0486 | 0.0020 |

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| Neptune | 18280-12-28 13:55 G | 8398054.84 | 8398055.08 | 8398055.33 | 0.0088 | 0.0008 |
| Neptune | 18281-12-31 00:00 G | 8398422.23 | 8398422.50 | 8398422.77 | 0.0088 | 0.0005 |
| Neptune | 18283-01-02 12:57 G | 8398789.80 | 8398790.04 | 8398790.30 | 0.0088 | 0.0004 |
| Neptune | 18284-01-04 18:43 G | 8399157.01 | 8399157.28 | 8399157.54 | 0.0088 | 0.0001 |
| Neptune | 18285-01-06 11:45 G | 8399524.73 | 8399524.99 | 8399525.24 | 0.0088 | 0.0001 |
| Neptune | 18286-01-08 15:07 G | 8399891.88 | 8399892.13 | 8399892.39 | 0.0088 | 0.0006 |
| Saturn | 18286-05-15 04:19 G | 8400018.52 | 8400018.68 | 8400018.85 | 0.0280 | 0.0210 |
| Jupiter | 18286-05-20 05:16 G | 8400023.60 | 8400023.72 | 8400023.85 | 0.0537 | 0.0456 |
| Neptune | 18287-01-11 08:38 G | 8400259.60 | 8400259.86 | 8400260.12 | 0.0088 | 0.0006 |
| Saturn | 18287-05-28 06:57 G | 8400396.68 | 8400396.79 | 8400396.92 | 0.0279 | 0.0244 |
| Jupiter | 18287-06-27 11:02 G | 8400426.85 | 8400426.96 | 8400427.09 | 0.0544 | 0.0465 |
| Neptune | 18288-01-13 13:26 G | 8400626.82 | 8400627.06 | 8400627.32 | 0.0088 | 0.0011 |
| Neptune | 18289-01-15 04:19 G | 8400994.42 | 8400994.68 | 8400994.95 | 0.0088 | 0.0010 |
| Neptune | 18290-01-17 13:26 G | 8401361.83 | 8401362.06 | 8401362.32 | 0.0088 | 0.0015 |
| Neptune | 18291-01-19 23:02 G | 8401729.20 | 8401729.46 | 8401729.72 | 0.0088 | 0.0015 |
| Neptune | 18292-01-22 12:57 G | 8402096.80 | 8402097.04 | 8402097.29 | 0.0088 | 0.0020 |
| Jupiter | 18292-12-13 07:26 G | 8402422.60 | 8402422.81 | 8402423.03 | 0.0485 | 0.0140 |
| Neptune | 18293-01-23 18:28 G | 8402464.02 | 8402464.27 | 8402464.53 | 0.0088 | 0.0020 |
| Neptune | 18294-01-26 12:00 G | 8402831.76 | 8402832.00 | 8402832.26 | 0.0088 | 0.0025 |
| Neptune | 18295-01-28 16:04 G | 8403198.93 | 8403199.17 | 8403199.43 | 0.0088 | 0.0024 |
| Neptune | 18296-01-31 09:36 G | 8403566.67 | 8403566.90 | 8403567.16 | 0.0088 | 0.0029 |
| Neptune | 18297-02-01 15:36 G | 8403933.93 | 8403934.15 | 8403934.41 | 0.0088 | 0.0028 |
| Neptune | 18298-02-04 06:28 G | 8404301.53 | 8404301.77 | 8404302.03 | 0.0088 | 0.0034 |
| Jupiter | 18298-05-25 06:00 G | 8404411.59 | 8404411.75 | 8404411.92 | 0.0538 | 0.0380 |
| Neptune | 18299-02-06 16:48 G | 8404668.97 | 8404669.20 | 8404669.43 | 0.0088 | 0.0032 |
| Neptune | 18300-02-09 01:55 G | 8405036.36 | 8405036.58 | 8405036.84 | 0.0088 | 0.0038 |
| Neptune | 18301-02-11 17:16 G | 8405403.99 | 8405404.22 | 8405404.45 | 0.0088 | 0.0036 |
| Saturn | 18301-11-18 20:52 G | 8405684.12 | 8405684.37 | 8405684.61 | 0.0279 | 0.0044 |
| Neptune | 18302-02-13 22:33 G | 8405771.22 | 8405771.44 | 8405771.68 | 0.0088 | 0.0041 |
| Uranus | 18302-03-31 04:19 G | 8405816.56 | 8405816.68 | 8405816.82 | 0.0135 | 0.0114 |

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| Neptune | 18303-02-16 16:33 G | 8406138.97 | 8406139.19 | 8406139.43 | 0.0088 | 0.0039 |
| Uranus | 18303-04-04 08:24 G | 8406185.65 | 8406185.85 | 8406186.08 | 0.0134 | 0.0077 |
| Jupiter | 18303-11-19 06:14 G | 8406414.67 | 8406414.76 | 8406414.86 | 0.0492 | 0.0444 |
| Neptune | 18304-02-18 20:52 G | 8406506.17 | 8406506.37 | 8406506.60 | 0.0088 | 0.0047 |
| Uranus | 18304-04-08 00:00 G | 8406555.25 | 8406555.50 | 8406555.75 | 0.0134 | 0.0014 |
| Jupiter | 18304-12-18 10:33 G | 8406809.74 | 8406809.94 | 8406810.15 | 0.0485 | 0.0251 |
| Neptune | 18305-02-20 14:52 G | 8406873.91 | 8406874.12 | 8406874.37 | 0.0088 | 0.0043 |
| Uranus | 18305-04-12 04:19 G | 8406924.43 | 8406924.68 | 8406924.94 | 0.0134 | 0.0030 |
| Neptune | 18306-02-22 21:21 G | 8407241.21 | 8407241.39 | 8407241.62 | 0.0088 | 0.0051 |
| Uranus | 18306-04-16 18:43 G | 8407294.09 | 8407294.28 | 8407294.48 | 0.0134 | 0.0082 |
| Neptune | 18307-02-25 12:43 G | 8407608.81 | 8407609.03 | 8407609.27 | 0.0088 | 0.0046 |
| Neptune | 18308-02-28 00:00 G | 8407976.31 | 8407976.50 | 8407976.71 | 0.0088 | 0.0053 |
| Neptune | 18309-03-01 10:04 G | 8408343.70 | 8408343.92 | 8408344.15 | 0.0088 | 0.0049 |
| Neptune | 18310-03-04 01:26 G | 8408711.38 | 8408711.56 | 8408711.76 | 0.0088 | 0.0057 |
| Jupiter | 18310-05-31 15:21 G | 8408799.95 | 8408800.14 | 8408800.34 | 0.0539 | 0.0264 |
| Neptune | 18311-03-06 07:40 G | 8409078.61 | 8409078.82 | 8409079.04 | 0.0088 | 0.0052 |
| Neptune | 18312-03-08 01:55 G | 8409446.41 | 8409446.58 | 8409446.79 | 0.0088 | 0.0060 |
| Neptune | 18313-03-10 06:57 G | 8409813.60 | 8409813.79 | 8409814.01 | 0.0088 | 0.0053 |
| Neptune | 18314-03-13 01:12 G | 8410181.39 | 8410181.55 | 8410181.77 | 0.0088 | 0.0062 |
| Neptune | 18315-03-15 08:09 G | 8410548.67 | 8410548.84 | 8410549.06 | 0.0088 | 0.0056 |
| Jupiter | 18315-11-23 19:40 G | 8410802.15 | 8410802.32 | 8410802.49 | 0.0491 | 0.0331 |
| Neptune | 18316-03-16 23:31 G | 8410916.32 | 8410916.48 | 8410916.70 | 0.0088 | 0.0064 |
| Saturn | 18316-05-23 08:38 G | 8410983.63 | 8410983.86 | 8410984.10 | 0.0280 | 0.0058 |
| Jupiter | 18316-12-22 15:07 G | 8411196.96 | 8411197.13 | 8411197.30 | 0.0484 | 0.0319 |
| Neptune | 18317-03-19 11:16 G | 8411283.80 | 8411283.97 | 8411284.18 | 0.0089 | 0.0058 |
| Neptune | 18318-03-21 21:50 G | 8411651.25 | 8411651.41 | 8411651.61 | 0.0089 | 0.0065 |
| Neptune | 18319-03-24 14:09 G | 8412018.90 | 8412019.09 | 8412019.29 | 0.0089 | 0.0058 |
| Neptune | 18320-03-25 20:38 G | 8412386.20 | 8412386.36 | 8412386.55 | 0.0089 | 0.0066 |
| Neptune | 18321-03-28 15:36 G | 8412753.98 | 8412754.15 | 8412754.37 | 0.0089 | 0.0059 |
| Neptune | 18322-03-30 21:07 G | 8413121.24 | 8413121.38 | 8413121.57 | 0.0089 | 0.0068 |

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| Jupiter | 18322-06-05 19:55 G | 8413188.09 | 8413188.33 | 8413188.57 | 0.0541 | 0.0086 |
| Neptune | 18323-04-02 16:33 G | 8413489.00 | 8413489.19 | 8413489.39 | 0.0089 | 0.0059 |
| Neptune | 18324-04-03 23:31 G | 8413856.33 | 8413856.48 | 8413856.66 | 0.0089 | 0.0068 |
| Neptune | 18325-04-06 15:50 G | 8414223.97 | 8414224.16 | 8414224.37 | 0.0089 | 0.0059 |
| Neptune | 18326-04-09 02:52 G | 8414591.48 | 8414591.62 | 8414591.81 | 0.0089 | 0.0068 |
| Neptune | 18327-04-11 14:38 G | 8414958.92 | 8414959.11 | 8414959.32 | 0.0089 | 0.0059 |
| Jupiter | 18327-11-27 18:14 G | 8415189.06 | 8415189.26 | 8415189.48 | 0.0489 | 0.0210 |
| Pluto | 18328-02-18 22:19 G | 8415272.29 | 8415272.43 | 8415272.58 | 0.0080 | 0.0066 |
| Neptune | 18328-04-13 06:28 G | 8415326.63 | 8415326.77 | 8415326.95 | 0.0089 | 0.0068 |
| Jupiter | 18328-12-26 22:04 G | 8415584.26 | 8415584.42 | 8415584.58 | 0.0484 | 0.0366 |
| Neptune | 18329-04-15 13:26 G | 8415693.89 | 8415694.06 | 8415694.28 | 0.0089 | 0.0059 |
| Neptune | 18330-04-18 09:07 G | 8416061.72 | 8416061.88 | 8416062.06 | 0.0089 | 0.0067 |
| Saturn | 18330-11-13 18:43 G | 8416271.17 | 8416271.28 | 8416271.42 | 0.0278 | 0.0238 |
| Neptune | 18331-04-20 14:52 G | 8416428.93 | 8416429.12 | 8416429.33 | 0.0089 | 0.0057 |
| Saturn | 18331-11-26 16:19 G | 8416649.03 | 8416649.18 | 8416649.36 | 0.0280 | 0.0209 |
| Neptune | 18332-04-22 10:19 G | 8416796.78 | 8416796.93 | 8416797.13 | 0.0089 | 0.0066 |
| Neptune | 18333-04-24 18:00 G | 8417164.06 | 8417164.25 | 8417164.45 | 0.0089 | 0.0056 |
| Neptune | 18334-04-27 11:02 G | 8417531.79 | 8417531.96 | 8417532.15 | 0.0089 | 0.0065 |
| Jupiter | 18334-06-11 04:48 G | 8417576.48 | 8417576.70 | 8417576.93 | 0.0542 | 0.0039 |
| Neptune | 18335-04-29 22:19 G | 8417899.25 | 8417899.43 | 8417899.64 | 0.0089 | 0.0055 |
| Neptune | 18336-05-01 11:02 G | 8418266.78 | 8418266.96 | 8418267.16 | 0.0089 | 0.0062 |
| Neptune | 18337-05-04 02:52 G | 8418634.42 | 8418634.62 | 8418634.83 | 0.0089 | 0.0053 |
| Neptune | 18338-05-06 10:33 G | 8419001.76 | 8419001.94 | 8419002.15 | 0.0089 | 0.0060 |
| Neptune | 18339-05-09 05:45 G | 8419369.54 | 8419369.74 | 8419369.96 | 0.0089 | 0.0051 |
| Jupiter | 18339-12-02 07:55 G | 8419576.61 | 8419576.83 | 8419577.06 | 0.0488 | 0.0123 |
| Neptune | 18340-05-10 11:45 G | 8419736.81 | 8419736.99 | 8419737.20 | 0.0089 | 0.0058 |
| Jupiter | 18340-12-30 20:24 G | 8419971.29 | 8419971.35 | 8419971.42 | 0.0484 | 0.0462 |
| Neptune | 18341-05-13 08:09 G | 8420104.62 | 8420104.84 | 8420105.06 | 0.0089 | 0.0048 |
| Neptune | 18342-05-15 14:52 G | 8420471.93 | 8420472.12 | 8420472.33 | 0.0089 | 0.0055 |
| Neptune | 18343-05-18 08:38 G | 8420839.64 | 8420839.86 | 8420840.10 | 0.0089 | 0.0045 |

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| Neptune | 18344-05-19 19:26 G | 8421207.12 | 8421207.31 | 8421207.53 | 0.0089 | 0.0051 |
| Saturn | 18345-05-17 05:31 G | 8421569.53 | 8421569.73 | 8421569.95 | 0.0280 | 0.0157 |
| Neptune | 18345-05-22 09:07 G | 8421574.66 | 8421574.88 | 8421575.13 | 0.0089 | 0.0042 |
| Uranus | 18345-09-30 07:12 G | 8421705.71 | 8421705.80 | 8421705.91 | 0.0144 | 0.0131 |
| Neptune | 18346-05-25 00:14 G | 8421942.32 | 8421942.51 | 8421942.75 | 0.0089 | 0.0049 |
| Jupiter | 18346-06-17 00:14 G | 8421965.28 | 8421965.51 | 8421965.74 | 0.0543 | 0.0126 |
| Uranus | 18346-10-05 01:40 G | 8422075.34 | 8422075.57 | 8422075.82 | 0.0144 | 0.0056 |
| Neptune | 18347-05-27 09:36 G | 8422309.66 | 8422309.90 | 8422310.15 | 0.0089 | 0.0038 |
| Uranus | 18347-10-10 02:38 G | 8422445.37 | 8422445.61 | 8422445.85 | 0.0144 | 0.0007 |
| Neptune | 18348-05-29 04:19 G | 8422677.47 | 8422677.68 | 8422677.92 | 0.0089 | 0.0044 |
| Uranus | 18348-10-14 00:00 G | 8422815.28 | 8422815.50 | 8422815.74 | 0.0145 | 0.0066 |
| Neptune | 18349-05-31 10:48 G | 8423044.72 | 8423044.95 | 8423045.20 | 0.0089 | 0.0034 |
| Uranus | 18349-10-18 22:48 G | 8423185.35 | 8423185.45 | 8423185.59 | 0.0145 | 0.0127 |
| Neptune | 18350-06-03 06:43 G | 8423412.57 | 8423412.78 | 8423413.04 | 0.0089 | 0.0040 |
| Neptune | 18351-06-05 13:40 G | 8423779.84 | 8423780.07 | 8423780.32 | 0.0089 | 0.0031 |
| Jupiter | 18351-12-06 05:02 G | 8423963.47 | 8423963.71 | 8423963.95 | 0.0487 | 0.0070 |
| Neptune | 18352-06-07 07:40 G | 8424147.60 | 8424147.82 | 8424148.09 | 0.0089 | 0.0036 |
| Neptune | 18353-06-09 18:00 G | 8424515.02 | 8424515.25 | 8424515.49 | 0.0089 | 0.0027 |
| Neptune | 18354-06-12 08:24 G | 8424882.60 | 8424882.85 | 8424883.11 | 0.0089 | 0.0030 |
| Neptune | 18355-06-14 23:02 G | 8425250.21 | 8425250.46 | 8425250.70 | 0.0089 | 0.0022 |
| Neptune | 18356-06-16 07:55 G | 8425617.59 | 8425617.83 | 8425618.10 | 0.0089 | 0.0026 |
| Neptune | 18357-06-19 02:38 G | 8425985.36 | 8425985.61 | 8425985.86 | 0.0089 | 0.0018 |
| Neptune | 18358-06-21 09:07 G | 8426352.63 | 8426352.88 | 8426353.14 | 0.0089 | 0.0021 |
| Jupiter | 18358-06-22 03:07 G | 8426353.43 | 8426353.63 | 8426353.83 | 0.0544 | 0.0273 |
| Neptune | 18359-06-24 05:31 G | 8426720.47 | 8426720.73 | 8426720.99 | 0.0089 | 0.0014 |
| Neptune | 18360-06-25 12:00 G | 8427087.75 | 8427088.00 | 8427088.25 | 0.0090 | 0.0015 |
| Saturn | 18360-11-19 20:09 G | 8427235.10 | 8427235.34 | 8427235.58 | 0.0279 | 0.0004 |
| Neptune | 18361-06-28 06:14 G | 8427455.50 | 8427455.76 | 8427456.03 | 0.0090 | 0.0009 |
| Neptune | 18362-06-30 15:36 G | 8427822.90 | 8427823.15 | 8427823.40 | 0.0090 | 0.0009 |
| Neptune | 18363-07-03 06:28 G | 8428190.51 | 8428190.77 | 8428191.04 | 0.0090 | 0.0005 |

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| Jupiter | 18363-12-10 14:09 G | 8428350.87 | 8428351.09 | 8428351.32 | 0.0486 | 0.0014 |
| Neptune | 18364-07-04 19:55 G | 8428558.09 | 8428558.33 | 8428558.58 | 0.0090 | 0.0005 |
| Neptune | 18365-07-07 05:45 G | 8428925.47 | 8428925.74 | 8428926.01 | 0.0090 | 0.0001 |
| Neptune | 18366-07-09 23:16 G | 8429293.22 | 8429293.47 | 8429293.72 | 0.0090 | 0.0001 |
| Neptune | 18367-07-12 05:45 G | 8429660.48 | 8429660.74 | 8429661.00 | 0.0090 | 0.0006 |
| Neptune | 18368-07-14 01:26 G | 8430028.30 | 8430028.56 | 8430028.82 | 0.0089 | 0.0006 |
| Jupiter | 18369-05-19 20:52 G | 8430338.28 | 8430338.37 | 8430338.49 | 0.0535 | 0.0474 |
| Neptune | 18369-07-16 07:12 G | 8430395.55 | 8430395.80 | 8430396.05 | 0.0089 | 0.0009 |
| Jupiter | 18370-06-27 13:12 G | 8430741.92 | 8430742.05 | 8430742.18 | 0.0544 | 0.0442 |
| Neptune | 18370-07-19 01:55 G | 8430763.32 | 8430763.58 | 8430763.84 | 0.0089 | 0.0011 |
| Neptune | 18371-07-21 10:19 G | 8431130.69 | 8431130.93 | 8431131.19 | 0.0089 | 0.0014 |
| Neptune | 18372-07-23 01:26 G | 8431498.31 | 8431498.56 | 8431498.83 | 0.0089 | 0.0017 |
| Neptune | 18373-07-25 14:24 G | 8431865.86 | 8431866.10 | 8431866.35 | 0.0089 | 0.0019 |
| Neptune | 18374-07-28 00:14 G | 8432233.26 | 8432233.51 | 8432233.78 | 0.0089 | 0.0021 |
| Saturn | 18375-05-25 11:16 G | 8432534.73 | 8432534.97 | 8432535.20 | 0.0280 | 0.0108 |
| Neptune | 18375-07-30 17:02 G | 8432600.98 | 8432601.21 | 8432601.46 | 0.0089 | 0.0023 |
| Jupiter | 18375-12-14 18:28 G | 8432738.04 | 8432738.27 | 8432738.50 | 0.0486 | 0.0136 |
| Neptune | 18376-07-31 23:16 G | 8432968.23 | 8432968.47 | 8432968.73 | 0.0089 | 0.0025 |
| Neptune | 18377-08-03 18:14 G | 8433336.03 | 8433336.26 | 8433336.52 | 0.0089 | 0.0027 |
| Neptune | 18378-08-05 23:45 G | 8433703.26 | 8433703.49 | 8433703.74 | 0.0089 | 0.0031 |
| Neptune | 18379-08-08 18:14 G | 8434071.02 | 8434071.26 | 8434071.51 | 0.0089 | 0.0031 |
| Neptune | 18380-08-10 01:40 G | 8434438.35 | 8434438.57 | 8434438.81 | 0.0089 | 0.0036 |
| Jupiter | 18381-05-25 10:48 G | 8434726.80 | 8434726.95 | 8434727.10 | 0.0537 | 0.0401 |
| Neptune | 18381-08-12 16:33 G | 8434805.96 | 8434806.19 | 8434806.45 | 0.0089 | 0.0034 |
| Jupiter | 18382-07-02 20:52 G | 8435130.35 | 8435130.37 | 8435130.40 | 0.0544 | 0.0540 |
| Neptune | 18382-08-15 04:33 G | 8435173.49 | 8435173.69 | 8435173.93 | 0.0089 | 0.0040 |
| Neptune | 18383-08-17 14:24 G | 8435540.88 | 8435541.10 | 8435541.36 | 0.0089 | 0.0039 |
| Neptune | 18384-08-19 06:57 G | 8435908.59 | 8435908.79 | 8435909.02 | 0.0089 | 0.0044 |
| Neptune | 18385-08-21 12:43 G | 8436275.82 | 8436276.03 | 8436276.28 | 0.0089 | 0.0042 |
| Uranus | 18386-03-31 14:24 G | 8436498.02 | 8436498.10 | 8436498.20 | 0.0135 | 0.0125 |

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| Neptune | 18386-08-24 07:40 G | 8436643.62 | 8436643.82 | 8436644.05 | 0.0089 | 0.0048 |
| Jupiter | 18386-11-18 23:31 G | 8436730.40 | 8436730.48 | 8436730.57 | 0.0493 | 0.0455 |
| Uranus | 18387-04-04 18:00 G | 8436867.03 | 8436867.25 | 8436867.50 | 0.0134 | 0.0060 |
| Neptune | 18387-08-26 12:28 G | 8437010.82 | 8437011.02 | 8437011.26 | 0.0089 | 0.0044 |
| Jupiter | 18387-12-18 21:21 G | 8437125.19 | 8437125.39 | 8437125.58 | 0.0485 | 0.0241 |
| Uranus | 18388-04-08 10:19 G | 8437236.69 | 8437236.93 | 8437237.19 | 0.0134 | 0.0022 |
| Neptune | 18388-08-28 06:00 G | 8437378.56 | 8437378.75 | 8437378.99 | 0.0089 | 0.0050 |
| Uranus | 18389-04-12 13:55 G | 8437605.84 | 8437606.08 | 8437606.34 | 0.0134 | 0.0038 |
| Neptune | 18389-08-30 13:26 G | 8437745.86 | 8437746.06 | 8437746.28 | 0.0089 | 0.0047 |
| Saturn | 18389-11-14 19:40 G | 8437822.15 | 8437822.32 | 8437822.51 | 0.0278 | 0.0190 |
| Uranus | 18390-04-17 04:48 G | 8437975.52 | 8437975.70 | 8437975.90 | 0.0134 | 0.0088 |
| Neptune | 18390-09-02 03:36 G | 8438113.46 | 8438113.65 | 8438113.88 | 0.0089 | 0.0053 |
| Saturn | 18390-11-27 12:14 G | 8438199.93 | 8438200.01 | 8438200.13 | 0.0279 | 0.0255 |
| Uranus | 18391-04-21 08:24 G | 8438344.85 | 8438344.85 | 8438344.87 | 0.0134 | 0.0133 |
| Neptune | 18391-09-04 15:07 G | 8438480.94 | 8438481.13 | 8438481.35 | 0.0089 | 0.0050 |
| Neptune | 18392-09-06 00:43 G | 8438848.33 | 8438848.53 | 8438848.74 | 0.0089 | 0.0055 |
| Jupiter | 18393-05-30 13:55 G | 8439114.87 | 8439115.08 | 8439115.29 | 0.0539 | 0.0274 |
| Neptune | 18393-09-08 16:19 G | 8439215.98 | 8439216.18 | 8439216.39 | 0.0089 | 0.0051 |
| Neptune | 18394-09-10 21:36 G | 8439583.21 | 8439583.40 | 8439583.61 | 0.0089 | 0.0057 |
| Neptune | 18395-09-13 16:04 G | 8439950.97 | 8439951.17 | 8439951.38 | 0.0089 | 0.0052 |
| Neptune | 18396-09-14 20:09 G | 8440318.17 | 8440318.34 | 8440318.54 | 0.0089 | 0.0060 |
| Neptune | 18397-09-17 13:55 G | 8440685.88 | 8440686.08 | 8440686.29 | 0.0089 | 0.0054 |
| Neptune | 18398-09-19 20:09 G | 8441053.19 | 8441053.34 | 8441053.54 | 0.0089 | 0.0062 |
| Jupiter | 18398-11-22 23:31 G | 8441117.31 | 8441117.48 | 8441117.64 | 0.0491 | 0.0338 |
| Neptune | 18399-09-22 10:04 G | 8441420.73 | 8441420.92 | 8441421.14 | 0.0089 | 0.0055 |
| Jupiter | 18399-12-23 05:31 G | 8441512.55 | 8441512.73 | 8441512.92 | 0.0484 | 0.0299 |
| Neptune | 18400-09-23 21:36 G | 8441788.23 | 8441788.40 | 8441788.58 | 0.0089 | 0.0062 |
| Neptune | 18401-09-26 06:00 G | 8442155.56 | 8442155.75 | 8442155.97 | 0.0089 | 0.0056 |
| Neptune | 18402-09-28 21:07 G | 8442523.23 | 8442523.38 | 8442523.58 | 0.0089 | 0.0064 |
| Neptune | 18403-10-01 02:09 G | 8442890.40 | 8442890.59 | 8442890.79 | 0.0089 | 0.0057 |

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| Saturn | 18404-05-18 10:04 G | 8443120.70 | 8443120.92 | 8443121.15 | 0.0280 | 0.0107 |
| Neptune | 18404-10-02 19:26 G | 8443258.16 | 8443258.31 | 8443258.51 | 0.0089 | 0.0065 |
| Jupiter | 18405-06-05 01:55 G | 8443503.36 | 8443503.58 | 8443503.80 | 0.0541 | 0.0093 |
| Neptune | 18405-10-04 23:31 G | 8443625.31 | 8443625.48 | 8443625.70 | 0.0089 | 0.0057 |
| Neptune | 18406-10-07 16:04 G | 8443993.01 | 8443993.17 | 8443993.37 | 0.0089 | 0.0064 |
| Neptune | 18407-10-09 22:33 G | 8444360.27 | 8444360.44 | 8444360.66 | 0.0089 | 0.0057 |
| Neptune | 18408-10-11 11:31 G | 8444727.81 | 8444727.98 | 8444728.18 | 0.0088 | 0.0064 |
| Neptune | 18409-10-13 23:16 G | 8445095.30 | 8445095.47 | 8445095.68 | 0.0088 | 0.0057 |
| Neptune | 18410-10-16 07:12 G | 8445462.63 | 8445462.80 | 8445462.99 | 0.0088 | 0.0063 |
| Jupiter | 18410-11-27 11:45 G | 8445504.79 | 8445504.99 | 8445505.20 | 0.0489 | 0.0215 |
| Neptune | 18411-10-18 22:48 G | 8445830.27 | 8445830.45 | 8445830.66 | 0.0088 | 0.0055 |
| Jupiter | 18411-12-27 02:24 G | 8445899.45 | 8445899.60 | 8445899.76 | 0.0484 | 0.0355 |
| Neptune | 18412-10-20 02:52 G | 8446197.45 | 8446197.62 | 8446197.81 | 0.0088 | 0.0062 |
| Neptune | 18413-10-22 20:09 G | 8446565.16 | 8446565.34 | 8446565.57 | 0.0088 | 0.0053 |
| Neptune | 18414-10-25 00:28 G | 8446932.34 | 8446932.52 | 8446932.70 | 0.0088 | 0.0061 |
| Neptune | 18415-10-27 16:04 G | 8447299.96 | 8447300.17 | 8447300.38 | 0.0088 | 0.0052 |
| Neptune | 18416-10-28 22:33 G | 8447667.27 | 8447667.44 | 8447667.64 | 0.0088 | 0.0059 |
| Jupiter | 18417-06-10 17:45 G | 8447892.00 | 8447892.24 | 8447892.48 | 0.0542 | 0.0023 |
| Neptune | 18417-10-31 10:33 G | 8448034.73 | 8448034.94 | 8448035.16 | 0.0088 | 0.0050 |
| Neptune | 18418-11-02 22:33 G | 8448402.25 | 8448402.44 | 8448402.63 | 0.0088 | 0.0057 |
| Neptune | 18419-11-05 05:02 G | 8448769.50 | 8448769.71 | 8448769.95 | 0.0088 | 0.0048 |
| Saturn | 18419-11-21 23:16 G | 8448786.24 | 8448786.47 | 8448786.71 | 0.0279 | 0.0044 |
| Neptune | 18420-11-06 20:52 G | 8449137.19 | 8449137.37 | 8449137.59 | 0.0088 | 0.0055 |
| Neptune | 18421-11-09 00:43 G | 8449504.33 | 8449504.53 | 8449504.76 | 0.0088 | 0.0045 |
| Neptune | 18422-11-11 18:14 G | 8449872.06 | 8449872.26 | 8449872.48 | 0.0088 | 0.0052 |
| Jupiter | 18422-12-01 11:31 G | 8449891.75 | 8449891.98 | 8449892.21 | 0.0488 | 0.0137 |
| Neptune | 18423-11-13 22:04 G | 8450239.21 | 8450239.42 | 8450239.66 | 0.0088 | 0.0042 |
| Jupiter | 18423-12-31 14:38 G | 8450287.05 | 8450287.11 | 8450287.18 | 0.0484 | 0.0461 |
| Neptune | 18424-11-15 12:57 G | 8450606.84 | 8450607.04 | 8450607.28 | 0.0088 | 0.0049 |
| Neptune | 18425-11-17 20:38 G | 8450974.15 | 8450974.36 | 8450974.59 | 0.0088 | 0.0039 |

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| Neptune | 18426-11-20 06:57 G | 8451341.58 | 8451341.79 | 8451342.03 | 0.0088 | 0.0046 |
| Neptune | 18427-11-22 19:55 G | 8451709.11 | 8451709.33 | 8451709.56 | 0.0088 | 0.0036 |
| Neptune | 18428-11-24 01:26 G | 8452076.35 | 8452076.56 | 8452076.81 | 0.0088 | 0.0043 |
| Jupiter | 18429-06-15 14:24 G | 8452279.88 | 8452280.10 | 8452280.33 | 0.0542 | 0.0104 |
| Uranus | 18429-09-30 18:00 G | 8452387.13 | 8452387.25 | 8452387.40 | 0.0144 | 0.0118 |
| Neptune | 18429-11-26 18:00 G | 8452444.02 | 8452444.25 | 8452444.49 | 0.0088 | 0.0032 |
| Uranus | 18430-10-05 11:16 G | 8452756.75 | 8452756.97 | 8452757.21 | 0.0144 | 0.0067 |
| Neptune | 18430-11-28 21:07 G | 8452811.17 | 8452811.38 | 8452811.62 | 0.0088 | 0.0039 |
| Uranus | 18431-10-10 13:12 G | 8453126.80 | 8453127.05 | 8453127.29 | 0.0144 | 0.0010 |
| Neptune | 18431-12-01 14:24 G | 8453178.86 | 8453179.10 | 8453179.35 | 0.0088 | 0.0028 |
| Uranus | 18432-10-14 08:52 G | 8453496.65 | 8453496.87 | 8453497.13 | 0.0145 | 0.0062 |
| Neptune | 18432-12-02 18:28 G | 8453546.05 | 8453546.27 | 8453546.51 | 0.0088 | 0.0036 |
| Uranus | 18433-10-19 09:21 G | 8453866.80 | 8453866.89 | 8453867.01 | 0.0145 | 0.0130 |
| Neptune | 18433-12-05 08:52 G | 8453913.62 | 8453913.87 | 8453914.13 | 0.0088 | 0.0025 |
| Saturn | 18434-05-26 09:07 G | 8454085.67 | 8454085.88 | 8454086.09 | 0.0280 | 0.0154 |
| Jupiter | 18434-12-05 20:24 G | 8454279.13 | 8454279.35 | 8454279.57 | 0.0488 | 0.0088 |
| Neptune | 18434-12-07 16:48 G | 8454280.99 | 8454281.20 | 8454281.45 | 0.0088 | 0.0032 |
| Neptune | 18435-12-10 02:38 G | 8454648.37 | 8454648.61 | 8454648.88 | 0.0088 | 0.0021 |
| Neptune | 18436-12-11 16:33 G | 8455015.96 | 8455016.19 | 8455016.43 | 0.0088 | 0.0027 |
| Neptune | 18437-12-13 21:36 G | 8455383.16 | 8455383.40 | 8455383.67 | 0.0088 | 0.0017 |
| Neptune | 18438-12-16 14:24 G | 8455750.86 | 8455751.10 | 8455751.36 | 0.0088 | 0.0024 |
| Neptune | 18439-12-18 17:45 G | 8456117.99 | 8456118.24 | 8456118.50 | 0.0088 | 0.0013 |
| Neptune | 18440-12-20 10:48 G | 8456485.70 | 8456485.95 | 8456486.21 | 0.0088 | 0.0019 |
| Jupiter | 18441-06-21 06:00 G | 8456668.56 | 8456668.75 | 8456668.96 | 0.0543 | 0.0255 |
| Neptune | 18441-12-22 15:36 G | 8456852.91 | 8456853.15 | 8456853.41 | 0.0088 | 0.0008 |
| Neptune | 18442-12-25 04:48 G | 8457220.45 | 8457220.70 | 8457220.98 | 0.0088 | 0.0015 |
| Neptune | 18443-12-27 14:09 G | 8457587.84 | 8457588.09 | 8457588.34 | 0.0088 | 0.0004 |
| Neptune | 18444-12-28 23:02 G | 8457955.20 | 8457955.46 | 8457955.73 | 0.0088 | 0.0011 |
| Neptune | 18445-12-31 13:40 G | 8458322.82 | 8458323.07 | 8458323.32 | 0.0088 | 0.0001 |
| Jupiter | 18446-12-10 01:12 G | 8458666.31 | 8458666.55 | 8458666.79 | 0.0486 | 0.0007 |

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| Neptune | 18447-01-02 18:43 G | 8458690.02 | 8458690.28 | 8458690.54 | 0.0088 | 0.0006 |
| Neptune | 18448-01-05 12:00 G | 8459057.75 | 8459058.00 | 8459058.26 | 0.0088 | 0.0006 |
| Saturn | 18448-11-15 16:04 G | 8459372.96 | 8459373.17 | 8459373.39 | 0.0278 | 0.0145 |
| Neptune | 18449-01-06 15:50 G | 8459424.91 | 8459425.16 | 8459425.42 | 0.0088 | 0.0001 |
| Neptune | 18450-01-09 08:52 G | 8459792.61 | 8459792.87 | 8459793.13 | 0.0088 | 0.0010 |
| Neptune | 18451-01-11 14:24 G | 8460159.85 | 8460160.10 | 8460160.35 | 0.0088 | 0.0003 |
| Neptune | 18452-01-14 03:36 G | 8460527.39 | 8460527.65 | 8460527.92 | 0.0088 | 0.0014 |
| Jupiter | 18452-05-19 07:40 G | 8460653.73 | 8460653.82 | 8460653.92 | 0.0535 | 0.0488 |
| Neptune | 18453-01-15 13:40 G | 8460894.83 | 8460895.07 | 8460895.32 | 0.0088 | 0.0008 |
| Jupiter | 18453-06-26 13:55 G | 8461056.93 | 8461057.08 | 8461057.23 | 0.0544 | 0.0424 |
| Neptune | 18454-01-17 22:04 G | 8461262.17 | 8461262.42 | 8461262.69 | 0.0088 | 0.0019 |
| Neptune | 18455-01-20 13:26 G | 8461629.82 | 8461630.06 | 8461630.32 | 0.0088 | 0.0012 |
| Neptune | 18456-01-22 18:14 G | 8461997.02 | 8461997.26 | 8461997.52 | 0.0088 | 0.0023 |
| Neptune | 18457-01-24 12:00 G | 8462364.76 | 8462365.00 | 8462365.27 | 0.0088 | 0.0016 |
| Neptune | 18458-01-26 16:04 G | 8462731.94 | 8462732.17 | 8462732.42 | 0.0088 | 0.0027 |
| Jupiter | 18458-12-14 04:04 G | 8463053.46 | 8463053.67 | 8463053.89 | 0.0485 | 0.0131 |
| Neptune | 18459-01-29 09:07 G | 8463099.64 | 8463099.88 | 8463100.15 | 0.0088 | 0.0021 |
| Neptune | 18460-01-31 15:50 G | 8463466.94 | 8463467.16 | 8463467.40 | 0.0088 | 0.0031 |
| Neptune | 18461-02-02 05:02 G | 8463834.46 | 8463834.71 | 8463834.98 | 0.0088 | 0.0025 |
| Neptune | 18462-02-04 15:50 G | 8464201.95 | 8464202.16 | 8464202.41 | 0.0088 | 0.0035 |
| Neptune | 18463-02-07 00:28 G | 8464569.28 | 8464569.52 | 8464569.79 | 0.0088 | 0.0028 |
| Mars | 18463-03-07 15:36 G | 8464597.96 | 8464598.15 | 8464598.34 | 0.1721 | 0.0671 |
| Saturn | 18463-05-20 18:00 G | 8464672.01 | 8464672.25 | 8464672.48 | 0.0280 | 0.0058 |
| Neptune | 18464-02-09 16:48 G | 8464936.98 | 8464937.20 | 8464937.43 | 0.0088 | 0.0039 |
| Jupiter | 18464-05-24 11:16 G | 8465041.82 | 8465041.97 | 8465042.13 | 0.0537 | 0.0411 |
| Neptune | 18465-02-10 21:36 G | 8465304.17 | 8465304.40 | 8465304.66 | 0.0088 | 0.0032 |
| Jupiter | 18465-07-02 01:40 G | 8465445.52 | 8465445.57 | 8465445.64 | 0.0545 | 0.0525 |
| Neptune | 18466-02-13 16:04 G | 8465671.95 | 8465672.17 | 8465672.41 | 0.0088 | 0.0042 |
| Neptune | 18467-02-15 20:38 G | 8466039.13 | 8466039.36 | 8466039.60 | 0.0088 | 0.0036 |
| Neptune | 18468-02-18 13:40 G | 8466406.86 | 8466407.07 | 8466407.32 | 0.0088 | 0.0045 |

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| Neptune | 18469-02-19 21:21 G | 8466774.16 | 8466774.39 | 8466774.61 | 0.0088 | 0.0039 |
| Jupiter | 18469-11-18 01:55 G | 8467045.51 | 8467045.58 | 8467045.66 | 0.0493 | 0.0462 |
| Neptune | 18470-02-22 10:19 G | 8467141.71 | 8467141.93 | 8467142.16 | 0.0088 | 0.0048 |
| Uranus | 18470-04-01 00:00 G | 8467179.37 | 8467179.50 | 8467179.67 | 0.0135 | 0.0109 |
| Jupiter | 18470-12-18 11:45 G | 8467440.78 | 8467440.99 | 8467441.20 | 0.0485 | 0.0229 |
| Neptune | 18471-02-24 21:50 G | 8467509.21 | 8467509.41 | 8467509.64 | 0.0088 | 0.0042 |
| Uranus | 18471-04-05 03:07 G | 8467548.43 | 8467548.63 | 8467548.87 | 0.0134 | 0.0072 |
| Neptune | 18472-02-27 06:28 G | 8467876.58 | 8467876.77 | 8467877.01 | 0.0088 | 0.0052 |
| Uranus | 18472-04-08 20:09 G | 8467918.09 | 8467918.34 | 8467918.60 | 0.0134 | 0.0008 |
| Neptune | 18473-02-28 23:16 G | 8468244.27 | 8468244.47 | 8468244.71 | 0.0088 | 0.0045 |
| Uranus | 18473-04-12 23:02 G | 8468287.21 | 8468287.46 | 8468287.71 | 0.0134 | 0.0035 |
| Neptune | 18474-03-03 05:02 G | 8468611.52 | 8468611.71 | 8468611.93 | 0.0088 | 0.0054 |
| Uranus | 18474-04-17 14:52 G | 8468656.94 | 8468657.12 | 8468657.31 | 0.0134 | 0.0090 |
| Neptune | 18475-03-06 00:14 G | 8468979.29 | 8468979.51 | 8468979.73 | 0.0088 | 0.0047 |
| Neptune | 18476-03-07 05:02 G | 8469346.53 | 8469346.71 | 8469346.93 | 0.0088 | 0.0056 |
| Jupiter | 18476-05-29 22:48 G | 8469430.26 | 8469430.45 | 8469430.65 | 0.0539 | 0.0275 |
| Neptune | 18477-03-09 23:16 G | 8469714.26 | 8469714.47 | 8469714.70 | 0.0088 | 0.0050 |
| Neptune | 18478-03-12 06:43 G | 8470081.60 | 8470081.78 | 8470081.98 | 0.0088 | 0.0058 |
| Saturn | 18478-11-23 00:57 G | 8470337.31 | 8470337.54 | 8470337.77 | 0.0279 | 0.0089 |
| Neptune | 18479-03-14 20:38 G | 8470449.15 | 8470449.36 | 8470449.59 | 0.0088 | 0.0052 |
| Neptune | 18480-03-16 08:52 G | 8470816.69 | 8470816.87 | 8470817.06 | 0.0088 | 0.0059 |
| Neptune | 18481-03-18 17:45 G | 8471184.04 | 8471184.24 | 8471184.47 | 0.0089 | 0.0053 |
| Jupiter | 18481-11-22 16:33 G | 8471433.03 | 8471433.19 | 8471433.35 | 0.0491 | 0.0340 |
| Neptune | 18482-03-21 11:02 G | 8471551.78 | 8471551.96 | 8471552.15 | 0.0089 | 0.0060 |
| Jupiter | 18482-12-22 10:04 G | 8471827.74 | 8471827.92 | 8471828.11 | 0.0485 | 0.0283 |
| Neptune | 18483-03-23 16:48 G | 8471919.01 | 8471919.20 | 8471919.42 | 0.0089 | 0.0055 |
| Neptune | 18484-03-25 12:43 G | 8472286.84 | 8472287.03 | 8472287.22 | 0.0089 | 0.0061 |
| Neptune | 18485-03-27 18:00 G | 8472654.07 | 8472654.25 | 8472654.46 | 0.0089 | 0.0056 |
| Pluto | 18485-08-22 07:26 G | 8472801.66 | 8472801.81 | 8472802.00 | 0.0064 | 0.0047 |
| Neptune | 18486-03-30 12:28 G | 8473021.85 | 8473022.02 | 8473022.23 | 0.0089 | 0.0061 |

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| Pluto | 18486-08-24 00:28 G | 8473168.35 | 8473168.52 | 8473168.74 | 0.0064 | 0.0044 |
| Neptune | 18487-04-01 20:38 G | 8473389.19 | 8473389.36 | 8473389.58 | 0.0089 | 0.0057 |
| Neptune | 18488-04-03 11:31 G | 8473756.81 | 8473756.98 | 8473757.20 | 0.0089 | 0.0061 |
| Jupiter | 18488-06-04 06:57 G | 8473818.56 | 8473818.79 | 8473819.03 | 0.0540 | 0.0109 |
| Neptune | 18489-04-06 00:00 G | 8474124.32 | 8474124.50 | 8474124.70 | 0.0089 | 0.0057 |
| Neptune | 18490-04-08 10:04 G | 8474491.73 | 8474491.92 | 8474492.12 | 0.0089 | 0.0061 |
| Neptune | 18491-04-11 03:07 G | 8474859.45 | 8474859.63 | 8474859.84 | 0.0089 | 0.0057 |
| Neptune | 18492-04-12 09:50 G | 8475226.73 | 8475226.91 | 8475227.12 | 0.0089 | 0.0060 |
| Saturn | 18492-05-14 00:43 G | 8475258.43 | 8475258.53 | 8475258.63 | 0.0282 | 0.0258 |
| Neptune | 18493-04-15 05:31 G | 8475594.55 | 8475594.73 | 8475594.95 | 0.0089 | 0.0056 |
| Saturn | 18493-05-27 08:52 G | 8475636.72 | 8475636.87 | 8475637.05 | 0.0280 | 0.0203 |
| Jupiter | 18493-11-26 16:04 G | 8475819.96 | 8475820.17 | 8475820.39 | 0.0490 | 0.0226 |
| Neptune | 18494-04-17 11:31 G | 8475961.79 | 8475961.98 | 8475962.18 | 0.0089 | 0.0058 |
| Jupiter | 18494-12-26 22:19 G | 8476215.27 | 8476215.43 | 8476215.59 | 0.0484 | 0.0345 |
| Neptune | 18495-04-20 06:28 G | 8476329.58 | 8476329.77 | 8476329.99 | 0.0089 | 0.0056 |
| Neptune | 18496-04-21 14:38 G | 8476696.94 | 8476697.11 | 8476697.32 | 0.0089 | 0.0058 |
| Neptune | 18497-04-24 06:14 G | 8477064.56 | 8477064.76 | 8477064.98 | 0.0089 | 0.0055 |
| Neptune | 18498-04-26 18:43 G | 8477432.09 | 8477432.28 | 8477432.48 | 0.0089 | 0.0055 |
| Neptune | 18499-04-29 05:02 G | 8477799.52 | 8477799.71 | 8477799.95 | 0.0089 | 0.0053 |
| Neptune | 18500-05-01 22:19 G | 8478167.25 | 8478167.43 | 8478167.66 | 0.0089 | 0.0054 |
| Jupiter | 18500-06-10 07:26 G | 8478206.58 | 8478206.81 | 8478207.04 | 0.0541 | 0.0004 |
| Neptune | 18501-05-04 05:45 G | 8478534.55 | 8478534.74 | 8478534.97 | 0.0089 | 0.0052 |
| Neptune | 18502-05-07 01:40 G | 8478902.38 | 8478902.57 | 8478902.80 | 0.0089 | 0.0052 |
| Neptune | 18503-05-09 07:55 G | 8479269.63 | 8479269.83 | 8479270.06 | 0.0089 | 0.0051 |
| Neptune | 18504-05-11 03:50 G | 8479637.45 | 8479637.66 | 8479637.89 | 0.0089 | 0.0048 |
| Neptune | 18505-05-13 11:31 G | 8480004.78 | 8480004.98 | 8480005.20 | 0.0089 | 0.0048 |
| Jupiter | 18505-12-02 01:26 G | 8480207.35 | 8480207.56 | 8480207.77 | 0.0489 | 0.0160 |
| Neptune | 18506-05-16 03:50 G | 8480372.44 | 8480372.66 | 8480372.91 | 0.0089 | 0.0044 |
| Jupiter | 18506-12-31 18:14 G | 8480602.18 | 8480602.26 | 8480602.36 | 0.0484 | 0.0448 |
| Neptune | 18507-05-18 15:36 G | 8480739.94 | 8480740.15 | 8480740.38 | 0.0089 | 0.0046 |

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| Saturn | 18507-11-18 14:38 G | 8480923.88 | 8480924.11 | 8480924.34 | 0.0278 | 0.0100 |
| Neptune | 18508-05-20 02:52 G | 8481107.40 | 8481107.62 | 8481107.88 | 0.0089 | 0.0042 |
| Neptune | 18509-05-22 19:55 G | 8481475.11 | 8481475.33 | 8481475.55 | 0.0089 | 0.0043 |
| Neptune | 18510-05-25 03:21 G | 8481842.42 | 8481842.64 | 8481842.90 | 0.0089 | 0.0039 |
| Neptune | 18511-05-27 23:31 G | 8482210.27 | 8482210.48 | 8482210.73 | 0.0089 | 0.0039 |
| Neptune | 18512-05-29 06:00 G | 8482577.52 | 8482577.75 | 8482578.00 | 0.0089 | 0.0034 |
| Jupiter | 18512-06-16 00:28 G | 8482595.29 | 8482595.52 | 8482595.74 | 0.0543 | 0.0086 |
| Neptune | 18513-06-01 01:55 G | 8482945.36 | 8482945.58 | 8482945.84 | 0.0089 | 0.0037 |
| Uranus | 18513-10-02 04:04 G | 8483068.57 | 8483068.67 | 8483068.81 | 0.0144 | 0.0125 |
| Neptune | 18514-06-03 09:36 G | 8483312.68 | 8483312.90 | 8483313.15 | 0.0089 | 0.0030 |
| Uranus | 18514-10-06 21:07 G | 8483438.14 | 8483438.38 | 8483438.63 | 0.0144 | 0.0050 |
| Neptune | 18515-06-06 03:21 G | 8483680.39 | 8483680.64 | 8483680.89 | 0.0089 | 0.0033 |
| Uranus | 18515-10-12 00:28 G | 8483808.28 | 8483808.52 | 8483808.77 | 0.0144 | 0.0001 |
| Neptune | 18516-06-07 13:55 G | 8484047.85 | 8484048.08 | 8484048.33 | 0.0089 | 0.0026 |
| Uranus | 18516-10-15 19:26 G | 8484178.10 | 8484178.31 | 8484178.55 | 0.0145 | 0.0075 |
| Neptune | 18517-06-10 02:09 G | 8484415.35 | 8484415.59 | 8484415.86 | 0.0089 | 0.0029 |
| Uranus | 18517-10-20 20:52 G | 8484548.30 | 8484548.37 | 8484548.49 | 0.0145 | 0.0133 |
| Jupiter | 18517-12-06 07:40 G | 8484594.59 | 8484594.82 | 8484595.06 | 0.0488 | 0.0100 |
| Neptune | 18518-06-12 18:14 G | 8484783.02 | 8484783.26 | 8484783.50 | 0.0089 | 0.0021 |
| Neptune | 18519-06-15 02:24 G | 8485150.36 | 8485150.60 | 8485150.87 | 0.0089 | 0.0025 |
| Neptune | 18520-06-16 22:04 G | 8485518.17 | 8485518.42 | 8485518.68 | 0.0089 | 0.0017 |
| Neptune | 18521-06-19 04:04 G | 8485885.43 | 8485885.67 | 8485885.93 | 0.0089 | 0.0021 |
| Saturn | 18522-05-22 22:19 G | 8486223.18 | 8486223.43 | 8486223.68 | 0.0280 | 0.0009 |
| Neptune | 18522-06-22 00:28 G | 8486253.26 | 8486253.52 | 8486253.78 | 0.0089 | 0.0012 |
| Neptune | 18523-06-24 07:40 G | 8486620.58 | 8486620.82 | 8486621.07 | 0.0089 | 0.0016 |
| Jupiter | 18524-06-21 07:55 G | 8486983.62 | 8486983.83 | 8486984.05 | 0.0544 | 0.0247 |
| Neptune | 18524-06-26 01:40 G | 8486988.30 | 8486988.57 | 8486988.83 | 0.0089 | 0.0007 |
| Neptune | 18525-06-28 11:45 G | 8487355.75 | 8487355.99 | 8487356.25 | 0.0089 | 0.0013 |
| Neptune | 18526-07-01 01:12 G | 8487723.28 | 8487723.55 | 8487723.82 | 0.0089 | 0.0003 |
| Neptune | 18527-07-03 16:04 G | 8488090.92 | 8488091.17 | 8488091.42 | 0.0089 | 0.0008 |

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| Neptune | 18528-07-05 00:57 G | 8488458.27 | 8488458.54 | 8488458.80 | 0.0090 | 0.0003 |
| Neptune | 18529-07-07 19:40 G | 8488826.07 | 8488826.32 | 8488826.57 | 0.0090 | 0.0003 |
| Jupiter | 18529-12-10 09:07 G | 8488981.65 | 8488981.88 | 8488982.11 | 0.0487 | 0.0002 |
| Neptune | 18530-07-10 01:40 G | 8489193.32 | 8489193.57 | 8489193.84 | 0.0090 | 0.0008 |
| Neptune | 18531-07-12 21:50 G | 8489561.15 | 8489561.41 | 8489561.67 | 0.0090 | 0.0001 |
| Neptune | 18532-07-14 04:04 G | 8489928.42 | 8489928.67 | 8489928.92 | 0.0089 | 0.0012 |
| Neptune | 18533-07-16 22:04 G | 8490296.16 | 8490296.42 | 8490296.69 | 0.0089 | 0.0005 |
| Neptune | 18534-07-19 07:26 G | 8490663.57 | 8490663.81 | 8490664.06 | 0.0089 | 0.0017 |
| Jupiter | 18535-05-20 08:38 G | 8490968.78 | 8490968.86 | 8490968.96 | 0.0535 | 0.0497 |
| Neptune | 18535-07-21 20:52 G | 8491031.11 | 8491031.37 | 8491031.64 | 0.0089 | 0.0010 |
| Jupiter | 18536-06-26 20:09 G | 8491372.20 | 8491372.34 | 8491372.48 | 0.0544 | 0.0415 |
| Neptune | 18536-07-23 10:33 G | 8491398.71 | 8491398.94 | 8491399.20 | 0.0089 | 0.0021 |
| Neptune | 18537-07-25 19:40 G | 8491766.07 | 8491766.32 | 8491766.59 | 0.0089 | 0.0014 |
| Saturn | 18537-11-24 22:33 G | 8491888.22 | 8491888.44 | 8491888.66 | 0.0279 | 0.0137 |
| Neptune | 18538-07-28 13:55 G | 8492133.85 | 8492134.08 | 8492134.33 | 0.0089 | 0.0025 |
| Neptune | 18539-07-30 20:09 G | 8492501.09 | 8492501.34 | 8492501.60 | 0.0089 | 0.0018 |
| Neptune | 18540-08-01 15:21 G | 8492868.91 | 8492869.14 | 8492869.40 | 0.0089 | 0.0030 |
| Neptune | 18541-08-03 21:21 G | 8493236.16 | 8493236.39 | 8493236.64 | 0.0089 | 0.0023 |
| Jupiter | 18541-12-14 18:57 G | 8493369.06 | 8493369.29 | 8493369.52 | 0.0486 | 0.0128 |
| Mars | 18542-03-11 13:12 G | 8493455.88 | 8493456.05 | 8493456.23 | 0.1727 | 0.0879 |
| Neptune | 18542-08-06 15:07 G | 8493603.90 | 8493604.13 | 8493604.39 | 0.0089 | 0.0034 |
| Neptune | 18543-08-08 23:45 G | 8493971.27 | 8493971.49 | 8493971.74 | 0.0089 | 0.0026 |
| Neptune | 18544-08-10 12:57 G | 8494338.81 | 8494339.04 | 8494339.30 | 0.0089 | 0.0037 |
| Neptune | 18545-08-13 02:09 G | 8494706.36 | 8494706.59 | 8494706.83 | 0.0089 | 0.0030 |
| Neptune | 18546-08-15 10:33 G | 8495073.72 | 8495073.94 | 8495074.19 | 0.0089 | 0.0040 |
| Jupiter | 18547-05-25 16:48 G | 8495357.07 | 8495357.20 | 8495357.33 | 0.0536 | 0.0434 |
| Neptune | 18547-08-18 04:04 G | 8495441.45 | 8495441.67 | 8495441.91 | 0.0089 | 0.0033 |
| Jupiter | 18548-07-02 05:31 G | 8495760.64 | 8495760.73 | 8495760.83 | 0.0544 | 0.0495 |
| Neptune | 18548-08-19 09:50 G | 8495808.69 | 8495808.91 | 8495809.14 | 0.0089 | 0.0044 |
| Neptune | 18549-08-22 04:33 G | 8496176.47 | 8496176.69 | 8496176.95 | 0.0089 | 0.0037 |

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| Neptune | 18550-08-24 10:19 G | 8496543.73 | 8496543.93 | 8496544.16 | 0.0089 | 0.0046 |
| Saturn | 18551-05-17 02:38 G | 8496809.45 | 8496809.61 | 8496809.77 | 0.0282 | 0.0212 |
| Neptune | 18551-08-27 03:50 G | 8496911.44 | 8496911.66 | 8496911.91 | 0.0089 | 0.0039 |
| Saturn | 18552-05-29 15:21 G | 8497188.04 | 8497188.14 | 8497188.25 | 0.0280 | 0.0249 |
| Neptune | 18552-08-28 12:00 G | 8497278.81 | 8497279.00 | 8497279.22 | 0.0089 | 0.0050 |
| Jupiter | 18552-11-18 17:45 G | 8497361.18 | 8497361.24 | 8497361.31 | 0.0494 | 0.0472 |
| Neptune | 18553-08-31 01:12 G | 8497646.33 | 8497646.55 | 8497646.79 | 0.0089 | 0.0042 |
| Jupiter | 18553-12-18 16:33 G | 8497755.99 | 8497756.19 | 8497756.40 | 0.0486 | 0.0215 |
| Uranus | 18554-04-02 10:19 G | 8497860.84 | 8497860.93 | 8497861.07 | 0.0135 | 0.0120 |
| Neptune | 18554-09-02 13:40 G | 8498013.87 | 8498014.07 | 8498014.28 | 0.0089 | 0.0052 |
| Uranus | 18555-04-06 13:40 G | 8498229.85 | 8498230.07 | 8498230.32 | 0.0134 | 0.0055 |
| Neptune | 18555-09-04 21:36 G | 8498381.18 | 8498381.40 | 8498381.64 | 0.0089 | 0.0044 |
| Uranus | 18556-04-10 06:57 G | 8498599.55 | 8498599.79 | 8498600.05 | 0.0134 | 0.0016 |
| Neptune | 18556-09-06 14:24 G | 8498748.91 | 8498749.10 | 8498749.31 | 0.0089 | 0.0053 |
| Uranus | 18557-04-14 09:21 G | 8498968.66 | 8498968.89 | 8498969.15 | 0.0134 | 0.0046 |
| Neptune | 18557-09-08 19:26 G | 8499116.11 | 8499116.31 | 8499116.55 | 0.0089 | 0.0046 |
| Uranus | 18558-04-19 01:40 G | 8499338.40 | 8499338.57 | 8499338.77 | 0.0134 | 0.0093 |
| Neptune | 18558-09-11 14:24 G | 8499483.90 | 8499484.10 | 8499484.30 | 0.0089 | 0.0055 |
| Jupiter | 18559-05-31 00:14 G | 8499745.31 | 8499745.51 | 8499745.72 | 0.0538 | 0.0289 |
| Neptune | 18559-09-13 18:43 G | 8499851.09 | 8499851.28 | 8499851.51 | 0.0089 | 0.0049 |
| Neptune | 18560-09-15 12:14 G | 8500218.81 | 8500219.01 | 8500219.21 | 0.0089 | 0.0056 |
| Neptune | 18561-09-17 19:55 G | 8500586.14 | 8500586.33 | 8500586.55 | 0.0089 | 0.0050 |
| Neptune | 18562-09-20 08:24 G | 8500953.66 | 8500953.85 | 8500954.06 | 0.0089 | 0.0057 |
| Mars | 18563-09-09 09:21 G | 8501307.69 | 8501307.89 | 8501308.09 | 0.1817 | 0.0541 |
| Neptune | 18563-09-22 20:38 G | 8501321.17 | 8501321.36 | 8501321.57 | 0.0089 | 0.0051 |
| Neptune | 18564-09-24 03:50 G | 8501688.48 | 8501688.66 | 8501688.88 | 0.0089 | 0.0059 |
| Jupiter | 18564-11-22 19:26 G | 8501748.15 | 8501748.31 | 8501748.48 | 0.0492 | 0.0348 |
| Neptune | 18565-09-26 20:38 G | 8502056.17 | 8502056.36 | 8502056.58 | 0.0089 | 0.0052 |
| Jupiter | 18565-12-23 03:50 G | 8502143.47 | 8502143.66 | 8502143.85 | 0.0485 | 0.0261 |
| Neptune | 18566-09-29 01:12 G | 8502423.37 | 8502423.55 | 8502423.76 | 0.0089 | 0.0059 |

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| Saturn | 18566-11-19 19:55 G | 8502475.10 | 8502475.33 | 8502475.56 | 0.0278 | 0.0050 |
| Neptune | 18567-10-01 18:57 G | 8502791.10 | 8502791.29 | 8502791.52 | 0.0089 | 0.0052 |
| Neptune | 18568-10-02 23:31 G | 8503158.31 | 8503158.48 | 8503158.69 | 0.0089 | 0.0059 |
| Neptune | 18569-10-05 15:36 G | 8503525.96 | 8503526.15 | 8503526.39 | 0.0089 | 0.0053 |
| Neptune | 18570-10-07 23:31 G | 8503893.31 | 8503893.48 | 8503893.68 | 0.0089 | 0.0059 |
| Jupiter | 18571-06-05 01:12 G | 8504133.33 | 8504133.55 | 8504133.77 | 0.0540 | 0.0127 |
| Neptune | 18571-10-10 10:48 G | 8504260.76 | 8504260.95 | 8504261.19 | 0.0089 | 0.0053 |
| Neptune | 18572-10-11 23:31 G | 8504628.30 | 8504628.48 | 8504628.67 | 0.0089 | 0.0058 |
| Neptune | 18573-10-14 05:31 G | 8504995.54 | 8504995.73 | 8504995.97 | 0.0088 | 0.0052 |
| Neptune | 18574-10-16 22:19 G | 8505363.25 | 8505363.43 | 8505363.64 | 0.0088 | 0.0057 |
| Pluto | 18575-02-22 08:09 G | 8505491.60 | 8505491.84 | 8505492.08 | 0.0080 | 0.0025 |
| Neptune | 18575-10-19 02:24 G | 8505730.40 | 8505730.60 | 8505730.82 | 0.0088 | 0.0051 |
| Neptune | 18576-10-20 20:24 G | 8506098.15 | 8506098.35 | 8506098.55 | 0.0088 | 0.0056 |
| Jupiter | 18576-11-27 05:45 G | 8506135.54 | 8506135.74 | 8506135.94 | 0.0490 | 0.0235 |
| Neptune | 18577-10-23 00:28 G | 8506465.33 | 8506465.52 | 8506465.74 | 0.0088 | 0.0051 |
| Jupiter | 18577-12-27 01:12 G | 8506530.38 | 8506530.55 | 8506530.73 | 0.0484 | 0.0332 |
| Neptune | 18578-10-25 15:36 G | 8506832.97 | 8506833.15 | 8506833.38 | 0.0088 | 0.0054 |
| Neptune | 18579-10-27 23:45 G | 8507200.30 | 8507200.49 | 8507200.72 | 0.0088 | 0.0049 |
| Neptune | 18580-10-29 10:04 G | 8507567.73 | 8507567.92 | 8507568.16 | 0.0088 | 0.0052 |
| Saturn | 18581-05-23 21:36 G | 8507774.15 | 8507774.40 | 8507774.66 | 0.0280 | 0.0039 |
| Neptune | 18581-10-31 23:02 G | 8507935.25 | 8507935.46 | 8507935.67 | 0.0088 | 0.0047 |
| Neptune | 18582-11-03 04:04 G | 8508302.48 | 8508302.67 | 8508302.91 | 0.0088 | 0.0052 |
| Jupiter | 18583-06-10 19:40 G | 8508522.09 | 8508522.32 | 8508522.56 | 0.0541 | 0.0023 |
| Neptune | 18583-11-05 20:38 G | 8508670.16 | 8508670.36 | 8508670.60 | 0.0088 | 0.0046 |
| Neptune | 18584-11-07 00:14 G | 8509037.31 | 8509037.51 | 8509037.74 | 0.0088 | 0.0048 |
| Neptune | 18585-11-09 17:31 G | 8509405.01 | 8509405.23 | 8509405.47 | 0.0088 | 0.0042 |
| Neptune | 18586-11-11 21:50 G | 8509772.22 | 8509772.41 | 8509772.65 | 0.0088 | 0.0045 |
| Neptune | 18587-11-14 12:28 G | 8510139.81 | 8510140.02 | 8510140.28 | 0.0088 | 0.0040 |
| Neptune | 18588-11-15 21:21 G | 8510507.20 | 8510507.39 | 8510507.63 | 0.0088 | 0.0043 |
| Jupiter | 18588-12-01 11:45 G | 8510522.76 | 8510522.99 | 8510523.21 | 0.0489 | 0.0173 |

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| Neptune | 18589-11-18 07:12 G | 8510874.57 | 8510874.80 | 8510875.05 | 0.0088 | 0.0037 |
| Jupiter | 18589-12-31 09:50 G | 8510917.83 | 8510917.91 | 8510918.01 | 0.0484 | 0.0445 |
| Neptune | 18590-11-20 20:38 G | 8511242.14 | 8511242.36 | 8511242.58 | 0.0088 | 0.0039 |
| Neptune | 18591-11-23 01:26 G | 8511609.32 | 8511609.56 | 8511609.80 | 0.0088 | 0.0033 |
| Neptune | 18592-11-24 18:14 G | 8511977.03 | 8511977.26 | 8511977.49 | 0.0088 | 0.0035 |
| Neptune | 18593-11-26 21:07 G | 8512344.16 | 8512344.38 | 8512344.64 | 0.0088 | 0.0031 |
| Neptune | 18594-11-29 13:40 G | 8512711.85 | 8512712.07 | 8512712.33 | 0.0088 | 0.0033 |
| Jupiter | 18595-06-16 00:57 G | 8512910.30 | 8512910.54 | 8512910.78 | 0.0542 | 0.0071 |
| Saturn | 18595-11-14 06:00 G | 8513061.66 | 8513061.75 | 8513061.85 | 0.0277 | 0.0257 |
| Neptune | 18595-12-01 19:12 G | 8513079.06 | 8513079.30 | 8513079.54 | 0.0088 | 0.0028 |
| Saturn | 18596-11-25 21:21 G | 8513439.22 | 8513439.39 | 8513439.58 | 0.0279 | 0.0187 |
| Neptune | 18596-12-03 08:38 G | 8513446.62 | 8513446.86 | 8513447.12 | 0.0088 | 0.0029 |
| Uranus | 18597-10-02 14:38 G | 8513749.97 | 8513750.11 | 8513750.27 | 0.0144 | 0.0114 |
| Neptune | 18597-12-05 18:14 G | 8513814.03 | 8513814.26 | 8513814.51 | 0.0088 | 0.0024 |
| Uranus | 18598-10-07 06:28 G | 8514119.55 | 8514119.77 | 8514120.01 | 0.0144 | 0.0061 |
| Neptune | 18598-12-08 02:38 G | 8514181.37 | 8514181.61 | 8514181.88 | 0.0088 | 0.0025 |
| Uranus | 18599-10-12 10:33 G | 8514489.70 | 8514489.94 | 8514490.19 | 0.0144 | 0.0016 |
| Neptune | 18599-12-10 16:48 G | 8514548.97 | 8514549.20 | 8514549.46 | 0.0088 | 0.0021 |
| Uranus | 18600-10-17 04:19 G | 8514859.47 | 8514859.68 | 8514859.92 | 0.0145 | 0.0067 |
| Jupiter | 18600-12-06 13:55 G | 8514909.87 | 8514910.08 | 8514910.31 | 0.0488 | 0.0111 |
| Neptune | 18600-12-12 21:21 G | 8514916.15 | 8514916.39 | 8514916.65 | 0.0088 | 0.0022 |
| Uranus | 18601-10-22 07:26 G | 8515229.75 | 8515229.81 | 8515229.89 | 0.0145 | 0.0138 |
| Neptune | 18601-12-15 14:38 G | 8515283.86 | 8515284.11 | 8515284.37 | 0.0088 | 0.0017 |
| Neptune | 18602-12-17 18:00 G | 8515651.01 | 8515651.25 | 8515651.50 | 0.0088 | 0.0017 |
| Neptune | 18603-12-20 10:33 G | 8516018.68 | 8516018.94 | 8516019.20 | 0.0088 | 0.0013 |
| Neptune | 18604-12-21 16:04 G | 8516385.93 | 8516386.17 | 8516386.43 | 0.0088 | 0.0013 |
| Neptune | 18605-12-24 05:02 G | 8516753.45 | 8516753.71 | 8516753.98 | 0.0088 | 0.0009 |
| Neptune | 18606-12-26 15:36 G | 8517120.91 | 8517121.15 | 8517121.40 | 0.0088 | 0.0009 |
| Jupiter | 18607-06-22 09:21 G | 8517298.69 | 8517298.89 | 8517299.10 | 0.0543 | 0.0229 |
| Neptune | 18607-12-28 23:31 G | 8517488.22 | 8517488.48 | 8517488.75 | 0.0088 | 0.0005 |

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| Neptune | 18608-12-30 14:24 G | 8517855.85 | 8517856.10 | 8517856.35 | 0.0088 | 0.0005 |
| Neptune | 18610-01-01 18:28 G | 8518223.01 | 8518223.27 | 8518223.53 | 0.0088 | 0.0001 |
| Saturn | 18610-05-19 09:36 G | 8518360.71 | 8518360.90 | 8518361.10 | 0.0282 | 0.0164 |
| Neptune | 18611-01-04 11:45 G | 8518590.73 | 8518590.99 | 8518591.24 | 0.0088 | 0.0001 |
| Neptune | 18612-01-06 15:21 G | 8518957.89 | 8518958.14 | 8518958.40 | 0.0088 | 0.0003 |
| Jupiter | 18612-12-10 23:16 G | 8519297.23 | 8519297.47 | 8519297.71 | 0.0487 | 0.0007 |
| Neptune | 18613-01-08 07:40 G | 8519325.55 | 8519325.82 | 8519326.08 | 0.0088 | 0.0004 |
| Neptune | 18614-01-10 13:55 G | 8519692.84 | 8519693.08 | 8519693.34 | 0.0088 | 0.0007 |
| Neptune | 18615-01-13 02:38 G | 8520060.35 | 8520060.61 | 8520060.88 | 0.0088 | 0.0008 |
| Neptune | 18616-01-15 14:24 G | 8520427.85 | 8520428.10 | 8520428.35 | 0.0088 | 0.0011 |
| Neptune | 18617-01-16 21:36 G | 8520795.14 | 8520795.40 | 8520795.67 | 0.0088 | 0.0013 |
| Neptune | 18618-01-19 13:12 G | 8521162.81 | 8521163.05 | 8521163.31 | 0.0088 | 0.0015 |
| Jupiter | 18618-05-20 13:26 G | 8521284.03 | 8521284.06 | 8521284.10 | 0.0534 | 0.0524 |
| Neptune | 18619-01-21 17:16 G | 8521529.98 | 8521530.22 | 8521530.49 | 0.0088 | 0.0016 |
| Jupiter | 18619-06-27 19:40 G | 8521687.16 | 8521687.32 | 8521687.49 | 0.0543 | 0.0386 |
| Neptune | 18620-01-24 11:02 G | 8521897.72 | 8521897.96 | 8521898.22 | 0.0088 | 0.0018 |
| Neptune | 18621-01-25 15:21 G | 8522264.89 | 8522265.14 | 8522265.39 | 0.0088 | 0.0020 |
| Neptune | 18622-01-28 06:57 G | 8522632.55 | 8522632.79 | 8522633.06 | 0.0088 | 0.0022 |
| Neptune | 18623-01-30 14:24 G | 8522999.87 | 8523000.10 | 8523000.35 | 0.0088 | 0.0025 |
| Neptune | 18624-02-02 02:24 G | 8523367.36 | 8523367.60 | 8523367.87 | 0.0088 | 0.0026 |
| Jupiter | 18624-12-14 21:07 G | 8523684.16 | 8523684.38 | 8523684.61 | 0.0486 | 0.0118 |
| Neptune | 18625-02-03 15:07 G | 8523734.91 | 8523735.13 | 8523735.38 | 0.0088 | 0.0028 |
| Saturn | 18625-11-22 04:19 G | 8524026.44 | 8524026.68 | 8524026.92 | 0.0278 | 0.0002 |
| Neptune | 18626-02-05 22:33 G | 8524102.20 | 8524102.44 | 8524102.71 | 0.0088 | 0.0029 |
| Neptune | 18627-02-08 15:21 G | 8524469.91 | 8524470.14 | 8524470.39 | 0.0088 | 0.0032 |
| Neptune | 18628-02-10 19:40 G | 8524837.10 | 8524837.32 | 8524837.58 | 0.0088 | 0.0033 |
| Neptune | 18629-02-12 14:09 G | 8525204.86 | 8525205.09 | 8525205.34 | 0.0088 | 0.0036 |
| Neptune | 18630-02-14 18:43 G | 8525572.06 | 8525572.28 | 8525572.53 | 0.0088 | 0.0035 |
| Jupiter | 18630-05-25 16:48 G | 8525672.08 | 8525672.20 | 8525672.33 | 0.0536 | 0.0451 |
| Neptune | 18631-02-17 11:16 G | 8525939.73 | 8525939.97 | 8525940.21 | 0.0088 | 0.0039 |

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| Jupiter | 18631-07-02 22:48 G | 8526075.34 | 8526075.45 | 8526075.56 | 0.0544 | 0.0474 |
| Neptune | 18632-02-19 19:26 G | 8526307.09 | 8526307.31 | 8526307.54 | 0.0088 | 0.0037 |
| Neptune | 18633-02-21 07:26 G | 8526674.58 | 8526674.81 | 8526675.05 | 0.0088 | 0.0042 |
| Neptune | 18634-02-23 20:38 G | 8527042.16 | 8527042.36 | 8527042.60 | 0.0088 | 0.0041 |
| Neptune | 18635-02-26 04:04 G | 8527409.46 | 8527409.67 | 8527409.92 | 0.0088 | 0.0045 |
| Jupiter | 18635-11-19 21:50 G | 8527676.35 | 8527676.41 | 8527676.48 | 0.0494 | 0.0473 |
| Neptune | 18636-02-28 21:50 G | 8527777.19 | 8527777.41 | 8527777.64 | 0.0088 | 0.0043 |
| Jupiter | 18636-12-19 09:21 G | 8528071.68 | 8528071.89 | 8528072.10 | 0.0485 | 0.0199 |
| Neptune | 18637-03-02 02:09 G | 8528144.39 | 8528144.59 | 8528144.83 | 0.0088 | 0.0047 |
| Neptune | 18638-03-04 20:52 G | 8528512.17 | 8528512.37 | 8528512.62 | 0.0088 | 0.0044 |
| Uranus | 18638-04-03 21:21 G | 8528542.23 | 8528542.39 | 8528542.56 | 0.0134 | 0.0103 |
| Neptune | 18639-03-07 02:38 G | 8528879.41 | 8528879.61 | 8528879.83 | 0.0088 | 0.0050 |
| Uranus | 18639-04-08 00:14 G | 8528911.30 | 8528911.51 | 8528911.74 | 0.0134 | 0.0065 |
| Neptune | 18640-03-08 19:12 G | 8529247.09 | 8529247.30 | 8529247.55 | 0.0088 | 0.0047 |
| Uranus | 18640-04-11 17:31 G | 8529280.97 | 8529281.23 | 8529281.48 | 0.0134 | 0.0001 |
| Saturn | 18640-05-26 00:14 G | 8529325.28 | 8529325.51 | 8529325.75 | 0.0281 | 0.0090 |
| Neptune | 18641-03-11 03:50 G | 8529614.48 | 8529614.66 | 8529614.88 | 0.0088 | 0.0052 |
| Uranus | 18641-04-15 19:26 G | 8529650.07 | 8529650.31 | 8529650.56 | 0.0134 | 0.0041 |
| Neptune | 18642-03-13 17:02 G | 8529981.98 | 8529982.21 | 8529982.43 | 0.0088 | 0.0048 |
| Uranus | 18642-04-20 11:45 G | 8530019.84 | 8530019.99 | 8530020.18 | 0.0134 | 0.0098 |
| Jupiter | 18642-05-30 21:07 G | 8530060.19 | 8530060.38 | 8530060.57 | 0.0538 | 0.0307 |
| Neptune | 18643-03-16 06:28 G | 8530349.59 | 8530349.77 | 8530349.99 | 0.0088 | 0.0054 |
| Neptune | 18644-03-17 14:52 G | 8530716.91 | 8530717.12 | 8530717.35 | 0.0088 | 0.0049 |
| Neptune | 18645-03-20 08:38 G | 8531084.67 | 8531084.86 | 8531085.07 | 0.0088 | 0.0055 |
| Neptune | 18646-03-22 13:26 G | 8531451.87 | 8531452.06 | 8531452.30 | 0.0089 | 0.0051 |
| Neptune | 18647-03-25 08:52 G | 8531819.69 | 8531819.87 | 8531820.09 | 0.0089 | 0.0057 |
| Jupiter | 18647-11-24 07:12 G | 8532063.64 | 8532063.80 | 8532063.96 | 0.0492 | 0.0347 |
| Neptune | 18648-03-26 14:38 G | 8532186.92 | 8532187.11 | 8532187.33 | 0.0089 | 0.0051 |
| Jupiter | 18648-12-23 05:45 G | 8532458.54 | 8532458.74 | 8532458.95 | 0.0485 | 0.0249 |
| Neptune | 18649-03-29 07:40 G | 8532554.63 | 8532554.82 | 8532555.04 | 0.0089 | 0.0057 |

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| Neptune | 18650-03-31 16:33 G | 8532922.01 | 8532922.19 | 8532922.42 | 0.0089 | 0.0051 |
| Neptune | 18651-04-03 06:14 G | 8533289.57 | 8533289.76 | 8533289.98 | 0.0089 | 0.0057 |
| Neptune | 18652-04-04 20:38 G | 8533657.16 | 8533657.36 | 8533657.57 | 0.0089 | 0.0051 |
| Neptune | 18653-04-07 05:16 G | 8534024.54 | 8534024.72 | 8534024.94 | 0.0089 | 0.0058 |
| Neptune | 18654-04-09 23:45 G | 8534392.29 | 8534392.49 | 8534392.71 | 0.0089 | 0.0050 |
| Jupiter | 18654-06-05 14:38 G | 8534448.88 | 8534449.11 | 8534449.33 | 0.0539 | 0.0139 |
| Saturn | 18654-11-16 07:12 G | 8534612.65 | 8534612.80 | 8534612.98 | 0.0277 | 0.0205 |
| Neptune | 18655-04-12 05:31 G | 8534759.54 | 8534759.73 | 8534759.94 | 0.0089 | 0.0057 |
| Saturn | 18655-11-29 03:36 G | 8534990.54 | 8534990.65 | 8534990.77 | 0.0279 | 0.0243 |
| Neptune | 18656-04-14 01:12 G | 8535127.35 | 8535127.55 | 8535127.78 | 0.0089 | 0.0049 |
| Neptune | 18657-04-16 06:57 G | 8535494.61 | 8535494.79 | 8535495.00 | 0.0089 | 0.0057 |
| Neptune | 18658-04-19 01:26 G | 8535862.34 | 8535862.56 | 8535862.78 | 0.0089 | 0.0048 |
| Neptune | 18659-04-21 10:04 G | 8536229.73 | 8536229.92 | 8536230.12 | 0.0089 | 0.0056 |
| Jupiter | 18659-11-28 14:38 G | 8536450.91 | 8536451.11 | 8536451.33 | 0.0491 | 0.0244 |
| Neptune | 18660-04-23 00:00 G | 8536597.28 | 8536597.50 | 8536597.74 | 0.0089 | 0.0047 |
| Jupiter | 18660-12-27 15:36 G | 8536845.99 | 8536846.15 | 8536846.33 | 0.0484 | 0.0327 |
| Neptune | 18661-04-25 13:40 G | 8536964.90 | 8536965.07 | 8536965.29 | 0.0089 | 0.0055 |
| Neptune | 18662-04-27 23:45 G | 8537332.28 | 8537332.49 | 8537332.73 | 0.0089 | 0.0045 |
| Neptune | 18663-04-30 18:00 G | 8537700.06 | 8537700.25 | 8537700.47 | 0.0089 | 0.0054 |
| Neptune | 18664-05-02 00:14 G | 8538067.31 | 8538067.51 | 8538067.76 | 0.0089 | 0.0044 |
| Neptune | 18665-05-04 20:24 G | 8538435.16 | 8538435.35 | 8538435.58 | 0.0089 | 0.0052 |
| Neptune | 18666-05-07 03:07 G | 8538802.41 | 8538802.63 | 8538802.86 | 0.0089 | 0.0042 |
| Jupiter | 18666-06-10 14:09 G | 8538836.85 | 8538837.09 | 8538837.33 | 0.0540 | 0.0046 |
| Neptune | 18667-05-09 21:50 G | 8539170.21 | 8539170.41 | 8539170.65 | 0.0089 | 0.0049 |
| Neptune | 18668-05-11 06:28 G | 8539537.56 | 8539537.77 | 8539538.01 | 0.0089 | 0.0039 |
| Neptune | 18669-05-13 21:36 G | 8539905.18 | 8539905.40 | 8539905.64 | 0.0089 | 0.0047 |
| Saturn | 18669-05-20 16:33 G | 8539911.97 | 8539912.19 | 8539912.42 | 0.0282 | 0.0111 |
| Neptune | 18670-05-16 11:02 G | 8540272.75 | 8540272.96 | 8540273.20 | 0.0089 | 0.0037 |
| Neptune | 18671-05-18 21:36 G | 8540640.19 | 8540640.40 | 8540640.65 | 0.0089 | 0.0044 |
| Jupiter | 18671-12-02 15:07 G | 8540837.92 | 8540838.13 | 8540838.34 | 0.0490 | 0.0190 |

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| Neptune | 18672-05-20 15:36 G | 8541007.92 | 8541008.15 | 8541008.39 | 0.0089 | 0.0034 |
| Jupiter | 18672-12-31 16:19 G | 8541233.08 | 8541233.18 | 8541233.29 | 0.0485 | 0.0436 |
| Neptune | 18673-05-22 22:33 G | 8541375.21 | 8541375.44 | 8541375.68 | 0.0089 | 0.0041 |
| Neptune | 18674-05-25 18:28 G | 8541743.04 | 8541743.27 | 8541743.53 | 0.0089 | 0.0031 |
| Neptune | 18675-05-28 00:43 G | 8542110.31 | 8542110.53 | 8542110.78 | 0.0089 | 0.0038 |
| Neptune | 18676-05-29 20:09 G | 8542478.10 | 8542478.34 | 8542478.60 | 0.0089 | 0.0028 |
| Neptune | 18677-06-01 04:19 G | 8542845.46 | 8542845.68 | 8542845.93 | 0.0089 | 0.0035 |
| Neptune | 18678-06-03 20:38 G | 8543213.10 | 8543213.36 | 8543213.62 | 0.0089 | 0.0024 |
| Jupiter | 18678-06-16 00:57 G | 8543225.32 | 8543225.54 | 8543225.77 | 0.0541 | 0.0045 |
| Neptune | 18679-06-06 09:21 G | 8543580.66 | 8543580.89 | 8543581.13 | 0.0089 | 0.0030 |
| Neptune | 18680-06-07 21:07 G | 8543948.12 | 8543948.38 | 8543948.64 | 0.0089 | 0.0020 |
| Neptune | 18681-06-10 14:09 G | 8544315.86 | 8544316.09 | 8544316.34 | 0.0089 | 0.0027 |
| Uranus | 18681-10-03 23:31 G | 8544431.35 | 8544431.48 | 8544431.63 | 0.0144 | 0.0119 |
| Neptune | 18682-06-12 21:36 G | 8544683.15 | 8544683.40 | 8544683.67 | 0.0089 | 0.0017 |
| Uranus | 18682-10-08 14:52 G | 8544800.89 | 8544801.12 | 8544801.38 | 0.0144 | 0.0047 |
| Neptune | 18683-06-15 17:31 G | 8545050.99 | 8545051.23 | 8545051.49 | 0.0089 | 0.0023 |
| Uranus | 18683-10-13 20:24 G | 8545171.10 | 8545171.35 | 8545171.60 | 0.0144 | 0.0004 |
| Jupiter | 18683-12-07 02:09 G | 8545225.36 | 8545225.59 | 8545225.82 | 0.0489 | 0.0125 |
| Neptune | 18684-06-16 23:31 G | 8545418.23 | 8545418.48 | 8545418.74 | 0.0089 | 0.0012 |
| Uranus | 18684-10-17 13:40 G | 8545540.86 | 8545541.07 | 8545541.29 | 0.0145 | 0.0081 |
| Saturn | 18684-11-23 09:21 G | 8545577.65 | 8545577.89 | 8545578.14 | 0.0278 | 0.0059 |
| Neptune | 18685-06-19 18:57 G | 8545786.04 | 8545786.29 | 8545786.56 | 0.0089 | 0.0018 |
| Uranus | 18685-10-22 17:31 G | 8545911.17 | 8545911.23 | 8545911.32 | 0.0145 | 0.0137 |
| Neptune | 18686-06-22 02:52 G | 8546153.37 | 8546153.62 | 8546153.87 | 0.0089 | 0.0009 |
| Neptune | 18687-06-24 18:57 G | 8546521.03 | 8546521.29 | 8546521.56 | 0.0089 | 0.0014 |
| Neptune | 18688-06-26 06:43 G | 8546888.53 | 8546888.78 | 8546889.03 | 0.0089 | 0.0006 |
| Neptune | 18689-06-28 18:57 G | 8547256.03 | 8547256.29 | 8547256.56 | 0.0089 | 0.0009 |
| Jupiter | 18690-06-21 08:24 G | 8547613.63 | 8547613.85 | 8547614.08 | 0.0543 | 0.0207 |
| Neptune | 18690-07-01 11:45 G | 8547623.74 | 8547623.99 | 8547624.24 | 0.0089 | 0.0001 |
| Neptune | 18691-07-03 19:40 G | 8547991.06 | 8547991.32 | 8547991.58 | 0.0089 | 0.0005 |

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| Neptune | 18692-07-05 15:07 G | 8548358.87 | 8548359.13 | 8548359.39 | 0.0089 | 0.0003 |
| Neptune | 18693-07-07 21:07 G | 8548726.12 | 8548726.38 | 8548726.64 | 0.0089 | 0.0001 |
| Neptune | 18694-07-10 16:48 G | 8549093.94 | 8549094.20 | 8549094.46 | 0.0090 | 0.0006 |
| Neptune | 18695-07-12 23:31 G | 8549461.24 | 8549461.48 | 8549461.74 | 0.0090 | 0.0005 |
| Jupiter | 18695-12-11 01:12 G | 8549612.32 | 8549612.55 | 8549612.79 | 0.0487 | 0.0013 |
| Neptune | 18696-07-14 16:19 G | 8549828.92 | 8549829.18 | 8549829.45 | 0.0089 | 0.0010 |
| Neptune | 18697-07-17 02:52 G | 8550196.38 | 8550196.62 | 8550196.88 | 0.0089 | 0.0010 |
| Neptune | 18698-07-19 15:21 G | 8550563.88 | 8550564.14 | 8550564.41 | 0.0089 | 0.0015 |
| Saturn | 18699-05-28 09:50 G | 8550876.71 | 8550876.91 | 8550877.12 | 0.0281 | 0.0147 |
| Neptune | 18699-07-22 07:12 G | 8550931.55 | 8550931.80 | 8550932.05 | 0.0089 | 0.0013 |
| Neptune | 18700-07-24 15:07 G | 8551298.87 | 8551299.13 | 8551299.39 | 0.0089 | 0.0018 |
| Neptune | 18701-07-27 09:50 G | 8551666.67 | 8551666.91 | 8551667.17 | 0.0089 | 0.0017 |
| Jupiter | 18702-06-27 15:36 G | 8552001.99 | 8552002.15 | 8552002.32 | 0.0544 | 0.0367 |
| Neptune | 18702-07-29 15:36 G | 8552033.91 | 8552034.15 | 8552034.41 | 0.0089 | 0.0022 |
| Neptune | 18703-08-01 11:02 G | 8552401.72 | 8552401.96 | 8552402.22 | 0.0089 | 0.0023 |
| Neptune | 18704-08-02 17:31 G | 8552769.00 | 8552769.23 | 8552769.48 | 0.0089 | 0.0026 |
| Neptune | 18705-08-05 10:33 G | 8553136.69 | 8553136.94 | 8553137.20 | 0.0089 | 0.0026 |
| Neptune | 18706-08-07 20:09 G | 8553504.12 | 8553504.34 | 8553504.59 | 0.0089 | 0.0028 |
| Neptune | 18707-08-10 08:52 G | 8553871.62 | 8553871.87 | 8553872.12 | 0.0089 | 0.0029 |
| Jupiter | 18707-12-16 12:14 G | 8553999.79 | 8554000.01 | 8554000.24 | 0.0486 | 0.0112 |
| Neptune | 18708-08-11 23:45 G | 8554239.26 | 8554239.49 | 8554239.72 | 0.0089 | 0.0032 |
| Neptune | 18709-08-14 07:12 G | 8554606.57 | 8554606.80 | 8554607.06 | 0.0089 | 0.0033 |
| Neptune | 18710-08-17 01:40 G | 8554974.34 | 8554974.57 | 8554974.81 | 0.0089 | 0.0034 |
| Neptune | 18711-08-19 06:43 G | 8555341.55 | 8555341.78 | 8555342.02 | 0.0089 | 0.0036 |
| Neptune | 18712-08-21 01:26 G | 8555709.35 | 8555709.56 | 8555709.82 | 0.0089 | 0.0037 |
| Jupiter | 18713-05-25 17:31 G | 8555987.13 | 8555987.23 | 8555987.34 | 0.0536 | 0.0468 |
| Neptune | 18713-08-23 07:26 G | 8556076.60 | 8556076.81 | 8556077.05 | 0.0089 | 0.0039 |
| Saturn | 18713-11-18 17:02 G | 8556164.01 | 8556164.21 | 8556164.41 | 0.0277 | 0.0146 |
| Jupiter | 18714-07-03 10:19 G | 8556390.81 | 8556390.93 | 8556391.07 | 0.0544 | 0.0448 |
| Neptune | 18714-08-25 23:45 G | 8556444.27 | 8556444.49 | 8556444.75 | 0.0089 | 0.0039 |

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| Neptune | 18715-08-28 09:21 G | 8556811.68 | 8556811.89 | 8556812.12 | 0.0089 | 0.0042 |
| Neptune | 18716-08-29 21:21 G | 8557179.17 | 8557179.39 | 8557179.64 | 0.0089 | 0.0042 |
| Neptune | 18717-09-01 11:45 G | 8557546.79 | 8557546.99 | 8557547.22 | 0.0089 | 0.0044 |
| Neptune | 18718-09-03 19:12 G | 8557914.09 | 8557914.30 | 8557914.55 | 0.0089 | 0.0043 |
| Jupiter | 18718-11-20 07:12 G | 8557991.75 | 8557991.80 | 8557991.86 | 0.0494 | 0.0477 |
| Neptune | 18719-09-06 12:57 G | 8558281.83 | 8558282.04 | 8558282.27 | 0.0089 | 0.0046 |
| Jupiter | 18719-12-20 10:33 G | 8558386.72 | 8558386.94 | 8558387.16 | 0.0486 | 0.0186 |
| Neptune | 18720-09-07 17:31 G | 8558649.03 | 8558649.23 | 8558649.47 | 0.0089 | 0.0045 |
| Neptune | 18721-09-10 12:00 G | 8559016.80 | 8559017.00 | 8559017.23 | 0.0089 | 0.0050 |
| Uranus | 18722-04-05 07:40 G | 8559223.70 | 8559223.82 | 8559223.98 | 0.0134 | 0.0113 |
| Neptune | 18722-09-12 17:31 G | 8559384.02 | 8559384.23 | 8559384.45 | 0.0089 | 0.0046 |
| Uranus | 18723-04-09 11:45 G | 8559592.75 | 8559592.99 | 8559593.23 | 0.0134 | 0.0048 |
| Neptune | 18723-09-15 09:07 G | 8559751.67 | 8559751.88 | 8559752.11 | 0.0089 | 0.0050 |
| Uranus | 18724-04-13 04:33 G | 8559962.43 | 8559962.69 | 8559962.95 | 0.0134 | 0.0010 |
| Neptune | 18724-09-16 17:45 G | 8560119.04 | 8560119.24 | 8560119.46 | 0.0089 | 0.0047 |
| Uranus | 18725-04-17 07:12 G | 8560331.56 | 8560331.80 | 8560332.03 | 0.0134 | 0.0053 |
| Jupiter | 18725-05-31 06:43 G | 8560375.59 | 8560375.78 | 8560375.97 | 0.0537 | 0.0321 |
| Neptune | 18725-09-19 04:48 G | 8560486.50 | 8560486.70 | 8560486.94 | 0.0089 | 0.0051 |
| Uranus | 18726-04-21 23:02 G | 8560701.31 | 8560701.46 | 8560701.66 | 0.0134 | 0.0099 |
| Jupiter | 18726-07-08 11:02 G | 8560778.95 | 8560778.96 | 8560778.98 | 0.0544 | 0.0541 |
| Neptune | 18726-09-21 19:12 G | 8560854.09 | 8560854.30 | 8560854.51 | 0.0089 | 0.0048 |
| Neptune | 18727-09-24 01:26 G | 8561221.37 | 8561221.56 | 8561221.79 | 0.0089 | 0.0053 |
| Saturn | 18728-05-22 20:24 G | 8561463.10 | 8561463.35 | 8561463.61 | 0.0282 | 0.0056 |
| Neptune | 18728-09-25 18:57 G | 8561589.10 | 8561589.29 | 8561589.53 | 0.0089 | 0.0049 |
| Neptune | 18729-09-27 23:45 G | 8561956.29 | 8561956.49 | 8561956.70 | 0.0089 | 0.0053 |
| Neptune | 18730-09-30 17:31 G | 8562324.03 | 8562324.23 | 8562324.46 | 0.0089 | 0.0048 |
| Jupiter | 18730-11-24 12:43 G | 8562378.86 | 8562379.03 | 8562379.19 | 0.0493 | 0.0353 |
| Neptune | 18731-10-02 22:33 G | 8562691.26 | 8562691.44 | 8562691.66 | 0.0089 | 0.0054 |
| Jupiter | 18731-12-24 18:14 G | 8562774.06 | 8562774.26 | 8562774.46 | 0.0485 | 0.0234 |
| Pluto | 18732-08-27 05:45 G | 8563020.48 | 8563020.74 | 8563021.00 | 0.0064 | 0.0000 |

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| Neptune | 18732-10-04 13:40 G | 8563058.87 | 8563059.07 | 8563059.31 | 0.0089 | 0.0049 |
| Neptune | 18733-10-06 22:33 G | 8563426.25 | 8563426.44 | 8563426.64 | 0.0089 | 0.0054 |
| Neptune | 18734-10-09 08:24 G | 8563793.65 | 8563793.85 | 8563794.10 | 0.0089 | 0.0049 |
| Neptune | 18735-10-11 22:19 G | 8564161.25 | 8564161.43 | 8564161.65 | 0.0089 | 0.0054 |
| Neptune | 18736-10-13 04:33 G | 8564528.48 | 8564528.69 | 8564528.92 | 0.0089 | 0.0047 |
| Jupiter | 18737-06-05 04:33 G | 8564763.47 | 8564763.69 | 8564763.92 | 0.0538 | 0.0164 |
| Neptune | 18737-10-15 21:36 G | 8564896.21 | 8564896.40 | 8564896.62 | 0.0088 | 0.0053 |
| Neptune | 18738-10-18 01:12 G | 8565263.35 | 8565263.55 | 8565263.79 | 0.0088 | 0.0047 |
| Neptune | 18739-10-20 18:43 G | 8565631.09 | 8565631.28 | 8565631.51 | 0.0088 | 0.0053 |
| Neptune | 18740-10-22 00:00 G | 8565998.31 | 8565998.50 | 8565998.73 | 0.0088 | 0.0046 |
| Neptune | 18741-10-24 14:24 G | 8566365.89 | 8566366.10 | 8566366.33 | 0.0088 | 0.0051 |
| Neptune | 18742-10-26 23:16 G | 8566733.27 | 8566733.47 | 8566733.70 | 0.0088 | 0.0044 |
| Jupiter | 18742-11-28 15:36 G | 8566765.96 | 8566766.15 | 8566766.34 | 0.0492 | 0.0260 |
| Neptune | 18743-10-29 08:52 G | 8567100.65 | 8567100.87 | 8567101.09 | 0.0088 | 0.0049 |
| Saturn | 18743-11-26 12:57 G | 8567128.82 | 8567129.04 | 8567129.27 | 0.0278 | 0.0119 |
| Jupiter | 18743-12-28 19:26 G | 8567161.13 | 8567161.31 | 8567161.50 | 0.0485 | 0.0313 |
| Neptune | 18744-10-30 22:48 G | 8567468.25 | 8567468.45 | 8567468.68 | 0.0088 | 0.0042 |
| Neptune | 18745-11-02 04:19 G | 8567835.46 | 8567835.68 | 8567835.90 | 0.0088 | 0.0048 |
| Neptune | 18746-11-04 21:21 G | 8568203.16 | 8568203.39 | 8568203.62 | 0.0088 | 0.0040 |
| Mars | 18747-03-11 10:19 G | 8568329.75 | 8568329.93 | 8568330.11 | 0.1714 | 0.0142 |
| Neptune | 18747-11-07 00:43 G | 8568570.32 | 8568570.53 | 8568570.75 | 0.0088 | 0.0046 |
| Neptune | 18748-11-08 17:16 G | 8568938.01 | 8568938.22 | 8568938.48 | 0.0088 | 0.0038 |
| Jupiter | 18749-06-10 14:38 G | 8569151.89 | 8569152.11 | 8569152.33 | 0.0540 | 0.0077 |
| Neptune | 18749-11-10 22:48 G | 8569305.24 | 8569305.45 | 8569305.68 | 0.0088 | 0.0043 |
| Neptune | 18750-11-13 11:45 G | 8569672.76 | 8569672.99 | 8569673.25 | 0.0088 | 0.0035 |
| Neptune | 18751-11-15 21:07 G | 8570040.18 | 8570040.38 | 8570040.62 | 0.0088 | 0.0042 |
| Neptune | 18752-11-17 05:45 G | 8570407.50 | 8570407.74 | 8570407.99 | 0.0088 | 0.0032 |
| Neptune | 18753-11-19 20:09 G | 8570775.13 | 8570775.34 | 8570775.58 | 0.0088 | 0.0038 |
| Neptune | 18754-11-22 00:43 G | 8571142.30 | 8571142.53 | 8571142.79 | 0.0088 | 0.0029 |
| Jupiter | 18754-12-03 04:19 G | 8571153.47 | 8571153.68 | 8571153.90 | 0.0490 | 0.0204 |

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| Neptune | 18755-11-24 18:00 G | 8571510.03 | 8571510.25 | 8571510.50 | 0.0088 | 0.0035 |
| Jupiter | 18756-01-01 23:02 G | 8571548.36 | 8571548.46 | 8571548.55 | 0.0484 | 0.0434 |
| Neptune | 18756-11-25 21:36 G | 8571877.17 | 8571877.40 | 8571877.65 | 0.0088 | 0.0026 |
| Saturn | 18757-05-17 07:40 G | 8572049.73 | 8572049.82 | 8572049.93 | 0.0282 | 0.0255 |
| Neptune | 18757-11-28 13:40 G | 8572244.85 | 8572245.07 | 8572245.33 | 0.0088 | 0.0033 |
| Saturn | 18758-05-30 22:19 G | 8572428.28 | 8572428.43 | 8572428.61 | 0.0281 | 0.0205 |
| Neptune | 18758-11-30 19:55 G | 8572612.09 | 8572612.33 | 8572612.57 | 0.0088 | 0.0023 |
| Neptune | 18759-12-03 07:55 G | 8572979.59 | 8572979.83 | 8572980.09 | 0.0088 | 0.0029 |
| Neptune | 18760-12-04 18:00 G | 8573347.02 | 8573347.25 | 8573347.50 | 0.0088 | 0.0020 |
| Jupiter | 18761-06-15 23:02 G | 8573540.22 | 8573540.46 | 8573540.70 | 0.0542 | 0.0022 |
| Neptune | 18761-12-07 01:26 G | 8573714.31 | 8573714.56 | 8573714.82 | 0.0088 | 0.0025 |
| Neptune | 18762-12-09 16:33 G | 8574081.95 | 8574082.19 | 8574082.44 | 0.0088 | 0.0016 |
| Neptune | 18763-12-11 20:24 G | 8574449.11 | 8574449.35 | 8574449.61 | 0.0088 | 0.0023 |
| Neptune | 18764-12-13 13:40 G | 8574816.83 | 8574817.07 | 8574817.34 | 0.0088 | 0.0013 |
| Uranus | 18765-10-05 09:07 G | 8575112.74 | 8575112.88 | 8575113.06 | 0.0144 | 0.0111 |
| Neptune | 18765-12-15 17:16 G | 8575183.99 | 8575184.22 | 8575184.48 | 0.0088 | 0.0019 |
| Uranus | 18766-10-10 00:14 G | 8575482.29 | 8575482.51 | 8575482.76 | 0.0144 | 0.0056 |
| Jupiter | 18766-12-07 02:38 G | 8575540.39 | 8575540.61 | 8575540.84 | 0.0489 | 0.0136 |
| Neptune | 18766-12-18 09:36 G | 8575551.64 | 8575551.90 | 8575552.17 | 0.0088 | 0.0009 |
| Uranus | 18767-10-15 05:45 G | 8575852.50 | 8575852.74 | 8575852.99 | 0.0144 | 0.0022 |
| Neptune | 18767-12-20 16:19 G | 8575918.94 | 8575919.18 | 8575919.43 | 0.0088 | 0.0015 |
| Uranus | 18768-10-18 22:04 G | 8576222.20 | 8576222.42 | 8576222.64 | 0.0145 | 0.0071 |
| Neptune | 18768-12-22 03:50 G | 8576286.40 | 8576286.66 | 8576286.93 | 0.0088 | 0.0005 |
| Neptune | 18769-12-24 14:52 G | 8576653.88 | 8576654.12 | 8576654.38 | 0.0088 | 0.0012 |
| Neptune | 18770-12-26 21:50 G | 8577021.14 | 8577021.41 | 8577021.67 | 0.0088 | 0.0002 |
| Neptune | 18771-12-29 13:26 G | 8577388.82 | 8577389.06 | 8577389.32 | 0.0088 | 0.0008 |
| Saturn | 18772-11-20 06:43 G | 8577715.56 | 8577715.78 | 8577716.01 | 0.0277 | 0.0084 |
| Neptune | 18772-12-30 17:31 G | 8577755.97 | 8577756.23 | 8577756.49 | 0.0088 | 0.0003 |
| Jupiter | 18773-06-21 07:40 G | 8577928.61 | 8577928.82 | 8577929.03 | 0.0543 | 0.0191 |
| Neptune | 18774-01-02 10:48 G | 8578123.69 | 8578123.95 | 8578124.21 | 0.0088 | 0.0004 |

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| Neptune | 18775-01-04 14:52 G | 8578490.87 | 8578491.12 | 8578491.37 | 0.0088 | 0.0006 |
| Neptune | 18776-01-07 06:28 G | 8578858.51 | 8578858.77 | 8578859.04 | 0.0088 | 0.0001 |
| Neptune | 18777-01-08 13:55 G | 8579225.84 | 8579226.08 | 8579226.33 | 0.0088 | 0.0010 |
| Neptune | 18778-01-11 00:57 G | 8579593.27 | 8579593.54 | 8579593.81 | 0.0088 | 0.0004 |
| Jupiter | 18778-12-11 14:38 G | 8579927.89 | 8579928.11 | 8579928.34 | 0.0488 | 0.0016 |
| Neptune | 18779-01-13 13:12 G | 8579960.80 | 8579961.05 | 8579961.30 | 0.0088 | 0.0014 |
| Neptune | 18780-01-15 19:26 G | 8580328.05 | 8580328.31 | 8580328.58 | 0.0088 | 0.0007 |
| Neptune | 18781-01-17 12:00 G | 8580695.76 | 8580696.00 | 8580696.26 | 0.0088 | 0.0018 |
| Neptune | 18782-01-19 15:50 G | 8581062.92 | 8581063.16 | 8581063.43 | 0.0088 | 0.0011 |
| Neptune | 18783-01-22 09:50 G | 8581430.66 | 8581430.91 | 8581431.16 | 0.0088 | 0.0021 |
| Neptune | 18784-01-24 14:24 G | 8581797.86 | 8581798.10 | 8581798.36 | 0.0088 | 0.0015 |
| Neptune | 18785-01-26 05:45 G | 8582165.49 | 8582165.74 | 8582166.00 | 0.0088 | 0.0025 |
| Jupiter | 18785-06-26 22:04 G | 8582317.24 | 8582317.42 | 8582317.61 | 0.0543 | 0.0339 |
| Neptune | 18786-01-28 14:09 G | 8582532.86 | 8582533.09 | 8582533.35 | 0.0088 | 0.0018 |
| Neptune | 18787-01-31 00:43 G | 8582900.29 | 8582900.53 | 8582900.80 | 0.0088 | 0.0028 |
| Saturn | 18787-05-25 00:14 G | 8583014.26 | 8583014.51 | 8583014.77 | 0.0282 | 0.0005 |
| Neptune | 18788-02-02 13:55 G | 8583267.84 | 8583268.08 | 8583268.33 | 0.0088 | 0.0021 |
| Neptune | 18789-02-03 19:55 G | 8583635.09 | 8583635.33 | 8583635.59 | 0.0088 | 0.0031 |
| Neptune | 18790-02-06 13:12 G | 8584002.81 | 8584003.05 | 8584003.30 | 0.0088 | 0.0024 |
| Jupiter | 18790-12-15 11:02 G | 8584314.73 | 8584314.96 | 8584315.20 | 0.0487 | 0.0096 |
| Neptune | 18791-02-08 17:02 G | 8584369.99 | 8584370.21 | 8584370.47 | 0.0088 | 0.0035 |
| Neptune | 18792-02-11 11:16 G | 8584737.73 | 8584737.97 | 8584738.23 | 0.0088 | 0.0027 |
| Neptune | 18793-02-12 16:33 G | 8585104.97 | 8585105.19 | 8585105.43 | 0.0088 | 0.0037 |
| Neptune | 18794-02-15 08:09 G | 8585472.61 | 8585472.84 | 8585473.11 | 0.0088 | 0.0030 |
| Neptune | 18795-02-17 17:45 G | 8585840.03 | 8585840.24 | 8585840.48 | 0.0088 | 0.0040 |
| Neptune | 18796-02-20 04:19 G | 8586207.45 | 8586207.68 | 8586207.94 | 0.0088 | 0.0033 |
| Jupiter | 18796-05-24 22:33 G | 8586302.35 | 8586302.44 | 8586302.54 | 0.0534 | 0.0485 |
| Neptune | 18797-02-21 18:14 G | 8586575.06 | 8586575.26 | 8586575.50 | 0.0088 | 0.0043 |
| Jupiter | 18797-07-01 22:19 G | 8586705.28 | 8586705.43 | 8586705.59 | 0.0543 | 0.0414 |
| Neptune | 18798-02-24 00:28 G | 8586942.29 | 8586942.52 | 8586942.78 | 0.0088 | 0.0035 |

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| Neptune | 18799-02-26 18:43 G | 8587310.06 | 8587310.28 | 8587310.50 | 0.0088 | 0.0045 |
| Neptune | 18800-02-28 22:48 G | 8587677.23 | 8587677.45 | 8587677.70 | 0.0088 | 0.0037 |
| Neptune | 18801-03-02 16:48 G | 8588045.00 | 8588045.20 | 8588045.45 | 0.0088 | 0.0047 |
| Saturn | 18801-11-15 06:00 G | 8588302.68 | 8588302.75 | 8588302.84 | 0.0277 | 0.0262 |
| Jupiter | 18801-11-19 10:48 G | 8588306.91 | 8588306.95 | 8588307.00 | 0.0495 | 0.0485 |
| Neptune | 18802-03-04 23:02 G | 8588412.25 | 8588412.46 | 8588412.70 | 0.0088 | 0.0040 |
| Saturn | 18802-11-27 22:04 G | 8588680.25 | 8588680.42 | 8588680.62 | 0.0278 | 0.0181 |
| Jupiter | 18802-12-19 19:55 G | 8588702.12 | 8588702.33 | 8588702.55 | 0.0486 | 0.0168 |
| Neptune | 18803-03-07 15:07 G | 8588779.91 | 8588780.13 | 8588780.36 | 0.0088 | 0.0049 |
| Neptune | 18804-03-09 00:57 G | 8589147.34 | 8589147.54 | 8589147.78 | 0.0088 | 0.0042 |
| Neptune | 18805-03-11 12:14 G | 8589514.80 | 8589515.01 | 8589515.24 | 0.0088 | 0.0050 |
| Neptune | 18806-03-14 03:07 G | 8589882.42 | 8589882.63 | 8589882.86 | 0.0088 | 0.0043 |
| Uranus | 18806-04-05 19:12 G | 8589905.14 | 8589905.30 | 8589905.50 | 0.0134 | 0.0097 |
| Neptune | 18807-03-16 09:50 G | 8590249.71 | 8590249.91 | 8590250.14 | 0.0088 | 0.0052 |
| Uranus | 18807-04-09 23:02 G | 8590274.24 | 8590274.46 | 8590274.70 | 0.0134 | 0.0058 |
| Neptune | 18808-03-18 04:04 G | 8590617.47 | 8590617.67 | 8590617.91 | 0.0088 | 0.0045 |
| Uranus | 18808-04-13 15:36 G | 8590643.89 | 8590644.15 | 8590644.41 | 0.0134 | 0.0007 |
| Jupiter | 18808-05-29 16:48 G | 8590690.03 | 8590690.20 | 8590690.38 | 0.0536 | 0.0345 |
| Neptune | 18809-03-20 09:07 G | 8590984.69 | 8590984.88 | 8590985.11 | 0.0088 | 0.0053 |
| Uranus | 18809-04-17 18:00 G | 8591013.02 | 8591013.25 | 8591013.49 | 0.0134 | 0.0047 |
| Jupiter | 18809-07-07 09:36 G | 8591093.84 | 8591093.90 | 8591093.97 | 0.0544 | 0.0520 |
| Neptune | 18810-03-23 04:04 G | 8591352.46 | 8591352.67 | 8591352.92 | 0.0088 | 0.0045 |
| Uranus | 18810-04-22 10:04 G | 8591382.76 | 8591382.92 | 8591383.08 | 0.0134 | 0.0106 |
| Neptune | 18811-03-25 10:33 G | 8591719.75 | 8591719.94 | 8591720.16 | 0.0089 | 0.0053 |
| Neptune | 18812-03-27 02:38 G | 8592087.41 | 8592087.61 | 8592087.86 | 0.0089 | 0.0046 |
| Neptune | 18813-03-29 13:40 G | 8592454.87 | 8592455.07 | 8592455.27 | 0.0089 | 0.0053 |
| Jupiter | 18813-11-23 15:36 G | 8592694.00 | 8592694.15 | 8592694.31 | 0.0493 | 0.0362 |
| Neptune | 18814-04-01 01:26 G | 8592822.34 | 8592822.56 | 8592822.79 | 0.0089 | 0.0046 |
| Jupiter | 18814-12-23 22:48 G | 8593089.24 | 8593089.45 | 8593089.67 | 0.0485 | 0.0218 |
| Neptune | 18815-04-03 15:50 G | 8593189.99 | 8593190.16 | 8593190.39 | 0.0089 | 0.0054 |

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| Neptune | 18816-04-04 23:31 G | 8593557.27 | 8593557.48 | 8593557.72 | 0.0089 | 0.0046 |
| Saturn | 18816-05-18 22:33 G | 8593601.27 | 8593601.44 | 8593601.62 | 0.0282 | 0.0196 |
| Neptune | 18817-04-07 18:28 G | 8593925.07 | 8593925.27 | 8593925.48 | 0.0089 | 0.0052 |
| Saturn | 18817-06-01 08:52 G | 8593979.80 | 8593979.87 | 8593979.96 | 0.0281 | 0.0264 |
| Neptune | 18818-04-09 23:45 G | 8594292.29 | 8594292.49 | 8594292.73 | 0.0089 | 0.0046 |
| Neptune | 18819-04-12 19:26 G | 8594660.12 | 8594660.31 | 8594660.54 | 0.0089 | 0.0052 |
| Neptune | 18820-04-14 02:09 G | 8595027.39 | 8595027.59 | 8595027.82 | 0.0089 | 0.0046 |
| Jupiter | 18820-06-04 06:57 G | 8595078.58 | 8595078.79 | 8595079.00 | 0.0538 | 0.0185 |
| Pluto | 18821-02-24 14:24 G | 8595343.96 | 8595344.10 | 8595344.27 | 0.0080 | 0.0063 |
| Neptune | 18821-04-16 19:26 G | 8595395.11 | 8595395.31 | 8595395.55 | 0.0089 | 0.0051 |
| Neptune | 18822-04-19 06:00 G | 8595762.55 | 8595762.75 | 8595762.98 | 0.0089 | 0.0045 |
| Neptune | 18823-04-21 18:43 G | 8596130.07 | 8596130.28 | 8596130.52 | 0.0089 | 0.0049 |
| Neptune | 18824-04-23 09:36 G | 8596497.70 | 8596497.90 | 8596498.14 | 0.0089 | 0.0044 |
| Neptune | 18825-04-25 17:45 G | 8596865.03 | 8596865.24 | 8596865.48 | 0.0089 | 0.0048 |
| Jupiter | 18825-11-28 04:04 G | 8597081.48 | 8597081.67 | 8597081.87 | 0.0492 | 0.0272 |
| Mars | 18826-03-13 16:48 G | 8597187.06 | 8597187.20 | 8597187.35 | 0.1719 | 0.1115 |
| Neptune | 18826-04-28 12:28 G | 8597232.81 | 8597233.02 | 8597233.26 | 0.0089 | 0.0043 |
| Jupiter | 18826-12-28 00:43 G | 8597476.36 | 8597476.53 | 8597476.71 | 0.0485 | 0.0307 |
| Neptune | 18827-04-30 18:28 G | 8597600.06 | 8597600.27 | 8597600.50 | 0.0089 | 0.0046 |
| Neptune | 18828-05-02 14:24 G | 8597967.87 | 8597968.10 | 8597968.34 | 0.0089 | 0.0041 |
| Neptune | 18829-05-04 20:52 G | 8598335.16 | 8598335.37 | 8598335.61 | 0.0089 | 0.0043 |
| Neptune | 18830-05-07 15:07 G | 8598702.90 | 8598703.13 | 8598703.38 | 0.0089 | 0.0039 |
| Neptune | 18831-05-10 01:12 G | 8599070.34 | 8599070.55 | 8599070.79 | 0.0089 | 0.0041 |
| Saturn | 18831-11-22 18:43 G | 8599267.04 | 8599267.28 | 8599267.53 | 0.0278 | 0.0023 |
| Neptune | 18832-05-11 15:07 G | 8599437.90 | 8599438.13 | 8599438.39 | 0.0089 | 0.0038 |
| Jupiter | 18832-06-09 13:40 G | 8599466.84 | 8599467.07 | 8599467.31 | 0.0540 | 0.0099 |
| Neptune | 18833-05-14 06:14 G | 8599805.54 | 8599805.76 | 8599805.99 | 0.0089 | 0.0039 |
| Neptune | 18834-05-16 14:52 G | 8600172.89 | 8600173.12 | 8600173.38 | 0.0089 | 0.0035 |
| Neptune | 18835-05-19 09:50 G | 8600540.68 | 8600540.91 | 8600541.15 | 0.0089 | 0.0035 |
| Neptune | 18836-05-20 15:50 G | 8600907.93 | 8600908.16 | 8600908.41 | 0.0089 | 0.0033 |

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| Neptune | 18837-05-23 12:00 G | 8601275.77 | 8601276.00 | 8601276.26 | 0.0089 | 0.0032 |
| Jupiter | 18837-12-02 03:07 G | 8601468.43 | 8601468.63 | 8601468.84 | 0.0490 | 0.0221 |
| Neptune | 18838-05-25 18:28 G | 8601643.04 | 8601643.27 | 8601643.52 | 0.0089 | 0.0031 |
| Jupiter | 18839-01-01 09:21 G | 8601863.78 | 8601863.89 | 8601864.01 | 0.0484 | 0.0426 |
| Neptune | 18839-05-28 13:12 G | 8602010.80 | 8602011.05 | 8602011.31 | 0.0089 | 0.0029 |
| Neptune | 18840-05-29 22:33 G | 8602378.22 | 8602378.44 | 8602378.70 | 0.0089 | 0.0029 |
| Neptune | 18841-06-01 13:40 G | 8602745.82 | 8602746.07 | 8602746.33 | 0.0089 | 0.0025 |
| Neptune | 18842-06-04 03:50 G | 8603113.43 | 8603113.66 | 8603113.91 | 0.0089 | 0.0024 |
| Neptune | 18843-06-06 13:40 G | 8603480.82 | 8603481.07 | 8603481.33 | 0.0089 | 0.0021 |
| Neptune | 18844-06-08 07:40 G | 8603848.59 | 8603848.82 | 8603849.08 | 0.0089 | 0.0023 |
| Jupiter | 18844-06-14 21:50 G | 8603855.18 | 8603855.41 | 8603855.64 | 0.0541 | 0.0002 |
| Neptune | 18845-06-10 14:52 G | 8604215.87 | 8604216.12 | 8604216.38 | 0.0089 | 0.0018 |
| Saturn | 18846-05-26 10:33 G | 8604565.70 | 8604565.94 | 8604566.18 | 0.0282 | 0.0057 |
| Neptune | 18846-06-13 11:16 G | 8604583.72 | 8604583.97 | 8604584.23 | 0.0089 | 0.0019 |
| Neptune | 18847-06-15 17:31 G | 8604950.98 | 8604951.23 | 8604951.48 | 0.0089 | 0.0013 |
| Mars | 18847-09-11 05:31 G | 8605038.56 | 8605038.73 | 8605038.91 | 0.1827 | 0.0664 |
| Neptune | 18848-06-17 12:28 G | 8605318.76 | 8605319.02 | 8605319.29 | 0.0089 | 0.0015 |
| Neptune | 18849-06-19 21:21 G | 8605686.15 | 8605686.39 | 8605686.65 | 0.0089 | 0.0010 |
| Uranus | 18849-10-05 18:00 G | 8605794.11 | 8605794.25 | 8605794.42 | 0.0144 | 0.0113 |
| Jupiter | 18849-12-06 12:57 G | 8605855.82 | 8605856.04 | 8605856.26 | 0.0489 | 0.0149 |
| Neptune | 18850-06-22 12:57 G | 8606053.78 | 8606054.04 | 8606054.31 | 0.0089 | 0.0012 |
| Uranus | 18850-10-10 09:21 G | 8606163.65 | 8606163.89 | 8606164.13 | 0.0144 | 0.0041 |
| Neptune | 18851-06-25 02:24 G | 8606421.35 | 8606421.60 | 8606421.85 | 0.0089 | 0.0005 |
| Uranus | 18851-10-15 15:07 G | 8606533.88 | 8606534.13 | 8606534.38 | 0.0144 | 0.0010 |
| Neptune | 18852-06-26 12:43 G | 8606788.76 | 8606789.03 | 8606789.29 | 0.0089 | 0.0008 |
| Uranus | 18852-10-19 07:26 G | 8606903.61 | 8606903.81 | 8606904.01 | 0.0145 | 0.0088 |
| Neptune | 18853-06-29 06:14 G | 8607156.51 | 8607156.76 | 8607157.01 | 0.0089 | 0.0001 |
| Uranus | 18853-10-24 12:28 G | 8607273.99 | 8607274.02 | 8607274.09 | 0.0145 | 0.0142 |
| Neptune | 18854-07-01 12:57 G | 8607523.79 | 8607524.04 | 8607524.31 | 0.0089 | 0.0005 |
| Neptune | 18855-07-04 09:07 G | 8607891.62 | 8607891.88 | 8607892.14 | 0.0089 | 0.0004 |

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| Jupiter | 18856-06-20 09:36 G | 8608243.67 | 8608243.90 | 8608244.13 | 0.0542 | 0.0169 |
| Neptune | 18856-07-05 15:07 G | 8608258.88 | 8608259.13 | 8608259.39 | 0.0089 | 0.0002 |
| Neptune | 18857-07-08 10:33 G | 8608626.68 | 8608626.94 | 8608627.21 | 0.0089 | 0.0007 |
| Neptune | 18858-07-10 18:57 G | 8608994.04 | 8608994.29 | 8608994.54 | 0.0089 | 0.0003 |
| Neptune | 18859-07-13 10:48 G | 8609361.69 | 8609361.95 | 8609362.22 | 0.0089 | 0.0012 |
| Neptune | 18860-07-14 23:16 G | 8609729.23 | 8609729.47 | 8609729.72 | 0.0089 | 0.0007 |
| Saturn | 18860-11-16 14:24 G | 8609853.95 | 8609854.10 | 8609854.27 | 0.0277 | 0.0205 |
| Neptune | 18861-07-17 10:04 G | 8610096.66 | 8610096.92 | 8610097.19 | 0.0089 | 0.0015 |
| Saturn | 18861-11-29 12:00 G | 8610231.90 | 8610232.00 | 8610232.12 | 0.0278 | 0.0243 |
| Jupiter | 18861-12-10 12:00 G | 8610242.76 | 8610243.00 | 8610243.24 | 0.0488 | 0.0029 |
| Neptune | 18862-07-20 02:38 G | 8610464.36 | 8610464.61 | 8610464.87 | 0.0089 | 0.0010 |
| Neptune | 18863-07-22 09:21 G | 8610831.64 | 8610831.89 | 8610832.15 | 0.0089 | 0.0019 |
| Neptune | 18864-07-24 04:48 G | 8611199.45 | 8611199.70 | 8611199.96 | 0.0089 | 0.0013 |
| Neptune | 18865-07-26 10:19 G | 8611566.69 | 8611566.93 | 8611567.19 | 0.0089 | 0.0023 |
| Neptune | 18866-07-29 05:16 G | 8611934.47 | 8611934.72 | 8611934.99 | 0.0089 | 0.0017 |
| Neptune | 18867-07-31 12:43 G | 8612301.80 | 8612302.03 | 8612302.28 | 0.0089 | 0.0027 |
| Jupiter | 18868-06-25 06:57 G | 8612631.60 | 8612631.79 | 8612631.98 | 0.0543 | 0.0312 |
| Neptune | 18868-08-02 04:48 G | 8612669.45 | 8612669.70 | 8612669.97 | 0.0089 | 0.0020 |
| Neptune | 18869-08-04 16:33 G | 8613036.97 | 8613037.19 | 8613037.44 | 0.0089 | 0.0030 |
| Neptune | 18870-08-07 04:04 G | 8613404.41 | 8613404.67 | 8613404.92 | 0.0089 | 0.0023 |
| Neptune | 18871-08-09 19:26 G | 8613772.09 | 8613772.31 | 8613772.56 | 0.0089 | 0.0034 |
| Neptune | 18872-08-11 02:38 G | 8614139.36 | 8614139.61 | 8614139.86 | 0.0089 | 0.0026 |
| Neptune | 18873-08-13 21:07 G | 8614507.16 | 8614507.38 | 8614507.63 | 0.0089 | 0.0036 |
| Jupiter | 18873-12-14 22:04 G | 8614630.20 | 8614630.42 | 8614630.65 | 0.0487 | 0.0086 |
| Neptune | 18874-08-16 02:09 G | 8614874.37 | 8614874.59 | 8614874.85 | 0.0089 | 0.0029 |
| Saturn | 18875-05-21 10:04 G | 8615152.70 | 8615152.92 | 8615153.14 | 0.0282 | 0.0135 |
| Neptune | 18875-08-18 20:52 G | 8615242.15 | 8615242.37 | 8615242.62 | 0.0089 | 0.0039 |
| Neptune | 18876-08-20 03:36 G | 8615609.43 | 8615609.65 | 8615609.90 | 0.0089 | 0.0032 |
| Neptune | 18877-08-22 19:12 G | 8615977.08 | 8615977.30 | 8615977.55 | 0.0089 | 0.0042 |
| Neptune | 18878-08-25 06:28 G | 8616344.55 | 8616344.77 | 8616345.01 | 0.0089 | 0.0034 |

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| Jupiter | 18879-05-24 09:36 G | 8616616.83 | 8616616.90 | 8616616.98 | 0.0534 | 0.0505 |
| Neptune | 18879-08-27 16:48 G | 8616711.99 | 8616712.20 | 8616712.45 | 0.0089 | 0.0044 |
| Jupiter | 18880-06-30 23:31 G | 8617020.32 | 8617020.48 | 8617020.63 | 0.0544 | 0.0390 |
| Neptune | 18880-08-29 08:24 G | 8617079.63 | 8617079.85 | 8617080.09 | 0.0089 | 0.0035 |
| Neptune | 18881-08-31 14:38 G | 8617446.90 | 8617447.11 | 8617447.35 | 0.0089 | 0.0045 |
| Neptune | 18882-09-03 09:07 G | 8617814.66 | 8617814.88 | 8617815.12 | 0.0089 | 0.0037 |
| Neptune | 18883-09-05 14:09 G | 8618181.88 | 8618182.09 | 8618182.31 | 0.0089 | 0.0047 |
| Neptune | 18884-09-07 08:09 G | 8618549.63 | 8618549.84 | 8618550.10 | 0.0089 | 0.0039 |
| Neptune | 18885-09-09 14:38 G | 8618916.91 | 8618917.11 | 8618917.33 | 0.0089 | 0.0048 |
| Jupiter | 18885-12-19 00:14 G | 8619017.28 | 8619017.51 | 8619017.75 | 0.0486 | 0.0149 |
| Neptune | 18886-09-12 05:45 G | 8619284.52 | 8619284.74 | 8619284.99 | 0.0089 | 0.0040 |
| Neptune | 18887-09-14 16:19 G | 8619651.98 | 8619652.18 | 8619652.40 | 0.0089 | 0.0049 |
| Neptune | 18888-09-16 02:24 G | 8620019.38 | 8620019.60 | 8620019.85 | 0.0089 | 0.0041 |
| Neptune | 18889-09-18 17:31 G | 8620387.03 | 8620387.23 | 8620387.44 | 0.0089 | 0.0050 |
| Uranus | 18890-04-06 06:28 G | 8620586.61 | 8620586.77 | 8620586.94 | 0.0134 | 0.0104 |
| Neptune | 18890-09-20 22:48 G | 8620754.24 | 8620754.45 | 8620754.69 | 0.0089 | 0.0042 |
| Saturn | 18890-11-24 03:07 G | 8620818.38 | 8620818.63 | 8620818.88 | 0.0278 | 0.0040 |
| Uranus | 18891-04-10 10:48 G | 8620955.72 | 8620955.95 | 8620956.20 | 0.0134 | 0.0041 |
| Jupiter | 18891-05-30 00:43 G | 8621005.36 | 8621005.53 | 8621005.71 | 0.0536 | 0.0351 |
| Neptune | 18891-09-23 16:33 G | 8621122.00 | 8621122.19 | 8621122.42 | 0.0089 | 0.0051 |
| Uranus | 18892-04-14 02:38 G | 8621325.35 | 8621325.61 | 8621325.88 | 0.0134 | 0.0003 |
| Jupiter | 18892-07-06 08:09 G | 8621408.76 | 8621408.84 | 8621408.94 | 0.0544 | 0.0499 |
| Neptune | 18892-09-24 21:07 G | 8621489.17 | 8621489.38 | 8621489.61 | 0.0089 | 0.0042 |
| Uranus | 18893-04-18 06:00 G | 8621694.53 | 8621694.75 | 8621694.98 | 0.0134 | 0.0062 |
| Neptune | 18893-09-27 14:24 G | 8621856.91 | 8621857.10 | 8621857.33 | 0.0089 | 0.0051 |
| Uranus | 18894-04-22 21:07 G | 8622064.24 | 8622064.38 | 8622064.56 | 0.0134 | 0.0106 |
| Neptune | 18894-09-29 20:38 G | 8622224.15 | 8622224.36 | 8622224.59 | 0.0089 | 0.0043 |
| Neptune | 18895-10-02 11:02 G | 8622591.76 | 8622591.96 | 8622592.19 | 0.0089 | 0.0051 |
| Neptune | 18896-10-03 21:36 G | 8622959.19 | 8622959.40 | 8622959.63 | 0.0089 | 0.0043 |
| Jupiter | 18896-11-23 02:52 G | 8623009.47 | 8623009.62 | 8623009.78 | 0.0494 | 0.0368 |

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| Neptune | 18897-10-06 07:12 G | 8623326.59 | 8623326.80 | 8623327.02 | 0.0089 | 0.0050 |
| Jupiter | 18897-12-23 03:07 G | 8623404.43 | 8623404.63 | 8623404.84 | 0.0485 | 0.0202 |
| Neptune | 18898-10-08 21:50 G | 8623694.19 | 8623694.41 | 8623694.63 | 0.0089 | 0.0042 |
| Neptune | 18899-10-11 02:38 G | 8624061.41 | 8624061.61 | 8624061.84 | 0.0089 | 0.0050 |
| Neptune | 18900-10-13 20:09 G | 8624429.13 | 8624429.34 | 8624429.58 | 0.0089 | 0.0042 |
| Neptune | 18901-10-15 23:31 G | 8624796.29 | 8624796.48 | 8624796.71 | 0.0089 | 0.0050 |
| Neptune | 18902-10-18 16:48 G | 8625163.97 | 8625164.20 | 8625164.44 | 0.0088 | 0.0041 |
| Jupiter | 18903-06-05 04:33 G | 8625393.47 | 8625393.69 | 8625393.92 | 0.0538 | 0.0202 |
| Neptune | 18903-10-20 22:19 G | 8625531.24 | 8625531.43 | 8625531.66 | 0.0088 | 0.0048 |
| Neptune | 18904-10-22 11:45 G | 8625898.77 | 8625898.99 | 8625899.24 | 0.0088 | 0.0040 |
| Saturn | 18905-05-29 01:55 G | 8626117.36 | 8626117.58 | 8626117.79 | 0.0281 | 0.0116 |
| Neptune | 18905-10-24 22:19 G | 8626266.24 | 8626266.43 | 8626266.66 | 0.0088 | 0.0046 |
| Neptune | 18906-10-27 06:57 G | 8626633.56 | 8626633.79 | 8626634.04 | 0.0088 | 0.0038 |
| Neptune | 18907-10-29 21:36 G | 8627001.21 | 8627001.40 | 8627001.64 | 0.0088 | 0.0046 |
| Neptune | 18908-10-31 02:24 G | 8627368.38 | 8627368.60 | 8627368.85 | 0.0088 | 0.0037 |
| Jupiter | 18908-11-27 23:31 G | 8627396.29 | 8627396.48 | 8627396.66 | 0.0492 | 0.0289 |
| Neptune | 18909-11-02 19:40 G | 8627736.11 | 8627736.32 | 8627736.56 | 0.0088 | 0.0042 |
| Jupiter | 18909-12-28 09:36 G | 8627791.71 | 8627791.90 | 8627792.09 | 0.0485 | 0.0296 |
| Neptune | 18910-11-04 23:31 G | 8628103.25 | 8628103.48 | 8628103.72 | 0.0088 | 0.0035 |
| Neptune | 18911-11-07 15:36 G | 8628470.93 | 8628471.15 | 8628471.39 | 0.0088 | 0.0040 |
| Neptune | 18912-11-08 21:36 G | 8628838.18 | 8628838.40 | 8628838.64 | 0.0088 | 0.0033 |
| Neptune | 18913-11-11 09:50 G | 8629205.68 | 8629205.91 | 8629206.16 | 0.0088 | 0.0038 |
| Neptune | 18914-11-13 20:52 G | 8629573.15 | 8629573.37 | 8629573.61 | 0.0088 | 0.0031 |
| Jupiter | 18915-06-10 11:31 G | 8629781.76 | 8629781.98 | 8629782.20 | 0.0539 | 0.0121 |
| Neptune | 18915-11-16 04:33 G | 8629940.45 | 8629940.69 | 8629940.93 | 0.0088 | 0.0035 |
| Neptune | 18916-11-17 19:40 G | 8630308.09 | 8630308.32 | 8630308.57 | 0.0088 | 0.0028 |
| Neptune | 18917-11-19 23:16 G | 8630675.25 | 8630675.47 | 8630675.72 | 0.0088 | 0.0034 |
| Neptune | 18918-11-22 16:48 G | 8631042.96 | 8631043.20 | 8631043.45 | 0.0088 | 0.0026 |
| Saturn | 18919-11-20 04:04 G | 8631405.47 | 8631405.67 | 8631405.87 | 0.0277 | 0.0146 |
| Neptune | 18919-11-24 20:24 G | 8631410.13 | 8631410.35 | 8631410.60 | 0.0088 | 0.0031 |

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| Neptune | 18920-11-26 12:00 G | 8631777.76 | 8631778.00 | 8631778.26 | 0.0088 | 0.0023 |
| Jupiter | 18920-12-02 12:28 G | 8631783.82 | 8631784.02 | 8631784.21 | 0.0491 | 0.0242 |
| Neptune | 18921-11-28 18:43 G | 8632145.05 | 8632145.28 | 8632145.53 | 0.0088 | 0.0027 |
| Jupiter | 18922-01-01 06:43 G | 8632178.66 | 8632178.78 | 8632178.90 | 0.0485 | 0.0412 |
| Neptune | 18922-12-01 06:00 G | 8632512.51 | 8632512.75 | 8632513.02 | 0.0088 | 0.0020 |
| Neptune | 18923-12-03 18:00 G | 8632880.02 | 8632880.25 | 8632880.50 | 0.0088 | 0.0024 |
| Neptune | 18924-12-05 00:43 G | 8633247.28 | 8633247.53 | 8633247.80 | 0.0088 | 0.0017 |
| Neptune | 18925-12-07 16:19 G | 8633614.95 | 8633615.18 | 8633615.44 | 0.0088 | 0.0021 |
| Neptune | 18926-12-09 19:40 G | 8633982.08 | 8633982.32 | 8633982.59 | 0.0088 | 0.0014 |
| Jupiter | 18927-06-15 17:16 G | 8634169.98 | 8634170.22 | 8634170.46 | 0.0540 | 0.0025 |
| Neptune | 18927-12-12 12:57 G | 8634349.80 | 8634350.04 | 8634350.31 | 0.0088 | 0.0017 |
| Neptune | 18928-12-13 17:02 G | 8634716.96 | 8634717.21 | 8634717.46 | 0.0088 | 0.0010 |
| Neptune | 18929-12-16 07:40 G | 8635084.56 | 8635084.82 | 8635085.09 | 0.0088 | 0.0014 |
| Neptune | 18930-12-18 15:07 G | 8635451.89 | 8635452.13 | 8635452.38 | 0.0088 | 0.0008 |
| Neptune | 18931-12-21 01:26 G | 8635819.30 | 8635819.56 | 8635819.83 | 0.0088 | 0.0011 |
| Jupiter | 18932-12-06 13:40 G | 8636170.85 | 8636171.07 | 8636171.30 | 0.0490 | 0.0158 |
| Neptune | 18932-12-22 14:38 G | 8636186.86 | 8636187.11 | 8636187.35 | 0.0088 | 0.0004 |
| Uranus | 18933-10-07 05:16 G | 8636475.57 | 8636475.72 | 8636475.91 | 0.0144 | 0.0106 |
| Neptune | 18933-12-24 20:24 G | 8636554.09 | 8636554.35 | 8636554.61 | 0.0088 | 0.0007 |
| Saturn | 18934-05-23 18:00 G | 8636704.01 | 8636704.25 | 8636704.50 | 0.0282 | 0.0075 |
| Uranus | 18934-10-11 20:38 G | 8636845.14 | 8636845.36 | 8636845.61 | 0.0144 | 0.0049 |
| Neptune | 18934-12-27 12:57 G | 8636921.79 | 8636922.04 | 8636922.30 | 0.0088 | 0.0001 |
| Uranus | 18935-10-17 02:24 G | 8637215.35 | 8637215.60 | 8637215.85 | 0.0144 | 0.0029 |
| Neptune | 18935-12-29 16:19 G | 8637288.93 | 8637289.18 | 8637289.44 | 0.0088 | 0.0004 |
| Uranus | 18936-10-20 17:45 G | 8637585.04 | 8637585.24 | 8637585.46 | 0.0145 | 0.0078 |
| Neptune | 18936-12-31 09:36 G | 8637656.64 | 8637656.90 | 8637657.16 | 0.0088 | 0.0002 |
| Neptune | 18938-01-02 13:55 G | 8638023.83 | 8638024.08 | 8638024.33 | 0.0088 | 0.0001 |
| Neptune | 18939-01-05 04:04 G | 8638391.41 | 8638391.67 | 8638391.94 | 0.0088 | 0.0006 |
| Jupiter | 18939-06-20 19:40 G | 8638558.10 | 8638558.32 | 8638558.55 | 0.0542 | 0.0148 |
| Neptune | 18940-01-07 12:28 G | 8638758.77 | 8638759.02 | 8638759.27 | 0.0088 | 0.0004 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 18941-01-08 21:50 G | 8639126.16 | 8639126.41 | 8639126.69 | 0.0088 | 0.0010 |
| Neptune | 18942-01-11 11:45 G | 8639493.74 | 8639493.99 | 8639494.24 | 0.0088 | 0.0007 |
| Neptune | 18943-01-13 17:16 G | 8639860.96 | 8639861.22 | 8639861.48 | 0.0088 | 0.0012 |
| Neptune | 18944-01-16 10:04 G | 8640228.68 | 8640228.92 | 8640229.19 | 0.0088 | 0.0011 |
| Jupiter | 18944-12-10 22:48 G | 8640558.23 | 8640558.45 | 8640558.68 | 0.0488 | 0.0037 |
| Neptune | 18945-01-17 13:40 G | 8640595.83 | 8640596.07 | 8640596.33 | 0.0088 | 0.0016 |
| Neptune | 18946-01-20 07:12 G | 8640963.55 | 8640963.80 | 8640964.06 | 0.0088 | 0.0015 |
| Neptune | 18947-01-22 12:28 G | 8641330.78 | 8641331.02 | 8641331.27 | 0.0088 | 0.0019 |
| Neptune | 18948-01-25 02:24 G | 8641698.35 | 8641698.60 | 8641698.87 | 0.0088 | 0.0018 |
| Neptune | 18949-01-26 11:45 G | 8642065.76 | 8642065.99 | 8642066.24 | 0.0088 | 0.0022 |
| Saturn | 18949-11-26 10:19 G | 8642369.70 | 8642369.93 | 8642370.16 | 0.0278 | 0.0101 |
| Neptune | 18950-01-28 20:52 G | 8642433.13 | 8642433.37 | 8642433.65 | 0.0088 | 0.0021 |
| Neptune | 18951-01-31 11:45 G | 8642800.76 | 8642800.99 | 8642801.24 | 0.0088 | 0.0025 |
| Jupiter | 18951-06-26 14:09 G | 8642946.90 | 8642947.09 | 8642947.28 | 0.0543 | 0.0292 |
| Neptune | 18952-02-02 17:16 G | 8643167.97 | 8643168.22 | 8643168.48 | 0.0088 | 0.0024 |
| Neptune | 18953-02-04 10:33 G | 8643535.71 | 8643535.94 | 8643536.20 | 0.0088 | 0.0028 |
| Neptune | 18954-02-06 14:38 G | 8643902.88 | 8643903.11 | 8643903.37 | 0.0088 | 0.0027 |
| Neptune | 18955-02-09 08:24 G | 8644270.61 | 8644270.85 | 8644271.10 | 0.0088 | 0.0029 |
| Neptune | 18956-02-11 13:55 G | 8644637.86 | 8644638.08 | 8644638.33 | 0.0088 | 0.0030 |
| Jupiter | 18956-12-15 02:09 G | 8644945.35 | 8644945.59 | 8644945.83 | 0.0487 | 0.0071 |
| Neptune | 18957-02-13 04:04 G | 8645005.43 | 8645005.67 | 8645005.93 | 0.0088 | 0.0032 |
| Neptune | 18958-02-15 14:24 G | 8645372.88 | 8645373.10 | 8645373.34 | 0.0088 | 0.0033 |
| Neptune | 18959-02-17 23:31 G | 8645740.26 | 8645740.48 | 8645740.75 | 0.0088 | 0.0035 |
| Neptune | 18960-02-20 15:21 G | 8646107.92 | 8646108.14 | 8646108.38 | 0.0088 | 0.0035 |
| Neptune | 18961-02-21 20:52 G | 8646475.15 | 8646475.37 | 8646475.63 | 0.0088 | 0.0036 |
| Neptune | 18962-02-24 15:21 G | 8646842.92 | 8646843.14 | 8646843.39 | 0.0088 | 0.0037 |
| Jupiter | 18962-05-24 19:40 G | 8646932.27 | 8646932.32 | 8646932.39 | 0.0534 | 0.0515 |
| Neptune | 18963-02-26 19:40 G | 8647210.11 | 8647210.32 | 8647210.57 | 0.0088 | 0.0038 |
| Jupiter | 18963-07-01 20:09 G | 8647335.16 | 8647335.34 | 8647335.52 | 0.0543 | 0.0366 |
| Neptune | 18964-02-29 13:26 G | 8647577.85 | 8647578.06 | 8647578.32 | 0.0088 | 0.0040 |

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| Saturn | 18964-05-30 15:21 G | 8647668.95 | 8647669.14 | 8647669.33 | 0.0281 | 0.0174 |
| Neptune | 18965-03-02 20:09 G | 8647945.13 | 8647945.34 | 8647945.58 | 0.0088 | 0.0040 |
| Neptune | 18966-03-05 10:19 G | 8648312.71 | 8648312.93 | 8648313.19 | 0.0088 | 0.0042 |
| Neptune | 18967-03-07 21:21 G | 8648680.18 | 8648680.39 | 8648680.62 | 0.0088 | 0.0041 |
| Neptune | 18968-03-09 06:28 G | 8649047.56 | 8649047.77 | 8649048.03 | 0.0088 | 0.0043 |
| Jupiter | 18968-12-19 02:38 G | 8649332.39 | 8649332.61 | 8649332.83 | 0.0487 | 0.0127 |
| Neptune | 18969-03-11 23:02 G | 8649415.24 | 8649415.46 | 8649415.68 | 0.0088 | 0.0042 |
| Neptune | 18970-03-14 04:48 G | 8649782.49 | 8649782.70 | 8649782.94 | 0.0088 | 0.0044 |
| Neptune | 18971-03-17 00:00 G | 8650150.28 | 8650150.50 | 8650150.73 | 0.0088 | 0.0043 |
| Neptune | 18972-03-18 04:33 G | 8650517.49 | 8650517.69 | 8650517.93 | 0.0088 | 0.0046 |
| Neptune | 18973-03-20 23:02 G | 8650885.25 | 8650885.46 | 8650885.71 | 0.0088 | 0.0043 |
| Neptune | 18974-03-23 06:43 G | 8651252.57 | 8651252.78 | 8651253.00 | 0.0088 | 0.0046 |
| Uranus | 18974-04-07 18:14 G | 8651268.07 | 8651268.26 | 8651268.46 | 0.0134 | 0.0090 |
| Jupiter | 18974-05-29 18:43 G | 8651320.11 | 8651320.28 | 8651320.46 | 0.0535 | 0.0360 |
| Neptune | 18975-03-25 21:21 G | 8651620.16 | 8651620.39 | 8651620.63 | 0.0089 | 0.0043 |
| Uranus | 18975-04-11 23:16 G | 8651637.24 | 8651637.47 | 8651637.71 | 0.0134 | 0.0050 |
| Jupiter | 18975-07-07 04:48 G | 8651723.60 | 8651723.70 | 8651723.81 | 0.0543 | 0.0481 |
| Neptune | 18976-03-27 08:52 G | 8651987.66 | 8651987.87 | 8651988.08 | 0.0089 | 0.0047 |
| Uranus | 18976-04-15 13:55 G | 8652006.83 | 8652007.08 | 8652007.35 | 0.0134 | 0.0016 |
| Neptune | 18977-03-29 18:28 G | 8652355.05 | 8652355.27 | 8652355.52 | 0.0089 | 0.0044 |
| Uranus | 18977-04-19 17:45 G | 8652376.01 | 8652376.24 | 8652376.47 | 0.0134 | 0.0055 |
| Neptune | 18978-04-01 11:16 G | 8652722.76 | 8652722.97 | 8652723.19 | 0.0089 | 0.0047 |
| Uranus | 18978-04-24 07:55 G | 8652745.72 | 8652745.83 | 8652745.98 | 0.0134 | 0.0116 |
| Pluto | 18978-08-29 15:07 G | 8652873.06 | 8652873.13 | 8652873.27 | 0.0064 | 0.0058 |
| Saturn | 18978-11-21 16:48 G | 8652956.97 | 8652957.20 | 8652957.43 | 0.0277 | 0.0087 |
| Neptune | 18979-04-03 17:31 G | 8653090.01 | 8653090.23 | 8653090.48 | 0.0089 | 0.0043 |
| Pluto | 18979-08-30 23:45 G | 8653239.26 | 8653239.49 | 8653239.75 | 0.0064 | 0.0024 |
| Jupiter | 18979-11-23 21:36 G | 8653324.25 | 8653324.40 | 8653324.54 | 0.0494 | 0.0382 |
| Neptune | 18980-04-05 12:43 G | 8653457.82 | 8653458.03 | 8653458.26 | 0.0089 | 0.0047 |
| Jupiter | 18980-12-23 11:45 G | 8653719.77 | 8653719.99 | 8653720.21 | 0.0486 | 0.0183 |

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| Neptune | 18981-04-07 18:14 G | 8653825.04 | 8653825.26 | 8653825.50 | 0.0089 | 0.0042 |
| Neptune | 18982-04-10 12:57 G | 8654192.84 | 8654193.04 | 8654193.29 | 0.0089 | 0.0048 |
| Neptune | 18983-04-12 20:38 G | 8654560.15 | 8654560.36 | 8654560.60 | 0.0089 | 0.0042 |
| Neptune | 18984-04-14 12:14 G | 8654927.80 | 8654928.01 | 8654928.26 | 0.0089 | 0.0047 |
| Neptune | 18985-04-17 00:14 G | 8655295.29 | 8655295.51 | 8655295.74 | 0.0089 | 0.0040 |
| Neptune | 18986-04-19 11:02 G | 8655662.74 | 8655662.96 | 8655663.20 | 0.0089 | 0.0045 |
| Jupiter | 18986-06-03 22:19 G | 8655708.22 | 8655708.43 | 8655708.63 | 0.0537 | 0.0225 |
| Neptune | 18987-04-22 03:36 G | 8656030.43 | 8656030.65 | 8656030.89 | 0.0089 | 0.0039 |
| Neptune | 18988-04-23 10:33 G | 8656397.73 | 8656397.94 | 8656398.19 | 0.0089 | 0.0045 |
| Neptune | 18989-04-26 06:43 G | 8656765.55 | 8656765.78 | 8656766.02 | 0.0089 | 0.0037 |
| Neptune | 18990-04-28 12:00 G | 8657132.80 | 8657133.00 | 8657133.25 | 0.0089 | 0.0044 |
| Neptune | 18991-05-01 07:40 G | 8657500.59 | 8657500.82 | 8657501.08 | 0.0089 | 0.0035 |
| Jupiter | 18991-11-28 12:57 G | 8657711.86 | 8657712.04 | 8657712.22 | 0.0493 | 0.0307 |
| Neptune | 18992-05-02 15:07 G | 8657867.93 | 8657868.13 | 8657868.37 | 0.0089 | 0.0042 |
| Jupiter | 18992-12-27 09:50 G | 8658106.73 | 8658106.91 | 8658107.10 | 0.0485 | 0.0285 |
| Neptune | 18993-05-05 07:55 G | 8658235.59 | 8658235.83 | 8658236.09 | 0.0089 | 0.0033 |
| Saturn | 18993-05-25 04:19 G | 8658255.44 | 8658255.68 | 8658255.93 | 0.0282 | 0.0013 |
| Neptune | 18994-05-07 18:57 G | 8658603.08 | 8658603.29 | 8658603.53 | 0.0089 | 0.0041 |
| Neptune | 18995-05-10 06:57 G | 8658970.55 | 8658970.79 | 8658971.05 | 0.0089 | 0.0031 |
| Neptune | 18996-05-11 23:02 G | 8659338.25 | 8659338.46 | 8659338.70 | 0.0089 | 0.0038 |
| Neptune | 18997-05-14 07:12 G | 8659705.57 | 8659705.80 | 8659706.07 | 0.0089 | 0.0029 |
| Neptune | 18998-05-17 03:07 G | 8660073.41 | 8660073.63 | 8660073.88 | 0.0089 | 0.0036 |
| Jupiter | 18998-06-09 06:14 G | 8660096.53 | 8660096.76 | 8660097.00 | 0.0539 | 0.0144 |
| Neptune | 18999-05-19 09:21 G | 8660440.65 | 8660440.89 | 8660441.15 | 0.0089 | 0.0026 |
| Neptune | 19000-05-22 05:31 G | 8660808.50 | 8660808.73 | 8660808.98 | 0.0089 | 0.0033 |

20TH MILLENNIUM CE

This is a list of transits of Moon in the 20th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Neptune | 19001-05-24 12:57 | G | 8661175.80 | 8661176.04 | 8661176.29 | 0.0089 | 0.0023 | |
| Neptune | 19002-05-27 06:00 | G | 8661543.52 | 8661543.75 | 8661544.02 | 0.0089 | 0.0031 | |
| Neptune | 19003-05-29 17:02 | G | 8661910.97 | 8661911.21 | 8661911.46 | 0.0089 | 0.0020 | |
| Jupiter | 19003-12-03 13:55 | G | 8662098.88 | 8662099.08 | 8662099.29 | 0.0491 | 0.0255 | |
| Neptune | 19004-05-31 05:45 | G | 8662278.48 | 8662278.74 | 8662279.00 | 0.0089 | 0.0027 | |
| Jupiter | 19005-01-01 20:52 | G | 8662494.25 | 8662494.37 | 8662494.50 | 0.0484 | 0.0401 | |
| Neptune | 19005-06-02 21:21 | G | 8662646.14 | 8662646.39 | 8662646.63 | 0.0089 | 0.0017 | |
| Neptune | 19006-06-05 05:45 | G | 8663013.49 | 8663013.74 | 8663014.00 | 0.0089 | 0.0024 | |
| Neptune | 19007-06-08 01:12 | G | 8663381.30 | 8663381.55 | 8663381.81 | 0.0089 | 0.0014 | |
| Neptune | 19008-06-09 07:26 | G | 8663748.57 | 8663748.81 | 8663749.07 | 0.0089 | 0.0021 | |
| Saturn | 19008-11-28 21:21 | G | 8663921.20 | 8663921.39 | 8663921.59 | 0.0278 | 0.0163 | |
| Neptune | 19009-06-12 03:50 | G | 8664116.41 | 8664116.66 | 8664116.93 | 0.0089 | 0.0011 | |
| Neptune | 19010-06-14 11:02 | G | 8664483.72 | 8664483.96 | 8664484.21 | 0.0089 | 0.0017 | |
| Jupiter | 19010-06-15 11:16 | G | 8664484.75 | 8664484.97 | 8664485.20 | 0.0541 | 0.0042 | |
| Neptune | 19011-06-17 05:16 | G | 8664851.46 | 8664851.72 | 8664851.99 | 0.0089 | 0.0007 | |
| Neptune | 19012-06-18 15:21 | G | 8665218.90 | 8665219.14 | 8665219.40 | 0.0089 | 0.0015 | |
| Neptune | 19013-06-21 05:02 | G | 8665586.44 | 8665586.71 | 8665586.98 | 0.0089 | 0.0004 | |
| Neptune | 19014-06-23 19:40 | G | 8665954.07 | 8665954.32 | 8665954.57 | 0.0089 | 0.0010 | |
| Neptune | 19015-06-26 04:48 | G | 8666321.44 | 8666321.70 | 8666321.97 | 0.0090 | 0.0001 | |
| Jupiter | 19015-12-07 23:45 | G | 8666486.28 | 8666486.49 | 8666486.71 | 0.0490 | 0.0167 | |
| Neptune | 19016-06-27 23:45 | G | 8666689.24 | 8666689.49 | 8666689.75 | 0.0090 | 0.0007 | |
| Jupiter | 19017-01-05 17:31 | G | 8666881.20 | 8666881.23 | 8666881.26 | 0.0484 | 0.0479 | |

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| Neptune | 19017-06-30 06:14 G | 8667056.50 | 8667056.76 | 8667057.02 | 0.0090 | 0.0003 |
| Uranus | 19017-10-08 15:50 G | 8667156.99 | 8667157.16 | 8667157.35 | 0.0144 | 0.0104 |
| Neptune | 19018-07-03 02:09 G | 8667424.33 | 8667424.59 | 8667424.86 | 0.0090 | 0.0004 |
| Uranus | 19018-10-13 07:26 G | 8667526.58 | 8667526.81 | 8667527.07 | 0.0144 | 0.0036 |
| Neptune | 19019-07-05 08:38 G | 8667791.62 | 8667791.86 | 8667792.12 | 0.0090 | 0.0007 |
| Uranus | 19019-10-18 12:57 G | 8667896.79 | 8667897.04 | 8667897.30 | 0.0145 | 0.0018 |
| Neptune | 19020-07-07 03:21 G | 8668159.38 | 8668159.64 | 8668159.91 | 0.0089 | 0.0002 |
| Uranus | 19020-10-22 05:02 G | 8668266.53 | 8668266.71 | 8668266.90 | 0.0145 | 0.0097 |
| Neptune | 19021-07-09 12:43 G | 8668526.79 | 8668527.03 | 8668527.28 | 0.0089 | 0.0010 |
| Saturn | 19022-05-20 15:21 G | 8668842.00 | 8668842.14 | 8668842.30 | 0.0282 | 0.0222 |
| Jupiter | 19022-06-21 05:31 G | 8668873.50 | 8668873.73 | 8668873.95 | 0.0541 | 0.0139 |
| Neptune | 19022-07-12 02:52 G | 8668894.36 | 8668894.62 | 8668894.89 | 0.0089 | 0.0005 |
| Saturn | 19023-06-02 23:02 G | 8669220.34 | 8669220.46 | 8669220.61 | 0.0281 | 0.0235 |
| Neptune | 19023-07-14 16:48 G | 8669261.95 | 8669262.20 | 8669262.45 | 0.0089 | 0.0013 |
| Neptune | 19024-07-16 02:24 G | 8669629.34 | 8669629.60 | 8669629.87 | 0.0089 | 0.0008 |
| Neptune | 19025-07-18 20:38 G | 8669997.12 | 8669997.36 | 8669997.62 | 0.0089 | 0.0017 |
| Neptune | 19026-07-21 03:07 G | 8670364.38 | 8670364.63 | 8670364.90 | 0.0089 | 0.0012 |
| Neptune | 19027-07-23 23:02 G | 8670732.22 | 8670732.46 | 8670732.72 | 0.0089 | 0.0020 |
| Jupiter | 19027-12-12 01:12 G | 8670873.31 | 8670873.55 | 8670873.79 | 0.0489 | 0.0046 |
| Neptune | 19028-07-25 05:02 G | 8671099.47 | 8671099.71 | 8671099.97 | 0.0089 | 0.0016 |
| Neptune | 19029-07-27 23:45 G | 8671467.24 | 8671467.49 | 8671467.75 | 0.0089 | 0.0022 |
| Neptune | 19030-07-30 08:09 G | 8671834.61 | 8671834.84 | 8671835.10 | 0.0089 | 0.0019 |
| Mars | 19031-03-14 12:43 G | 8672061.85 | 8672062.03 | 8672062.22 | 0.1707 | 0.0502 |
| Neptune | 19031-08-01 22:33 G | 8672202.19 | 8672202.44 | 8672202.71 | 0.0089 | 0.0024 |
| Neptune | 19032-08-03 11:31 G | 8672569.74 | 8672569.98 | 8672570.22 | 0.0089 | 0.0022 |
| Neptune | 19033-08-05 21:07 G | 8672937.13 | 8672937.38 | 8672937.64 | 0.0089 | 0.0028 |
| Jupiter | 19034-06-26 07:12 G | 8673261.60 | 8673261.80 | 8673262.01 | 0.0542 | 0.0270 |
| Neptune | 19034-08-08 14:38 G | 8673304.86 | 8673305.11 | 8673305.35 | 0.0089 | 0.0025 |
| Neptune | 19035-08-10 20:52 G | 8673672.13 | 8673672.37 | 8673672.62 | 0.0089 | 0.0030 |
| Neptune | 19036-08-12 16:19 G | 8674039.95 | 8674040.18 | 8674040.44 | 0.0089 | 0.0028 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 19037-08-14 22:04 G | 8674407.19 | 8674407.42 | 8674407.66 | 0.0089 | 0.0032 |
| Saturn | 19037-11-23 22:04 G | 8674508.17 | 8674508.42 | 8674508.67 | 0.0277 | 0.0030 |
| Neptune | 19038-08-17 16:33 G | 8674774.95 | 8674775.19 | 8674775.44 | 0.0089 | 0.0031 |
| Neptune | 19039-08-20 00:14 G | 8675142.29 | 8675142.51 | 8675142.75 | 0.0089 | 0.0035 |
| Jupiter | 19039-12-16 04:33 G | 8675260.47 | 8675260.69 | 8675260.91 | 0.0488 | 0.0056 |
| Neptune | 19040-08-21 14:24 G | 8675509.87 | 8675510.10 | 8675510.36 | 0.0089 | 0.0033 |
| Neptune | 19041-08-24 02:24 G | 8675877.38 | 8675877.60 | 8675877.84 | 0.0089 | 0.0036 |
| Neptune | 19042-08-26 11:31 G | 8676244.75 | 8676244.98 | 8676245.24 | 0.0089 | 0.0034 |
| Neptune | 19043-08-29 04:04 G | 8676612.46 | 8676612.67 | 8676612.92 | 0.0089 | 0.0038 |
| Neptune | 19044-08-30 10:04 G | 8676979.70 | 8676979.92 | 8676980.17 | 0.0089 | 0.0037 |
| Jupiter | 19045-05-24 06:00 G | 8677246.75 | 8677246.75 | 8677246.77 | 0.0533 | 0.0532 |
| Neptune | 19045-09-02 04:48 G | 8677347.49 | 8677347.70 | 8677347.95 | 0.0089 | 0.0039 |
| Jupiter | 19046-07-01 13:40 G | 8677649.90 | 8677650.07 | 8677650.25 | 0.0543 | 0.0344 |
| Neptune | 19046-09-04 09:50 G | 8677714.70 | 8677714.91 | 8677715.16 | 0.0089 | 0.0039 |
| Neptune | 19047-09-07 04:04 G | 8678082.45 | 8678082.67 | 8678082.92 | 0.0089 | 0.0039 |
| Neptune | 19048-09-08 11:31 G | 8678449.77 | 8678449.98 | 8678450.22 | 0.0089 | 0.0040 |
| Neptune | 19049-09-11 01:26 G | 8678817.34 | 8678817.56 | 8678817.81 | 0.0089 | 0.0040 |
| Neptune | 19050-09-13 12:43 G | 8679184.83 | 8679185.03 | 8679185.27 | 0.0089 | 0.0042 |
| Neptune | 19051-09-15 21:36 G | 8679552.18 | 8679552.40 | 8679552.65 | 0.0089 | 0.0042 |
| Jupiter | 19051-12-20 15:36 G | 8679647.92 | 8679648.15 | 8679648.38 | 0.0487 | 0.0108 |
| Saturn | 19052-05-27 18:14 G | 8679807.03 | 8679807.26 | 8679807.50 | 0.0281 | 0.0051 |
| Neptune | 19052-09-17 13:40 G | 8679919.87 | 8679920.07 | 8679920.31 | 0.0089 | 0.0043 |
| Neptune | 19053-09-19 18:43 G | 8680287.08 | 8680287.28 | 8680287.54 | 0.0089 | 0.0042 |
| Neptune | 19054-09-22 13:12 G | 8680654.85 | 8680655.05 | 8680655.30 | 0.0089 | 0.0043 |
| Neptune | 19055-09-24 18:14 G | 8681022.04 | 8681022.26 | 8681022.48 | 0.0089 | 0.0041 |
| Neptune | 19056-09-26 11:02 G | 8681389.75 | 8681389.96 | 8681390.21 | 0.0089 | 0.0044 |
| Jupiter | 19057-05-29 15:21 G | 8681634.99 | 8681635.14 | 8681635.31 | 0.0535 | 0.0380 |
| Neptune | 19057-09-28 18:28 G | 8681757.06 | 8681757.27 | 8681757.49 | 0.0089 | 0.0042 |
| Uranus | 19058-04-09 05:16 G | 8681949.56 | 8681949.72 | 8681949.93 | 0.0134 | 0.0096 |
| Jupiter | 19058-07-07 00:43 G | 8682038.41 | 8682038.53 | 8682038.66 | 0.0544 | 0.0459 |

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| Neptune | 19058-10-01 07:12 G | 8682124.59 | 8682124.80 | 8682125.05 | 0.0089 | 0.0044 |
| Uranus | 19059-04-13 12:00 G | 8682318.76 | 8682319.00 | 8682319.24 | 0.0134 | 0.0033 |
| Neptune | 19059-10-03 18:57 G | 8682492.07 | 8682492.29 | 8682492.51 | 0.0089 | 0.0041 |
| Uranus | 19060-04-17 01:55 G | 8682688.32 | 8682688.58 | 8682688.84 | 0.0134 | 0.0006 |
| Neptune | 19060-10-05 02:38 G | 8682859.40 | 8682859.61 | 8682859.86 | 0.0089 | 0.0043 |
| Uranus | 19061-04-21 06:14 G | 8683057.57 | 8683057.76 | 8683057.99 | 0.0134 | 0.0072 |
| Neptune | 19061-10-07 18:43 G | 8683227.07 | 8683227.28 | 8683227.52 | 0.0089 | 0.0041 |
| Uranus | 19062-04-25 20:09 G | 8683427.22 | 8683427.34 | 8683427.50 | 0.0134 | 0.0114 |
| Neptune | 19062-10-09 23:16 G | 8683594.27 | 8683594.47 | 8683594.72 | 0.0089 | 0.0044 |
| Jupiter | 19062-11-24 12:14 G | 8683639.88 | 8683640.01 | 8683640.16 | 0.0495 | 0.0388 |
| Neptune | 19063-10-12 17:45 G | 8683962.02 | 8683962.24 | 8683962.48 | 0.0089 | 0.0040 |
| Jupiter | 19063-12-24 12:43 G | 8684034.81 | 8684035.03 | 8684035.25 | 0.0486 | 0.0170 |
| Neptune | 19064-10-13 22:04 G | 8684329.20 | 8684329.42 | 8684329.64 | 0.0089 | 0.0043 |
| Neptune | 19065-10-16 14:24 G | 8684696.88 | 8684697.10 | 8684697.35 | 0.0089 | 0.0038 |
| Neptune | 19066-10-18 21:21 G | 8685064.19 | 8685064.39 | 8685064.63 | 0.0088 | 0.0042 |
| Saturn | 19066-11-18 11:45 G | 8685094.87 | 8685094.99 | 8685095.14 | 0.0277 | 0.0224 |
| Neptune | 19067-10-21 09:50 G | 8685431.67 | 8685431.91 | 8685432.15 | 0.0088 | 0.0037 |
| Saturn | 19067-12-01 09:36 G | 8685472.78 | 8685472.90 | 8685473.06 | 0.0278 | 0.0223 |
| Pluto | 19068-02-29 13:12 G | 8685562.80 | 8685563.05 | 8685563.30 | 0.0080 | 0.0006 |
| Neptune | 19068-10-22 21:07 G | 8685799.17 | 8685799.38 | 8685799.61 | 0.0088 | 0.0041 |
| Jupiter | 19069-06-03 22:33 G | 8686023.23 | 8686023.44 | 8686023.66 | 0.0537 | 0.0241 |
| Neptune | 19069-10-25 03:50 G | 8686166.43 | 8686166.66 | 8686166.91 | 0.0088 | 0.0037 |
| Neptune | 19070-10-27 19:55 G | 8686534.11 | 8686534.33 | 8686534.56 | 0.0088 | 0.0039 |
| Neptune | 19071-10-29 23:45 G | 8686901.27 | 8686901.49 | 8686901.75 | 0.0088 | 0.0034 |
| Neptune | 19072-10-31 17:31 G | 8687269.01 | 8687269.23 | 8687269.47 | 0.0088 | 0.0037 |
| Neptune | 19073-11-02 21:50 G | 8687636.18 | 8687636.41 | 8687636.65 | 0.0088 | 0.0032 |
| Neptune | 19074-11-05 13:26 G | 8688003.84 | 8688004.06 | 8688004.32 | 0.0088 | 0.0036 |
| Jupiter | 19074-11-28 14:24 G | 8688026.92 | 8688027.10 | 8688027.29 | 0.0493 | 0.0318 |
| Neptune | 19075-11-07 21:07 G | 8688371.16 | 8688371.38 | 8688371.62 | 0.0088 | 0.0030 |
| Jupiter | 19075-12-29 00:28 G | 8688422.33 | 8688422.52 | 8688422.71 | 0.0485 | 0.0276 |

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| Neptune | 19076-11-09 07:55 G | 8688738.61 | 8688738.83 | 8688739.10 | 0.0088 | 0.0035 |
| Neptune | 19077-11-11 20:09 G | 8689106.11 | 8689106.34 | 8689106.58 | 0.0088 | 0.0028 |
| Neptune | 19078-11-14 01:55 G | 8689473.35 | 8689473.58 | 8689473.84 | 0.0088 | 0.0031 |
| Neptune | 19079-11-16 18:00 G | 8689841.02 | 8689841.25 | 8689841.51 | 0.0088 | 0.0025 |
| Neptune | 19080-11-17 21:36 G | 8690208.17 | 8690208.40 | 8690208.65 | 0.0088 | 0.0029 |
| Saturn | 19081-05-21 23:16 G | 8690393.27 | 8690393.47 | 8690393.69 | 0.0282 | 0.0163 |
| Jupiter | 19081-06-09 05:31 G | 8690411.51 | 8690411.73 | 8690411.95 | 0.0539 | 0.0163 |
| Neptune | 19081-11-20 14:38 G | 8690575.87 | 8690576.11 | 8690576.37 | 0.0088 | 0.0023 |
| Neptune | 19082-11-22 18:57 G | 8690943.06 | 8690943.29 | 8690943.53 | 0.0088 | 0.0027 |
| Neptune | 19083-11-25 09:36 G | 8691310.66 | 8691310.90 | 8691311.17 | 0.0088 | 0.0020 |
| Neptune | 19084-11-26 17:45 G | 8691678.01 | 8691678.24 | 8691678.49 | 0.0088 | 0.0024 |
| Neptune | 19085-11-29 03:50 G | 8692045.41 | 8692045.66 | 8692045.93 | 0.0088 | 0.0017 |
| Neptune | 19086-12-01 16:33 G | 8692412.96 | 8692413.19 | 8692413.44 | 0.0088 | 0.0022 |
| Jupiter | 19086-12-02 22:19 G | 8692414.24 | 8692414.43 | 8692414.61 | 0.0491 | 0.0268 |
| Neptune | 19087-12-03 21:50 G | 8692780.17 | 8692780.41 | 8692780.68 | 0.0088 | 0.0015 |
| Jupiter | 19088-01-01 19:12 G | 8692809.17 | 8692809.30 | 8692809.45 | 0.0485 | 0.0389 |
| Neptune | 19088-12-05 14:24 G | 8693147.86 | 8693148.10 | 8693148.35 | 0.0088 | 0.0019 |
| Neptune | 19089-12-07 17:45 G | 8693514.99 | 8693515.24 | 8693515.50 | 0.0088 | 0.0011 |
| Neptune | 19090-12-10 10:33 G | 8693882.70 | 8693882.94 | 8693883.21 | 0.0088 | 0.0016 |
| Neptune | 19091-12-12 15:07 G | 8694249.89 | 8694250.13 | 8694250.39 | 0.0088 | 0.0008 |
| Neptune | 19092-12-14 05:16 G | 8694617.46 | 8694617.72 | 8694617.99 | 0.0088 | 0.0013 |
| Jupiter | 19093-06-14 19:55 G | 8694800.10 | 8694800.33 | 8694800.56 | 0.0540 | 0.0052 |
| Neptune | 19093-12-16 14:24 G | 8694984.85 | 8694985.10 | 8694985.34 | 0.0088 | 0.0005 |
| Neptune | 19094-12-18 23:16 G | 8695352.21 | 8695352.47 | 8695352.74 | 0.0088 | 0.0010 |
| Neptune | 19095-12-21 12:57 G | 8695719.79 | 8695720.04 | 8695720.29 | 0.0088 | 0.0001 |
| Saturn | 19096-11-24 22:33 G | 8696059.20 | 8696059.44 | 8696059.70 | 0.0278 | 0.0026 |
| Neptune | 19096-12-22 17:31 G | 8696086.97 | 8696087.23 | 8696087.49 | 0.0088 | 0.0006 |
| Neptune | 19097-12-25 10:19 G | 8696454.68 | 8696454.93 | 8696455.19 | 0.0088 | 0.0003 |
| Jupiter | 19098-12-07 03:07 G | 8696801.41 | 8696801.63 | 8696801.86 | 0.0490 | 0.0173 |
| Neptune | 19098-12-27 13:55 G | 8696821.82 | 8696822.08 | 8696822.33 | 0.0088 | 0.0004 |

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| Neptune | 19099-12-30 06:28 G | 8697189.51 | 8697189.77 | 8697190.04 | 0.0088 | 0.0005 |
| Jupiter | 19100-01-06 05:02 G | 8697196.65 | 8697196.71 | 8697196.78 | 0.0484 | 0.0462 |
| Neptune | 19101-01-01 12:00 G | 8697556.75 | 8697557.00 | 8697557.25 | 0.0088 | 0.0001 |
| Uranus | 19101-10-10 04:04 G | 8697838.49 | 8697838.67 | 8697838.86 | 0.0144 | 0.0099 |
| Neptune | 19102-01-04 01:26 G | 8697924.30 | 8697924.56 | 8697924.83 | 0.0088 | 0.0008 |
| Uranus | 19102-10-14 20:24 G | 8698208.12 | 8698208.35 | 8698208.60 | 0.0144 | 0.0039 |
| Neptune | 19103-01-06 11:31 G | 8698291.73 | 8698291.98 | 8698292.23 | 0.0088 | 0.0003 |
| Uranus | 19103-10-20 01:26 G | 8698578.31 | 8698578.56 | 8698578.81 | 0.0145 | 0.0037 |
| Neptune | 19104-01-08 19:40 G | 8698659.07 | 8698659.32 | 8698659.60 | 0.0088 | 0.0012 |
| Uranus | 19104-10-23 17:02 G | 8698948.03 | 8698948.21 | 8698948.42 | 0.0145 | 0.0087 |
| Neptune | 19105-01-10 10:19 G | 8699026.68 | 8699026.93 | 8699027.18 | 0.0088 | 0.0005 |
| Jupiter | 19105-06-20 15:07 G | 8699187.89 | 8699188.13 | 8699188.36 | 0.0541 | 0.0111 |
| Neptune | 19106-01-12 14:38 G | 8699393.86 | 8699394.11 | 8699394.37 | 0.0088 | 0.0014 |
| Neptune | 19107-01-15 07:55 G | 8699761.58 | 8699761.83 | 8699762.09 | 0.0088 | 0.0008 |
| Neptune | 19108-01-17 11:02 G | 8700128.72 | 8700128.96 | 8700129.22 | 0.0088 | 0.0018 |
| Neptune | 19109-01-19 03:36 G | 8700496.40 | 8700496.65 | 8700496.92 | 0.0088 | 0.0012 |
| Neptune | 19110-01-21 09:36 G | 8700863.67 | 8700863.90 | 8700864.15 | 0.0088 | 0.0021 |
| Jupiter | 19110-12-12 08:09 G | 8701188.61 | 8701188.84 | 8701189.06 | 0.0489 | 0.0048 |
| Neptune | 19111-01-23 22:48 G | 8701231.19 | 8701231.45 | 8701231.72 | 0.0088 | 0.0014 |
| Saturn | 19111-05-31 07:40 G | 8701358.60 | 8701358.82 | 8701359.05 | 0.0281 | 0.0109 |
| Neptune | 19112-01-26 09:50 G | 8701598.68 | 8701598.91 | 8701599.16 | 0.0088 | 0.0023 |
| Neptune | 19113-01-27 18:00 G | 8701966.00 | 8701966.25 | 8701966.52 | 0.0088 | 0.0017 |
| Neptune | 19114-01-30 09:07 G | 8702333.66 | 8702333.88 | 8702334.14 | 0.0088 | 0.0027 |
| Neptune | 19115-02-01 13:40 G | 8702700.83 | 8702701.07 | 8702701.34 | 0.0088 | 0.0020 |
| Neptune | 19116-02-04 07:26 G | 8703068.58 | 8703068.81 | 8703069.06 | 0.0088 | 0.0029 |
| Neptune | 19117-02-05 11:16 G | 8703435.74 | 8703435.97 | 8703436.23 | 0.0088 | 0.0022 |
| Jupiter | 19117-06-26 04:19 G | 8703576.48 | 8703576.68 | 8703576.88 | 0.0542 | 0.0246 |
| Neptune | 19118-02-08 03:50 G | 8703803.43 | 8703803.66 | 8703803.92 | 0.0088 | 0.0031 |
| Neptune | 19119-02-10 10:33 G | 8704170.71 | 8704170.94 | 8704171.19 | 0.0088 | 0.0024 |
| Neptune | 19120-02-12 23:16 G | 8704538.24 | 8704538.47 | 8704538.73 | 0.0088 | 0.0034 |

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| Neptune | 19121-02-14 11:16 G | 8704905.74 | 8704905.97 | 8704906.22 | 0.0088 | 0.0027 |
| Neptune | 19122-02-16 19:12 G | 8705273.07 | 8705273.30 | 8705273.56 | 0.0088 | 0.0036 |
| Jupiter | 19122-12-16 18:57 G | 8705576.05 | 8705576.29 | 8705576.52 | 0.0488 | 0.0044 |
| Neptune | 19123-02-19 11:31 G | 8705640.75 | 8705640.98 | 8705641.23 | 0.0088 | 0.0028 |
| Neptune | 19124-02-21 15:50 G | 8706007.95 | 8706008.16 | 8706008.42 | 0.0088 | 0.0038 |
| Neptune | 19125-02-23 10:19 G | 8706375.70 | 8706375.93 | 8706376.19 | 0.0088 | 0.0030 |
| Saturn | 19125-11-20 21:21 G | 8706646.20 | 8706646.39 | 8706646.58 | 0.0277 | 0.0169 |
| Neptune | 19126-02-25 14:52 G | 8706742.92 | 8706743.12 | 8706743.37 | 0.0088 | 0.0041 |
| Saturn | 19126-12-03 15:50 G | 8707024.15 | 8707024.16 | 8707024.19 | 0.0278 | 0.0277 |
| Neptune | 19127-02-28 07:40 G | 8707110.59 | 8707110.82 | 8707111.09 | 0.0088 | 0.0032 |
| Neptune | 19128-03-01 15:21 G | 8707477.94 | 8707478.14 | 8707478.38 | 0.0088 | 0.0042 |
| Neptune | 19129-03-04 04:19 G | 8707845.45 | 8707845.68 | 8707845.95 | 0.0088 | 0.0033 |
| Jupiter | 19129-07-01 15:36 G | 8707964.95 | 8707965.15 | 8707965.35 | 0.0543 | 0.0319 |
| Neptune | 19130-03-06 17:02 G | 8708213.01 | 8708213.21 | 8708213.45 | 0.0088 | 0.0043 |
| Neptune | 19131-03-09 01:26 G | 8708580.33 | 8708580.56 | 8708580.82 | 0.0088 | 0.0034 |
| Mars | 19131-09-14 18:43 G | 8708770.10 | 8708770.28 | 8708770.46 | 0.1835 | 0.0383 |
| Neptune | 19132-03-10 18:28 G | 8708948.06 | 8708948.27 | 8708948.50 | 0.0088 | 0.0044 |
| Neptune | 19133-03-12 23:16 G | 8709315.25 | 8709315.47 | 8709315.73 | 0.0088 | 0.0035 |
| Neptune | 19134-03-15 18:14 G | 8709683.05 | 8709683.26 | 8709683.49 | 0.0088 | 0.0045 |
| Jupiter | 19134-12-20 16:33 G | 8709962.97 | 8709963.19 | 8709963.42 | 0.0487 | 0.0096 |
| Neptune | 19135-03-17 23:16 G | 8710050.24 | 8710050.47 | 8710050.71 | 0.0088 | 0.0036 |
| Neptune | 19136-03-19 16:33 G | 8710417.97 | 8710418.19 | 8710418.43 | 0.0088 | 0.0045 |
| Neptune | 19137-03-22 00:43 G | 8710785.31 | 8710785.53 | 8710785.77 | 0.0088 | 0.0037 |
| Neptune | 19138-03-24 13:55 G | 8711152.87 | 8711153.08 | 8711153.33 | 0.0088 | 0.0046 |
| Neptune | 19139-03-27 03:50 G | 8711520.43 | 8711520.66 | 8711520.89 | 0.0088 | 0.0037 |
| Neptune | 19140-03-28 12:14 G | 8711887.81 | 8711888.01 | 8711888.26 | 0.0088 | 0.0046 |
| Saturn | 19140-05-24 04:33 G | 8711944.46 | 8711944.69 | 8711944.93 | 0.0281 | 0.0107 |
| Jupiter | 19140-05-29 18:28 G | 8711950.11 | 8711950.27 | 8711950.44 | 0.0535 | 0.0387 |
| Neptune | 19141-03-31 05:45 G | 8712255.53 | 8712255.74 | 8712255.99 | 0.0089 | 0.0037 |
| Jupiter | 19141-07-06 23:31 G | 8712353.35 | 8712353.48 | 8712353.61 | 0.0544 | 0.0448 |

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| Neptune | 19142-04-02 11:45 G | 8712622.77 | 8712622.99 | 8712623.22 | 0.0089 | 0.0045 |
| Uranus | 19142-04-10 18:14 G | 8712631.06 | 8712631.26 | 8712631.48 | 0.0134 | 0.0083 |
| Neptune | 19143-04-05 06:43 G | 8712990.56 | 8712990.78 | 8712991.03 | 0.0089 | 0.0037 |
| Uranus | 19143-04-15 01:26 G | 8713000.32 | 8713000.56 | 8713000.79 | 0.0134 | 0.0041 |
| Neptune | 19144-04-06 12:28 G | 8713357.81 | 8713358.02 | 8713358.24 | 0.0089 | 0.0045 |
| Uranus | 19144-04-18 13:55 G | 8713369.82 | 8713370.08 | 8713370.34 | 0.0134 | 0.0024 |
| Neptune | 19145-04-09 06:28 G | 8713725.53 | 8713725.77 | 8713726.01 | 0.0089 | 0.0036 |
| Uranus | 19145-04-22 18:57 G | 8713739.09 | 8713739.29 | 8713739.53 | 0.0134 | 0.0064 |
| Jupiter | 19145-11-24 12:14 G | 8713954.88 | 8713955.01 | 8713955.16 | 0.0495 | 0.0394 |
| Neptune | 19146-04-11 14:09 G | 8714092.89 | 8714093.09 | 8714093.33 | 0.0089 | 0.0044 |
| Uranus | 19146-04-27 07:40 G | 8714108.74 | 8714108.82 | 8714108.92 | 0.0134 | 0.0125 |
| Jupiter | 19146-12-25 02:52 G | 8714350.41 | 8714350.62 | 8714350.84 | 0.0486 | 0.0161 |
| Neptune | 19147-04-14 04:33 G | 8714460.45 | 8714460.69 | 8714460.94 | 0.0089 | 0.0035 |
| Neptune | 19148-04-15 17:31 G | 8714828.03 | 8714828.23 | 8714828.47 | 0.0089 | 0.0043 |
| Neptune | 19149-04-18 03:50 G | 8715195.41 | 8715195.66 | 8715195.91 | 0.0089 | 0.0034 |
| Neptune | 19150-04-20 21:07 G | 8715563.17 | 8715563.38 | 8715563.62 | 0.0089 | 0.0042 |
| Neptune | 19151-04-23 03:36 G | 8715930.41 | 8715930.65 | 8715930.90 | 0.0089 | 0.0033 |
| Neptune | 19152-04-24 23:16 G | 8716298.25 | 8716298.47 | 8716298.72 | 0.0089 | 0.0040 |
| Jupiter | 19152-06-03 23:31 G | 8716338.28 | 8716338.48 | 8716338.68 | 0.0536 | 0.0256 |
| Neptune | 19153-04-27 05:16 G | 8716665.50 | 8716665.72 | 8716665.97 | 0.0089 | 0.0032 |
| Neptune | 19154-04-29 23:45 G | 8717033.27 | 8717033.49 | 8717033.75 | 0.0089 | 0.0038 |
| Neptune | 19155-05-02 08:09 G | 8717400.61 | 8717400.84 | 8717401.09 | 0.0089 | 0.0031 |
| Saturn | 19155-11-28 00:57 G | 8717610.32 | 8717610.54 | 8717610.78 | 0.0278 | 0.0076 |
| Neptune | 19156-05-03 23:02 G | 8717768.23 | 8717768.46 | 8717768.72 | 0.0089 | 0.0036 |
| Neptune | 19157-05-06 12:14 G | 8718135.78 | 8718136.01 | 8718136.26 | 0.0089 | 0.0030 |
| Jupiter | 19157-11-28 23:16 G | 8718342.30 | 8718342.47 | 8718342.63 | 0.0493 | 0.0332 |
| Neptune | 19158-05-08 22:33 G | 8718503.21 | 8718503.44 | 8718503.71 | 0.0089 | 0.0034 |
| Jupiter | 19158-12-29 00:14 G | 8718737.32 | 8718737.51 | 8718737.71 | 0.0485 | 0.0270 |
| Neptune | 19159-05-11 16:04 G | 8718870.94 | 8718871.17 | 8718871.43 | 0.0089 | 0.0027 |
| Neptune | 19160-05-12 23:02 G | 8719238.23 | 8719238.46 | 8719238.72 | 0.0089 | 0.0032 |

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| Neptune | 19161-05-15 19:12 G | 8719606.06 | 8719606.30 | 8719606.55 | 0.0089 | 0.0026 |
| Neptune | 19162-05-18 01:12 G | 8719973.31 | 8719973.55 | 8719973.80 | 0.0089 | 0.0029 |
| Neptune | 19163-05-20 20:24 G | 8720341.11 | 8720341.35 | 8720341.62 | 0.0089 | 0.0024 |
| Neptune | 19164-05-22 04:33 G | 8720708.47 | 8720708.69 | 8720708.95 | 0.0089 | 0.0026 |
| Jupiter | 19164-06-09 06:43 G | 8720726.56 | 8720726.78 | 8720727.00 | 0.0538 | 0.0192 |
| Neptune | 19165-05-24 20:52 G | 8721076.11 | 8721076.37 | 8721076.63 | 0.0089 | 0.0020 |
| Neptune | 19166-05-27 09:36 G | 8721443.66 | 8721443.90 | 8721444.14 | 0.0089 | 0.0022 |
| Neptune | 19167-05-29 20:52 G | 8721811.12 | 8721811.37 | 8721811.64 | 0.0089 | 0.0019 |
| Neptune | 19168-05-31 14:09 G | 8722178.86 | 8722179.09 | 8722179.35 | 0.0089 | 0.0021 |
| Neptune | 19169-06-02 21:36 G | 8722546.16 | 8722546.40 | 8722546.68 | 0.0089 | 0.0017 |
| Jupiter | 19169-12-03 06:14 G | 8722729.56 | 8722729.76 | 8722729.96 | 0.0492 | 0.0276 |
| Saturn | 19170-06-01 15:36 G | 8722909.95 | 8722910.15 | 8722910.36 | 0.0281 | 0.0164 |
| Neptune | 19170-06-05 17:31 G | 8722913.99 | 8722914.23 | 8722914.49 | 0.0089 | 0.0016 |
| Jupiter | 19171-01-02 11:02 G | 8723124.83 | 8723124.96 | 8723125.10 | 0.0485 | 0.0385 |
| Neptune | 19171-06-07 23:45 G | 8723281.24 | 8723281.49 | 8723281.75 | 0.0089 | 0.0013 |
| Neptune | 19172-06-09 19:26 G | 8723649.06 | 8723649.31 | 8723649.58 | 0.0089 | 0.0013 |
| Neptune | 19173-06-12 03:07 G | 8724016.38 | 8724016.63 | 8724016.89 | 0.0089 | 0.0011 |
| Neptune | 19174-06-14 19:40 G | 8724384.06 | 8724384.32 | 8724384.60 | 0.0089 | 0.0010 |
| Neptune | 19175-06-17 07:40 G | 8724751.58 | 8724751.82 | 8724752.07 | 0.0089 | 0.0008 |
| Jupiter | 19176-06-14 06:14 G | 8725114.53 | 8725114.76 | 8725115.00 | 0.0539 | 0.0078 |
| Neptune | 19176-06-18 20:24 G | 8725119.08 | 8725119.35 | 8725119.62 | 0.0089 | 0.0006 |
| Neptune | 19177-06-21 13:12 G | 8725486.80 | 8725487.05 | 8725487.30 | 0.0089 | 0.0004 |
| Neptune | 19178-06-23 21:07 G | 8725854.12 | 8725854.38 | 8725854.65 | 0.0089 | 0.0002 |
| Neptune | 19179-06-26 16:48 G | 8726221.95 | 8726222.20 | 8726222.46 | 0.0089 | 0.0002 |
| Neptune | 19180-06-27 23:02 G | 8726589.20 | 8726589.46 | 8726589.72 | 0.0090 | 0.0001 |
| Neptune | 19181-06-30 18:57 G | 8726957.02 | 8726957.29 | 8726957.55 | 0.0090 | 0.0001 |
| Jupiter | 19181-12-07 11:02 G | 8727116.75 | 8727116.96 | 8727117.17 | 0.0491 | 0.0176 |
| Neptune | 19182-07-03 01:40 G | 8727324.33 | 8727324.57 | 8727324.83 | 0.0090 | 0.0006 |
| Jupiter | 19183-01-06 12:14 G | 8727511.92 | 8727512.01 | 8727512.11 | 0.0484 | 0.0443 |
| Neptune | 19183-07-05 18:57 G | 8727692.02 | 8727692.29 | 8727692.56 | 0.0090 | 0.0004 |

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| Neptune | 19184-07-07 05:45 G | 8728059.49 | 8728059.74 | 8728059.99 | 0.0090 | 0.0009 |
| Saturn | 19184-11-22 01:55 G | 8728197.36 | 8728197.58 | 8728197.81 | 0.0277 | 0.0119 |
| Neptune | 19185-07-09 18:43 G | 8728427.01 | 8728427.28 | 8728427.55 | 0.0090 | 0.0006 |
| Uranus | 19185-10-10 12:57 G | 8728519.86 | 8728520.04 | 8728520.25 | 0.0144 | 0.0096 |
| Neptune | 19186-07-12 10:19 G | 8728794.69 | 8728794.93 | 8728795.18 | 0.0090 | 0.0012 |
| Uranus | 19186-10-15 06:28 G | 8728889.54 | 8728889.77 | 8728890.02 | 0.0144 | 0.0030 |
| Neptune | 19187-07-14 18:57 G | 8729162.03 | 8729162.29 | 8729162.55 | 0.0090 | 0.0009 |
| Uranus | 19187-10-20 11:02 G | 8729259.70 | 8729259.96 | 8729260.21 | 0.0145 | 0.0026 |
| Jupiter | 19188-06-19 22:33 G | 8729503.21 | 8729503.44 | 8729503.66 | 0.0541 | 0.0096 |
| Neptune | 19188-07-16 13:55 G | 8729529.84 | 8729530.08 | 8729530.34 | 0.0089 | 0.0016 |
| Uranus | 19188-10-24 03:36 G | 8729629.49 | 8729629.65 | 8729629.83 | 0.0145 | 0.0105 |
| Neptune | 19189-07-18 19:55 G | 8729897.08 | 8729897.33 | 8729897.59 | 0.0089 | 0.0012 |
| Neptune | 19190-07-21 15:50 G | 8730264.92 | 8730265.16 | 8730265.42 | 0.0089 | 0.0019 |
| Neptune | 19191-07-23 22:33 G | 8730632.20 | 8730632.44 | 8730632.70 | 0.0089 | 0.0015 |
| Neptune | 19192-07-25 15:50 G | 8730999.91 | 8731000.16 | 8731000.43 | 0.0089 | 0.0022 |
| Neptune | 19193-07-28 01:55 G | 8731367.34 | 8731367.58 | 8731367.83 | 0.0089 | 0.0017 |
| Jupiter | 19193-12-11 22:48 G | 8731504.22 | 8731504.45 | 8731504.69 | 0.0489 | 0.0048 |
| Neptune | 19194-07-30 14:38 G | 8731734.87 | 8731735.11 | 8731735.38 | 0.0089 | 0.0025 |
| Neptune | 19195-08-02 05:45 G | 8732102.50 | 8732102.74 | 8732102.99 | 0.0089 | 0.0020 |
| Neptune | 19196-08-03 14:09 G | 8732469.85 | 8732470.09 | 8732470.35 | 0.0089 | 0.0028 |
| Neptune | 19197-08-06 08:24 G | 8732837.61 | 8732837.85 | 8732838.11 | 0.0089 | 0.0022 |
| Neptune | 19198-08-08 14:09 G | 8733204.85 | 8733205.09 | 8733205.34 | 0.0089 | 0.0030 |
| Saturn | 19199-05-26 12:43 G | 8733495.80 | 8733496.03 | 8733496.27 | 0.0281 | 0.0053 |
| Neptune | 19199-08-11 09:36 G | 8733572.66 | 8733572.90 | 8733573.16 | 0.0089 | 0.0024 |
| Jupiter | 19200-06-25 08:24 G | 8733891.63 | 8733891.85 | 8733892.07 | 0.0542 | 0.0225 |
| Neptune | 19200-08-12 15:50 G | 8733939.93 | 8733940.16 | 8733940.40 | 0.0089 | 0.0033 |
| Neptune | 19201-08-15 09:21 G | 8734307.64 | 8734307.89 | 8734308.14 | 0.0089 | 0.0026 |
| Neptune | 19202-08-17 18:28 G | 8734675.04 | 8734675.27 | 8734675.50 | 0.0089 | 0.0035 |
| Neptune | 19203-08-20 07:40 G | 8735042.57 | 8735042.82 | 8735043.08 | 0.0089 | 0.0027 |
| Neptune | 19204-08-21 21:36 G | 8735410.19 | 8735410.40 | 8735410.64 | 0.0089 | 0.0037 |

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| Neptune | 19205-08-24 06:00 G | 8735777.52 | 8735777.75 | 8735778.02 | 0.0089 | 0.0029 |
| Jupiter | 19205-12-15 19:12 G | 8735891.07 | 8735891.30 | 8735891.53 | 0.0488 | 0.0035 |
| Neptune | 19206-08-26 23:45 G | 8736145.28 | 8736145.49 | 8736145.73 | 0.0089 | 0.0039 |
| Neptune | 19207-08-29 05:16 G | 8736512.49 | 8736512.72 | 8736512.97 | 0.0089 | 0.0031 |
| Neptune | 19208-08-31 00:00 G | 8736880.28 | 8736880.50 | 8736880.74 | 0.0089 | 0.0040 |
| Neptune | 19209-09-02 05:45 G | 8737247.51 | 8737247.74 | 8737247.98 | 0.0089 | 0.0032 |
| Neptune | 19210-09-04 22:33 G | 8737615.21 | 8737615.44 | 8737615.68 | 0.0089 | 0.0041 |
| Neptune | 19211-09-07 06:43 G | 8737982.56 | 8737982.78 | 8737983.03 | 0.0089 | 0.0033 |
| Jupiter | 19212-06-30 15:36 G | 8738279.96 | 8738280.15 | 8738280.34 | 0.0543 | 0.0299 |
| Neptune | 19212-09-08 19:12 G | 8738350.09 | 8738350.30 | 8738350.55 | 0.0089 | 0.0042 |
| Neptune | 19213-09-11 08:52 G | 8738717.65 | 8738717.87 | 8738718.11 | 0.0089 | 0.0034 |
| Neptune | 19214-09-13 16:48 G | 8739084.99 | 8739085.20 | 8739085.45 | 0.0089 | 0.0043 |
| Saturn | 19214-11-29 05:45 G | 8739161.53 | 8739161.74 | 8739161.95 | 0.0278 | 0.0126 |
| Neptune | 19215-09-16 10:19 G | 8739452.72 | 8739452.93 | 8739453.18 | 0.0089 | 0.0034 |
| Neptune | 19216-09-17 15:07 G | 8739819.92 | 8739820.13 | 8739820.37 | 0.0089 | 0.0043 |
| Neptune | 19217-09-20 09:50 G | 8740187.68 | 8740187.91 | 8740188.16 | 0.0089 | 0.0034 |
| Jupiter | 19217-12-20 08:09 G | 8740278.62 | 8740278.84 | 8740279.07 | 0.0487 | 0.0085 |
| Neptune | 19218-09-22 14:38 G | 8740554.91 | 8740555.11 | 8740555.35 | 0.0089 | 0.0044 |
| Neptune | 19219-09-25 06:57 G | 8740922.56 | 8740922.79 | 8740923.05 | 0.0089 | 0.0035 |
| Neptune | 19220-09-26 15:07 G | 8741289.92 | 8741290.13 | 8741290.35 | 0.0089 | 0.0043 |
| Neptune | 19221-09-29 02:38 G | 8741657.38 | 8741657.61 | 8741657.87 | 0.0089 | 0.0034 |
| Neptune | 19222-10-01 15:36 G | 8742024.95 | 8742025.15 | 8742025.39 | 0.0089 | 0.0043 |
| Jupiter | 19223-05-29 15:21 G | 8742265.00 | 8742265.14 | 8742265.29 | 0.0534 | 0.0406 |
| Neptune | 19223-10-03 23:02 G | 8742392.23 | 8742392.46 | 8742392.72 | 0.0089 | 0.0034 |
| Jupiter | 19224-07-06 01:55 G | 8742668.44 | 8742668.58 | 8742668.73 | 0.0543 | 0.0424 |
| Neptune | 19224-10-05 15:50 G | 8742759.95 | 8742760.16 | 8742760.39 | 0.0089 | 0.0043 |
| Pluto | 19225-09-02 03:50 G | 8743091.49 | 8743091.66 | 8743091.88 | 0.0064 | 0.0039 |
| Neptune | 19225-10-07 19:55 G | 8743127.11 | 8743127.33 | 8743127.59 | 0.0089 | 0.0034 |
| Uranus | 19226-04-11 06:00 G | 8743312.56 | 8743312.75 | 8743312.96 | 0.0134 | 0.0086 |
| Pluto | 19226-09-03 15:50 G | 8743457.98 | 8743458.16 | 8743458.38 | 0.0064 | 0.0043 |

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| Neptune | 19226-10-10 14:09 G | 8743494.88 | 8743495.09 | 8743495.33 | 0.0089 | 0.0042 |
| Uranus | 19227-04-15 14:24 G | 8743681.86 | 8743682.10 | 8743682.35 | 0.0134 | 0.0025 |
| Neptune | 19227-10-12 18:57 G | 8743862.07 | 8743862.29 | 8743862.54 | 0.0089 | 0.0033 |
| Uranus | 19228-04-19 02:09 G | 8744051.33 | 8744051.59 | 8744051.85 | 0.0134 | 0.0015 |
| Saturn | 19228-05-20 08:24 G | 8744082.74 | 8744082.85 | 8744082.99 | 0.0283 | 0.0245 |
| Neptune | 19228-10-14 10:19 G | 8744229.72 | 8744229.93 | 8744230.19 | 0.0089 | 0.0041 |
| Jupiter | 19228-11-24 00:28 G | 8744270.39 | 8744270.52 | 8744270.65 | 0.0496 | 0.0406 |
| Uranus | 19229-04-23 08:38 G | 8744420.68 | 8744420.86 | 8744421.07 | 0.0134 | 0.0081 |
| Saturn | 19229-06-02 16:48 G | 8744461.04 | 8744461.20 | 8744461.36 | 0.0281 | 0.0216 |
| Neptune | 19229-10-16 18:28 G | 8744597.05 | 8744597.27 | 8744597.52 | 0.0089 | 0.0032 |
| Jupiter | 19229-12-24 06:57 G | 8744665.57 | 8744665.79 | 8744666.02 | 0.0486 | 0.0154 |
| Uranus | 19230-04-27 20:09 G | 8744790.25 | 8744790.34 | 8744790.47 | 0.0133 | 0.0122 |
| Neptune | 19230-10-19 05:16 G | 8744964.50 | 8744964.72 | 8744964.98 | 0.0088 | 0.0040 |
| Neptune | 19231-10-21 18:28 G | 8745332.05 | 8745332.27 | 8745332.52 | 0.0088 | 0.0031 |
| Neptune | 19232-10-23 00:43 G | 8745699.31 | 8745699.53 | 8745699.78 | 0.0088 | 0.0039 |
| Neptune | 19233-10-25 17:45 G | 8746067.01 | 8746067.24 | 8746067.49 | 0.0088 | 0.0028 |
| Neptune | 19234-10-27 21:21 G | 8746434.17 | 8746434.39 | 8746434.64 | 0.0088 | 0.0037 |
| Jupiter | 19235-06-04 00:57 G | 8746653.34 | 8746653.54 | 8746653.74 | 0.0535 | 0.0280 |
| Neptune | 19235-10-30 14:38 G | 8746801.88 | 8746802.11 | 8746802.37 | 0.0088 | 0.0028 |
| Mars | 19236-03-12 06:28 G | 8746935.66 | 8746935.77 | 8746935.88 | 0.1694 | 0.1363 |
| Neptune | 19236-10-31 19:12 G | 8747169.09 | 8747169.30 | 8747169.55 | 0.0088 | 0.0036 |
| Neptune | 19237-11-03 09:50 G | 8747536.68 | 8747536.91 | 8747537.18 | 0.0088 | 0.0027 |
| Neptune | 19238-11-05 18:28 G | 8747904.04 | 8747904.27 | 8747904.50 | 0.0088 | 0.0033 |
| Neptune | 19239-11-08 04:19 G | 8748271.43 | 8748271.68 | 8748271.94 | 0.0088 | 0.0023 |
| Neptune | 19240-11-09 17:45 G | 8748639.02 | 8748639.24 | 8748639.48 | 0.0088 | 0.0030 |
| Jupiter | 19240-11-28 08:38 G | 8748657.70 | 8748657.86 | 8748658.04 | 0.0494 | 0.0345 |
| Neptune | 19241-11-11 23:31 G | 8749006.23 | 8749006.48 | 8749006.74 | 0.0088 | 0.0021 |
| Jupiter | 19241-12-28 16:19 G | 8749053.00 | 8749053.18 | 8749053.37 | 0.0485 | 0.0271 |
| Neptune | 19242-11-14 16:33 G | 8749373.95 | 8749374.19 | 8749374.43 | 0.0088 | 0.0029 |
| Neptune | 19243-11-16 19:40 G | 8749741.08 | 8749741.32 | 8749741.58 | 0.0088 | 0.0020 |

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| Saturn | 19243-11-23 23:31 G | 8749748.24 | 8749748.48 | 8749748.73 | 0.0277 | 0.0068 |
| Neptune | 19244-11-18 12:43 G | 8750108.79 | 8750109.03 | 8750109.29 | 0.0088 | 0.0026 |
| Neptune | 19245-11-20 17:45 G | 8750476.00 | 8750476.24 | 8750476.49 | 0.0088 | 0.0017 |
| Neptune | 19246-11-23 07:12 G | 8750843.55 | 8750843.80 | 8750844.07 | 0.0088 | 0.0023 |
| Jupiter | 19247-06-09 01:12 G | 8751041.34 | 8751041.55 | 8751041.77 | 0.0538 | 0.0211 |
| Neptune | 19247-11-25 16:04 G | 8751210.93 | 8751211.17 | 8751211.42 | 0.0088 | 0.0014 |
| Neptune | 19248-11-27 00:28 G | 8751578.27 | 8751578.52 | 8751578.79 | 0.0088 | 0.0021 |
| Neptune | 19249-11-29 14:38 G | 8751945.87 | 8751946.11 | 8751946.36 | 0.0088 | 0.0012 |
| Neptune | 19250-12-01 19:26 G | 8752313.06 | 8752313.31 | 8752313.57 | 0.0088 | 0.0018 |
| Neptune | 19251-12-04 12:28 G | 8752680.77 | 8752681.02 | 8752681.28 | 0.0088 | 0.0009 |
| Jupiter | 19252-12-02 14:24 G | 8753044.92 | 8753045.10 | 8753045.28 | 0.0492 | 0.0286 |
| Neptune | 19252-12-05 15:50 G | 8753047.92 | 8753048.16 | 8753048.42 | 0.0088 | 0.0015 |
| Neptune | 19253-12-08 08:38 G | 8753415.61 | 8753415.86 | 8753416.13 | 0.0088 | 0.0007 |
| Jupiter | 19254-01-01 18:57 G | 8753440.15 | 8753440.29 | 8753440.45 | 0.0485 | 0.0375 |
| Neptune | 19254-12-10 14:09 G | 8753782.85 | 8753783.09 | 8753783.34 | 0.0088 | 0.0012 |
| Neptune | 19255-12-13 03:07 G | 8754150.36 | 8754150.63 | 8754150.89 | 0.0088 | 0.0004 |
| Neptune | 19256-12-14 12:28 G | 8754517.77 | 8754518.02 | 8754518.27 | 0.0088 | 0.0009 |
| Neptune | 19257-12-16 20:09 G | 8754885.08 | 8754885.34 | 8754885.61 | 0.0088 | 0.0001 |
| Saturn | 19258-05-27 23:02 G | 8755047.22 | 8755047.46 | 8755047.70 | 0.0281 | 0.0006 |
| Neptune | 19258-12-19 10:48 G | 8755252.70 | 8755252.95 | 8755253.20 | 0.0088 | 0.0006 |
| Jupiter | 19259-06-14 19:12 G | 8755430.07 | 8755430.30 | 8755430.52 | 0.0539 | 0.0087 |
| Neptune | 19259-12-21 14:52 G | 8755619.86 | 8755620.12 | 8755620.38 | 0.0088 | 0.0002 |
| Neptune | 19260-12-23 08:09 G | 8755987.58 | 8755987.84 | 8755988.10 | 0.0088 | 0.0004 |
| Neptune | 19261-12-25 11:31 G | 8756354.73 | 8756354.98 | 8756355.24 | 0.0088 | 0.0004 |
| Neptune | 19262-12-28 03:36 G | 8756722.39 | 8756722.65 | 8756722.92 | 0.0088 | 0.0001 |
| Neptune | 19263-12-30 09:50 G | 8757089.66 | 8757089.91 | 8757090.16 | 0.0088 | 0.0008 |
| Jupiter | 19264-12-07 00:57 G | 8757432.33 | 8757432.54 | 8757432.77 | 0.0491 | 0.0174 |
| Neptune | 19264-12-31 21:50 G | 8757457.15 | 8757457.41 | 8757457.68 | 0.0088 | 0.0003 |
| Neptune | 19266-01-03 08:38 G | 8757824.61 | 8757824.86 | 8757825.11 | 0.0088 | 0.0010 |
| Jupiter | 19266-01-05 20:52 G | 8757827.28 | 8757827.37 | 8757827.48 | 0.0484 | 0.0434 |

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| Neptune | 19267-01-05 15:36 G | 8758191.89 | 8758192.15 | 8758192.42 | 0.0088 | 0.0005 |
| Neptune | 19268-01-08 06:57 G | 8758559.55 | 8758559.79 | 8758560.05 | 0.0088 | 0.0013 |
| Neptune | 19269-01-09 11:16 G | 8758926.71 | 8758926.97 | 8758927.23 | 0.0088 | 0.0008 |
| Uranus | 19269-10-11 00:00 G | 8759201.32 | 8759201.50 | 8759201.71 | 0.0144 | 0.0095 |
| Neptune | 19270-01-12 04:33 G | 8759294.44 | 8759294.69 | 8759294.95 | 0.0088 | 0.0016 |
| Uranus | 19270-10-15 18:57 G | 8759571.05 | 8759571.29 | 8759571.53 | 0.0144 | 0.0031 |
| Neptune | 19271-01-14 08:09 G | 8759661.60 | 8759661.84 | 8759662.10 | 0.0088 | 0.0012 |
| Jupiter | 19271-06-20 00:57 G | 8759818.30 | 8759818.54 | 8759818.78 | 0.0541 | 0.0084 |
| Uranus | 19271-10-20 22:19 G | 8759941.18 | 8759941.43 | 8759941.68 | 0.0145 | 0.0043 |
| Neptune | 19272-01-17 00:14 G | 8760029.26 | 8760029.51 | 8760029.77 | 0.0088 | 0.0018 |
| Uranus | 19272-10-24 15:21 G | 8760310.97 | 8760311.14 | 8760311.34 | 0.0145 | 0.0094 |
| Saturn | 19272-11-17 12:57 G | 8760335.00 | 8760335.04 | 8760335.10 | 0.0276 | 0.0270 |
| Neptune | 19273-01-18 07:12 G | 8760396.57 | 8760396.80 | 8760397.06 | 0.0088 | 0.0014 |
| Saturn | 19273-11-30 08:24 G | 8760712.67 | 8760712.85 | 8760713.05 | 0.0278 | 0.0173 |
| Neptune | 19274-01-20 18:43 G | 8760764.02 | 8760764.28 | 8760764.55 | 0.0088 | 0.0020 |
| Neptune | 19275-01-23 06:14 G | 8761131.53 | 8761131.76 | 8761132.02 | 0.0088 | 0.0017 |
| Neptune | 19276-01-25 12:43 G | 8761498.79 | 8761499.03 | 8761499.30 | 0.0088 | 0.0024 |
| Jupiter | 19276-12-11 00:00 G | 8761819.27 | 8761819.50 | 8761819.73 | 0.0490 | 0.0054 |
| Neptune | 19277-01-27 05:16 G | 8761866.48 | 8761866.72 | 8761866.97 | 0.0088 | 0.0019 |
| Jupiter | 19278-01-10 05:02 G | 8762214.68 | 8762214.71 | 8762214.75 | 0.0484 | 0.0477 |
| Neptune | 19278-01-29 09:36 G | 8762233.65 | 8762233.90 | 8762234.15 | 0.0088 | 0.0025 |
| Neptune | 19279-02-01 03:07 G | 8762601.38 | 8762601.63 | 8762601.89 | 0.0088 | 0.0021 |
| Neptune | 19280-02-03 07:40 G | 8762968.59 | 8762968.82 | 8762969.07 | 0.0088 | 0.0027 |
| Neptune | 19281-02-04 23:31 G | 8763336.24 | 8763336.48 | 8763336.75 | 0.0088 | 0.0024 |
| Neptune | 19282-02-07 07:55 G | 8763703.60 | 8763703.83 | 8763704.07 | 0.0088 | 0.0029 |
| Neptune | 19283-02-09 18:57 G | 8764071.04 | 8764071.29 | 8764071.55 | 0.0088 | 0.0026 |
| Jupiter | 19283-06-25 03:50 G | 8764206.45 | 8764206.66 | 8764206.87 | 0.0541 | 0.0196 |
| Neptune | 19284-02-12 07:26 G | 8764438.59 | 8764438.81 | 8764439.06 | 0.0088 | 0.0031 |
| Neptune | 19285-02-13 13:55 G | 8764805.84 | 8764806.08 | 8764806.35 | 0.0088 | 0.0027 |
| Neptune | 19286-02-16 06:57 G | 8765173.57 | 8765173.79 | 8765174.04 | 0.0088 | 0.0032 |

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| Neptune | 19287-02-18 11:02 G | 8765540.73 | 8765540.96 | 8765541.22 | 0.0088 | 0.0029 |
| Saturn | 19287-05-22 07:12 G | 8765633.63 | 8765633.80 | 8765633.99 | 0.0283 | 0.0195 |
| Neptune | 19288-02-21 05:02 G | 8765908.49 | 8765908.71 | 8765908.97 | 0.0088 | 0.0034 |
| Saturn | 19288-06-03 18:14 G | 8766012.19 | 8766012.26 | 8766012.34 | 0.0282 | 0.0267 |
| Jupiter | 19288-12-15 13:55 G | 8766206.85 | 8766207.08 | 8766207.31 | 0.0489 | 0.0023 |
| Neptune | 19289-02-22 10:04 G | 8766275.70 | 8766275.92 | 8766276.18 | 0.0088 | 0.0032 |
| Neptune | 19290-02-25 02:09 G | 8766643.36 | 8766643.59 | 8766643.85 | 0.0088 | 0.0035 |
| Neptune | 19291-02-27 11:31 G | 8767010.75 | 8767010.98 | 8767011.22 | 0.0088 | 0.0032 |
| Neptune | 19292-02-29 22:48 G | 8767378.21 | 8767378.45 | 8767378.71 | 0.0088 | 0.0036 |
| Neptune | 19293-03-03 12:14 G | 8767745.80 | 8767746.01 | 8767746.26 | 0.0088 | 0.0034 |
| Neptune | 19294-03-05 19:12 G | 8768113.07 | 8768113.30 | 8768113.55 | 0.0088 | 0.0037 |
| Neptune | 19295-03-08 12:43 G | 8768480.81 | 8768481.03 | 8768481.27 | 0.0088 | 0.0035 |
| Jupiter | 19295-06-30 17:45 G | 8768595.03 | 8768595.24 | 8768595.44 | 0.0542 | 0.0270 |
| Neptune | 19296-03-09 17:16 G | 8768848.00 | 8768848.22 | 8768848.47 | 0.0088 | 0.0037 |
| Neptune | 19297-03-12 12:00 G | 8769215.77 | 8769216.00 | 8769216.25 | 0.0088 | 0.0035 |
| Neptune | 19298-03-14 17:02 G | 8769583.01 | 8769583.21 | 8769583.46 | 0.0088 | 0.0038 |
| Neptune | 19299-03-17 09:36 G | 8769950.67 | 8769950.90 | 8769951.16 | 0.0088 | 0.0037 |
| Neptune | 19300-03-19 19:26 G | 8770318.09 | 8770318.31 | 8770318.54 | 0.0088 | 0.0038 |
| Jupiter | 19300-12-20 12:43 G | 8770593.80 | 8770594.03 | 8770594.27 | 0.0487 | 0.0072 |
| Neptune | 19301-03-22 06:43 G | 8770685.56 | 8770685.78 | 8770686.05 | 0.0088 | 0.0038 |
| Neptune | 19302-03-24 21:07 G | 8771053.17 | 8771053.38 | 8771053.62 | 0.0088 | 0.0038 |
| Saturn | 19302-11-25 21:07 G | 8771299.14 | 8771299.38 | 8771299.63 | 0.0277 | 0.0017 |
| Neptune | 19303-03-27 04:04 G | 8771420.45 | 8771420.67 | 8771420.93 | 0.0088 | 0.0037 |
| Neptune | 19304-03-28 22:33 G | 8771788.22 | 8771788.44 | 8771788.68 | 0.0088 | 0.0037 |
| Neptune | 19305-03-31 04:04 G | 8772155.44 | 8772155.67 | 8772155.91 | 0.0089 | 0.0037 |
| Neptune | 19306-04-02 22:48 G | 8772523.23 | 8772523.45 | 8772523.71 | 0.0089 | 0.0037 |
| Jupiter | 19306-05-29 21:36 G | 8772580.26 | 8772580.40 | 8772580.56 | 0.0533 | 0.0411 |
| Neptune | 19307-04-05 05:02 G | 8772890.49 | 8772890.71 | 8772890.95 | 0.0089 | 0.0038 |
| Jupiter | 19307-07-06 20:38 G | 8772983.21 | 8772983.36 | 8772983.52 | 0.0544 | 0.0405 |
| Neptune | 19308-04-06 21:50 G | 8773258.19 | 8773258.41 | 8773258.68 | 0.0089 | 0.0036 |

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| Uranus | 19309-04-08 08:24 G | 8773624.82 | 8773624.85 | 8773624.93 | 0.0135 | 0.0132 |
| Neptune | 19309-04-09 07:55 G | 8773625.62 | 8773625.83 | 8773626.08 | 0.0089 | 0.0037 |
| Neptune | 19310-04-11 20:38 G | 8773993.12 | 8773993.36 | 8773993.62 | 0.0089 | 0.0034 |
| Uranus | 19310-04-12 18:57 G | 8773994.09 | 8773994.29 | 8773994.53 | 0.0134 | 0.0075 |
| Neptune | 19311-04-14 11:02 G | 8774360.74 | 8774360.96 | 8774361.20 | 0.0089 | 0.0036 |
| Uranus | 19311-04-17 04:19 G | 8774363.45 | 8774363.68 | 8774363.93 | 0.0134 | 0.0031 |
| Jupiter | 19311-11-25 11:16 G | 8774585.84 | 8774585.97 | 8774586.11 | 0.0496 | 0.0411 |
| Neptune | 19312-04-15 18:43 G | 8774728.05 | 8774728.28 | 8774728.54 | 0.0089 | 0.0034 |
| Uranus | 19312-04-20 14:38 G | 8774732.86 | 8774733.11 | 8774733.37 | 0.0134 | 0.0033 |
| Jupiter | 19312-12-24 22:33 G | 8774981.23 | 8774981.44 | 8774981.66 | 0.0486 | 0.0153 |
| Neptune | 19313-04-18 13:12 G | 8775095.83 | 8775096.05 | 8775096.30 | 0.0089 | 0.0036 |
| Uranus | 19313-04-24 22:04 G | 8775102.23 | 8775102.42 | 8775102.64 | 0.0134 | 0.0073 |
| Neptune | 19314-04-20 18:43 G | 8775463.05 | 8775463.28 | 8775463.54 | 0.0089 | 0.0032 |
| Pluto | 19315-03-05 04:04 G | 8775781.44 | 8775781.67 | 8775781.90 | 0.0080 | 0.0032 |
| Mars | 19315-03-16 19:40 G | 8775793.14 | 8775793.32 | 8775793.50 | 0.1700 | 0.0833 |
| Neptune | 19315-04-23 14:38 G | 8775830.88 | 8775831.11 | 8775831.36 | 0.0089 | 0.0034 |
| Neptune | 19316-04-24 21:07 G | 8776198.15 | 8776198.38 | 8776198.63 | 0.0089 | 0.0029 |
| Neptune | 19317-04-27 14:38 G | 8776565.88 | 8776566.11 | 8776566.38 | 0.0089 | 0.0033 |
| Saturn | 19317-05-30 04:04 G | 8776598.43 | 8776598.67 | 8776598.92 | 0.0282 | 0.0054 |
| Neptune | 19318-04-30 00:57 G | 8776933.31 | 8776933.54 | 8776933.79 | 0.0089 | 0.0028 |
| Jupiter | 19318-06-04 00:00 G | 8776968.31 | 8776968.50 | 8776968.70 | 0.0536 | 0.0295 |
| Neptune | 19319-05-02 14:24 G | 8777300.86 | 8777301.10 | 8777301.37 | 0.0089 | 0.0032 |
| Neptune | 19320-05-04 05:02 G | 8777668.48 | 8777668.71 | 8777668.97 | 0.0089 | 0.0026 |
| Neptune | 19321-05-06 13:40 G | 8778035.83 | 8778036.07 | 8778036.33 | 0.0089 | 0.0029 |
| Neptune | 19322-05-09 07:55 G | 8778403.60 | 8778403.83 | 8778404.09 | 0.0089 | 0.0023 |
| Neptune | 19323-05-11 14:09 G | 8778770.86 | 8778771.09 | 8778771.35 | 0.0089 | 0.0028 |
| Jupiter | 19323-11-29 15:21 G | 8778973.00 | 8778973.14 | 8778973.30 | 0.0494 | 0.0362 |
| Neptune | 19324-05-13 10:33 G | 8779138.69 | 8779138.94 | 8779139.20 | 0.0089 | 0.0021 |
| Jupiter | 19324-12-29 00:28 G | 8779368.33 | 8779368.52 | 8779368.73 | 0.0486 | 0.0270 |
| Neptune | 19325-05-15 16:33 G | 8779505.96 | 8779506.19 | 8779506.45 | 0.0089 | 0.0027 |

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| Neptune | 19326-05-18 11:02 G | 8779873.71 | 8779873.96 | 8779874.23 | 0.0089 | 0.0018 |
| Neptune | 19327-05-20 20:52 G | 8780241.14 | 8780241.37 | 8780241.62 | 0.0089 | 0.0024 |
| Neptune | 19328-05-22 11:31 G | 8780608.72 | 8780608.98 | 8780609.25 | 0.0089 | 0.0015 |
| Neptune | 19329-05-25 01:40 G | 8780976.33 | 8780976.57 | 8780976.82 | 0.0089 | 0.0021 |
| Neptune | 19330-05-27 11:02 G | 8781343.71 | 8781343.96 | 8781344.24 | 0.0089 | 0.0014 |
| Jupiter | 19330-06-09 16:04 G | 8781356.96 | 8781357.17 | 8781357.38 | 0.0537 | 0.0224 |
| Neptune | 19331-05-30 05:31 G | 8781711.49 | 8781711.73 | 8781711.99 | 0.0089 | 0.0020 |
| Saturn | 19331-11-20 15:21 G | 8781885.99 | 8781886.14 | 8781886.28 | 0.0276 | 0.0220 |
| Neptune | 19332-05-31 12:14 G | 8782078.76 | 8782079.01 | 8782079.28 | 0.0089 | 0.0011 |
| Saturn | 19332-12-02 05:02 G | 8782263.56 | 8782263.71 | 8782263.87 | 0.0278 | 0.0221 |
| Neptune | 19333-06-03 08:38 G | 8782446.61 | 8782446.86 | 8782447.12 | 0.0089 | 0.0016 |
| Neptune | 19334-06-05 14:52 G | 8782813.87 | 8782814.12 | 8782814.38 | 0.0089 | 0.0007 |
| Neptune | 19335-06-08 09:36 G | 8783181.65 | 8783181.90 | 8783182.18 | 0.0089 | 0.0015 |
| Jupiter | 19335-12-04 05:02 G | 8783360.52 | 8783360.71 | 8783360.90 | 0.0493 | 0.0293 |
| Neptune | 19336-06-09 18:57 G | 8783549.04 | 8783549.29 | 8783549.55 | 0.0089 | 0.0005 |
| Jupiter | 19337-01-02 04:04 G | 8783755.53 | 8783755.67 | 8783755.82 | 0.0485 | 0.0370 |
| Neptune | 19337-06-12 10:19 G | 8783916.67 | 8783916.93 | 8783917.20 | 0.0089 | 0.0011 |
| Neptune | 19338-06-15 00:00 G | 8784284.24 | 8784284.50 | 8784284.75 | 0.0089 | 0.0002 |
| Neptune | 19339-06-17 10:04 G | 8784651.66 | 8784651.92 | 8784652.19 | 0.0089 | 0.0008 |
| Neptune | 19340-06-19 04:04 G | 8785019.41 | 8785019.67 | 8785019.92 | 0.0089 | 0.0002 |
| Neptune | 19341-06-21 11:02 G | 8785386.70 | 8785386.96 | 8785387.22 | 0.0089 | 0.0006 |
| Jupiter | 19342-06-14 14:09 G | 8785744.85 | 8785745.09 | 8785745.32 | 0.0538 | 0.0107 |
| Neptune | 19342-06-24 07:12 G | 8785754.55 | 8785754.80 | 8785755.06 | 0.0089 | 0.0005 |
| Neptune | 19343-06-26 13:40 G | 8786121.82 | 8786122.07 | 8786122.33 | 0.0089 | 0.0003 |
| Neptune | 19344-06-28 09:07 G | 8786489.62 | 8786489.88 | 8786490.15 | 0.0089 | 0.0008 |
| Neptune | 19345-06-30 17:45 G | 8786856.99 | 8786857.24 | 8786857.49 | 0.0090 | 0.0001 |
| Saturn | 19346-05-24 08:52 G | 8787184.67 | 8787184.87 | 8787185.09 | 0.0283 | 0.0146 |
| Neptune | 19346-07-03 09:50 G | 8787224.65 | 8787224.91 | 8787225.18 | 0.0090 | 0.0011 |
| Neptune | 19347-07-05 22:48 G | 8787592.20 | 8787592.45 | 8787592.70 | 0.0090 | 0.0004 |
| Jupiter | 19347-12-08 04:04 G | 8787747.45 | 8787747.67 | 8787747.89 | 0.0492 | 0.0182 |

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| Neptune | 19348-07-07 09:36 G | 8787959.64 | 8787959.90 | 8787960.17 | 0.0090 | 0.0014 |
| Jupiter | 19349-01-06 12:57 G | 8788142.93 | 8788143.04 | 8788143.17 | 0.0485 | 0.0417 |
| Neptune | 19349-07-10 02:24 G | 8788327.35 | 8788327.60 | 8788327.86 | 0.0090 | 0.0006 |
| Neptune | 19350-07-12 09:36 G | 8788694.65 | 8788694.90 | 8788695.16 | 0.0090 | 0.0017 |
| Neptune | 19351-07-15 05:31 G | 8789062.48 | 8789062.73 | 8789062.99 | 0.0090 | 0.0009 |
| Neptune | 19352-07-16 11:16 G | 8789429.73 | 8789429.97 | 8789430.23 | 0.0090 | 0.0019 |
| Neptune | 19353-07-19 06:57 G | 8789797.53 | 8789797.79 | 8789798.05 | 0.0089 | 0.0012 |
| Uranus | 19353-10-12 08:38 G | 8789882.66 | 8789882.86 | 8789883.07 | 0.0144 | 0.0088 |
| Jupiter | 19354-06-19 22:33 G | 8790133.21 | 8790133.44 | 8790133.66 | 0.0540 | 0.0065 |
| Neptune | 19354-07-21 14:38 G | 8790164.87 | 8790165.11 | 8790165.36 | 0.0089 | 0.0021 |
| Uranus | 19354-10-17 04:33 G | 8790252.45 | 8790252.69 | 8790252.93 | 0.0144 | 0.0024 |
| Neptune | 19355-07-24 07:26 G | 8790532.55 | 8790532.81 | 8790533.08 | 0.0089 | 0.0015 |
| Uranus | 19355-10-22 06:43 G | 8790622.54 | 8790622.78 | 8790623.04 | 0.0145 | 0.0034 |
| Neptune | 19356-07-25 19:26 G | 8790900.08 | 8790900.31 | 8790900.56 | 0.0089 | 0.0024 |
| Uranus | 19356-10-26 01:26 G | 8790992.42 | 8790992.56 | 8790992.73 | 0.0145 | 0.0112 |
| Neptune | 19357-07-28 06:57 G | 8791267.53 | 8791267.79 | 8791268.06 | 0.0089 | 0.0018 |
| Neptune | 19358-07-30 22:48 G | 8791635.23 | 8791635.45 | 8791635.71 | 0.0089 | 0.0027 |
| Neptune | 19359-08-02 06:14 G | 8792002.52 | 8792002.76 | 8792003.03 | 0.0089 | 0.0020 |
| Jupiter | 19359-12-12 18:43 G | 8792135.05 | 8792135.28 | 8792135.51 | 0.0490 | 0.0064 |
| Neptune | 19360-08-04 01:26 G | 8792370.32 | 8792370.56 | 8792370.81 | 0.0089 | 0.0028 |
| Jupiter | 19361-01-10 11:02 G | 8792529.91 | 8792529.96 | 8792530.03 | 0.0484 | 0.0467 |
| Neptune | 19361-08-06 06:57 G | 8792737.55 | 8792737.79 | 8792738.05 | 0.0089 | 0.0022 |
| Saturn | 19361-11-27 00:28 G | 8792850.29 | 8792850.52 | 8792850.76 | 0.0277 | 0.0035 |
| Neptune | 19362-08-09 02:24 G | 8793105.36 | 8793105.60 | 8793105.85 | 0.0089 | 0.0030 |
| Neptune | 19363-08-11 09:07 G | 8793472.65 | 8793472.88 | 8793473.13 | 0.0089 | 0.0025 |
| Neptune | 19364-08-13 01:26 G | 8793840.33 | 8793840.56 | 8793840.83 | 0.0089 | 0.0032 |
| Neptune | 19365-08-15 12:28 G | 8794207.80 | 8794208.02 | 8794208.27 | 0.0089 | 0.0026 |
| Jupiter | 19366-06-25 11:31 G | 8794521.75 | 8794521.98 | 8794522.21 | 0.0541 | 0.0172 |
| Neptune | 19366-08-18 00:14 G | 8794575.27 | 8794575.51 | 8794575.77 | 0.0089 | 0.0032 |
| Neptune | 19367-08-20 15:50 G | 8794942.92 | 8794943.16 | 8794943.40 | 0.0089 | 0.0028 |

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| Neptune | 19368-08-21 22:33 G | 8795310.21 | 8795310.44 | 8795310.70 | 0.0089 | 0.0035 |
| Neptune | 19369-08-24 17:16 G | 8795677.99 | 8795678.22 | 8795678.47 | 0.0089 | 0.0030 |
| Neptune | 19370-08-26 22:33 G | 8796045.22 | 8796045.44 | 8796045.69 | 0.0089 | 0.0036 |
| Neptune | 19371-08-29 17:45 G | 8796413.00 | 8796413.24 | 8796413.49 | 0.0089 | 0.0031 |
| Jupiter | 19371-12-16 18:43 G | 8796522.04 | 8796522.28 | 8796522.52 | 0.0489 | 0.0011 |
| Neptune | 19372-08-30 23:45 G | 8796780.27 | 8796780.49 | 8796780.73 | 0.0089 | 0.0035 |
| Neptune | 19373-09-02 15:36 G | 8797147.92 | 8797148.15 | 8797148.42 | 0.0089 | 0.0033 |
| Neptune | 19374-09-05 02:09 G | 8797515.37 | 8797515.59 | 8797515.83 | 0.0089 | 0.0036 |
| Neptune | 19375-09-07 13:26 G | 8797882.83 | 8797883.06 | 8797883.32 | 0.0089 | 0.0033 |
| Saturn | 19376-05-31 03:07 G | 8798149.39 | 8798149.63 | 8798149.87 | 0.0282 | 0.0106 |
| Neptune | 19376-09-09 03:50 G | 8798250.45 | 8798250.66 | 8798250.90 | 0.0089 | 0.0037 |
| Neptune | 19377-09-11 10:33 G | 8798617.71 | 8798617.94 | 8798618.19 | 0.0089 | 0.0033 |
| Jupiter | 19378-06-30 16:33 G | 8798909.99 | 8798910.19 | 8798910.40 | 0.0543 | 0.0256 |
| Neptune | 19378-09-14 04:33 G | 8798985.47 | 8798985.69 | 8798985.94 | 0.0089 | 0.0036 |
| Neptune | 19379-09-16 09:21 G | 8799352.67 | 8799352.89 | 8799353.14 | 0.0089 | 0.0034 |
| Neptune | 19380-09-18 03:36 G | 8799720.44 | 8799720.65 | 8799720.91 | 0.0089 | 0.0037 |
| Neptune | 19381-09-20 09:50 G | 8800087.69 | 8800087.91 | 8800088.15 | 0.0089 | 0.0035 |
| Neptune | 19382-09-23 01:40 G | 8800455.33 | 8800455.57 | 8800455.81 | 0.0089 | 0.0036 |
| Neptune | 19383-09-25 11:16 G | 8800822.76 | 8800822.97 | 8800823.21 | 0.0089 | 0.0035 |
| Jupiter | 19383-12-21 03:21 G | 8800909.41 | 8800909.64 | 8800909.86 | 0.0488 | 0.0059 |
| Neptune | 19384-09-26 22:19 G | 8801190.19 | 8801190.43 | 8801190.68 | 0.0089 | 0.0035 |
| Neptune | 19385-09-29 12:28 G | 8801557.79 | 8801558.02 | 8801558.26 | 0.0089 | 0.0034 |
| Neptune | 19386-10-01 18:14 G | 8801925.04 | 8801925.26 | 8801925.51 | 0.0089 | 0.0036 |
| Neptune | 19387-10-04 11:45 G | 8802292.77 | 8802292.99 | 8802293.23 | 0.0089 | 0.0035 |
| Neptune | 19388-10-05 15:50 G | 8802659.94 | 8802660.16 | 8802660.41 | 0.0089 | 0.0035 |
| Jupiter | 19389-05-29 00:00 G | 8802895.35 | 8802895.50 | 8802895.64 | 0.0533 | 0.0412 |
| Neptune | 19389-10-08 09:36 G | 8803027.67 | 8803027.90 | 8803028.15 | 0.0089 | 0.0034 |
| Jupiter | 19390-07-06 11:16 G | 8803298.83 | 8803298.97 | 8803299.13 | 0.0543 | 0.0400 |
| Neptune | 19390-10-10 14:52 G | 8803394.91 | 8803395.12 | 8803395.37 | 0.0089 | 0.0033 |
| Saturn | 19390-11-21 11:31 G | 8803436.79 | 8803436.98 | 8803437.19 | 0.0276 | 0.0170 |

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| Neptune | 19391-10-13 05:45 G | 8803762.51 | 8803762.74 | 8803763.00 | 0.0089 | 0.0033 |
| Saturn | 19391-12-04 00:00 G | 8803814.46 | 8803814.50 | 8803814.56 | 0.0277 | 0.0272 |
| Neptune | 19392-10-14 15:50 G | 8804129.93 | 8804130.16 | 8804130.40 | 0.0089 | 0.0032 |
| Uranus | 19393-04-08 22:04 G | 8804306.37 | 8804306.42 | 8804306.52 | 0.0135 | 0.0128 |
| Neptune | 19393-10-17 01:40 G | 8804497.34 | 8804497.57 | 8804497.83 | 0.0089 | 0.0032 |
| Uranus | 19394-04-13 07:12 G | 8804675.60 | 8804675.80 | 8804676.03 | 0.0134 | 0.0076 |
| Neptune | 19394-10-19 16:04 G | 8804864.95 | 8804865.17 | 8804865.42 | 0.0088 | 0.0031 |
| Jupiter | 19394-11-24 17:16 G | 8804901.11 | 8804901.22 | 8804901.34 | 0.0497 | 0.0425 |
| Uranus | 19395-04-17 18:14 G | 8805045.01 | 8805045.26 | 8805045.51 | 0.0134 | 0.0016 |
| Neptune | 19395-10-21 21:21 G | 8805232.15 | 8805232.39 | 8805232.64 | 0.0088 | 0.0030 |
| Jupiter | 19395-12-25 07:55 G | 8805296.60 | 8805296.83 | 8805297.06 | 0.0487 | 0.0149 |
| Uranus | 19396-04-21 03:36 G | 8805414.39 | 8805414.65 | 8805414.91 | 0.0134 | 0.0025 |
| Neptune | 19396-10-23 14:52 G | 8805599.88 | 8805600.12 | 8805600.36 | 0.0088 | 0.0028 |
| Uranus | 19397-04-25 12:14 G | 8805783.85 | 8805784.01 | 8805784.21 | 0.0134 | 0.0091 |
| Neptune | 19397-10-25 18:28 G | 8805967.04 | 8805967.27 | 8805967.52 | 0.0088 | 0.0028 |
| Uranus | 19398-04-29 21:36 G | 8806153.37 | 8806153.40 | 8806153.48 | 0.0133 | 0.0131 |
| Neptune | 19398-10-28 11:16 G | 8806334.73 | 8806334.97 | 8806335.23 | 0.0088 | 0.0027 |
| Neptune | 19399-10-30 16:48 G | 8806701.97 | 8806702.20 | 8806702.44 | 0.0088 | 0.0028 |
| Neptune | 19400-11-02 06:28 G | 8807069.52 | 8807069.77 | 8807070.02 | 0.0088 | 0.0025 |
| Jupiter | 19401-06-04 10:33 G | 8807283.75 | 8807283.94 | 8807284.13 | 0.0534 | 0.0314 |
| Neptune | 19401-11-04 16:19 G | 8807436.95 | 8807437.18 | 8807437.42 | 0.0088 | 0.0025 |
| Neptune | 19402-11-07 01:12 G | 8807804.30 | 8807804.55 | 8807804.81 | 0.0088 | 0.0022 |
| Neptune | 19403-11-09 15:36 G | 8808171.91 | 8808172.15 | 8808172.39 | 0.0088 | 0.0023 |
| Neptune | 19404-11-10 19:55 G | 8808539.09 | 8808539.33 | 8808539.59 | 0.0088 | 0.0021 |
| Saturn | 19405-05-26 13:40 G | 8808735.85 | 8808736.07 | 8808736.30 | 0.0283 | 0.0096 |
| Neptune | 19405-11-13 13:26 G | 8808906.81 | 8808907.06 | 8808907.31 | 0.0088 | 0.0022 |
| Neptune | 19406-11-15 16:48 G | 8809273.96 | 8809274.20 | 8809274.45 | 0.0088 | 0.0019 |
| Jupiter | 19406-11-30 06:14 G | 8809288.62 | 8809288.76 | 8809288.91 | 0.0495 | 0.0382 |
| Neptune | 19407-11-18 09:07 G | 8809641.64 | 8809641.88 | 8809642.15 | 0.0088 | 0.0020 |
| Jupiter | 19407-12-30 10:48 G | 8809683.76 | 8809683.95 | 8809684.14 | 0.0486 | 0.0265 |

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| Neptune | 19408-11-19 14:52 G | 8810008.88 | 8810009.12 | 8810009.37 | 0.0088 | 0.0015 |
| Neptune | 19409-11-22 03:36 G | 8810376.39 | 8810376.65 | 8810376.91 | 0.0088 | 0.0017 |
| Neptune | 19410-11-24 13:55 G | 8810743.85 | 8810744.08 | 8810744.34 | 0.0088 | 0.0014 |
| Neptune | 19411-11-26 21:50 G | 8811111.15 | 8811111.41 | 8811111.67 | 0.0088 | 0.0015 |
| Neptune | 19412-11-28 12:43 G | 8811478.79 | 8811479.03 | 8811479.28 | 0.0088 | 0.0011 |
| Jupiter | 19413-06-09 09:07 G | 8811671.66 | 8811671.88 | 8811672.09 | 0.0536 | 0.0242 |
| Neptune | 19413-11-30 16:48 G | 8811845.94 | 8811846.20 | 8811846.45 | 0.0088 | 0.0012 |
| Neptune | 19414-12-03 09:36 G | 8812213.65 | 8812213.90 | 8812214.16 | 0.0088 | 0.0007 |
| Mars | 19415-09-16 07:12 G | 8812500.59 | 8812500.80 | 8812501.00 | 0.1845 | 0.0495 |
| Neptune | 19415-12-05 12:57 G | 8812580.80 | 8812581.04 | 8812581.30 | 0.0088 | 0.0010 |
| Neptune | 19416-12-07 04:48 G | 8812948.44 | 8812948.70 | 8812948.96 | 0.0088 | 0.0005 |
| Neptune | 19417-12-09 11:02 G | 8813315.71 | 8813315.96 | 8813316.21 | 0.0088 | 0.0008 |
| Jupiter | 19418-12-04 07:26 G | 8813675.63 | 8813675.81 | 8813675.99 | 0.0494 | 0.0307 |
| Neptune | 19418-12-11 22:48 G | 8813683.18 | 8813683.45 | 8813683.71 | 0.0088 | 0.0003 |
| Neptune | 19419-12-14 10:19 G | 8814050.68 | 8814050.93 | 8814051.18 | 0.0088 | 0.0005 |
| Jupiter | 19420-01-03 19:40 G | 8814071.16 | 8814071.32 | 8814071.48 | 0.0485 | 0.0355 |
| Saturn | 19420-11-29 05:16 G | 8814401.49 | 8814401.72 | 8814401.95 | 0.0276 | 0.0086 |
| Neptune | 19420-12-15 17:16 G | 8814417.96 | 8814418.22 | 8814418.48 | 0.0088 | 0.0000 |
| Neptune | 19421-12-18 08:52 G | 8814785.62 | 8814785.87 | 8814786.12 | 0.0088 | 0.0002 |
| Neptune | 19422-12-20 12:14 G | 8815152.76 | 8815153.01 | 8815153.27 | 0.0088 | 0.0003 |
| Neptune | 19423-12-23 05:31 G | 8815520.47 | 8815520.73 | 8815520.99 | 0.0088 | 0.0001 |
| Neptune | 19424-12-24 09:07 G | 8815887.63 | 8815887.88 | 8815888.13 | 0.0088 | 0.0006 |
| Jupiter | 19425-06-14 18:43 G | 8816060.06 | 8816060.28 | 8816060.50 | 0.0538 | 0.0116 |
| Neptune | 19425-12-27 00:00 G | 8816255.24 | 8816255.50 | 8816255.77 | 0.0088 | 0.0003 |
| Neptune | 19426-12-29 06:57 G | 8816622.55 | 8816622.79 | 8816623.04 | 0.0088 | 0.0009 |
| Neptune | 19427-12-31 17:45 G | 8816989.97 | 8816990.24 | 8816990.50 | 0.0088 | 0.0005 |
| Neptune | 19429-01-02 06:00 G | 8817357.51 | 8817357.75 | 8817358.00 | 0.0088 | 0.0011 |
| Neptune | 19430-01-04 12:14 G | 8817724.75 | 8817725.01 | 8817725.28 | 0.0088 | 0.0007 |
| Jupiter | 19430-12-08 23:02 G | 8818063.26 | 8818063.46 | 8818063.68 | 0.0492 | 0.0185 |
| Neptune | 19431-01-07 04:19 G | 8818092.44 | 8818092.68 | 8818092.94 | 0.0088 | 0.0014 |

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| Jupiter | 19432-01-07 18:14 G | 8818458.14 | 8818458.26 | 8818458.39 | 0.0485 | 0.0402 |
| Neptune | 19432-01-09 07:55 G | 8818459.58 | 8818459.83 | 8818460.09 | 0.0088 | 0.0010 |
| Neptune | 19433-01-11 01:12 G | 8818827.31 | 8818827.55 | 8818827.82 | 0.0088 | 0.0017 |
| Neptune | 19434-01-13 05:45 G | 8819194.49 | 8819194.74 | 8819194.99 | 0.0088 | 0.0012 |
| Neptune | 19435-01-15 20:09 G | 8819562.09 | 8819562.34 | 8819562.61 | 0.0088 | 0.0019 |
| Saturn | 19435-06-03 03:07 G | 8819700.43 | 8819700.63 | 8819700.84 | 0.0282 | 0.0157 |
| Neptune | 19436-01-18 04:04 G | 8819929.43 | 8819929.67 | 8819929.92 | 0.0088 | 0.0014 |
| Neptune | 19437-01-19 13:55 G | 8820296.83 | 8820297.08 | 8820297.35 | 0.0088 | 0.0021 |
| Jupiter | 19437-06-20 07:40 G | 8820448.58 | 8820448.82 | 8820449.06 | 0.0540 | 0.0057 |
| Uranus | 19437-10-13 20:52 G | 8820564.18 | 8820564.37 | 8820564.59 | 0.0144 | 0.0089 |
| Neptune | 19438-01-22 03:21 G | 8820664.40 | 8820664.64 | 8820664.89 | 0.0088 | 0.0017 |
| Uranus | 19438-10-18 18:00 G | 8820934.01 | 8820934.25 | 8820934.50 | 0.0144 | 0.0023 |
| Neptune | 19439-01-24 08:38 G | 8821031.63 | 8821031.86 | 8821032.13 | 0.0088 | 0.0024 |
| Uranus | 19439-10-23 19:12 G | 8821304.07 | 8821304.30 | 8821304.56 | 0.0145 | 0.0050 |
| Neptune | 19440-01-27 01:55 G | 8821399.33 | 8821399.58 | 8821399.83 | 0.0088 | 0.0018 |
| Uranus | 19440-10-27 14:38 G | 8821673.96 | 8821674.11 | 8821674.30 | 0.0145 | 0.0103 |
| Neptune | 19441-01-28 05:31 G | 8821766.49 | 8821766.73 | 8821766.98 | 0.0088 | 0.0025 |
| Neptune | 19442-01-30 22:33 G | 8822134.20 | 8822134.44 | 8822134.70 | 0.0088 | 0.0020 |
| Jupiter | 19442-12-12 22:33 G | 8822450.21 | 8822450.44 | 8822450.68 | 0.0490 | 0.0072 |
| Neptune | 19443-02-02 03:50 G | 8822501.42 | 8822501.66 | 8822501.90 | 0.0088 | 0.0027 |
| Jupiter | 19444-01-12 04:33 G | 8822845.62 | 8822845.69 | 8822845.77 | 0.0484 | 0.0456 |
| Neptune | 19444-02-04 18:00 G | 8822869.00 | 8822869.25 | 8822869.51 | 0.0088 | 0.0022 |
| Neptune | 19445-02-06 02:52 G | 8823236.40 | 8823236.62 | 8823236.87 | 0.0088 | 0.0030 |
| Neptune | 19446-02-08 12:28 G | 8823603.78 | 8823604.02 | 8823604.29 | 0.0088 | 0.0024 |
| Neptune | 19447-02-11 02:52 G | 8823971.40 | 8823971.62 | 8823971.87 | 0.0088 | 0.0031 |
| Neptune | 19448-02-13 08:38 G | 8824338.62 | 8824338.86 | 8824339.13 | 0.0088 | 0.0025 |
| Neptune | 19449-02-15 02:38 G | 8824706.37 | 8824706.61 | 8824706.85 | 0.0088 | 0.0032 |
| Jupiter | 19449-06-25 12:00 G | 8824836.78 | 8824837.00 | 8824837.22 | 0.0541 | 0.0161 |
| Saturn | 19449-11-23 08:38 G | 8824987.64 | 8824987.86 | 8824988.09 | 0.0276 | 0.0118 |
| Neptune | 19450-02-17 06:14 G | 8825073.52 | 8825073.76 | 8825074.01 | 0.0088 | 0.0026 |

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| Neptune | 19451-02-20 00:00 G | 8825441.26 | 8825441.50 | 8825441.74 | 0.0088 | 0.0034 |
| Neptune | 19452-02-22 05:45 G | 8825808.50 | 8825808.74 | 8825808.98 | 0.0088 | 0.0027 |
| Neptune | 19453-02-23 19:40 G | 8826176.09 | 8826176.32 | 8826176.58 | 0.0088 | 0.0035 |
| Neptune | 19454-02-26 05:31 G | 8826543.51 | 8826543.73 | 8826543.98 | 0.0088 | 0.0028 |
| Jupiter | 19454-12-17 08:38 G | 8826837.63 | 8826837.86 | 8826838.08 | 0.0489 | 0.0009 |
| Neptune | 19455-02-28 14:52 G | 8826910.90 | 8826911.12 | 8826911.38 | 0.0088 | 0.0036 |
| Neptune | 19456-03-02 06:28 G | 8827278.54 | 8827278.77 | 8827279.02 | 0.0088 | 0.0029 |
| Neptune | 19457-03-04 12:28 G | 8827645.79 | 8827646.02 | 8827646.27 | 0.0088 | 0.0037 |
| Neptune | 19458-03-07 06:43 G | 8828013.55 | 8828013.78 | 8828014.03 | 0.0088 | 0.0029 |
| Neptune | 19459-03-09 11:31 G | 8828380.75 | 8828380.98 | 8828381.21 | 0.0088 | 0.0038 |
| Neptune | 19460-03-11 05:31 G | 8828748.49 | 8828748.73 | 8828748.99 | 0.0088 | 0.0029 |
| Neptune | 19461-03-13 11:45 G | 8829115.78 | 8829115.99 | 8829116.23 | 0.0088 | 0.0038 |
| Jupiter | 19461-07-01 01:12 G | 8829225.34 | 8829225.55 | 8829225.76 | 0.0542 | 0.0234 |
| Neptune | 19462-03-16 02:24 G | 8829483.36 | 8829483.60 | 8829483.87 | 0.0088 | 0.0030 |
| Neptune | 19463-03-18 12:57 G | 8829850.83 | 8829851.04 | 8829851.28 | 0.0088 | 0.0039 |
| Neptune | 19464-03-19 23:02 G | 8830218.21 | 8830218.46 | 8830218.72 | 0.0088 | 0.0030 |
| Saturn | 19464-05-27 18:00 G | 8830287.01 | 8830287.25 | 8830287.50 | 0.0283 | 0.0048 |
| Neptune | 19465-03-22 14:24 G | 8830585.90 | 8830586.10 | 8830586.35 | 0.0088 | 0.0039 |
| Neptune | 19466-03-24 20:38 G | 8830953.13 | 8830953.36 | 8830953.63 | 0.0088 | 0.0030 |
| Jupiter | 19466-12-21 13:12 G | 8831224.81 | 8831225.05 | 8831225.29 | 0.0488 | 0.0042 |
| Neptune | 19467-03-27 15:21 G | 8831320.93 | 8831321.14 | 8831321.40 | 0.0088 | 0.0039 |
| Neptune | 19468-03-28 20:52 G | 8831688.13 | 8831688.37 | 8831688.62 | 0.0088 | 0.0029 |
| Neptune | 19469-03-31 15:21 G | 8832055.91 | 8832056.14 | 8832056.39 | 0.0088 | 0.0038 |
| Neptune | 19470-04-02 22:19 G | 8832423.20 | 8832423.43 | 8832423.68 | 0.0089 | 0.0029 |
| Neptune | 19471-04-05 13:26 G | 8832790.84 | 8832791.06 | 8832791.33 | 0.0089 | 0.0037 |
| Neptune | 19472-04-07 00:43 G | 8833158.30 | 8833158.53 | 8833158.78 | 0.0089 | 0.0028 |
| Jupiter | 19472-05-29 08:52 G | 8833210.73 | 8833210.87 | 8833211.01 | 0.0532 | 0.0423 |
| Pluto | 19472-09-05 11:31 G | 8833309.81 | 8833309.98 | 8833310.21 | 0.0064 | 0.0038 |
| Neptune | 19473-04-09 11:16 G | 8833525.74 | 8833525.97 | 8833526.23 | 0.0089 | 0.0036 |
| Jupiter | 19473-07-06 03:07 G | 8833613.45 | 8833613.63 | 8833613.80 | 0.0542 | 0.0375 |

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| Pluto | 19473-09-07 03:21 G | 8833676.50 | 8833676.64 | 8833676.81 | 0.0064 | 0.0052 |
| Neptune | 19474-04-12 03:21 G | 8833893.41 | 8833893.64 | 8833893.89 | 0.0089 | 0.0027 |
| Neptune | 19475-04-14 10:19 G | 8834260.69 | 8834260.93 | 8834261.18 | 0.0089 | 0.0035 |
| Neptune | 19476-04-16 05:31 G | 8834628.49 | 8834628.73 | 8834628.98 | 0.0089 | 0.0025 |
| Uranus | 19477-04-10 12:28 G | 8834987.93 | 8834988.02 | 8834988.15 | 0.0135 | 0.0121 |
| Neptune | 19477-04-18 10:33 G | 8834995.72 | 8834995.94 | 8834996.19 | 0.0089 | 0.0034 |
| Jupiter | 19477-11-25 07:12 G | 8835216.70 | 8835216.80 | 8835216.91 | 0.0498 | 0.0442 |
| Uranus | 19478-04-14 20:38 G | 8835357.14 | 8835357.36 | 8835357.61 | 0.0135 | 0.0067 |
| Neptune | 19478-04-21 05:45 G | 8835363.50 | 8835363.74 | 8835364.01 | 0.0089 | 0.0024 |
| Jupiter | 19478-12-25 15:50 G | 8835611.95 | 8835612.16 | 8835612.38 | 0.0487 | 0.0139 |
| Uranus | 19479-04-19 08:38 G | 8835726.62 | 8835726.86 | 8835727.11 | 0.0134 | 0.0020 |
| Neptune | 19479-04-23 13:12 G | 8835730.82 | 8835731.05 | 8835731.29 | 0.0089 | 0.0032 |
| Saturn | 19479-12-01 05:45 G | 8835952.53 | 8835952.74 | 8835952.97 | 0.0276 | 0.0136 |
| Uranus | 19480-04-22 16:33 G | 8836095.94 | 8836096.19 | 8836096.44 | 0.0134 | 0.0043 |
| Neptune | 19480-04-25 05:02 G | 8836098.46 | 8836098.71 | 8836098.98 | 0.0089 | 0.0023 |
| Uranus | 19481-04-27 02:24 G | 8836465.42 | 8836465.60 | 8836465.81 | 0.0134 | 0.0083 |
| Neptune | 19481-04-27 16:04 G | 8836465.95 | 8836466.17 | 8836466.42 | 0.0089 | 0.0031 |
| Neptune | 19482-04-30 03:21 G | 8836833.39 | 8836833.64 | 8836833.92 | 0.0089 | 0.0021 |
| Neptune | 19483-05-02 19:55 G | 8837201.10 | 8837201.33 | 8837201.57 | 0.0089 | 0.0028 |
| Neptune | 19484-05-04 03:36 G | 8837568.40 | 8837568.65 | 8837568.92 | 0.0089 | 0.0019 |
| Jupiter | 19484-06-03 04:48 G | 8837598.52 | 8837598.70 | 8837598.89 | 0.0534 | 0.0326 |
| Neptune | 19485-05-06 23:16 G | 8837936.23 | 8837936.47 | 8837936.72 | 0.0089 | 0.0026 |
| Jupiter | 19485-07-11 13:55 G | 8838002.05 | 8838002.08 | 8838002.12 | 0.0544 | 0.0536 |
| Neptune | 19486-05-09 05:02 G | 8838303.47 | 8838303.71 | 8838303.97 | 0.0089 | 0.0018 |
| Neptune | 19487-05-12 00:57 G | 8838671.29 | 8838671.54 | 8838671.80 | 0.0089 | 0.0024 |
| Neptune | 19488-05-13 08:09 G | 8839038.60 | 8839038.84 | 8839039.10 | 0.0089 | 0.0015 |
| Neptune | 19489-05-16 00:57 G | 8839406.30 | 8839406.54 | 8839406.82 | 0.0089 | 0.0022 |
| Jupiter | 19489-11-29 09:36 G | 8839603.77 | 8839603.90 | 8839604.05 | 0.0496 | 0.0392 |
| Neptune | 19490-05-18 12:00 G | 8839773.76 | 8839774.00 | 8839774.25 | 0.0089 | 0.0013 |
| Jupiter | 19490-12-30 02:09 G | 8839999.39 | 8839999.59 | 8839999.80 | 0.0486 | 0.0260 |

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| Neptune | 19491-05-21 00:00 G | 8840141.25 | 8840141.50 | 8840141.78 | 0.0089 | 0.0019 |
| Neptune | 19492-05-22 16:04 G | 8840508.92 | 8840509.17 | 8840509.42 | 0.0089 | 0.0011 |
| Saturn | 19493-05-21 15:21 G | 8840873.05 | 8840873.14 | 8840873.24 | 0.0283 | 0.0262 |
| Neptune | 19493-05-25 00:28 G | 8840876.26 | 8840876.52 | 8840876.78 | 0.0089 | 0.0017 |
| Neptune | 19494-05-27 19:55 G | 8841244.08 | 8841244.33 | 8841244.59 | 0.0089 | 0.0008 |
| Saturn | 19494-06-04 07:40 G | 8841251.68 | 8841251.82 | 8841251.99 | 0.0282 | 0.0210 |
| Neptune | 19495-05-30 02:09 G | 8841611.35 | 8841611.59 | 8841611.86 | 0.0089 | 0.0014 |
| Neptune | 19496-05-31 22:33 G | 8841979.19 | 8841979.44 | 8841979.71 | 0.0089 | 0.0006 |
| Jupiter | 19496-06-08 17:16 G | 8841987.03 | 8841987.22 | 8841987.42 | 0.0536 | 0.0257 |
| Neptune | 19497-06-03 06:00 G | 8842346.50 | 8842346.75 | 8842347.00 | 0.0089 | 0.0011 |
| Neptune | 19498-06-06 00:00 G | 8842714.24 | 8842714.50 | 8842714.77 | 0.0089 | 0.0005 |
| Neptune | 19499-06-08 10:33 G | 8843081.69 | 8843081.94 | 8843082.19 | 0.0089 | 0.0008 |
| Neptune | 19500-06-10 23:45 G | 8843449.22 | 8843449.49 | 8843449.76 | 0.0089 | 0.0002 |
| Neptune | 19501-06-13 14:38 G | 8843816.86 | 8843817.11 | 8843817.36 | 0.0089 | 0.0004 |
| Jupiter | 19501-12-05 00:57 G | 8843991.37 | 8843991.54 | 8843991.72 | 0.0494 | 0.0311 |
| Neptune | 19502-06-15 23:45 G | 8844184.23 | 8844184.49 | 8844184.76 | 0.0089 | 0.0001 |
| Jupiter | 19503-01-03 23:31 G | 8844386.32 | 8844386.48 | 8844386.64 | 0.0485 | 0.0343 |
| Neptune | 19503-06-18 18:57 G | 8844552.04 | 8844552.29 | 8844552.55 | 0.0089 | 0.0002 |
| Neptune | 19504-06-20 01:12 G | 8844919.30 | 8844919.55 | 8844919.82 | 0.0089 | 0.0003 |
| Neptune | 19505-06-22 21:36 G | 8845287.14 | 8845287.40 | 8845287.67 | 0.0089 | 0.0002 |
| Neptune | 19506-06-25 04:33 G | 8845654.44 | 8845654.69 | 8845654.94 | 0.0089 | 0.0005 |
| Neptune | 19507-06-27 23:02 G | 8846022.20 | 8846022.46 | 8846022.73 | 0.0089 | 0.0006 |
| Jupiter | 19508-06-15 03:36 G | 8846375.41 | 8846375.65 | 8846375.89 | 0.0538 | 0.0115 |
| Neptune | 19508-06-29 08:52 G | 8846389.62 | 8846389.87 | 8846390.12 | 0.0090 | 0.0008 |
| Saturn | 19508-11-25 12:00 G | 8846538.78 | 8846539.00 | 8846539.24 | 0.0276 | 0.0069 |
| Neptune | 19509-07-01 23:02 G | 8846757.19 | 8846757.46 | 8846757.73 | 0.0090 | 0.0008 |
| Neptune | 19510-07-04 13:26 G | 8847124.81 | 8847125.06 | 8847125.31 | 0.0090 | 0.0010 |
| Neptune | 19511-07-06 22:48 G | 8847492.20 | 8847492.45 | 8847492.73 | 0.0090 | 0.0011 |
| Neptune | 19512-07-08 17:31 G | 8847859.98 | 8847860.23 | 8847860.49 | 0.0090 | 0.0012 |
| Neptune | 19513-07-11 00:14 G | 8848227.25 | 8848227.51 | 8848227.77 | 0.0090 | 0.0014 |

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| Jupiter | 19513-12-09 01:55 G | 8848378.37 | 8848378.58 | 8848378.81 | 0.0492 | 0.0190 |
| Neptune | 19514-07-13 20:24 G | 8848595.10 | 8848595.35 | 8848595.61 | 0.0090 | 0.0014 |
| Jupiter | 19515-01-08 11:31 G | 8848773.84 | 8848773.98 | 8848774.12 | 0.0485 | 0.0383 |
| Neptune | 19515-07-16 02:38 G | 8848962.37 | 8848962.61 | 8848962.87 | 0.0090 | 0.0016 |
| Neptune | 19516-07-17 21:21 G | 8849330.14 | 8849330.39 | 8849330.66 | 0.0090 | 0.0016 |
| Neptune | 19517-07-20 06:28 G | 8849697.53 | 8849697.77 | 8849698.02 | 0.0090 | 0.0019 |
| Neptune | 19518-07-22 21:07 G | 8850065.12 | 8850065.38 | 8850065.65 | 0.0090 | 0.0018 |
| Neptune | 19519-07-25 10:19 G | 8850432.69 | 8850432.93 | 8850433.18 | 0.0090 | 0.0022 |
| Mars | 19520-03-16 12:43 G | 8850667.87 | 8850668.03 | 8850668.20 | 0.1689 | 0.0626 |
| Jupiter | 19520-06-20 03:50 G | 8850763.44 | 8850763.66 | 8850763.89 | 0.0539 | 0.0041 |
| Neptune | 19520-07-26 20:09 G | 8850800.09 | 8850800.34 | 8850800.61 | 0.0090 | 0.0020 |
| Neptune | 19521-07-29 14:24 G | 8851167.86 | 8851168.10 | 8851168.34 | 0.0089 | 0.0024 |
| Uranus | 19521-10-15 07:40 G | 8851245.61 | 8851245.82 | 8851246.04 | 0.0144 | 0.0078 |
| Neptune | 19522-07-31 21:07 G | 8851535.14 | 8851535.38 | 8851535.64 | 0.0089 | 0.0021 |
| Uranus | 19522-10-20 06:00 G | 8851615.51 | 8851615.75 | 8851616.00 | 0.0144 | 0.0016 |
| Saturn | 19523-05-30 18:14 G | 8851838.00 | 8851838.26 | 8851838.51 | 0.0283 | 0.0004 |
| Neptune | 19523-08-03 17:02 G | 8851902.97 | 8851903.21 | 8851903.47 | 0.0089 | 0.0026 |
| Uranus | 19523-10-25 06:00 G | 8851985.51 | 8851985.75 | 8851986.00 | 0.0145 | 0.0044 |
| Neptune | 19524-08-04 23:02 G | 8852270.22 | 8852270.46 | 8852270.71 | 0.0089 | 0.0023 |
| Uranus | 19524-10-29 02:38 G | 8852355.50 | 8852355.61 | 8852355.76 | 0.0145 | 0.0122 |
| Neptune | 19525-08-07 18:00 G | 8852638.01 | 8852638.25 | 8852638.50 | 0.0089 | 0.0029 |
| Jupiter | 19525-12-13 10:33 G | 8852765.72 | 8852765.94 | 8852766.16 | 0.0491 | 0.0087 |
| Neptune | 19526-08-10 02:09 G | 8853005.36 | 8853005.59 | 8853005.84 | 0.0089 | 0.0025 |
| Jupiter | 19527-01-12 08:24 G | 8853160.77 | 8853160.85 | 8853160.95 | 0.0485 | 0.0444 |
| Neptune | 19527-08-12 17:02 G | 8853372.96 | 8853373.21 | 8853373.47 | 0.0089 | 0.0030 |
| Neptune | 19528-08-14 05:02 G | 8853740.48 | 8853740.71 | 8853740.96 | 0.0089 | 0.0025 |
| Neptune | 19529-08-16 15:07 G | 8854107.89 | 8854108.13 | 8854108.38 | 0.0089 | 0.0031 |
| Neptune | 19530-08-19 08:09 G | 8854475.61 | 8854475.84 | 8854476.09 | 0.0089 | 0.0027 |
| Neptune | 19531-08-21 14:24 G | 8854842.88 | 8854843.10 | 8854843.36 | 0.0089 | 0.0034 |
| Jupiter | 19532-06-25 18:14 G | 8855152.04 | 8855152.26 | 8855152.49 | 0.0540 | 0.0136 |

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| Neptune | 19532-08-23 10:04 G | 8855210.68 | 8855210.92 | 8855211.17 | 0.0089 | 0.0028 |
| Neptune | 19533-08-25 15:36 G | 8855577.92 | 8855578.15 | 8855578.39 | 0.0089 | 0.0034 |
| Neptune | 19534-08-28 10:19 G | 8855945.69 | 8855945.93 | 8855946.19 | 0.0089 | 0.0028 |
| Neptune | 19535-08-30 18:00 G | 8856313.03 | 8856313.25 | 8856313.49 | 0.0089 | 0.0035 |
| Neptune | 19536-09-01 08:52 G | 8856680.62 | 8856680.87 | 8856681.13 | 0.0089 | 0.0028 |
| Neptune | 19537-09-03 20:09 G | 8857048.13 | 8857048.34 | 8857048.58 | 0.0089 | 0.0036 |
| Saturn | 19537-11-20 19:26 G | 8857126.22 | 8857126.31 | 8857126.43 | 0.0275 | 0.0248 |
| Jupiter | 19537-12-17 17:02 G | 8857152.97 | 8857153.21 | 8857153.45 | 0.0490 | 0.0030 |
| Neptune | 19538-09-06 06:00 G | 8857415.51 | 8857415.75 | 8857416.01 | 0.0089 | 0.0029 |
| Saturn | 19538-12-03 04:33 G | 8857503.52 | 8857503.69 | 8857503.88 | 0.0276 | 0.0189 |
| Neptune | 19539-09-08 22:04 G | 8857783.20 | 8857783.42 | 8857783.66 | 0.0089 | 0.0037 |
| Neptune | 19540-09-10 04:19 G | 8858150.44 | 8858150.68 | 8858150.93 | 0.0089 | 0.0028 |
| Neptune | 19541-09-12 23:02 G | 8858518.23 | 8858518.46 | 8858518.70 | 0.0089 | 0.0036 |
| Neptune | 19542-09-15 04:04 G | 8858885.43 | 8858885.67 | 8858885.91 | 0.0089 | 0.0028 |
| Neptune | 19543-09-17 21:50 G | 8859253.18 | 8859253.41 | 8859253.66 | 0.0089 | 0.0037 |
| Jupiter | 19544-06-30 18:00 G | 8859540.03 | 8859540.25 | 8859540.47 | 0.0542 | 0.0215 |
| Neptune | 19544-09-19 04:48 G | 8859620.48 | 8859620.70 | 8859620.95 | 0.0089 | 0.0029 |
| Neptune | 19545-09-21 19:12 G | 8859988.07 | 8859988.30 | 8859988.55 | 0.0089 | 0.0036 |
| Neptune | 19546-09-24 06:14 G | 8860355.53 | 8860355.76 | 8860356.01 | 0.0089 | 0.0028 |
| Neptune | 19547-09-26 15:07 G | 8860722.91 | 8860723.13 | 8860723.39 | 0.0089 | 0.0036 |
| Neptune | 19548-09-28 07:26 G | 8861090.57 | 8861090.81 | 8861091.05 | 0.0089 | 0.0027 |
| Neptune | 19549-09-30 12:43 G | 8861457.81 | 8861458.03 | 8861458.28 | 0.0089 | 0.0036 |
| Jupiter | 19549-12-21 20:38 G | 8861540.13 | 8861540.36 | 8861540.58 | 0.0488 | 0.0031 |
| Neptune | 19550-10-03 06:57 G | 8861825.56 | 8861825.79 | 8861826.05 | 0.0089 | 0.0027 |
| Neptune | 19551-10-05 11:16 G | 8862192.75 | 8862192.97 | 8862193.22 | 0.0089 | 0.0035 |
| Saturn | 19552-05-23 22:48 G | 8862424.30 | 8862424.45 | 8862424.62 | 0.0284 | 0.0208 |
| Neptune | 19552-10-07 05:02 G | 8862560.46 | 8862560.71 | 8862560.96 | 0.0089 | 0.0025 |
| Saturn | 19553-06-06 16:33 G | 8862803.11 | 8862803.19 | 8862803.28 | 0.0282 | 0.0263 |
| Neptune | 19553-10-09 11:16 G | 8862927.76 | 8862927.97 | 8862928.22 | 0.0089 | 0.0034 |
| Neptune | 19554-10-12 00:43 G | 8863295.29 | 8863295.53 | 8863295.80 | 0.0089 | 0.0025 |

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| Jupiter | 19555-05-30 03:50 G | 8863525.53 | 8863525.66 | 8863525.80 | 0.0532 | 0.0434 |
| Neptune | 19555-10-14 11:31 G | 8863662.76 | 8863662.98 | 8863663.22 | 0.0089 | 0.0033 |
| Jupiter | 19556-07-06 09:07 G | 8863928.72 | 8863928.88 | 8863929.04 | 0.0543 | 0.0372 |
| Neptune | 19556-10-15 19:40 G | 8864030.08 | 8864030.32 | 8864030.59 | 0.0089 | 0.0024 |
| Neptune | 19557-10-18 11:16 G | 8864397.75 | 8864397.97 | 8864398.22 | 0.0089 | 0.0032 |
| Neptune | 19558-10-20 16:04 G | 8864764.93 | 8864765.17 | 8864765.44 | 0.0089 | 0.0022 |
| Neptune | 19559-10-23 10:19 G | 8865132.69 | 8865132.93 | 8865133.18 | 0.0088 | 0.0030 |
| Neptune | 19560-10-24 14:09 G | 8865499.86 | 8865500.09 | 8865500.35 | 0.0088 | 0.0021 |
| Jupiter | 19560-11-25 09:07 G | 8865531.79 | 8865531.88 | 8865531.98 | 0.0498 | 0.0450 |
| Uranus | 19561-04-12 02:38 G | 8865669.51 | 8865669.61 | 8865669.74 | 0.0135 | 0.0119 |
| Neptune | 19561-10-27 06:57 G | 8865867.56 | 8865867.79 | 8865868.06 | 0.0088 | 0.0029 |
| Jupiter | 19561-12-26 06:28 G | 8865927.54 | 8865927.77 | 8865928.00 | 0.0487 | 0.0134 |
| Pluto | 19562-03-08 12:28 G | 8865999.82 | 8866000.02 | 8866000.27 | 0.0080 | 0.0036 |
| Uranus | 19562-04-16 09:36 G | 8866038.68 | 8866038.90 | 8866039.14 | 0.0135 | 0.0064 |
| Neptune | 19562-10-29 13:55 G | 8866234.85 | 8866235.08 | 8866235.33 | 0.0088 | 0.0019 |
| Uranus | 19563-04-20 22:48 G | 8866408.21 | 8866408.45 | 8866408.70 | 0.0134 | 0.0006 |
| Neptune | 19563-11-01 02:09 G | 8866602.35 | 8866602.59 | 8866602.86 | 0.0088 | 0.0027 |
| Uranus | 19564-04-24 06:00 G | 8866777.50 | 8866777.75 | 8866778.01 | 0.0134 | 0.0036 |
| Neptune | 19564-11-02 13:26 G | 8866969.82 | 8866970.06 | 8866970.31 | 0.0088 | 0.0016 |
| Uranus | 19565-04-28 17:16 G | 8867147.08 | 8867147.22 | 8867147.40 | 0.0134 | 0.0102 |
| Neptune | 19565-11-04 20:24 G | 8867337.11 | 8867337.35 | 8867337.62 | 0.0088 | 0.0025 |
| Neptune | 19566-11-07 12:00 G | 8867704.76 | 8867705.00 | 8867705.26 | 0.0088 | 0.0015 |
| Jupiter | 19567-06-04 16:48 G | 8867914.03 | 8867914.20 | 8867914.38 | 0.0534 | 0.0343 |
| Neptune | 19567-11-09 16:19 G | 8868071.93 | 8868072.18 | 8868072.43 | 0.0088 | 0.0023 |
| Saturn | 19567-11-27 20:38 G | 8868090.12 | 8868090.36 | 8868090.60 | 0.0276 | 0.0014 |
| Jupiter | 19568-07-11 23:02 G | 8868317.39 | 8868317.46 | 8868317.53 | 0.0543 | 0.0521 |
| Neptune | 19568-11-11 09:50 G | 8868439.66 | 8868439.91 | 8868440.17 | 0.0088 | 0.0012 |
| Neptune | 19569-11-13 13:26 G | 8868806.83 | 8868807.06 | 8868807.32 | 0.0088 | 0.0020 |
| Neptune | 19570-11-16 05:31 G | 8869174.48 | 8869174.73 | 8869175.00 | 0.0088 | 0.0010 |
| Neptune | 19571-11-18 12:43 G | 8869541.79 | 8869542.03 | 8869542.28 | 0.0088 | 0.0018 |

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| Neptune | 19572-11-20 00:14 G | 8869909.25 | 8869909.51 | 8869909.78 | 0.0088 | 0.0008 |
| Jupiter | 19572-11-30 01:26 G | 8869919.43 | 8869919.56 | 8869919.69 | 0.0496 | 0.0402 |
| Neptune | 19573-11-22 11:45 G | 8870276.75 | 8870276.99 | 8870277.24 | 0.0088 | 0.0016 |
| Jupiter | 19573-12-30 04:48 G | 8870314.51 | 8870314.70 | 8870314.90 | 0.0486 | 0.0253 |
| Neptune | 19574-11-24 18:00 G | 8870644.00 | 8870644.25 | 8870644.52 | 0.0088 | 0.0006 |
| Neptune | 19575-11-27 09:50 G | 8871011.67 | 8871011.91 | 8871012.17 | 0.0088 | 0.0013 |
| Neptune | 19576-11-28 13:40 G | 8871378.81 | 8871379.07 | 8871379.32 | 0.0088 | 0.0003 |
| Neptune | 19577-12-01 06:28 G | 8871746.52 | 8871746.77 | 8871747.03 | 0.0088 | 0.0011 |
| Neptune | 19578-12-03 10:33 G | 8872113.69 | 8872113.94 | 8872114.19 | 0.0088 | 0.0001 |
| Jupiter | 19579-06-09 21:07 G | 8872302.17 | 8872302.38 | 8872302.59 | 0.0535 | 0.0274 |
| Neptune | 19579-12-06 01:26 G | 8872481.30 | 8872481.56 | 8872481.83 | 0.0088 | 0.0009 |
| Neptune | 19580-12-07 09:07 G | 8872848.64 | 8872848.88 | 8872849.13 | 0.0088 | 0.0002 |
| Neptune | 19581-12-09 19:26 G | 8873216.05 | 8873216.31 | 8873216.58 | 0.0088 | 0.0006 |
| Saturn | 19582-05-31 16:48 G | 8873388.96 | 8873389.20 | 8873389.45 | 0.0283 | 0.0056 |
| Neptune | 19582-12-12 07:40 G | 8873583.57 | 8873583.82 | 8873584.07 | 0.0088 | 0.0004 |
| Neptune | 19583-12-14 12:57 G | 8873950.79 | 8873951.04 | 8873951.31 | 0.0088 | 0.0004 |
| Jupiter | 19584-12-04 00:43 G | 8874306.35 | 8874306.53 | 8874306.71 | 0.0495 | 0.0322 |
| Neptune | 19584-12-16 05:31 G | 8874318.47 | 8874318.73 | 8874318.98 | 0.0088 | 0.0006 |
| Neptune | 19585-12-18 08:38 G | 8874685.61 | 8874685.86 | 8874686.12 | 0.0088 | 0.0002 |
| Jupiter | 19586-01-03 15:21 G | 8874701.97 | 8874702.14 | 8874702.31 | 0.0486 | 0.0323 |
| Neptune | 19586-12-21 01:40 G | 8875053.31 | 8875053.57 | 8875053.83 | 0.0088 | 0.0009 |
| Neptune | 19587-12-23 06:00 G | 8875420.50 | 8875420.75 | 8875421.00 | 0.0088 | 0.0002 |
| Neptune | 19588-12-24 20:24 G | 8875788.09 | 8875788.35 | 8875788.61 | 0.0088 | 0.0011 |
| Neptune | 19589-12-27 04:48 G | 8876155.46 | 8876155.70 | 8876155.95 | 0.0088 | 0.0004 |
| Neptune | 19590-12-29 14:09 G | 8876522.83 | 8876523.09 | 8876523.35 | 0.0088 | 0.0013 |
| Jupiter | 19591-06-14 22:19 G | 8876690.21 | 8876690.43 | 8876690.65 | 0.0537 | 0.0135 |
| Neptune | 19592-01-01 03:21 G | 8876890.39 | 8876890.64 | 8876890.89 | 0.0088 | 0.0006 |
| Neptune | 19593-01-02 07:55 G | 8877257.58 | 8877257.83 | 8877258.10 | 0.0088 | 0.0016 |
| Neptune | 19594-01-05 00:28 G | 8877625.27 | 8877625.52 | 8877625.78 | 0.0088 | 0.0009 |
| Neptune | 19595-01-07 03:50 G | 8877992.41 | 8877992.66 | 8877992.91 | 0.0088 | 0.0018 |

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| Neptune | 19596-01-09 20:38 G | 8878360.10 | 8878360.36 | 8878360.62 | 0.0088 | 0.0011 |
| Saturn | 19596-11-21 20:09 G | 8878677.16 | 8878677.34 | 8878677.52 | 0.0275 | 0.0190 |
| Jupiter | 19596-12-08 11:31 G | 8878693.78 | 8878693.98 | 8878694.19 | 0.0493 | 0.0197 |
| Neptune | 19597-01-11 01:26 G | 8878727.32 | 8878727.56 | 8878727.81 | 0.0088 | 0.0020 |
| Saturn | 19597-12-04 08:38 G | 8879054.76 | 8879054.86 | 8879054.98 | 0.0276 | 0.0242 |
| Jupiter | 19598-01-07 12:57 G | 8879088.89 | 8879089.04 | 8879089.20 | 0.0485 | 0.0364 |
| Neptune | 19598-01-13 15:21 G | 8879094.88 | 8879095.14 | 8879095.41 | 0.0088 | 0.0013 |
| Neptune | 19599-01-16 00:57 G | 8879462.31 | 8879462.54 | 8879462.79 | 0.0088 | 0.0022 |
| Mars | 19599-03-19 13:12 G | 8879524.93 | 8879525.05 | 8879525.16 | 0.1693 | 0.1316 |
| Neptune | 19600-01-18 09:50 G | 8879829.66 | 8879829.91 | 8879830.18 | 0.0088 | 0.0015 |
| Neptune | 19601-01-20 00:14 G | 8880197.27 | 8880197.51 | 8880197.75 | 0.0088 | 0.0024 |
| Neptune | 19602-01-22 04:19 G | 8880564.44 | 8880564.68 | 8880564.95 | 0.0088 | 0.0017 |
| Neptune | 19603-01-24 21:50 G | 8880932.16 | 8880932.41 | 8880932.65 | 0.0088 | 0.0025 |
| Jupiter | 19603-06-20 09:36 G | 8881078.67 | 8881078.90 | 8881079.14 | 0.0539 | 0.0023 |
| Neptune | 19604-01-27 00:57 G | 8881299.31 | 8881299.54 | 8881299.80 | 0.0088 | 0.0019 |
| Uranus | 19604-10-11 02:24 G | 8881557.53 | 8881557.60 | 8881557.69 | 0.0143 | 0.0135 |
| Neptune | 19605-01-28 17:31 G | 8881666.99 | 8881667.23 | 8881667.49 | 0.0088 | 0.0027 |
| Uranus | 19605-10-15 22:33 G | 8881927.22 | 8881927.44 | 8881927.66 | 0.0144 | 0.0080 |
| Neptune | 19606-01-30 23:16 G | 8882034.24 | 8882034.47 | 8882034.72 | 0.0088 | 0.0021 |
| Uranus | 19606-10-20 21:50 G | 8882297.17 | 8882297.41 | 8882297.66 | 0.0144 | 0.0011 |
| Neptune | 19607-02-02 12:28 G | 8882401.78 | 8882402.02 | 8882402.28 | 0.0088 | 0.0029 |
| Uranus | 19607-10-25 20:52 G | 8882667.14 | 8882667.37 | 8882667.62 | 0.0145 | 0.0059 |
| Neptune | 19608-02-04 23:31 G | 8882769.24 | 8882769.48 | 8882769.72 | 0.0088 | 0.0022 |
| Uranus | 19608-10-29 18:28 G | 8883037.14 | 8883037.27 | 8883037.44 | 0.0145 | 0.0114 |
| Jupiter | 19608-12-12 20:09 G | 8883081.10 | 8883081.34 | 8883081.58 | 0.0491 | 0.0096 |
| Neptune | 19609-02-06 07:26 G | 8883136.58 | 8883136.81 | 8883137.08 | 0.0088 | 0.0030 |
| Jupiter | 19610-01-11 22:48 G | 8883476.36 | 8883476.45 | 8883476.55 | 0.0485 | 0.0437 |
| Neptune | 19610-02-08 23:02 G | 8883504.21 | 8883504.46 | 8883504.70 | 0.0088 | 0.0023 |
| Neptune | 19611-02-11 03:36 G | 8883871.41 | 8883871.65 | 8883871.89 | 0.0088 | 0.0031 |
| Saturn | 19611-05-26 09:07 G | 8883975.68 | 8883975.88 | 8883976.09 | 0.0284 | 0.0150 |

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| Neptune | 19612-02-13 21:21 G | 8884239.15 | 8884239.39 | 8884239.64 | 0.0088 | 0.0025 |
| Neptune | 19613-02-15 00:57 G | 8884606.32 | 8884606.54 | 8884606.79 | 0.0088 | 0.0033 |
| Neptune | 19614-02-17 17:45 G | 8884974.00 | 8884974.24 | 8884974.50 | 0.0088 | 0.0026 |
| Neptune | 19615-02-20 00:28 G | 8885341.29 | 8885341.52 | 8885341.76 | 0.0088 | 0.0032 |
| Jupiter | 19615-06-25 11:31 G | 8885466.75 | 8885466.98 | 8885467.22 | 0.0540 | 0.0118 |
| Neptune | 19616-02-22 13:12 G | 8885708.81 | 8885709.05 | 8885709.32 | 0.0088 | 0.0027 |
| Neptune | 19617-02-24 01:12 G | 8886076.32 | 8886076.55 | 8886076.78 | 0.0088 | 0.0033 |
| Neptune | 19618-02-26 08:52 G | 8886443.64 | 8886443.87 | 8886444.14 | 0.0088 | 0.0028 |
| Neptune | 19619-03-01 00:57 G | 8886811.32 | 8886811.54 | 8886811.79 | 0.0088 | 0.0035 |
| Neptune | 19620-03-02 05:45 G | 8887178.50 | 8887178.74 | 8887179.00 | 0.0088 | 0.0028 |
| Jupiter | 19620-12-16 22:33 G | 8887468.21 | 8887468.44 | 8887468.66 | 0.0490 | 0.0043 |
| Neptune | 19621-03-05 00:00 G | 8887546.27 | 8887546.50 | 8887546.75 | 0.0088 | 0.0033 |
| Neptune | 19622-03-07 04:33 G | 8887913.46 | 8887913.69 | 8887913.94 | 0.0088 | 0.0028 |
| Neptune | 19623-03-09 21:50 G | 8888281.16 | 8888281.41 | 8888281.65 | 0.0088 | 0.0034 |
| Neptune | 19624-03-11 05:02 G | 8888648.48 | 8888648.71 | 8888648.95 | 0.0088 | 0.0029 |
| Neptune | 19625-03-13 18:00 G | 8889016.02 | 8889016.25 | 8889016.52 | 0.0088 | 0.0034 |
| Neptune | 19626-03-16 06:43 G | 8889383.55 | 8889383.78 | 8889384.03 | 0.0088 | 0.0029 |
| Saturn | 19626-11-29 04:33 G | 8889641.45 | 8889641.69 | 8889641.93 | 0.0276 | 0.0043 |
| Neptune | 19627-03-18 15:21 G | 8889750.90 | 8889751.14 | 8889751.40 | 0.0088 | 0.0033 |
| Jupiter | 19627-07-01 03:36 G | 8889855.44 | 8889855.65 | 8889855.86 | 0.0542 | 0.0202 |
| Neptune | 19628-03-20 08:09 G | 8890118.61 | 8890118.84 | 8890119.09 | 0.0088 | 0.0029 |
| Neptune | 19629-03-22 12:57 G | 8890485.81 | 8890486.04 | 8890486.30 | 0.0088 | 0.0033 |
| Neptune | 19630-03-25 07:55 G | 8890853.59 | 8890853.83 | 8890854.08 | 0.0088 | 0.0029 |
| Neptune | 19631-03-27 12:57 G | 8891220.81 | 8891221.04 | 8891221.29 | 0.0088 | 0.0033 |
| Neptune | 19632-03-29 06:14 G | 8891588.52 | 8891588.76 | 8891589.02 | 0.0088 | 0.0029 |
| Jupiter | 19632-12-21 09:50 G | 8891855.68 | 8891855.91 | 8891856.15 | 0.0489 | 0.0022 |
| Neptune | 19633-03-31 14:09 G | 8891955.86 | 8891956.09 | 8891956.33 | 0.0088 | 0.0031 |
| Neptune | 19634-04-03 03:36 G | 8892323.41 | 8892323.65 | 8892323.92 | 0.0088 | 0.0028 |
| Neptune | 19635-04-05 17:02 G | 8892690.98 | 8892691.21 | 8892691.45 | 0.0088 | 0.0030 |
| Neptune | 19636-04-07 02:24 G | 8893058.35 | 8893058.60 | 8893058.86 | 0.0089 | 0.0027 |

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| Neptune | 19637-04-09 19:26 G | 8893426.08 | 8893426.31 | 8893426.56 | 0.0089 | 0.0029 |
| Neptune | 19638-04-12 01:26 G | 8893793.32 | 8893793.56 | 8893793.82 | 0.0089 | 0.0026 |
| Jupiter | 19638-05-29 15:07 G | 8893841.01 | 8893841.13 | 8893841.25 | 0.0531 | 0.0448 |
| Neptune | 19639-04-14 21:07 G | 8894161.13 | 8894161.38 | 8894161.63 | 0.0089 | 0.0026 |
| Jupiter | 19639-07-06 11:16 G | 8894243.79 | 8894243.97 | 8894244.15 | 0.0542 | 0.0353 |
| Neptune | 19640-04-16 02:09 G | 8894528.36 | 8894528.59 | 8894528.85 | 0.0089 | 0.0025 |
| Neptune | 19641-04-18 20:24 G | 8894896.10 | 8894896.35 | 8894896.62 | 0.0089 | 0.0025 |
| Saturn | 19641-06-01 23:02 G | 8894940.25 | 8894940.46 | 8894940.69 | 0.0283 | 0.0115 |
| Neptune | 19642-04-21 04:33 G | 8895263.45 | 8895263.69 | 8895263.94 | 0.0089 | 0.0024 |
| Neptune | 19643-04-23 18:57 G | 8895631.04 | 8895631.29 | 8895631.55 | 0.0089 | 0.0023 |
| Jupiter | 19643-11-25 19:55 G | 8895847.25 | 8895847.33 | 8895847.41 | 0.0499 | 0.0466 |
| Neptune | 19644-04-25 08:09 G | 8895998.60 | 8895998.84 | 8895999.08 | 0.0089 | 0.0022 |
| Jupiter | 19644-12-25 06:00 G | 8896242.53 | 8896242.75 | 8896242.98 | 0.0488 | 0.0124 |
| Uranus | 19645-04-12 17:45 G | 8896351.11 | 8896351.24 | 8896351.39 | 0.0135 | 0.0110 |
| Neptune | 19645-04-27 17:45 G | 8896365.99 | 8896366.24 | 8896366.51 | 0.0089 | 0.0021 |
| Uranus | 19646-04-17 00:00 G | 8896720.27 | 8896720.50 | 8896720.75 | 0.0135 | 0.0057 |
| Neptune | 19646-04-30 11:31 G | 8896733.74 | 8896733.98 | 8896734.23 | 0.0089 | 0.0020 |
| Uranus | 19647-04-21 14:09 G | 8897089.84 | 8897090.09 | 8897090.34 | 0.0134 | 0.0009 |
| Neptune | 19647-05-02 17:45 G | 8897100.99 | 8897101.24 | 8897101.51 | 0.0089 | 0.0019 |
| Uranus | 19648-04-24 19:40 G | 8897459.09 | 8897459.32 | 8897459.58 | 0.0134 | 0.0054 |
| Neptune | 19648-05-04 13:26 G | 8897468.82 | 8897469.06 | 8897469.32 | 0.0089 | 0.0020 |
| Uranus | 19649-04-29 08:09 G | 8897828.68 | 8897828.84 | 8897829.03 | 0.0134 | 0.0094 |
| Neptune | 19649-05-06 19:26 G | 8897836.07 | 8897836.31 | 8897836.57 | 0.0089 | 0.0017 |
| Neptune | 19650-05-09 14:24 G | 8898203.85 | 8898204.10 | 8898204.37 | 0.0089 | 0.0018 |
| Jupiter | 19650-06-03 15:07 G | 8898228.96 | 8898229.13 | 8898229.31 | 0.0532 | 0.0364 |
| Neptune | 19651-05-11 22:48 G | 8898571.20 | 8898571.45 | 8898571.70 | 0.0089 | 0.0013 |
| Jupiter | 19651-07-11 14:09 G | 8898632.00 | 8898632.09 | 8898632.18 | 0.0542 | 0.0497 |
| Neptune | 19652-05-13 13:55 G | 8898938.82 | 8898939.08 | 8898939.35 | 0.0089 | 0.0015 |
| Neptune | 19653-05-16 02:52 G | 8899306.37 | 8899306.62 | 8899306.87 | 0.0089 | 0.0011 |
| Neptune | 19654-05-18 13:55 G | 8899673.81 | 8899674.08 | 8899674.34 | 0.0089 | 0.0014 |

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| Neptune | 19655-05-21 07:12 G | 8900041.55 | 8900041.80 | 8900042.06 | 0.0089 | 0.0009 |
| Saturn | 19655-11-24 01:26 G | 8900228.36 | 8900228.56 | 8900228.78 | 0.0275 | 0.0133 |
| Jupiter | 19655-11-29 22:48 G | 8900234.32 | 8900234.45 | 8900234.58 | 0.0497 | 0.0414 |
| Neptune | 19656-05-22 13:55 G | 8900408.83 | 8900409.08 | 8900409.35 | 0.0089 | 0.0012 |
| Jupiter | 19656-12-29 18:00 G | 8900630.06 | 8900630.25 | 8900630.46 | 0.0487 | 0.0243 |
| Neptune | 19657-05-25 09:50 G | 8900776.66 | 8900776.91 | 8900777.17 | 0.0089 | 0.0006 |
| Neptune | 19658-05-27 15:50 G | 8901143.91 | 8901144.16 | 8901144.42 | 0.0089 | 0.0009 |
| Neptune | 19659-05-30 11:16 G | 8901511.71 | 8901511.97 | 8901512.24 | 0.0089 | 0.0003 |
| Neptune | 19660-05-31 19:12 G | 8901879.05 | 8901879.30 | 8901879.56 | 0.0089 | 0.0008 |
| Neptune | 19661-06-03 11:31 G | 8902246.71 | 8902246.98 | 8902247.25 | 0.0089 | 0.0001 |
| Neptune | 19662-06-06 00:00 G | 8902614.25 | 8902614.50 | 8902614.75 | 0.0089 | 0.0005 |
| Jupiter | 19662-06-08 14:38 G | 8902616.93 | 8902617.11 | 8902617.30 | 0.0535 | 0.0296 |
| Neptune | 19663-06-08 12:00 G | 8902981.74 | 8902982.00 | 8902982.27 | 0.0089 | 0.0003 |
| Neptune | 19664-06-10 05:02 G | 8903349.46 | 8903349.71 | 8903349.97 | 0.0089 | 0.0003 |
| Neptune | 19665-06-12 12:43 G | 8903716.77 | 8903717.03 | 8903717.30 | 0.0089 | 0.0006 |
| Neptune | 19666-06-15 08:52 G | 8904084.61 | 8904084.87 | 8904085.12 | 0.0089 | 0.0002 |
| Neptune | 19667-06-17 14:52 G | 8904451.86 | 8904452.12 | 8904452.37 | 0.0089 | 0.0008 |
| Jupiter | 19667-12-04 11:45 G | 8904621.83 | 8904621.99 | 8904622.17 | 0.0495 | 0.0323 |
| Neptune | 19668-06-19 10:33 G | 8904819.68 | 8904819.94 | 8904820.21 | 0.0089 | 0.0002 |
| Jupiter | 19669-01-02 17:02 G | 8905017.03 | 8905017.21 | 8905017.40 | 0.0486 | 0.0309 |
| Neptune | 19669-06-21 18:00 G | 8905187.00 | 8905187.25 | 8905187.51 | 0.0089 | 0.0011 |
| Saturn | 19670-05-27 16:04 G | 8905526.93 | 8905527.17 | 8905527.42 | 0.0284 | 0.0090 |
| Neptune | 19670-06-24 11:02 G | 8905554.69 | 8905554.96 | 8905555.23 | 0.0089 | 0.0004 |
| Neptune | 19671-06-26 22:19 G | 8905922.19 | 8905922.43 | 8905922.69 | 0.0089 | 0.0014 |
| Neptune | 19672-06-28 11:02 G | 8906289.70 | 8906289.96 | 8906290.23 | 0.0090 | 0.0007 |
| Neptune | 19673-07-01 03:36 G | 8906657.41 | 8906657.65 | 8906657.91 | 0.0090 | 0.0016 |
| Jupiter | 19674-06-14 03:36 G | 8907005.43 | 8907005.65 | 8907005.88 | 0.0537 | 0.0149 |
| Neptune | 19674-07-03 12:14 G | 8907024.75 | 8907025.01 | 8907025.28 | 0.0090 | 0.0008 |
| Neptune | 19675-07-06 07:40 G | 8907392.58 | 8907392.82 | 8907393.08 | 0.0090 | 0.0019 |
| Neptune | 19676-07-07 14:09 G | 8907759.83 | 8907760.09 | 8907760.35 | 0.0090 | 0.0011 |

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| Neptune | 19677-07-10 10:19 G | 8908127.68 | 8908127.93 | 8908128.18 | 0.0090 | 0.0021 |
| Neptune | 19678-07-12 17:16 G | 8908494.97 | 8908495.22 | 8908495.48 | 0.0090 | 0.0013 |
| Neptune | 19679-07-15 10:33 G | 8908862.69 | 8908862.94 | 8908863.21 | 0.0090 | 0.0023 |
| Jupiter | 19679-12-08 20:09 G | 8909009.12 | 8909009.34 | 8909009.56 | 0.0493 | 0.0196 |
| Neptune | 19680-07-16 21:07 G | 8909230.14 | 8909230.38 | 8909230.63 | 0.0090 | 0.0015 |
| Jupiter | 19681-01-07 01:40 G | 8909404.42 | 8909404.57 | 8909404.72 | 0.0485 | 0.0352 |
| Neptune | 19681-07-19 10:19 G | 8909597.68 | 8909597.93 | 8909598.19 | 0.0090 | 0.0025 |
| Neptune | 19682-07-22 01:55 G | 8909965.34 | 8909965.58 | 8909965.83 | 0.0090 | 0.0017 |
| Neptune | 19683-07-24 10:19 G | 8910332.69 | 8910332.93 | 8910333.19 | 0.0090 | 0.0027 |
| Neptune | 19684-07-26 05:02 G | 8910700.48 | 8910700.71 | 8910700.98 | 0.0090 | 0.0019 |
| Neptune | 19685-07-28 11:16 G | 8911067.74 | 8911067.97 | 8911068.23 | 0.0090 | 0.0029 |
| Saturn | 19685-11-30 09:07 G | 8911192.65 | 8911192.88 | 8911193.12 | 0.0276 | 0.0103 |
| Jupiter | 19686-06-19 05:16 G | 8911393.48 | 8911393.72 | 8911393.95 | 0.0538 | 0.0006 |
| Neptune | 19686-07-31 07:12 G | 8911435.56 | 8911435.80 | 8911436.07 | 0.0090 | 0.0021 |
| Neptune | 19687-08-02 14:09 G | 8911802.85 | 8911803.09 | 8911803.33 | 0.0090 | 0.0030 |
| Neptune | 19688-08-04 07:40 G | 8912170.57 | 8912170.82 | 8912171.08 | 0.0089 | 0.0022 |
| Neptune | 19689-08-06 17:16 G | 8912538.00 | 8912538.22 | 8912538.47 | 0.0089 | 0.0031 |
| Uranus | 19689-10-16 09:36 G | 8912608.68 | 8912608.90 | 8912609.14 | 0.0144 | 0.0068 |
| Neptune | 19690-08-09 06:57 G | 8912905.54 | 8912905.79 | 8912906.06 | 0.0089 | 0.0023 |
| Uranus | 19690-10-21 10:33 G | 8912978.69 | 8912978.94 | 8912979.18 | 0.0144 | 0.0007 |
| Neptune | 19691-08-11 21:21 G | 8913273.17 | 8913273.39 | 8913273.63 | 0.0089 | 0.0032 |
| Uranus | 19691-10-26 08:09 G | 8913348.61 | 8913348.84 | 8913349.09 | 0.0144 | 0.0055 |
| Jupiter | 19691-12-12 23:16 G | 8913396.25 | 8913396.47 | 8913396.69 | 0.0492 | 0.0107 |
| Neptune | 19692-08-13 06:14 G | 8913640.52 | 8913640.76 | 8913641.03 | 0.0089 | 0.0024 |
| Uranus | 19692-10-30 07:12 G | 8913718.72 | 8913718.80 | 8913718.91 | 0.0145 | 0.0132 |
| Jupiter | 19693-01-11 03:21 G | 8913791.52 | 8913791.64 | 8913791.75 | 0.0485 | 0.0426 |
| Neptune | 19693-08-16 00:14 G | 8914008.29 | 8914008.51 | 8914008.76 | 0.0089 | 0.0034 |
| Neptune | 19694-08-18 06:00 G | 8914375.52 | 8914375.75 | 8914376.01 | 0.0089 | 0.0025 |
| Neptune | 19695-08-21 01:26 G | 8914743.34 | 8914743.56 | 8914743.82 | 0.0089 | 0.0034 |
| Neptune | 19696-08-22 07:26 G | 8915110.58 | 8915110.81 | 8915111.06 | 0.0089 | 0.0026 |

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| Neptune | 19697-08-25 00:57 G | 8915478.30 | 8915478.54 | 8915478.80 | 0.0089 | 0.0033 |
| Jupiter | 19698-06-24 19:26 G | 8915782.09 | 8915782.31 | 8915782.54 | 0.0539 | 0.0090 |
| Neptune | 19698-08-27 09:36 G | 8915845.68 | 8915845.90 | 8915846.15 | 0.0089 | 0.0027 |
| Neptune | 19699-08-29 22:48 G | 8916213.22 | 8916213.45 | 8916213.72 | 0.0089 | 0.0035 |
| Mars | 19699-09-17 00:57 G | 8916231.37 | 8916231.54 | 8916231.72 | 0.1855 | 0.0571 |
| Saturn | 19700-06-04 11:16 G | 8916491.79 | 8916491.97 | 8916492.16 | 0.0283 | 0.0175 |
| Neptune | 19700-09-01 12:57 G | 8916580.81 | 8916581.04 | 8916581.29 | 0.0089 | 0.0028 |
| Neptune | 19701-09-03 21:50 G | 8916948.18 | 8916948.41 | 8916948.67 | 0.0089 | 0.0034 |
| Neptune | 19702-09-06 15:21 G | 8917315.91 | 8917316.14 | 8917316.40 | 0.0089 | 0.0028 |
| Neptune | 19703-09-08 20:52 G | 8917683.14 | 8917683.37 | 8917683.62 | 0.0089 | 0.0034 |
| Jupiter | 19703-12-18 08:24 G | 8917783.61 | 8917783.85 | 8917784.08 | 0.0491 | 0.0059 |
| Neptune | 19704-09-10 15:50 G | 8918050.93 | 8918051.16 | 8918051.42 | 0.0089 | 0.0028 |
| Neptune | 19705-09-12 21:07 G | 8918418.17 | 8918418.38 | 8918418.63 | 0.0089 | 0.0035 |
| Neptune | 19706-09-15 14:24 G | 8918785.86 | 8918786.10 | 8918786.36 | 0.0089 | 0.0028 |
| Neptune | 19707-09-17 22:04 G | 8919153.21 | 8919153.42 | 8919153.67 | 0.0089 | 0.0033 |
| Neptune | 19708-09-19 11:02 G | 8919520.72 | 8919520.96 | 8919521.23 | 0.0089 | 0.0027 |
| Neptune | 19709-09-22 00:14 G | 8919888.29 | 8919888.51 | 8919888.76 | 0.0089 | 0.0032 |
| Jupiter | 19710-06-30 23:45 G | 8920170.26 | 8920170.49 | 8920170.72 | 0.0540 | 0.0176 |
| Neptune | 19710-09-24 08:38 G | 8920255.62 | 8920255.86 | 8920256.12 | 0.0089 | 0.0027 |
| Neptune | 19711-09-27 01:40 G | 8920623.35 | 8920623.57 | 8920623.82 | 0.0089 | 0.0032 |
| Neptune | 19712-09-28 06:57 G | 8920990.55 | 8920990.79 | 8920991.04 | 0.0089 | 0.0026 |
| Neptune | 19713-10-01 01:12 G | 8921358.33 | 8921358.55 | 8921358.81 | 0.0089 | 0.0030 |
| Neptune | 19714-10-03 06:28 G | 8921725.53 | 8921725.77 | 8921726.02 | 0.0089 | 0.0025 |
| Saturn | 19714-11-26 13:55 G | 8921779.86 | 8921780.08 | 8921780.31 | 0.0275 | 0.0074 |
| Neptune | 19715-10-05 23:02 G | 8922093.21 | 8922093.46 | 8922093.71 | 0.0089 | 0.0028 |
| Jupiter | 19715-12-22 07:12 G | 8922170.57 | 8922170.80 | 8922171.03 | 0.0489 | 0.0008 |
| Neptune | 19716-10-07 06:28 G | 8922460.54 | 8922460.77 | 8922461.02 | 0.0089 | 0.0025 |
| Neptune | 19717-10-09 18:28 G | 8922828.04 | 8922828.27 | 8922828.54 | 0.0089 | 0.0028 |
| Neptune | 19718-10-12 07:12 G | 8923195.57 | 8923195.80 | 8923196.05 | 0.0089 | 0.0024 |
| Pluto | 19719-09-09 18:14 G | 8923528.06 | 8923528.26 | 8923528.50 | 0.0064 | 0.0033 |

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| Neptune | 19719-10-14 14:38 G | 8923562.87 | 8923563.11 | 8923563.38 | 0.0089 | 0.0026 |
| Pluto | 19720-09-10 11:45 G | 8923894.83 | 8923894.99 | 8923895.21 | 0.0064 | 0.0045 |
| Neptune | 19720-10-16 07:26 G | 8923930.58 | 8923930.81 | 8923931.07 | 0.0089 | 0.0022 |
| Jupiter | 19721-05-29 06:28 G | 8924155.66 | 8924155.77 | 8924155.89 | 0.0530 | 0.0463 |
| Neptune | 19721-10-18 11:45 G | 8924297.75 | 8924297.99 | 8924298.25 | 0.0089 | 0.0024 |
| Jupiter | 19722-07-06 01:55 G | 8924558.41 | 8924558.58 | 8924558.77 | 0.0542 | 0.0330 |
| Neptune | 19722-10-21 05:45 G | 8924665.49 | 8924665.74 | 8924666.00 | 0.0089 | 0.0021 |
| Neptune | 19723-10-23 10:04 G | 8925032.69 | 8925032.92 | 8925033.18 | 0.0089 | 0.0023 |
| Neptune | 19724-10-25 01:55 G | 8925400.33 | 8925400.58 | 8925400.85 | 0.0088 | 0.0020 |
| Mars | 19725-03-15 18:43 G | 8925542.17 | 8925542.28 | 8925542.40 | 0.1677 | 0.1365 |
| Neptune | 19725-10-27 09:50 G | 8925767.67 | 8925767.91 | 8925768.15 | 0.0088 | 0.0020 |
| Neptune | 19726-10-29 20:52 G | 8926135.11 | 8926135.37 | 8926135.63 | 0.0088 | 0.0017 |
| Jupiter | 19726-11-25 20:09 G | 8926162.27 | 8926162.34 | 8926162.42 | 0.0499 | 0.0473 |
| Neptune | 19727-11-01 09:50 G | 8926502.67 | 8926502.91 | 8926503.15 | 0.0088 | 0.0018 |
| Jupiter | 19727-12-26 20:38 G | 8926558.14 | 8926558.36 | 8926558.58 | 0.0488 | 0.0125 |
| Neptune | 19728-11-02 16:19 G | 8926869.93 | 8926870.18 | 8926870.45 | 0.0088 | 0.0016 |
| Uranus | 19729-04-14 08:09 G | 8927032.71 | 8927032.84 | 8927033.00 | 0.0135 | 0.0110 |
| Saturn | 19729-05-29 22:04 G | 8927078.17 | 8927078.42 | 8927078.68 | 0.0284 | 0.0027 |
| Neptune | 19729-11-05 08:52 G | 8927237.63 | 8927237.87 | 8927238.13 | 0.0088 | 0.0017 |
| Uranus | 19730-04-18 13:26 G | 8927401.83 | 8927402.06 | 8927402.31 | 0.0134 | 0.0054 |
| Neptune | 19730-11-07 12:43 G | 8927604.78 | 8927605.03 | 8927605.29 | 0.0088 | 0.0014 |
| Uranus | 19731-04-23 04:48 G | 8927771.45 | 8927771.70 | 8927771.95 | 0.0134 | 0.0004 |
| Neptune | 19731-11-10 06:00 G | 8927972.50 | 8927972.75 | 8927973.01 | 0.0088 | 0.0013 |
| Uranus | 19732-04-26 09:50 G | 8928140.67 | 8928140.91 | 8928141.17 | 0.0134 | 0.0047 |
| Neptune | 19732-11-11 10:19 G | 8928339.69 | 8928339.93 | 8928340.19 | 0.0088 | 0.0012 |
| Uranus | 19733-04-30 23:16 G | 8928510.36 | 8928510.47 | 8928510.62 | 0.0134 | 0.0113 |
| Jupiter | 19733-06-03 10:33 G | 8928543.79 | 8928543.94 | 8928544.10 | 0.0532 | 0.0388 |
| Neptune | 19733-11-14 01:12 G | 8928707.29 | 8928707.55 | 8928707.82 | 0.0088 | 0.0011 |
| Jupiter | 19734-07-11 17:45 G | 8928947.13 | 8928947.24 | 8928947.36 | 0.0543 | 0.0476 |
| Neptune | 19734-11-16 08:52 G | 8929074.63 | 8929074.87 | 8929075.12 | 0.0088 | 0.0010 |

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| Neptune | 19735-11-18 18:57 G | 8929442.03 | 8929442.29 | 8929442.56 | 0.0088 | 0.0009 |
| Neptune | 19736-11-20 08:09 G | 8929809.59 | 8929809.84 | 8929810.09 | 0.0088 | 0.0008 |
| Neptune | 19737-11-22 13:55 G | 8930176.82 | 8930177.08 | 8930177.34 | 0.0088 | 0.0007 |
| Neptune | 19738-11-25 06:43 G | 8930544.53 | 8930544.78 | 8930545.03 | 0.0088 | 0.0005 |
| Jupiter | 19738-11-30 09:21 G | 8930549.78 | 8930549.89 | 8930550.01 | 0.0497 | 0.0427 |
| Neptune | 19739-11-27 10:04 G | 8930911.67 | 8930911.92 | 8930912.18 | 0.0088 | 0.0004 |
| Jupiter | 19739-12-30 18:57 G | 8930945.08 | 8930945.29 | 8930945.50 | 0.0487 | 0.0232 |
| Neptune | 19740-11-29 03:21 G | 8931279.38 | 8931279.64 | 8931279.90 | 0.0088 | 0.0003 |
| Neptune | 19741-12-01 07:55 G | 8931646.59 | 8931646.83 | 8931647.09 | 0.0088 | 0.0003 |
| Neptune | 19742-12-03 21:50 G | 8932014.14 | 8932014.41 | 8932014.68 | 0.0088 | 0.0001 |
| Saturn | 19743-11-21 06:28 G | 8932366.71 | 8932366.77 | 8932366.84 | 0.0275 | 0.0265 |
| Neptune | 19743-12-06 06:14 G | 8932381.51 | 8932381.76 | 8932382.01 | 0.0088 | 0.0001 |
| Saturn | 19744-12-02 15:36 G | 8932743.97 | 8932744.15 | 8932744.36 | 0.0276 | 0.0165 |
| Neptune | 19744-12-07 15:07 G | 8932748.87 | 8932749.13 | 8932749.40 | 0.0088 | 0.0002 |
| Jupiter | 19745-06-08 22:19 G | 8932932.24 | 8932932.43 | 8932932.63 | 0.0534 | 0.0311 |
| Neptune | 19745-12-10 04:33 G | 8933116.45 | 8933116.69 | 8933116.95 | 0.0088 | 0.0004 |
| Neptune | 19746-12-12 09:36 G | 8933483.64 | 8933483.90 | 8933484.16 | 0.0088 | 0.0003 |
| Neptune | 19747-12-15 02:24 G | 8933851.35 | 8933851.60 | 8933851.86 | 0.0088 | 0.0005 |
| Neptune | 19748-12-16 05:31 G | 8934218.48 | 8934218.73 | 8934218.99 | 0.0088 | 0.0006 |
| Neptune | 19749-12-18 22:19 G | 8934586.17 | 8934586.43 | 8934586.69 | 0.0088 | 0.0009 |
| Jupiter | 19750-12-04 18:14 G | 8934937.08 | 8934937.26 | 8934937.44 | 0.0495 | 0.0323 |
| Neptune | 19750-12-21 03:36 G | 8934953.40 | 8934953.65 | 8934953.90 | 0.0088 | 0.0008 |
| Neptune | 19751-12-23 16:33 G | 8935320.93 | 8935321.19 | 8935321.46 | 0.0088 | 0.0011 |
| Jupiter | 19752-01-04 03:50 G | 8935332.49 | 8935332.66 | 8935332.85 | 0.0486 | 0.0295 |
| Neptune | 19752-12-25 01:55 G | 8935688.34 | 8935688.58 | 8935688.84 | 0.0088 | 0.0010 |
| Neptune | 19753-12-27 09:50 G | 8936055.65 | 8936055.91 | 8936056.17 | 0.0088 | 0.0012 |
| Neptune | 19754-12-30 00:14 G | 8936423.27 | 8936423.51 | 8936423.77 | 0.0088 | 0.0012 |
| Neptune | 19756-01-01 04:33 G | 8936790.44 | 8936790.69 | 8936790.95 | 0.0088 | 0.0015 |
| Neptune | 19757-01-02 21:36 G | 8937158.15 | 8937158.40 | 8937158.66 | 0.0088 | 0.0014 |
| Jupiter | 19757-06-13 22:19 G | 8937320.21 | 8937320.43 | 8937320.66 | 0.0536 | 0.0168 |

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| Neptune | 19758-01-05 00:57 G | 8937525.29 | 8937525.54 | 8937525.79 | 0.0088 | 0.0017 |
| Saturn | 19758-05-24 04:48 G | 8937664.59 | 8937664.70 | 8937664.83 | 0.0284 | 0.0244 |
| Neptune | 19759-01-07 17:16 G | 8937892.96 | 8937893.22 | 8937893.48 | 0.0088 | 0.0015 |
| Saturn | 19759-06-06 22:33 G | 8938043.31 | 8938043.44 | 8938043.59 | 0.0283 | 0.0234 |
| Neptune | 19760-01-09 22:48 G | 8938260.22 | 8938260.45 | 8938260.71 | 0.0088 | 0.0019 |
| Neptune | 19761-01-11 11:02 G | 8938627.71 | 8938627.96 | 8938628.23 | 0.0088 | 0.0017 |
| Neptune | 19762-01-13 21:21 G | 8938995.15 | 8938995.39 | 8938995.64 | 0.0088 | 0.0021 |
| Jupiter | 19762-12-08 18:43 G | 8939324.07 | 8939324.28 | 8939324.48 | 0.0494 | 0.0208 |
| Neptune | 19763-01-16 04:19 G | 8939362.44 | 8939362.68 | 8939362.95 | 0.0088 | 0.0020 |
| Jupiter | 19764-01-08 03:50 G | 8939719.48 | 8939719.66 | 8939719.83 | 0.0486 | 0.0336 |
| Neptune | 19764-01-18 19:55 G | 8939730.09 | 8939730.33 | 8939730.58 | 0.0088 | 0.0023 |
| Neptune | 19765-01-19 23:45 G | 8940097.25 | 8940097.49 | 8940097.75 | 0.0088 | 0.0021 |
| Neptune | 19766-01-22 17:16 G | 8940464.98 | 8940465.22 | 8940465.48 | 0.0088 | 0.0024 |
| Neptune | 19767-01-24 21:07 G | 8940832.14 | 8940832.38 | 8940832.63 | 0.0088 | 0.0022 |
| Neptune | 19768-01-27 13:12 G | 8941199.80 | 8941200.05 | 8941200.31 | 0.0088 | 0.0026 |
| Neptune | 19769-01-28 19:55 G | 8941567.10 | 8941567.33 | 8941567.58 | 0.0088 | 0.0024 |
| Jupiter | 19769-06-19 10:48 G | 8941708.72 | 8941708.95 | 8941709.18 | 0.0537 | 0.0015 |
| Neptune | 19770-01-31 07:40 G | 8941934.57 | 8941934.82 | 8941935.07 | 0.0088 | 0.0027 |
| Neptune | 19771-02-02 18:57 G | 8942302.06 | 8942302.29 | 8942302.54 | 0.0088 | 0.0024 |
| Neptune | 19772-02-05 01:26 G | 8942669.32 | 8942669.56 | 8942669.82 | 0.0088 | 0.0028 |
| Uranus | 19772-10-13 05:31 G | 8942920.63 | 8942920.73 | 8942920.86 | 0.0143 | 0.0126 |
| Neptune | 19773-02-06 17:31 G | 8943037.00 | 8943037.23 | 8943037.48 | 0.0088 | 0.0025 |
| Uranus | 19773-10-17 23:16 G | 8943290.26 | 8943290.47 | 8943290.71 | 0.0144 | 0.0073 |
| Saturn | 19773-11-28 02:52 G | 8943331.38 | 8943331.62 | 8943331.86 | 0.0275 | 0.0014 |
| Neptune | 19774-02-08 21:21 G | 8943404.16 | 8943404.39 | 8943404.65 | 0.0088 | 0.0030 |
| Uranus | 19774-10-23 01:12 G | 8943660.31 | 8943660.55 | 8943660.80 | 0.0144 | 0.0003 |
| Jupiter | 19774-12-13 07:12 G | 8943711.57 | 8943711.80 | 8943712.03 | 0.0492 | 0.0120 |
| Neptune | 19775-02-11 15:21 G | 8943771.90 | 8943772.14 | 8943772.40 | 0.0088 | 0.0026 |
| Uranus | 19775-10-27 21:50 G | 8944030.19 | 8944030.41 | 8944030.65 | 0.0145 | 0.0067 |
| Jupiter | 19776-01-12 07:12 G | 8944106.70 | 8944106.80 | 8944106.91 | 0.0485 | 0.0421 |

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| Neptune | 19776-02-13 19:40 G | 8944139.09 | 8944139.32 | 8944139.57 | 0.0088 | 0.0031 |
| Uranus | 19776-10-31 21:50 G | 8944400.30 | 8944400.41 | 8944400.55 | 0.0145 | 0.0124 |
| Neptune | 19777-02-15 11:45 G | 8944506.75 | 8944506.99 | 8944507.25 | 0.0088 | 0.0026 |
| Neptune | 19778-02-17 19:40 G | 8944874.10 | 8944874.32 | 8944874.57 | 0.0088 | 0.0031 |
| Neptune | 19779-02-20 07:12 G | 8945241.56 | 8945241.80 | 8945242.07 | 0.0088 | 0.0027 |
| Neptune | 19780-02-22 19:55 G | 8945609.10 | 8945609.33 | 8945609.57 | 0.0088 | 0.0032 |
| Neptune | 19781-02-24 02:09 G | 8945976.35 | 8945976.59 | 8945976.86 | 0.0088 | 0.0028 |
| Jupiter | 19781-06-24 08:52 G | 8946096.63 | 8946096.87 | 8946097.11 | 0.0539 | 0.0062 |
| Neptune | 19782-02-26 18:57 G | 8946344.08 | 8946344.29 | 8946344.55 | 0.0088 | 0.0033 |
| Neptune | 19783-02-28 23:31 G | 8946711.24 | 8946711.48 | 8946711.74 | 0.0088 | 0.0027 |
| Neptune | 19784-03-02 17:31 G | 8947079.00 | 8947079.23 | 8947079.48 | 0.0088 | 0.0032 |
| Neptune | 19785-03-04 22:48 G | 8947446.20 | 8947446.45 | 8947446.69 | 0.0088 | 0.0027 |
| Neptune | 19786-03-07 14:24 G | 8947813.87 | 8947814.10 | 8947814.36 | 0.0088 | 0.0033 |
| Jupiter | 19786-12-17 07:55 G | 8948098.60 | 8948098.83 | 8948099.06 | 0.0491 | 0.0071 |
| Neptune | 19787-03-09 23:16 G | 8948181.25 | 8948181.47 | 8948181.72 | 0.0088 | 0.0027 |
| Neptune | 19788-03-11 11:02 G | 8948548.71 | 8948548.96 | 8948549.21 | 0.0088 | 0.0032 |
| Saturn | 19788-05-31 08:09 G | 8948629.60 | 8948629.84 | 8948630.09 | 0.0283 | 0.0036 |
| Neptune | 19789-03-14 00:14 G | 8948916.28 | 8948916.51 | 8948916.76 | 0.0088 | 0.0026 |
| Neptune | 19790-03-16 07:12 G | 8949283.56 | 8949283.80 | 8949284.06 | 0.0088 | 0.0032 |
| Neptune | 19791-03-19 00:43 G | 8949651.30 | 8949651.53 | 8949651.79 | 0.0088 | 0.0026 |
| Neptune | 19792-03-20 05:16 G | 8950018.50 | 8950018.72 | 8950018.98 | 0.0088 | 0.0033 |
| Neptune | 19793-03-23 00:14 G | 8950386.26 | 8950386.51 | 8950386.77 | 0.0088 | 0.0025 |
| Jupiter | 19793-06-29 16:48 G | 8950484.99 | 8950485.20 | 8950485.42 | 0.0541 | 0.0154 |
| Neptune | 19794-03-25 05:45 G | 8950753.51 | 8950753.74 | 8950753.98 | 0.0088 | 0.0031 |
| Neptune | 19795-03-27 22:04 G | 8951121.18 | 8951121.42 | 8951121.69 | 0.0088 | 0.0023 |
| Neptune | 19796-03-29 07:26 G | 8951488.59 | 8951488.81 | 8951489.06 | 0.0088 | 0.0031 |
| Neptune | 19797-03-31 19:12 G | 8951856.06 | 8951856.30 | 8951856.58 | 0.0088 | 0.0023 |
| Neptune | 19798-04-03 09:21 G | 8952223.67 | 8952223.89 | 8952224.14 | 0.0088 | 0.0030 |
| Jupiter | 19798-12-21 20:52 G | 8952486.14 | 8952486.37 | 8952486.60 | 0.0489 | 0.0004 |
| Neptune | 19799-04-05 16:33 G | 8952590.95 | 8952591.19 | 8952591.46 | 0.0088 | 0.0022 |

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| Neptune | 19800-04-08 10:33 G | 8952958.71 | 8952958.94 | 8952959.19 | 0.0089 | 0.0029 |
| Neptune | 19801-04-10 15:50 G | 8953325.92 | 8953326.16 | 8953326.42 | 0.0089 | 0.0019 |
| Neptune | 19802-04-13 11:16 G | 8953693.72 | 8953693.97 | 8953694.22 | 0.0089 | 0.0027 |
| Saturn | 19802-11-23 14:09 G | 8953917.93 | 8953918.09 | 8953918.26 | 0.0275 | 0.0205 |
| Neptune | 19803-04-15 17:16 G | 8954060.98 | 8954061.22 | 8954061.47 | 0.0089 | 0.0018 |
| Saturn | 19803-12-06 05:16 G | 8954295.58 | 8954295.72 | 8954295.85 | 0.0276 | 0.0224 |
| Mars | 19804-03-19 10:48 G | 8954399.75 | 8954399.95 | 8954400.16 | 0.1683 | 0.0047 |
| Neptune | 19804-04-17 10:19 G | 8954428.69 | 8954428.93 | 8954429.20 | 0.0089 | 0.0026 |
| Jupiter | 19804-05-29 08:38 G | 8954470.76 | 8954470.86 | 8954470.95 | 0.0530 | 0.0477 |
| Neptune | 19805-04-19 20:24 G | 8954796.11 | 8954796.35 | 8954796.60 | 0.0089 | 0.0017 |
| Jupiter | 19805-07-06 08:09 G | 8954873.65 | 8954873.84 | 8954874.04 | 0.0542 | 0.0314 |
| Neptune | 19806-04-22 08:52 G | 8955163.63 | 8955163.87 | 8955164.15 | 0.0089 | 0.0024 |
| Neptune | 19807-04-24 23:31 G | 8955531.24 | 8955531.48 | 8955531.73 | 0.0089 | 0.0014 |
| Neptune | 19808-04-26 07:12 G | 8955898.55 | 8955898.80 | 8955899.07 | 0.0089 | 0.0022 |
| Pluto | 19809-03-11 17:02 G | 8956217.98 | 8956218.21 | 8956218.47 | 0.0080 | 0.0027 |
| Neptune | 19809-04-29 01:40 G | 8956266.32 | 8956266.57 | 8956266.83 | 0.0089 | 0.0012 |
| Jupiter | 19809-11-26 05:02 G | 8956477.68 | 8956477.71 | 8956477.75 | 0.0499 | 0.0492 |
| Neptune | 19810-05-01 07:12 G | 8956633.56 | 8956633.80 | 8956634.07 | 0.0089 | 0.0021 |
| Jupiter | 19810-12-26 20:09 G | 8956873.11 | 8956873.34 | 8956873.57 | 0.0488 | 0.0117 |
| Neptune | 19811-05-04 03:07 G | 8957001.37 | 8957001.63 | 8957001.89 | 0.0089 | 0.0010 |
| Neptune | 19812-05-05 09:21 G | 8957368.64 | 8957368.89 | 8957369.14 | 0.0089 | 0.0018 |
| Uranus | 19813-04-15 23:31 G | 8957714.32 | 8957714.48 | 8957714.66 | 0.0135 | 0.0099 |
| Neptune | 19813-05-08 03:07 G | 8957736.37 | 8957736.63 | 8957736.90 | 0.0089 | 0.0008 |
| Uranus | 19814-04-20 04:19 G | 8958083.44 | 8958083.68 | 8958083.93 | 0.0134 | 0.0048 |
| Neptune | 19814-05-10 12:57 G | 8958103.81 | 8958104.04 | 8958104.30 | 0.0089 | 0.0016 |
| Uranus | 19815-04-24 20:09 G | 8958453.09 | 8958453.34 | 8958453.59 | 0.0134 | 0.0002 |
| Neptune | 19815-05-13 03:07 G | 8958471.36 | 8958471.63 | 8958471.90 | 0.0089 | 0.0006 |
| Uranus | 19816-04-28 00:00 G | 8958822.28 | 8958822.50 | 8958822.75 | 0.0134 | 0.0064 |
| Neptune | 19816-05-14 17:16 G | 8958838.98 | 8958839.22 | 8958839.48 | 0.0089 | 0.0014 |
| Jupiter | 19816-06-03 17:45 G | 8958859.09 | 8958859.24 | 8958859.40 | 0.0532 | 0.0404 |

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| Uranus | 19817-05-02 14:09 G | 8959191.95 | 8959192.09 | 8959192.26 | 0.0134 | 0.0105 |
| Neptune | 19817-05-17 02:24 G | 8959206.34 | 8959206.60 | 8959206.87 | 0.0089 | 0.0004 |
| Saturn | 19817-05-26 18:28 G | 8959216.09 | 8959216.27 | 8959216.47 | 0.0284 | 0.0181 |
| Jupiter | 19817-07-11 11:16 G | 8959261.85 | 8959261.97 | 8959262.10 | 0.0542 | 0.0453 |
| Neptune | 19818-05-19 20:52 G | 8959574.12 | 8959574.37 | 8959574.63 | 0.0089 | 0.0012 |
| Neptune | 19819-05-22 03:07 G | 8959941.37 | 8959941.63 | 8959941.90 | 0.0089 | 0.0002 |
| Neptune | 19820-05-23 23:02 G | 8960309.21 | 8960309.46 | 8960309.73 | 0.0089 | 0.0009 |
| Neptune | 19821-05-26 05:31 G | 8960676.48 | 8960676.73 | 8960676.99 | 0.0089 | 0.0002 |
| Jupiter | 19821-11-30 10:33 G | 8960864.84 | 8960864.94 | 8960865.07 | 0.0498 | 0.0440 |
| Neptune | 19822-05-29 00:14 G | 8961044.24 | 8961044.51 | 8961044.77 | 0.0089 | 0.0007 |
| Jupiter | 19822-12-31 02:38 G | 8961260.41 | 8961260.61 | 8961260.81 | 0.0488 | 0.0220 |
| Neptune | 19823-05-31 09:36 G | 8961411.66 | 8961411.90 | 8961412.16 | 0.0089 | 0.0004 |
| Neptune | 19824-06-02 00:14 G | 8961779.24 | 8961779.51 | 8961779.78 | 0.0089 | 0.0004 |
| Neptune | 19825-06-04 14:24 G | 8962146.85 | 8962147.10 | 8962147.35 | 0.0089 | 0.0006 |
| Neptune | 19826-06-07 00:14 G | 8962514.24 | 8962514.51 | 8962514.77 | 0.0089 | 0.0001 |
| Neptune | 19827-06-09 18:14 G | 8962882.01 | 8962882.26 | 8962882.51 | 0.0089 | 0.0008 |
| Jupiter | 19828-06-08 14:52 G | 8963246.94 | 8963247.12 | 8963247.30 | 0.0533 | 0.0327 |
| Neptune | 19828-06-11 01:12 G | 8963249.29 | 8963249.55 | 8963249.81 | 0.0089 | 0.0001 |
| Neptune | 19829-06-13 21:36 G | 8963617.14 | 8963617.40 | 8963617.66 | 0.0089 | 0.0010 |
| Jupiter | 19829-07-17 00:57 G | 8963650.48 | 8963650.54 | 8963650.61 | 0.0543 | 0.0516 |
| Neptune | 19830-06-16 03:50 G | 8963984.41 | 8963984.66 | 8963984.92 | 0.0089 | 0.0005 |
| Neptune | 19831-06-18 23:02 G | 8964352.20 | 8964352.46 | 8964352.73 | 0.0089 | 0.0012 |
| Neptune | 19832-06-20 08:09 G | 8964719.59 | 8964719.84 | 8964720.09 | 0.0089 | 0.0007 |
| Saturn | 19832-11-30 11:02 G | 8964882.71 | 8964882.96 | 8964883.21 | 0.0276 | 0.0043 |
| Neptune | 19833-06-22 23:45 G | 8965087.23 | 8965087.49 | 8965087.76 | 0.0089 | 0.0014 |
| Jupiter | 19833-12-04 15:21 G | 8965251.98 | 8965252.14 | 8965252.30 | 0.0496 | 0.0337 |
| Neptune | 19834-06-25 13:12 G | 8965454.80 | 8965455.05 | 8965455.30 | 0.0090 | 0.0009 |
| Jupiter | 19835-01-04 04:48 G | 8965647.51 | 8965647.70 | 8965647.91 | 0.0487 | 0.0278 |
| Neptune | 19835-06-27 23:31 G | 8965822.22 | 8965822.48 | 8965822.75 | 0.0090 | 0.0016 |
| Neptune | 19836-06-29 17:02 G | 8966189.96 | 8966190.21 | 8966190.46 | 0.0090 | 0.0012 |

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| Neptune | 19837-07-02 00:00 G | 8966557.25 | 8966557.50 | 8966557.77 | 0.0090 | 0.0019 |
| Neptune | 19838-07-04 20:09 G | 8966925.09 | 8966925.34 | 8966925.60 | 0.0090 | 0.0015 |
| Neptune | 19839-07-07 02:24 G | 8967292.36 | 8967292.60 | 8967292.86 | 0.0090 | 0.0019 |
| Jupiter | 19840-06-13 22:19 G | 8967635.22 | 8967635.43 | 8967635.65 | 0.0535 | 0.0186 |
| Neptune | 19840-07-08 22:04 G | 8967660.16 | 8967660.42 | 8967660.68 | 0.0090 | 0.0016 |
| Neptune | 19841-07-11 06:28 G | 8968027.53 | 8968027.77 | 8968028.02 | 0.0090 | 0.0021 |
| Neptune | 19842-07-13 23:02 G | 8968395.21 | 8968395.46 | 8968395.73 | 0.0090 | 0.0019 |
| Neptune | 19843-07-16 11:31 G | 8968762.75 | 8968762.98 | 8968763.23 | 0.0090 | 0.0023 |
| Neptune | 19844-07-17 23:02 G | 8969130.20 | 8969130.46 | 8969130.72 | 0.0090 | 0.0021 |
| Neptune | 19845-07-20 15:50 G | 8969497.92 | 8969498.16 | 8969498.41 | 0.0090 | 0.0024 |
| Jupiter | 19845-12-09 06:28 G | 8969639.56 | 8969639.77 | 8969639.99 | 0.0494 | 0.0213 |
| Neptune | 19846-07-22 23:02 G | 8969865.21 | 8969865.46 | 8969865.72 | 0.0090 | 0.0022 |
| Jupiter | 19847-01-08 09:36 G | 8970034.74 | 8970034.90 | 8970035.08 | 0.0486 | 0.0326 |
| Saturn | 19847-06-04 00:00 G | 8970181.28 | 8970181.50 | 8970181.72 | 0.0283 | 0.0102 |
| Neptune | 19847-07-25 18:43 G | 8970233.04 | 8970233.28 | 8970233.54 | 0.0090 | 0.0024 |
| Neptune | 19848-07-27 00:28 G | 8970600.29 | 8970600.52 | 8970600.78 | 0.0090 | 0.0025 |
| Neptune | 19849-07-29 20:24 G | 8970968.10 | 8970968.35 | 8970968.61 | 0.0090 | 0.0026 |
| Neptune | 19850-08-01 03:50 G | 8971335.43 | 8971335.66 | 8971335.91 | 0.0090 | 0.0027 |
| Neptune | 19851-08-03 20:24 G | 8971703.11 | 8971703.35 | 8971703.62 | 0.0090 | 0.0027 |
| Jupiter | 19852-06-18 22:33 G | 8972023.20 | 8972023.44 | 8972023.69 | 0.0537 | 0.0039 |
| Neptune | 19852-08-05 08:09 G | 8972070.62 | 8972070.84 | 8972071.10 | 0.0090 | 0.0028 |
| Neptune | 19853-08-07 20:38 G | 8972438.11 | 8972438.36 | 8972438.62 | 0.0089 | 0.0027 |
| Neptune | 19854-08-10 12:28 G | 8972805.79 | 8972806.02 | 8972806.26 | 0.0089 | 0.0029 |
| Neptune | 19855-08-12 19:55 G | 8973173.09 | 8973173.33 | 8973173.59 | 0.0089 | 0.0029 |
| Neptune | 19856-08-14 15:07 G | 8973540.90 | 8973541.13 | 8973541.38 | 0.0089 | 0.0031 |
| Uranus | 19856-10-14 17:02 G | 8973602.16 | 8973602.21 | 8973602.30 | 0.0143 | 0.0137 |
| Neptune | 19857-08-16 20:38 G | 8973908.13 | 8973908.36 | 8973908.62 | 0.0089 | 0.0029 |
| Uranus | 19857-10-19 09:36 G | 8973971.67 | 8973971.90 | 8973972.14 | 0.0144 | 0.0058 |
| Jupiter | 19857-12-13 06:57 G | 8974026.57 | 8974026.79 | 8974027.01 | 0.0493 | 0.0133 |
| Neptune | 19858-08-19 16:04 G | 8974275.94 | 8974276.17 | 8974276.43 | 0.0089 | 0.0031 |

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| Uranus | 19858-10-24 12:14 G | 8974341.77 | 8974342.01 | 8974342.26 | 0.0144 | 0.0003 |
| Jupiter | 19859-01-12 17:31 G | 8974422.11 | 8974422.23 | 8974422.35 | 0.0485 | 0.0413 |
| Neptune | 19859-08-21 23:02 G | 8974643.23 | 8974643.46 | 8974643.70 | 0.0089 | 0.0028 |
| Uranus | 19859-10-29 07:26 G | 8974711.59 | 8974711.81 | 8974712.06 | 0.0144 | 0.0066 |
| Neptune | 19860-08-23 15:36 G | 8975010.91 | 8975011.15 | 8975011.41 | 0.0089 | 0.0031 |
| Uranus | 19860-11-02 09:07 G | 8975081.82 | 8975081.88 | 8975081.94 | 0.0145 | 0.0140 |
| Neptune | 19861-08-26 02:24 G | 8975378.38 | 8975378.60 | 8975378.85 | 0.0089 | 0.0029 |
| Saturn | 19861-11-25 01:55 G | 8975469.39 | 8975469.58 | 8975469.79 | 0.0275 | 0.0147 |
| Neptune | 19862-08-28 14:09 G | 8975745.85 | 8975746.09 | 8975746.35 | 0.0089 | 0.0032 |
| Neptune | 19863-08-31 05:31 G | 8976113.49 | 8976113.73 | 8976113.97 | 0.0089 | 0.0028 |
| Jupiter | 19864-06-24 09:36 G | 8976411.67 | 8976411.90 | 8976412.12 | 0.0539 | 0.0041 |
| Neptune | 19864-09-01 12:28 G | 8976480.79 | 8976481.02 | 8976481.28 | 0.0089 | 0.0031 |
| Neptune | 19865-09-04 07:26 G | 8976848.57 | 8976848.81 | 8976849.05 | 0.0089 | 0.0027 |
| Neptune | 19866-09-06 12:43 G | 8977215.79 | 8977216.03 | 8977216.27 | 0.0089 | 0.0032 |
| Neptune | 19867-09-09 07:40 G | 8977583.58 | 8977583.82 | 8977584.08 | 0.0089 | 0.0027 |
| Neptune | 19868-09-10 13:40 G | 8977950.85 | 8977951.07 | 8977951.32 | 0.0089 | 0.0033 |
| Neptune | 19869-09-13 06:28 G | 8978318.52 | 8978318.77 | 8978319.03 | 0.0089 | 0.0026 |
| Jupiter | 19869-12-17 20:38 G | 8978414.13 | 8978414.36 | 8978414.58 | 0.0491 | 0.0089 |
| Neptune | 19870-09-15 16:04 G | 8978685.96 | 8978686.17 | 8978686.42 | 0.0089 | 0.0031 |
| Neptune | 19871-09-18 04:04 G | 8979053.42 | 8979053.67 | 8979053.93 | 0.0089 | 0.0025 |
| Neptune | 19872-09-19 18:28 G | 8979421.03 | 8979421.27 | 8979421.50 | 0.0089 | 0.0030 |
| Neptune | 19873-09-22 00:57 G | 8979788.29 | 8979788.54 | 8979788.80 | 0.0089 | 0.0024 |
| Neptune | 19874-09-24 18:43 G | 8980156.05 | 8980156.28 | 8980156.53 | 0.0089 | 0.0030 |
| Neptune | 19875-09-26 23:16 G | 8980523.24 | 8980523.47 | 8980523.73 | 0.0089 | 0.0023 |
| Saturn | 19876-05-28 03:36 G | 8980767.41 | 8980767.65 | 8980767.88 | 0.0284 | 0.0114 |
| Jupiter | 19876-06-29 22:19 G | 8980800.20 | 8980800.43 | 8980800.66 | 0.0540 | 0.0136 |
| Neptune | 19876-09-28 17:45 G | 8980891.00 | 8980891.24 | 8980891.50 | 0.0089 | 0.0029 |
| Neptune | 19877-09-30 23:31 G | 8981258.25 | 8981258.48 | 8981258.73 | 0.0089 | 0.0021 |
| Neptune | 19878-10-03 15:07 G | 8981625.89 | 8981626.13 | 8981626.40 | 0.0089 | 0.0028 |
| Neptune | 19879-10-06 01:12 G | 8981993.31 | 8981993.55 | 8981993.80 | 0.0089 | 0.0020 |

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| Neptune | 19880-10-07 12:14 G | 8982360.77 | 8982361.01 | 8982361.28 | 0.0089 | 0.0027 |
| Neptune | 19881-10-10 02:09 G | 8982728.36 | 8982728.59 | 8982728.85 | 0.0089 | 0.0019 |
| Jupiter | 19881-12-21 17:31 G | 8982800.99 | 8982801.23 | 8982801.47 | 0.0490 | 0.0013 |
| Neptune | 19882-10-12 08:24 G | 8983095.61 | 8983095.85 | 8983096.12 | 0.0089 | 0.0025 |
| Neptune | 19883-10-15 02:09 G | 8983463.34 | 8983463.59 | 8983463.84 | 0.0089 | 0.0016 |
| Neptune | 19884-10-16 06:00 G | 8983830.52 | 8983830.75 | 8983831.01 | 0.0089 | 0.0024 |
| Neptune | 19885-10-19 00:00 G | 8984198.25 | 8984198.50 | 8984198.76 | 0.0089 | 0.0015 |
| Neptune | 19886-10-21 05:02 G | 8984565.47 | 8984565.71 | 8984565.96 | 0.0089 | 0.0022 |
| Jupiter | 19887-05-29 12:14 G | 8984785.92 | 8984786.01 | 8984786.11 | 0.0529 | 0.0482 |
| Neptune | 19887-10-23 19:55 G | 8984933.08 | 8984933.33 | 8984933.60 | 0.0089 | 0.0013 |
| Jupiter | 19888-07-04 23:16 G | 8985188.28 | 8985188.47 | 8985188.67 | 0.0541 | 0.0296 |
| Neptune | 19888-10-25 05:31 G | 8985300.50 | 8985300.73 | 8985300.98 | 0.0089 | 0.0020 |
| Neptune | 19889-10-27 15:36 G | 8985667.89 | 8985668.15 | 8985668.42 | 0.0088 | 0.0011 |
| Neptune | 19890-10-30 05:45 G | 8986035.50 | 8986035.74 | 8986035.99 | 0.0088 | 0.0018 |
| Neptune | 19891-11-01 11:16 G | 8986402.72 | 8986402.97 | 8986403.24 | 0.0088 | 0.0009 |
| Saturn | 19891-12-02 16:04 G | 8986433.95 | 8986434.17 | 8986434.41 | 0.0276 | 0.0102 |
| Neptune | 19892-11-03 04:19 G | 8986770.44 | 8986770.68 | 8986770.94 | 0.0088 | 0.0017 |
| Neptune | 19893-11-05 08:24 G | 8987137.60 | 8987137.85 | 8987138.11 | 0.0088 | 0.0006 |
| Jupiter | 19893-12-26 02:52 G | 8987188.40 | 8987188.62 | 8987188.84 | 0.0489 | 0.0108 |
| Neptune | 19894-11-08 01:26 G | 8987505.31 | 8987505.56 | 8987505.82 | 0.0088 | 0.0014 |
| Neptune | 19895-11-10 06:43 G | 8987872.53 | 8987872.78 | 8987873.03 | 0.0088 | 0.0004 |
| Neptune | 19896-11-11 20:38 G | 8988240.10 | 8988240.36 | 8988240.63 | 0.0088 | 0.0011 |
| Uranus | 19897-04-16 13:40 G | 8988395.92 | 8988396.07 | 8988396.25 | 0.0135 | 0.0100 |
| Neptune | 19897-11-14 06:14 G | 8988607.52 | 8988607.76 | 8988608.01 | 0.0088 | 0.0002 |
| Uranus | 19898-04-20 18:14 G | 8988765.01 | 8988765.26 | 8988765.50 | 0.0135 | 0.0042 |
| Neptune | 19898-11-16 15:21 G | 8988974.88 | 8988975.14 | 8988975.40 | 0.0088 | 0.0009 |
| Uranus | 19899-04-25 10:19 G | 8989134.69 | 8989134.93 | 8989135.19 | 0.0134 | 0.0015 |
| Jupiter | 19899-06-03 04:33 G | 8989173.55 | 8989173.69 | 8989173.83 | 0.0531 | 0.0421 |
| Neptune | 19899-11-19 05:31 G | 8989342.48 | 8989342.73 | 8989342.98 | 0.0088 | 0.0002 |
| Uranus | 19900-04-29 14:09 G | 8989503.86 | 8989504.09 | 8989504.33 | 0.0134 | 0.0058 |

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| Jupiter | 19900-07-11 09:21 G | 8989576.75 | 8989576.89 | 8989577.03 | 0.0542 | 0.0427 |
| Neptune | 19900-11-21 10:04 G | 8989709.66 | 8989709.92 | 8989710.18 | 0.0088 | 0.0007 |
| Uranus | 19901-05-04 05:02 G | 8989873.63 | 8989873.71 | 8989873.82 | 0.0134 | 0.0124 |
| Neptune | 19901-11-24 03:07 G | 8990077.37 | 8990077.63 | 8990077.88 | 0.0088 | 0.0003 |
| Neptune | 19902-11-26 06:28 G | 8990444.52 | 8990444.77 | 8990445.03 | 0.0088 | 0.0005 |
| Neptune | 19903-11-28 23:02 G | 8990812.20 | 8990812.46 | 8990812.72 | 0.0088 | 0.0005 |
| Neptune | 19904-11-30 04:33 G | 8991179.44 | 8991179.69 | 8991179.94 | 0.0088 | 0.0003 |
| Jupiter | 19904-11-30 12:43 G | 8991179.94 | 8991180.03 | 8991180.12 | 0.0498 | 0.0453 * |
| Neptune | 19905-12-02 17:16 G | 8991546.96 | 8991547.22 | 8991547.49 | 0.0088 | 0.0007 |
| Jupiter | 19905-12-31 07:26 G | 8991575.59 | 8991575.81 | 8991576.03 | 0.0488 | 0.0208 |
| Saturn | 19906-06-06 16:48 G | 8991733.01 | 8991733.20 | 8991733.40 | 0.0283 | 0.0167 |
| Neptune | 19906-12-05 03:36 G | 8991914.41 | 8991914.65 | 8991914.90 | 0.0088 | 0.0002 |
| Neptune | 19907-12-07 11:31 G | 8992281.73 | 8992281.98 | 8992282.25 | 0.0088 | 0.0010 |
| Neptune | 19908-12-09 02:24 G | 8992649.35 | 8992649.60 | 8992649.85 | 0.0088 | 0.0002 |
| Neptune | 19909-12-11 06:00 G | 8993016.50 | 8993016.75 | 8993017.02 | 0.0088 | 0.0012 |
| Neptune | 19910-12-13 23:16 G | 8993384.21 | 8993384.47 | 8993384.72 | 0.0088 | 0.0004 |
| Jupiter | 19911-06-09 15:21 G | 8993561.97 | 8993562.14 | 8993562.33 | 0.0533 | 0.0345 |
| Neptune | 19911-12-16 02:24 G | 8993751.36 | 8993751.60 | 8993751.85 | 0.0088 | 0.0014 |
| Jupiter | 19912-07-16 12:57 G | 8993964.95 | 8993965.04 | 8993965.15 | 0.0543 | 0.0492 |
| Neptune | 19912-12-17 18:14 G | 8994119.00 | 8994119.26 | 8994119.52 | 0.0088 | 0.0006 |
| Neptune | 19913-12-20 00:00 G | 8994486.26 | 8994486.50 | 8994486.75 | 0.0088 | 0.0016 |
| Neptune | 19914-12-22 11:45 G | 8994853.73 | 8994853.99 | 8994854.26 | 0.0088 | 0.0008 |
| Neptune | 19915-12-24 22:48 G | 8995221.22 | 8995221.45 | 8995221.70 | 0.0088 | 0.0018 |
| Jupiter | 19916-12-05 04:04 G | 8995567.51 | 8995567.67 | 8995567.85 | 0.0496 | 0.0343 |
| Neptune | 19916-12-26 06:00 G | 8995588.49 | 8995588.75 | 8995589.01 | 0.0088 | 0.0010 |
| Neptune | 19917-12-28 21:21 G | 8995956.15 | 8995956.39 | 8995956.65 | 0.0088 | 0.0020 |
| Jupiter | 19918-01-04 11:02 G | 8995962.78 | 8995962.96 | 8995963.16 | 0.0487 | 0.0260 |
| Neptune | 19918-12-31 01:12 G | 8996323.29 | 8996323.55 | 8996323.81 | 0.0088 | 0.0012 |
| Neptune | 19920-01-02 18:14 G | 8996691.01 | 8996691.26 | 8996691.51 | 0.0088 | 0.0022 |
| Saturn | 19920-11-27 16:04 G | 8997020.94 | 8997021.17 | 8997021.39 | 0.0275 | 0.0086 |

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| Neptune | 19921-01-03 21:50 G | 8997058.17 | 8997058.41 | 8997058.67 | 0.0088 | 0.0014 |
| Neptune | 19922-01-06 12:57 G | 8997425.79 | 8997426.04 | 8997426.30 | 0.0088 | 0.0023 |
| Neptune | 19923-01-08 19:40 G | 8997793.08 | 8997793.32 | 8997793.57 | 0.0088 | 0.0016 |
| Jupiter | 19923-06-14 15:07 G | 8997949.91 | 8997950.13 | 8997950.36 | 0.0535 | 0.0197 |
| Neptune | 19924-01-11 06:28 G | 8998160.52 | 8998160.77 | 8998161.03 | 0.0088 | 0.0025 |
| Neptune | 19925-01-12 18:28 G | 8998528.03 | 8998528.27 | 8998528.52 | 0.0088 | 0.0018 |
| Neptune | 19926-01-15 00:43 G | 8998895.29 | 8998895.53 | 8998895.79 | 0.0088 | 0.0027 |
| Neptune | 19927-01-17 16:48 G | 8999262.96 | 8999263.20 | 8999263.46 | 0.0088 | 0.0019 |
| Neptune | 19928-01-19 20:09 G | 8999630.11 | 8999630.34 | 8999630.59 | 0.0088 | 0.0028 |
| Jupiter | 19928-12-09 05:16 G | 8999954.52 | 8999954.72 | 8999954.93 | 0.0494 | 0.0223 |
| Neptune | 19929-01-21 13:26 G | 8999997.82 | 8999998.06 | 8999998.32 | 0.0088 | 0.0020 |
| Jupiter | 19930-01-08 19:40 G | 9000350.14 | 9000350.32 | 9000350.51 | 0.0486 | 0.0309 |
| Neptune | 19930-01-23 17:31 G | 9000365.01 | 9000365.23 | 9000365.48 | 0.0088 | 0.0030 |
| Neptune | 19931-01-26 08:24 G | 9000732.60 | 9000732.85 | 9000733.12 | 0.0088 | 0.0022 |
| Neptune | 19932-01-28 16:33 G | 9001099.95 | 9001100.19 | 9001100.42 | 0.0088 | 0.0030 |
| Neptune | 19933-01-30 02:24 G | 9001467.35 | 9001467.60 | 9001467.86 | 0.0088 | 0.0022 |
| Neptune | 19934-02-01 15:36 G | 9001834.93 | 9001835.15 | 9001835.39 | 0.0088 | 0.0031 |
| Neptune | 19935-02-03 21:21 G | 9002202.15 | 9002202.39 | 9002202.66 | 0.0088 | 0.0023 |
| Saturn | 19935-05-31 12:28 G | 9002318.78 | 9002319.02 | 9002319.27 | 0.0283 | 0.0048 |
| Jupiter | 19935-06-20 03:50 G | 9002338.43 | 9002338.66 | 9002338.88 | 0.0537 | 0.0053 |
| Neptune | 19936-02-06 14:09 G | 9002569.86 | 9002570.09 | 9002570.33 | 0.0088 | 0.0032 |
| Neptune | 19937-02-07 17:31 G | 9002937.00 | 9002937.23 | 9002937.49 | 0.0088 | 0.0024 |
| Neptune | 19938-02-10 10:48 G | 9003304.72 | 9003304.95 | 9003305.21 | 0.0088 | 0.0033 |
| Neptune | 19939-02-12 15:50 G | 9003671.92 | 9003672.16 | 9003672.41 | 0.0088 | 0.0024 |
| Neptune | 19940-02-15 06:14 G | 9004039.51 | 9004039.76 | 9004040.01 | 0.0088 | 0.0032 |
| Uranus | 19940-10-16 06:14 G | 9004283.64 | 9004283.76 | 9004283.93 | 0.0143 | 0.0118 |
| Jupiter | 19940-12-13 16:48 G | 9004341.98 | 9004342.20 | 9004342.42 | 0.0493 | 0.0152 |
| Neptune | 19941-02-16 14:38 G | 9004406.88 | 9004407.11 | 9004407.36 | 0.0088 | 0.0025 |
| Uranus | 19941-10-20 22:33 G | 9004653.22 | 9004653.44 | 9004653.68 | 0.0144 | 0.0065 |
| Jupiter | 19942-01-12 14:52 G | 9004737.00 | 9004737.12 | 9004737.25 | 0.0486 | 0.0404 |

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| Neptune | 19942-02-19 00:28 G | 9004774.28 | 9004774.52 | 9004774.78 | 0.0088 | 0.0033 |
| Uranus | 19942-10-26 02:09 G | 9005023.35 | 9005023.59 | 9005023.84 | 0.0144 | 0.0009 |
| Neptune | 19943-02-21 14:52 G | 9005141.89 | 9005142.12 | 9005142.37 | 0.0088 | 0.0025 |
| Uranus | 19943-10-30 20:24 G | 9005393.13 | 9005393.35 | 9005393.58 | 0.0144 | 0.0075 |
| Neptune | 19944-02-23 20:38 G | 9005509.12 | 9005509.36 | 9005509.61 | 0.0088 | 0.0033 |
| Uranus | 19944-11-03 22:19 G | 9005763.36 | 9005763.43 | 9005763.54 | 0.0145 | 0.0134 |
| Neptune | 19945-02-25 13:55 G | 9005876.85 | 9005877.08 | 9005877.34 | 0.0088 | 0.0025 |
| Neptune | 19946-02-27 18:00 G | 9006244.03 | 9006244.25 | 9006244.50 | 0.0088 | 0.0033 |
| Neptune | 19947-03-02 11:45 G | 9006611.75 | 9006611.99 | 9006612.25 | 0.0088 | 0.0025 |
| Jupiter | 19947-06-25 11:31 G | 9006726.73 | 9006726.98 | 9006727.22 | 0.0538 | 0.0024 |
| Neptune | 19948-03-03 17:16 G | 9006979.00 | 9006979.22 | 9006979.47 | 0.0088 | 0.0033 |
| Neptune | 19949-03-06 07:26 G | 9007346.57 | 9007346.81 | 9007347.08 | 0.0088 | 0.0025 |
| Saturn | 19949-11-22 10:19 G | 9007607.89 | 9007607.93 | 9007607.99 | 0.0275 | 0.0268 |
| Neptune | 19950-03-08 17:16 G | 9007714.00 | 9007714.22 | 9007714.46 | 0.0088 | 0.0032 |
| Saturn | 19950-12-04 22:33 G | 9007985.25 | 9007985.44 | 9007985.65 | 0.0276 | 0.0158 |
| Neptune | 19951-03-11 02:38 G | 9008081.37 | 9008081.61 | 9008081.89 | 0.0088 | 0.0025 |
| Neptune | 19952-03-12 17:45 G | 9008449.02 | 9008449.24 | 9008449.49 | 0.0088 | 0.0031 |
| Jupiter | 19952-12-17 17:16 G | 9008728.99 | 9008729.22 | 9008729.45 | 0.0492 | 0.0104 |
| Neptune | 19953-03-14 23:45 G | 9008816.24 | 9008816.49 | 9008816.75 | 0.0088 | 0.0024 |
| Neptune | 19954-03-17 17:45 G | 9009184.02 | 9009184.24 | 9009184.50 | 0.0088 | 0.0031 |
| Neptune | 19955-03-19 22:19 G | 9009551.20 | 9009551.43 | 9009551.69 | 0.0088 | 0.0023 |
| Neptune | 19956-03-21 16:33 G | 9009918.96 | 9009919.19 | 9009919.45 | 0.0088 | 0.0030 |
| Neptune | 19957-03-23 23:02 G | 9010286.23 | 9010286.46 | 9010286.72 | 0.0088 | 0.0022 |
| Neptune | 19958-03-26 14:09 G | 9010653.84 | 9010654.09 | 9010654.35 | 0.0088 | 0.0028 |
| Neptune | 19959-03-29 00:28 G | 9011021.29 | 9011021.52 | 9011021.77 | 0.0088 | 0.0021 |
| Jupiter | 19959-06-30 08:24 G | 9011114.63 | 9011114.85 | 9011115.07 | 0.0540 | 0.0112 |
| Neptune | 19960-03-30 10:04 G | 9011388.68 | 9011388.92 | 9011389.19 | 0.0088 | 0.0028 |
| Neptune | 19961-04-02 01:55 G | 9011756.35 | 9011756.58 | 9011756.84 | 0.0088 | 0.0021 |
| Neptune | 19962-04-04 08:24 G | 9012123.61 | 9012123.85 | 9012124.11 | 0.0088 | 0.0026 |
| Neptune | 19963-04-07 02:52 G | 9012491.38 | 9012491.62 | 9012491.89 | 0.0088 | 0.0019 |

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| Neptune | 19964-04-08 07:55 G | 9012858.59 | 9012858.83 | 9012859.09 | 0.0088 | 0.0023 |
| Saturn | 19964-05-25 13:12 G | 9012905.94 | 9012906.05 | 9012906.19 | 0.0284 | 0.0242 |
| Jupiter | 19964-12-22 04:33 G | 9013116.47 | 9013116.69 | 9013116.92 | 0.0490 | 0.0019 |
| Neptune | 19965-04-11 02:38 G | 9013226.36 | 9013226.61 | 9013226.88 | 0.0088 | 0.0018 |
| Saturn | 19965-06-08 04:19 G | 9013284.55 | 9013284.68 | 9013284.83 | 0.0283 | 0.0232 |
| Neptune | 19966-04-13 09:36 G | 9013593.66 | 9013593.90 | 9013594.15 | 0.0089 | 0.0022 |
| Pluto | 19966-09-12 20:24 G | 9013746.23 | 9013746.35 | 9013746.54 | 0.0064 | 0.0051 |
| Neptune | 19967-04-16 00:57 G | 9013961.28 | 9013961.54 | 9013961.81 | 0.0089 | 0.0016 |
| Pluto | 19967-09-14 15:36 G | 9014112.93 | 9014113.15 | 9014113.38 | 0.0064 | 0.0033 |
| Neptune | 19968-04-17 11:45 G | 9014328.76 | 9014328.99 | 9014329.25 | 0.0089 | 0.0020 |
| Neptune | 19969-04-19 22:33 G | 9014696.18 | 9014696.44 | 9014696.71 | 0.0089 | 0.0014 |
| Neptune | 19970-04-22 14:52 G | 9015063.88 | 9015064.12 | 9015064.37 | 0.0089 | 0.0017 |
| Jupiter | 19970-05-29 01:12 G | 9015100.48 | 9015100.55 | 9015100.62 | 0.0528 | 0.0499 |
| Neptune | 19971-04-24 21:50 G | 9015431.15 | 9015431.41 | 9015431.67 | 0.0089 | 0.0012 |
| Jupiter | 19971-07-05 22:48 G | 9015503.25 | 9015503.45 | 9015503.65 | 0.0541 | 0.0279 |
| Neptune | 19972-04-26 16:48 G | 9015798.96 | 9015799.20 | 9015799.47 | 0.0089 | 0.0016 |
| Neptune | 19973-04-28 22:33 G | 9016166.19 | 9016166.44 | 9016166.70 | 0.0089 | 0.0011 |
| Neptune | 19974-05-01 17:45 G | 9016533.98 | 9016534.24 | 9016534.50 | 0.0089 | 0.0012 |
| Neptune | 19975-05-04 00:43 G | 9016901.29 | 9016901.53 | 9016901.79 | 0.0089 | 0.0009 |
| Neptune | 19976-05-05 17:02 G | 9017268.94 | 9017269.21 | 9017269.48 | 0.0089 | 0.0009 |
| Jupiter | 19976-12-26 09:07 G | 9017503.64 | 9017503.88 | 9017504.12 | 0.0489 | 0.0099 |
| Neptune | 19977-05-08 03:50 G | 9017636.42 | 9017636.66 | 9017636.92 | 0.0089 | 0.0007 |
| Neptune | 19978-05-10 15:07 G | 9018003.87 | 9018004.13 | 9018004.41 | 0.0089 | 0.0008 |
| Neptune | 19979-05-13 07:12 G | 9018371.55 | 9018371.80 | 9018372.05 | 0.0089 | 0.0005 |
| Saturn | 19979-11-30 02:09 G | 9018572.35 | 9018572.59 | 9018572.84 | 0.0275 | 0.0028 |
| Neptune | 19980-05-14 14:52 G | 9018738.86 | 9018739.12 | 9018739.39 | 0.0089 | 0.0005 |
| Uranus | 19981-04-18 04:19 G | 9019077.50 | 9019077.68 | 9019077.89 | 0.0135 | 0.0088 |
| Neptune | 19981-05-17 10:33 G | 9019106.69 | 9019106.94 | 9019107.20 | 0.0089 | 0.0003 |
| Uranus | 19982-04-22 08:24 G | 9019446.61 | 9019446.85 | 9019447.11 | 0.0135 | 0.0038 |
| Neptune | 19982-05-19 16:33 G | 9019473.93 | 9019474.19 | 9019474.45 | 0.0089 | 0.0002 |

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| Jupiter | 19982-06-03 11:31 G | 9019488.85 | 9019488.98 | 9019489.12 | 0.0531 | 0.0435 |
| Uranus | 19983-04-27 01:26 G | 9019816.31 | 9019816.56 | 9019816.81 | 0.0134 | 0.0014 |
| Neptune | 19983-05-22 12:28 G | 9019841.76 | 9019842.02 | 9019842.28 | 0.0089 | 0.0001 |
| Jupiter | 19983-07-11 03:07 G | 9019891.48 | 9019891.63 | 9019891.79 | 0.0542 | 0.0406 |
| Mars | 19983-09-20 11:45 G | 9019962.80 | 9019962.99 | 9019963.19 | 0.1863 | 0.0211 |
| Uranus | 19984-04-30 04:04 G | 9020185.47 | 9020185.67 | 9020185.90 | 0.0134 | 0.0075 |
| Neptune | 19984-05-23 19:55 G | 9020209.07 | 9020209.33 | 9020209.58 | 0.0089 | 0.0001 |
| Uranus | 19985-05-04 19:26 G | 9020555.21 | 9020555.31 | 9020555.45 | 0.0134 | 0.0116 |
| Neptune | 19985-05-26 12:57 G | 9020576.77 | 9020577.04 | 9020577.31 | 0.0089 | 0.0001 |
| Neptune | 19986-05-28 23:45 G | 9020944.24 | 9020944.49 | 9020944.74 | 0.0089 | 0.0003 |
| Neptune | 19987-05-31 12:00 G | 9021311.73 | 9021312.00 | 9021312.27 | 0.0089 | 0.0004 |
| Jupiter | 19987-12-01 01:12 G | 9021495.47 | 9021495.55 | 9021495.65 | 0.0499 | 0.0461 |
| Neptune | 19988-06-02 03:36 G | 9021679.40 | 9021679.65 | 9021679.90 | 0.0089 | 0.0006 |
| Jupiter | 19988-12-30 13:12 G | 9021890.84 | 9021891.05 | 9021891.26 | 0.0488 | 0.0195 |
| Neptune | 19989-06-04 12:00 G | 9022046.74 | 9022047.00 | 9022047.27 | 0.0089 | 0.0005 |
| Neptune | 19990-06-07 07:26 G | 9022414.56 | 9022414.81 | 9022415.07 | 0.0089 | 0.0008 |
| Neptune | 19991-06-09 13:40 G | 9022781.81 | 9022782.07 | 9022782.33 | 0.0089 | 0.0007 |
| Neptune | 19992-06-11 09:50 G | 9023149.66 | 9023149.91 | 9023150.18 | 0.0089 | 0.0012 |
| Neptune | 19993-06-13 17:16 G | 9023516.97 | 9023517.22 | 9023517.47 | 0.0089 | 0.0009 |
| Saturn | 19994-06-02 02:09 G | 9023870.35 | 9023870.59 | 9023870.83 | 0.0283 | 0.0018 |
| Jupiter | 19994-06-08 11:16 G | 9023876.80 | 9023876.97 | 9023877.16 | 0.0533 | 0.0355 |
| Neptune | 19994-06-16 11:16 G | 9023884.71 | 9023884.97 | 9023885.24 | 0.0089 | 0.0015 |
| Neptune | 19995-06-18 21:50 G | 9024252.16 | 9024252.41 | 9024252.66 | 0.0089 | 0.0011 |
| Jupiter | 19995-07-16 18:28 G | 9024280.17 | 9024280.27 | 9024280.38 | 0.0543 | 0.0477 |
| Neptune | 19996-06-20 11:02 G | 9024619.71 | 9024619.96 | 9024620.24 | 0.0089 | 0.0016 |
| Neptune | 19997-06-23 02:24 G | 9024987.35 | 9024987.60 | 9024987.85 | 0.0089 | 0.0012 |
| Neptune | 19998-06-25 11:16 G | 9025354.72 | 9025354.97 | 9025355.24 | 0.0089 | 0.0019 |
| Neptune | 19999-06-28 06:28 G | 9025722.53 | 9025722.77 | 9025723.03 | 0.0089 | 0.0015 |
| Jupiter | 19999-12-05 00:28 G | 9025882.36 | 9025882.52 | 9025882.68 | 0.0497 | 0.0353 |
| Neptune | 20000-06-29 12:57 G | 9026089.80 | 9026090.04 | 9026090.30 | 0.0090 | 0.0022 |

21ST MILLENNIUM CE

This is a list of transits of Moon in the 21st millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|------------|------------|------------|--------|--------|---|
| Jupiter | 20001-01-03 20:09 | G | 9026278.13 | 9026278.34 | 9026278.54 | 0.0487 | 0.0238 | |
| Neptune | 20001-07-02 09:36 | G | 9026457.64 | 9026457.90 | 9026458.16 | 0.0090 | 0.0016 | |
| Neptune | 20002-07-04 16:04 | G | 9026824.94 | 9026825.17 | 9026825.43 | 0.0090 | 0.0023 | |
| Neptune | 20003-07-07 10:48 | G | 9027192.69 | 9027192.95 | 9027193.22 | 0.0090 | 0.0017 | |
| Neptune | 20004-07-08 20:24 | G | 9027560.12 | 9027560.35 | 9027560.60 | 0.0090 | 0.0025 | |
| Neptune | 20005-07-11 10:33 | G | 9027927.69 | 9027927.94 | 9027928.22 | 0.0090 | 0.0020 | |
| Jupiter | 20006-06-13 21:50 | G | 9028265.20 | 9028265.41 | 9028265.62 | 0.0534 | 0.0200 | |
| Neptune | 20006-07-14 00:43 | G | 9028295.30 | 9028295.53 | 9028295.78 | 0.0090 | 0.0027 | |
| Neptune | 20007-07-16 10:33 | G | 9028662.70 | 9028662.94 | 9028663.21 | 0.0090 | 0.0021 | |
| Neptune | 20008-07-18 05:16 | G | 9029030.50 | 9029030.72 | 9029030.98 | 0.0090 | 0.0029 | |
| Saturn | 20008-11-23 14:52 | G | 9029158.98 | 9029159.12 | 9029159.27 | 0.0275 | 0.0214 | |
| Mars | 20009-03-18 18:43 | G | 9029274.12 | 9029274.28 | 9029274.43 | 0.1672 | 0.0802 | |
| Neptune | 20009-07-20 12:28 | G | 9029397.77 | 9029398.02 | 9029398.27 | 0.0090 | 0.0021 | |
| Saturn | 20009-12-06 07:55 | G | 9029536.69 | 9029536.83 | 9029536.99 | 0.0276 | 0.0211 | |
| Neptune | 20010-07-23 08:24 | G | 9029765.62 | 9029765.85 | 9029766.11 | 0.0090 | 0.0030 | |
| Neptune | 20011-07-25 14:52 | G | 9030132.88 | 9030133.12 | 9030133.38 | 0.0090 | 0.0022 | |
| Jupiter | 20011-12-09 15:36 | G | 9030269.95 | 9030270.15 | 9030270.35 | 0.0495 | 0.0232 | |
| Neptune | 20012-07-27 09:50 | G | 9030500.67 | 9030500.91 | 9030501.17 | 0.0090 | 0.0032 | |
| Jupiter | 20013-01-07 18:00 | G | 9030665.07 | 9030665.25 | 9030665.43 | 0.0486 | 0.0297 | |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 20013-07-29 18:43 G | 9030868.05 | 9030868.28 | 9030868.53 | 0.0090 | 0.0023 |
| Neptune | 20014-08-01 09:07 G | 9031235.64 | 9031235.88 | 9031236.14 | 0.0090 | 0.0032 |
| Neptune | 20015-08-03 22:19 G | 9031603.20 | 9031603.43 | 9031603.68 | 0.0090 | 0.0024 |
| Neptune | 20016-08-05 08:24 G | 9031970.61 | 9031970.85 | 9031971.11 | 0.0090 | 0.0033 |
| Neptune | 20017-08-08 02:09 G | 9032338.35 | 9032338.59 | 9032338.84 | 0.0090 | 0.0025 |
| Jupiter | 20018-06-18 21:21 G | 9032653.15 | 9032653.39 | 9032653.63 | 0.0536 | 0.0074 |
| Neptune | 20018-08-10 09:07 G | 9032705.64 | 9032705.88 | 9032706.12 | 0.0090 | 0.0034 |
| Neptune | 20019-08-13 05:02 G | 9033073.47 | 9033073.71 | 9033073.96 | 0.0090 | 0.0025 |
| Neptune | 20020-08-14 11:16 G | 9033440.74 | 9033440.97 | 9033441.21 | 0.0089 | 0.0034 |
| Neptune | 20021-08-17 06:14 G | 9033808.52 | 9033808.76 | 9033809.02 | 0.0089 | 0.0025 |
| Neptune | 20022-08-19 14:09 G | 9034175.88 | 9034176.09 | 9034176.34 | 0.0089 | 0.0035 |
| Saturn | 20023-05-27 23:16 G | 9034457.28 | 9034457.47 | 9034457.67 | 0.0284 | 0.0178 |
| Neptune | 20023-08-22 05:16 G | 9034543.48 | 9034543.72 | 9034543.99 | 0.0089 | 0.0026 |
| Jupiter | 20023-12-13 18:14 G | 9034657.04 | 9034657.26 | 9034657.49 | 0.0494 | 0.0167 |
| Neptune | 20024-08-23 17:31 G | 9034911.01 | 9034911.23 | 9034911.47 | 0.0089 | 0.0034 |
| Uranus | 20024-10-16 18:57 G | 9034965.19 | 9034965.29 | 9034965.42 | 0.0143 | 0.0127 |
| Jupiter | 20025-01-12 07:26 G | 9035052.68 | 9035052.81 | 9035052.94 | 0.0486 | 0.0398 |
| Neptune | 20025-08-26 03:50 G | 9035278.40 | 9035278.66 | 9035278.91 | 0.0089 | 0.0025 |
| Uranus | 20025-10-21 09:50 G | 9035334.68 | 9035334.91 | 9035335.16 | 0.0144 | 0.0048 |
| Neptune | 20026-08-28 20:24 G | 9035646.13 | 9035646.35 | 9035646.60 | 0.0089 | 0.0034 |
| Uranus | 20026-10-26 13:55 G | 9035704.83 | 9035705.08 | 9035705.33 | 0.0144 | 0.0009 |
| Neptune | 20027-08-31 03:07 G | 9036013.39 | 9036013.63 | 9036013.89 | 0.0089 | 0.0025 |
| Uranus | 20027-10-31 06:57 G | 9036074.58 | 9036074.79 | 9036075.01 | 0.0144 | 0.0077 |
| Neptune | 20028-09-01 22:33 G | 9036381.21 | 9036381.44 | 9036381.68 | 0.0089 | 0.0034 |
| Neptune | 20029-09-04 04:04 G | 9036748.43 | 9036748.67 | 9036748.92 | 0.0089 | 0.0025 |
| Jupiter | 20030-06-24 00:14 G | 9037041.29 | 9037041.51 | 9037041.74 | 0.0538 | 0.0009 |
| Neptune | 20030-09-06 22:33 G | 9037116.21 | 9037116.44 | 9037116.69 | 0.0089 | 0.0033 |
| Neptune | 20031-09-09 06:28 G | 9037483.53 | 9037483.77 | 9037484.01 | 0.0089 | 0.0024 |
| Neptune | 20032-09-10 21:07 G | 9037851.15 | 9037851.38 | 9037851.65 | 0.0089 | 0.0031 |
| Neptune | 20033-09-13 08:38 G | 9038218.63 | 9038218.86 | 9038219.11 | 0.0089 | 0.0023 |

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| Neptune | 20034-09-15 18:43 G | 9038586.04 | 9038586.28 | 9038586.54 | 0.0089 | 0.0031 |
| Neptune | 20035-09-18 11:02 G | 9038953.72 | 9038953.96 | 9038954.21 | 0.0089 | 0.0022 |
| Jupiter | 20035-12-18 05:31 G | 9039044.51 | 9039044.73 | 9039044.95 | 0.0492 | 0.0119 |
| Neptune | 20036-09-19 17:16 G | 9039320.98 | 9039321.22 | 9039321.47 | 0.0089 | 0.0030 |
| Neptune | 20037-09-22 11:45 G | 9039688.76 | 9039688.99 | 9039689.26 | 0.0089 | 0.0021 |
| Neptune | 20038-09-24 17:02 G | 9040055.96 | 9040056.21 | 9040056.45 | 0.0089 | 0.0028 |
| Saturn | 20038-12-01 04:04 G | 9040123.42 | 9040123.67 | 9040123.92 | 0.0275 | 0.0027 |
| Neptune | 20039-09-27 10:48 G | 9040423.71 | 9040423.95 | 9040424.22 | 0.0089 | 0.0020 |
| Neptune | 20040-09-28 18:00 G | 9040791.02 | 9040791.25 | 9040791.49 | 0.0089 | 0.0026 |
| Neptune | 20041-10-01 08:09 G | 9041158.59 | 9041158.84 | 9041159.11 | 0.0089 | 0.0019 |
| Jupiter | 20042-06-29 15:21 G | 9041429.91 | 9041430.14 | 9041430.37 | 0.0540 | 0.0100 |
| Neptune | 20042-10-03 18:57 G | 9041526.06 | 9041526.29 | 9041526.54 | 0.0089 | 0.0025 |
| Neptune | 20043-10-06 04:19 G | 9041893.43 | 9041893.68 | 9041893.95 | 0.0089 | 0.0017 |
| Neptune | 20044-10-07 20:09 G | 9042261.10 | 9042261.34 | 9042261.58 | 0.0089 | 0.0022 |
| Neptune | 20045-10-10 01:55 G | 9042628.33 | 9042628.58 | 9042628.84 | 0.0089 | 0.0015 |
| Neptune | 20046-10-12 20:09 G | 9042996.10 | 9042996.34 | 9042996.60 | 0.0089 | 0.0021 |
| Neptune | 20047-10-15 00:43 G | 9043363.28 | 9043363.53 | 9043363.78 | 0.0089 | 0.0014 |
| Jupiter | 20047-12-22 11:16 G | 9043431.73 | 9043431.97 | 9043432.21 | 0.0490 | 0.0026 |
| Neptune | 20048-10-16 18:14 G | 9043731.01 | 9043731.26 | 9043731.52 | 0.0089 | 0.0019 |
| Neptune | 20049-10-19 00:43 G | 9044098.29 | 9044098.53 | 9044098.78 | 0.0089 | 0.0012 |
| Neptune | 20050-10-21 14:24 G | 9044465.84 | 9044466.10 | 9044466.37 | 0.0089 | 0.0016 |
| Neptune | 20051-10-24 00:57 G | 9044833.30 | 9044833.54 | 9044833.79 | 0.0089 | 0.0010 |
| Neptune | 20052-10-25 09:07 G | 9045200.63 | 9045200.88 | 9045201.15 | 0.0089 | 0.0015 |
| Jupiter | 20053-05-28 11:45 G | 9045415.93 | 9045415.99 | 9045416.06 | 0.0528 | 0.0506 |
| Saturn | 20053-06-03 16:33 G | 9045421.96 | 9045422.19 | 9045422.42 | 0.0283 | 0.0082 |
| Neptune | 20053-10-28 00:28 G | 9045568.28 | 9045568.52 | 9045568.78 | 0.0089 | 0.0009 |
| Jupiter | 20054-07-04 19:40 G | 9045818.11 | 9045818.32 | 9045818.53 | 0.0541 | 0.0267 |
| Neptune | 20054-10-30 05:16 G | 9045935.48 | 9045935.72 | 9045935.99 | 0.0089 | 0.0013 |
| Neptune | 20055-11-01 23:16 G | 9046303.22 | 9046303.47 | 9046303.73 | 0.0088 | 0.0006 |
| Pluto | 20056-03-13 17:45 G | 9046435.99 | 9046436.24 | 9046436.50 | 0.0080 | 0.0004 |

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| Neptune | 20056-11-03 03:21 G | 9046670.39 | 9046670.64 | 9046670.90 | 0.0088 | 0.0009 |
| Neptune | 20057-11-05 20:09 G | 9047038.08 | 9047038.34 | 9047038.61 | 0.0088 | 0.0004 |
| Neptune | 20058-11-08 02:52 G | 9047405.38 | 9047405.62 | 9047405.87 | 0.0088 | 0.0008 |
| Neptune | 20059-11-10 15:50 G | 9047772.90 | 9047773.16 | 9047773.43 | 0.0088 | 0.0003 |
| Jupiter | 20059-12-26 13:26 G | 9047818.84 | 9047819.06 | 9047819.28 | 0.0489 | 0.0094 |
| Neptune | 20060-11-12 02:38 G | 9048140.36 | 9048140.61 | 9048140.86 | 0.0088 | 0.0005 |
| Neptune | 20061-11-14 10:04 G | 9048507.66 | 9048507.92 | 9048508.18 | 0.0088 | 0.0001 |
| Neptune | 20062-11-17 01:26 G | 9048875.31 | 9048875.56 | 9048875.81 | 0.0088 | 0.0002 |
| Neptune | 20063-11-19 05:31 G | 9049242.48 | 9049242.73 | 9049242.99 | 0.0088 | 0.0003 |
| Uranus | 20064-04-13 23:45 G | 9049389.49 | 9049389.49 | 9049389.51 | 0.0135 | 0.0135 |
| Neptune | 20064-11-20 23:02 G | 9049610.20 | 9049610.46 | 9049610.72 | 0.0088 | 0.0000 |
| Uranus | 20065-04-18 18:00 G | 9049759.07 | 9049759.25 | 9049759.45 | 0.0135 | 0.0090 |
| Jupiter | 20065-06-02 08:09 G | 9049803.72 | 9049803.84 | 9049803.97 | 0.0530 | 0.0446 |
| Neptune | 20065-11-23 02:38 G | 9049977.36 | 9049977.61 | 9049977.87 | 0.0088 | 0.0004 |
| Uranus | 20066-04-22 21:36 G | 9050128.16 | 9050128.40 | 9050128.66 | 0.0135 | 0.0031 |
| Jupiter | 20066-07-10 09:36 G | 9050206.75 | 9050206.90 | 9050207.06 | 0.0542 | 0.0392 |
| Neptune | 20066-11-25 18:43 G | 9050345.02 | 9050345.28 | 9050345.55 | 0.0088 | 0.0003 |
| Uranus | 20067-04-27 14:38 G | 9050497.87 | 9050498.11 | 9050498.36 | 0.0134 | 0.0025 |
| Saturn | 20067-11-25 22:33 G | 9050710.26 | 9050710.44 | 9050710.64 | 0.0275 | 0.0164 |
| Neptune | 20067-11-28 01:40 G | 9050712.32 | 9050712.57 | 9050712.82 | 0.0088 | 0.0007 |
| Uranus | 20068-04-30 17:31 G | 9050867.01 | 9050867.23 | 9050867.45 | 0.0134 | 0.0070 |
| Neptune | 20068-11-29 13:12 G | 9051079.79 | 9051080.05 | 9051080.32 | 0.0088 | 0.0006 |
| Saturn | 20068-12-07 15:21 G | 9051088.08 | 9051088.14 | 9051088.23 | 0.0276 | 0.0262 |
| Neptune | 20069-12-02 00:43 G | 9051447.28 | 9051447.53 | 9051447.78 | 0.0088 | 0.0009 |
| Jupiter | 20070-11-29 21:50 G | 9051810.34 | 9051810.41 | 9051810.49 | 0.0499 | 0.0470 |
| Neptune | 20070-12-04 07:12 G | 9051814.54 | 9051814.80 | 9051815.06 | 0.0088 | 0.0007 |
| Neptune | 20071-12-06 22:48 G | 9052182.21 | 9052182.45 | 9052182.71 | 0.0088 | 0.0011 |
| Jupiter | 20071-12-30 23:16 G | 9052206.25 | 9052206.47 | 9052206.70 | 0.0488 | 0.0181 |
| Neptune | 20072-12-08 02:38 G | 9052549.36 | 9052549.61 | 9052549.87 | 0.0088 | 0.0009 |
| Neptune | 20073-12-10 19:55 G | 9052917.07 | 9052917.33 | 9052917.59 | 0.0088 | 0.0013 |

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| Neptune | 20074-12-12 23:45 G | 9053284.24 | 9053284.49 | 9053284.74 | 0.0088 | 0.0012 |
| Neptune | 20075-12-15 14:52 G | 9053651.86 | 9053652.12 | 9053652.38 | 0.0088 | 0.0015 |
| Neptune | 20076-12-16 22:04 G | 9054019.18 | 9054019.42 | 9054019.67 | 0.0088 | 0.0014 |
| Jupiter | 20077-06-07 13:26 G | 9054191.91 | 9054192.06 | 9054192.23 | 0.0532 | 0.0372 |
| Neptune | 20077-12-19 08:52 G | 9054386.61 | 9054386.87 | 9054387.13 | 0.0088 | 0.0016 |
| Jupiter | 20078-07-15 11:16 G | 9054594.84 | 9054594.97 | 9054595.11 | 0.0542 | 0.0450 |
| Neptune | 20078-12-21 20:38 G | 9054754.13 | 9054754.36 | 9054754.62 | 0.0088 | 0.0016 |
| Neptune | 20079-12-24 02:09 G | 9055121.34 | 9055121.59 | 9055121.85 | 0.0088 | 0.0019 |
| Neptune | 20080-12-25 18:14 G | 9055489.02 | 9055489.26 | 9055489.51 | 0.0088 | 0.0018 |
| Neptune | 20081-12-27 21:21 G | 9055856.15 | 9055856.39 | 9055856.65 | 0.0088 | 0.0021 |
| Saturn | 20082-05-29 03:36 G | 9056008.42 | 9056008.65 | 9056008.89 | 0.0284 | 0.0116 |
| Jupiter | 20082-12-04 14:52 G | 9056197.96 | 9056198.12 | 9056198.28 | 0.0498 | 0.0354 |
| Neptune | 20082-12-30 14:24 G | 9056223.85 | 9056224.10 | 9056224.36 | 0.0088 | 0.0020 |
| Neptune | 20084-01-01 18:43 G | 9056591.04 | 9056591.28 | 9056591.53 | 0.0088 | 0.0021 |
| Jupiter | 20084-01-03 22:48 G | 9056593.25 | 9056593.45 | 9056593.66 | 0.0487 | 0.0225 |
| Neptune | 20085-01-03 09:07 G | 9056958.63 | 9056958.88 | 9056959.14 | 0.0088 | 0.0021 |
| Neptune | 20086-01-05 17:45 G | 9057326.00 | 9057326.24 | 9057326.48 | 0.0088 | 0.0023 |
| Neptune | 20087-01-08 03:21 G | 9057693.39 | 9057693.64 | 9057693.90 | 0.0088 | 0.0023 |
| Neptune | 20088-01-10 16:04 G | 9058060.94 | 9058061.17 | 9058061.42 | 0.0088 | 0.0025 |
| Mars | 20088-03-20 22:19 G | 9058131.25 | 9058131.43 | 9058131.62 | 0.1676 | 0.0504 |
| Neptune | 20089-01-11 20:38 G | 9058428.13 | 9058428.36 | 9058428.63 | 0.0088 | 0.0024 |
| Jupiter | 20089-06-12 14:52 G | 9058579.90 | 9058580.12 | 9058580.34 | 0.0534 | 0.0219 |
| Neptune | 20090-01-14 13:26 G | 9058795.82 | 9058796.06 | 9058796.31 | 0.0088 | 0.0025 |
| Neptune | 20091-01-16 16:33 G | 9059162.95 | 9059163.19 | 9059163.44 | 0.0088 | 0.0025 |
| Neptune | 20092-01-19 09:21 G | 9059530.64 | 9059530.89 | 9059531.14 | 0.0088 | 0.0026 |
| Neptune | 20093-01-20 13:55 G | 9059897.85 | 9059898.08 | 9059898.33 | 0.0088 | 0.0027 |
| Neptune | 20094-01-23 03:50 G | 9060265.41 | 9060265.66 | 9060265.92 | 0.0088 | 0.0027 |
| Jupiter | 20094-12-08 18:43 G | 9060585.07 | 9060585.28 | 9060585.49 | 0.0496 | 0.0241 |
| Neptune | 20095-01-25 12:57 G | 9060632.83 | 9060633.04 | 9060633.30 | 0.0088 | 0.0028 |
| Jupiter | 20096-01-08 11:16 G | 9060980.79 | 9060980.97 | 9060981.16 | 0.0486 | 0.0287 |

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| Neptune | 20096-01-27 21:50 G | 9061000.18 | 9061000.41 | 9061000.68 | 0.0088 | 0.0028 |
| Neptune | 20097-01-29 12:28 G | 9061367.78 | 9061368.02 | 9061368.26 | 0.0088 | 0.0028 |
| Saturn | 20097-12-02 04:48 G | 9061674.47 | 9061674.70 | 9061674.94 | 0.0275 | 0.0079 |
| Neptune | 20098-01-31 16:48 G | 9061734.97 | 9061735.20 | 9061735.46 | 0.0088 | 0.0029 |
| Neptune | 20099-02-03 09:50 G | 9062102.68 | 9062102.91 | 9062103.17 | 0.0088 | 0.0030 |
| Neptune | 20100-02-05 13:26 G | 9062469.83 | 9062470.06 | 9062470.31 | 0.0088 | 0.0029 |
| Neptune | 20101-02-08 06:00 G | 9062837.51 | 9062837.75 | 9062838.01 | 0.0088 | 0.0030 |
| Jupiter | 20101-06-18 20:09 G | 9062968.11 | 9062968.34 | 9062968.56 | 0.0536 | 0.0091 |
| Neptune | 20102-02-10 11:45 G | 9063204.76 | 9063204.99 | 9063205.23 | 0.0088 | 0.0028 |
| Neptune | 20103-02-13 00:43 G | 9063572.30 | 9063572.53 | 9063572.80 | 0.0088 | 0.0030 |
| Neptune | 20104-02-15 11:31 G | 9063939.75 | 9063939.98 | 9063940.22 | 0.0088 | 0.0029 |
| Neptune | 20105-02-16 19:55 G | 9064307.09 | 9064307.33 | 9064307.59 | 0.0088 | 0.0030 |
| Neptune | 20106-02-19 10:48 G | 9064674.73 | 9064674.95 | 9064675.20 | 0.0088 | 0.0029 |
| Jupiter | 20106-12-14 06:43 G | 9064972.57 | 9064972.78 | 9064972.99 | 0.0494 | 0.0181 |
| Neptune | 20107-02-21 15:07 G | 9065041.90 | 9065042.13 | 9065042.39 | 0.0088 | 0.0030 |
| Jupiter | 20108-01-13 08:38 G | 9065367.72 | 9065367.86 | 9065368.01 | 0.0486 | 0.0388 |
| Neptune | 20108-02-24 09:07 G | 9065409.64 | 9065409.88 | 9065410.13 | 0.0088 | 0.0027 |
| Uranus | 20108-10-18 09:36 G | 9065646.75 | 9065646.90 | 9065647.08 | 0.0143 | 0.0107 |
| Neptune | 20109-02-25 12:43 G | 9065776.81 | 9065777.03 | 9065777.29 | 0.0088 | 0.0030 |
| Uranus | 20109-10-23 00:28 G | 9066016.29 | 9066016.52 | 9066016.76 | 0.0144 | 0.0055 |
| Neptune | 20110-02-28 06:00 G | 9066144.50 | 9066144.75 | 9066145.00 | 0.0088 | 0.0027 |
| Uranus | 20110-10-28 05:02 G | 9066386.47 | 9066386.71 | 9066386.96 | 0.0144 | 0.0021 |
| Neptune | 20111-03-02 12:14 G | 9066511.79 | 9066512.01 | 9066512.26 | 0.0088 | 0.0030 |
| Uranus | 20111-11-01 21:21 G | 9066756.19 | 9066756.39 | 9066756.60 | 0.0144 | 0.0085 |
| Neptune | 20112-03-04 01:12 G | 9066879.32 | 9066879.55 | 9066879.82 | 0.0088 | 0.0027 |
| Saturn | 20112-06-06 02:09 G | 9066973.38 | 9066973.59 | 9066973.81 | 0.0283 | 0.0140 |
| Neptune | 20113-03-06 12:57 G | 9067246.82 | 9067247.04 | 9067247.29 | 0.0088 | 0.0029 |
| Jupiter | 20113-06-24 11:02 G | 9067356.72 | 9067356.96 | 9067357.20 | 0.0538 | 0.0020 |
| Neptune | 20114-03-08 21:36 G | 9067614.15 | 9067614.40 | 9067614.66 | 0.0088 | 0.0025 |
| Neptune | 20115-03-11 13:12 G | 9067981.82 | 9067982.05 | 9067982.30 | 0.0088 | 0.0028 |

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| Neptune | 20116-03-12 17:45 G | 9068349.01 | 9068349.24 | 9068349.51 | 0.0088 | 0.0025 |
| Neptune | 20117-03-15 12:00 G | 9068716.77 | 9068717.00 | 9068717.26 | 0.0088 | 0.0028 |
| Neptune | 20118-03-17 16:33 G | 9069083.95 | 9069084.19 | 9069084.44 | 0.0088 | 0.0023 |
| Jupiter | 20118-12-18 11:16 G | 9069359.74 | 9069359.97 | 9069360.21 | 0.0492 | 0.0127 |
| Neptune | 20119-03-20 09:21 G | 9069451.65 | 9069451.89 | 9069452.15 | 0.0088 | 0.0027 |
| Neptune | 20120-03-21 16:33 G | 9069818.95 | 9069819.19 | 9069819.44 | 0.0088 | 0.0021 |
| Neptune | 20121-03-24 05:45 G | 9070186.49 | 9070186.74 | 9070187.01 | 0.0088 | 0.0025 |
| Neptune | 20122-03-26 18:28 G | 9070554.03 | 9070554.27 | 9070554.52 | 0.0088 | 0.0020 |
| Neptune | 20123-03-29 02:52 G | 9070921.37 | 9070921.62 | 9070921.89 | 0.0088 | 0.0024 |
| Neptune | 20124-03-30 19:55 G | 9071289.08 | 9071289.33 | 9071289.58 | 0.0088 | 0.0019 |
| Neptune | 20125-04-02 00:57 G | 9071656.30 | 9071656.54 | 9071656.80 | 0.0088 | 0.0022 |
| Jupiter | 20125-06-29 12:28 G | 9071744.79 | 9071745.02 | 9071745.25 | 0.0539 | 0.0089 |
| Neptune | 20126-04-04 19:55 G | 9072024.07 | 9072024.33 | 9072024.58 | 0.0088 | 0.0016 |
| Saturn | 20126-11-28 03:07 G | 9072261.42 | 9072261.63 | 9072261.86 | 0.0275 | 0.0115 |
| Neptune | 20127-04-07 00:28 G | 9072391.29 | 9072391.52 | 9072391.78 | 0.0088 | 0.0021 |
| Neptune | 20128-04-08 18:00 G | 9072759.00 | 9072759.25 | 9072759.52 | 0.0088 | 0.0015 |
| Neptune | 20129-04-11 01:55 G | 9073126.34 | 9073126.58 | 9073126.83 | 0.0088 | 0.0020 |
| Neptune | 20130-04-13 15:21 G | 9073493.88 | 9073494.14 | 9073494.41 | 0.0088 | 0.0013 |
| Jupiter | 20130-12-22 16:19 G | 9073746.95 | 9073747.18 | 9073747.40 | 0.0491 | 0.0029 |
| Neptune | 20131-04-16 04:04 G | 9073861.44 | 9073861.67 | 9073861.93 | 0.0089 | 0.0018 |
| Neptune | 20132-04-17 13:40 G | 9074228.80 | 9074229.07 | 9074229.33 | 0.0089 | 0.0010 |
| Neptune | 20133-04-20 06:43 G | 9074596.54 | 9074596.78 | 9074597.04 | 0.0089 | 0.0016 |
| Neptune | 20134-04-22 12:43 G | 9074963.77 | 9074964.03 | 9074964.29 | 0.0089 | 0.0008 |
| Neptune | 20135-04-25 07:55 G | 9075331.58 | 9075331.83 | 9075332.09 | 0.0089 | 0.0015 |
| Neptune | 20136-04-26 13:40 G | 9075698.82 | 9075699.07 | 9075699.33 | 0.0089 | 0.0006 |
| Jupiter | 20136-05-28 04:04 G | 9075730.65 | 9075730.67 | 9075730.70 | 0.0527 | 0.0523 |
| Neptune | 20137-04-29 07:55 G | 9076066.57 | 9076066.83 | 9076067.10 | 0.0089 | 0.0012 |
| Jupiter | 20137-07-04 21:21 G | 9076133.18 | 9076133.39 | 9076133.59 | 0.0540 | 0.0247 |
| Neptune | 20138-05-01 16:04 G | 9076433.92 | 9076434.17 | 9076434.42 | 0.0089 | 0.0003 |
| Neptune | 20139-05-04 06:14 G | 9076801.50 | 9076801.76 | 9076802.03 | 0.0089 | 0.0009 |

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| Neptune | 20140-05-05 19:26 G | 9077169.06 | 9077169.31 | 9077169.56 | 0.0089 | 0.0001 |
| Neptune | 20141-05-08 05:31 G | 9077536.47 | 9077536.73 | 9077537.00 | 0.0089 | 0.0008 |
| Saturn | 20141-05-31 08:38 G | 9077559.63 | 9077559.86 | 9077560.10 | 0.0284 | 0.0060 |
| Neptune | 20142-05-10 22:48 G | 9077904.20 | 9077904.45 | 9077904.71 | 0.0089 | 0.0002 |
| Jupiter | 20142-12-27 04:04 G | 9078134.43 | 9078134.67 | 9078134.90 | 0.0490 | 0.0092 |
| Neptune | 20143-05-13 05:16 G | 9078271.46 | 9078271.72 | 9078271.98 | 0.0089 | 0.0005 |
| Neptune | 20144-05-15 00:57 G | 9078639.28 | 9078639.54 | 9078639.80 | 0.0089 | 0.0005 |
| Neptune | 20145-05-17 06:57 G | 9079006.53 | 9079006.79 | 9079007.04 | 0.0089 | 0.0003 |
| Neptune | 20146-05-20 01:40 G | 9079374.31 | 9079374.57 | 9079374.84 | 0.0089 | 0.0007 |
| Neptune | 20147-05-22 09:50 G | 9079741.66 | 9079741.91 | 9079742.16 | 0.0089 | 0.0001 |
| Neptune | 20148-05-24 01:26 G | 9080109.29 | 9080109.56 | 9080109.82 | 0.0089 | 0.0009 |
| Jupiter | 20148-06-02 12:28 G | 9080118.92 | 9080119.02 | 9080119.12 | 0.0529 | 0.0471 |
| Uranus | 20149-04-20 08:09 G | 9080440.64 | 9080440.84 | 9080441.06 | 0.0135 | 0.0077 |
| Neptune | 20149-05-26 14:24 G | 9080476.85 | 9080477.10 | 9080477.35 | 0.0089 | 0.0002 |
| Jupiter | 20149-07-10 01:55 G | 9080521.40 | 9080521.58 | 9080521.76 | 0.0541 | 0.0365 |
| Uranus | 20150-04-24 11:45 G | 9080809.74 | 9080809.99 | 9080810.24 | 0.0135 | 0.0028 |
| Neptune | 20150-05-29 01:12 G | 9080844.29 | 9080844.55 | 9080844.82 | 0.0089 | 0.0012 |
| Uranus | 20151-04-29 05:02 G | 9081179.47 | 9081179.71 | 9081179.97 | 0.0134 | 0.0025 |
| Neptune | 20151-05-31 18:43 G | 9081212.03 | 9081212.28 | 9081212.54 | 0.0089 | 0.0004 |
| Uranus | 20152-05-02 07:26 G | 9081548.62 | 9081548.81 | 9081549.02 | 0.0134 | 0.0086 |
| Neptune | 20152-06-02 01:40 G | 9081579.32 | 9081579.57 | 9081579.84 | 0.0089 | 0.0015 |
| Uranus | 20153-05-06 23:45 G | 9081918.42 | 9081918.49 | 9081918.57 | 0.0134 | 0.0127 |
| Neptune | 20153-06-04 21:36 G | 9081947.15 | 9081947.40 | 9081947.66 | 0.0089 | 0.0006 |
| Jupiter | 20153-11-30 13:55 G | 9082126.02 | 9082126.08 | 9082126.15 | 0.0500 | 0.0476 |
| Neptune | 20154-06-07 03:36 G | 9082314.40 | 9082314.65 | 9082314.91 | 0.0089 | 0.0017 |
| Jupiter | 20154-12-31 03:07 G | 9082521.41 | 9082521.63 | 9082521.85 | 0.0489 | 0.0169 |
| Neptune | 20155-06-09 22:48 G | 9082682.20 | 9082682.45 | 9082682.72 | 0.0089 | 0.0009 |
| Neptune | 20156-06-11 06:28 G | 9083049.54 | 9083049.77 | 9083050.03 | 0.0089 | 0.0020 |
| Saturn | 20156-12-04 09:21 G | 9083225.69 | 9083225.89 | 9083226.11 | 0.0275 | 0.0126 |
| Neptune | 20157-06-13 22:48 G | 9083417.19 | 9083417.45 | 9083417.72 | 0.0089 | 0.0011 |

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| Neptune | 20158-06-16 11:02 G | 9083784.72 | 9083784.96 | 9083785.21 | 0.0089 | 0.0020 |
| Neptune | 20159-06-18 23:02 G | 9084152.20 | 9084152.46 | 9084152.73 | 0.0089 | 0.0013 |
| Jupiter | 20160-06-07 12:00 G | 9084506.83 | 9084507.00 | 9084507.17 | 0.0531 | 0.0382 |
| Neptune | 20160-06-20 16:19 G | 9084519.94 | 9084520.18 | 9084520.43 | 0.0089 | 0.0023 |
| Neptune | 20161-06-23 00:00 G | 9084887.25 | 9084887.50 | 9084887.77 | 0.0089 | 0.0015 |
| Jupiter | 20161-07-15 11:02 G | 9084909.82 | 9084909.96 | 9084910.09 | 0.0543 | 0.0431 |
| Neptune | 20162-06-25 19:55 G | 9085255.09 | 9085255.33 | 9085255.59 | 0.0089 | 0.0025 |
| Neptune | 20163-06-28 02:24 G | 9085622.35 | 9085622.60 | 9085622.85 | 0.0089 | 0.0017 |
| Neptune | 20164-06-29 22:04 G | 9085990.18 | 9085990.42 | 9085990.68 | 0.0090 | 0.0026 |
| Neptune | 20165-07-02 05:45 G | 9086357.50 | 9086357.74 | 9086357.99 | 0.0090 | 0.0019 |
| Jupiter | 20165-12-04 19:12 G | 9086513.13 | 9086513.30 | 9086513.47 | 0.0498 | 0.0351 |
| Neptune | 20166-07-04 22:04 G | 9086725.19 | 9086725.42 | 9086725.70 | 0.0090 | 0.0028 |
| Jupiter | 20167-01-04 16:33 G | 9086908.99 | 9086909.19 | 9086909.40 | 0.0487 | 0.0213 |
| Neptune | 20167-07-07 09:36 G | 9087092.67 | 9087092.90 | 9087093.16 | 0.0090 | 0.0022 |
| Neptune | 20168-07-08 22:33 G | 9087460.20 | 9087460.44 | 9087460.70 | 0.0090 | 0.0029 |
| Neptune | 20169-07-11 14:38 G | 9087827.88 | 9087828.11 | 9087828.37 | 0.0090 | 0.0023 |
| Saturn | 20170-05-25 15:36 G | 9088146.11 | 9088146.15 | 9088146.21 | 0.0284 | 0.0278 |
| Neptune | 20170-07-13 23:02 G | 9088195.23 | 9088195.46 | 9088195.73 | 0.0090 | 0.0030 |
| Saturn | 20171-06-08 04:48 G | 9088524.53 | 9088524.70 | 9088524.90 | 0.0283 | 0.0197 |
| Neptune | 20171-07-16 18:43 G | 9088563.04 | 9088563.28 | 9088563.54 | 0.0090 | 0.0024 |
| Jupiter | 20172-06-12 19:40 G | 9088895.12 | 9088895.32 | 9088895.52 | 0.0534 | 0.0228 |
| Neptune | 20172-07-18 01:12 G | 9088930.31 | 9088930.55 | 9088930.79 | 0.0090 | 0.0031 |
| Neptune | 20173-07-20 21:21 G | 9089298.15 | 9089298.39 | 9089298.65 | 0.0090 | 0.0026 |
| Neptune | 20174-07-23 04:19 G | 9089665.45 | 9089665.68 | 9089665.93 | 0.0090 | 0.0032 |
| Neptune | 20175-07-25 21:50 G | 9090033.17 | 9090033.41 | 9090033.68 | 0.0090 | 0.0027 |
| Neptune | 20176-07-27 08:24 G | 9090400.63 | 9090400.85 | 9090401.10 | 0.0090 | 0.0032 |
| Neptune | 20177-07-29 22:04 G | 9090768.16 | 9090768.42 | 9090768.67 | 0.0090 | 0.0027 |
| Jupiter | 20177-12-09 06:00 G | 9090900.56 | 9090900.75 | 9090900.94 | 0.0496 | 0.0249 |
| Neptune | 20178-08-01 13:12 G | 9091135.83 | 9091136.05 | 9091136.30 | 0.0090 | 0.0032 |
| Jupiter | 20179-01-08 12:28 G | 9091295.83 | 9091296.02 | 9091296.22 | 0.0487 | 0.0279 |

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| Neptune | 20179-08-03 22:04 G | 9091503.18 | 9091503.42 | 9091503.68 | 0.0090 | 0.0029 |
| Neptune | 20180-08-05 16:48 G | 9091870.98 | 9091871.20 | 9091871.45 | 0.0090 | 0.0033 |
| Neptune | 20181-08-07 23:02 G | 9092238.22 | 9092238.46 | 9092238.71 | 0.0090 | 0.0029 |
| Neptune | 20182-08-10 19:12 G | 9092606.05 | 9092606.30 | 9092606.54 | 0.0090 | 0.0031 |
| Neptune | 20183-08-13 01:40 G | 9092973.33 | 9092973.57 | 9092973.81 | 0.0090 | 0.0029 |
| Jupiter | 20184-06-18 07:12 G | 9093283.56 | 9093283.80 | 9093284.03 | 0.0535 | 0.0104 |
| Neptune | 20184-08-14 18:57 G | 9093341.06 | 9093341.29 | 9093341.56 | 0.0090 | 0.0032 |
| Neptune | 20185-08-17 05:02 G | 9093708.47 | 9093708.71 | 9093708.94 | 0.0090 | 0.0030 |
| Saturn | 20185-11-29 01:12 G | 9093812.31 | 9093812.55 | 9093812.80 | 0.0275 | 0.0070 |
| Neptune | 20186-08-19 18:14 G | 9094076.03 | 9094076.26 | 9094076.53 | 0.0089 | 0.0032 |
| Neptune | 20187-08-22 09:07 G | 9094443.66 | 9094443.88 | 9094444.13 | 0.0089 | 0.0030 |
| Neptune | 20188-08-23 18:14 G | 9094811.02 | 9094811.26 | 9094811.52 | 0.0089 | 0.0030 |
| Neptune | 20189-08-26 12:14 G | 9095178.79 | 9095179.01 | 9095179.27 | 0.0089 | 0.0030 |
| Jupiter | 20189-12-13 13:40 G | 9095287.85 | 9095288.07 | 9095288.29 | 0.0494 | 0.0191 |
| Neptune | 20190-08-28 18:14 G | 9095546.02 | 9095546.26 | 9095546.51 | 0.0089 | 0.0029 |
| Jupiter | 20191-01-12 23:16 G | 9095683.34 | 9095683.47 | 9095683.61 | 0.0486 | 0.0391 |
| Neptune | 20191-08-31 13:40 G | 9095913.84 | 9095914.07 | 9095914.33 | 0.0089 | 0.0030 |
| Neptune | 20192-09-01 19:26 G | 9096281.09 | 9096281.31 | 9096281.56 | 0.0089 | 0.0029 |
| Uranus | 20192-10-18 23:31 G | 9096328.35 | 9096328.48 | 9096328.64 | 0.0143 | 0.0117 |
| Neptune | 20193-09-04 12:57 G | 9096648.80 | 9096649.04 | 9096649.30 | 0.0089 | 0.0029 |
| Uranus | 20193-10-23 13:55 G | 9096697.83 | 9096698.08 | 9096698.32 | 0.0144 | 0.0036 |
| Neptune | 20194-09-06 21:36 G | 9097016.17 | 9097016.40 | 9097016.65 | 0.0089 | 0.0027 |
| Uranus | 20194-10-28 18:14 G | 9097068.02 | 9097068.26 | 9097068.51 | 0.0144 | 0.0020 |
| Neptune | 20195-09-09 11:02 G | 9097383.72 | 9097383.96 | 9097384.23 | 0.0089 | 0.0027 |
| Uranus | 20195-11-02 09:50 G | 9097437.72 | 9097437.91 | 9097438.12 | 0.0144 | 0.0090 |
| Jupiter | 20196-06-23 02:38 G | 9097671.37 | 9097671.61 | 9097671.84 | 0.0537 | 0.0046 |
| Neptune | 20196-09-11 00:43 G | 9097751.30 | 9097751.53 | 9097751.78 | 0.0089 | 0.0026 |
| Neptune | 20197-09-13 09:36 G | 9098118.66 | 9098118.90 | 9098119.16 | 0.0089 | 0.0027 |
| Neptune | 20198-09-16 03:21 G | 9098486.41 | 9098486.64 | 9098486.89 | 0.0089 | 0.0024 |
| Neptune | 20199-09-18 09:07 G | 9098853.64 | 9098853.88 | 9098854.13 | 0.0089 | 0.0025 |

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| Saturn | 20200-06-02 16:33 G | 9099110.95 | 9099111.19 | 9099111.43 | 0.0285 | 0.0002 |
| Neptune | 20200-09-21 04:19 G | 9099221.43 | 9099221.68 | 9099221.93 | 0.0089 | 0.0021 |
| Neptune | 20201-09-23 09:21 G | 9099588.66 | 9099588.89 | 9099589.15 | 0.0089 | 0.0024 |
| Jupiter | 20201-12-18 19:12 G | 9099675.08 | 9099675.30 | 9099675.51 | 0.0493 | 0.0138 |
| Neptune | 20202-09-26 02:38 G | 9099956.37 | 9099956.61 | 9099956.88 | 0.0089 | 0.0020 |
| Jupiter | 20203-01-18 02:09 G | 9100070.59 | 9100070.59 | 9100070.61 | 0.0486 | 0.0485 |
| Neptune | 20203-09-28 10:48 G | 9100323.71 | 9100323.95 | 9100324.20 | 0.0089 | 0.0023 |
| Neptune | 20204-09-29 23:45 G | 9100691.23 | 9100691.49 | 9100691.75 | 0.0089 | 0.0018 |
| Neptune | 20205-10-02 12:28 G | 9101058.79 | 9101059.02 | 9101059.27 | 0.0089 | 0.0021 |
| Neptune | 20206-10-04 20:52 G | 9101426.12 | 9101426.37 | 9101426.64 | 0.0089 | 0.0016 |
| Neptune | 20207-10-07 14:09 G | 9101793.84 | 9101794.09 | 9101794.34 | 0.0089 | 0.0019 |
| Jupiter | 20208-06-29 15:36 G | 9102059.93 | 9102060.15 | 9102060.38 | 0.0538 | 0.0069 |
| Neptune | 20208-10-08 18:57 G | 9102161.04 | 9102161.29 | 9102161.55 | 0.0089 | 0.0014 |
| Neptune | 20209-10-11 13:26 G | 9102528.82 | 9102529.06 | 9102529.32 | 0.0089 | 0.0019 |
| Neptune | 20210-10-13 18:28 G | 9102896.03 | 9102896.27 | 9102896.53 | 0.0089 | 0.0012 |
| Neptune | 20211-10-16 11:31 G | 9103263.72 | 9103263.98 | 9103264.24 | 0.0089 | 0.0016 |
| Neptune | 20212-10-17 18:57 G | 9103631.05 | 9103631.29 | 9103631.54 | 0.0089 | 0.0009 |
| Neptune | 20213-10-20 07:12 G | 9103998.55 | 9103998.80 | 9103999.07 | 0.0089 | 0.0014 |
| Jupiter | 20213-12-23 07:55 G | 9104062.59 | 9104062.83 | 9104063.06 | 0.0492 | 0.0029 |
| Pluto | 20214-09-17 17:02 G | 9104330.96 | 9104331.21 | 9104331.47 | 0.0064 | 0.0016 |
| Neptune | 20214-10-22 20:09 G | 9104366.10 | 9104366.34 | 9104366.59 | 0.0089 | 0.0007 |
| Saturn | 20214-11-24 22:04 G | 9104399.32 | 9104399.42 | 9104399.52 | 0.0274 | 0.0245 |
| Neptune | 20215-10-25 03:50 G | 9104733.40 | 9104733.66 | 9104733.92 | 0.0089 | 0.0012 |
| Saturn | 20215-12-07 13:55 G | 9104776.90 | 9104777.08 | 9104777.27 | 0.0275 | 0.0170 |
| Neptune | 20216-10-26 20:38 G | 9105101.10 | 9105101.36 | 9105101.61 | 0.0089 | 0.0005 |
| Neptune | 20217-10-29 00:43 G | 9105468.28 | 9105468.53 | 9105468.79 | 0.0089 | 0.0010 |
| Neptune | 20218-10-31 18:43 G | 9105836.03 | 9105836.28 | 9105836.54 | 0.0089 | 0.0002 |
| Neptune | 20219-11-02 23:16 G | 9106203.22 | 9106203.47 | 9106203.72 | 0.0089 | 0.0007 |
| Jupiter | 20220-07-04 19:26 G | 9106448.09 | 9106448.31 | 9106448.53 | 0.0540 | 0.0229 |
| Neptune | 20220-11-04 15:07 G | 9106570.86 | 9106571.13 | 9106571.39 | 0.0088 | 0.0001 |

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| Neptune | 20221-11-06 22:33 G | 9106938.19 | 9106938.44 | 9106938.69 | 0.0088 | 0.0005 |
| Neptune | 20222-11-09 09:50 G | 9107305.65 | 9107305.91 | 9107306.18 | 0.0088 | 0.0003 |
| Neptune | 20223-11-11 22:33 G | 9107673.19 | 9107673.44 | 9107673.69 | 0.0088 | 0.0003 |
| Neptune | 20224-11-13 05:31 G | 9108040.47 | 9108040.73 | 9108040.99 | 0.0088 | 0.0006 |
| Neptune | 20225-11-15 22:04 G | 9108408.17 | 9108408.42 | 9108408.67 | 0.0088 | 0.0000 |
| Jupiter | 20225-12-27 07:55 G | 9108449.60 | 9108449.83 | 9108450.06 | 0.0490 | 0.0089 |
| Neptune | 20226-11-18 01:55 G | 9108775.33 | 9108775.58 | 9108775.84 | 0.0088 | 0.0008 |
| Neptune | 20227-11-20 19:26 G | 9109143.05 | 9109143.31 | 9109143.57 | 0.0088 | 0.0002 |
| Neptune | 20228-11-21 23:45 G | 9109510.24 | 9109510.49 | 9109510.74 | 0.0088 | 0.0010 |
| Saturn | 20229-05-27 15:50 G | 9109696.99 | 9109697.16 | 9109697.32 | 0.0285 | 0.0218 |
| Neptune | 20229-11-24 14:38 G | 9109877.85 | 9109878.11 | 9109878.38 | 0.0088 | 0.0004 |
| Saturn | 20230-06-10 05:45 G | 9110075.65 | 9110075.74 | 9110075.86 | 0.0283 | 0.0254 |
| Neptune | 20230-11-26 22:04 G | 9110245.19 | 9110245.42 | 9110245.68 | 0.0088 | 0.0014 |
| Jupiter | 20231-06-03 13:40 G | 9110433.98 | 9110434.07 | 9110434.17 | 0.0529 | 0.0483 |
| Neptune | 20231-11-29 08:24 G | 9110612.58 | 9110612.85 | 9110613.11 | 0.0088 | 0.0006 |
| Uranus | 20232-04-17 02:52 G | 9110752.55 | 9110752.62 | 9110752.73 | 0.0135 | 0.0127 |
| Jupiter | 20232-07-10 07:55 G | 9110836.66 | 9110836.83 | 9110837.00 | 0.0541 | 0.0348 |
| Neptune | 20232-11-30 21:07 G | 9110980.14 | 9110980.38 | 9110980.63 | 0.0088 | 0.0015 |
| Uranus | 20233-04-21 21:21 G | 9111122.19 | 9111122.39 | 9111122.60 | 0.0135 | 0.0081 |
| Neptune | 20233-12-03 03:07 G | 9111347.37 | 9111347.63 | 9111347.89 | 0.0088 | 0.0008 |
| Uranus | 20234-04-26 00:43 G | 9111491.28 | 9111491.53 | 9111491.79 | 0.0135 | 0.0020 |
| Neptune | 20234-12-05 19:26 G | 9111715.07 | 9111715.31 | 9111715.57 | 0.0088 | 0.0017 |
| Uranus | 20235-04-30 17:45 G | 9111861.00 | 9111861.24 | 9111861.50 | 0.0135 | 0.0035 |
| Neptune | 20235-12-07 23:02 G | 9112082.21 | 9112082.46 | 9112082.72 | 0.0088 | 0.0010 |
| Uranus | 20236-05-03 20:24 G | 9112230.15 | 9112230.35 | 9112230.56 | 0.0134 | 0.0082 |
| Jupiter | 20236-11-30 17:02 G | 9112441.15 | 9112441.21 | 9112441.29 | 0.0500 | 0.0476 |
| Neptune | 20236-12-09 16:04 G | 9112449.93 | 9112450.17 | 9112450.43 | 0.0088 | 0.0020 |
| Neptune | 20237-12-11 21:07 G | 9112817.13 | 9112817.38 | 9112817.63 | 0.0088 | 0.0012 |
| Jupiter | 20237-12-31 20:09 G | 9112837.13 | 9112837.34 | 9112837.56 | 0.0489 | 0.0159 |
| Neptune | 20238-12-14 11:02 G | 9113184.71 | 9113184.96 | 9113185.23 | 0.0088 | 0.0021 |

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| Neptune | 20239-12-16 19:26 G | 9113552.07 | 9113552.31 | 9113552.56 | 0.0088 | 0.0014 |
| Neptune | 20240-12-18 04:04 G | 9113919.43 | 9113919.67 | 9113919.94 | 0.0088 | 0.0023 |
| Neptune | 20241-12-20 18:00 G | 9114287.01 | 9114287.25 | 9114287.50 | 0.0088 | 0.0016 |
| Neptune | 20242-12-22 22:48 G | 9114654.21 | 9114654.45 | 9114654.71 | 0.0088 | 0.0025 |
| Jupiter | 20243-06-08 20:24 G | 9114822.21 | 9114822.35 | 9114822.51 | 0.0531 | 0.0389 |
| Neptune | 20243-12-25 15:36 G | 9115021.91 | 9115022.15 | 9115022.41 | 0.0088 | 0.0018 |
| Jupiter | 20244-07-15 23:16 G | 9115225.32 | 9115225.47 | 9115225.62 | 0.0542 | 0.0411 |
| Saturn | 20244-11-30 20:24 G | 9115363.10 | 9115363.35 | 9115363.60 | 0.0275 | 0.0023 |
| Neptune | 20244-12-26 18:43 G | 9115389.04 | 9115389.28 | 9115389.53 | 0.0088 | 0.0027 |
| Neptune | 20245-12-29 11:31 G | 9115756.73 | 9115756.98 | 9115757.24 | 0.0088 | 0.0019 |
| Neptune | 20246-12-31 16:33 G | 9116123.96 | 9116124.19 | 9116124.44 | 0.0088 | 0.0028 |
| Neptune | 20248-01-03 05:31 G | 9116491.48 | 9116491.73 | 9116492.00 | 0.0088 | 0.0021 |
| Jupiter | 20248-12-05 06:14 G | 9116828.61 | 9116828.76 | 9116828.92 | 0.0498 | 0.0354 |
| Neptune | 20249-01-04 14:52 G | 9116858.90 | 9116859.12 | 9116859.36 | 0.0088 | 0.0030 |
| Jupiter | 20250-01-04 18:57 G | 9117224.08 | 9117224.29 | 9117224.51 | 0.0488 | 0.0205 |
| Neptune | 20250-01-06 23:02 G | 9117226.21 | 9117226.46 | 9117226.73 | 0.0088 | 0.0022 |
| Neptune | 20251-01-09 13:26 G | 9117593.83 | 9117594.06 | 9117594.30 | 0.0088 | 0.0031 |
| Neptune | 20252-01-11 17:45 G | 9117961.00 | 9117961.24 | 9117961.50 | 0.0088 | 0.0023 |
| Neptune | 20253-01-13 11:02 G | 9118328.73 | 9118328.96 | 9118329.21 | 0.0088 | 0.0032 |
| Neptune | 20254-01-15 14:09 G | 9118695.86 | 9118696.09 | 9118696.35 | 0.0088 | 0.0024 |
| Neptune | 20255-01-18 06:43 G | 9119063.54 | 9119063.78 | 9119064.03 | 0.0088 | 0.0033 |
| Jupiter | 20255-06-14 00:57 G | 9119210.33 | 9119210.54 | 9119210.76 | 0.0532 | 0.0240 |
| Neptune | 20256-01-20 12:28 G | 9119430.79 | 9119431.02 | 9119431.26 | 0.0088 | 0.0025 |
| Jupiter | 20256-07-20 19:40 G | 9119613.28 | 9119613.32 | 9119613.39 | 0.0543 | 0.0528 |
| Neptune | 20257-01-22 00:57 G | 9119798.29 | 9119798.54 | 9119798.79 | 0.0088 | 0.0033 |
| Neptune | 20258-01-24 11:02 G | 9120165.72 | 9120165.96 | 9120166.20 | 0.0088 | 0.0025 |
| Neptune | 20259-01-26 17:45 G | 9120533.01 | 9120533.24 | 9120533.50 | 0.0088 | 0.0034 |
| Saturn | 20259-06-04 22:33 G | 9120662.20 | 9120662.44 | 9120662.68 | 0.0285 | 0.0054 |
| Neptune | 20260-01-29 09:07 G | 9120900.65 | 9120900.88 | 9120901.13 | 0.0088 | 0.0026 |
| Jupiter | 20260-12-09 14:09 G | 9121215.89 | 9121216.09 | 9121216.30 | 0.0497 | 0.0259 |

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| Neptune | 20261-01-30 13:12 G | 9121267.82 | 9121268.05 | 9121268.30 | 0.0088 | 0.0035 |
| Jupiter | 20262-01-09 05:31 G | 9121611.55 | 9121611.73 | 9121611.92 | 0.0487 | 0.0277 |
| Neptune | 20262-02-02 06:28 G | 9121635.53 | 9121635.77 | 9121636.03 | 0.0088 | 0.0026 |
| Neptune | 20263-02-04 10:19 G | 9122002.71 | 9122002.93 | 9122003.17 | 0.0088 | 0.0035 |
| Neptune | 20264-02-07 02:24 G | 9122370.36 | 9122370.60 | 9122370.87 | 0.0088 | 0.0026 |
| Neptune | 20265-02-08 09:07 G | 9122737.67 | 9122737.88 | 9122738.13 | 0.0088 | 0.0035 |
| Neptune | 20266-02-10 21:21 G | 9123105.14 | 9123105.39 | 9123105.65 | 0.0088 | 0.0026 |
| Neptune | 20267-02-13 08:09 G | 9123472.63 | 9123472.84 | 9123473.08 | 0.0088 | 0.0035 |
| Jupiter | 20267-06-18 23:16 G | 9123598.25 | 9123598.47 | 9123598.70 | 0.0534 | 0.0127 |
| Mars | 20267-09-21 17:02 G | 9123693.01 | 9123693.21 | 9123693.41 | 0.1872 | 0.0553 |
| Neptune | 20268-02-15 14:52 G | 9123839.88 | 9123840.12 | 9123840.39 | 0.0088 | 0.0026 |
| Neptune | 20269-02-17 07:12 G | 9124207.57 | 9124207.80 | 9124208.03 | 0.0088 | 0.0034 |
| Neptune | 20270-02-19 10:48 G | 9124574.72 | 9124574.95 | 9124575.21 | 0.0088 | 0.0025 |
| Neptune | 20271-02-22 04:19 G | 9124942.46 | 9124942.68 | 9124942.94 | 0.0088 | 0.0034 |
| Neptune | 20272-02-24 08:38 G | 9125309.63 | 9125309.86 | 9125310.12 | 0.0088 | 0.0025 |
| Jupiter | 20272-12-13 21:21 G | 9125603.19 | 9125603.39 | 9125603.60 | 0.0495 | 0.0209 |
| Neptune | 20273-02-26 00:57 G | 9125677.30 | 9125677.54 | 9125677.79 | 0.0088 | 0.0033 |
| Saturn | 20273-11-26 02:52 G | 9125950.45 | 9125950.62 | 9125950.79 | 0.0274 | 0.0196 |
| Jupiter | 20274-01-13 08:52 G | 9125998.73 | 9125998.87 | 9125999.02 | 0.0486 | 0.0387 |
| Neptune | 20274-02-28 08:38 G | 9126044.63 | 9126044.86 | 9126045.11 | 0.0088 | 0.0024 |
| Saturn | 20274-12-08 13:55 G | 9126327.93 | 9126328.08 | 9126328.24 | 0.0275 | 0.0214 |
| Neptune | 20275-03-02 19:55 G | 9126412.10 | 9126412.33 | 9126412.60 | 0.0088 | 0.0032 |
| Neptune | 20276-03-04 08:38 G | 9126779.63 | 9126779.86 | 9126780.11 | 0.0088 | 0.0023 |
| Uranus | 20276-10-20 12:57 G | 9127009.87 | 9127010.04 | 9127010.24 | 0.0143 | 0.0096 |
| Neptune | 20277-03-06 15:21 G | 9127146.90 | 9127147.14 | 9127147.40 | 0.0088 | 0.0031 |
| Uranus | 20277-10-25 03:21 G | 9127379.41 | 9127379.64 | 9127379.89 | 0.0144 | 0.0046 |
| Neptune | 20278-03-09 08:09 G | 9127514.60 | 9127514.84 | 9127515.09 | 0.0088 | 0.0022 |
| Uranus | 20278-10-30 08:24 G | 9127749.62 | 9127749.85 | 9127750.11 | 0.0144 | 0.0033 |
| Neptune | 20279-03-11 12:28 G | 9127881.78 | 9127882.02 | 9127882.27 | 0.0088 | 0.0030 |
| Jupiter | 20279-06-24 12:14 G | 9127986.78 | 9127987.01 | 9127987.24 | 0.0536 | 0.0065 |

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| Uranus | 20279-11-04 00:00 G | 9128119.31 | 9128119.50 | 9128119.70 | 0.0144 | 0.0095 |
| Neptune | 20280-03-13 06:43 G | 9128249.53 | 9128249.78 | 9128250.03 | 0.0088 | 0.0020 |
| Neptune | 20281-03-15 11:31 G | 9128616.74 | 9128616.98 | 9128617.22 | 0.0088 | 0.0028 |
| Neptune | 20282-03-18 03:36 G | 9128984.40 | 9128984.65 | 9128984.92 | 0.0088 | 0.0019 |
| Neptune | 20283-03-20 12:00 G | 9129351.78 | 9129352.00 | 9129352.25 | 0.0088 | 0.0027 |
| Neptune | 20284-03-21 23:45 G | 9129719.24 | 9129719.49 | 9129719.76 | 0.0088 | 0.0018 |
| Jupiter | 20284-12-18 11:31 G | 9129990.76 | 9129990.98 | 9129991.21 | 0.0493 | 0.0144 |
| Neptune | 20285-03-24 13:12 G | 9130086.81 | 9130087.05 | 9130087.29 | 0.0088 | 0.0025 |
| Jupiter | 20286-01-17 12:28 G | 9130385.99 | 9130386.02 | 9130386.06 | 0.0485 | 0.0479 |
| Neptune | 20286-03-26 19:40 G | 9130454.07 | 9130454.32 | 9130454.59 | 0.0088 | 0.0016 |
| Neptune | 20287-03-29 13:26 G | 9130821.82 | 9130822.06 | 9130822.31 | 0.0088 | 0.0023 |
| Neptune | 20288-03-30 18:14 G | 9131189.01 | 9131189.26 | 9131189.52 | 0.0088 | 0.0014 |
| Saturn | 20288-05-28 15:36 G | 9131247.96 | 9131248.15 | 9131248.36 | 0.0285 | 0.0163 |
| Neptune | 20289-04-02 12:57 G | 9131556.79 | 9131557.04 | 9131557.30 | 0.0088 | 0.0021 |
| Neptune | 20290-04-04 18:43 G | 9131924.03 | 9131924.28 | 9131924.53 | 0.0088 | 0.0013 |
| Neptune | 20291-04-07 11:02 G | 9132291.71 | 9132291.96 | 9132292.23 | 0.0088 | 0.0019 |
| Jupiter | 20291-06-29 16:33 G | 9132374.95 | 9132375.19 | 9132375.43 | 0.0538 | 0.0056 |
| Neptune | 20292-04-08 20:38 G | 9132659.11 | 9132659.36 | 9132659.61 | 0.0088 | 0.0010 |
| Mars | 20293-03-22 04:33 G | 9133006.50 | 9133006.69 | 9133006.88 | 0.1667 | 0.0056 |
| Neptune | 20293-04-11 08:38 G | 9133026.60 | 9133026.86 | 9133027.13 | 0.0088 | 0.0017 |
| Neptune | 20294-04-13 22:19 G | 9133394.18 | 9133394.43 | 9133394.69 | 0.0088 | 0.0008 |
| Neptune | 20295-04-16 05:45 G | 9133761.48 | 9133761.74 | 9133762.00 | 0.0088 | 0.0015 |
| Neptune | 20296-04-17 23:31 G | 9134129.23 | 9134129.48 | 9134129.74 | 0.0089 | 0.0007 |
| Jupiter | 20296-12-22 10:48 G | 9134377.72 | 9134377.95 | 9134378.19 | 0.0492 | 0.0032 |
| Neptune | 20297-04-20 04:33 G | 9134496.44 | 9134496.69 | 9134496.95 | 0.0089 | 0.0013 |
| Neptune | 20298-04-22 23:45 G | 9134864.23 | 9134864.49 | 9134864.75 | 0.0089 | 0.0004 |
| Neptune | 20299-04-25 05:31 G | 9135231.48 | 9135231.73 | 9135231.99 | 0.0089 | 0.0009 |
| Neptune | 20300-04-27 23:02 G | 9135599.19 | 9135599.46 | 9135599.72 | 0.0089 | 0.0002 |
| Neptune | 20301-04-30 08:52 G | 9135966.62 | 9135966.87 | 9135967.12 | 0.0089 | 0.0007 |
| Neptune | 20302-05-02 21:36 G | 9136334.13 | 9136334.40 | 9136334.67 | 0.0089 | 0.0001 |

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| Pluto | 20303-03-18 12:57 G | 9136653.85 | 9136654.04 | 9136654.27 | 0.0080 | 0.0048 |
| Neptune | 20303-05-05 12:00 G | 9136701.75 | 9136702.00 | 9136702.25 | 0.0089 | 0.0005 |
| Jupiter | 20303-07-06 04:33 G | 9136763.49 | 9136763.69 | 9136763.90 | 0.0540 | 0.0223 |
| Saturn | 20303-12-03 19:55 G | 9136914.09 | 9136914.33 | 9136914.57 | 0.0275 | 0.0021 |
| Neptune | 20304-05-06 20:09 G | 9137069.07 | 9137069.34 | 9137069.60 | 0.0089 | 0.0003 |
| Neptune | 20305-05-09 14:24 G | 9137436.84 | 9137437.10 | 9137437.35 | 0.0089 | 0.0002 |
| Neptune | 20306-05-11 19:55 G | 9137804.07 | 9137804.33 | 9137804.59 | 0.0089 | 0.0006 |
| Neptune | 20307-05-14 15:36 G | 9138171.89 | 9138172.15 | 9138172.41 | 0.0089 | 0.0001 |
| Neptune | 20308-05-15 21:36 G | 9138539.15 | 9138539.40 | 9138539.66 | 0.0089 | 0.0007 |
| Jupiter | 20308-12-28 01:12 G | 9138765.33 | 9138765.55 | 9138765.78 | 0.0490 | 0.0084 |
| Neptune | 20309-05-18 15:36 G | 9138906.88 | 9138907.15 | 9138907.42 | 0.0089 | 0.0004 |
| Neptune | 20310-05-21 01:12 G | 9139274.30 | 9139274.55 | 9139274.80 | 0.0089 | 0.0009 |
| Neptune | 20311-05-23 15:07 G | 9139641.86 | 9139642.13 | 9139642.40 | 0.0089 | 0.0007 |
| Neptune | 20312-05-25 05:16 G | 9140009.48 | 9140009.72 | 9140009.98 | 0.0089 | 0.0012 |
| Neptune | 20313-05-27 14:09 G | 9140376.83 | 9140377.09 | 9140377.36 | 0.0089 | 0.0009 |
| Neptune | 20314-05-30 08:38 G | 9140744.61 | 9140744.86 | 9140745.12 | 0.0089 | 0.0013 |
| Jupiter | 20314-06-03 20:38 G | 9140749.30 | 9140749.36 | 9140749.43 | 0.0528 | 0.0502 |
| Neptune | 20315-06-01 15:07 G | 9141111.88 | 9141112.13 | 9141112.39 | 0.0089 | 0.0012 |
| Jupiter | 20315-07-11 12:14 G | 9141151.82 | 9141152.01 | 9141152.21 | 0.0540 | 0.0317 |
| Uranus | 20316-04-18 16:33 G | 9141434.19 | 9141434.19 | 9141434.21 | 0.0135 | 0.0135 |
| Neptune | 20316-06-03 11:16 G | 9141479.72 | 9141479.97 | 9141480.23 | 0.0089 | 0.0015 |
| Uranus | 20317-04-23 10:33 G | 9141803.72 | 9141803.94 | 9141804.17 | 0.0135 | 0.0067 |
| Neptune | 20317-06-05 17:45 G | 9141846.99 | 9141847.24 | 9141847.49 | 0.0089 | 0.0015 |
| Uranus | 20318-04-27 14:24 G | 9142172.85 | 9142173.10 | 9142173.35 | 0.0135 | 0.0019 |
| Saturn | 20318-06-06 21:21 G | 9142213.16 | 9142213.39 | 9142213.63 | 0.0285 | 0.0107 |
| Neptune | 20318-06-08 12:14 G | 9142214.75 | 9142215.01 | 9142215.27 | 0.0089 | 0.0018 |
| Uranus | 20319-05-02 07:40 G | 9142542.57 | 9142542.82 | 9142543.07 | 0.0134 | 0.0036 |
| Neptune | 20319-06-10 21:50 G | 9142582.17 | 9142582.41 | 9142582.66 | 0.0089 | 0.0018 |
| Jupiter | 20319-12-02 03:36 G | 9142756.59 | 9142756.65 | 9142756.70 | 0.0501 | 0.0486 |
| Uranus | 20320-05-05 09:50 G | 9142911.76 | 9142911.91 | 9142912.11 | 0.0134 | 0.0096 |

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| Neptune | 20320-06-12 12:43 G | 9142949.77 | 9142950.03 | 9142950.29 | 0.0089 | 0.0019 |
| Jupiter | 20321-01-01 00:00 G | 9143152.28 | 9143152.50 | 9143152.73 | 0.0490 | 0.0146 |
| Neptune | 20321-06-15 02:24 G | 9143317.36 | 9143317.60 | 9143317.85 | 0.0089 | 0.0020 |
| Neptune | 20322-06-17 12:00 G | 9143684.75 | 9143685.00 | 9143685.27 | 0.0089 | 0.0021 |
| Neptune | 20323-06-20 06:14 G | 9144052.52 | 9144052.76 | 9144053.01 | 0.0089 | 0.0023 |
| Neptune | 20324-06-21 12:43 G | 9144419.80 | 9144420.03 | 9144420.30 | 0.0089 | 0.0024 |
| Neptune | 20325-06-24 09:21 G | 9144787.65 | 9144787.89 | 9144788.14 | 0.0089 | 0.0025 |
| Jupiter | 20326-06-09 00:14 G | 9145137.35 | 9145137.51 | 9145137.67 | 0.0530 | 0.0399 |
| Neptune | 20326-06-26 15:36 G | 9145154.91 | 9145155.15 | 9145155.41 | 0.0089 | 0.0024 |
| Neptune | 20327-06-29 11:02 G | 9145522.72 | 9145522.96 | 9145523.22 | 0.0089 | 0.0026 |
| Jupiter | 20327-07-16 12:57 G | 9145539.89 | 9145540.04 | 9145540.21 | 0.0541 | 0.0386 |
| Neptune | 20328-06-30 20:09 G | 9145890.11 | 9145890.34 | 9145890.59 | 0.0089 | 0.0025 |
| Neptune | 20329-07-03 11:45 G | 9146257.75 | 9146257.99 | 9146258.26 | 0.0089 | 0.0029 |
| Neptune | 20330-07-06 01:12 G | 9146625.32 | 9146625.55 | 9146625.80 | 0.0090 | 0.0027 |
| Neptune | 20331-07-08 12:00 G | 9146992.75 | 9146993.00 | 9146993.26 | 0.0090 | 0.0030 |
| Jupiter | 20331-12-06 14:38 G | 9147143.95 | 9147144.11 | 9147144.28 | 0.0499 | 0.0360 |
| Neptune | 20332-07-10 05:16 G | 9147360.49 | 9147360.72 | 9147360.97 | 0.0090 | 0.0027 |
| Saturn | 20332-11-28 03:07 G | 9147501.42 | 9147501.63 | 9147501.84 | 0.0274 | 0.0149 |
| Jupiter | 20333-01-05 11:02 G | 9147539.75 | 9147539.96 | 9147540.17 | 0.0488 | 0.0191 |
| Neptune | 20333-07-12 12:14 G | 9147727.78 | 9147728.01 | 9147728.27 | 0.0090 | 0.0031 |
| Saturn | 20333-12-10 09:36 G | 9147878.82 | 9147878.90 | 9147879.00 | 0.0275 | 0.0256 |
| Neptune | 20334-07-15 08:38 G | 9148095.61 | 9148095.86 | 9148096.10 | 0.0090 | 0.0027 |
| Neptune | 20335-07-17 14:38 G | 9148462.88 | 9148463.11 | 9148463.35 | 0.0090 | 0.0033 |
| Neptune | 20336-07-19 10:19 G | 9148830.68 | 9148830.93 | 9148831.18 | 0.0090 | 0.0028 |
| Neptune | 20337-07-21 18:28 G | 9149198.04 | 9149198.27 | 9149198.50 | 0.0090 | 0.0034 |
| Jupiter | 20338-06-13 21:50 G | 9149525.21 | 9149525.41 | 9149525.62 | 0.0532 | 0.0250 |
| Neptune | 20338-07-24 11:02 G | 9149565.71 | 9149565.96 | 9149566.21 | 0.0090 | 0.0028 |
| Jupiter | 20339-07-22 06:00 G | 9149928.69 | 9149928.75 | 9149928.83 | 0.0543 | 0.0515 |
| Neptune | 20339-07-26 23:16 G | 9149933.26 | 9149933.47 | 9149933.72 | 0.0090 | 0.0035 |
| Neptune | 20340-07-28 10:48 G | 9150300.71 | 9150300.95 | 9150301.22 | 0.0090 | 0.0029 |

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| Neptune | 20341-07-31 03:36 G | 9150668.43 | 9150668.65 | 9150668.90 | 0.0090 | 0.0036 |
| Neptune | 20342-08-02 11:16 G | 9151035.73 | 9151035.97 | 9151036.23 | 0.0090 | 0.0029 |
| Neptune | 20343-08-05 07:12 G | 9151403.56 | 9151403.80 | 9151404.03 | 0.0090 | 0.0036 |
| Jupiter | 20343-12-10 23:16 G | 9151531.28 | 9151531.47 | 9151531.66 | 0.0497 | 0.0269 |
| Neptune | 20344-08-06 13:12 G | 9151770.80 | 9151771.05 | 9151771.29 | 0.0090 | 0.0028 |
| Jupiter | 20345-01-09 15:36 G | 9151926.95 | 9151927.15 | 9151927.35 | 0.0487 | 0.0274 |
| Neptune | 20345-08-09 08:09 G | 9152138.61 | 9152138.84 | 9152139.10 | 0.0090 | 0.0036 |
| Neptune | 20346-08-11 15:50 G | 9152505.93 | 9152506.16 | 9152506.41 | 0.0090 | 0.0028 |
| Saturn | 20347-05-31 21:21 G | 9152799.17 | 9152799.39 | 9152799.61 | 0.0285 | 0.0110 |
| Neptune | 20347-08-14 08:38 G | 9152873.63 | 9152873.86 | 9152874.11 | 0.0090 | 0.0036 |
| Neptune | 20348-08-15 20:24 G | 9153241.11 | 9153241.35 | 9153241.59 | 0.0090 | 0.0028 |
| Neptune | 20349-08-18 07:55 G | 9153608.60 | 9153608.83 | 9153609.09 | 0.0090 | 0.0036 |
| Jupiter | 20350-06-19 12:14 G | 9153913.79 | 9153914.01 | 9153914.23 | 0.0534 | 0.0143 |
| Neptune | 20350-08-21 00:00 G | 9153976.27 | 9153976.50 | 9153976.75 | 0.0090 | 0.0027 |
| Neptune | 20351-08-23 07:26 G | 9154343.58 | 9154343.81 | 9154344.07 | 0.0089 | 0.0035 |
| Neptune | 20352-08-25 02:52 G | 9154711.39 | 9154711.62 | 9154711.87 | 0.0089 | 0.0026 |
| Neptune | 20353-08-27 08:38 G | 9155078.64 | 9155078.86 | 9155079.11 | 0.0089 | 0.0035 |
| Neptune | 20354-08-30 04:33 G | 9155446.44 | 9155446.69 | 9155446.94 | 0.0089 | 0.0025 |
| Neptune | 20355-09-01 11:02 G | 9155813.74 | 9155813.96 | 9155814.21 | 0.0089 | 0.0034 |
| Jupiter | 20355-12-15 12:57 G | 9155918.84 | 9155919.04 | 9155919.26 | 0.0495 | 0.0224 |
| Neptune | 20356-09-03 03:50 G | 9156181.41 | 9156181.66 | 9156181.93 | 0.0089 | 0.0024 |
| Jupiter | 20357-01-13 17:31 G | 9156314.11 | 9156314.23 | 9156314.37 | 0.0486 | 0.0389 |
| Neptune | 20357-09-05 14:38 G | 9156548.88 | 9156549.11 | 9156549.35 | 0.0089 | 0.0032 |
| Neptune | 20358-09-08 02:38 G | 9156916.36 | 9156916.61 | 9156916.88 | 0.0089 | 0.0023 |
| Neptune | 20359-09-10 17:45 G | 9157284.01 | 9157284.24 | 9157284.48 | 0.0089 | 0.0031 |
| Neptune | 20360-09-12 00:43 G | 9157651.29 | 9157651.53 | 9157651.80 | 0.0089 | 0.0021 |
| Uranus | 20360-10-22 00:57 G | 9157691.39 | 9157691.54 | 9157691.73 | 0.0143 | 0.0108 |
| Neptune | 20361-09-14 19:12 G | 9158019.07 | 9158019.30 | 9158019.55 | 0.0089 | 0.0029 |
| Uranus | 20361-10-26 15:36 G | 9158060.91 | 9158061.15 | 9158061.40 | 0.0143 | 0.0027 |
| Jupiter | 20362-06-24 14:09 G | 9158301.85 | 9158302.09 | 9158302.33 | 0.0536 | 0.0075 |

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| Neptune | 20362-09-17 00:43 G | 9158386.28 | 9158386.53 | 9158386.79 | 0.0089 | 0.0019 |
| Uranus | 20362-10-31 20:09 G | 9158431.10 | 9158431.34 | 9158431.59 | 0.0144 | 0.0029 |
| Saturn | 20362-12-05 00:43 G | 9158465.30 | 9158465.53 | 9158465.77 | 0.0274 | 0.0065 |
| Neptune | 20363-09-19 19:40 G | 9158754.08 | 9158754.32 | 9158754.58 | 0.0089 | 0.0027 |
| Uranus | 20363-11-05 11:02 G | 9158800.80 | 9158800.96 | 9158801.16 | 0.0144 | 0.0100 |
| Neptune | 20364-09-21 01:55 G | 9159121.34 | 9159121.58 | 9159121.83 | 0.0089 | 0.0017 |
| Neptune | 20365-09-23 18:28 G | 9159489.03 | 9159489.27 | 9159489.53 | 0.0089 | 0.0026 |
| Neptune | 20366-09-26 04:33 G | 9159856.46 | 9159856.69 | 9159856.95 | 0.0089 | 0.0017 |
| Neptune | 20367-09-28 16:19 G | 9160223.94 | 9160224.18 | 9160224.45 | 0.0089 | 0.0024 |
| Jupiter | 20367-12-19 13:55 G | 9160305.87 | 9160306.08 | 9160306.31 | 0.0494 | 0.0152 |
| Neptune | 20368-09-30 06:57 G | 9160591.55 | 9160591.79 | 9160592.04 | 0.0089 | 0.0013 |
| Jupiter | 20369-01-18 03:21 G | 9160701.59 | 9160701.64 | 9160701.71 | 0.0486 | 0.0469 |
| Neptune | 20369-10-02 13:40 G | 9160958.83 | 9160959.07 | 9160959.34 | 0.0089 | 0.0021 |
| Neptune | 20370-10-05 07:40 G | 9161326.57 | 9161326.82 | 9161327.07 | 0.0089 | 0.0011 |
| Neptune | 20371-10-07 12:14 G | 9161693.77 | 9161694.01 | 9161694.27 | 0.0089 | 0.0019 |
| Mars | 20372-03-25 05:31 G | 9161863.62 | 9161863.73 | 9161863.84 | 0.1671 | 0.1307 |
| Neptune | 20372-10-09 06:43 G | 9162061.52 | 9162061.78 | 9162062.04 | 0.0089 | 0.0009 |
| Neptune | 20373-10-11 12:14 G | 9162428.77 | 9162429.01 | 9162429.26 | 0.0089 | 0.0016 |
| Jupiter | 20374-06-29 22:33 G | 9162690.22 | 9162690.44 | 9162690.67 | 0.0537 | 0.0043 |
| Neptune | 20374-10-14 04:04 G | 9162796.41 | 9162796.67 | 9162796.94 | 0.0089 | 0.0007 |
| Neptune | 20375-10-16 13:26 G | 9163163.83 | 9163164.06 | 9163164.31 | 0.0089 | 0.0014 |
| Neptune | 20376-10-18 00:57 G | 9163531.28 | 9163531.54 | 9163531.81 | 0.0089 | 0.0005 |
| Saturn | 20377-06-07 17:31 G | 9163764.03 | 9163764.23 | 9163764.44 | 0.0285 | 0.0160 |
| Neptune | 20377-10-20 14:52 G | 9163898.88 | 9163899.12 | 9163899.38 | 0.0089 | 0.0012 |
| Neptune | 20378-10-22 21:21 G | 9164266.13 | 9164266.39 | 9164266.66 | 0.0089 | 0.0003 |
| Neptune | 20379-10-25 14:52 G | 9164633.87 | 9164634.12 | 9164634.38 | 0.0089 | 0.0009 |
| Jupiter | 20379-12-24 03:36 G | 9164693.42 | 9164693.65 | 9164693.88 | 0.0493 | 0.0038 |
| Neptune | 20380-10-26 19:12 G | 9165001.04 | 9165001.30 | 9165001.55 | 0.0089 | 0.0001 |
| Neptune | 20381-10-29 12:57 G | 9165368.78 | 9165369.04 | 9165369.30 | 0.0089 | 0.0006 |
| Neptune | 20382-10-31 18:14 G | 9165736.01 | 9165736.26 | 9165736.51 | 0.0089 | 0.0002 |

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| Neptune | 20383-11-03 09:07 G | 9166103.62 | 9166103.88 | 9166104.15 | 0.0089 | 0.0004 |
| Neptune | 20384-11-04 18:28 G | 9166471.03 | 9166471.27 | 9166471.52 | 0.0089 | 0.0005 |
| Neptune | 20385-11-07 05:02 G | 9166838.44 | 9166838.71 | 9166838.97 | 0.0089 | 0.0001 |
| Jupiter | 20386-07-05 05:45 G | 9167078.52 | 9167078.74 | 9167078.97 | 0.0539 | 0.0204 |
| Neptune | 20386-11-09 18:43 G | 9167206.03 | 9167206.28 | 9167206.53 | 0.0088 | 0.0008 |
| Neptune | 20387-11-12 00:14 G | 9167573.25 | 9167573.51 | 9167573.78 | 0.0088 | 0.0002 |
| Neptune | 20388-11-13 17:31 G | 9167940.98 | 9167941.23 | 9167941.48 | 0.0088 | 0.0009 |
| Neptune | 20389-11-15 21:21 G | 9168308.14 | 9168308.39 | 9168308.65 | 0.0088 | 0.0004 |
| Neptune | 20390-11-18 14:52 G | 9168675.86 | 9168676.12 | 9168676.38 | 0.0088 | 0.0012 |
| Neptune | 20391-11-20 19:55 G | 9169043.08 | 9169043.33 | 9169043.58 | 0.0088 | 0.0007 |
| Saturn | 20391-11-29 23:31 G | 9169052.25 | 9169052.48 | 9169052.72 | 0.0273 | 0.0104 |
| Jupiter | 20391-12-28 04:04 G | 9169080.44 | 9169080.67 | 9169080.91 | 0.0491 | 0.0071 |
| Neptune | 20392-11-22 10:04 G | 9169410.66 | 9169410.92 | 9169411.18 | 0.0088 | 0.0014 |
| Neptune | 20393-11-24 19:40 G | 9169778.08 | 9169778.32 | 9169778.57 | 0.0088 | 0.0010 |
| Neptune | 20394-11-27 04:48 G | 9170145.45 | 9170145.70 | 9170145.97 | 0.0088 | 0.0017 |
| Neptune | 20395-11-29 19:12 G | 9170513.05 | 9170513.30 | 9170513.55 | 0.0088 | 0.0011 |
| Neptune | 20396-11-30 23:31 G | 9170880.24 | 9170880.48 | 9170880.75 | 0.0088 | 0.0019 |
| Jupiter | 20397-06-02 23:45 G | 9171064.44 | 9171064.49 | 9171064.56 | 0.0527 | 0.0509 |
| Neptune | 20397-12-03 16:48 G | 9171247.95 | 9171248.20 | 9171248.45 | 0.0088 | 0.0014 |
| Jupiter | 20398-07-10 07:12 G | 9171466.61 | 9171466.80 | 9171466.99 | 0.0540 | 0.0299 |
| Neptune | 20398-12-05 20:09 G | 9171615.10 | 9171615.34 | 9171615.59 | 0.0088 | 0.0021 |
| Neptune | 20399-12-08 12:43 G | 9171982.77 | 9171983.03 | 9171983.29 | 0.0088 | 0.0017 |
| Uranus | 20400-04-19 05:16 G | 9172115.62 | 9172115.72 | 9172115.86 | 0.0136 | 0.0118 |
| Neptune | 20400-12-09 17:45 G | 9172350.01 | 9172350.24 | 9172350.49 | 0.0088 | 0.0023 |
| Uranus | 20401-04-23 22:33 G | 9172485.23 | 9172485.44 | 9172485.67 | 0.0135 | 0.0073 |
| Neptune | 20401-12-12 06:57 G | 9172717.54 | 9172717.79 | 9172718.06 | 0.0088 | 0.0018 |
| Uranus | 20402-04-28 02:52 G | 9172854.37 | 9172854.62 | 9172854.88 | 0.0135 | 0.0010 |
| Jupiter | 20402-12-01 14:09 G | 9173072.04 | 9173072.09 | 9173072.16 | 0.0502 | 0.0484 |
| Neptune | 20402-12-14 17:02 G | 9173084.98 | 9173085.21 | 9173085.46 | 0.0088 | 0.0024 |
| Uranus | 20403-05-02 19:26 G | 9173224.07 | 9173224.31 | 9173224.56 | 0.0135 | 0.0043 |

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| Neptune | 20403-12-17 01:26 G | 9173452.31 | 9173452.56 | 9173452.83 | 0.0088 | 0.0020 |
| Jupiter | 20404-01-01 16:04 G | 9173467.95 | 9173468.17 | 9173468.38 | 0.0490 | 0.0131 |
| Uranus | 20404-05-05 22:04 G | 9173593.26 | 9173593.42 | 9173593.62 | 0.0134 | 0.0093 |
| Neptune | 20404-12-18 16:19 G | 9173819.94 | 9173820.18 | 9173820.42 | 0.0088 | 0.0026 |
| Neptune | 20405-12-20 20:09 G | 9174187.10 | 9174187.34 | 9174187.60 | 0.0088 | 0.0022 |
| Saturn | 20406-06-02 03:36 G | 9174350.42 | 9174350.65 | 9174350.89 | 0.0285 | 0.0055 |
| Neptune | 20406-12-23 13:26 G | 9174554.82 | 9174555.06 | 9174555.31 | 0.0088 | 0.0027 |
| Neptune | 20407-12-25 16:33 G | 9174921.95 | 9174922.19 | 9174922.44 | 0.0088 | 0.0023 |
| Neptune | 20408-12-27 08:38 G | 9175289.61 | 9175289.86 | 9175290.11 | 0.0088 | 0.0028 |
| Jupiter | 20409-06-08 00:00 G | 9175452.36 | 9175452.50 | 9175452.65 | 0.0530 | 0.0406 |
| Neptune | 20409-12-29 13:55 G | 9175656.86 | 9175657.08 | 9175657.34 | 0.0088 | 0.0026 |
| Jupiter | 20410-07-16 02:24 G | 9175855.43 | 9175855.60 | 9175855.76 | 0.0542 | 0.0371 |
| Neptune | 20411-01-01 02:09 G | 9176024.34 | 9176024.59 | 9176024.84 | 0.0088 | 0.0030 |
| Neptune | 20412-01-03 12:43 G | 9176391.81 | 9176392.03 | 9176392.28 | 0.0088 | 0.0027 |
| Neptune | 20413-01-04 20:09 G | 9176759.10 | 9176759.34 | 9176759.60 | 0.0088 | 0.0031 |
| Neptune | 20414-01-07 11:31 G | 9177126.74 | 9177126.98 | 9177127.22 | 0.0088 | 0.0027 |
| Jupiter | 20414-12-05 22:19 G | 9177459.29 | 9177459.43 | 9177459.59 | 0.0499 | 0.0365 |
| Neptune | 20415-01-09 15:07 G | 9177493.90 | 9177494.13 | 9177494.38 | 0.0088 | 0.0032 |
| Jupiter | 20416-01-05 20:09 G | 9177855.11 | 9177855.34 | 9177855.57 | 0.0488 | 0.0177 |
| Neptune | 20416-01-12 08:24 G | 9177861.61 | 9177861.85 | 9177862.10 | 0.0088 | 0.0029 |
| Neptune | 20417-01-13 12:00 G | 9178228.77 | 9178229.00 | 9178229.24 | 0.0088 | 0.0033 |
| Neptune | 20418-01-16 03:21 G | 9178596.40 | 9178596.64 | 9178596.90 | 0.0088 | 0.0030 |
| Neptune | 20419-01-18 09:50 G | 9178963.69 | 9178963.91 | 9178964.15 | 0.0088 | 0.0033 |
| Neptune | 20420-01-20 20:52 G | 9179331.13 | 9179331.37 | 9179331.63 | 0.0088 | 0.0030 |
| Neptune | 20421-01-22 08:38 G | 9179698.65 | 9179698.86 | 9179699.11 | 0.0088 | 0.0034 |
| Jupiter | 20421-06-13 13:12 G | 9179840.85 | 9179841.05 | 9179841.26 | 0.0532 | 0.0250 |
| Saturn | 20421-12-06 04:04 G | 9180016.45 | 9180016.67 | 9180016.90 | 0.0274 | 0.0110 |
| Neptune | 20422-01-24 15:07 G | 9180065.90 | 9180066.13 | 9180066.39 | 0.0088 | 0.0031 |
| Jupiter | 20422-07-21 07:12 G | 9180243.72 | 9180243.80 | 9180243.89 | 0.0543 | 0.0504 |
| Neptune | 20423-01-27 07:26 G | 9180433.58 | 9180433.81 | 9180434.04 | 0.0088 | 0.0034 |

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| Neptune | 20424-01-29 10:33 G | 9180800.71 | 9180800.94 | 9180801.19 | 0.0088 | 0.0031 |
| Neptune | 20425-01-31 04:04 G | 9181168.43 | 9181168.67 | 9181168.91 | 0.0088 | 0.0033 |
| Neptune | 20426-02-02 07:55 G | 9181535.61 | 9181535.83 | 9181536.08 | 0.0088 | 0.0031 |
| Jupiter | 20426-12-10 13:40 G | 9181846.88 | 9181847.07 | 9181847.27 | 0.0498 | 0.0282 |
| Neptune | 20427-02-04 22:48 G | 9181903.22 | 9181903.45 | 9181903.71 | 0.0088 | 0.0033 |
| Jupiter | 20428-01-09 23:31 G | 9182242.29 | 9182242.48 | 9182242.67 | 0.0487 | 0.0272 |
| Neptune | 20428-02-07 06:43 G | 9182270.55 | 9182270.78 | 9182271.01 | 0.0088 | 0.0031 |
| Neptune | 20429-02-08 16:48 G | 9182637.97 | 9182638.20 | 9182638.46 | 0.0088 | 0.0034 |
| Neptune | 20430-02-11 05:45 G | 9183005.52 | 9183005.74 | 9183005.99 | 0.0088 | 0.0031 |
| Neptune | 20431-02-13 12:14 G | 9183372.77 | 9183373.01 | 9183373.26 | 0.0088 | 0.0032 |
| Neptune | 20432-02-16 04:48 G | 9183740.47 | 9183740.70 | 9183740.95 | 0.0088 | 0.0030 |
| Neptune | 20433-02-17 08:09 G | 9184107.62 | 9184107.84 | 9184108.10 | 0.0088 | 0.0032 |
| Jupiter | 20433-06-18 10:04 G | 9184228.70 | 9184228.92 | 9184229.16 | 0.0533 | 0.0160 |
| Neptune | 20434-02-20 01:55 G | 9184475.34 | 9184475.58 | 9184475.83 | 0.0088 | 0.0030 |
| Neptune | 20435-02-22 06:28 G | 9184842.54 | 9184842.77 | 9184843.02 | 0.0088 | 0.0031 |
| Saturn | 20435-05-26 22:48 G | 9184936.38 | 9184936.45 | 9184936.54 | 0.0286 | 0.0270 |
| Neptune | 20436-02-24 21:07 G | 9185210.14 | 9185210.38 | 9185210.64 | 0.0088 | 0.0029 |
| Saturn | 20436-06-08 20:09 G | 9185315.19 | 9185315.34 | 9185315.51 | 0.0285 | 0.0210 |
| Neptune | 20437-02-26 05:31 G | 9185577.50 | 9185577.73 | 9185577.98 | 0.0088 | 0.0029 |
| Neptune | 20438-02-28 15:21 G | 9185944.89 | 9185945.14 | 9185945.40 | 0.0088 | 0.0027 |
| Jupiter | 20438-12-14 12:57 G | 9186233.84 | 9186234.04 | 9186234.25 | 0.0496 | 0.0242 |
| Neptune | 20439-03-03 05:16 G | 9186312.49 | 9186312.72 | 9186312.97 | 0.0088 | 0.0028 |
| Jupiter | 20440-01-14 08:24 G | 9186629.71 | 9186629.85 | 9186630.01 | 0.0487 | 0.0380 |
| Neptune | 20440-03-04 11:02 G | 9186679.73 | 9186679.96 | 9186680.23 | 0.0088 | 0.0027 |
| Neptune | 20441-03-07 04:33 G | 9187047.46 | 9187047.69 | 9187047.95 | 0.0088 | 0.0027 |
| Neptune | 20442-03-09 08:24 G | 9187414.62 | 9187414.85 | 9187415.12 | 0.0088 | 0.0026 |
| Neptune | 20443-03-12 02:24 G | 9187782.36 | 9187782.60 | 9187782.87 | 0.0088 | 0.0024 |
| Neptune | 20444-03-13 07:55 G | 9188149.60 | 9188149.83 | 9188150.09 | 0.0088 | 0.0024 |
| Uranus | 20444-10-22 12:14 G | 9188372.81 | 9188373.01 | 9188373.22 | 0.0143 | 0.0088 |
| Neptune | 20445-03-15 22:48 G | 9188517.20 | 9188517.45 | 9188517.71 | 0.0088 | 0.0022 |

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| Jupiter | 20445-06-23 19:40 G | 9188617.09 | 9188617.32 | 9188617.54 | 0.0535 | 0.0094 |
| Uranus | 20445-10-27 03:07 G | 9188742.39 | 9188742.63 | 9188742.88 | 0.0143 | 0.0037 |
| Neptune | 20446-03-18 08:09 G | 9188884.60 | 9188884.84 | 9188885.08 | 0.0088 | 0.0023 |
| Uranus | 20446-11-01 07:55 G | 9189112.59 | 9189112.83 | 9189113.08 | 0.0144 | 0.0042 |
| Neptune | 20447-03-20 17:45 G | 9189251.99 | 9189252.24 | 9189252.51 | 0.0088 | 0.0021 |
| Uranus | 20447-11-05 23:02 G | 9189482.29 | 9189482.46 | 9189482.65 | 0.0144 | 0.0102 |
| Neptune | 20448-03-22 08:24 G | 9189619.62 | 9189619.85 | 9189620.11 | 0.0088 | 0.0022 |
| Neptune | 20449-03-24 14:38 G | 9189986.86 | 9189987.11 | 9189987.37 | 0.0088 | 0.0018 |
| Neptune | 20450-03-27 08:38 G | 9190354.61 | 9190354.86 | 9190355.12 | 0.0088 | 0.0018 |
| Saturn | 20450-12-01 00:57 G | 9190603.31 | 9190603.54 | 9190603.78 | 0.0273 | 0.0058 |
| Jupiter | 20450-12-19 05:02 G | 9190621.49 | 9190621.71 | 9190621.93 | 0.0495 | 0.0162 |
| Neptune | 20451-03-29 12:57 G | 9190721.79 | 9190722.04 | 9190722.30 | 0.0088 | 0.0016 |
| Jupiter | 20452-01-18 06:57 G | 9191016.72 | 9191016.79 | 9191016.87 | 0.0486 | 0.0456 |
| Neptune | 20452-03-31 07:12 G | 9191089.55 | 9191089.80 | 9191090.06 | 0.0088 | 0.0017 |
| Neptune | 20453-04-02 13:26 G | 9191456.82 | 9191457.06 | 9191457.32 | 0.0088 | 0.0014 |
| Neptune | 20454-04-05 04:19 G | 9191824.42 | 9191824.68 | 9191824.95 | 0.0088 | 0.0015 |
| Neptune | 20455-04-07 14:38 G | 9192191.87 | 9192192.11 | 9192192.37 | 0.0088 | 0.0011 |
| Neptune | 20456-04-09 00:57 G | 9192559.28 | 9192559.54 | 9192559.81 | 0.0088 | 0.0012 |
| Neptune | 20457-04-11 16:33 G | 9192926.94 | 9192927.19 | 9192927.44 | 0.0088 | 0.0009 |
| Jupiter | 20457-06-28 23:02 G | 9193005.21 | 9193005.46 | 9193005.70 | 0.0537 | 0.0034 |
| Neptune | 20458-04-13 23:02 G | 9193294.20 | 9193294.46 | 9193294.72 | 0.0088 | 0.0011 |
| Neptune | 20459-04-16 17:31 G | 9193661.98 | 9193662.23 | 9193662.50 | 0.0088 | 0.0007 |
| Neptune | 20460-04-17 22:33 G | 9194029.19 | 9194029.44 | 9194029.70 | 0.0088 | 0.0009 |
| Neptune | 20461-04-20 17:16 G | 9194396.96 | 9194397.22 | 9194397.49 | 0.0089 | 0.0003 |
| Pluto | 20461-09-19 12:00 G | 9194548.78 | 9194549.00 | 9194549.26 | 0.0064 | 0.0024 |
| Neptune | 20462-04-23 00:00 G | 9194764.25 | 9194764.50 | 9194764.75 | 0.0089 | 0.0006 |
| Jupiter | 20462-12-23 07:26 G | 9195008.58 | 9195008.81 | 9195009.05 | 0.0493 | 0.0044 |
| Neptune | 20463-04-25 15:36 G | 9195131.88 | 9195132.15 | 9195132.42 | 0.0089 | 0.0001 |
| Neptune | 20464-04-27 02:09 G | 9195499.34 | 9195499.59 | 9195499.84 | 0.0089 | 0.0004 |
| Neptune | 20465-04-29 12:43 G | 9195866.77 | 9195867.03 | 9195867.30 | 0.0089 | 0.0003 |

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| Saturn | 20465-06-03 06:28 G | 9195901.51 | 9195901.77 | 9195902.02 | 0.0285 | 0.0006 |
| Neptune | 20466-05-02 04:48 G | 9196234.45 | 9196234.70 | 9196234.95 | 0.0089 | 0.0001 |
| Neptune | 20467-05-04 12:00 G | 9196601.74 | 9196602.00 | 9196602.27 | 0.0089 | 0.0006 |
| Neptune | 20468-05-06 07:12 G | 9196969.55 | 9196969.80 | 9196970.06 | 0.0089 | 0.0002 |
| Neptune | 20469-05-08 12:43 G | 9197336.78 | 9197337.03 | 9197337.29 | 0.0089 | 0.0009 |
| Jupiter | 20469-07-04 03:50 G | 9197393.45 | 9197393.66 | 9197393.88 | 0.0539 | 0.0194 |
| Neptune | 20470-05-11 08:09 G | 9197704.58 | 9197704.84 | 9197705.10 | 0.0089 | 0.0003 |
| Neptune | 20471-05-13 15:07 G | 9198071.88 | 9198072.13 | 9198072.39 | 0.0089 | 0.0011 |
| Neptune | 20472-05-15 07:26 G | 9198439.55 | 9198439.81 | 9198440.08 | 0.0089 | 0.0006 |
| Neptune | 20473-05-17 18:14 G | 9198807.01 | 9198807.26 | 9198807.51 | 0.0089 | 0.0014 |
| Neptune | 20474-05-20 05:31 G | 9199174.47 | 9199174.73 | 9199175.00 | 0.0089 | 0.0009 |
| Jupiter | 20474-12-27 18:28 G | 9199396.05 | 9199396.27 | 9199396.49 | 0.0491 | 0.0060 |
| Neptune | 20475-05-22 21:21 G | 9199542.15 | 9199542.39 | 9199542.64 | 0.0089 | 0.0017 |
| Neptune | 20476-05-24 05:02 G | 9199909.45 | 9199909.71 | 9199909.98 | 0.0089 | 0.0011 |
| Neptune | 20477-05-27 00:28 G | 9200277.27 | 9200277.52 | 9200277.77 | 0.0089 | 0.0019 |
| Neptune | 20478-05-29 06:14 G | 9200644.51 | 9200644.76 | 9200645.03 | 0.0089 | 0.0013 |
| Neptune | 20479-06-01 02:24 G | 9201012.35 | 9201012.60 | 9201012.86 | 0.0089 | 0.0022 |
| Saturn | 20479-11-25 22:19 G | 9201190.33 | 9201190.43 | 9201190.55 | 0.0273 | 0.0243 |
| Jupiter | 20480-06-02 03:50 G | 9201379.64 | 9201379.66 | 9201379.70 | 0.0527 | 0.0521 |
| Neptune | 20480-06-02 09:36 G | 9201379.66 | 9201379.90 | 9201380.15 | 0.0089 | 0.0015 * |
| Saturn | 20480-12-07 03:21 G | 9201567.44 | 9201567.64 | 9201567.86 | 0.0274 | 0.0155 |
| Neptune | 20481-06-05 02:52 G | 9201747.37 | 9201747.62 | 9201747.88 | 0.0089 | 0.0025 |
| Jupiter | 20481-07-09 21:50 G | 9201782.21 | 9201782.41 | 9201782.61 | 0.0540 | 0.0284 |
| Neptune | 20482-06-07 13:26 G | 9202114.83 | 9202115.06 | 9202115.32 | 0.0089 | 0.0018 |
| Neptune | 20483-06-10 01:55 G | 9202482.34 | 9202482.58 | 9202482.85 | 0.0089 | 0.0027 |
| Uranus | 20484-04-19 18:14 G | 9202797.18 | 9202797.26 | 9202797.35 | 0.0136 | 0.0127 |
| Neptune | 20484-06-11 17:31 G | 9202849.99 | 9202850.23 | 9202850.48 | 0.0089 | 0.0019 |
| Uranus | 20485-04-24 10:19 G | 9203166.71 | 9203166.93 | 9203167.18 | 0.0135 | 0.0059 |
| Neptune | 20485-06-14 01:40 G | 9203217.34 | 9203217.57 | 9203217.84 | 0.0089 | 0.0030 |
| Jupiter | 20485-11-30 19:55 G | 9203387.28 | 9203387.33 | 9203387.37 | 0.0502 | 0.0489 |

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| Uranus | 20486-04-28 15:50 G | 9203535.91 | 9203536.16 | 9203536.41 | 0.0135 | 0.0011 |
| Neptune | 20486-06-16 21:07 G | 9203585.15 | 9203585.38 | 9203585.64 | 0.0089 | 0.0022 |
| Jupiter | 20487-01-01 00:28 G | 9203783.28 | 9203783.52 | 9203783.75 | 0.0490 | 0.0112 |
| Uranus | 20487-05-03 07:55 G | 9203905.60 | 9203905.83 | 9203906.09 | 0.0135 | 0.0047 |
| Neptune | 20487-06-19 03:21 G | 9203952.41 | 9203952.64 | 9203952.90 | 0.0089 | 0.0031 |
| Uranus | 20488-05-06 12:00 G | 9204274.84 | 9204275.00 | 9204275.16 | 0.0134 | 0.0104 |
| Neptune | 20488-06-20 23:31 G | 9204320.24 | 9204320.48 | 9204320.75 | 0.0089 | 0.0023 |
| Neptune | 20489-06-23 06:28 G | 9204687.55 | 9204687.77 | 9204688.02 | 0.0089 | 0.0033 |
| Neptune | 20490-06-26 00:43 G | 9205055.28 | 9205055.53 | 9205055.80 | 0.0089 | 0.0024 |
| Neptune | 20491-06-28 10:48 G | 9205422.74 | 9205422.95 | 9205423.20 | 0.0089 | 0.0035 |
| Jupiter | 20492-06-07 13:12 G | 9205767.91 | 9205768.05 | 9205768.21 | 0.0528 | 0.0406 |
| Neptune | 20492-06-30 00:14 G | 9205790.27 | 9205790.51 | 9205790.79 | 0.0089 | 0.0027 |
| Neptune | 20493-07-02 15:21 G | 9206157.92 | 9206158.14 | 9206158.39 | 0.0089 | 0.0036 |
| Jupiter | 20493-07-14 21:07 G | 9206170.20 | 9206170.38 | 9206170.57 | 0.0541 | 0.0351 |
| Saturn | 20494-05-28 02:09 G | 9206487.45 | 9206487.59 | 9206487.76 | 0.0286 | 0.0220 |
| Neptune | 20494-07-05 00:57 G | 9206525.30 | 9206525.54 | 9206525.80 | 0.0089 | 0.0027 |
| Saturn | 20495-06-11 03:07 G | 9206866.54 | 9206866.63 | 9206866.72 | 0.0285 | 0.0260 |
| Neptune | 20495-07-07 19:55 G | 9206893.12 | 9206893.33 | 9206893.58 | 0.0089 | 0.0037 |
| Neptune | 20496-07-09 02:52 G | 9207260.38 | 9207260.62 | 9207260.87 | 0.0090 | 0.0028 |
| Neptune | 20497-07-11 23:02 G | 9207628.23 | 9207628.46 | 9207628.71 | 0.0090 | 0.0038 |
| Jupiter | 20497-12-05 08:24 G | 9207774.70 | 9207774.85 | 9207775.01 | 0.0500 | 0.0371 |
| Mars | 20498-03-21 08:09 G | 9207880.74 | 9207880.84 | 9207880.95 | 0.1656 | 0.1372 |
| Neptune | 20498-07-14 05:45 G | 9207995.51 | 9207995.74 | 9207995.99 | 0.0090 | 0.0030 |
| Jupiter | 20499-01-05 01:26 G | 9208170.35 | 9208170.56 | 9208170.78 | 0.0489 | 0.0163 |
| Neptune | 20499-07-17 00:28 G | 9208363.30 | 9208363.52 | 9208363.78 | 0.0090 | 0.0038 |
| Neptune | 20500-07-19 10:04 G | 9208730.69 | 9208730.92 | 9208731.16 | 0.0090 | 0.0030 |
| Neptune | 20501-07-22 00:14 G | 9209098.28 | 9209098.51 | 9209098.77 | 0.0090 | 0.0038 |
| Neptune | 20502-07-24 14:09 G | 9209465.87 | 9209466.09 | 9209466.34 | 0.0090 | 0.0031 |
| Neptune | 20503-07-27 00:00 G | 9209833.27 | 9209833.50 | 9209833.75 | 0.0090 | 0.0039 |
| Jupiter | 20504-06-13 08:09 G | 9210155.64 | 9210155.84 | 9210156.05 | 0.0530 | 0.0262 |

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| Neptune | 20504-07-28 18:43 G | 9210201.04 | 9210201.28 | 9210201.52 | 0.0090 | 0.0031 |
| Jupiter | 20505-07-21 08:38 G | 9210558.77 | 9210558.86 | 9210558.96 | 0.0542 | 0.0491 |
| Neptune | 20505-07-31 01:12 G | 9210568.34 | 9210568.55 | 9210568.81 | 0.0090 | 0.0039 |
| Neptune | 20506-08-02 21:50 G | 9210936.18 | 9210936.41 | 9210936.67 | 0.0090 | 0.0031 |
| Neptune | 20507-08-05 04:19 G | 9211303.46 | 9211303.68 | 9211303.92 | 0.0090 | 0.0038 |
| Neptune | 20508-08-06 23:16 G | 9211671.24 | 9211671.47 | 9211671.73 | 0.0090 | 0.0032 |
| Neptune | 20509-08-09 08:09 G | 9212038.63 | 9212038.84 | 9212039.08 | 0.0090 | 0.0038 |
| Saturn | 20509-12-03 08:52 G | 9212154.64 | 9212154.87 | 9212155.11 | 0.0273 | 0.0012 |
| Jupiter | 20509-12-10 11:31 G | 9212161.80 | 9212161.98 | 9212162.17 | 0.0499 | 0.0299 |
| Neptune | 20510-08-11 23:16 G | 9212406.23 | 9212406.47 | 9212406.73 | 0.0090 | 0.0031 |
| Jupiter | 20511-01-10 12:28 G | 9212557.82 | 9212558.02 | 9212558.22 | 0.0488 | 0.0261 |
| Neptune | 20511-08-14 12:14 G | 9212773.78 | 9212774.01 | 9212774.24 | 0.0090 | 0.0036 |
| Neptune | 20512-08-15 22:04 G | 9213141.18 | 9213141.42 | 9213141.68 | 0.0090 | 0.0030 |
| Neptune | 20513-08-18 15:50 G | 9213508.93 | 9213509.16 | 9213509.39 | 0.0090 | 0.0035 |
| Neptune | 20514-08-20 22:19 G | 9213876.20 | 9213876.43 | 9213876.69 | 0.0090 | 0.0030 |
| Neptune | 20515-08-23 18:14 G | 9214244.04 | 9214244.26 | 9214244.51 | 0.0090 | 0.0034 |
| Jupiter | 20516-06-18 15:07 G | 9214543.92 | 9214544.13 | 9214544.35 | 0.0533 | 0.0176 |
| Neptune | 20516-08-25 00:14 G | 9214611.27 | 9214611.51 | 9214611.76 | 0.0090 | 0.0029 |
| Neptune | 20517-08-27 19:26 G | 9214979.07 | 9214979.31 | 9214979.56 | 0.0089 | 0.0032 |
| Neptune | 20518-08-30 03:36 G | 9215346.42 | 9215346.65 | 9215346.90 | 0.0089 | 0.0028 |
| Neptune | 20519-09-01 18:57 G | 9215714.04 | 9215714.29 | 9215714.54 | 0.0089 | 0.0030 |
| Neptune | 20520-09-03 06:43 G | 9216081.55 | 9216081.78 | 9216082.03 | 0.0089 | 0.0027 |
| Neptune | 20521-09-05 17:02 G | 9216448.97 | 9216449.21 | 9216449.47 | 0.0089 | 0.0029 |
| Jupiter | 20521-12-15 05:31 G | 9216549.54 | 9216549.73 | 9216549.93 | 0.0497 | 0.0253 |
| Neptune | 20522-09-08 09:50 G | 9216816.68 | 9216816.91 | 9216817.16 | 0.0089 | 0.0026 |
| Jupiter | 20523-01-14 11:31 G | 9216944.84 | 9216944.98 | 9216945.13 | 0.0487 | 0.0373 |
| Neptune | 20523-09-10 16:33 G | 9217183.95 | 9217184.19 | 9217184.45 | 0.0089 | 0.0027 |
| Saturn | 20524-06-05 07:40 G | 9217452.57 | 9217452.82 | 9217453.07 | 0.0285 | 0.0054 |
| Neptune | 20524-09-12 11:31 G | 9217551.75 | 9217551.98 | 9217552.25 | 0.0089 | 0.0024 |
| Neptune | 20525-09-14 17:16 G | 9217918.98 | 9217919.22 | 9217919.47 | 0.0089 | 0.0024 |

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| Neptune | 20526-09-17 11:45 G | 9218286.75 | 9218286.99 | 9218287.26 | 0.0089 | 0.0023 |
| Neptune | 20527-09-19 19:12 G | 9218654.07 | 9218654.30 | 9218654.55 | 0.0089 | 0.0022 |
| Jupiter | 20528-06-23 19:12 G | 9218932.06 | 9218932.30 | 9218932.54 | 0.0535 | 0.0107 |
| Neptune | 20528-09-21 10:19 G | 9219021.68 | 9219021.93 | 9219022.20 | 0.0089 | 0.0021 |
| Uranus | 20528-10-23 23:45 G | 9219054.30 | 9219054.49 | 9219054.68 | 0.0143 | 0.0098 |
| Neptune | 20529-09-23 21:36 G | 9219389.17 | 9219389.40 | 9219389.65 | 0.0089 | 0.0020 |
| Uranus | 20529-10-28 14:52 G | 9219423.88 | 9219424.12 | 9219424.37 | 0.0143 | 0.0019 |
| Neptune | 20530-09-26 07:55 G | 9219756.57 | 9219756.83 | 9219757.09 | 0.0089 | 0.0017 |
| Uranus | 20530-11-02 18:57 G | 9219794.04 | 9219794.29 | 9219794.54 | 0.0144 | 0.0036 |
| Neptune | 20531-09-29 00:14 G | 9220124.26 | 9220124.51 | 9220124.75 | 0.0089 | 0.0017 |
| Uranus | 20531-11-07 09:50 G | 9220163.77 | 9220163.91 | 9220164.09 | 0.0144 | 0.0110 |
| Neptune | 20532-09-30 06:14 G | 9220491.52 | 9220491.76 | 9220492.03 | 0.0089 | 0.0017 |
| Neptune | 20533-10-03 01:26 G | 9220859.31 | 9220859.56 | 9220859.82 | 0.0089 | 0.0014 |
| Jupiter | 20533-12-19 07:55 G | 9220936.61 | 9220936.83 | 9220937.06 | 0.0495 | 0.0168 |
| Neptune | 20534-10-05 06:14 G | 9221226.52 | 9221226.76 | 9221227.02 | 0.0089 | 0.0014 |
| Jupiter | 20535-01-18 22:48 G | 9221332.36 | 9221332.45 | 9221332.56 | 0.0486 | 0.0439 |
| Neptune | 20535-10-08 00:28 G | 9221594.27 | 9221594.52 | 9221594.79 | 0.0089 | 0.0011 |
| Neptune | 20536-10-09 07:26 G | 9221961.56 | 9221961.81 | 9221962.06 | 0.0089 | 0.0011 |
| Neptune | 20537-10-11 22:04 G | 9222329.16 | 9222329.42 | 9222329.69 | 0.0089 | 0.0008 |
| Neptune | 20538-10-14 08:38 G | 9222696.61 | 9222696.86 | 9222697.11 | 0.0089 | 0.0009 |
| Saturn | 20538-11-28 00:57 G | 9222741.37 | 9222741.54 | 9222741.73 | 0.0273 | 0.0193 |
| Neptune | 20539-10-16 18:00 G | 9223063.99 | 9223064.25 | 9223064.52 | 0.0089 | 0.0006 |
| Saturn | 20539-12-10 06:14 G | 9223118.61 | 9223118.76 | 9223118.94 | 0.0274 | 0.0203 |
| Jupiter | 20540-06-29 01:12 G | 9223320.32 | 9223320.55 | 9223320.77 | 0.0537 | 0.0031 |
| Neptune | 20540-10-18 09:36 G | 9223431.65 | 9223431.90 | 9223432.15 | 0.0089 | 0.0007 |
| Neptune | 20541-10-20 15:21 G | 9223798.88 | 9223799.14 | 9223799.40 | 0.0089 | 0.0003 |
| Neptune | 20542-10-23 09:50 G | 9224166.65 | 9224166.91 | 9224167.16 | 0.0089 | 0.0004 |
| Neptune | 20543-10-25 14:09 G | 9224533.84 | 9224534.09 | 9224534.35 | 0.0089 | 0.0001 |
| Neptune | 20544-10-27 08:09 G | 9224901.57 | 9224901.84 | 9224902.10 | 0.0089 | 0.0002 |
| Neptune | 20545-10-29 14:38 G | 9225268.86 | 9225269.11 | 9225269.36 | 0.0089 | 0.0003 |

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| Jupiter | 20545-12-23 19:40 G | 9225324.10 | 9225324.32 | 9225324.55 | 0.0493 | 0.0046 |
| Neptune | 20546-11-01 04:33 G | 9225636.43 | 9225636.69 | 9225636.96 | 0.0089 | 0.0001 |
| Jupiter | 20547-01-22 21:07 G | 9225719.33 | 9225719.38 | 9225719.44 | 0.0486 | 0.0472 |
| Neptune | 20547-11-03 14:52 G | 9226003.88 | 9226004.12 | 9226004.38 | 0.0089 | 0.0007 |
| Neptune | 20548-11-04 23:31 G | 9226371.22 | 9226371.48 | 9226371.75 | 0.0089 | 0.0005 |
| Neptune | 20549-11-07 14:38 G | 9226738.87 | 9226739.11 | 9226739.37 | 0.0089 | 0.0010 |
| Neptune | 20550-11-09 19:40 G | 9227106.07 | 9227106.32 | 9227106.58 | 0.0089 | 0.0006 |
| Pluto | 20551-03-22 15:21 G | 9227238.96 | 9227239.14 | 9227239.33 | 0.0080 | 0.0055 |
| Mars | 20551-09-23 08:24 G | 9227423.69 | 9227423.85 | 9227424.01 | 0.1881 | 0.0908 |
| Neptune | 20551-11-12 13:26 G | 9227473.81 | 9227474.06 | 9227474.32 | 0.0089 | 0.0012 |
| Jupiter | 20552-07-04 14:38 G | 9227708.89 | 9227709.11 | 9227709.34 | 0.0538 | 0.0180 |
| Neptune | 20552-11-13 17:16 G | 9227840.98 | 9227841.22 | 9227841.48 | 0.0088 | 0.0009 |
| Saturn | 20553-05-30 11:45 G | 9228038.79 | 9228038.99 | 9228039.18 | 0.0286 | 0.0162 |
| Neptune | 20553-11-16 10:19 G | 9228208.68 | 9228208.93 | 9228209.20 | 0.0088 | 0.0015 |
| Neptune | 20554-11-18 16:48 G | 9228575.96 | 9228576.20 | 9228576.45 | 0.0088 | 0.0011 |
| Neptune | 20555-11-21 05:45 G | 9228943.49 | 9228943.74 | 9228944.01 | 0.0088 | 0.0018 |
| Neptune | 20556-11-22 16:33 G | 9229310.95 | 9229311.19 | 9229311.44 | 0.0088 | 0.0013 |
| Neptune | 20557-11-25 00:14 G | 9229678.26 | 9229678.51 | 9229678.78 | 0.0088 | 0.0019 |
| Jupiter | 20557-12-27 23:16 G | 9229711.23 | 9229711.47 | 9229711.71 | 0.0492 | 0.0045 |
| Neptune | 20558-11-27 15:36 G | 9230045.91 | 9230046.15 | 9230046.40 | 0.0088 | 0.0015 |
| Neptune | 20559-11-29 19:40 G | 9230413.09 | 9230413.32 | 9230413.59 | 0.0088 | 0.0023 |
| Neptune | 20560-12-01 13:40 G | 9230780.82 | 9230781.07 | 9230781.32 | 0.0088 | 0.0018 |
| Neptune | 20561-12-03 17:02 G | 9231147.98 | 9231148.21 | 9231148.47 | 0.0088 | 0.0025 |
| Neptune | 20562-12-06 09:21 G | 9231515.64 | 9231515.89 | 9231516.15 | 0.0088 | 0.0019 |
| Neptune | 20563-12-08 15:50 G | 9231882.94 | 9231883.16 | 9231883.41 | 0.0088 | 0.0027 |
| Jupiter | 20564-07-09 12:43 G | 9232096.82 | 9232097.03 | 9232097.24 | 0.0539 | 0.0264 |
| Neptune | 20564-12-10 04:04 G | 9232250.42 | 9232250.67 | 9232250.93 | 0.0088 | 0.0021 |
| Neptune | 20565-12-12 15:07 G | 9232617.90 | 9232618.13 | 9232618.37 | 0.0088 | 0.0028 |
| Neptune | 20566-12-14 21:36 G | 9232985.16 | 9232985.40 | 9232985.67 | 0.0088 | 0.0024 |
| Neptune | 20567-12-17 13:12 G | 9233352.82 | 9233353.05 | 9233353.30 | 0.0088 | 0.0031 |

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| Uranus | 20568-04-21 05:45 G | 9233478.61 | 9233478.74 | 9233478.90 | 0.0136 | 0.0110 |
| Jupiter | 20568-12-01 03:07 G | 9233702.59 | 9233702.63 | 9233702.68 | 0.0503 | 0.0492 |
| Saturn | 20568-12-04 18:43 G | 9233706.04 | 9233706.28 | 9233706.52 | 0.0273 | 0.0042 |
| Neptune | 20568-12-18 17:02 G | 9233719.98 | 9233720.21 | 9233720.47 | 0.0088 | 0.0025 |
| Uranus | 20569-04-25 21:07 G | 9233848.17 | 9233848.38 | 9233848.62 | 0.0135 | 0.0066 |
| Neptune | 20569-12-21 10:33 G | 9234087.71 | 9234087.94 | 9234088.19 | 0.0088 | 0.0032 |
| Jupiter | 20570-01-01 03:07 G | 9234098.41 | 9234098.63 | 9234098.85 | 0.0491 | 0.0094 |
| Uranus | 20570-04-30 03:21 G | 9234217.40 | 9234217.64 | 9234217.89 | 0.0135 | 0.0003 |
| Neptune | 20570-12-23 14:09 G | 9234454.86 | 9234455.09 | 9234455.35 | 0.0088 | 0.0026 |
| Uranus | 20571-05-04 18:43 G | 9234587.04 | 9234587.28 | 9234587.53 | 0.0135 | 0.0051 |
| Neptune | 20571-12-26 05:45 G | 9234822.51 | 9234822.74 | 9234823.00 | 0.0088 | 0.0034 |
| Uranus | 20572-05-07 23:02 G | 9234956.31 | 9234956.46 | 9234956.63 | 0.0134 | 0.0103 |
| Neptune | 20572-12-27 13:12 G | 9235189.83 | 9235190.05 | 9235190.30 | 0.0088 | 0.0028 |
| Neptune | 20573-12-30 00:00 G | 9235557.27 | 9235557.50 | 9235557.76 | 0.0088 | 0.0035 |
| Neptune | 20575-01-01 11:45 G | 9235924.77 | 9235924.99 | 9235925.24 | 0.0088 | 0.0029 |
| Jupiter | 20575-06-08 03:50 G | 9236082.52 | 9236082.66 | 9236082.81 | 0.0528 | 0.0417 |
| Neptune | 20576-01-03 17:31 G | 9236292.01 | 9236292.23 | 9236292.49 | 0.0088 | 0.0036 |
| Jupiter | 20576-07-14 23:31 G | 9236485.31 | 9236485.48 | 9236485.66 | 0.0541 | 0.0335 |
| Neptune | 20577-01-05 09:36 G | 9236659.67 | 9236659.90 | 9236660.15 | 0.0088 | 0.0029 |
| Mars | 20577-03-24 20:09 G | 9236738.14 | 9236738.34 | 9236738.54 | 0.1661 | 0.0371 |
| Neptune | 20578-01-07 12:57 G | 9237026.82 | 9237027.04 | 9237027.28 | 0.0088 | 0.0037 |
| Neptune | 20579-01-10 06:00 G | 9237394.51 | 9237394.75 | 9237395.00 | 0.0088 | 0.0030 |
| Neptune | 20580-01-12 10:04 G | 9237761.70 | 9237761.92 | 9237762.15 | 0.0088 | 0.0038 |
| Jupiter | 20580-12-05 09:07 G | 9238089.73 | 9238089.88 | 9238090.04 | 0.0501 | 0.0375 |
| Neptune | 20581-01-14 00:43 G | 9238129.30 | 9238129.53 | 9238129.79 | 0.0088 | 0.0031 |
| Jupiter | 20582-01-05 15:36 G | 9238485.93 | 9238486.15 | 9238486.38 | 0.0489 | 0.0153 |
| Neptune | 20582-01-16 08:52 G | 9238496.66 | 9238496.87 | 9238497.11 | 0.0088 | 0.0038 |
| Neptune | 20583-01-18 18:57 G | 9238864.06 | 9238864.29 | 9238864.55 | 0.0088 | 0.0031 |
| Saturn | 20583-06-07 12:43 G | 9239003.81 | 9239004.03 | 9239004.26 | 0.0285 | 0.0112 |
| Neptune | 20584-01-21 07:55 G | 9239231.62 | 9239231.83 | 9239232.06 | 0.0088 | 0.0039 |

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| Neptune | 20585-01-22 12:57 G | 9239598.81 | 9239599.04 | 9239599.30 | 0.0088 | 0.0032 |
| Neptune | 20586-01-25 05:31 G | 9239966.51 | 9239966.73 | 9239966.97 | 0.0088 | 0.0039 |
| Neptune | 20587-01-27 08:38 G | 9240333.63 | 9240333.86 | 9240334.11 | 0.0088 | 0.0031 |
| Jupiter | 20587-06-13 13:55 G | 9240470.89 | 9240471.08 | 9240471.28 | 0.0530 | 0.0276 |
| Neptune | 20588-01-30 01:26 G | 9240701.34 | 9240701.56 | 9240701.81 | 0.0088 | 0.0039 |
| Jupiter | 20588-07-20 07:55 G | 9240873.72 | 9240873.83 | 9240873.95 | 0.0542 | 0.0479 |
| Neptune | 20589-01-31 06:00 G | 9241068.53 | 9241068.75 | 9241069.00 | 0.0088 | 0.0031 |
| Neptune | 20590-02-02 20:09 G | 9241436.11 | 9241436.34 | 9241436.58 | 0.0088 | 0.0038 |
| Neptune | 20591-02-05 05:02 G | 9241803.49 | 9241803.71 | 9241803.96 | 0.0088 | 0.0031 |
| Neptune | 20592-02-07 14:24 G | 9242170.87 | 9242171.10 | 9242171.35 | 0.0088 | 0.0038 |
| Jupiter | 20592-12-10 03:07 G | 9242477.45 | 9242477.63 | 9242477.81 | 0.0499 | 0.0311 |
| Neptune | 20593-02-09 04:04 G | 9242538.45 | 9242538.67 | 9242538.92 | 0.0088 | 0.0030 |
| Jupiter | 20594-01-09 13:55 G | 9242872.88 | 9242873.08 | 9242873.27 | 0.0488 | 0.0253 |
| Neptune | 20594-02-11 08:52 G | 9242905.65 | 9242905.87 | 9242906.12 | 0.0088 | 0.0037 |
| Neptune | 20595-02-14 02:24 G | 9243273.35 | 9243273.60 | 9243273.84 | 0.0088 | 0.0028 |
| Neptune | 20596-02-16 05:31 G | 9243640.51 | 9243640.73 | 9243640.98 | 0.0088 | 0.0037 |
| Neptune | 20597-02-17 22:33 G | 9244008.20 | 9244008.44 | 9244008.70 | 0.0088 | 0.0028 |
| Saturn | 20597-11-29 05:16 G | 9244292.51 | 9244292.72 | 9244292.94 | 0.0273 | 0.0139 |
| Neptune | 20598-02-20 03:36 G | 9244375.44 | 9244375.65 | 9244375.90 | 0.0088 | 0.0036 |
| Saturn | 20598-12-11 16:19 G | 9244670.10 | 9244670.18 | 9244670.27 | 0.0274 | 0.0257 |
| Neptune | 20599-02-22 17:45 G | 9244742.99 | 9244743.24 | 9244743.50 | 0.0088 | 0.0026 |
| Jupiter | 20599-06-18 15:50 G | 9244858.94 | 9244859.16 | 9244859.39 | 0.0533 | 0.0190 |
| Neptune | 20600-02-25 03:36 G | 9245110.44 | 9245110.65 | 9245110.90 | 0.0088 | 0.0034 |
| Neptune | 20601-02-27 12:28 G | 9245477.78 | 9245478.02 | 9245478.29 | 0.0088 | 0.0025 |
| Neptune | 20602-03-02 03:07 G | 9245845.41 | 9245845.63 | 9245845.88 | 0.0088 | 0.0033 |
| Neptune | 20603-03-04 07:55 G | 9246212.59 | 9246212.83 | 9246213.09 | 0.0088 | 0.0024 |
| Neptune | 20604-03-06 01:40 G | 9246580.33 | 9246580.57 | 9246580.81 | 0.0088 | 0.0031 |
| Jupiter | 20604-12-15 06:14 G | 9246864.56 | 9246864.76 | 9246864.97 | 0.0497 | 0.0260 |
| Neptune | 20605-03-08 05:16 G | 9246947.49 | 9246947.72 | 9246947.98 | 0.0088 | 0.0022 |
| Jupiter | 20606-01-15 02:09 G | 9247260.44 | 9247260.59 | 9247260.74 | 0.0487 | 0.0365 |

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| Neptune | 20606-03-10 22:19 G | 9247315.19 | 9247315.43 | 9247315.69 | 0.0088 | 0.0029 |
| Neptune | 20607-03-13 04:33 G | 9247682.46 | 9247682.69 | 9247682.95 | 0.0088 | 0.0020 |
| Neptune | 20608-03-14 18:14 G | 9248050.01 | 9248050.26 | 9248050.52 | 0.0088 | 0.0027 |
| Neptune | 20609-03-17 05:31 G | 9248417.49 | 9248417.73 | 9248417.98 | 0.0088 | 0.0018 |
| Neptune | 20610-03-19 14:24 G | 9248784.85 | 9248785.10 | 9248785.36 | 0.0088 | 0.0025 |
| Neptune | 20611-03-22 06:14 G | 9249152.51 | 9249152.76 | 9249153.01 | 0.0088 | 0.0015 |
| Jupiter | 20611-06-24 21:36 G | 9249247.18 | 9249247.40 | 9249247.62 | 0.0534 | 0.0124 |
| Neptune | 20612-03-23 10:48 G | 9249519.71 | 9249519.95 | 9249520.22 | 0.0088 | 0.0023 |
| Saturn | 20612-06-01 20:24 G | 9249590.12 | 9249590.35 | 9249590.59 | 0.0286 | 0.0103 |
| Uranus | 20612-10-25 10:33 G | 9249735.75 | 9249735.94 | 9249736.17 | 0.0143 | 0.0081 |
| Neptune | 20613-03-26 05:02 G | 9249887.46 | 9249887.71 | 9249887.97 | 0.0088 | 0.0013 |
| Uranus | 20613-10-30 03:07 G | 9250105.39 | 9250105.63 | 9250105.87 | 0.0143 | 0.0029 |
| Neptune | 20614-03-28 09:21 G | 9250254.65 | 9250254.89 | 9250255.15 | 0.0088 | 0.0021 |
| Uranus | 20614-11-04 06:28 G | 9250475.54 | 9250475.77 | 9250476.02 | 0.0144 | 0.0052 |
| Neptune | 20615-03-31 02:24 G | 9250622.35 | 9250622.60 | 9250622.88 | 0.0088 | 0.0012 |
| Uranus | 20615-11-08 22:19 G | 9250845.29 | 9250845.43 | 9250845.61 | 0.0144 | 0.0110 |
| Neptune | 20616-04-01 09:21 G | 9250989.65 | 9250989.89 | 9250990.14 | 0.0088 | 0.0018 |
| Jupiter | 20616-12-19 15:07 G | 9251251.92 | 9251252.13 | 9251252.34 | 0.0495 | 0.0176 |
| Neptune | 20617-04-03 22:48 G | 9251357.19 | 9251357.45 | 9251357.73 | 0.0088 | 0.0008 |
| Jupiter | 20618-01-18 22:19 G | 9251647.32 | 9251647.43 | 9251647.55 | 0.0487 | 0.0421 |
| Neptune | 20618-04-06 10:48 G | 9251724.71 | 9251724.95 | 9251725.21 | 0.0088 | 0.0015 |
| Neptune | 20619-04-08 20:09 G | 9252092.08 | 9252092.34 | 9252092.61 | 0.0088 | 0.0005 |
| Neptune | 20620-04-10 12:28 G | 9252459.77 | 9252460.02 | 9252460.27 | 0.0088 | 0.0013 |
| Neptune | 20621-04-12 18:00 G | 9252826.99 | 9252827.25 | 9252827.51 | 0.0088 | 0.0003 |
| Neptune | 20622-04-15 12:43 G | 9253194.78 | 9253195.03 | 9253195.29 | 0.0088 | 0.0010 |
| Neptune | 20623-04-17 17:45 G | 9253561.99 | 9253562.24 | 9253562.50 | 0.0088 | 0.0001 |
| Jupiter | 20623-06-30 07:26 G | 9253635.57 | 9253635.81 | 9253636.05 | 0.0536 | 0.0017 |
| Neptune | 20624-04-19 11:31 G | 9253929.71 | 9253929.98 | 9253930.24 | 0.0088 | 0.0007 |
| Neptune | 20625-04-21 18:43 G | 9254297.03 | 9254297.28 | 9254297.53 | 0.0088 | 0.0003 |
| Neptune | 20626-04-24 08:38 G | 9254664.60 | 9254664.86 | 9254665.13 | 0.0089 | 0.0005 |

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| Neptune | 20627-04-26 21:07 G | 9255032.14 | 9255032.38 | 9255032.63 | 0.0089 | 0.0005 |
| Saturn | 20627-12-08 01:26 G | 9255257.33 | 9255257.56 | 9255257.80 | 0.0274 | 0.0095 |
| Neptune | 20628-04-28 06:43 G | 9255399.51 | 9255399.78 | 9255400.04 | 0.0089 | 0.0002 |
| Jupiter | 20628-12-23 22:19 G | 9255639.19 | 9255639.43 | 9255639.67 | 0.0494 | 0.0052 |
| Neptune | 20629-04-30 23:31 G | 9255767.23 | 9255767.48 | 9255767.73 | 0.0089 | 0.0008 |
| Jupiter | 20630-01-23 07:26 G | 9256034.75 | 9256034.81 | 9256034.89 | 0.0486 | 0.0458 |
| Neptune | 20630-05-03 05:16 G | 9256134.46 | 9256134.72 | 9256134.99 | 0.0089 | 0.0002 |
| Mars | 20630-09-27 12:00 G | 9256281.89 | 9256282.00 | 9256282.10 | 0.1875 | 0.1593 |
| Neptune | 20631-05-06 00:43 G | 9256502.27 | 9256502.53 | 9256502.78 | 0.0089 | 0.0011 |
| Neptune | 20632-05-07 06:00 G | 9256869.50 | 9256869.75 | 9256870.01 | 0.0089 | 0.0004 |
| Neptune | 20633-05-10 00:28 G | 9257237.26 | 9257237.52 | 9257237.78 | 0.0089 | 0.0013 |
| Neptune | 20634-05-12 08:09 G | 9257604.60 | 9257604.84 | 9257605.10 | 0.0089 | 0.0008 |
| Neptune | 20635-05-14 23:16 G | 9257972.21 | 9257972.47 | 9257972.73 | 0.0089 | 0.0016 |
| Jupiter | 20635-07-05 01:40 G | 9258023.35 | 9258023.57 | 9258023.80 | 0.0537 | 0.0159 |
| Neptune | 20636-05-16 11:45 G | 9258339.74 | 9258339.99 | 9258340.24 | 0.0089 | 0.0011 |
| Neptune | 20637-05-18 22:04 G | 9258707.17 | 9258707.42 | 9258707.69 | 0.0089 | 0.0019 |
| Neptune | 20638-05-21 15:21 G | 9259074.90 | 9259075.14 | 9259075.40 | 0.0089 | 0.0013 |
| Neptune | 20639-05-23 21:50 G | 9259442.16 | 9259442.41 | 9259442.67 | 0.0089 | 0.0021 |
| Neptune | 20640-05-25 17:31 G | 9259809.98 | 9259810.23 | 9259810.49 | 0.0089 | 0.0016 |
| Jupiter | 20640-12-28 03:50 G | 9260026.43 | 9260026.66 | 9260026.88 | 0.0492 | 0.0036 |
| Neptune | 20641-05-27 23:02 G | 9260177.22 | 9260177.46 | 9260177.72 | 0.0089 | 0.0024 |
| Neptune | 20642-05-30 18:14 G | 9260545.01 | 9260545.26 | 9260545.52 | 0.0089 | 0.0019 |
| Saturn | 20642-06-10 01:55 G | 9260555.40 | 9260555.58 | 9260555.78 | 0.0285 | 0.0172 |
| Neptune | 20643-06-02 02:09 G | 9260912.35 | 9260912.59 | 9260912.83 | 0.0089 | 0.0025 |
| Neptune | 20644-06-03 17:16 G | 9261279.97 | 9261280.22 | 9261280.49 | 0.0089 | 0.0021 |
| Neptune | 20645-06-06 06:00 G | 9261647.52 | 9261647.75 | 9261647.99 | 0.0089 | 0.0027 |
| Neptune | 20646-06-08 17:16 G | 9262014.98 | 9262015.22 | 9262015.49 | 0.0089 | 0.0024 |
| Neptune | 20647-06-11 10:33 G | 9262382.72 | 9262382.94 | 9262383.19 | 0.0089 | 0.0030 |
| Jupiter | 20647-07-10 16:19 G | 9262411.98 | 9262412.18 | 9262412.39 | 0.0539 | 0.0243 |
| Neptune | 20648-06-12 18:00 G | 9262750.01 | 9262750.25 | 9262750.51 | 0.0089 | 0.0027 |

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| Neptune | 20649-06-15 13:40 G | 9263117.85 | 9263118.07 | 9263118.33 | 0.0089 | 0.0031 |
| Neptune | 20650-06-17 19:40 G | 9263485.10 | 9263485.32 | 9263485.58 | 0.0089 | 0.0029 |
| Neptune | 20651-06-20 15:36 G | 9263852.91 | 9263853.15 | 9263853.41 | 0.0089 | 0.0032 |
| Jupiter | 20651-12-02 03:36 G | 9264017.61 | 9264017.65 | 9264017.69 | 0.0503 | 0.0493 |
| Uranus | 20652-04-22 17:16 G | 9264160.12 | 9264160.22 | 9264160.35 | 0.0136 | 0.0120 |
| Neptune | 20652-06-21 23:02 G | 9264220.23 | 9264220.46 | 9264220.70 | 0.0089 | 0.0031 |
| Jupiter | 20653-01-01 16:04 G | 9264413.94 | 9264414.17 | 9264414.41 | 0.0491 | 0.0080 |
| Uranus | 20653-04-27 08:09 G | 9264529.60 | 9264529.84 | 9264530.09 | 0.0135 | 0.0050 |
| Neptune | 20653-06-24 15:21 G | 9264587.90 | 9264588.14 | 9264588.40 | 0.0089 | 0.0034 |
| Uranus | 20654-05-01 15:36 G | 9264898.90 | 9264899.15 | 9264899.40 | 0.0135 | 0.0004 |
| Neptune | 20654-06-27 03:21 G | 9264955.41 | 9264955.64 | 9264955.88 | 0.0089 | 0.0033 |
| Uranus | 20655-05-06 06:14 G | 9265268.53 | 9265268.76 | 9265269.00 | 0.0135 | 0.0056 |
| Neptune | 20655-06-29 15:21 G | 9265322.90 | 9265323.14 | 9265323.40 | 0.0089 | 0.0035 |
| Uranus | 20656-05-09 12:00 G | 9265637.87 | 9265638.00 | 9265638.14 | 0.0134 | 0.0112 |
| Neptune | 20656-07-01 07:55 G | 9265690.61 | 9265690.83 | 9265691.08 | 0.0089 | 0.0034 |
| Saturn | 20656-12-01 15:50 G | 9265843.94 | 9265844.16 | 9265844.40 | 0.0273 | 0.0086 |
| Neptune | 20657-07-03 15:50 G | 9266057.94 | 9266058.16 | 9266058.42 | 0.0089 | 0.0036 |
| Jupiter | 20658-06-08 13:40 G | 9266397.94 | 9266398.07 | 9266398.21 | 0.0528 | 0.0426 |
| Neptune | 20658-07-06 11:45 G | 9266425.77 | 9266425.99 | 9266426.24 | 0.0089 | 0.0036 |
| Neptune | 20659-07-08 18:00 G | 9266793.03 | 9266793.25 | 9266793.50 | 0.0089 | 0.0037 |
| Jupiter | 20659-07-15 23:16 G | 9266800.28 | 9266800.47 | 9266800.68 | 0.0541 | 0.0319 |
| Neptune | 20660-07-10 13:55 G | 9267160.86 | 9267161.08 | 9267161.34 | 0.0089 | 0.0038 |
| Neptune | 20661-07-12 21:21 G | 9267528.18 | 9267528.39 | 9267528.64 | 0.0090 | 0.0037 |
| Neptune | 20662-07-15 14:38 G | 9267895.88 | 9267896.11 | 9267896.37 | 0.0090 | 0.0038 |
| Neptune | 20663-07-18 01:55 G | 9268263.35 | 9268263.58 | 9268263.81 | 0.0090 | 0.0036 |
| Jupiter | 20663-12-06 22:04 G | 9268405.27 | 9268405.42 | 9268405.57 | 0.0501 | 0.0380 |
| Neptune | 20664-07-19 14:52 G | 9268630.88 | 9268631.12 | 9268631.36 | 0.0090 | 0.0038 |
| Jupiter | 20665-01-05 14:52 G | 9268800.90 | 9268801.12 | 9268801.35 | 0.0489 | 0.0143 |
| Neptune | 20665-07-22 06:43 G | 9268998.56 | 9268998.78 | 9268999.02 | 0.0090 | 0.0037 |
| Neptune | 20666-07-24 15:21 G | 9269365.91 | 9269366.14 | 9269366.38 | 0.0090 | 0.0039 |

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| Neptune | 20667-07-27 10:33 G | 9269733.71 | 9269733.94 | 9269734.18 | 0.0090 | 0.0036 |
| Neptune | 20668-07-28 16:33 G | 9270100.97 | 9270101.19 | 9270101.43 | 0.0090 | 0.0039 |
| Neptune | 20669-07-31 12:43 G | 9270468.80 | 9270469.03 | 9270469.28 | 0.0090 | 0.0035 |
| Jupiter | 20670-06-13 13:12 G | 9270785.86 | 9270786.05 | 9270786.26 | 0.0530 | 0.0288 |
| Neptune | 20670-08-02 19:55 G | 9270836.11 | 9270836.33 | 9270836.56 | 0.0090 | 0.0039 |
| Saturn | 20671-06-04 01:55 G | 9271141.33 | 9271141.58 | 9271141.83 | 0.0286 | 0.0044 |
| Jupiter | 20671-07-21 06:43 G | 9271188.67 | 9271188.78 | 9271188.89 | 0.0541 | 0.0466 |
| Neptune | 20671-08-05 13:26 G | 9271203.83 | 9271204.06 | 9271204.32 | 0.0090 | 0.0035 |
| Neptune | 20672-08-06 23:31 G | 9271571.28 | 9271571.48 | 9271571.73 | 0.0090 | 0.0040 |
| Neptune | 20673-08-09 13:26 G | 9271938.83 | 9271939.06 | 9271939.32 | 0.0090 | 0.0034 |
| Neptune | 20674-08-12 04:48 G | 9272306.48 | 9272306.70 | 9272306.93 | 0.0090 | 0.0038 |
| Neptune | 20675-08-14 13:55 G | 9272673.84 | 9272674.08 | 9272674.34 | 0.0090 | 0.0032 |
| Jupiter | 20675-12-10 22:04 G | 9272792.24 | 9272792.42 | 9272792.60 | 0.0499 | 0.0321 |
| Neptune | 20676-08-16 08:24 G | 9273041.63 | 9273041.85 | 9273042.09 | 0.0090 | 0.0038 |
| Jupiter | 20677-01-10 00:57 G | 9273188.34 | 9273188.54 | 9273188.74 | 0.0489 | 0.0249 |
| Neptune | 20677-08-18 14:52 G | 9273408.88 | 9273409.12 | 9273409.36 | 0.0090 | 0.0031 |
| Neptune | 20678-08-21 10:19 G | 9273776.71 | 9273776.93 | 9273777.19 | 0.0090 | 0.0038 |
| Neptune | 20679-08-23 16:33 G | 9274143.97 | 9274144.19 | 9274144.45 | 0.0090 | 0.0030 |
| Neptune | 20680-08-25 10:19 G | 9274511.71 | 9274511.93 | 9274512.20 | 0.0090 | 0.0036 |
| Neptune | 20681-08-27 19:40 G | 9274879.10 | 9274879.32 | 9274879.58 | 0.0089 | 0.0028 |
| Jupiter | 20682-06-18 17:02 G | 9275174.00 | 9275174.21 | 9275174.42 | 0.0531 | 0.0212 |
| Neptune | 20682-08-30 09:36 G | 9275246.67 | 9275246.90 | 9275247.16 | 0.0089 | 0.0034 |
| Neptune | 20683-09-02 00:14 G | 9275614.27 | 9275614.51 | 9275614.75 | 0.0089 | 0.0026 |
| Neptune | 20684-09-03 09:21 G | 9275981.66 | 9275981.89 | 9275982.15 | 0.0089 | 0.0032 |
| Neptune | 20685-09-06 03:36 G | 9276349.42 | 9276349.65 | 9276349.91 | 0.0089 | 0.0023 |
| Saturn | 20685-11-27 00:57 G | 9276431.45 | 9276431.54 | 9276431.65 | 0.0273 | 0.0249 |
| Neptune | 20686-09-08 09:50 G | 9276716.67 | 9276716.91 | 9276717.16 | 0.0089 | 0.0030 |
| Saturn | 20686-12-09 05:45 G | 9276808.53 | 9276808.74 | 9276808.96 | 0.0274 | 0.0146 |
| Neptune | 20687-09-11 05:02 G | 9277084.47 | 9277084.71 | 9277084.98 | 0.0089 | 0.0021 |
| Jupiter | 20687-12-15 11:16 G | 9277179.78 | 9277179.97 | 9277180.16 | 0.0498 | 0.0274 |

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| Neptune | 20688-09-12 10:48 G | 9277451.73 | 9277451.95 | 9277452.21 | 0.0089 | 0.0029 |
| Jupiter | 20689-01-13 23:16 G | 9277575.31 | 9277575.47 | 9277575.64 | 0.0488 | 0.0354 |
| Neptune | 20689-09-15 04:48 G | 9277819.45 | 9277819.70 | 9277819.97 | 0.0089 | 0.0019 |
| Neptune | 20690-09-17 13:12 G | 9278186.81 | 9278187.05 | 9278187.29 | 0.0089 | 0.0026 |
| Neptune | 20691-09-20 02:38 G | 9278554.36 | 9278554.61 | 9278554.88 | 0.0089 | 0.0016 |
| Neptune | 20692-09-21 15:50 G | 9278921.93 | 9278922.16 | 9278922.41 | 0.0089 | 0.0023 |
| Neptune | 20693-09-24 00:57 G | 9279289.29 | 9279289.54 | 9279289.82 | 0.0089 | 0.0014 |
| Jupiter | 20694-06-23 20:24 G | 9279562.12 | 9279562.35 | 9279562.58 | 0.0533 | 0.0145 |
| Neptune | 20694-09-26 18:28 G | 9279657.03 | 9279657.27 | 9279657.52 | 0.0089 | 0.0021 |
| Neptune | 20695-09-29 00:00 G | 9280024.25 | 9280024.50 | 9280024.76 | 0.0089 | 0.0011 |
| Neptune | 20696-09-30 19:12 G | 9280392.05 | 9280392.30 | 9280392.55 | 0.0089 | 0.0018 |
| Uranus | 20696-10-26 00:14 G | 9280417.31 | 9280417.51 | 9280417.72 | 0.0143 | 0.0088 |
| Neptune | 20697-10-03 00:43 G | 9280759.28 | 9280759.53 | 9280759.78 | 0.0089 | 0.0008 |
| Uranus | 20697-10-30 17:16 G | 9280786.97 | 9280787.22 | 9280787.46 | 0.0143 | 0.0009 |
| Neptune | 20698-10-05 18:00 G | 9281127.00 | 9281127.25 | 9281127.52 | 0.0089 | 0.0015 |
| Uranus | 20698-11-04 19:26 G | 9281157.08 | 9281157.31 | 9281157.57 | 0.0144 | 0.0046 |
| Neptune | 20699-10-08 01:55 G | 9281494.33 | 9281494.58 | 9281494.83 | 0.0089 | 0.0005 |
| Uranus | 20699-11-09 11:31 G | 9281526.86 | 9281526.98 | 9281527.13 | 0.0144 | 0.0121 |
| Jupiter | 20699-12-19 20:38 G | 9281567.14 | 9281567.36 | 9281567.59 | 0.0496 | 0.0176 |
| Saturn | 20700-05-29 18:00 G | 9281728.14 | 9281728.25 | 9281728.39 | 0.0286 | 0.0242 |
| Neptune | 20700-10-10 15:07 G | 9281861.87 | 9281862.13 | 9281862.40 | 0.0089 | 0.0012 |
| Jupiter | 20701-01-19 09:50 G | 9281962.79 | 9281962.91 | 9281963.04 | 0.0487 | 0.0409 |
| Saturn | 20701-06-12 17:16 G | 9282107.09 | 9282107.22 | 9282107.37 | 0.0285 | 0.0235 |
| Neptune | 20701-10-13 03:50 G | 9282229.41 | 9282229.66 | 9282229.91 | 0.0089 | 0.0002 |
| Neptune | 20702-10-15 12:28 G | 9282596.76 | 9282597.02 | 9282597.29 | 0.0089 | 0.0010 |
| Neptune | 20703-10-18 05:16 G | 9282964.47 | 9282964.72 | 9282964.97 | 0.0089 | 0.0001 |
| Neptune | 20704-10-19 10:19 G | 9283331.67 | 9283331.93 | 9283332.19 | 0.0089 | 0.0006 |
| Neptune | 20705-10-22 04:48 G | 9283699.45 | 9283699.70 | 9283699.96 | 0.0089 | 0.0004 |
| Jupiter | 20706-06-29 18:28 G | 9283950.04 | 9283950.27 | 9283950.50 | 0.0535 | 0.0006 |
| Neptune | 20706-10-24 09:36 G | 9284066.65 | 9284066.90 | 9284067.15 | 0.0089 | 0.0004 |

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| Neptune | 20707-10-27 02:24 G | 9284434.34 | 9284434.60 | 9284434.87 | 0.0089 | 0.0007 |
| Pluto | 20708-09-23 05:02 G | 9284766.65 | 9284766.71 | 9284766.78 | 0.0064 | 0.0061 |
| Neptune | 20708-10-28 09:50 G | 9284801.66 | 9284801.91 | 9284802.16 | 0.0089 | 0.0001 |
| Pluto | 20709-09-24 10:33 G | 9285132.71 | 9285132.94 | 9285133.20 | 0.0064 | 0.0022 |
| Neptune | 20709-10-30 22:19 G | 9285169.17 | 9285169.43 | 9285169.70 | 0.0089 | 0.0010 |
| Neptune | 20710-11-02 11:02 G | 9285536.71 | 9285536.96 | 9285537.21 | 0.0089 | 0.0003 |
| Neptune | 20711-11-04 18:57 G | 9285904.04 | 9285904.29 | 9285904.56 | 0.0089 | 0.0013 |
| Jupiter | 20711-12-25 02:09 G | 9285954.37 | 9285954.59 | 9285954.81 | 0.0494 | 0.0056 |
| Neptune | 20712-11-06 11:31 G | 9286271.74 | 9286271.98 | 9286272.24 | 0.0089 | 0.0006 |
| Jupiter | 20713-01-23 11:16 G | 9286349.88 | 9286349.97 | 9286350.08 | 0.0486 | 0.0443 |
| Neptune | 20713-11-08 16:04 G | 9286638.93 | 9286639.17 | 9286639.43 | 0.0089 | 0.0016 |
| Neptune | 20714-11-11 10:04 G | 9287006.67 | 9287006.92 | 9287007.18 | 0.0089 | 0.0008 |
| Neptune | 20715-11-13 14:24 G | 9287373.87 | 9287374.10 | 9287374.36 | 0.0089 | 0.0019 |
| Saturn | 20715-12-05 06:43 G | 9287395.54 | 9287395.78 | 9287396.02 | 0.0273 | 0.0031 |
| Neptune | 20716-11-15 06:43 G | 9287741.52 | 9287741.78 | 9287742.05 | 0.0089 | 0.0012 |
| Neptune | 20717-11-17 13:55 G | 9288108.84 | 9288109.08 | 9288109.32 | 0.0088 | 0.0021 |
| Jupiter | 20718-07-05 10:19 G | 9288338.71 | 9288338.93 | 9288339.15 | 0.0537 | 0.0143 |
| Neptune | 20718-11-20 01:26 G | 9288476.30 | 9288476.56 | 9288476.83 | 0.0088 | 0.0014 |
| Neptune | 20719-11-22 13:55 G | 9288843.84 | 9288844.08 | 9288844.32 | 0.0088 | 0.0023 |
| Neptune | 20720-11-23 20:52 G | 9289211.12 | 9289211.37 | 9289211.63 | 0.0088 | 0.0016 |
| Neptune | 20721-11-26 13:12 G | 9289578.82 | 9289579.05 | 9289579.31 | 0.0088 | 0.0026 |
| Neptune | 20722-11-28 17:16 G | 9289945.98 | 9289946.22 | 9289946.48 | 0.0088 | 0.0019 |
| Neptune | 20723-12-01 11:02 G | 9290313.73 | 9290313.96 | 9290314.22 | 0.0088 | 0.0028 |
| Jupiter | 20723-12-29 15:07 G | 9290341.90 | 9290342.13 | 9290342.37 | 0.0492 | 0.0026 |
| Neptune | 20724-12-02 15:36 G | 9290680.91 | 9290681.15 | 9290681.40 | 0.0088 | 0.0021 |
| Neptune | 20725-12-05 06:43 G | 9291048.54 | 9291048.78 | 9291049.04 | 0.0088 | 0.0030 |
| Neptune | 20726-12-07 14:24 G | 9291415.86 | 9291416.10 | 9291416.34 | 0.0088 | 0.0023 |
| Neptune | 20727-12-10 00:28 G | 9291783.29 | 9291783.52 | 9291783.79 | 0.0088 | 0.0033 |
| Neptune | 20728-12-11 13:12 G | 9292150.82 | 9292151.05 | 9292151.30 | 0.0088 | 0.0026 |
| Neptune | 20729-12-13 19:12 G | 9292518.07 | 9292518.30 | 9292518.56 | 0.0088 | 0.0034 |

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| Saturn | 20730-06-06 11:02 G | 9292692.72 | 9292692.96 | 9292693.21 | 0.0286 | 0.0019 |
| Jupiter | 20730-07-10 13:55 G | 9292726.86 | 9292727.08 | 9292727.31 | 0.0538 | 0.0219 |
| Neptune | 20730-12-16 11:45 G | 9292885.76 | 9292885.99 | 9292886.24 | 0.0088 | 0.0027 |
| Neptune | 20731-12-18 15:07 G | 9293252.91 | 9293253.13 | 9293253.38 | 0.0088 | 0.0035 |
| Neptune | 20732-12-20 08:24 G | 9293620.62 | 9293620.85 | 9293621.11 | 0.0088 | 0.0029 |
| Neptune | 20733-12-22 12:43 G | 9293987.82 | 9293988.03 | 9293988.28 | 0.0088 | 0.0037 |
| Jupiter | 20734-12-02 10:48 G | 9294332.93 | 9294332.95 | 9294332.98 | 0.0504 | 0.0499 |
| Neptune | 20734-12-25 03:21 G | 9294355.41 | 9294355.64 | 9294355.90 | 0.0088 | 0.0031 |
| Neptune | 20735-12-27 11:31 G | 9294722.77 | 9294722.98 | 9294723.22 | 0.0088 | 0.0038 |
| Jupiter | 20736-01-02 11:16 G | 9294728.74 | 9294728.97 | 9294729.20 | 0.0491 | 0.0068 |
| Uranus | 20736-04-24 04:33 G | 9294841.55 | 9294841.69 | 9294841.87 | 0.0136 | 0.0104 |
| Neptune | 20736-12-28 21:21 G | 9295090.14 | 9295090.39 | 9295090.63 | 0.0088 | 0.0031 |
| Uranus | 20737-04-28 18:00 G | 9295211.03 | 9295211.25 | 9295211.50 | 0.0135 | 0.0059 |
| Neptune | 20737-12-31 10:04 G | 9295457.72 | 9295457.92 | 9295458.16 | 0.0088 | 0.0039 |
| Uranus | 20738-05-03 02:52 G | 9295580.37 | 9295580.62 | 9295580.87 | 0.0135 | 0.0008 |
| Neptune | 20739-01-02 15:50 G | 9295824.92 | 9295825.16 | 9295825.40 | 0.0088 | 0.0032 |
| Uranus | 20739-05-07 16:19 G | 9295949.94 | 9295950.18 | 9295950.42 | 0.0135 | 0.0057 |
| Neptune | 20740-01-05 08:24 G | 9296192.63 | 9296192.85 | 9296193.09 | 0.0088 | 0.0040 |
| Uranus | 20740-05-10 23:02 G | 9296319.32 | 9296319.46 | 9296319.59 | 0.0134 | 0.0112 |
| Neptune | 20741-01-06 11:31 G | 9296559.76 | 9296559.98 | 9296560.23 | 0.0088 | 0.0034 |
| Jupiter | 20741-06-08 09:21 G | 9296712.76 | 9296712.89 | 9296713.03 | 0.0527 | 0.0434 |
| Neptune | 20742-01-09 04:33 G | 9296927.46 | 9296927.69 | 9296927.93 | 0.0088 | 0.0040 |
| Jupiter | 20742-07-15 20:52 G | 9297115.18 | 9297115.37 | 9297115.55 | 0.0540 | 0.0300 |
| Neptune | 20743-01-11 09:21 G | 9297294.67 | 9297294.89 | 9297295.13 | 0.0088 | 0.0034 |
| Neptune | 20744-01-13 23:02 G | 9297662.23 | 9297662.46 | 9297662.70 | 0.0088 | 0.0040 |
| Saturn | 20744-11-29 05:16 G | 9297982.56 | 9297982.72 | 9297982.91 | 0.0273 | 0.0199 |
| Neptune | 20745-01-15 07:40 G | 9298029.60 | 9298029.82 | 9298030.06 | 0.0088 | 0.0035 |
| Saturn | 20745-12-11 13:55 G | 9298359.93 | 9298360.08 | 9298360.25 | 0.0274 | 0.0199 |
| Neptune | 20746-01-17 16:04 G | 9298396.95 | 9298397.17 | 9298397.42 | 0.0088 | 0.0041 |
| Jupiter | 20746-12-06 14:52 G | 9298719.98 | 9298720.12 | 9298720.27 | 0.0502 | 0.0391 |

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| Neptune | 20747-01-20 06:00 G | 9298764.54 | 9298764.75 | 9298765.00 | 0.0088 | 0.0036 |
| Jupiter | 20748-01-07 00:28 G | 9299116.30 | 9299116.52 | 9299116.74 | 0.0490 | 0.0134 |
| Neptune | 20748-01-22 11:02 G | 9299131.74 | 9299131.96 | 9299132.20 | 0.0088 | 0.0041 |
| Neptune | 20749-01-24 04:04 G | 9299499.45 | 9299499.67 | 9299499.92 | 0.0088 | 0.0035 |
| Neptune | 20750-01-26 07:40 G | 9299866.60 | 9299866.82 | 9299867.05 | 0.0088 | 0.0040 |
| Neptune | 20751-01-29 00:14 G | 9300234.28 | 9300234.51 | 9300234.76 | 0.0088 | 0.0035 |
| Neptune | 20752-01-31 06:14 G | 9300601.54 | 9300601.76 | 9300601.98 | 0.0088 | 0.0040 |
| Neptune | 20753-02-01 18:43 G | 9300969.05 | 9300969.28 | 9300969.54 | 0.0088 | 0.0035 |
| Jupiter | 20753-06-13 09:21 G | 9301100.71 | 9301100.89 | 9301101.07 | 0.0529 | 0.0307 |
| Neptune | 20754-02-04 04:19 G | 9301336.48 | 9301336.68 | 9301336.92 | 0.0088 | 0.0040 |
| Jupiter | 20754-07-21 03:21 G | 9301503.51 | 9301503.64 | 9301503.79 | 0.0541 | 0.0442 |
| Neptune | 20755-02-06 12:00 G | 9301703.77 | 9301704.00 | 9301704.26 | 0.0088 | 0.0034 |
| Neptune | 20756-02-09 03:07 G | 9302071.41 | 9302071.63 | 9302071.86 | 0.0088 | 0.0038 |
| Neptune | 20757-02-10 07:12 G | 9302438.57 | 9302438.80 | 9302439.05 | 0.0088 | 0.0033 |
| Neptune | 20758-02-13 00:28 G | 9302806.30 | 9302806.52 | 9302806.77 | 0.0088 | 0.0038 |
| Jupiter | 20758-12-11 07:12 G | 9303107.64 | 9303107.80 | 9303107.97 | 0.0500 | 0.0336 |
| Neptune | 20759-02-15 04:04 G | 9303173.45 | 9303173.67 | 9303173.92 | 0.0088 | 0.0033 |
| Saturn | 20759-06-01 10:19 G | 9303279.73 | 9303279.93 | 9303280.12 | 0.0286 | 0.0176 |
| Jupiter | 20760-01-11 00:57 G | 9303503.34 | 9303503.54 | 9303503.75 | 0.0489 | 0.0245 |
| Neptune | 20760-02-17 20:38 G | 9303541.14 | 9303541.36 | 9303541.62 | 0.0088 | 0.0036 |
| Neptune | 20761-02-19 03:07 G | 9303908.41 | 9303908.63 | 9303908.88 | 0.0088 | 0.0031 |
| Neptune | 20762-02-21 15:36 G | 9304275.92 | 9304276.15 | 9304276.41 | 0.0088 | 0.0034 |
| Neptune | 20763-02-24 02:52 G | 9304643.39 | 9304643.62 | 9304643.86 | 0.0088 | 0.0029 |
| Neptune | 20764-02-26 09:50 G | 9305010.68 | 9305010.91 | 9305011.17 | 0.0088 | 0.0033 |
| Neptune | 20765-02-28 01:40 G | 9305378.34 | 9305378.57 | 9305378.81 | 0.0088 | 0.0028 |
| Jupiter | 20765-06-18 13:55 G | 9305488.87 | 9305489.08 | 9305489.30 | 0.0531 | 0.0235 |
| Neptune | 20766-03-02 05:45 G | 9305745.51 | 9305745.74 | 9305745.99 | 0.0088 | 0.0031 |
| Neptune | 20767-03-04 23:16 G | 9306113.24 | 9306113.47 | 9306113.74 | 0.0088 | 0.0026 |
| Neptune | 20768-03-06 03:21 G | 9306480.42 | 9306480.64 | 9306480.90 | 0.0088 | 0.0028 |
| Neptune | 20769-03-08 19:40 G | 9306848.08 | 9306848.32 | 9306848.59 | 0.0088 | 0.0024 |

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| Neptune | 20770-03-11 03:07 G | 9307215.40 | 9307215.63 | 9307215.88 | 0.0088 | 0.0026 |
| Jupiter | 20770-12-15 16:48 G | 9307495.01 | 9307495.20 | 9307495.40 | 0.0498 | 0.0283 |
| Neptune | 20771-03-13 15:21 G | 9307582.89 | 9307583.14 | 9307583.40 | 0.0088 | 0.0022 |
| Jupiter | 20772-01-15 10:19 G | 9307890.78 | 9307890.93 | 9307891.09 | 0.0488 | 0.0345 |
| Neptune | 20772-03-15 03:07 G | 9307950.40 | 9307950.63 | 9307950.88 | 0.0088 | 0.0024 |
| Neptune | 20773-03-17 10:19 G | 9308317.68 | 9308317.93 | 9308318.20 | 0.0088 | 0.0019 |
| Neptune | 20774-03-20 02:38 G | 9308685.38 | 9308685.61 | 9308685.87 | 0.0088 | 0.0021 |
| Saturn | 20774-12-06 18:00 G | 9308947.00 | 9308947.25 | 9308947.50 | 0.0273 | 0.0024 |
| Neptune | 20775-03-22 07:26 G | 9309052.56 | 9309052.81 | 9309053.07 | 0.0088 | 0.0017 |
| Neptune | 20776-03-24 01:55 G | 9309420.32 | 9309420.58 | 9309420.83 | 0.0088 | 0.0018 |
| Neptune | 20777-03-26 06:28 G | 9309787.52 | 9309787.77 | 9309788.02 | 0.0088 | 0.0015 |
| Jupiter | 20777-06-23 13:26 G | 9309876.84 | 9309877.06 | 9309877.28 | 0.0533 | 0.0162 |
| Neptune | 20778-03-28 23:02 G | 9310155.20 | 9310155.46 | 9310155.73 | 0.0088 | 0.0015 |
| Neptune | 20779-03-31 07:12 G | 9310522.56 | 9310522.80 | 9310523.06 | 0.0088 | 0.0013 |
| Neptune | 20780-04-01 19:12 G | 9310890.05 | 9310890.30 | 9310890.58 | 0.0088 | 0.0012 |
| Uranus | 20780-10-27 11:45 G | 9311098.78 | 9311098.99 | 9311099.23 | 0.0143 | 0.0072 |
| Neptune | 20781-04-04 08:09 G | 9311257.60 | 9311257.84 | 9311258.09 | 0.0088 | 0.0010 |
| Uranus | 20781-11-01 06:00 G | 9311468.51 | 9311468.75 | 9311469.00 | 0.0143 | 0.0019 |
| Mars | 20782-03-25 16:48 G | 9311613.04 | 9311613.20 | 9311613.37 | 0.1652 | 0.0643 |
| Neptune | 20782-04-06 15:21 G | 9311624.88 | 9311625.14 | 9311625.41 | 0.0088 | 0.0010 |
| Uranus | 20782-11-06 07:40 G | 9311838.60 | 9311838.82 | 9311839.07 | 0.0144 | 0.0062 |
| Jupiter | 20782-12-19 23:02 G | 9311882.25 | 9311882.46 | 9311882.67 | 0.0496 | 0.0181 |
| Neptune | 20783-04-09 08:38 G | 9311992.61 | 9311992.86 | 9311993.11 | 0.0088 | 0.0007 |
| Uranus | 20783-11-11 01:12 G | 9312208.41 | 9312208.55 | 9312208.68 | 0.0144 | 0.0119 |
| Jupiter | 20784-01-19 12:57 G | 9312277.91 | 9312278.04 | 9312278.19 | 0.0487 | 0.0393 |
| Neptune | 20784-04-10 13:26 G | 9312359.80 | 9312360.06 | 9312360.32 | 0.0088 | 0.0006 |
| Neptune | 20785-04-13 08:09 G | 9312727.58 | 9312727.84 | 9312728.10 | 0.0088 | 0.0004 |
| Neptune | 20786-04-15 13:26 G | 9313094.81 | 9313095.06 | 9313095.32 | 0.0088 | 0.0002 |
| Neptune | 20787-04-18 06:43 G | 9313462.51 | 9313462.78 | 9313463.04 | 0.0088 | 0.0002 |
| Neptune | 20788-04-19 15:36 G | 9313829.90 | 9313830.15 | 9313830.40 | 0.0088 | 0.0002 |

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| Neptune | 20789-04-22 04:19 G | 9314197.41 | 9314197.68 | 9314197.95 | 0.0088 | 0.0001 |
| Saturn | 20789-06-08 02:09 G | 9314244.37 | 9314244.59 | 9314244.83 | 0.0285 | 0.0081 |
| Jupiter | 20789-06-29 04:48 G | 9314265.47 | 9314265.70 | 9314265.93 | 0.0535 | 0.0017 |
| Neptune | 20790-04-24 17:45 G | 9314564.99 | 9314565.24 | 9314565.50 | 0.0088 | 0.0004 |
| Neptune | 20791-04-27 01:26 G | 9314932.30 | 9314932.56 | 9314932.83 | 0.0089 | 0.0005 |
| Neptune | 20792-04-28 19:12 G | 9315300.05 | 9315300.30 | 9315300.55 | 0.0089 | 0.0008 |
| Neptune | 20793-05-01 00:14 G | 9315667.26 | 9315667.51 | 9315667.78 | 0.0089 | 0.0008 |
| Neptune | 20794-05-03 19:40 G | 9316035.06 | 9316035.32 | 9316035.58 | 0.0089 | 0.0011 |
| Jupiter | 20794-12-24 09:21 G | 9316269.66 | 9316269.89 | 9316270.13 | 0.0495 | 0.0064 |
| Neptune | 20795-05-06 00:57 G | 9316402.30 | 9316402.54 | 9316402.81 | 0.0089 | 0.0010 |
| Jupiter | 20796-01-23 14:38 G | 9316665.02 | 9316665.11 | 9316665.22 | 0.0486 | 0.0435 |
| Neptune | 20796-05-07 18:28 G | 9316770.01 | 9316770.27 | 9316770.54 | 0.0089 | 0.0014 |
| Neptune | 20797-05-10 03:50 G | 9317137.42 | 9317137.66 | 9317137.91 | 0.0089 | 0.0013 |
| Pluto | 20798-03-24 22:48 G | 9317456.24 | 9317456.45 | 9317456.70 | 0.0080 | 0.0035 |
| Neptune | 20798-05-12 17:16 G | 9317504.96 | 9317505.22 | 9317505.49 | 0.0089 | 0.0018 |
| Neptune | 20799-05-15 06:57 G | 9317872.55 | 9317872.79 | 9317873.05 | 0.0089 | 0.0016 |
| Neptune | 20800-05-16 15:36 G | 9318239.90 | 9318240.15 | 9318240.42 | 0.0089 | 0.0020 |
| Neptune | 20801-05-19 09:36 G | 9318607.66 | 9318607.90 | 9318608.16 | 0.0089 | 0.0017 |
| Jupiter | 20801-07-04 03:36 G | 9318653.42 | 9318653.65 | 9318653.89 | 0.0536 | 0.0124 |
| Neptune | 20802-05-21 15:36 G | 9318974.90 | 9318975.15 | 9318975.40 | 0.0089 | 0.0023 |
| Neptune | 20803-05-24 11:16 G | 9319342.72 | 9319342.97 | 9319343.23 | 0.0089 | 0.0020 |
| Saturn | 20803-12-01 13:12 G | 9319533.85 | 9319534.05 | 9319534.26 | 0.0273 | 0.0145 |
| Neptune | 20804-05-25 17:02 G | 9319709.97 | 9319710.21 | 9319710.46 | 0.0089 | 0.0027 |
| Saturn | 20804-12-13 02:52 G | 9319911.54 | 9319911.62 | 9319911.73 | 0.0274 | 0.0251 |
| Neptune | 20805-05-28 11:16 G | 9320077.72 | 9320077.97 | 9320078.23 | 0.0089 | 0.0022 |
| Neptune | 20806-05-30 20:24 G | 9320445.12 | 9320445.35 | 9320445.60 | 0.0089 | 0.0029 |
| Jupiter | 20806-12-28 09:07 G | 9320656.65 | 9320656.88 | 9320657.12 | 0.0493 | 0.0016 |
| Neptune | 20807-06-02 10:33 G | 9320812.69 | 9320812.94 | 9320813.21 | 0.0089 | 0.0024 |
| Neptune | 20808-06-04 00:28 G | 9321180.29 | 9321180.52 | 9321180.76 | 0.0089 | 0.0032 |
| Neptune | 20809-06-06 09:36 G | 9321547.66 | 9321547.90 | 9321548.17 | 0.0089 | 0.0027 |

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| Neptune | 20810-06-09 03:21 G | 9321915.42 | 9321915.64 | 9321915.89 | 0.0089 | 0.0035 |
| Neptune | 20811-06-11 10:19 G | 9322282.68 | 9322282.93 | 9322283.18 | 0.0089 | 0.0029 |
| Neptune | 20812-06-13 06:14 G | 9322650.53 | 9322650.76 | 9322651.00 | 0.0089 | 0.0037 |
| Neptune | 20813-06-15 12:43 G | 9323017.79 | 9323018.03 | 9323018.27 | 0.0089 | 0.0030 |
| Jupiter | 20813-07-09 07:12 G | 9323041.59 | 9323041.80 | 9323042.01 | 0.0538 | 0.0192 |
| Neptune | 20814-06-18 07:26 G | 9323385.58 | 9323385.81 | 9323386.06 | 0.0089 | 0.0039 |
| Neptune | 20815-06-20 16:19 G | 9323752.96 | 9323753.18 | 9323753.43 | 0.0089 | 0.0032 |
| Neptune | 20816-06-22 07:40 G | 9324120.60 | 9324120.82 | 9324121.08 | 0.0089 | 0.0041 |
| Neptune | 20817-06-24 21:21 G | 9324488.17 | 9324488.39 | 9324488.63 | 0.0089 | 0.0033 |
| Saturn | 20818-06-02 23:02 G | 9324831.22 | 9324831.46 | 9324831.69 | 0.0286 | 0.0110 |
| Neptune | 20818-06-27 07:26 G | 9324855.59 | 9324855.81 | 9324856.06 | 0.0089 | 0.0042 |
| Jupiter | 20819-01-02 00:43 G | 9325044.30 | 9325044.53 | 9325044.76 | 0.0492 | 0.0055 |
| Neptune | 20819-06-30 01:12 G | 9325223.32 | 9325223.55 | 9325223.79 | 0.0089 | 0.0034 |
| Uranus | 20820-04-24 16:33 G | 9325523.05 | 9325523.19 | 9325523.32 | 0.0136 | 0.0113 |
| Neptune | 20820-07-01 07:40 G | 9325590.61 | 9325590.82 | 9325591.07 | 0.0089 | 0.0043 |
| Uranus | 20821-04-29 04:33 G | 9325892.45 | 9325892.69 | 9325892.95 | 0.0135 | 0.0043 |
| Neptune | 20821-07-04 04:19 G | 9325958.44 | 9325958.68 | 9325958.92 | 0.0089 | 0.0035 |
| Uranus | 20822-05-03 14:52 G | 9326261.87 | 9326262.12 | 9326262.37 | 0.0135 | 0.0002 |
| Neptune | 20822-07-06 10:19 G | 9326325.72 | 9326325.93 | 9326326.16 | 0.0089 | 0.0045 |
| Uranus | 20823-05-08 03:07 G | 9326631.41 | 9326631.63 | 9326631.87 | 0.0135 | 0.0065 |
| Neptune | 20823-07-09 05:31 G | 9326693.50 | 9326693.73 | 9326693.99 | 0.0089 | 0.0036 |
| Uranus | 20824-05-11 11:45 G | 9327000.87 | 9327000.99 | 9327001.10 | 0.0134 | 0.0118 |
| Jupiter | 20824-06-07 06:57 G | 9327027.68 | 9327027.79 | 9327027.92 | 0.0526 | 0.0448 |
| Neptune | 20824-07-10 14:24 G | 9327060.89 | 9327061.10 | 9327061.33 | 0.0089 | 0.0045 |
| Neptune | 20825-07-13 06:57 G | 9327428.55 | 9327428.79 | 9327429.04 | 0.0089 | 0.0036 |
| Jupiter | 20825-07-14 16:04 G | 9327429.97 | 9327430.17 | 9327430.38 | 0.0540 | 0.0275 |
| Neptune | 20826-07-15 19:26 G | 9327796.12 | 9327796.31 | 9327796.55 | 0.0089 | 0.0046 |
| Neptune | 20827-07-18 06:57 G | 9328163.56 | 9328163.79 | 9328164.05 | 0.0090 | 0.0037 |
| Neptune | 20828-07-20 00:00 G | 9328531.29 | 9328531.50 | 9328531.73 | 0.0090 | 0.0046 |
| Neptune | 20829-07-22 07:12 G | 9328898.58 | 9328898.80 | 9328899.06 | 0.0090 | 0.0037 |

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| Jupiter | 20829-12-06 01:26 G | 9329035.43 | 9329035.56 | 9329035.70 | 0.0503 | 0.0405 |
| Neptune | 20830-07-25 03:07 G | 9329266.43 | 9329266.63 | 9329266.87 | 0.0090 | 0.0046 |
| Jupiter | 20831-01-06 00:57 G | 9329431.31 | 9329431.54 | 9329431.77 | 0.0490 | 0.0126 |
| Neptune | 20831-07-27 09:21 G | 9329633.66 | 9329633.89 | 9329634.13 | 0.0090 | 0.0036 |
| Neptune | 20832-07-29 05:02 G | 9330001.49 | 9330001.71 | 9330001.95 | 0.0090 | 0.0045 |
| Neptune | 20833-07-31 12:57 G | 9330368.82 | 9330369.04 | 9330369.28 | 0.0090 | 0.0036 |
| Saturn | 20833-12-07 23:45 G | 9330498.25 | 9330498.49 | 9330498.74 | 0.0274 | 0.0077 |
| Neptune | 20834-08-03 05:45 G | 9330736.51 | 9330736.74 | 9330736.97 | 0.0090 | 0.0044 |
| Neptune | 20835-08-05 17:16 G | 9331104.01 | 9331104.22 | 9331104.47 | 0.0090 | 0.0036 |
| Mars | 20835-09-25 07:55 G | 9331154.67 | 9331154.83 | 9331154.99 | 0.1889 | 0.1156 |
| Jupiter | 20836-06-12 09:50 G | 9331415.72 | 9331415.91 | 9331416.11 | 0.0528 | 0.0317 |
| Neptune | 20836-08-07 05:31 G | 9331471.51 | 9331471.73 | 9331471.98 | 0.0090 | 0.0043 |
| Jupiter | 20837-07-19 20:24 G | 9331818.22 | 9331818.35 | 9331818.50 | 0.0541 | 0.0425 |
| Neptune | 20837-08-09 22:04 G | 9331839.19 | 9331839.42 | 9331839.65 | 0.0090 | 0.0034 |
| Neptune | 20838-08-12 05:45 G | 9332206.51 | 9332206.74 | 9332206.98 | 0.0090 | 0.0042 |
| Neptune | 20839-08-15 00:57 G | 9332574.32 | 9332574.54 | 9332574.80 | 0.0090 | 0.0034 |
| Neptune | 20840-08-16 07:12 G | 9332941.58 | 9332941.80 | 9332942.04 | 0.0090 | 0.0041 |
| Neptune | 20841-08-19 02:52 G | 9333309.39 | 9333309.62 | 9333309.88 | 0.0090 | 0.0032 |
| Jupiter | 20841-12-10 11:31 G | 9333422.82 | 9333422.98 | 9333423.16 | 0.0500 | 0.0350 |
| Neptune | 20842-08-21 10:04 G | 9333676.70 | 9333676.92 | 9333677.16 | 0.0090 | 0.0038 |
| Jupiter | 20843-01-10 10:48 G | 9333818.76 | 9333818.95 | 9333819.15 | 0.0489 | 0.0243 |
| Neptune | 20843-08-24 03:21 G | 9334044.39 | 9334044.64 | 9334044.89 | 0.0090 | 0.0030 |
| Neptune | 20844-08-25 14:09 G | 9334411.88 | 9334412.09 | 9334412.33 | 0.0090 | 0.0036 |
| Neptune | 20845-08-28 02:38 G | 9334779.36 | 9334779.61 | 9334779.87 | 0.0090 | 0.0029 |
| Neptune | 20846-08-30 17:45 G | 9335147.02 | 9335147.24 | 9335147.49 | 0.0090 | 0.0035 |
| Neptune | 20847-09-02 01:40 G | 9335514.32 | 9335514.57 | 9335514.83 | 0.0089 | 0.0026 |
| Saturn | 20848-06-09 19:40 G | 9335796.12 | 9335796.32 | 9335796.53 | 0.0285 | 0.0146 |
| Jupiter | 20848-06-17 10:48 G | 9335803.75 | 9335803.95 | 9335804.15 | 0.0531 | 0.0250 |
| Neptune | 20848-09-03 20:24 G | 9335882.13 | 9335882.35 | 9335882.60 | 0.0089 | 0.0031 |
| Neptune | 20849-09-06 02:24 G | 9336249.36 | 9336249.60 | 9336249.85 | 0.0089 | 0.0024 |

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| Neptune | 20850-09-08 21:50 G | 9336617.17 | 9336617.41 | 9336617.67 | 0.0089 | 0.0029 |
| Neptune | 20851-09-11 04:33 G | 9336984.45 | 9336984.69 | 9336984.94 | 0.0089 | 0.0023 |
| Neptune | 20852-09-12 22:04 G | 9337352.16 | 9337352.42 | 9337352.67 | 0.0089 | 0.0026 |
| Neptune | 20853-09-15 08:24 G | 9337719.60 | 9337719.85 | 9337720.09 | 0.0089 | 0.0020 |
| Jupiter | 20853-12-14 15:36 G | 9337809.98 | 9337810.15 | 9337810.34 | 0.0498 | 0.0297 |
| Neptune | 20854-09-17 20:38 G | 9338087.11 | 9338087.36 | 9338087.63 | 0.0089 | 0.0023 |
| Jupiter | 20855-01-14 11:31 G | 9338205.80 | 9338205.98 | 9338206.16 | 0.0488 | 0.0332 |
| Neptune | 20855-09-20 11:02 G | 9338454.73 | 9338454.96 | 9338455.22 | 0.0089 | 0.0017 |
| Neptune | 20856-09-21 18:43 G | 9338822.03 | 9338822.28 | 9338822.55 | 0.0089 | 0.0020 |
| Neptune | 20857-09-24 12:57 G | 9339189.80 | 9339190.04 | 9339190.30 | 0.0089 | 0.0015 |
| Neptune | 20858-09-26 18:00 G | 9339557.01 | 9339557.25 | 9339557.52 | 0.0089 | 0.0017 |
| Neptune | 20859-09-29 13:26 G | 9339924.80 | 9339925.06 | 9339925.32 | 0.0089 | 0.0012 |
| Jupiter | 20860-06-22 22:04 G | 9340192.20 | 9340192.42 | 9340192.65 | 0.0532 | 0.0173 |
| Neptune | 20860-09-30 19:26 G | 9340292.06 | 9340292.31 | 9340292.56 | 0.0089 | 0.0013 |
| Mars | 20861-03-27 15:21 G | 9340469.98 | 9340470.14 | 9340470.30 | 0.1655 | 0.0829 |
| Neptune | 20861-10-03 12:00 G | 9340659.74 | 9340660.00 | 9340660.27 | 0.0089 | 0.0009 |
| Neptune | 20862-10-05 21:50 G | 9341027.16 | 9341027.41 | 9341027.66 | 0.0089 | 0.0010 |
| Saturn | 20862-12-03 00:00 G | 9341085.28 | 9341085.50 | 9341085.72 | 0.0273 | 0.0094 |
| Neptune | 20863-10-08 10:19 G | 9341394.66 | 9341394.93 | 9341395.19 | 0.0089 | 0.0006 |
| Uranus | 20863-10-24 02:24 G | 9341410.55 | 9341410.60 | 9341410.67 | 0.0142 | 0.0138 |
| Neptune | 20864-10-10 00:14 G | 9341762.27 | 9341762.51 | 9341762.76 | 0.0089 | 0.0007 |
| Uranus | 20864-10-28 00:14 G | 9341780.29 | 9341780.51 | 9341780.73 | 0.0143 | 0.0079 |
| Neptune | 20865-10-12 07:40 G | 9342129.56 | 9342129.82 | 9342130.08 | 0.0089 | 0.0002 |
| Uranus | 20865-11-01 19:26 G | 9342150.06 | 9342150.31 | 9342150.55 | 0.0143 | 0.0002 |
| Jupiter | 20865-12-19 06:00 G | 9342197.53 | 9342197.75 | 9342197.97 | 0.0497 | 0.0188 |
| Neptune | 20866-10-15 01:12 G | 9342497.30 | 9342497.55 | 9342497.80 | 0.0089 | 0.0002 |
| Uranus | 20866-11-06 19:26 G | 9342520.08 | 9342520.31 | 9342520.57 | 0.0144 | 0.0054 |
| Jupiter | 20867-01-18 15:50 G | 9342593.03 | 9342593.16 | 9342593.31 | 0.0487 | 0.0381 |
| Neptune | 20867-10-17 06:00 G | 9342864.49 | 9342864.75 | 9342865.01 | 0.0089 | 0.0001 |
| Uranus | 20867-11-11 13:12 G | 9342889.97 | 9342890.05 | 9342890.17 | 0.0144 | 0.0131 |

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| Neptune | 20868-10-19 00:28 G | 9343232.26 | 9343232.52 | 9343232.78 | 0.0089 | 0.0002 |
| Neptune | 20869-10-21 05:45 G | 9343599.49 | 9343599.74 | 9343599.99 | 0.0089 | 0.0003 |
| Neptune | 20870-10-23 21:50 G | 9343967.15 | 9343967.41 | 9343967.68 | 0.0089 | 0.0004 |
| Neptune | 20871-10-26 06:57 G | 9344334.54 | 9344334.79 | 9344335.04 | 0.0089 | 0.0006 |
| Jupiter | 20872-06-27 13:55 G | 9344579.84 | 9344580.08 | 9344580.32 | 0.0534 | 0.0040 |
| Neptune | 20872-10-27 18:28 G | 9344702.01 | 9344702.27 | 9344702.54 | 0.0089 | 0.0008 |
| Neptune | 20873-10-30 08:09 G | 9345069.59 | 9345069.84 | 9345070.09 | 0.0089 | 0.0009 |
| Neptune | 20874-11-01 14:38 G | 9345436.85 | 9345437.11 | 9345437.38 | 0.0089 | 0.0011 |
| Neptune | 20875-11-04 07:55 G | 9345804.59 | 9345804.83 | 9345805.09 | 0.0089 | 0.0012 |
| Neptune | 20876-11-05 12:28 G | 9346171.77 | 9346172.02 | 9346172.28 | 0.0089 | 0.0014 |
| Saturn | 20877-06-04 07:55 G | 9346382.58 | 9346382.83 | 9346383.08 | 0.0286 | 0.0043 |
| Neptune | 20877-11-08 06:14 G | 9346539.52 | 9346539.76 | 9346540.03 | 0.0089 | 0.0015 |
| Jupiter | 20877-12-23 07:55 G | 9346584.61 | 9346584.83 | 9346585.06 | 0.0495 | 0.0075 |
| Neptune | 20878-11-10 11:31 G | 9346906.74 | 9346906.98 | 9346907.23 | 0.0089 | 0.0018 |
| Jupiter | 20879-01-23 01:12 G | 9346980.44 | 9346980.55 | 9346980.67 | 0.0487 | 0.0421 |
| Neptune | 20879-11-13 02:52 G | 9347274.37 | 9347274.62 | 9347274.89 | 0.0089 | 0.0018 |
| Neptune | 20880-11-14 11:45 G | 9347641.76 | 9347641.99 | 9347642.24 | 0.0089 | 0.0021 |
| Neptune | 20881-11-16 22:33 G | 9348009.19 | 9348009.44 | 9348009.71 | 0.0089 | 0.0020 |
| Neptune | 20882-11-19 12:00 G | 9348376.77 | 9348377.00 | 9348377.25 | 0.0088 | 0.0023 |
| Neptune | 20883-11-21 18:00 G | 9348744.00 | 9348744.25 | 9348744.50 | 0.0088 | 0.0023 |
| Jupiter | 20884-07-02 23:31 G | 9348968.25 | 9348968.48 | 9348968.70 | 0.0536 | 0.0102 |
| Neptune | 20884-11-23 11:02 G | 9349111.72 | 9349111.96 | 9349112.20 | 0.0088 | 0.0027 |
| Neptune | 20885-11-25 14:24 G | 9349478.87 | 9349479.10 | 9349479.36 | 0.0088 | 0.0026 |
| Neptune | 20886-11-28 07:40 G | 9349846.59 | 9349846.82 | 9349847.08 | 0.0088 | 0.0030 |
| Neptune | 20887-11-30 12:57 G | 9350213.81 | 9350214.04 | 9350214.29 | 0.0088 | 0.0027 |
| Neptune | 20888-12-02 03:21 G | 9350581.40 | 9350581.64 | 9350581.90 | 0.0088 | 0.0031 |
| Neptune | 20889-12-04 12:43 G | 9350948.81 | 9350949.03 | 9350949.28 | 0.0088 | 0.0030 |
| Jupiter | 20889-12-27 23:45 G | 9350972.26 | 9350972.49 | 9350972.72 | 0.0493 | 0.0007 |
| Neptune | 20890-12-06 22:19 G | 9351316.21 | 9351316.43 | 9351316.70 | 0.0088 | 0.0035 |
| Saturn | 20891-11-28 00:43 G | 9351672.46 | 9351672.53 | 9351672.61 | 0.0273 | 0.0259 |

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| Neptune | 20891-12-09 12:43 G | 9351683.80 | 9351684.03 | 9351684.27 | 0.0088 | 0.0032 |
| Saturn | 20892-12-09 05:16 G | 9352049.51 | 9352049.72 | 9352049.94 | 0.0274 | 0.0130 |
| Neptune | 20892-12-10 17:45 G | 9352051.01 | 9352051.24 | 9352051.49 | 0.0088 | 0.0035 |
| Neptune | 20893-12-13 10:33 G | 9352418.71 | 9352418.94 | 9352419.19 | 0.0088 | 0.0032 |
| Neptune | 20894-12-15 13:55 G | 9352785.86 | 9352786.08 | 9352786.32 | 0.0088 | 0.0037 |
| Neptune | 20895-12-18 06:43 G | 9353153.56 | 9353153.78 | 9353154.04 | 0.0088 | 0.0034 |
| Jupiter | 20896-07-08 07:26 G | 9353356.58 | 9353356.81 | 9353357.04 | 0.0538 | 0.0170 |
| Neptune | 20896-12-19 11:31 G | 9353520.78 | 9353520.98 | 9353521.22 | 0.0088 | 0.0040 |
| Neptune | 20897-12-22 00:57 G | 9353888.32 | 9353888.54 | 9353888.80 | 0.0088 | 0.0036 |
| Neptune | 20898-12-24 10:48 G | 9354255.75 | 9354255.95 | 9354256.19 | 0.0088 | 0.0041 |
| Neptune | 20899-12-26 19:55 G | 9354623.09 | 9354623.33 | 9354623.57 | 0.0088 | 0.0036 |
| Neptune | 20900-12-29 09:50 G | 9354990.71 | 9354990.91 | 9354991.16 | 0.0088 | 0.0042 |
| Neptune | 20901-12-31 14:24 G | 9355357.88 | 9355358.10 | 9355358.35 | 0.0088 | 0.0038 |
| Jupiter | 20902-01-02 00:43 G | 9355359.29 | 9355359.53 | 9355359.77 | 0.0492 | 0.0040 |
| Neptune | 20903-01-03 07:26 G | 9355725.61 | 9355725.81 | 9355726.06 | 0.0088 | 0.0044 |
| Neptune | 20904-01-05 11:02 G | 9356092.75 | 9356092.96 | 9356093.21 | 0.0088 | 0.0039 |
| Uranus | 20904-04-26 03:36 G | 9356204.49 | 9356204.65 | 9356204.83 | 0.0136 | 0.0098 |
| Neptune | 20905-01-07 03:21 G | 9356460.43 | 9356460.64 | 9356460.88 | 0.0088 | 0.0044 |
| Uranus | 20905-04-30 14:24 G | 9356573.86 | 9356574.10 | 9356574.35 | 0.0135 | 0.0053 |
| Neptune | 20906-01-09 09:07 G | 9356827.65 | 9356827.88 | 9356828.10 | 0.0088 | 0.0038 |
| Uranus | 20906-05-05 01:40 G | 9356943.33 | 9356943.57 | 9356943.83 | 0.0135 | 0.0016 |
| Saturn | 20906-05-30 12:57 G | 9356968.95 | 9356969.04 | 9356969.15 | 0.0286 | 0.0259 |
| Neptune | 20907-01-11 21:07 G | 9357195.17 | 9357195.38 | 9357195.63 | 0.0088 | 0.0044 |
| Uranus | 20907-05-09 12:14 G | 9357312.79 | 9357313.01 | 9357313.26 | 0.0135 | 0.0063 |
| Jupiter | 20907-06-08 09:36 G | 9357342.78 | 9357342.90 | 9357343.03 | 0.0526 | 0.0445 |
| Saturn | 20907-06-13 10:19 G | 9357347.77 | 9357347.93 | 9357348.10 | 0.0285 | 0.0211 |
| Neptune | 20908-01-14 07:40 G | 9357562.61 | 9357562.82 | 9357563.05 | 0.0088 | 0.0039 |
| Uranus | 20908-05-12 21:36 G | 9357682.31 | 9357682.40 | 9357682.53 | 0.0134 | 0.0121 |
| Jupiter | 20908-07-14 13:40 G | 9357744.87 | 9357745.07 | 9357745.27 | 0.0539 | 0.0262 |
| Neptune | 20909-01-15 15:36 G | 9357929.93 | 9357930.15 | 9357930.38 | 0.0088 | 0.0044 |

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| Neptune | 20910-01-18 06:28 G | 9358297.55 | 9358297.77 | 9358298.00 | 0.0088 | 0.0039 |
| Neptune | 20911-01-20 10:19 G | 9358664.71 | 9358664.93 | 9358665.16 | 0.0088 | 0.0044 |
| Neptune | 20912-01-23 03:21 G | 9359032.42 | 9359032.64 | 9359032.89 | 0.0088 | 0.0038 |
| Jupiter | 20912-12-06 02:24 G | 9359350.47 | 9359350.60 | 9359350.74 | 0.0503 | 0.0414 |
| Neptune | 20913-01-24 06:43 G | 9359399.58 | 9359399.78 | 9359400.02 | 0.0088 | 0.0044 |
| Jupiter | 20914-01-06 08:38 G | 9359746.64 | 9359746.86 | 9359747.08 | 0.0491 | 0.0119 |
| Neptune | 20914-01-26 22:33 G | 9359767.22 | 9359767.44 | 9359767.70 | 0.0088 | 0.0038 |
| Mars | 20914-09-29 12:43 G | 9360012.94 | 9360013.03 | 9360013.13 | 0.1883 | 0.1615 |
| Neptune | 20915-01-29 05:02 G | 9360134.50 | 9360134.71 | 9360134.94 | 0.0088 | 0.0044 |
| Neptune | 20916-01-31 16:48 G | 9360501.96 | 9360502.20 | 9360502.44 | 0.0088 | 0.0037 |
| Neptune | 20917-02-02 04:04 G | 9360869.47 | 9360869.67 | 9360869.90 | 0.0088 | 0.0043 |
| Neptune | 20918-02-04 11:02 G | 9361236.74 | 9361236.96 | 9361237.22 | 0.0088 | 0.0036 |
| Neptune | 20919-02-07 02:52 G | 9361604.41 | 9361604.62 | 9361604.86 | 0.0088 | 0.0042 |
| Jupiter | 20919-06-13 08:09 G | 9361730.67 | 9361730.84 | 9361731.02 | 0.0528 | 0.0326 |
| Neptune | 20920-02-09 06:28 G | 9361971.55 | 9361971.77 | 9361972.02 | 0.0088 | 0.0035 |
| Jupiter | 20920-07-20 04:04 G | 9362133.53 | 9362133.67 | 9362133.82 | 0.0540 | 0.0416 |
| Neptune | 20921-02-11 00:00 G | 9362339.28 | 9362339.50 | 9362339.73 | 0.0088 | 0.0041 |
| Saturn | 20921-12-05 09:21 G | 9362636.66 | 9362636.89 | 9362637.13 | 0.0274 | 0.0042 |
| Neptune | 20922-02-13 03:36 G | 9362706.44 | 9362706.65 | 9362706.90 | 0.0088 | 0.0034 |
| Neptune | 20923-02-15 18:57 G | 9363074.07 | 9363074.29 | 9363074.55 | 0.0088 | 0.0040 |
| Neptune | 20924-02-18 01:55 G | 9363441.37 | 9363441.58 | 9363441.83 | 0.0088 | 0.0032 |
| Jupiter | 20924-12-10 10:33 G | 9363737.79 | 9363737.94 | 9363738.09 | 0.0501 | 0.0369 |
| Neptune | 20925-02-19 13:12 G | 9363808.81 | 9363809.05 | 9363809.30 | 0.0088 | 0.0037 |
| Jupiter | 20926-01-10 12:43 G | 9364133.82 | 9364134.03 | 9364134.24 | 0.0490 | 0.0233 |
| Neptune | 20926-02-22 01:40 G | 9364176.34 | 9364176.57 | 9364176.81 | 0.0088 | 0.0030 |
| Neptune | 20927-02-24 08:24 G | 9364543.62 | 9364543.85 | 9364544.10 | 0.0088 | 0.0036 |
| Neptune | 20928-02-27 00:57 G | 9364911.31 | 9364911.54 | 9364911.79 | 0.0088 | 0.0028 |
| Neptune | 20929-02-28 04:48 G | 9365278.47 | 9365278.70 | 9365278.95 | 0.0088 | 0.0034 |
| Neptune | 20930-03-02 22:33 G | 9365646.20 | 9365646.44 | 9365646.70 | 0.0088 | 0.0025 |
| Neptune | 20931-03-05 02:52 G | 9366013.41 | 9366013.62 | 9366013.88 | 0.0088 | 0.0032 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Jupiter | 20931-06-18 12:43 G | 9366118.83 | 9366119.03 | 9366119.24 | 0.0530 | 0.0268 |
| Neptune | 20932-03-06 18:14 G | 9366381.01 | 9366381.26 | 9366381.53 | 0.0088 | 0.0023 |
| Jupiter | 20932-07-24 23:16 G | 9366521.44 | 9366521.47 | 9366521.53 | 0.0541 | 0.0531 |
| Neptune | 20933-03-09 02:09 G | 9366748.37 | 9366748.59 | 9366748.84 | 0.0088 | 0.0030 |
| Neptune | 20934-03-11 12:43 G | 9367115.78 | 9367116.03 | 9367116.30 | 0.0088 | 0.0021 |
| Neptune | 20935-03-14 01:55 G | 9367483.36 | 9367483.58 | 9367483.84 | 0.0088 | 0.0027 |
| Neptune | 20936-03-15 08:38 G | 9367850.61 | 9367850.86 | 9367851.12 | 0.0088 | 0.0017 |
| Saturn | 20936-06-06 18:57 G | 9367934.05 | 9367934.29 | 9367934.53 | 0.0286 | 0.0022 |
| Jupiter | 20936-12-15 02:52 G | 9368125.43 | 9368125.62 | 9368125.81 | 0.0499 | 0.0309 |
| Neptune | 20937-03-18 01:40 G | 9368218.33 | 9368218.57 | 9368218.82 | 0.0088 | 0.0024 |
| Jupiter | 20938-01-14 18:28 G | 9368521.11 | 9368521.27 | 9368521.45 | 0.0489 | 0.0323 |
| Neptune | 20938-03-20 05:45 G | 9368585.50 | 9368585.74 | 9368586.01 | 0.0088 | 0.0015 |
| Neptune | 20939-03-22 23:45 G | 9368953.25 | 9368953.49 | 9368953.76 | 0.0088 | 0.0022 |
| Neptune | 20940-03-24 05:02 G | 9369320.47 | 9369320.71 | 9369320.97 | 0.0088 | 0.0012 |
| Neptune | 20941-03-26 20:38 G | 9369688.10 | 9369688.36 | 9369688.62 | 0.0088 | 0.0018 |
| Neptune | 20942-03-29 05:31 G | 9370055.48 | 9370055.73 | 9370055.98 | 0.0088 | 0.0008 |
| Neptune | 20943-03-31 15:50 G | 9370422.91 | 9370423.16 | 9370423.44 | 0.0088 | 0.0015 |
| Jupiter | 20943-06-23 07:40 G | 9370506.60 | 9370506.82 | 9370507.04 | 0.0532 | 0.0193 |
| Neptune | 20944-04-02 06:14 G | 9370790.51 | 9370790.76 | 9370791.01 | 0.0088 | 0.0006 |
| Neptune | 20945-04-04 12:43 G | 9371157.77 | 9371158.03 | 9371158.30 | 0.0088 | 0.0013 |
| Neptune | 20946-04-07 06:43 G | 9371525.52 | 9371525.78 | 9371526.03 | 0.0088 | 0.0002 |
| Neptune | 20947-04-09 11:02 G | 9371892.71 | 9371892.96 | 9371893.22 | 0.0088 | 0.0009 |
| Uranus | 20947-10-25 12:57 G | 9372091.99 | 9372092.04 | 9372092.11 | 0.0142 | 0.0138 |
| Neptune | 20948-04-11 05:16 G | 9372260.46 | 9372260.72 | 9372260.99 | 0.0088 | 0.0002 |
| Uranus | 20948-10-29 09:07 G | 9372461.66 | 9372461.88 | 9372462.12 | 0.0143 | 0.0066 |
| Jupiter | 20948-12-19 06:00 G | 9372512.54 | 9372512.75 | 9372512.96 | 0.0497 | 0.0200 |
| Neptune | 20949-04-13 11:16 G | 9372627.72 | 9372627.97 | 9372628.22 | 0.0088 | 0.0006 |
| Uranus | 20949-11-03 05:45 G | 9372831.49 | 9372831.74 | 9372831.98 | 0.0143 | 0.0011 |
| Jupiter | 20950-01-19 03:36 G | 9372908.49 | 9372908.65 | 9372908.81 | 0.0487 | 0.0359 |
| Neptune | 20950-04-16 02:52 G | 9372995.35 | 9372995.62 | 9372995.89 | 0.0088 | 0.0004 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Uranus | 20950-11-08 04:48 G | 9373201.48 | 9373201.70 | 9373201.94 | 0.0144 | 0.0070 |
| Saturn | 20950-11-30 03:07 G | 9373223.48 | 9373223.63 | 9373223.80 | 0.0273 | 0.0209 |
| Neptune | 20951-04-18 12:14 G | 9373362.76 | 9373363.01 | 9373363.26 | 0.0088 | 0.0003 |
| Uranus | 20951-11-13 00:00 G | 9373571.40 | 9373571.50 | 9373571.63 | 0.0144 | 0.0126 |
| Saturn | 20951-12-12 13:26 G | 9373600.90 | 9373601.06 | 9373601.25 | 0.0274 | 0.0183 |
| Neptune | 20952-04-19 23:16 G | 9373730.20 | 9373730.47 | 9373730.73 | 0.0088 | 0.0008 |
| Neptune | 20953-04-22 14:09 G | 9374097.84 | 9374098.09 | 9374098.34 | 0.0088 | 0.0001 |
| Neptune | 20954-04-24 21:07 G | 9374465.12 | 9374465.38 | 9374465.65 | 0.0088 | 0.0012 |
| Neptune | 20955-04-27 15:36 G | 9374832.90 | 9374833.15 | 9374833.41 | 0.0088 | 0.0005 |
| Jupiter | 20955-06-28 18:57 G | 9374895.06 | 9374895.29 | 9374895.52 | 0.0534 | 0.0046 |
| Neptune | 20956-04-28 20:38 G | 9375200.11 | 9375200.36 | 9375200.62 | 0.0089 | 0.0015 |
| Pluto | 20956-09-25 22:48 G | 9375350.26 | 9375350.45 | 9375350.69 | 0.0064 | 0.0037 |
| Neptune | 20957-05-01 15:36 G | 9375567.89 | 9375568.15 | 9375568.42 | 0.0089 | 0.0007 |
| Pluto | 20957-09-27 17:45 G | 9375717.10 | 9375717.24 | 9375717.40 | 0.0064 | 0.0053 |
| Neptune | 20958-05-03 22:04 G | 9375935.17 | 9375935.42 | 9375935.67 | 0.0089 | 0.0018 |
| Neptune | 20959-05-06 14:09 G | 9376302.82 | 9376303.09 | 9376303.36 | 0.0089 | 0.0011 |
| Neptune | 20960-05-07 23:45 G | 9376670.26 | 9376670.49 | 9376670.75 | 0.0089 | 0.0022 |
| Jupiter | 20960-12-23 22:48 G | 9376900.22 | 9376900.45 | 9376900.68 | 0.0495 | 0.0082 |
| Neptune | 20961-05-10 11:31 G | 9377037.71 | 9377037.98 | 9377038.25 | 0.0089 | 0.0014 |
| Jupiter | 20962-01-23 02:24 G | 9377295.48 | 9377295.60 | 9377295.72 | 0.0486 | 0.0410 |
| Neptune | 20962-05-13 02:24 G | 9377405.36 | 9377405.60 | 9377405.85 | 0.0089 | 0.0024 |
| Neptune | 20963-05-15 09:50 G | 9377772.66 | 9377772.91 | 9377773.18 | 0.0089 | 0.0017 |
| Neptune | 20964-05-17 05:02 G | 9378140.47 | 9378140.71 | 9378140.96 | 0.0089 | 0.0027 |
| Neptune | 20965-05-19 10:33 G | 9378507.70 | 9378507.94 | 9378508.20 | 0.0089 | 0.0020 |
| Saturn | 20965-06-01 00:43 G | 9378520.36 | 9378520.53 | 9378520.72 | 0.0286 | 0.0195 |
| Neptune | 20966-05-22 06:14 G | 9378875.52 | 9378875.76 | 9378876.02 | 0.0089 | 0.0030 |
| Saturn | 20966-06-14 18:14 G | 9378899.18 | 9378899.26 | 9378899.34 | 0.0285 | 0.0270 |
| Neptune | 20967-05-24 12:57 G | 9379242.80 | 9379243.04 | 9379243.29 | 0.0089 | 0.0023 |
| Jupiter | 20967-07-04 01:55 G | 9379283.34 | 9379283.58 | 9379283.82 | 0.0536 | 0.0089 |
| Neptune | 20968-05-26 06:00 G | 9379610.51 | 9379610.75 | 9379611.01 | 0.0089 | 0.0032 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 20969-05-28 16:04 G | 9379977.95 | 9379978.17 | 9379978.43 | 0.0089 | 0.0026 |
| Neptune | 20970-05-31 04:19 G | 9380345.45 | 9380345.68 | 9380345.94 | 0.0089 | 0.0035 |
| Neptune | 20971-06-02 19:26 G | 9380713.08 | 9380713.31 | 9380713.56 | 0.0089 | 0.0029 |
| Neptune | 20972-06-04 03:36 G | 9381080.43 | 9381080.65 | 9381080.91 | 0.0089 | 0.0038 |
| Jupiter | 20972-12-27 22:04 G | 9381287.18 | 9381287.42 | 9381287.65 | 0.0494 | 0.0020 |
| Neptune | 20973-06-06 22:33 G | 9381448.22 | 9381448.44 | 9381448.70 | 0.0089 | 0.0032 |
| Neptune | 20974-06-09 04:33 G | 9381815.47 | 9381815.69 | 9381815.94 | 0.0089 | 0.0039 |
| Neptune | 20975-06-12 00:28 G | 9382183.29 | 9382183.52 | 9382183.77 | 0.0089 | 0.0033 |
| Neptune | 20976-06-13 07:12 G | 9382550.59 | 9382550.80 | 9382551.04 | 0.0089 | 0.0041 |
| Neptune | 20977-06-16 01:12 G | 9382918.32 | 9382918.55 | 9382918.81 | 0.0089 | 0.0036 |
| Neptune | 20978-06-18 11:02 G | 9383285.76 | 9383285.96 | 9383286.20 | 0.0089 | 0.0043 |
| Neptune | 20979-06-21 00:28 G | 9383653.29 | 9383653.52 | 9383653.78 | 0.0089 | 0.0038 |
| Jupiter | 20979-07-09 06:28 G | 9383671.55 | 9383671.77 | 9383671.99 | 0.0537 | 0.0158 |
| Neptune | 20980-06-22 15:21 G | 9384020.93 | 9384021.14 | 9384021.37 | 0.0089 | 0.0044 |
| Saturn | 20980-12-06 12:43 G | 9384187.78 | 9384188.03 | 9384188.28 | 0.0274 | 0.0005 |
| Neptune | 20981-06-25 00:28 G | 9384388.29 | 9384388.52 | 9384388.77 | 0.0089 | 0.0039 |
| Neptune | 20982-06-27 19:12 G | 9384756.10 | 9384756.30 | 9384756.54 | 0.0089 | 0.0046 |
| Neptune | 20983-06-30 01:55 G | 9385123.35 | 9385123.58 | 9385123.82 | 0.0089 | 0.0041 |
| Neptune | 20984-07-01 22:04 G | 9385491.21 | 9385491.42 | 9385491.66 | 0.0089 | 0.0046 |
| Jupiter | 20985-01-01 09:07 G | 9385674.65 | 9385674.88 | 9385675.10 | 0.0492 | 0.0027 |
| Neptune | 20985-07-04 04:48 G | 9385858.48 | 9385858.70 | 9385858.93 | 0.0089 | 0.0042 |
| Neptune | 20986-07-06 22:48 G | 9386226.25 | 9386226.45 | 9386226.71 | 0.0089 | 0.0046 |
| Mars | 20987-03-25 10:33 G | 9386487.84 | 9386487.94 | 9386488.04 | 0.1643 | 0.1404 |
| Neptune | 20987-07-09 08:38 G | 9386593.65 | 9386593.86 | 9386594.09 | 0.0089 | 0.0043 |
| Uranus | 20988-04-26 14:38 G | 9386885.96 | 9386886.11 | 9386886.26 | 0.0136 | 0.0107 |
| Neptune | 20988-07-10 22:48 G | 9386961.23 | 9386961.45 | 9386961.70 | 0.0089 | 0.0046 |
| Uranus | 20989-05-01 00:14 G | 9387255.26 | 9387255.51 | 9387255.77 | 0.0135 | 0.0036 |
| Neptune | 20989-07-13 12:57 G | 9387328.83 | 9387329.04 | 9387329.27 | 0.0089 | 0.0044 |
| Uranus | 20990-05-05 13:12 G | 9387624.81 | 9387625.05 | 9387625.30 | 0.0135 | 0.0008 |
| Jupiter | 20990-06-07 04:48 G | 9387657.60 | 9387657.70 | 9387657.81 | 0.0524 | 0.0458 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 20990-07-15 22:33 G | 9387696.23 | 9387696.44 | 9387696.69 | 0.0089 | 0.0047 |
| Uranus | 20991-05-09 22:33 G | 9387994.23 | 9387994.44 | 9387994.68 | 0.0135 | 0.0073 |
| Jupiter | 20991-07-14 13:55 G | 9388059.87 | 9388060.08 | 9388060.29 | 0.0539 | 0.0240 |
| Neptune | 20991-07-18 17:31 G | 9388064.01 | 9388064.23 | 9388064.46 | 0.0089 | 0.0044 |
| Uranus | 20992-05-13 09:21 G | 9388363.82 | 9388363.89 | 9388364.01 | 0.0134 | 0.0124 |
| Neptune | 20992-07-20 00:28 G | 9388431.30 | 9388431.52 | 9388431.75 | 0.0090 | 0.0045 |
| Neptune | 20993-07-22 20:52 G | 9388799.15 | 9388799.37 | 9388799.61 | 0.0090 | 0.0044 |
| Neptune | 20994-07-25 03:07 G | 9389166.42 | 9389166.63 | 9389166.87 | 0.0090 | 0.0045 |
| Saturn | 20995-06-09 08:38 G | 9389485.64 | 9389485.86 | 9389486.09 | 0.0286 | 0.0081 |
| Neptune | 20995-07-27 22:19 G | 9389534.22 | 9389534.43 | 9389534.67 | 0.0090 | 0.0045 |
| Jupiter | 20995-12-06 05:16 G | 9389665.61 | 9389665.72 | 9389665.84 | 0.0504 | 0.0431 |
| Neptune | 20996-07-29 07:26 G | 9389901.60 | 9389901.81 | 9389902.04 | 0.0090 | 0.0044 |
| Jupiter | 20997-01-05 15:21 G | 9390061.90 | 9390062.14 | 9390062.38 | 0.0491 | 0.0111 |
| Neptune | 20997-07-31 22:04 G | 9390269.21 | 9390269.42 | 9390269.68 | 0.0090 | 0.0044 |
| Neptune | 20998-08-03 11:31 G | 9390636.77 | 9390636.98 | 9390637.21 | 0.0090 | 0.0042 |
| Neptune | 20999-08-05 21:50 G | 9391004.18 | 9391004.41 | 9391004.65 | 0.0090 | 0.0042 |
| Neptune | 21000-08-08 15:36 G | 9391371.94 | 9391372.15 | 9391372.39 | 0.0090 | 0.0041 |

22ND MILLENNIUM CE

This is a list of transits of Moon in the 22nd millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|------------|------------|------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Neptune | 21001-08-10 22:48 G | 9391739.23 | 9391739.45 | 9391739.69 | 0.0090 | 0.0042 | | |
| Jupiter | 21002-06-13 10:48 G | 9392045.77 | 9392045.95 | 9392046.14 | 0.0527 | 0.0340 | | |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 21002-08-13 19:12 G | 9392107.06 | 9392107.30 | 9392107.53 | 0.0090 | 0.0039 |
| Jupiter | 21003-07-20 13:40 G | 9392447.91 | 9392448.07 | 9392448.23 | 0.0540 | 0.0394 |
| Neptune | 21003-08-16 01:12 G | 9392474.33 | 9392474.55 | 9392474.79 | 0.0090 | 0.0041 |
| Neptune | 21004-08-17 21:07 G | 9392842.14 | 9392842.38 | 9392842.62 | 0.0090 | 0.0036 |
| Neptune | 21005-08-20 05:02 G | 9393209.50 | 9393209.71 | 9393209.95 | 0.0090 | 0.0039 |
| Neptune | 21006-08-22 21:07 G | 9393577.13 | 9393577.38 | 9393577.62 | 0.0090 | 0.0034 |
| Neptune | 21007-08-25 08:52 G | 9393944.66 | 9393944.87 | 9393945.11 | 0.0090 | 0.0038 |
| Jupiter | 21007-12-11 23:31 G | 9394053.34 | 9394053.48 | 9394053.64 | 0.0502 | 0.0385 |
| Neptune | 21008-08-26 19:40 G | 9394312.08 | 9394312.32 | 9394312.58 | 0.0090 | 0.0033 |
| Jupiter | 21009-01-10 20:52 G | 9394449.17 | 9394449.37 | 9394449.57 | 0.0490 | 0.0226 |
| Neptune | 21009-08-29 12:28 G | 9394679.81 | 9394680.02 | 9394680.27 | 0.0090 | 0.0036 |
| Saturn | 21009-12-02 09:21 G | 9394774.71 | 9394774.89 | 9394775.09 | 0.0273 | 0.0163 |
| Neptune | 21010-08-31 19:40 G | 9395047.08 | 9395047.32 | 9395047.58 | 0.0090 | 0.0029 |
| Saturn | 21010-12-14 22:19 G | 9395152.31 | 9395152.43 | 9395152.56 | 0.0274 | 0.0229 |
| Neptune | 21011-09-03 15:21 G | 9395414.91 | 9395415.14 | 9395415.39 | 0.0090 | 0.0033 |
| Neptune | 21012-09-04 21:07 G | 9395782.15 | 9395782.38 | 9395782.64 | 0.0089 | 0.0026 |
| Neptune | 21013-09-07 16:19 G | 9396149.94 | 9396150.18 | 9396150.44 | 0.0089 | 0.0031 |
| Jupiter | 21014-06-18 05:31 G | 9396433.53 | 9396433.73 | 9396433.93 | 0.0529 | 0.0279 |
| Neptune | 21014-09-10 00:00 G | 9396517.27 | 9396517.50 | 9396517.75 | 0.0089 | 0.0023 |
| Jupiter | 21015-07-26 04:48 G | 9396836.64 | 9396836.70 | 9396836.77 | 0.0541 | 0.0515 |
| Neptune | 21015-09-12 15:50 G | 9396884.91 | 9396885.16 | 9396885.42 | 0.0089 | 0.0028 |
| Neptune | 21016-09-14 03:21 G | 9397252.40 | 9397252.64 | 9397252.88 | 0.0089 | 0.0020 |
| Neptune | 21017-09-16 13:55 G | 9397619.84 | 9397620.08 | 9397620.35 | 0.0089 | 0.0025 |
| Neptune | 21018-09-19 06:14 G | 9397987.52 | 9397987.76 | 9397988.02 | 0.0089 | 0.0017 |
| Neptune | 21019-09-21 13:12 G | 9398354.81 | 9398355.05 | 9398355.32 | 0.0089 | 0.0023 |
| Jupiter | 21019-12-16 03:50 G | 9398440.49 | 9398440.66 | 9398440.84 | 0.0500 | 0.0317 |
| Neptune | 21020-09-23 08:38 G | 9398722.61 | 9398722.86 | 9398723.12 | 0.0089 | 0.0013 |
| Jupiter | 21021-01-15 06:57 G | 9398836.61 | 9398836.79 | 9398836.98 | 0.0489 | 0.0307 |
| Neptune | 21021-09-25 13:40 G | 9399089.83 | 9399090.07 | 9399090.33 | 0.0089 | 0.0019 |
| Neptune | 21022-09-28 08:38 G | 9399457.61 | 9399457.86 | 9399458.13 | 0.0089 | 0.0009 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 21023-09-30 15:36 G | 9399824.91 | 9399825.15 | 9399825.40 | 0.0089 | 0.0015 |
| Saturn | 21024-06-03 06:14 G | 9400071.54 | 9400071.76 | 9400071.99 | 0.0286 | 0.0136 |
| Neptune | 21024-10-02 07:12 G | 9400192.54 | 9400192.80 | 9400193.07 | 0.0089 | 0.0006 |
| Neptune | 21025-10-04 17:45 G | 9400559.99 | 9400560.24 | 9400560.49 | 0.0089 | 0.0012 |
| Jupiter | 21026-06-23 18:28 G | 9400822.06 | 9400822.27 | 9400822.48 | 0.0532 | 0.0200 |
| Neptune | 21026-10-07 04:04 G | 9400927.41 | 9400927.67 | 9400927.94 | 0.0089 | 0.0004 |
| Neptune | 21027-10-09 19:40 G | 9401295.07 | 9401295.32 | 9401295.57 | 0.0089 | 0.0009 |
| Neptune | 21028-10-11 02:24 G | 9401662.34 | 9401662.60 | 9401662.87 | 0.0089 | 0.0002 |
| Neptune | 21029-10-13 21:07 G | 9402030.12 | 9402030.38 | 9402030.64 | 0.0089 | 0.0005 |
| Neptune | 21030-10-16 02:09 G | 9402397.33 | 9402397.59 | 9402397.85 | 0.0089 | 0.0005 |
| Neptune | 21031-10-18 20:38 G | 9402765.10 | 9402765.36 | 9402765.63 | 0.0089 | 0.0003 |
| Uranus | 21031-10-27 00:14 G | 9402773.44 | 9402773.51 | 9402773.61 | 0.0142 | 0.0134 |
| Jupiter | 21031-12-20 19:40 G | 9402828.11 | 9402828.32 | 9402828.53 | 0.0498 | 0.0202 |
| Neptune | 21032-10-20 03:07 G | 9403132.39 | 9403132.63 | 9403132.88 | 0.0089 | 0.0008 |
| Uranus | 21032-10-30 18:57 G | 9403143.07 | 9403143.29 | 9403143.52 | 0.0143 | 0.0072 |
| Jupiter | 21033-01-19 04:04 G | 9403223.51 | 9403223.67 | 9403223.83 | 0.0488 | 0.0345 |
| Neptune | 21033-10-22 18:28 G | 9403500.00 | 9403500.27 | 9403500.53 | 0.0089 | 0.0002 |
| Uranus | 21033-11-04 16:48 G | 9403512.96 | 9403513.20 | 9403513.45 | 0.0143 | 0.0006 |
| Neptune | 21034-10-25 04:33 G | 9403867.44 | 9403867.69 | 9403867.93 | 0.0089 | 0.0012 |
| Uranus | 21034-11-09 14:09 G | 9403882.87 | 9403883.09 | 9403883.34 | 0.0143 | 0.0060 |
| Neptune | 21035-10-27 14:24 G | 9404234.84 | 9404235.10 | 9404235.37 | 0.0089 | 0.0005 |
| Uranus | 21035-11-14 10:19 G | 9404252.88 | 9404252.93 | 9404253.01 | 0.0144 | 0.0139 |
| Neptune | 21036-10-29 05:02 G | 9404602.48 | 9404602.71 | 9404602.97 | 0.0089 | 0.0016 |
| Neptune | 21037-10-31 11:16 G | 9404969.71 | 9404969.97 | 9404970.23 | 0.0089 | 0.0008 |
| Jupiter | 21038-06-28 21:07 G | 9405210.14 | 9405210.38 | 9405210.63 | 0.0534 | 0.0050 |
| Neptune | 21038-11-03 05:16 G | 9405337.48 | 9405337.72 | 9405337.98 | 0.0089 | 0.0019 |
| Neptune | 21039-11-05 09:36 G | 9405704.66 | 9405704.90 | 9405705.16 | 0.0089 | 0.0012 |
| Saturn | 21039-12-09 10:19 G | 9405738.68 | 9405738.93 | 9405739.18 | 0.0273 | 0.0047 |
| Neptune | 21040-11-07 03:21 G | 9406072.40 | 9406072.64 | 9406072.91 | 0.0089 | 0.0023 |
| Neptune | 21041-11-09 09:36 G | 9406439.67 | 9406439.90 | 9406440.16 | 0.0089 | 0.0016 |

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| Neptune | 21042-11-12 00:14 G | 9406807.27 | 9406807.51 | 9406807.78 | 0.0089 | 0.0026 |
| Neptune | 21043-11-14 10:33 G | 9407174.70 | 9407174.94 | 9407175.18 | 0.0089 | 0.0018 |
| Jupiter | 21043-12-24 21:36 G | 9407215.17 | 9407215.40 | 9407215.64 | 0.0496 | 0.0091 |
| Neptune | 21044-11-15 19:26 G | 9407542.08 | 9407542.31 | 9407542.58 | 0.0089 | 0.0029 |
| Jupiter | 21045-01-23 16:48 G | 9407611.07 | 9407611.20 | 9407611.33 | 0.0487 | 0.0401 |
| Neptune | 21045-11-18 10:04 G | 9407909.69 | 9407909.92 | 9407910.18 | 0.0089 | 0.0022 |
| Pluto | 21046-03-29 00:00 G | 9408040.27 | 9408040.50 | 9408040.76 | 0.0080 | 0.0027 |
| Neptune | 21046-11-20 15:36 G | 9408276.92 | 9408277.15 | 9408277.40 | 0.0089 | 0.0032 |
| Neptune | 21047-11-23 09:36 G | 9408644.65 | 9408644.90 | 9408645.15 | 0.0088 | 0.0024 |
| Neptune | 21048-11-24 12:57 G | 9409011.82 | 9409012.04 | 9409012.29 | 0.0088 | 0.0035 |
| Neptune | 21049-11-27 06:14 G | 9409379.52 | 9409379.76 | 9409380.02 | 0.0088 | 0.0027 |
| Jupiter | 21050-07-03 21:07 G | 9409598.16 | 9409598.38 | 9409598.60 | 0.0535 | 0.0069 |
| Neptune | 21050-11-29 12:14 G | 9409746.80 | 9409747.01 | 9409747.25 | 0.0088 | 0.0037 |
| Neptune | 21051-12-02 01:55 G | 9410114.34 | 9410114.58 | 9410114.84 | 0.0088 | 0.0029 |
| Neptune | 21052-12-03 11:45 G | 9410481.79 | 9410481.99 | 9410482.23 | 0.0088 | 0.0040 |
| Neptune | 21053-12-05 20:09 G | 9410849.11 | 9410849.34 | 9410849.60 | 0.0088 | 0.0032 |
| Saturn | 21054-06-11 18:57 G | 9411037.08 | 9411037.29 | 9411037.51 | 0.0286 | 0.0137 |
| Neptune | 21054-12-08 11:02 G | 9411216.75 | 9411216.96 | 9411217.20 | 0.0088 | 0.0041 |
| Neptune | 21055-12-10 15:50 G | 9411583.93 | 9411584.16 | 9411584.41 | 0.0088 | 0.0033 |
| Jupiter | 21055-12-29 10:04 G | 9411602.70 | 9411602.92 | 9411603.15 | 0.0495 | 0.0038 |
| Neptune | 21056-12-12 09:07 G | 9411951.68 | 9411951.88 | 9411952.12 | 0.0088 | 0.0043 |
| Neptune | 21057-12-14 12:57 G | 9412318.82 | 9412319.04 | 9412319.29 | 0.0088 | 0.0036 |
| Neptune | 21058-12-17 05:16 G | 9412686.52 | 9412686.72 | 9412686.97 | 0.0088 | 0.0046 |
| Neptune | 21059-12-19 11:45 G | 9413053.78 | 9413053.99 | 9413054.23 | 0.0088 | 0.0037 |
| Neptune | 21060-12-21 00:43 G | 9413421.30 | 9413421.53 | 9413421.76 | 0.0088 | 0.0045 |
| Neptune | 21061-12-23 11:02 G | 9413788.74 | 9413788.96 | 9413789.19 | 0.0088 | 0.0038 |
| Jupiter | 21062-07-09 06:57 G | 9413986.56 | 9413986.79 | 9413987.02 | 0.0537 | 0.0133 |
| Neptune | 21062-12-25 18:00 G | 9414156.04 | 9414156.25 | 9414156.49 | 0.0088 | 0.0047 |
| Neptune | 21063-12-28 09:36 G | 9414523.67 | 9414523.90 | 9414524.12 | 0.0088 | 0.0039 |
| Neptune | 21064-12-29 13:26 G | 9414890.85 | 9414891.06 | 9414891.28 | 0.0088 | 0.0048 |

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| Neptune | 21066-01-01 06:43 G | 9415258.56 | 9415258.78 | 9415259.01 | 0.0088 | 0.0040 |
| Mars | 21066-03-28 22:33 G | 9415345.24 | 9415345.44 | 9415345.63 | 0.1647 | 0.0076 |
| Neptune | 21067-01-03 10:04 G | 9415625.73 | 9415625.92 | 9415626.15 | 0.0088 | 0.0049 |
| Jupiter | 21068-01-02 17:31 G | 9415989.99 | 9415990.23 | 9415990.47 | 0.0493 | 0.0014 |
| Neptune | 21068-01-06 01:55 G | 9415993.37 | 9415993.58 | 9415993.84 | 0.0088 | 0.0041 |
| Saturn | 21068-12-03 17:02 G | 9416326.00 | 9416326.21 | 9416326.43 | 0.0272 | 0.0119 |
| Neptune | 21069-01-07 09:07 G | 9416360.69 | 9416360.88 | 9416361.10 | 0.0088 | 0.0049 |
| Saturn | 21069-12-16 01:55 G | 9416703.58 | 9416703.58 | 9416703.61 | 0.0274 | 0.0273 |
| Neptune | 21070-01-09 20:38 G | 9416728.15 | 9416728.36 | 9416728.62 | 0.0088 | 0.0042 |
| Neptune | 21071-01-12 08:09 G | 9417095.66 | 9417095.84 | 9417096.06 | 0.0088 | 0.0050 |
| Neptune | 21072-01-14 14:24 G | 9417462.89 | 9417463.10 | 9417463.36 | 0.0088 | 0.0042 |
| Uranus | 21072-04-28 00:43 G | 9417567.37 | 9417567.53 | 9417567.73 | 0.0136 | 0.0093 |
| Neptune | 21073-01-16 06:14 G | 9417830.56 | 9417830.76 | 9417830.98 | 0.0088 | 0.0049 |
| Uranus | 21073-05-02 09:07 G | 9417936.64 | 9417936.88 | 9417937.14 | 0.0135 | 0.0048 |
| Jupiter | 21073-06-07 12:00 G | 9417972.90 | 9417973.00 | 9417973.12 | 0.0524 | 0.0461 |
| Neptune | 21074-01-18 09:50 G | 9418197.70 | 9418197.91 | 9418198.15 | 0.0088 | 0.0041 |
| Uranus | 21074-05-06 23:16 G | 9418306.23 | 9418306.47 | 9418306.72 | 0.0135 | 0.0022 |
| Jupiter | 21074-07-14 07:40 G | 9418374.60 | 9418374.82 | 9418375.03 | 0.0539 | 0.0227 |
| Neptune | 21075-01-21 02:52 G | 9418565.43 | 9418565.62 | 9418565.86 | 0.0088 | 0.0049 |
| Uranus | 21075-05-11 07:12 G | 9418675.57 | 9418675.80 | 9418676.03 | 0.0135 | 0.0067 |
| Neptune | 21076-01-23 06:57 G | 9418932.57 | 9418932.79 | 9418933.02 | 0.0088 | 0.0041 |
| Uranus | 21076-05-14 18:57 G | 9419045.24 | 9419045.29 | 9419045.38 | 0.0135 | 0.0129 |
| Neptune | 21077-01-24 22:19 G | 9419300.21 | 9419300.43 | 9419300.65 | 0.0088 | 0.0048 |
| Neptune | 21078-01-27 05:31 G | 9419667.53 | 9419667.73 | 9419667.97 | 0.0088 | 0.0041 |
| Jupiter | 21078-12-06 19:55 G | 9419981.22 | 9419981.33 | 9419981.45 | 0.0504 | 0.0437 |
| Neptune | 21079-01-29 16:33 G | 9420034.98 | 9420035.19 | 9420035.42 | 0.0088 | 0.0047 |
| Jupiter | 21080-01-06 23:45 G | 9420377.27 | 9420377.49 | 9420377.71 | 0.0491 | 0.0108 |
| Neptune | 21080-02-01 04:33 G | 9420402.49 | 9420402.69 | 9420402.94 | 0.0088 | 0.0040 |
| Neptune | 21081-02-02 10:48 G | 9420769.73 | 9420769.95 | 9420770.18 | 0.0088 | 0.0046 |
| Neptune | 21082-02-05 02:52 G | 9421137.41 | 9421137.62 | 9421137.86 | 0.0088 | 0.0039 |

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| Neptune | 21083-02-07 06:43 G | 9421504.56 | 9421504.78 | 9421505.00 | 0.0088 | 0.0045 |
| Saturn | 21083-06-05 10:48 G | 9421622.72 | 9421622.95 | 9421623.19 | 0.0286 | 0.0081 |
| Neptune | 21084-02-09 23:45 G | 9421872.26 | 9421872.49 | 9421872.73 | 0.0088 | 0.0037 |
| Neptune | 21085-02-11 03:50 G | 9422239.45 | 9422239.66 | 9422239.89 | 0.0088 | 0.0043 |
| Jupiter | 21085-06-12 08:09 G | 9422360.67 | 9422360.84 | 9422361.02 | 0.0527 | 0.0349 |
| Neptune | 21086-02-13 18:43 G | 9422607.04 | 9422607.28 | 9422607.53 | 0.0088 | 0.0035 |
| Jupiter | 21086-07-20 01:12 G | 9422763.39 | 9422763.55 | 9422763.70 | 0.0540 | 0.0391 |
| Neptune | 21087-02-16 02:52 G | 9422974.42 | 9422974.62 | 9422974.85 | 0.0088 | 0.0041 |
| Neptune | 21088-02-18 12:57 G | 9423341.81 | 9423342.04 | 9423342.30 | 0.0088 | 0.0034 |
| Neptune | 21089-02-20 01:55 G | 9423709.38 | 9423709.58 | 9423709.83 | 0.0088 | 0.0040 |
| Neptune | 21090-02-22 07:40 G | 9424076.58 | 9424076.82 | 9424077.07 | 0.0088 | 0.0031 |
| Jupiter | 21090-12-10 23:31 G | 9424368.35 | 9424368.48 | 9424368.63 | 0.0502 | 0.0393 |
| Neptune | 21091-02-25 00:00 G | 9424444.29 | 9424444.50 | 9424444.76 | 0.0088 | 0.0037 |
| Jupiter | 21092-01-11 08:52 G | 9424764.65 | 9424764.87 | 9424765.08 | 0.0490 | 0.0223 |
| Neptune | 21092-02-27 03:50 G | 9424811.43 | 9424811.66 | 9424811.91 | 0.0088 | 0.0029 |
| Neptune | 21093-02-28 21:07 G | 9425179.15 | 9425179.38 | 9425179.63 | 0.0088 | 0.0034 |
| Neptune | 21094-03-03 02:24 G | 9425546.36 | 9425546.60 | 9425546.84 | 0.0088 | 0.0027 |
| Neptune | 21095-03-05 16:19 G | 9425913.95 | 9425914.18 | 9425914.45 | 0.0088 | 0.0032 |
| Neptune | 21096-03-07 02:09 G | 9426281.36 | 9426281.59 | 9426281.84 | 0.0088 | 0.0025 |
| Neptune | 21097-03-09 12:00 G | 9426648.76 | 9426649.00 | 9426649.26 | 0.0088 | 0.0028 |
| Jupiter | 21097-06-17 19:26 G | 9426749.12 | 9426749.31 | 9426749.50 | 0.0529 | 0.0295 |
| Neptune | 21098-03-12 02:09 G | 9427016.35 | 9427016.59 | 9427016.84 | 0.0088 | 0.0021 |
| Jupiter | 21098-07-25 07:26 G | 9427151.72 | 9427151.81 | 9427151.91 | 0.0541 | 0.0498 |
| Saturn | 21098-12-10 11:02 G | 9427289.73 | 9427289.96 | 9427290.18 | 0.0273 | 0.0088 |
| Neptune | 21099-03-14 07:12 G | 9427383.56 | 9427383.80 | 9427384.07 | 0.0088 | 0.0026 |
| Neptune | 21100-03-17 00:43 G | 9427751.29 | 9427751.53 | 9427751.79 | 0.0088 | 0.0019 |
| Neptune | 21101-03-19 04:33 G | 9428118.45 | 9428118.69 | 9428118.95 | 0.0088 | 0.0023 |
| Neptune | 21102-03-21 21:50 G | 9428486.16 | 9428486.41 | 9428486.68 | 0.0088 | 0.0016 |
| Jupiter | 21102-12-16 18:00 G | 9428756.07 | 9428756.25 | 9428756.42 | 0.0500 | 0.0321 |
| Neptune | 21103-03-24 03:36 G | 9428853.41 | 9428853.65 | 9428853.90 | 0.0088 | 0.0018 |

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| Jupiter | 21104-01-16 08:24 G | 9429151.68 | 9429151.85 | 9429152.04 | 0.0489 | 0.0297 |
| Neptune | 21104-03-25 17:45 G | 9429220.98 | 9429221.24 | 9429221.51 | 0.0088 | 0.0012 |
| Neptune | 21105-03-28 04:19 G | 9429588.44 | 9429588.68 | 9429588.93 | 0.0088 | 0.0015 |
| Neptune | 21106-03-30 14:09 G | 9429955.83 | 9429956.09 | 9429956.36 | 0.0088 | 0.0009 |
| Neptune | 21107-04-02 05:16 G | 9430323.48 | 9430323.72 | 9430323.98 | 0.0088 | 0.0013 |
| Neptune | 21108-04-03 10:48 G | 9430690.70 | 9430690.95 | 9430691.22 | 0.0088 | 0.0006 |
| Neptune | 21109-04-06 05:02 G | 9431058.46 | 9431058.71 | 9431058.97 | 0.0088 | 0.0008 |
| Jupiter | 21109-06-23 14:52 G | 9431136.90 | 9431137.12 | 9431137.35 | 0.0530 | 0.0214 |
| Neptune | 21110-04-08 09:36 G | 9431425.64 | 9431425.90 | 9431426.15 | 0.0088 | 0.0002 |
| Neptune | 21111-04-11 03:07 G | 9431793.37 | 9431793.63 | 9431793.90 | 0.0088 | 0.0004 |
| Neptune | 21112-04-12 09:21 G | 9432160.64 | 9432160.89 | 9432161.15 | 0.0088 | 0.0001 |
| Saturn | 21112-05-31 01:12 G | 9432209.51 | 9432209.55 | 9432209.61 | 0.0287 | 0.0280 |
| Neptune | 21113-04-15 00:00 G | 9432528.23 | 9432528.50 | 9432528.76 | 0.0088 | 0.0001 |
| Saturn | 21113-06-13 21:50 G | 9432588.22 | 9432588.41 | 9432588.60 | 0.0286 | 0.0188 |
| Neptune | 21114-04-17 10:48 G | 9432895.71 | 9432895.95 | 9432896.21 | 0.0088 | 0.0005 |
| Jupiter | 21114-12-20 20:52 G | 9433143.15 | 9433143.37 | 9433143.58 | 0.0499 | 0.0207 |
| Neptune | 21115-04-19 20:52 G | 9433263.10 | 9433263.37 | 9433263.64 | 0.0088 | 0.0004 |
| Uranus | 21115-10-28 10:04 G | 9433454.83 | 9433454.92 | 9433455.03 | 0.0142 | 0.0131 |
| Jupiter | 21116-01-20 22:04 G | 9433539.26 | 9433539.42 | 9433539.60 | 0.0488 | 0.0330 |
| Neptune | 21116-04-21 12:28 G | 9433630.78 | 9433631.02 | 9433631.28 | 0.0088 | 0.0009 |
| Uranus | 21116-11-01 03:07 G | 9433824.40 | 9433824.63 | 9433824.88 | 0.0143 | 0.0062 |
| Neptune | 21117-04-23 18:28 G | 9433998.01 | 9433998.27 | 9433998.53 | 0.0088 | 0.0007 |
| Uranus | 21117-11-06 02:24 G | 9434194.35 | 9434194.60 | 9434194.84 | 0.0143 | 0.0005 |
| Neptune | 21118-04-26 13:12 G | 9434365.79 | 9434366.05 | 9434366.31 | 0.0088 | 0.0011 |
| Uranus | 21118-11-10 22:19 G | 9434564.22 | 9434564.43 | 9434564.66 | 0.0143 | 0.0076 |
| Neptune | 21119-04-28 18:00 G | 9434733.00 | 9434733.25 | 9434733.50 | 0.0088 | 0.0011 |
| Uranus | 21119-11-15 20:24 G | 9434934.25 | 9434934.35 | 9434934.45 | 0.0144 | 0.0131 |
| Neptune | 21120-04-30 12:28 G | 9435100.76 | 9435101.02 | 9435101.28 | 0.0088 | 0.0014 |
| Neptune | 21121-05-02 19:12 G | 9435468.06 | 9435468.30 | 9435468.55 | 0.0089 | 0.0016 |
| Jupiter | 21121-06-28 18:57 G | 9435525.06 | 9435525.29 | 9435525.51 | 0.0532 | 0.0067 |

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| Neptune | 21122-05-05 10:04 G | 9435835.66 | 9435835.92 | 9435836.18 | 0.0089 | 0.0018 |
| Neptune | 21123-05-07 21:21 G | 9436203.16 | 9436203.39 | 9436203.65 | 0.0089 | 0.0020 |
| Neptune | 21124-05-09 07:55 G | 9436570.58 | 9436570.83 | 9436571.10 | 0.0089 | 0.0021 |
| Neptune | 21125-05-12 00:14 G | 9436938.27 | 9436938.51 | 9436938.76 | 0.0089 | 0.0022 |
| Neptune | 21126-05-14 06:43 G | 9437305.53 | 9437305.78 | 9437306.04 | 0.0089 | 0.0024 |
| Jupiter | 21126-12-25 11:02 G | 9437530.74 | 9437530.96 | 9437531.18 | 0.0497 | 0.0102 |
| Neptune | 21127-05-17 01:26 G | 9437673.32 | 9437673.56 | 9437673.82 | 0.0089 | 0.0027 |
| Saturn | 21127-12-06 18:28 G | 9437877.04 | 9437877.27 | 9437877.52 | 0.0272 | 0.0075 |
| Jupiter | 21128-01-24 20:24 G | 9437926.21 | 9437926.35 | 9437926.49 | 0.0487 | 0.0391 |
| Neptune | 21128-05-18 06:57 G | 9438040.55 | 9438040.79 | 9438041.04 | 0.0089 | 0.0027 |
| Neptune | 21129-05-21 01:40 G | 9438408.33 | 9438408.57 | 9438408.82 | 0.0089 | 0.0030 |
| Neptune | 21130-05-23 08:38 G | 9438775.63 | 9438775.86 | 9438776.11 | 0.0089 | 0.0029 |
| Neptune | 21131-05-26 00:28 G | 9439143.27 | 9439143.52 | 9439143.77 | 0.0089 | 0.0032 |
| Neptune | 21132-05-27 12:00 G | 9439510.78 | 9439511.00 | 9439511.25 | 0.0089 | 0.0032 |
| Neptune | 21133-05-29 23:16 G | 9439878.24 | 9439878.47 | 9439878.73 | 0.0089 | 0.0036 |
| Jupiter | 21133-07-04 03:07 G | 9439913.39 | 9439913.63 | 9439913.87 | 0.0535 | 0.0054 |
| Neptune | 21134-06-01 15:50 G | 9440245.95 | 9440246.16 | 9440246.41 | 0.0089 | 0.0035 |
| Neptune | 21135-06-03 22:48 G | 9440613.24 | 9440613.45 | 9440613.71 | 0.0089 | 0.0039 |
| Neptune | 21136-06-05 18:28 G | 9440981.05 | 9440981.27 | 9440981.52 | 0.0089 | 0.0036 |
| Neptune | 21137-06-08 00:00 G | 9441348.29 | 9441348.50 | 9441348.75 | 0.0089 | 0.0042 |
| Neptune | 21138-06-10 19:12 G | 9441716.08 | 9441716.30 | 9441716.56 | 0.0089 | 0.0038 |
| Jupiter | 21138-12-29 20:09 G | 9441918.10 | 9441918.34 | 9441918.58 | 0.0495 | 0.0048 |
| Neptune | 21139-06-13 02:38 G | 9442083.40 | 9442083.61 | 9442083.84 | 0.0089 | 0.0044 |
| Neptune | 21140-06-14 18:57 G | 9442451.06 | 9442451.29 | 9442451.54 | 0.0089 | 0.0040 |
| Neptune | 21141-06-17 06:14 G | 9442818.57 | 9442818.76 | 9442818.99 | 0.0089 | 0.0047 |
| Saturn | 21142-06-07 18:00 G | 9443174.01 | 9443174.25 | 9443174.49 | 0.0286 | 0.0029 |
| Neptune | 21142-06-19 18:28 G | 9443186.05 | 9443186.27 | 9443186.52 | 0.0089 | 0.0042 |
| Neptune | 21143-06-22 11:16 G | 9443553.76 | 9443553.97 | 9443554.19 | 0.0089 | 0.0048 |
| Neptune | 21144-06-23 19:12 G | 9443921.08 | 9443921.30 | 9443921.54 | 0.0089 | 0.0043 |
| Mars | 21145-04-01 01:55 G | 9444202.53 | 9444202.58 | 9444202.64 | 0.1651 | 0.1554 |

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| Neptune | 21145-06-26 14:24 G | 9444288.91 | 9444289.10 | 9444289.34 | 0.0089 | 0.0051 |
| Jupiter | 21145-07-09 05:45 G | 9444301.52 | 9444301.74 | 9444301.97 | 0.0537 | 0.0118 |
| Neptune | 21146-06-28 20:38 G | 9444656.15 | 9444656.36 | 9444656.60 | 0.0089 | 0.0044 |
| Neptune | 21147-07-01 16:48 G | 9445024.00 | 9445024.20 | 9445024.43 | 0.0089 | 0.0052 |
| Neptune | 21148-07-02 23:45 G | 9445391.29 | 9445391.49 | 9445391.73 | 0.0089 | 0.0045 |
| Neptune | 21149-07-05 17:02 G | 9445759.00 | 9445759.21 | 9445759.44 | 0.0089 | 0.0052 |
| Neptune | 21150-07-08 04:04 G | 9446126.46 | 9446126.67 | 9446126.89 | 0.0089 | 0.0045 |
| Jupiter | 21151-01-03 00:57 G | 9446305.32 | 9446305.54 | 9446305.77 | 0.0493 | 0.0009 |
| Neptune | 21151-07-10 16:48 G | 9446494.00 | 9446494.20 | 9446494.43 | 0.0089 | 0.0053 |
| Neptune | 21152-07-12 08:38 G | 9446861.66 | 9446861.86 | 9446862.09 | 0.0089 | 0.0046 |
| Neptune | 21153-07-14 17:31 G | 9447229.02 | 9447229.23 | 9447229.45 | 0.0089 | 0.0053 |
| Neptune | 21154-07-17 12:28 G | 9447596.81 | 9447597.02 | 9447597.25 | 0.0089 | 0.0045 |
| Neptune | 21155-07-19 18:43 G | 9447964.09 | 9447964.28 | 9447964.50 | 0.0089 | 0.0053 |
| Uranus | 21156-04-29 10:48 G | 9448248.80 | 9448248.95 | 9448249.12 | 0.0136 | 0.0101 |
| Jupiter | 21156-06-07 13:12 G | 9448287.95 | 9448288.05 | 9448288.15 | 0.0524 | 0.0468 |
| Neptune | 21156-07-21 15:07 G | 9448331.91 | 9448332.13 | 9448332.37 | 0.0089 | 0.0044 |
| Saturn | 21156-11-30 03:36 G | 9448463.57 | 9448463.65 | 9448463.73 | 0.0272 | 0.0256 |
| Uranus | 21157-05-03 17:45 G | 9448618.00 | 9448618.24 | 9448618.51 | 0.0135 | 0.0032 |
| Jupiter | 21157-07-14 21:36 G | 9448690.19 | 9448690.40 | 9448690.61 | 0.0538 | 0.0223 |
| Neptune | 21157-07-23 21:50 G | 9448699.22 | 9448699.41 | 9448699.63 | 0.0090 | 0.0053 |
| Saturn | 21157-12-12 15:21 G | 9448840.94 | 9448841.14 | 9448841.35 | 0.0273 | 0.0129 |
| Uranus | 21158-05-08 09:21 G | 9448987.65 | 9448987.89 | 9448988.15 | 0.0135 | 0.0014 |
| Neptune | 21158-07-26 15:50 G | 9449066.94 | 9449067.16 | 9449067.41 | 0.0090 | 0.0044 |
| Uranus | 21159-05-12 16:19 G | 9449356.98 | 9449357.18 | 9449357.40 | 0.0135 | 0.0080 |
| Neptune | 21159-07-29 02:24 G | 9449434.40 | 9449434.60 | 9449434.81 | 0.0090 | 0.0052 |
| Uranus | 21160-05-16 05:45 G | 9449726.69 | 9449726.74 | 9449726.83 | 0.0135 | 0.0129 |
| Neptune | 21160-07-30 15:50 G | 9449801.94 | 9449802.16 | 9449802.42 | 0.0090 | 0.0043 |
| Neptune | 21161-08-02 06:57 G | 9450169.61 | 9450169.79 | 9450170.02 | 0.0090 | 0.0051 |
| Jupiter | 21161-12-06 19:55 G | 9450296.23 | 9450296.33 | 9450296.44 | 0.0505 | 0.0444 |
| Neptune | 21162-08-04 16:33 G | 9450536.96 | 9450537.19 | 9450537.43 | 0.0090 | 0.0041 |

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| Jupiter | 21163-01-07 12:57 G | 9450692.80 | 9450693.04 | 9450693.27 | 0.0492 | 0.0109 |
| Neptune | 21163-08-07 11:02 G | 9450904.76 | 9450904.96 | 9450905.19 | 0.0090 | 0.0050 |
| Neptune | 21164-08-08 17:16 G | 9451272.01 | 9451272.22 | 9451272.47 | 0.0090 | 0.0040 |
| Neptune | 21165-08-11 13:26 G | 9451639.85 | 9451640.06 | 9451640.29 | 0.0090 | 0.0048 |
| Neptune | 21166-08-13 19:40 G | 9452007.10 | 9452007.32 | 9452007.56 | 0.0090 | 0.0038 |
| Neptune | 21167-08-16 13:55 G | 9452374.87 | 9452375.08 | 9452375.33 | 0.0090 | 0.0046 |
| Jupiter | 21168-06-12 19:40 G | 9452676.16 | 9452676.32 | 9452676.49 | 0.0525 | 0.0367 |
| Neptune | 21168-08-17 23:31 G | 9452742.25 | 9452742.48 | 9452742.71 | 0.0090 | 0.0036 |
| Jupiter | 21169-07-19 20:24 G | 9453078.17 | 9453078.35 | 9453078.53 | 0.0539 | 0.0368 |
| Neptune | 21169-08-20 13:40 G | 9453109.85 | 9453110.07 | 9453110.32 | 0.0090 | 0.0044 |
| Neptune | 21170-08-23 04:19 G | 9453477.45 | 9453477.68 | 9453477.91 | 0.0090 | 0.0034 |
| Saturn | 21171-06-02 00:14 G | 9453760.37 | 9453760.51 | 9453760.67 | 0.0287 | 0.0232 |
| Neptune | 21171-08-25 14:24 G | 9453844.87 | 9453845.10 | 9453845.34 | 0.0090 | 0.0041 |
| Saturn | 21172-06-14 19:55 G | 9454139.19 | 9454139.33 | 9454139.47 | 0.0286 | 0.0235 |
| Neptune | 21172-08-27 08:24 G | 9454212.62 | 9454212.85 | 9454213.10 | 0.0090 | 0.0031 |
| Neptune | 21173-08-29 14:24 G | 9454579.89 | 9454580.10 | 9454580.36 | 0.0090 | 0.0039 |
| Jupiter | 21173-12-11 13:55 G | 9454683.95 | 9454684.08 | 9454684.22 | 0.0503 | 0.0407 |
| Neptune | 21174-09-01 10:33 G | 9454947.70 | 9454947.94 | 9454948.19 | 0.0090 | 0.0029 |
| Jupiter | 21175-01-11 12:43 G | 9455079.83 | 9455080.03 | 9455080.24 | 0.0491 | 0.0218 |
| Neptune | 21175-09-03 16:33 G | 9455314.97 | 9455315.19 | 9455315.44 | 0.0090 | 0.0036 |
| Neptune | 21176-09-05 11:02 G | 9455682.71 | 9455682.96 | 9455683.22 | 0.0089 | 0.0026 |
| Neptune | 21177-09-07 19:26 G | 9456050.08 | 9456050.31 | 9456050.55 | 0.0089 | 0.0032 |
| Neptune | 21178-09-10 09:50 G | 9456417.66 | 9456417.91 | 9456418.18 | 0.0089 | 0.0022 |
| Neptune | 21179-09-12 23:02 G | 9456785.24 | 9456785.46 | 9456785.71 | 0.0089 | 0.0029 |
| Jupiter | 21180-06-17 15:21 G | 9457063.94 | 9457064.14 | 9457064.33 | 0.0527 | 0.0315 |
| Neptune | 21180-09-14 09:07 G | 9457152.63 | 9457152.88 | 9457153.15 | 0.0089 | 0.0020 |
| Jupiter | 21181-07-25 04:33 G | 9457466.60 | 9457466.69 | 9457466.80 | 0.0540 | 0.0477 |
| Neptune | 21181-09-17 02:24 G | 9457520.37 | 9457520.60 | 9457520.86 | 0.0089 | 0.0026 |
| Neptune | 21182-09-19 08:52 G | 9457887.62 | 9457887.87 | 9457888.14 | 0.0089 | 0.0016 |
| Neptune | 21183-09-22 04:48 G | 9458255.45 | 9458255.70 | 9458255.95 | 0.0089 | 0.0021 |

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| Neptune | 21184-09-23 10:04 G | 9458622.68 | 9458622.92 | 9458623.18 | 0.0089 | 0.0013 |
| Neptune | 21185-09-26 04:33 G | 9458990.43 | 9458990.69 | 9458990.95 | 0.0089 | 0.0016 |
| Jupiter | 21185-12-15 19:40 G | 9459071.15 | 9459071.32 | 9459071.51 | 0.0501 | 0.0328 |
| Neptune | 21186-09-28 12:14 G | 9459357.77 | 9459358.01 | 9459358.26 | 0.0089 | 0.0009 |
| Saturn | 21186-12-07 14:38 G | 9459427.86 | 9459428.11 | 9459428.36 | 0.0272 | 0.0035 |
| Jupiter | 21187-01-16 02:52 G | 9459467.44 | 9459467.62 | 9459467.82 | 0.0489 | 0.0283 |
| Neptune | 21187-10-01 02:38 G | 9459725.35 | 9459725.61 | 9459725.88 | 0.0089 | 0.0013 |
| Neptune | 21188-10-02 15:07 G | 9460092.88 | 9460093.13 | 9460093.38 | 0.0089 | 0.0006 |
| Neptune | 21189-10-05 00:43 G | 9460460.27 | 9460460.53 | 9460460.80 | 0.0089 | 0.0009 |
| Neptune | 21190-10-07 17:31 G | 9460827.98 | 9460828.23 | 9460828.48 | 0.0089 | 0.0002 |
| Neptune | 21191-10-09 23:16 G | 9461195.22 | 9461195.47 | 9461195.74 | 0.0089 | 0.0005 |
| Jupiter | 21192-06-22 18:57 G | 9461452.09 | 9461452.29 | 9461452.50 | 0.0530 | 0.0225 |
| Neptune | 21192-10-11 18:14 G | 9461563.00 | 9461563.26 | 9461563.52 | 0.0089 | 0.0002 |
| Jupiter | 21193-07-30 17:02 G | 9461855.17 | 9461855.21 | 9461855.27 | 0.0542 | 0.0527 |
| Neptune | 21193-10-13 23:16 G | 9461930.22 | 9461930.47 | 9461930.72 | 0.0089 | 0.0001 |
| Neptune | 21194-10-16 17:02 G | 9462297.96 | 9462298.21 | 9462298.48 | 0.0089 | 0.0005 |
| Neptune | 21195-10-19 00:14 G | 9462665.27 | 9462665.51 | 9462665.77 | 0.0089 | 0.0004 |
| Neptune | 21196-10-20 14:24 G | 9463032.84 | 9463033.10 | 9463033.37 | 0.0089 | 0.0009 |
| Neptune | 21197-10-23 02:09 G | 9463400.35 | 9463400.59 | 9463400.84 | 0.0089 | 0.0008 |
| Jupiter | 21197-12-20 11:45 G | 9463458.78 | 9463458.99 | 9463459.19 | 0.0499 | 0.0202 |
| Mars | 21198-10-01 00:43 G | 9463743.37 | 9463743.53 | 9463743.69 | 0.1892 | 0.1256 |
| Neptune | 21198-10-25 11:31 G | 9463767.72 | 9463767.98 | 9463768.25 | 0.0089 | 0.0013 |
| Jupiter | 21199-01-20 02:24 G | 9463854.42 | 9463854.60 | 9463854.78 | 0.0488 | 0.0321 |
| Neptune | 21199-10-28 03:50 G | 9464135.42 | 9464135.66 | 9464135.91 | 0.0089 | 0.0011 |
| Uranus | 21199-10-28 21:50 G | 9464136.32 | 9464136.41 | 9464136.53 | 0.0142 | 0.0129 |
| Neptune | 21200-10-29 08:52 G | 9464502.63 | 9464502.87 | 9464503.14 | 0.0089 | 0.0016 |
| Uranus | 21200-11-01 13:55 G | 9464505.85 | 9464506.08 | 9464506.31 | 0.0143 | 0.0064 |
| Saturn | 21201-06-09 01:12 G | 9464725.31 | 9464725.55 | 9464725.79 | 0.0286 | 0.0023 |
| Neptune | 21201-11-01 03:21 G | 9464870.39 | 9464870.64 | 9464870.90 | 0.0089 | 0.0016 |
| Uranus | 21201-11-06 13:55 G | 9464875.84 | 9464876.08 | 9464876.33 | 0.0143 | 0.0012 |

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| Neptune | 21202-11-03 07:55 G | 9465237.59 | 9465237.83 | 9465238.08 | 0.0089 | 0.0020 |
| Uranus | 21202-11-11 08:24 G | 9465245.63 | 9465245.85 | 9465246.10 | 0.0143 | 0.0066 |
| Neptune | 21203-11-06 00:57 G | 9465605.29 | 9465605.54 | 9465605.81 | 0.0089 | 0.0020 |
| Jupiter | 21204-06-28 03:36 G | 9465840.41 | 9465840.65 | 9465840.89 | 0.0532 | 0.0073 |
| Pluto | 21204-09-30 03:21 G | 9465934.40 | 9465934.64 | 9465934.90 | 0.0064 | 0.0014 |
| Neptune | 21204-11-07 07:40 G | 9465972.59 | 9465972.82 | 9465973.07 | 0.0089 | 0.0023 |
| Neptune | 21205-11-09 20:38 G | 9466340.12 | 9466340.36 | 9466340.63 | 0.0089 | 0.0023 |
| Neptune | 21206-11-12 08:24 G | 9466707.62 | 9466707.85 | 9466708.10 | 0.0089 | 0.0026 |
| Neptune | 21207-11-14 17:16 G | 9467074.97 | 9467075.22 | 9467075.48 | 0.0089 | 0.0026 |
| Neptune | 21208-11-16 09:07 G | 9467442.66 | 9467442.88 | 9467443.13 | 0.0089 | 0.0030 |
| Neptune | 21209-11-18 14:09 G | 9467809.86 | 9467810.09 | 9467810.35 | 0.0089 | 0.0030 |
| Jupiter | 21209-12-24 20:24 G | 9467846.12 | 9467846.35 | 9467846.59 | 0.0497 | 0.0108 |
| Neptune | 21210-11-21 08:09 G | 9468177.62 | 9468177.84 | 9468178.10 | 0.0089 | 0.0032 |
| Jupiter | 21211-01-24 12:14 G | 9468241.88 | 9468242.01 | 9468242.15 | 0.0487 | 0.0390 |
| Neptune | 21211-11-23 12:28 G | 9468544.80 | 9468545.02 | 9468545.27 | 0.0088 | 0.0032 |
| Neptune | 21212-11-25 05:02 G | 9468912.48 | 9468912.71 | 9468912.97 | 0.0088 | 0.0034 |
| Neptune | 21213-11-27 11:45 G | 9469279.77 | 9469279.99 | 9469280.23 | 0.0088 | 0.0036 |
| Neptune | 21214-11-29 23:45 G | 9469647.27 | 9469647.49 | 9469647.75 | 0.0088 | 0.0037 |
| Saturn | 21215-12-02 06:57 G | 9470014.66 | 9470014.79 | 9470014.94 | 0.0272 | 0.0215 |
| Neptune | 21215-12-02 11:31 G | 9470014.76 | 9470014.98 | 9470015.21 | 0.0088 | 0.0039 * |
| Jupiter | 21216-07-03 05:16 G | 9470228.49 | 9470228.72 | 9470228.95 | 0.0534 | 0.0041 |
| Neptune | 21216-12-03 18:57 G | 9470382.07 | 9470382.29 | 9470382.54 | 0.0088 | 0.0039 |
| Saturn | 21216-12-13 16:19 G | 9470392.00 | 9470392.18 | 9470392.38 | 0.0273 | 0.0169 |
| Neptune | 21217-12-06 11:02 G | 9470749.75 | 9470749.96 | 9470750.20 | 0.0088 | 0.0041 |
| Neptune | 21218-12-08 15:07 G | 9471116.92 | 9471117.13 | 9471117.38 | 0.0088 | 0.0041 |
| Neptune | 21219-12-11 08:52 G | 9471484.66 | 9471484.87 | 9471485.11 | 0.0088 | 0.0044 |
| Neptune | 21220-12-12 13:12 G | 9471851.84 | 9471852.05 | 9471852.28 | 0.0088 | 0.0043 |
| Neptune | 21221-12-15 05:31 G | 9472219.50 | 9472219.73 | 9472219.95 | 0.0088 | 0.0046 |
| Jupiter | 21221-12-29 03:21 G | 9472233.41 | 9472233.64 | 9472233.86 | 0.0495 | 0.0059 |
| Neptune | 21222-12-17 12:14 G | 9472586.80 | 9472587.01 | 9472587.23 | 0.0088 | 0.0045 |

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| Neptune | 21223-12-19 23:16 G | 9472954.26 | 9472954.47 | 9472954.71 | 0.0088 | 0.0047 |
| Neptune | 21224-12-21 11:02 G | 9473321.77 | 9473321.96 | 9473322.19 | 0.0088 | 0.0046 |
| Neptune | 21225-12-23 18:00 G | 9473689.04 | 9473689.25 | 9473689.48 | 0.0088 | 0.0048 |
| Neptune | 21226-12-26 10:19 G | 9474056.73 | 9474056.93 | 9474057.15 | 0.0088 | 0.0047 |
| Neptune | 21227-12-28 13:26 G | 9474423.87 | 9474424.06 | 9474424.30 | 0.0088 | 0.0050 |
| Jupiter | 21228-07-08 15:50 G | 9474616.93 | 9474617.16 | 9474617.39 | 0.0535 | 0.0092 |
| Neptune | 21228-12-30 07:12 G | 9474791.59 | 9474791.80 | 9474792.03 | 0.0088 | 0.0047 |
| Neptune | 21230-01-01 11:02 G | 9475158.78 | 9475158.96 | 9475159.19 | 0.0088 | 0.0050 |
| Saturn | 21230-06-02 20:38 G | 9475311.18 | 9475311.36 | 9475311.56 | 0.0288 | 0.0185 |
| Neptune | 21231-01-04 02:24 G | 9475526.39 | 9475526.60 | 9475526.83 | 0.0088 | 0.0047 |
| Saturn | 21231-06-16 20:24 G | 9475690.33 | 9475690.35 | 9475690.40 | 0.0286 | 0.0284 |
| Neptune | 21232-01-06 09:36 G | 9475893.71 | 9475893.90 | 9475894.12 | 0.0088 | 0.0051 |
| Neptune | 21233-01-07 19:40 G | 9476261.12 | 9476261.32 | 9476261.56 | 0.0088 | 0.0049 |
| Jupiter | 21234-01-02 14:52 G | 9476620.88 | 9476621.12 | 9476621.36 | 0.0494 | 0.0004 |
| Neptune | 21234-01-10 08:38 G | 9476628.67 | 9476628.86 | 9476629.07 | 0.0088 | 0.0051 |
| Neptune | 21235-01-12 14:24 G | 9476995.90 | 9476996.10 | 9476996.34 | 0.0088 | 0.0048 |
| Neptune | 21236-01-15 06:43 G | 9477363.60 | 9477363.78 | 9477364.01 | 0.0088 | 0.0051 |
| Neptune | 21237-01-16 10:33 G | 9477730.73 | 9477730.94 | 9477731.17 | 0.0088 | 0.0047 |
| Neptune | 21238-01-19 03:36 G | 9478098.45 | 9478098.65 | 9478098.88 | 0.0088 | 0.0051 |
| Neptune | 21239-01-21 07:55 G | 9478465.64 | 9478465.83 | 9478466.06 | 0.0088 | 0.0048 |
| Jupiter | 21239-06-08 01:12 G | 9478603.45 | 9478603.55 | 9478603.64 | 0.0522 | 0.0473 |
| Neptune | 21240-01-23 22:04 G | 9478833.23 | 9478833.42 | 9478833.66 | 0.0088 | 0.0051 |
| Uranus | 21240-04-29 20:09 G | 9478930.17 | 9478930.34 | 9478930.54 | 0.0136 | 0.0089 |
| Jupiter | 21240-07-13 15:21 G | 9479004.92 | 9479005.14 | 9479005.36 | 0.0537 | 0.0201 |
| Neptune | 21241-01-25 06:43 G | 9479200.57 | 9479200.78 | 9479200.99 | 0.0088 | 0.0046 |
| Uranus | 21241-05-04 02:09 G | 9479299.35 | 9479299.59 | 9479299.85 | 0.0136 | 0.0043 |
| Neptune | 21242-01-27 15:21 G | 9479567.94 | 9479568.14 | 9479568.39 | 0.0088 | 0.0049 |
| Uranus | 21242-05-08 18:28 G | 9479669.03 | 9479669.27 | 9479669.52 | 0.0135 | 0.0029 |
| Neptune | 21243-01-30 05:02 G | 9479935.51 | 9479935.71 | 9479935.94 | 0.0088 | 0.0045 |
| Uranus | 21243-05-12 23:45 G | 9480038.28 | 9480038.49 | 9480038.73 | 0.0135 | 0.0072 |

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| Neptune | 21244-02-01 10:04 G | 9480302.72 | 9480302.92 | 9480303.15 | 0.0088 | 0.0048 |
| Jupiter | 21244-12-06 10:33 G | 9480611.84 | 9480611.94 | 9480612.03 | 0.0506 | 0.0458 |
| Neptune | 21245-02-03 03:07 G | 9480670.42 | 9480670.63 | 9480670.86 | 0.0088 | 0.0044 |
| Saturn | 21245-12-08 12:28 G | 9480978.78 | 9480979.02 | 9480979.27 | 0.0272 | 0.0008 |
| Jupiter | 21246-01-06 16:33 G | 9481007.96 | 9481008.19 | 9481008.42 | 0.0493 | 0.0105 |
| Neptune | 21246-02-05 06:57 G | 9481037.57 | 9481037.79 | 9481038.00 | 0.0088 | 0.0047 |
| Neptune | 21247-02-07 23:31 G | 9481405.27 | 9481405.48 | 9481405.73 | 0.0088 | 0.0042 |
| Neptune | 21248-02-10 05:02 G | 9481772.50 | 9481772.71 | 9481772.93 | 0.0088 | 0.0045 |
| Neptune | 21249-02-11 18:57 G | 9482140.06 | 9482140.29 | 9482140.53 | 0.0088 | 0.0039 |
| Neptune | 21250-02-14 03:50 G | 9482507.46 | 9482507.66 | 9482507.89 | 0.0088 | 0.0044 |
| Neptune | 21251-02-16 12:28 G | 9482874.79 | 9482875.02 | 9482875.27 | 0.0088 | 0.0038 |
| Jupiter | 21251-06-12 17:02 G | 9482991.04 | 9482991.21 | 9482991.38 | 0.0525 | 0.0378 |
| Neptune | 21252-02-19 02:24 G | 9483242.40 | 9483242.60 | 9483242.84 | 0.0088 | 0.0042 |
| Jupiter | 21252-07-19 00:43 G | 9483393.37 | 9483393.53 | 9483393.71 | 0.0539 | 0.0357 |
| Neptune | 21253-02-20 07:26 G | 9483609.59 | 9483609.81 | 9483610.06 | 0.0088 | 0.0035 |
| Neptune | 21254-02-23 00:43 G | 9483977.32 | 9483977.53 | 9483977.78 | 0.0088 | 0.0039 |
| Neptune | 21255-02-25 04:19 G | 9484344.45 | 9484344.68 | 9484344.93 | 0.0088 | 0.0032 |
| Neptune | 21256-02-27 21:07 G | 9484712.16 | 9484712.38 | 9484712.63 | 0.0088 | 0.0037 |
| Jupiter | 21256-12-10 18:28 G | 9484999.13 | 9484999.27 | 9484999.40 | 0.0504 | 0.0413 |
| Neptune | 21257-03-01 03:07 G | 9485079.41 | 9485079.63 | 9485079.88 | 0.0088 | 0.0030 |
| Jupiter | 21258-01-11 07:55 G | 9485395.62 | 9485395.83 | 9485396.03 | 0.0491 | 0.0216 |
| Neptune | 21258-03-03 16:19 G | 9485446.95 | 9485447.18 | 9485447.44 | 0.0088 | 0.0034 |
| Neptune | 21259-03-06 02:38 G | 9485814.39 | 9485814.61 | 9485814.86 | 0.0088 | 0.0027 |
| Neptune | 21260-03-07 10:48 G | 9486181.71 | 9486181.95 | 9486182.21 | 0.0088 | 0.0030 |
| Saturn | 21260-06-10 02:38 G | 9486276.37 | 9486276.61 | 9486276.86 | 0.0287 | 0.0071 |
| Neptune | 21261-03-10 02:09 G | 9486549.36 | 9486549.59 | 9486549.84 | 0.0088 | 0.0023 |
| Neptune | 21262-03-12 07:12 G | 9486916.55 | 9486916.80 | 9486917.05 | 0.0088 | 0.0027 |
| Neptune | 21263-03-15 00:43 G | 9487284.29 | 9487284.53 | 9487284.79 | 0.0088 | 0.0020 |
| Jupiter | 21263-06-17 23:16 G | 9487379.30 | 9487379.47 | 9487379.65 | 0.0527 | 0.0330 |
| Neptune | 21264-03-16 04:33 G | 9487651.46 | 9487651.69 | 9487651.95 | 0.0088 | 0.0025 |

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| Jupiter | 21264-07-24 13:40 G | 9487781.94 | 9487782.07 | 9487782.20 | 0.0541 | 0.0455 |
| Neptune | 21265-03-18 21:36 G | 9488019.15 | 9488019.40 | 9488019.67 | 0.0088 | 0.0016 |
| Neptune | 21266-03-21 04:19 G | 9488386.44 | 9488386.68 | 9488386.93 | 0.0088 | 0.0020 |
| Neptune | 21267-03-23 17:31 G | 9488753.97 | 9488754.23 | 9488754.50 | 0.0088 | 0.0012 |
| Neptune | 21268-03-25 04:33 G | 9489121.45 | 9489121.69 | 9489121.94 | 0.0088 | 0.0017 |
| Jupiter | 21268-12-15 10:04 G | 9489386.76 | 9489386.92 | 9489387.09 | 0.0501 | 0.0327 |
| Neptune | 21269-03-27 12:28 G | 9489488.76 | 9489489.02 | 9489489.29 | 0.0088 | 0.0009 |
| Jupiter | 21270-01-15 06:43 G | 9489782.59 | 9489782.78 | 9489782.98 | 0.0490 | 0.0273 |
| Neptune | 21270-03-30 04:04 G | 9489856.43 | 9489856.67 | 9489856.93 | 0.0088 | 0.0015 |
| Mars | 21271-03-28 08:24 G | 9490219.70 | 9490219.85 | 9490220.01 | 0.1638 | 0.0850 |
| Neptune | 21271-04-01 09:21 G | 9490223.63 | 9490223.89 | 9490224.15 | 0.0088 | 0.0005 |
| Neptune | 21272-04-03 03:21 G | 9490591.39 | 9490591.64 | 9490591.91 | 0.0088 | 0.0010 |
| Neptune | 21273-04-05 08:09 G | 9490958.59 | 9490958.84 | 9490959.10 | 0.0088 | 0.0001 |
| Neptune | 21274-04-08 01:26 G | 9491326.29 | 9491326.56 | 9491326.82 | 0.0088 | 0.0006 |
| Saturn | 21274-12-03 09:50 G | 9491565.73 | 9491565.91 | 9491566.10 | 0.0272 | 0.0173 |
| Neptune | 21275-04-10 09:07 G | 9491693.63 | 9491693.88 | 9491694.13 | 0.0088 | 0.0004 |
| Jupiter | 21275-06-23 05:31 G | 9491767.51 | 9491767.73 | 9491767.95 | 0.0530 | 0.0229 |
| Saturn | 21275-12-15 12:43 G | 9491942.87 | 9491943.03 | 9491943.19 | 0.0273 | 0.0211 |
| Neptune | 21276-04-11 22:19 G | 9492061.16 | 9492061.43 | 9492061.70 | 0.0088 | 0.0002 |
| Jupiter | 21276-07-29 18:43 G | 9492170.21 | 9492170.28 | 9492170.35 | 0.0542 | 0.0512 |
| Neptune | 21277-04-14 10:19 G | 9492428.68 | 9492428.93 | 9492429.18 | 0.0088 | 0.0008 |
| Neptune | 21278-04-16 18:28 G | 9492796.00 | 9492796.27 | 9492796.53 | 0.0088 | 0.0002 |
| Neptune | 21279-04-19 10:33 G | 9493163.70 | 9493163.94 | 9493164.20 | 0.0088 | 0.0013 |
| Neptune | 21280-04-20 16:04 G | 9493530.91 | 9493531.17 | 9493531.43 | 0.0088 | 0.0005 |
| Jupiter | 21280-12-19 20:38 G | 9493774.14 | 9493774.36 | 9493774.59 | 0.0499 | 0.0202 |
| Neptune | 21281-04-23 10:48 G | 9493898.70 | 9493898.95 | 9493899.21 | 0.0088 | 0.0016 |
| Jupiter | 21282-01-19 18:14 G | 9494170.09 | 9494170.26 | 9494170.43 | 0.0489 | 0.0314 |
| Neptune | 21282-04-25 15:36 G | 9494265.90 | 9494266.15 | 9494266.41 | 0.0088 | 0.0009 |
| Neptune | 21283-04-28 09:21 G | 9494633.63 | 9494633.89 | 9494634.15 | 0.0088 | 0.0020 |
| Uranus | 21283-10-29 08:52 G | 9494817.76 | 9494817.87 | 9494818.01 | 0.0142 | 0.0122 |

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| Neptune | 21284-04-29 17:31 G | 9495000.99 | 9495001.23 | 9495001.48 | 0.0088 | 0.0013 |
| Uranus | 21284-11-01 23:31 G | 9495187.26 | 9495187.48 | 9495187.73 | 0.0143 | 0.0057 |
| Neptune | 21285-05-02 07:12 G | 9495368.55 | 9495368.80 | 9495369.07 | 0.0088 | 0.0024 |
| Uranus | 21285-11-07 00:57 G | 9495557.30 | 9495557.54 | 9495557.79 | 0.0143 | 0.0004 |
| Neptune | 21286-05-04 20:09 G | 9495736.09 | 9495736.34 | 9495736.59 | 0.0089 | 0.0017 |
| Uranus | 21286-11-11 18:28 G | 9495927.07 | 9495927.27 | 9495927.49 | 0.0143 | 0.0084 |
| Neptune | 21287-05-07 04:48 G | 9496103.45 | 9496103.70 | 9496103.96 | 0.0089 | 0.0027 |
| Jupiter | 21287-06-28 03:50 G | 9496155.44 | 9496155.66 | 9496155.89 | 0.0531 | 0.0086 |
| Uranus | 21287-11-16 18:43 G | 9496297.23 | 9496297.28 | 9496297.36 | 0.0144 | 0.0138 |
| Neptune | 21288-05-08 21:36 G | 9496471.17 | 9496471.40 | 9496471.66 | 0.0089 | 0.0021 |
| Neptune | 21289-05-11 03:21 G | 9496838.41 | 9496838.64 | 9496838.90 | 0.0089 | 0.0032 |
| Saturn | 21289-06-03 22:19 G | 9496862.22 | 9496862.43 | 9496862.64 | 0.0288 | 0.0143 |
| Neptune | 21290-05-13 22:48 G | 9497206.21 | 9497206.45 | 9497206.71 | 0.0089 | 0.0024 |
| Neptune | 21291-05-16 04:04 G | 9497573.45 | 9497573.67 | 9497573.92 | 0.0089 | 0.0035 |
| Neptune | 21292-05-17 22:19 G | 9497941.19 | 9497941.43 | 9497941.69 | 0.0089 | 0.0027 |
| Jupiter | 21292-12-24 01:55 G | 9498161.36 | 9498161.58 | 9498161.80 | 0.0498 | 0.0121 |
| Neptune | 21293-05-20 06:28 G | 9498308.56 | 9498308.77 | 9498309.01 | 0.0089 | 0.0038 |
| Jupiter | 21294-01-23 20:52 G | 9498557.23 | 9498557.37 | 9498557.52 | 0.0488 | 0.0385 |
| Pluto | 21294-04-01 08:09 G | 9498624.72 | 9498624.84 | 9498624.99 | 0.0080 | 0.0068 |
| Neptune | 21294-05-22 20:52 G | 9498676.13 | 9498676.37 | 9498676.64 | 0.0089 | 0.0031 |
| Neptune | 21295-05-25 09:50 G | 9499043.70 | 9499043.91 | 9499044.14 | 0.0089 | 0.0041 |
| Neptune | 21296-05-26 19:12 G | 9499411.07 | 9499411.30 | 9499411.56 | 0.0089 | 0.0034 |
| Neptune | 21297-05-29 12:28 G | 9499778.82 | 9499779.02 | 9499779.26 | 0.0089 | 0.0044 |
| Neptune | 21298-05-31 18:57 G | 9500146.06 | 9500146.29 | 9500146.54 | 0.0089 | 0.0036 |
| Neptune | 21299-06-03 14:52 G | 9500513.91 | 9500514.12 | 9500514.35 | 0.0089 | 0.0046 |
| Jupiter | 21299-07-03 14:24 G | 9500543.86 | 9500544.10 | 9500544.33 | 0.0533 | 0.0018 |
| Neptune | 21300-06-05 20:38 G | 9500881.14 | 9500881.36 | 9500881.60 | 0.0089 | 0.0039 |
| Neptune | 21301-06-08 15:07 G | 9501248.93 | 9501249.13 | 9501249.37 | 0.0089 | 0.0049 |
| Neptune | 21302-06-10 23:31 G | 9501616.28 | 9501616.48 | 9501616.72 | 0.0089 | 0.0042 |
| Neptune | 21303-06-13 15:21 G | 9501983.93 | 9501984.14 | 9501984.37 | 0.0089 | 0.0051 |

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| Neptune | 21304-06-15 04:04 G | 9502351.45 | 9502351.67 | 9502351.89 | 0.0089 | 0.0043 |
| Saturn | 21304-12-10 15:36 G | 9502529.92 | 9502530.15 | 9502530.38 | 0.0272 | 0.0050 |
| Jupiter | 21304-12-29 16:33 G | 9502548.96 | 9502549.19 | 9502549.43 | 0.0496 | 0.0076 |
| Neptune | 21305-06-17 13:55 G | 9502718.88 | 9502719.08 | 9502719.32 | 0.0089 | 0.0053 |
| Neptune | 21306-06-20 06:57 G | 9503086.59 | 9503086.79 | 9503087.02 | 0.0089 | 0.0046 |
| Neptune | 21307-06-22 13:55 G | 9503453.89 | 9503454.08 | 9503454.30 | 0.0089 | 0.0054 |
| Neptune | 21308-06-24 09:36 G | 9503821.70 | 9503821.90 | 9503822.14 | 0.0089 | 0.0048 |
| Neptune | 21309-06-26 15:21 G | 9504188.97 | 9504189.14 | 9504189.37 | 0.0089 | 0.0056 |
| Neptune | 21310-06-29 10:48 G | 9504556.76 | 9504556.95 | 9504557.20 | 0.0089 | 0.0049 |
| Neptune | 21311-07-01 19:26 G | 9504924.13 | 9504924.31 | 9504924.52 | 0.0089 | 0.0056 |
| Jupiter | 21311-07-09 11:16 G | 9504931.73 | 9504931.97 | 9504932.21 | 0.0535 | 0.0075 |
| Neptune | 21312-07-03 11:45 G | 9505291.79 | 9505291.99 | 9505292.23 | 0.0089 | 0.0050 |
| Neptune | 21313-07-06 00:14 G | 9505659.34 | 9505659.51 | 9505659.73 | 0.0089 | 0.0057 |
| Neptune | 21314-07-08 11:31 G | 9506026.78 | 9506026.98 | 9506027.22 | 0.0089 | 0.0051 |
| Neptune | 21315-07-11 04:19 G | 9506394.51 | 9506394.68 | 9506394.90 | 0.0089 | 0.0057 |
| Neptune | 21316-07-12 12:00 G | 9506761.79 | 9506762.00 | 9506762.23 | 0.0089 | 0.0050 |
| Jupiter | 21317-01-02 19:40 G | 9506936.09 | 9506936.32 | 9506936.55 | 0.0494 | 0.0010 |
| Neptune | 21317-07-15 07:26 G | 9507129.63 | 9507129.81 | 9507130.03 | 0.0089 | 0.0056 |
| Neptune | 21318-07-17 13:40 G | 9507496.87 | 9507497.07 | 9507497.30 | 0.0089 | 0.0051 |
| Saturn | 21319-06-12 23:45 G | 9507827.26 | 9507827.49 | 9507827.73 | 0.0287 | 0.0114 |
| Neptune | 21319-07-20 09:21 G | 9507864.71 | 9507864.89 | 9507865.12 | 0.0089 | 0.0056 |
| Neptune | 21320-07-21 17:31 G | 9508232.02 | 9508232.23 | 9508232.44 | 0.0089 | 0.0051 |
| Neptune | 21321-07-24 10:33 G | 9508599.73 | 9508599.94 | 9508600.16 | 0.0089 | 0.0054 |
| Jupiter | 21322-06-07 23:16 G | 9508918.37 | 9508918.47 | 9508918.57 | 0.0522 | 0.0474 |
| Neptune | 21322-07-26 22:19 G | 9508967.23 | 9508967.43 | 9508967.65 | 0.0089 | 0.0050 |
| Jupiter | 21323-07-15 00:00 G | 9509320.29 | 9509320.50 | 9509320.71 | 0.0537 | 0.0194 |
| Neptune | 21323-07-29 10:33 G | 9509334.74 | 9509334.94 | 9509335.17 | 0.0089 | 0.0053 |
| Uranus | 21324-05-01 05:45 G | 9509611.57 | 9509611.74 | 9509611.92 | 0.0136 | 0.0096 |
| Neptune | 21324-07-31 02:38 G | 9509702.42 | 9509702.61 | 9509702.84 | 0.0090 | 0.0050 |
| Uranus | 21325-05-05 10:48 G | 9509980.70 | 9509980.95 | 9509981.21 | 0.0136 | 0.0027 |

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| Neptune | 21325-08-02 10:48 G | 9510069.75 | 9510069.95 | 9510070.18 | 0.0090 | 0.0052 |
| Uranus | 21326-05-10 04:04 G | 9510350.43 | 9510350.67 | 9510350.93 | 0.0135 | 0.0018 |
| Neptune | 21326-08-05 06:14 G | 9510437.57 | 9510437.76 | 9510438.00 | 0.0090 | 0.0049 |
| Uranus | 21327-05-14 08:52 G | 9510719.68 | 9510719.87 | 9510720.08 | 0.0135 | 0.0086 |
| Neptune | 21327-08-07 12:28 G | 9510804.83 | 9510805.02 | 9510805.26 | 0.0090 | 0.0050 |
| Jupiter | 21327-12-07 14:24 G | 9510927.02 | 9510927.10 | 9510927.19 | 0.0506 | 0.0468 |
| Uranus | 21328-05-18 00:57 G | 9511089.50 | 9511089.54 | 9511089.59 | 0.0135 | 0.0132 |
| Neptune | 21328-08-09 08:24 G | 9511172.65 | 9511172.85 | 9511173.09 | 0.0090 | 0.0047 |
| Jupiter | 21329-01-07 10:33 G | 9511323.71 | 9511323.94 | 9511324.16 | 0.0493 | 0.0108 |
| Neptune | 21329-08-11 15:36 G | 9511539.95 | 9511540.15 | 9511540.38 | 0.0090 | 0.0047 |
| Neptune | 21330-08-14 09:21 G | 9511907.67 | 9511907.89 | 9511908.13 | 0.0090 | 0.0045 |
| Neptune | 21331-08-16 20:09 G | 9512275.14 | 9512275.34 | 9512275.57 | 0.0090 | 0.0045 |
| Neptune | 21332-08-18 09:21 G | 9512642.66 | 9512642.89 | 9512643.13 | 0.0090 | 0.0043 |
| Neptune | 21333-08-21 00:14 G | 9513010.31 | 9513010.51 | 9513010.75 | 0.0090 | 0.0042 |
| Saturn | 21333-12-05 07:55 G | 9513116.61 | 9513116.83 | 9513117.05 | 0.0272 | 0.0132 |
| Jupiter | 21334-06-13 05:31 G | 9513306.58 | 9513306.73 | 9513306.88 | 0.0525 | 0.0392 |
| Neptune | 21334-08-23 08:38 G | 9513377.64 | 9513377.86 | 9513378.11 | 0.0090 | 0.0040 |
| Saturn | 21334-12-17 09:50 G | 9513493.83 | 9513493.91 | 9513494.01 | 0.0273 | 0.0254 |
| Jupiter | 21335-07-20 10:04 G | 9513708.74 | 9513708.92 | 9513709.11 | 0.0539 | 0.0348 |
| Neptune | 21335-08-26 03:36 G | 9513745.44 | 9513745.65 | 9513745.90 | 0.0090 | 0.0038 |
| Neptune | 21336-08-27 09:50 G | 9514112.69 | 9514112.91 | 9514113.16 | 0.0090 | 0.0038 |
| Neptune | 21337-08-30 06:00 G | 9514480.52 | 9514480.75 | 9514481.00 | 0.0090 | 0.0035 |
| Neptune | 21338-09-01 12:43 G | 9514847.81 | 9514848.03 | 9514848.27 | 0.0090 | 0.0036 |
| Neptune | 21339-09-04 06:28 G | 9515215.53 | 9515215.77 | 9515216.03 | 0.0090 | 0.0031 |
| Jupiter | 21339-12-12 07:12 G | 9515314.69 | 9515314.80 | 9515314.92 | 0.0504 | 0.0426 |
| Neptune | 21340-09-05 16:33 G | 9515582.97 | 9515583.19 | 9515583.43 | 0.0090 | 0.0032 |
| Jupiter | 21341-01-11 11:02 G | 9515710.75 | 9515710.96 | 9515711.18 | 0.0491 | 0.0208 |
| Neptune | 21341-09-08 05:45 G | 9515950.50 | 9515950.74 | 9515951.01 | 0.0089 | 0.0027 |
| Neptune | 21342-09-10 20:09 G | 9516318.12 | 9516318.34 | 9516318.59 | 0.0089 | 0.0029 |
| Neptune | 21343-09-13 04:33 G | 9516685.44 | 9516685.69 | 9516685.95 | 0.0089 | 0.0024 |

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| Neptune | 21344-09-14 22:48 G | 9517053.21 | 9517053.45 | 9517053.70 | 0.0089 | 0.0026 |
| Neptune | 21345-09-17 04:19 G | 9517420.44 | 9517420.68 | 9517420.95 | 0.0089 | 0.0020 |
| Jupiter | 21346-06-18 07:12 G | 9517694.62 | 9517694.80 | 9517694.99 | 0.0526 | 0.0342 |
| Neptune | 21346-09-20 00:14 G | 9517788.26 | 9517788.51 | 9517788.77 | 0.0089 | 0.0022 |
| Jupiter | 21347-07-25 11:16 G | 9518096.84 | 9518096.97 | 9518097.11 | 0.0539 | 0.0432 |
| Neptune | 21347-09-22 06:14 G | 9518155.51 | 9518155.76 | 9518156.01 | 0.0089 | 0.0014 |
| Saturn | 21348-06-06 03:36 G | 9518413.43 | 9518413.65 | 9518413.88 | 0.0288 | 0.0100 |
| Neptune | 21348-09-24 00:14 G | 9518523.25 | 9518523.51 | 9518523.77 | 0.0089 | 0.0018 |
| Neptune | 21349-09-26 09:36 G | 9518890.65 | 9518890.90 | 9518891.15 | 0.0089 | 0.0011 |
| Mars | 21350-03-31 12:43 G | 9519076.85 | 9519077.03 | 9519077.20 | 0.1642 | 0.0703 |
| Neptune | 21350-09-28 23:02 G | 9519258.20 | 9519258.46 | 9519258.73 | 0.0089 | 0.0014 |
| Neptune | 21351-10-01 12:57 G | 9519625.79 | 9519626.04 | 9519626.29 | 0.0089 | 0.0006 |
| Jupiter | 21351-12-16 15:36 G | 9519701.97 | 9519702.15 | 9519702.33 | 0.0502 | 0.0333 |
| Neptune | 21352-10-02 21:07 G | 9519993.12 | 9519993.38 | 9519993.64 | 0.0089 | 0.0009 |
| Jupiter | 21353-01-15 21:07 G | 9520098.19 | 9520098.38 | 9520098.57 | 0.0490 | 0.0259 |
| Neptune | 21353-10-05 14:38 G | 9520360.86 | 9520361.11 | 9520361.37 | 0.0089 | 0.0002 |
| Neptune | 21354-10-07 20:09 G | 9520728.09 | 9520728.34 | 9520728.60 | 0.0089 | 0.0006 |
| Neptune | 21355-10-10 15:07 G | 9521095.88 | 9521096.13 | 9521096.39 | 0.0089 | 0.0003 |
| Neptune | 21356-10-11 20:38 G | 9521463.11 | 9521463.36 | 9521463.61 | 0.0089 | 0.0002 |
| Neptune | 21357-10-14 13:55 G | 9521830.82 | 9521831.08 | 9521831.34 | 0.0089 | 0.0007 |
| Jupiter | 21358-06-23 05:02 G | 9522082.52 | 9522082.71 | 9522082.92 | 0.0528 | 0.0241 |
| Neptune | 21358-10-16 22:33 G | 9522198.19 | 9522198.44 | 9522198.69 | 0.0089 | 0.0003 |
| Jupiter | 21359-07-31 01:26 G | 9522485.47 | 9522485.56 | 9522485.66 | 0.0540 | 0.0488 |
| Neptune | 21359-10-19 11:31 G | 9522565.73 | 9522565.98 | 9522566.26 | 0.0089 | 0.0012 |
| Neptune | 21360-10-21 00:57 G | 9522933.29 | 9522933.54 | 9522933.79 | 0.0089 | 0.0006 |
| Neptune | 21361-10-23 08:52 G | 9523300.61 | 9523300.87 | 9523301.13 | 0.0089 | 0.0015 |
| Neptune | 21362-10-26 01:55 G | 9523668.34 | 9523668.58 | 9523668.84 | 0.0089 | 0.0010 |
| Neptune | 21363-10-28 06:57 G | 9524035.55 | 9524035.79 | 9524036.05 | 0.0089 | 0.0020 |
| Saturn | 21363-12-12 21:07 G | 9524081.15 | 9524081.38 | 9524081.61 | 0.0272 | 0.0092 |
| Jupiter | 21363-12-21 00:28 G | 9524089.32 | 9524089.52 | 9524089.72 | 0.0500 | 0.0213 |

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| Neptune | 21364-10-30 01:40 G | 9524403.32 | 9524403.57 | 9524403.83 | 0.0089 | 0.0014 |
| Jupiter | 21365-01-20 01:26 G | 9524485.38 | 9524485.56 | 9524485.76 | 0.0489 | 0.0299 |
| Neptune | 21365-11-01 06:28 G | 9524770.54 | 9524770.77 | 9524771.03 | 0.0089 | 0.0025 |
| Neptune | 21366-11-03 23:16 G | 9525138.22 | 9525138.47 | 9525138.74 | 0.0089 | 0.0018 |
| Uranus | 21367-10-30 20:24 G | 9525499.24 | 9525499.35 | 9525499.49 | 0.0142 | 0.0124 |
| Neptune | 21367-11-06 07:26 G | 9525505.59 | 9525505.81 | 9525506.06 | 0.0089 | 0.0028 |
| Uranus | 21368-11-03 10:48 G | 9525868.71 | 9525868.95 | 9525869.19 | 0.0143 | 0.0056 |
| Neptune | 21368-11-07 19:40 G | 9525873.08 | 9525873.32 | 9525873.60 | 0.0089 | 0.0022 |
| Uranus | 21369-11-08 12:57 G | 9526238.80 | 9526239.04 | 9526239.29 | 0.0143 | 0.0018 |
| Neptune | 21369-11-10 08:38 G | 9526240.64 | 9526240.86 | 9526241.10 | 0.0089 | 0.0032 |
| Jupiter | 21370-06-28 12:14 G | 9526470.77 | 9526471.01 | 9526471.24 | 0.0531 | 0.0091 |
| Neptune | 21370-11-12 15:50 G | 9526607.92 | 9526608.16 | 9526608.43 | 0.0089 | 0.0026 |
| Uranus | 21370-11-13 05:02 G | 9526608.50 | 9526608.71 | 9526608.95 | 0.0143 | 0.0074 |
| Neptune | 21371-11-15 08:24 G | 9526975.63 | 9526975.85 | 9526976.09 | 0.0089 | 0.0036 |
| Neptune | 21372-11-16 12:43 G | 9527342.80 | 9527343.03 | 9527343.29 | 0.0089 | 0.0029 |
| Neptune | 21373-11-19 06:57 G | 9527710.57 | 9527710.79 | 9527711.04 | 0.0089 | 0.0039 |
| Neptune | 21374-11-21 11:31 G | 9528077.76 | 9528077.98 | 9528078.23 | 0.0089 | 0.0032 |
| Neptune | 21375-11-24 03:50 G | 9528445.43 | 9528445.66 | 9528445.90 | 0.0089 | 0.0042 |
| Jupiter | 21375-12-25 17:16 G | 9528477.00 | 9528477.22 | 9528477.45 | 0.0498 | 0.0131 |
| Neptune | 21376-11-25 12:14 G | 9528812.78 | 9528813.01 | 9528813.23 | 0.0088 | 0.0035 |
| Jupiter | 21377-01-24 06:28 G | 9528872.64 | 9528872.77 | 9528872.91 | 0.0488 | 0.0388 |
| Neptune | 21377-11-27 23:31 G | 9529180.27 | 9529180.48 | 9529180.72 | 0.0088 | 0.0045 |
| Saturn | 21378-06-14 00:57 G | 9529378.34 | 9529378.54 | 9529378.74 | 0.0287 | 0.0159 |
| Neptune | 21378-11-30 12:14 G | 9529547.80 | 9529548.01 | 9529548.25 | 0.0088 | 0.0038 |
| Neptune | 21379-12-02 18:28 G | 9529915.07 | 9529915.27 | 9529915.51 | 0.0088 | 0.0048 |
| Neptune | 21380-12-04 11:02 G | 9530282.75 | 9530282.96 | 9530283.20 | 0.0088 | 0.0040 |
| Neptune | 21381-12-06 15:21 G | 9530649.93 | 9530650.14 | 9530650.35 | 0.0088 | 0.0050 |
| Jupiter | 21382-07-03 10:33 G | 9530858.71 | 9530858.94 | 9530859.18 | 0.0533 | 0.0011 |
| Neptune | 21382-12-09 08:24 G | 9531017.64 | 9531017.85 | 9531018.09 | 0.0088 | 0.0042 |
| Neptune | 21383-12-11 12:43 G | 9531384.85 | 9531385.03 | 9531385.25 | 0.0088 | 0.0052 |

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| Neptune | 21384-12-13 04:19 G | 9531752.45 | 9531752.68 | 9531752.91 | 0.0088 | 0.0044 |
| Neptune | 21385-12-15 12:14 G | 9532119.83 | 9532120.01 | 9532120.22 | 0.0088 | 0.0054 |
| Neptune | 21386-12-17 23:16 G | 9532487.25 | 9532487.47 | 9532487.71 | 0.0088 | 0.0045 |
| Neptune | 21387-12-20 12:14 G | 9532854.83 | 9532855.01 | 9532855.22 | 0.0088 | 0.0056 |
| Jupiter | 21387-12-29 20:09 G | 9532864.12 | 9532864.34 | 9532864.57 | 0.0496 | 0.0090 |
| Neptune | 21388-12-21 18:00 G | 9533222.05 | 9533222.25 | 9533222.49 | 0.0088 | 0.0047 |
| Neptune | 21389-12-24 10:33 G | 9533589.77 | 9533589.94 | 9533590.16 | 0.0088 | 0.0057 |
| Neptune | 21390-12-26 14:09 G | 9533956.90 | 9533957.09 | 9533957.32 | 0.0088 | 0.0048 |
| Neptune | 21391-12-29 07:26 G | 9534324.63 | 9534324.81 | 9534325.02 | 0.0088 | 0.0057 |
| Saturn | 21392-12-06 06:00 G | 9534667.52 | 9534667.75 | 9534667.99 | 0.0272 | 0.0091 |
| Neptune | 21392-12-30 11:45 G | 9534691.80 | 9534691.99 | 9534692.22 | 0.0088 | 0.0049 |
| Neptune | 21394-01-02 01:55 G | 9535059.40 | 9535059.58 | 9535059.80 | 0.0088 | 0.0058 |
| Jupiter | 21394-07-08 23:45 G | 9535247.26 | 9535247.49 | 9535247.71 | 0.0535 | 0.0066 |
| Neptune | 21395-01-04 10:48 G | 9535426.76 | 9535426.95 | 9535427.17 | 0.0088 | 0.0050 |
| Neptune | 21396-01-06 20:38 G | 9535794.17 | 9535794.36 | 9535794.56 | 0.0088 | 0.0058 |
| Neptune | 21397-01-08 10:04 G | 9536161.73 | 9536161.92 | 9536162.14 | 0.0088 | 0.0050 |
| Neptune | 21398-01-10 15:21 G | 9536528.95 | 9536529.14 | 9536529.34 | 0.0088 | 0.0058 |
| Neptune | 21399-01-13 08:09 G | 9536896.64 | 9536896.84 | 9536897.06 | 0.0088 | 0.0049 |
| Jupiter | 21400-01-03 12:14 G | 9537251.78 | 9537252.01 | 9537252.24 | 0.0495 | 0.0015 |
| Neptune | 21400-01-15 11:45 G | 9537263.80 | 9537263.99 | 9537264.18 | 0.0088 | 0.0058 |
| Neptune | 21401-01-18 04:04 G | 9537631.48 | 9537631.67 | 9537631.91 | 0.0088 | 0.0050 |
| Neptune | 21402-01-20 09:07 G | 9537998.71 | 9537998.88 | 9537999.09 | 0.0088 | 0.0058 |
| Neptune | 21403-01-22 22:19 G | 9538366.24 | 9538366.43 | 9538366.68 | 0.0088 | 0.0049 |
| Neptune | 21404-01-25 08:24 G | 9538733.67 | 9538733.85 | 9538734.04 | 0.0088 | 0.0056 |
| Neptune | 21405-01-26 17:02 G | 9539101.00 | 9539101.21 | 9539101.44 | 0.0088 | 0.0047 |
| Jupiter | 21405-06-08 12:14 G | 9539233.92 | 9539234.01 | 9539234.10 | 0.0521 | 0.0477 |
| Neptune | 21406-01-29 07:12 G | 9539468.62 | 9539468.80 | 9539469.01 | 0.0088 | 0.0056 |
| Jupiter | 21406-07-15 04:04 G | 9539635.44 | 9539635.67 | 9539635.90 | 0.0536 | 0.0182 |
| Neptune | 21407-01-31 11:45 G | 9539835.78 | 9539835.99 | 9539836.22 | 0.0088 | 0.0046 |
| Saturn | 21407-06-09 05:45 G | 9539964.50 | 9539964.74 | 9539964.99 | 0.0288 | 0.0056 |

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| Neptune | 21408-02-03 04:33 G | 9540203.51 | 9540203.69 | 9540203.91 | 0.0088 | 0.0054 |
| Uranus | 21408-05-02 14:38 G | 9540292.93 | 9540293.11 | 9540293.32 | 0.0136 | 0.0086 |
| Neptune | 21409-02-04 08:09 G | 9540570.63 | 9540570.84 | 9540571.07 | 0.0088 | 0.0044 |
| Uranus | 21409-05-06 19:26 G | 9540662.07 | 9540662.31 | 9540662.56 | 0.0136 | 0.0038 |
| Neptune | 21410-02-07 00:00 G | 9540938.31 | 9540938.50 | 9540938.74 | 0.0088 | 0.0052 |
| Uranus | 21410-05-11 12:57 G | 9541031.81 | 9541032.04 | 9541032.29 | 0.0135 | 0.0034 |
| Jupiter | 21410-12-07 22:04 G | 9541242.36 | 9541242.42 | 9541242.48 | 0.0507 | 0.0489 |
| Neptune | 21411-02-09 05:45 G | 9541305.54 | 9541305.74 | 9541305.97 | 0.0088 | 0.0043 |
| Uranus | 21411-05-15 16:33 G | 9541401.00 | 9541401.19 | 9541401.43 | 0.0135 | 0.0076 |
| Jupiter | 21412-01-08 10:48 G | 9541638.72 | 9541638.95 | 9541639.19 | 0.0494 | 0.0096 |
| Neptune | 21412-02-11 18:14 G | 9541673.06 | 9541673.26 | 9541673.50 | 0.0088 | 0.0050 |
| Neptune | 21413-02-13 05:02 G | 9542040.50 | 9542040.71 | 9542040.94 | 0.0088 | 0.0041 |
| Neptune | 21414-02-15 12:57 G | 9542407.84 | 9542408.04 | 9542408.28 | 0.0088 | 0.0048 |
| Neptune | 21415-02-18 04:19 G | 9542775.46 | 9542775.68 | 9542775.92 | 0.0088 | 0.0038 |
| Neptune | 21416-02-20 08:24 G | 9543142.64 | 9543142.85 | 9543143.09 | 0.0088 | 0.0045 |
| Neptune | 21417-02-22 02:09 G | 9543510.36 | 9543510.59 | 9543510.83 | 0.0088 | 0.0035 |
| Jupiter | 21417-06-13 10:19 G | 9543621.78 | 9543621.93 | 9543622.09 | 0.0523 | 0.0400 |
| Neptune | 21418-02-24 05:45 G | 9543877.52 | 9543877.74 | 9543877.96 | 0.0088 | 0.0042 |
| Jupiter | 21418-07-20 06:14 G | 9544023.59 | 9544023.76 | 9544023.94 | 0.0537 | 0.0333 |
| Neptune | 21419-02-26 21:36 G | 9544245.17 | 9544245.40 | 9544245.66 | 0.0088 | 0.0033 |
| Neptune | 21420-02-29 03:50 G | 9544612.45 | 9544612.66 | 9544612.90 | 0.0088 | 0.0039 |
| Neptune | 21421-03-02 15:36 G | 9544979.92 | 9544980.15 | 9544980.42 | 0.0088 | 0.0030 |
| Saturn | 21421-12-02 18:57 G | 9545255.20 | 9545255.29 | 9545255.39 | 0.0271 | 0.0248 |
| Neptune | 21422-03-05 03:21 G | 9545347.42 | 9545347.64 | 9545347.88 | 0.0088 | 0.0035 |
| Jupiter | 21422-12-12 10:33 G | 9545629.82 | 9545629.94 | 9545630.06 | 0.0505 | 0.0437 |
| Saturn | 21422-12-14 23:16 G | 9545632.25 | 9545632.47 | 9545632.69 | 0.0272 | 0.0136 |
| Neptune | 21423-03-07 10:48 G | 9545714.70 | 9545714.95 | 9545715.21 | 0.0088 | 0.0026 |
| Jupiter | 21424-01-12 23:02 G | 9546026.26 | 9546026.46 | 9546026.67 | 0.0492 | 0.0196 |
| Neptune | 21424-03-09 03:07 G | 9546082.39 | 9546082.63 | 9546082.87 | 0.0088 | 0.0032 |
| Neptune | 21425-03-11 07:12 G | 9546449.56 | 9546449.80 | 9546450.06 | 0.0088 | 0.0023 |

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| Neptune | 21426-03-14 01:12 G | 9546817.30 | 9546817.55 | 9546817.79 | 0.0088 | 0.0028 |
| Neptune | 21427-03-16 05:16 G | 9547184.48 | 9547184.72 | 9547184.98 | 0.0088 | 0.0019 |
| Neptune | 21428-03-17 21:21 G | 9547552.15 | 9547552.39 | 9547552.66 | 0.0088 | 0.0024 |
| Neptune | 21429-03-20 04:33 G | 9547919.46 | 9547919.69 | 9547919.95 | 0.0088 | 0.0016 |
| Jupiter | 21429-06-18 05:02 G | 9548009.55 | 9548009.71 | 9548009.89 | 0.0526 | 0.0354 |
| Neptune | 21430-03-22 16:33 G | 9548286.93 | 9548287.19 | 9548287.45 | 0.0088 | 0.0020 |
| Jupiter | 21430-07-25 18:00 G | 9548412.10 | 9548412.25 | 9548412.40 | 0.0539 | 0.0411 |
| Neptune | 21431-03-25 04:48 G | 9548654.46 | 9548654.70 | 9548654.95 | 0.0088 | 0.0012 |
| Neptune | 21432-03-26 12:14 G | 9549021.75 | 9549022.01 | 9549022.27 | 0.0088 | 0.0016 |
| Neptune | 21433-03-29 05:02 G | 9549389.46 | 9549389.71 | 9549389.97 | 0.0088 | 0.0007 |
| Neptune | 21434-03-31 09:07 G | 9549756.63 | 9549756.88 | 9549757.15 | 0.0088 | 0.0012 |
| Jupiter | 21434-12-16 22:19 G | 9550017.26 | 9550017.43 | 9550017.59 | 0.0503 | 0.0337 |
| Neptune | 21435-04-03 03:21 G | 9550124.39 | 9550124.64 | 9550124.91 | 0.0088 | 0.0004 |
| Jupiter | 21436-01-17 05:16 G | 9550413.52 | 9550413.72 | 9550413.94 | 0.0491 | 0.0243 |
| Neptune | 21436-04-04 08:24 G | 9550491.60 | 9550491.85 | 9550492.10 | 0.0088 | 0.0008 |
| Saturn | 21436-06-02 05:45 G | 9550550.64 | 9550550.74 | 9550550.84 | 0.0288 | 0.0260 |
| Neptune | 21437-04-07 00:43 G | 9550859.26 | 9550859.53 | 9550859.79 | 0.0088 | 0.0001 |
| Saturn | 21437-06-16 09:21 G | 9550929.73 | 9550929.89 | 9550930.06 | 0.0287 | 0.0208 |
| Neptune | 21438-04-09 08:38 G | 9551226.61 | 9551226.86 | 9551227.11 | 0.0088 | 0.0003 |
| Neptune | 21439-04-11 20:24 G | 9551594.09 | 9551594.35 | 9551594.62 | 0.0088 | 0.0005 |
| Neptune | 21440-04-13 09:50 G | 9551961.66 | 9551961.91 | 9551962.16 | 0.0088 | 0.0002 |
| Neptune | 21441-04-15 17:16 G | 9552328.96 | 9552329.22 | 9552329.49 | 0.0088 | 0.0009 |
| Jupiter | 21441-06-23 13:12 G | 9552397.85 | 9552398.05 | 9552398.27 | 0.0528 | 0.0242 |
| Neptune | 21442-04-18 10:48 G | 9552696.70 | 9552696.95 | 9552697.20 | 0.0088 | 0.0005 |
| Jupiter | 21442-07-30 19:55 G | 9552800.22 | 9552800.33 | 9552800.45 | 0.0541 | 0.0475 |
| Neptune | 21443-04-20 15:36 G | 9553063.89 | 9553064.15 | 9553064.41 | 0.0088 | 0.0013 |
| Neptune | 21444-04-22 10:04 G | 9553431.67 | 9553431.92 | 9553432.19 | 0.0088 | 0.0011 |
| Neptune | 21445-04-24 15:21 G | 9553798.90 | 9553799.14 | 9553799.39 | 0.0088 | 0.0017 |
| Neptune | 21446-04-27 07:55 G | 9554166.57 | 9554166.83 | 9554167.10 | 0.0088 | 0.0015 |
| Jupiter | 21446-12-21 15:07 G | 9554404.92 | 9554405.13 | 9554405.35 | 0.0501 | 0.0215 |

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| Neptune | 21447-04-29 16:33 G | 9554533.95 | 9554534.19 | 9554534.44 | 0.0088 | 0.0021 |
| Jupiter | 21448-01-21 09:21 G | 9554800.71 | 9554800.89 | 9554801.07 | 0.0489 | 0.0289 |
| Neptune | 21448-05-01 04:19 G | 9554901.43 | 9554901.68 | 9554901.95 | 0.0088 | 0.0019 |
| Neptune | 21449-05-03 18:00 G | 9555269.02 | 9555269.25 | 9555269.50 | 0.0088 | 0.0025 |
| Neptune | 21450-05-06 02:09 G | 9555636.33 | 9555636.59 | 9555636.85 | 0.0089 | 0.0023 |
| Neptune | 21451-05-08 20:09 G | 9556004.10 | 9556004.34 | 9556004.59 | 0.0089 | 0.0029 |
| Uranus | 21451-11-01 05:45 G | 9556180.60 | 9556180.74 | 9556180.89 | 0.0142 | 0.0116 |
| Saturn | 21451-12-09 12:28 G | 9556218.79 | 9556219.02 | 9556219.26 | 0.0272 | 0.0043 |
| Neptune | 21452-05-10 01:26 G | 9556371.32 | 9556371.56 | 9556371.82 | 0.0089 | 0.0028 |
| Pluto | 21452-10-03 14:09 G | 9556517.84 | 9556518.09 | 9556518.35 | 0.0064 | 0.0001 |
| Uranus | 21452-11-04 19:26 G | 9556550.07 | 9556550.31 | 9556550.55 | 0.0143 | 0.0052 |
| Neptune | 21453-05-12 20:38 G | 9556739.13 | 9556739.36 | 9556739.61 | 0.0089 | 0.0032 |
| Jupiter | 21453-06-28 11:02 G | 9556785.73 | 9556785.96 | 9556786.20 | 0.0531 | 0.0097 |
| Uranus | 21453-11-09 22:19 G | 9556920.19 | 9556920.43 | 9556920.68 | 0.0143 | 0.0011 |
| Neptune | 21454-05-15 02:52 G | 9557106.38 | 9557106.62 | 9557106.85 | 0.0089 | 0.0031 |
| Uranus | 21454-11-14 13:55 G | 9557289.89 | 9557290.08 | 9557290.29 | 0.0143 | 0.0090 |
| Neptune | 21455-05-17 19:40 G | 9557474.09 | 9557474.32 | 9557474.58 | 0.0089 | 0.0035 |
| Uranus | 21455-11-19 16:48 G | 9557660.20 | 9557660.20 | 9557660.21 | 0.0144 | 0.0144 |
| Neptune | 21456-05-19 05:02 G | 9557841.48 | 9557841.71 | 9557841.94 | 0.0089 | 0.0035 |
| Neptune | 21457-05-21 17:16 G | 9558208.99 | 9558209.22 | 9558209.48 | 0.0089 | 0.0039 |
| Neptune | 21458-05-24 06:57 G | 9558576.59 | 9558576.79 | 9558577.04 | 0.0089 | 0.0040 |
| Jupiter | 21458-12-25 18:57 G | 9558792.07 | 9558792.29 | 9558792.51 | 0.0499 | 0.0143 |
| Neptune | 21459-05-26 15:36 G | 9558943.94 | 9558944.15 | 9558944.40 | 0.0089 | 0.0042 |
| Jupiter | 21460-01-25 20:24 G | 9559188.20 | 9559188.35 | 9559188.50 | 0.0488 | 0.0382 |
| Neptune | 21460-05-28 10:04 G | 9559311.71 | 9559311.92 | 9559312.16 | 0.0089 | 0.0042 |
| Neptune | 21461-05-30 15:36 G | 9559678.94 | 9559679.15 | 9559679.40 | 0.0089 | 0.0044 |
| Neptune | 21462-06-02 11:16 G | 9560046.77 | 9560046.97 | 9560047.22 | 0.0089 | 0.0046 |
| Neptune | 21463-06-04 17:31 G | 9560414.04 | 9560414.23 | 9560414.47 | 0.0089 | 0.0047 |
| Neptune | 21464-06-06 11:45 G | 9560781.78 | 9560781.99 | 9560782.23 | 0.0089 | 0.0049 |
| Neptune | 21465-06-08 20:52 G | 9561149.18 | 9561149.37 | 9561149.60 | 0.0089 | 0.0049 |

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| Jupiter | 21465-07-03 22:19 G | 9561174.20 | 9561174.43 | 9561174.66 | 0.0532 | 0.0013 |
| Saturn | 21466-06-10 05:16 G | 9561515.46 | 9561515.72 | 9561515.97 | 0.0288 | 0.0009 |
| Neptune | 21466-06-11 10:33 G | 9561516.74 | 9561516.94 | 9561517.18 | 0.0089 | 0.0051 |
| Neptune | 21467-06-14 00:43 G | 9561884.34 | 9561884.53 | 9561884.75 | 0.0089 | 0.0050 |
| Neptune | 21468-06-15 09:50 G | 9562251.72 | 9562251.91 | 9562252.14 | 0.0089 | 0.0054 |
| Neptune | 21469-06-18 04:33 G | 9562619.49 | 9562619.69 | 9562619.90 | 0.0089 | 0.0052 |
| Neptune | 21470-06-20 10:33 G | 9562986.76 | 9562986.94 | 9562987.16 | 0.0089 | 0.0056 |
| Jupiter | 21470-12-30 07:55 G | 9563179.60 | 9563179.83 | 9563180.05 | 0.0497 | 0.0107 |
| Neptune | 21471-06-23 06:43 G | 9563354.59 | 9563354.78 | 9563355.00 | 0.0089 | 0.0054 |
| Jupiter | 21472-01-29 16:48 G | 9563575.17 | 9563575.20 | 9563575.24 | 0.0488 | 0.0482 |
| Neptune | 21472-06-24 12:57 G | 9563721.86 | 9563722.04 | 9563722.24 | 0.0089 | 0.0058 |
| Neptune | 21473-06-27 07:40 G | 9564089.62 | 9564089.82 | 9564090.04 | 0.0089 | 0.0054 |
| Neptune | 21474-06-29 16:19 G | 9564457.02 | 9564457.18 | 9564457.39 | 0.0089 | 0.0060 |
| Neptune | 21475-07-02 06:43 G | 9564824.60 | 9564824.78 | 9564825.02 | 0.0089 | 0.0056 |
| Mars | 21476-03-28 19:55 G | 9565095.26 | 9565095.33 | 9565095.41 | 0.1631 | 0.1511 |
| Neptune | 21476-07-03 20:38 G | 9565192.19 | 9565192.36 | 9565192.56 | 0.0089 | 0.0061 |
| Neptune | 21477-07-06 06:43 G | 9565559.59 | 9565559.78 | 9565560.00 | 0.0089 | 0.0056 |
| Jupiter | 21477-07-08 23:02 G | 9565562.22 | 9565562.46 | 9565562.70 | 0.0534 | 0.0050 |
| Neptune | 21478-07-09 01:12 G | 9565927.38 | 9565927.55 | 9565927.75 | 0.0089 | 0.0061 |
| Neptune | 21479-07-11 08:09 G | 9566294.65 | 9566294.84 | 9566295.06 | 0.0089 | 0.0055 |
| Neptune | 21480-07-13 04:33 G | 9566662.50 | 9566662.69 | 9566662.88 | 0.0089 | 0.0061 |
| Saturn | 21480-12-03 22:48 G | 9566806.29 | 9566806.45 | 9566806.63 | 0.0271 | 0.0199 |
| Neptune | 21481-07-15 10:33 G | 9567029.75 | 9567029.94 | 9567030.15 | 0.0089 | 0.0055 |
| Saturn | 21481-12-15 23:16 G | 9567183.30 | 9567183.47 | 9567183.67 | 0.0272 | 0.0184 |
| Neptune | 21482-07-18 05:31 G | 9567397.56 | 9567397.73 | 9567397.95 | 0.0089 | 0.0062 |
| Mars | 21482-10-01 20:52 G | 9567473.18 | 9567473.37 | 9567473.55 | 0.1901 | 0.0582 |
| Jupiter | 21483-01-03 10:19 G | 9567566.69 | 9567566.93 | 9567567.17 | 0.0496 | 0.0025 |
| Neptune | 21483-07-20 14:38 G | 9567764.91 | 9567765.11 | 9567765.31 | 0.0089 | 0.0054 |
| Neptune | 21484-07-22 05:45 G | 9568132.55 | 9568132.74 | 9568132.94 | 0.0089 | 0.0060 |
| Neptune | 21485-07-24 18:14 G | 9568500.07 | 9568500.26 | 9568500.48 | 0.0090 | 0.0053 |

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| Neptune | 21486-07-27 05:16 G | 9568867.52 | 9568867.72 | 9568867.92 | 0.0090 | 0.0059 |
| Neptune | 21487-07-29 22:33 G | 9569235.26 | 9569235.44 | 9569235.67 | 0.0090 | 0.0052 |
| Jupiter | 21488-06-07 10:48 G | 9569548.87 | 9569548.95 | 9569549.05 | 0.0520 | 0.0480 |
| Neptune | 21488-07-31 05:45 G | 9569602.57 | 9569602.74 | 9569602.96 | 0.0090 | 0.0059 |
| Jupiter | 21489-07-13 23:31 G | 9569950.27 | 9569950.48 | 9569950.70 | 0.0536 | 0.0173 |
| Neptune | 21489-08-03 01:55 G | 9569970.39 | 9569970.58 | 9569970.82 | 0.0090 | 0.0050 |
| Neptune | 21490-08-05 08:38 G | 9570337.68 | 9570337.86 | 9570338.07 | 0.0090 | 0.0057 |
| Neptune | 21491-08-08 04:19 G | 9570705.47 | 9570705.68 | 9570705.92 | 0.0090 | 0.0047 |
| Uranus | 21492-05-02 23:45 G | 9570974.32 | 9570974.49 | 9570974.69 | 0.0136 | 0.0091 |
| Neptune | 21492-08-09 12:28 G | 9571072.84 | 9571073.02 | 9571073.23 | 0.0090 | 0.0055 |
| Uranus | 21493-05-07 04:04 G | 9571343.42 | 9571343.67 | 9571343.93 | 0.0136 | 0.0024 |
| Neptune | 21493-08-12 04:48 G | 9571440.48 | 9571440.70 | 9571440.94 | 0.0090 | 0.0045 |
| Jupiter | 21493-12-07 04:33 G | 9571557.65 | 9571557.69 | 9571557.74 | 0.0508 | 0.0498 |
| Uranus | 21494-05-11 22:19 G | 9571713.18 | 9571713.43 | 9571713.68 | 0.0135 | 0.0021 |
| Neptune | 21494-08-14 16:33 G | 9571808.00 | 9571808.19 | 9571808.41 | 0.0090 | 0.0053 |
| Jupiter | 21495-01-08 00:14 G | 9571954.29 | 9571954.51 | 9571954.73 | 0.0494 | 0.0094 |
| Uranus | 21495-05-16 01:26 G | 9572082.39 | 9572082.56 | 9572082.77 | 0.0135 | 0.0092 |
| Saturn | 21495-06-04 16:04 G | 9572102.01 | 9572102.17 | 9572102.34 | 0.0288 | 0.0208 |
| Neptune | 21495-08-17 03:50 G | 9572175.44 | 9572175.66 | 9572175.91 | 0.0090 | 0.0043 |
| Saturn | 21496-06-17 18:43 G | 9572481.19 | 9572481.28 | 9572481.40 | 0.0287 | 0.0259 |
| Neptune | 21496-08-18 20:24 G | 9572543.16 | 9572543.35 | 9572543.58 | 0.0090 | 0.0050 |
| Neptune | 21497-08-21 04:19 G | 9572910.46 | 9572910.68 | 9572910.93 | 0.0090 | 0.0039 |
| Neptune | 21498-08-24 00:00 G | 9573278.30 | 9573278.50 | 9573278.73 | 0.0090 | 0.0047 |
| Neptune | 21499-08-26 06:14 G | 9573645.53 | 9573645.76 | 9573646.00 | 0.0090 | 0.0036 |
| Jupiter | 21500-06-13 08:52 G | 9573936.73 | 9573936.87 | 9573937.01 | 0.0523 | 0.0412 |
| Neptune | 21500-08-29 01:40 G | 9574013.36 | 9574013.57 | 9574013.82 | 0.0090 | 0.0044 |
| Jupiter | 21501-07-20 12:28 G | 9574338.84 | 9574339.02 | 9574339.22 | 0.0538 | 0.0323 |
| Neptune | 21501-08-31 09:36 G | 9574380.67 | 9574380.90 | 9574381.14 | 0.0090 | 0.0033 |
| Neptune | 21502-09-03 02:09 G | 9574748.36 | 9574748.59 | 9574748.84 | 0.0089 | 0.0040 |
| Neptune | 21503-09-05 13:40 G | 9575115.83 | 9575116.07 | 9575116.30 | 0.0089 | 0.0029 |

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| Neptune | 21504-09-07 01:12 G | 9575483.31 | 9575483.55 | 9575483.80 | 0.0089 | 0.0036 |
| Neptune | 21505-09-09 17:16 G | 9575850.99 | 9575851.22 | 9575851.47 | 0.0089 | 0.0025 |
| Jupiter | 21505-12-12 16:33 G | 9575945.10 | 9575945.19 | 9575945.30 | 0.0505 | 0.0447 |
| Neptune | 21506-09-12 00:57 G | 9576218.31 | 9576218.54 | 9576218.80 | 0.0089 | 0.0033 |
| Jupiter | 21507-01-13 06:28 G | 9576341.54 | 9576341.77 | 9576341.99 | 0.0492 | 0.0183 |
| Neptune | 21507-09-14 20:09 G | 9576586.10 | 9576586.34 | 9576586.60 | 0.0089 | 0.0021 |
| Neptune | 21508-09-16 01:55 G | 9576953.35 | 9576953.58 | 9576953.84 | 0.0089 | 0.0028 |
| Neptune | 21509-09-18 21:36 G | 9577321.15 | 9577321.40 | 9577321.66 | 0.0089 | 0.0017 |
| Neptune | 21510-09-21 04:19 G | 9577688.45 | 9577688.68 | 9577688.93 | 0.0089 | 0.0023 |
| Saturn | 21510-12-11 23:31 G | 9577770.24 | 9577770.48 | 9577770.72 | 0.0272 | 0.0008 |
| Neptune | 21511-09-23 21:07 G | 9578056.12 | 9578056.38 | 9578056.65 | 0.0089 | 0.0013 |
| Jupiter | 21512-06-18 15:36 G | 9578324.98 | 9578325.15 | 9578325.32 | 0.0526 | 0.0363 |
| Neptune | 21512-09-25 07:12 G | 9578423.56 | 9578423.80 | 9578424.05 | 0.0089 | 0.0019 |
| Jupiter | 21513-07-25 14:24 G | 9578726.95 | 9578727.10 | 9578727.26 | 0.0539 | 0.0400 |
| Neptune | 21513-09-27 18:57 G | 9578791.03 | 9578791.29 | 9578791.56 | 0.0089 | 0.0009 |
| Neptune | 21514-09-30 10:19 G | 9579158.68 | 9579158.93 | 9579159.17 | 0.0089 | 0.0014 |
| Neptune | 21515-10-02 18:00 G | 9579525.99 | 9579526.25 | 9579526.51 | 0.0089 | 0.0004 |
| Neptune | 21516-10-04 12:43 G | 9579893.78 | 9579894.03 | 9579894.29 | 0.0089 | 0.0010 |
| Neptune | 21517-10-06 18:14 G | 9580261.00 | 9580261.26 | 9580261.52 | 0.0089 | 0.0000 |
| Jupiter | 21517-12-17 10:19 G | 9580332.76 | 9580332.93 | 9580333.11 | 0.0503 | 0.0336 |
| Neptune | 21518-10-09 13:12 G | 9580628.80 | 9580629.05 | 9580629.32 | 0.0089 | 0.0005 |
| Jupiter | 21519-01-17 11:02 G | 9580728.76 | 9580728.96 | 9580729.16 | 0.0491 | 0.0226 |
| Neptune | 21519-10-11 19:26 G | 9580996.07 | 9580996.31 | 9580996.57 | 0.0089 | 0.0005 |
| Neptune | 21520-10-13 12:00 G | 9581363.74 | 9581364.00 | 9581364.27 | 0.0089 | 0.0001 |
| Neptune | 21521-10-15 21:21 G | 9581731.15 | 9581731.39 | 9581731.64 | 0.0089 | 0.0009 |
| Neptune | 21522-10-18 08:52 G | 9582098.60 | 9582098.87 | 9582099.14 | 0.0089 | 0.0005 |
| Neptune | 21523-10-20 23:02 G | 9582466.21 | 9582466.46 | 9582466.71 | 0.0089 | 0.0013 |
| Jupiter | 21524-06-23 12:00 G | 9582712.80 | 9582713.00 | 9582713.21 | 0.0527 | 0.0246 |
| Neptune | 21524-10-22 06:14 G | 9582833.50 | 9582833.76 | 9582834.03 | 0.0089 | 0.0009 |
| Saturn | 21525-06-12 09:50 G | 9583066.67 | 9583066.91 | 9583067.15 | 0.0288 | 0.0044 |

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| Jupiter | 21525-07-31 05:16 G | 9583115.61 | 9583115.72 | 9583115.84 | 0.0540 | 0.0462 |
| Neptune | 21525-10-25 00:14 G | 9583201.27 | 9583201.51 | 9583201.77 | 0.0089 | 0.0018 |
| Neptune | 21526-10-27 05:02 G | 9583568.47 | 9583568.71 | 9583568.98 | 0.0089 | 0.0015 |
| Neptune | 21527-10-30 00:00 G | 9583936.26 | 9583936.50 | 9583936.76 | 0.0089 | 0.0022 |
| Neptune | 21528-10-31 05:45 G | 9584303.51 | 9584303.74 | 9584304.00 | 0.0089 | 0.0019 |
| Neptune | 21529-11-02 22:04 G | 9584671.17 | 9584671.42 | 9584671.68 | 0.0089 | 0.0025 |
| Jupiter | 21529-12-21 10:33 G | 9584719.74 | 9584719.94 | 9584720.15 | 0.0501 | 0.0225 |
| Neptune | 21530-11-05 07:12 G | 9585038.57 | 9585038.80 | 9585039.05 | 0.0089 | 0.0023 |
| Jupiter | 21531-01-21 19:40 G | 9585116.12 | 9585116.32 | 9585116.52 | 0.0490 | 0.0275 |
| Neptune | 21531-11-07 17:45 G | 9585406.01 | 9585406.24 | 9585406.51 | 0.0089 | 0.0030 |
| Neptune | 21532-11-09 07:55 G | 9585773.60 | 9585773.83 | 9585774.07 | 0.0089 | 0.0028 |
| Neptune | 21533-11-11 14:38 G | 9586140.87 | 9586141.11 | 9586141.36 | 0.0089 | 0.0034 |
| Neptune | 21534-11-14 08:09 G | 9586508.61 | 9586508.84 | 9586509.08 | 0.0089 | 0.0031 |
| Uranus | 21535-11-02 14:38 G | 9586861.98 | 9586862.11 | 9586862.25 | 0.0142 | 0.0121 |
| Neptune | 21535-11-16 12:14 G | 9586875.79 | 9586876.01 | 9586876.26 | 0.0089 | 0.0037 |
| Jupiter | 21536-06-28 20:24 G | 9587101.13 | 9587101.35 | 9587101.58 | 0.0529 | 0.0106 |
| Uranus | 21536-11-06 03:50 G | 9587231.43 | 9587231.66 | 9587231.91 | 0.0143 | 0.0051 |
| Neptune | 21536-11-18 06:28 G | 9587243.54 | 9587243.77 | 9587244.02 | 0.0089 | 0.0035 |
| Uranus | 21537-11-11 07:40 G | 9587601.57 | 9587601.82 | 9587602.07 | 0.0143 | 0.0021 |
| Neptune | 21537-11-20 11:45 G | 9587610.79 | 9587610.99 | 9587611.23 | 0.0089 | 0.0041 |
| Uranus | 21538-11-15 22:19 G | 9587971.23 | 9587971.43 | 9587971.66 | 0.0143 | 0.0078 |
| Neptune | 21538-11-23 03:07 G | 9587978.41 | 9587978.63 | 9587978.89 | 0.0089 | 0.0040 |
| Neptune | 21539-11-25 12:14 G | 9588345.81 | 9588346.01 | 9588346.24 | 0.0089 | 0.0044 |
| Saturn | 21539-12-07 01:12 G | 9588357.35 | 9588357.55 | 9588357.77 | 0.0271 | 0.0151 |
| Neptune | 21540-11-26 22:33 G | 9588713.22 | 9588713.44 | 9588713.69 | 0.0088 | 0.0042 |
| Saturn | 21540-12-18 06:00 G | 9588734.64 | 9588734.75 | 9588734.87 | 0.0272 | 0.0236 |
| Pluto | 21541-04-03 23:45 G | 9588841.48 | 9588841.49 | 9588841.57 | 0.0080 | 0.0080 |
| Neptune | 21541-11-29 12:43 G | 9589080.82 | 9589081.03 | 9589081.25 | 0.0088 | 0.0046 |
| Jupiter | 21541-12-26 03:50 G | 9589107.45 | 9589107.66 | 9589107.88 | 0.0500 | 0.0162 |
| Neptune | 21542-12-01 18:28 G | 9589448.06 | 9589448.27 | 9589448.51 | 0.0088 | 0.0045 |

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| Jupiter | 21543-01-25 18:14 G | 9589503.12 | 9589503.26 | 9589503.42 | 0.0489 | 0.0372 |
| Neptune | 21543-12-04 12:14 G | 9589815.80 | 9589816.01 | 9589816.22 | 0.0088 | 0.0049 |
| Neptune | 21544-12-05 15:50 G | 9590182.96 | 9590183.16 | 9590183.39 | 0.0088 | 0.0049 |
| Neptune | 21545-12-08 09:07 G | 9590550.69 | 9590550.88 | 9590551.11 | 0.0088 | 0.0052 |
| Neptune | 21546-12-10 14:38 G | 9590917.92 | 9590918.11 | 9590918.32 | 0.0088 | 0.0051 |
| Neptune | 21547-12-13 05:02 G | 9591285.51 | 9591285.71 | 9591285.93 | 0.0088 | 0.0053 |
| Jupiter | 21548-07-03 15:07 G | 9591488.89 | 9591489.13 | 9591489.37 | 0.0531 | 0.0028 |
| Neptune | 21548-12-14 14:09 G | 9591652.90 | 9591653.09 | 9591653.30 | 0.0088 | 0.0053 |
| Neptune | 21549-12-16 23:02 G | 9592020.28 | 9592020.46 | 9592020.69 | 0.0088 | 0.0055 |
| Neptune | 21550-12-19 12:57 G | 9592387.86 | 9592388.04 | 9592388.25 | 0.0088 | 0.0055 |
| Neptune | 21551-12-21 18:00 G | 9592755.08 | 9592755.25 | 9592755.47 | 0.0088 | 0.0057 |
| Neptune | 21552-12-23 11:31 G | 9593122.80 | 9593122.98 | 9593123.20 | 0.0088 | 0.0056 |
| Neptune | 21553-12-25 14:52 G | 9593489.95 | 9593490.12 | 9593490.34 | 0.0088 | 0.0058 |
| Jupiter | 21553-12-30 08:52 G | 9593494.64 | 9593494.87 | 9593495.10 | 0.0498 | 0.0114 |
| Saturn | 21554-06-07 03:36 G | 9593653.44 | 9593653.65 | 9593653.86 | 0.0288 | 0.0150 |
| Neptune | 21554-12-28 08:09 G | 9593857.66 | 9593857.84 | 9593858.06 | 0.0088 | 0.0057 |
| Jupiter | 21555-01-30 08:09 G | 9593890.80 | 9593890.84 | 9593890.90 | 0.0488 | 0.0475 |
| Mars | 21555-04-01 22:04 G | 9593952.24 | 9593952.42 | 9593952.60 | 0.1634 | 0.0116 |
| Neptune | 21555-12-30 13:40 G | 9594224.91 | 9594225.07 | 9594225.28 | 0.0088 | 0.0059 |
| Neptune | 21557-01-01 03:36 G | 9594592.46 | 9594592.65 | 9594592.86 | 0.0088 | 0.0059 |
| Neptune | 21558-01-03 12:57 G | 9594959.88 | 9594960.04 | 9594960.25 | 0.0088 | 0.0059 |
| Neptune | 21559-01-05 21:07 G | 9595327.20 | 9595327.38 | 9595327.59 | 0.0088 | 0.0058 |
| Neptune | 21560-01-08 11:31 G | 9595694.81 | 9595694.98 | 9595695.18 | 0.0088 | 0.0058 |
| Jupiter | 21560-07-08 19:55 G | 9595877.11 | 9595877.33 | 9595877.56 | 0.0534 | 0.0035 |
| Neptune | 21561-01-09 15:50 G | 9596061.98 | 9596062.16 | 9596062.37 | 0.0088 | 0.0058 |
| Neptune | 21562-01-12 09:07 G | 9596429.70 | 9596429.88 | 9596430.08 | 0.0088 | 0.0058 |
| Neptune | 21563-01-14 12:14 G | 9596796.84 | 9596797.01 | 9596797.22 | 0.0088 | 0.0059 |
| Neptune | 21564-01-17 04:33 G | 9597164.52 | 9597164.69 | 9597164.91 | 0.0088 | 0.0058 |
| Neptune | 21565-01-18 11:02 G | 9597531.78 | 9597531.96 | 9597532.15 | 0.0088 | 0.0058 |
| Jupiter | 21566-01-03 22:48 G | 9597882.22 | 9597882.45 | 9597882.67 | 0.0496 | 0.0029 |

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| Neptune | 21566-01-20 23:45 G | 9597899.30 | 9597899.49 | 9597899.70 | 0.0088 | 0.0056 |
| Neptune | 21567-01-23 10:19 G | 9598266.75 | 9598266.93 | 9598267.13 | 0.0088 | 0.0057 |
| Neptune | 21568-01-25 17:31 G | 9598634.04 | 9598634.23 | 9598634.45 | 0.0088 | 0.0056 |
| Neptune | 21569-01-27 08:24 G | 9599001.68 | 9599001.85 | 9599002.06 | 0.0088 | 0.0057 |
| Saturn | 21569-12-13 08:52 G | 9599321.63 | 9599321.87 | 9599322.12 | 0.0272 | 0.0062 |
| Neptune | 21570-01-29 12:14 G | 9599368.83 | 9599369.01 | 9599369.24 | 0.0088 | 0.0055 |
| Neptune | 21571-02-01 05:45 G | 9599736.56 | 9599736.74 | 9599736.96 | 0.0088 | 0.0055 |
| Jupiter | 21571-06-08 13:40 G | 9599863.99 | 9599864.07 | 9599864.14 | 0.0520 | 0.0489 |
| Neptune | 21572-02-03 09:21 G | 9600103.70 | 9600103.89 | 9600104.11 | 0.0088 | 0.0052 |
| Jupiter | 21572-07-14 07:55 G | 9600265.60 | 9600265.83 | 9600266.06 | 0.0536 | 0.0169 |
| Neptune | 21573-02-05 01:12 G | 9600471.35 | 9600471.55 | 9600471.77 | 0.0088 | 0.0053 |
| Neptune | 21574-02-07 08:09 G | 9600838.64 | 9600838.84 | 9600839.05 | 0.0088 | 0.0050 |
| Neptune | 21575-02-09 19:55 G | 9601206.12 | 9601206.33 | 9601206.55 | 0.0088 | 0.0051 |
| Neptune | 21576-02-12 07:12 G | 9601573.61 | 9601573.80 | 9601574.02 | 0.0088 | 0.0048 |
| Uranus | 21576-05-04 08:09 G | 9601655.64 | 9601655.84 | 9601656.05 | 0.0136 | 0.0083 |
| Neptune | 21577-02-13 13:55 G | 9601940.87 | 9601941.08 | 9601941.31 | 0.0088 | 0.0048 |
| Uranus | 21577-05-08 12:28 G | 9602024.78 | 9602025.02 | 9602025.27 | 0.0136 | 0.0033 |
| Jupiter | 21578-01-08 05:31 G | 9602269.49 | 9602269.73 | 9602269.97 | 0.0494 | 0.0089 |
| Neptune | 21578-02-16 05:16 G | 9602308.53 | 9602308.72 | 9602308.96 | 0.0088 | 0.0045 |
| Uranus | 21578-05-13 06:43 G | 9602394.54 | 9602394.78 | 9602395.03 | 0.0135 | 0.0037 |
| Neptune | 21579-02-18 09:07 G | 9602675.68 | 9602675.88 | 9602676.12 | 0.0088 | 0.0046 |
| Uranus | 21579-05-17 09:50 G | 9602763.72 | 9602763.91 | 9602764.13 | 0.0135 | 0.0080 |
| Neptune | 21580-02-21 02:52 G | 9603043.41 | 9603043.62 | 9603043.86 | 0.0088 | 0.0042 |
| Neptune | 21581-02-22 06:43 G | 9603410.58 | 9603410.78 | 9603411.02 | 0.0088 | 0.0044 |
| Neptune | 21582-02-24 22:19 G | 9603778.21 | 9603778.43 | 9603778.69 | 0.0088 | 0.0039 |
| Neptune | 21583-02-27 06:14 G | 9604145.54 | 9604145.76 | 9604145.99 | 0.0088 | 0.0040 |
| Jupiter | 21583-06-13 18:57 G | 9604252.15 | 9604252.29 | 9604252.43 | 0.0522 | 0.0424 |
| Neptune | 21584-02-29 17:16 G | 9604512.99 | 9604513.22 | 9604513.48 | 0.0088 | 0.0035 |
| Saturn | 21584-06-13 21:21 G | 9604618.17 | 9604618.39 | 9604618.61 | 0.0287 | 0.0102 |
| Jupiter | 21584-07-19 07:55 G | 9604653.65 | 9604653.83 | 9604654.03 | 0.0537 | 0.0309 |

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| Neptune | 21585-03-03 06:00 G | 9604880.52 | 9604880.75 | 9604880.98 | 0.0088 | 0.0036 |
| Neptune | 21586-03-05 11:31 G | 9605247.76 | 9605247.98 | 9605248.25 | 0.0088 | 0.0032 |
| Neptune | 21587-03-08 04:04 G | 9605615.45 | 9605615.67 | 9605615.92 | 0.0088 | 0.0034 |
| Neptune | 21588-03-09 07:55 G | 9605982.60 | 9605982.83 | 9605983.08 | 0.0088 | 0.0028 |
| Jupiter | 21588-12-11 21:50 G | 9606260.32 | 9606260.41 | 9606260.52 | 0.0506 | 0.0454 |
| Neptune | 21589-03-12 01:12 G | 9606350.32 | 9606350.55 | 9606350.81 | 0.0088 | 0.0030 |
| Jupiter | 21590-01-12 07:12 G | 9606656.59 | 9606656.80 | 9606657.02 | 0.0493 | 0.0170 |
| Neptune | 21590-03-14 05:45 G | 9606717.51 | 9606717.74 | 9606718.00 | 0.0088 | 0.0023 |
| Neptune | 21591-03-16 21:07 G | 9607085.14 | 9607085.38 | 9607085.64 | 0.0088 | 0.0025 |
| Neptune | 21592-03-18 05:45 G | 9607452.51 | 9607452.74 | 9607452.99 | 0.0088 | 0.0019 |
| Neptune | 21593-03-20 17:02 G | 9607819.95 | 9607820.21 | 9607820.47 | 0.0088 | 0.0021 |
| Neptune | 21594-03-23 06:14 G | 9608187.52 | 9608187.76 | 9608188.02 | 0.0088 | 0.0015 |
| Neptune | 21595-03-25 12:14 G | 9608554.76 | 9608555.01 | 9608555.28 | 0.0088 | 0.0017 |
| Jupiter | 21595-06-18 11:45 G | 9608639.83 | 9608639.99 | 9608640.15 | 0.0525 | 0.0373 |
| Neptune | 21596-03-27 05:31 G | 9608922.48 | 9608922.73 | 9608922.99 | 0.0088 | 0.0009 |
| Jupiter | 21596-07-24 21:07 G | 9609042.22 | 9609042.38 | 9609042.54 | 0.0538 | 0.0381 |
| Neptune | 21597-03-29 09:21 G | 9609289.64 | 9609289.89 | 9609290.15 | 0.0088 | 0.0012 |
| Neptune | 21598-04-01 03:21 G | 9609657.38 | 9609657.64 | 9609657.90 | 0.0088 | 0.0005 |
| Saturn | 21598-12-08 07:55 G | 9609908.60 | 9609908.83 | 9609909.05 | 0.0271 | 0.0100 |
| Neptune | 21599-04-03 08:09 G | 9610024.60 | 9610024.84 | 9610025.10 | 0.0088 | 0.0009 |
| Neptune | 21600-04-04 23:31 G | 9610392.21 | 9610392.48 | 9610392.75 | 0.0088 | 0.0001 |
| Jupiter | 21600-12-16 03:21 G | 9610647.47 | 9610647.64 | 9610647.80 | 0.0504 | 0.0345 |
| Neptune | 21601-04-07 08:52 G | 9610759.62 | 9610759.87 | 9610760.12 | 0.0088 | 0.0004 |
| Jupiter | 21602-01-16 18:57 G | 9611044.08 | 9611044.29 | 9611044.51 | 0.0492 | 0.0209 |
| Neptune | 21602-04-09 19:40 G | 9611127.06 | 9611127.32 | 9611127.59 | 0.0088 | 0.0005 |
| Neptune | 21603-04-12 10:04 G | 9611494.67 | 9611494.92 | 9611495.17 | 0.0088 | 0.0001 |
| Neptune | 21604-04-13 16:19 G | 9611861.92 | 9611862.18 | 9611862.45 | 0.0088 | 0.0009 |
| Neptune | 21605-04-16 10:04 G | 9612229.67 | 9612229.92 | 9612230.18 | 0.0088 | 0.0005 |
| Neptune | 21606-04-18 14:38 G | 9612596.86 | 9612597.11 | 9612597.37 | 0.0088 | 0.0014 |
| Neptune | 21607-04-21 08:52 G | 9612964.62 | 9612964.87 | 9612965.14 | 0.0088 | 0.0010 |

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| Jupiter | 21607-06-23 15:21 G | 9613027.94 | 9613028.14 | 9613028.34 | 0.0527 | 0.0257 |
| Neptune | 21608-04-22 14:24 G | 9613331.87 | 9613332.10 | 9613332.36 | 0.0088 | 0.0019 |
| Jupiter | 21608-07-29 18:57 G | 9613430.16 | 9613430.29 | 9613430.43 | 0.0540 | 0.0442 |
| Neptune | 21609-04-25 06:00 G | 9613699.50 | 9613699.75 | 9613700.02 | 0.0088 | 0.0014 |
| Neptune | 21610-04-27 16:04 G | 9614066.94 | 9614067.17 | 9614067.42 | 0.0088 | 0.0023 |
| Neptune | 21611-04-30 03:07 G | 9614434.39 | 9614434.63 | 9614434.91 | 0.0088 | 0.0019 |
| Neptune | 21612-05-01 18:14 G | 9614802.03 | 9614802.26 | 9614802.51 | 0.0088 | 0.0028 |
| Jupiter | 21612-12-20 23:16 G | 9615035.27 | 9615035.47 | 9615035.67 | 0.0502 | 0.0229 |
| Neptune | 21613-05-04 00:43 G | 9615169.29 | 9615169.53 | 9615169.80 | 0.0088 | 0.0023 |
| Saturn | 21613-06-08 13:12 G | 9615204.81 | 9615205.05 | 9615205.29 | 0.0288 | 0.0091 |
| Jupiter | 21614-01-20 19:26 G | 9615431.13 | 9615431.31 | 9615431.51 | 0.0490 | 0.0268 |
| Neptune | 21614-05-06 19:12 G | 9615537.06 | 9615537.30 | 9615537.54 | 0.0089 | 0.0033 |
| Neptune | 21615-05-09 00:00 G | 9615904.27 | 9615904.50 | 9615904.76 | 0.0089 | 0.0027 |
| Neptune | 21616-05-10 18:43 G | 9616272.05 | 9616272.28 | 9616272.53 | 0.0089 | 0.0037 |
| Neptune | 21617-05-13 00:43 G | 9616639.31 | 9616639.53 | 9616639.79 | 0.0089 | 0.0031 |
| Neptune | 21618-05-15 16:48 G | 9617006.98 | 9617007.20 | 9617007.46 | 0.0089 | 0.0041 |
| Neptune | 21619-05-18 03:36 G | 9617374.43 | 9617374.65 | 9617374.89 | 0.0089 | 0.0035 |
| Jupiter | 21619-06-28 11:02 G | 9617415.73 | 9617415.96 | 9617416.20 | 0.0529 | 0.0122 |
| Uranus | 21619-11-02 22:04 G | 9617543.27 | 9617543.42 | 9617543.59 | 0.0142 | 0.0111 |
| Neptune | 21620-05-19 15:21 G | 9617741.92 | 9617742.14 | 9617742.39 | 0.0089 | 0.0045 |
| Uranus | 21620-11-06 11:02 G | 9617912.74 | 9617912.96 | 9617913.21 | 0.0143 | 0.0051 |
| Neptune | 21621-05-22 06:57 G | 9618109.57 | 9618109.79 | 9618110.02 | 0.0089 | 0.0038 |
| Uranus | 21621-11-11 15:21 G | 9618282.89 | 9618283.14 | 9618283.39 | 0.0143 | 0.0015 |
| Neptune | 21622-05-24 14:09 G | 9618476.88 | 9618477.09 | 9618477.32 | 0.0089 | 0.0048 |
| Uranus | 21622-11-16 05:31 G | 9618652.55 | 9618652.73 | 9618652.93 | 0.0143 | 0.0093 |
| Neptune | 21623-05-27 08:38 G | 9618844.65 | 9618844.86 | 9618845.10 | 0.0089 | 0.0041 |
| Neptune | 21624-05-28 13:40 G | 9619211.88 | 9619212.07 | 9619212.30 | 0.0089 | 0.0052 |
| Jupiter | 21624-12-25 04:33 G | 9619422.47 | 9619422.69 | 9619422.92 | 0.0500 | 0.0171 |
| Neptune | 21625-05-31 09:07 G | 9619579.66 | 9619579.88 | 9619580.12 | 0.0089 | 0.0044 |
| Jupiter | 21626-01-25 08:38 G | 9619818.72 | 9619818.86 | 9619819.02 | 0.0489 | 0.0367 |

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| Neptune | 21626-06-02 15:21 G | 9619946.96 | 9619947.14 | 9619947.36 | 0.0089 | 0.0055 |
| Neptune | 21627-06-05 08:09 G | 9620314.62 | 9620314.84 | 9620315.08 | 0.0089 | 0.0047 |
| Saturn | 21627-12-03 14:24 G | 9620496.07 | 9620496.10 | 9620496.15 | 0.0271 | 0.0266 |
| Neptune | 21628-06-06 18:28 G | 9620682.09 | 9620682.27 | 9620682.48 | 0.0089 | 0.0057 |
| Saturn | 21628-12-14 15:21 G | 9620872.92 | 9620873.14 | 9620873.37 | 0.0272 | 0.0118 |
| Neptune | 21629-06-09 07:12 G | 9621049.59 | 9621049.80 | 9621050.03 | 0.0089 | 0.0049 |
| Neptune | 21630-06-11 22:33 G | 9621417.28 | 9621417.44 | 9621417.65 | 0.0089 | 0.0060 |
| Neptune | 21631-06-14 06:43 G | 9621784.59 | 9621784.78 | 9621785.02 | 0.0089 | 0.0052 |
| Jupiter | 21631-07-03 17:45 G | 9621804.02 | 9621804.24 | 9621804.47 | 0.0531 | 0.0047 |
| Neptune | 21632-06-16 01:40 G | 9622152.40 | 9622152.57 | 9622152.77 | 0.0089 | 0.0063 |
| Neptune | 21633-06-18 07:26 G | 9622519.63 | 9622519.81 | 9622520.04 | 0.0089 | 0.0054 |
| Mars | 21634-04-03 19:12 G | 9622809.21 | 9622809.30 | 9622809.39 | 0.1638 | 0.1416 |
| Neptune | 21634-06-21 03:36 G | 9622887.48 | 9622887.65 | 9622887.84 | 0.0089 | 0.0064 |
| Neptune | 21635-06-23 10:04 G | 9623254.73 | 9623254.92 | 9623255.13 | 0.0089 | 0.0055 |
| Neptune | 21636-06-25 03:36 G | 9623622.47 | 9623622.65 | 9623622.84 | 0.0089 | 0.0065 |
| Jupiter | 21636-12-29 18:57 G | 9623810.07 | 9623810.29 | 9623810.51 | 0.0498 | 0.0123 |
| Neptune | 21637-06-27 13:26 G | 9623989.88 | 9623990.06 | 9623990.26 | 0.0089 | 0.0058 |
| Jupiter | 21638-01-29 07:12 G | 9624205.74 | 9624205.80 | 9624205.88 | 0.0488 | 0.0464 |
| Neptune | 21638-06-30 02:38 G | 9624357.45 | 9624357.61 | 9624357.81 | 0.0089 | 0.0066 |
| Neptune | 21639-07-02 17:45 G | 9624725.08 | 9624725.24 | 9624725.46 | 0.0089 | 0.0059 |
| Neptune | 21640-07-04 02:38 G | 9625092.46 | 9625092.61 | 9625092.81 | 0.0089 | 0.0067 |
| Neptune | 21641-07-06 21:36 G | 9625460.23 | 9625460.40 | 9625460.61 | 0.0089 | 0.0059 |
| Neptune | 21642-07-09 04:19 G | 9625827.51 | 9625827.68 | 9625827.86 | 0.0089 | 0.0067 |
| Saturn | 21643-06-16 12:57 G | 9626169.85 | 9626170.04 | 9626170.25 | 0.0287 | 0.0160 |
| Jupiter | 21643-07-09 03:07 G | 9626192.39 | 9626192.63 | 9626192.87 | 0.0533 | 0.0021 |
| Neptune | 21643-07-12 00:00 G | 9626195.33 | 9626195.50 | 9626195.72 | 0.0089 | 0.0060 |
| Neptune | 21644-07-13 06:57 G | 9626562.64 | 9626562.79 | 9626562.97 | 0.0089 | 0.0067 |
| Neptune | 21645-07-16 01:26 G | 9626930.37 | 9626930.56 | 9626930.77 | 0.0089 | 0.0059 |
| Neptune | 21646-07-18 10:48 G | 9627297.80 | 9627297.95 | 9627298.14 | 0.0089 | 0.0066 |
| Neptune | 21647-07-21 01:40 G | 9627665.37 | 9627665.57 | 9627665.77 | 0.0089 | 0.0058 |

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| Neptune | 21648-07-22 15:50 G | 9628033.00 | 9628033.16 | 9628033.35 | 0.0089 | 0.0065 |
| Jupiter | 21649-01-02 22:33 G | 9628197.20 | 9628197.44 | 9628197.68 | 0.0496 | 0.0035 |
| Neptune | 21649-07-25 01:26 G | 9628400.38 | 9628400.56 | 9628400.79 | 0.0089 | 0.0058 |
| Neptune | 21650-07-27 19:55 G | 9628768.17 | 9628768.33 | 9628768.53 | 0.0089 | 0.0064 |
| Neptune | 21651-07-30 02:38 G | 9629135.41 | 9629135.61 | 9629135.82 | 0.0090 | 0.0056 |
| Neptune | 21652-07-31 22:33 G | 9629503.27 | 9629503.44 | 9629503.65 | 0.0090 | 0.0061 |
| Neptune | 21653-08-03 04:48 G | 9629870.52 | 9629870.70 | 9629870.93 | 0.0090 | 0.0055 |
| Jupiter | 21654-06-07 20:24 G | 9630179.28 | 9630179.35 | 9630179.44 | 0.0519 | 0.0491 |
| Neptune | 21654-08-06 00:14 G | 9630238.31 | 9630238.51 | 9630238.71 | 0.0090 | 0.0058 |
| Jupiter | 21655-07-14 00:28 G | 9630580.30 | 9630580.52 | 9630580.75 | 0.0535 | 0.0155 |
| Neptune | 21655-08-08 08:38 G | 9630605.68 | 9630605.86 | 9630606.08 | 0.0090 | 0.0054 |
| Neptune | 21656-08-10 00:00 G | 9630973.30 | 9630973.50 | 9630973.72 | 0.0090 | 0.0056 |
| Neptune | 21657-08-12 13:55 G | 9631340.89 | 9631341.08 | 9631341.30 | 0.0090 | 0.0051 |
| Saturn | 21657-12-09 19:55 G | 9631460.10 | 9631460.33 | 9631460.57 | 0.0272 | 0.0048 |
| Neptune | 21658-08-15 00:28 G | 9631708.32 | 9631708.52 | 9631708.75 | 0.0090 | 0.0053 |
| Neptune | 21659-08-17 18:14 G | 9632076.06 | 9632076.26 | 9632076.49 | 0.0090 | 0.0048 |
| Uranus | 21660-05-04 16:04 G | 9632336.99 | 9632337.17 | 9632337.39 | 0.0136 | 0.0086 |
| Neptune | 21660-08-19 00:57 G | 9632443.34 | 9632443.54 | 9632443.77 | 0.0090 | 0.0050 |
| Jupiter | 21661-01-07 04:19 G | 9632584.46 | 9632584.68 | 9632584.90 | 0.0495 | 0.0084 |
| Uranus | 21661-05-08 20:52 G | 9632706.13 | 9632706.37 | 9632706.63 | 0.0136 | 0.0021 |
| Neptune | 21661-08-21 21:07 G | 9632811.17 | 9632811.38 | 9632811.61 | 0.0090 | 0.0046 |
| Uranus | 21662-05-13 14:52 G | 9633075.87 | 9633076.12 | 9633076.38 | 0.0135 | 0.0026 |
| Neptune | 21662-08-24 03:21 G | 9633178.42 | 9633178.64 | 9633178.86 | 0.0090 | 0.0046 |
| Uranus | 21663-05-17 18:14 G | 9633445.11 | 9633445.26 | 9633445.46 | 0.0135 | 0.0097 |
| Neptune | 21663-08-26 21:50 G | 9633546.20 | 9633546.41 | 9633546.66 | 0.0090 | 0.0043 |
| Neptune | 21664-08-28 05:45 G | 9633913.54 | 9633913.74 | 9633913.99 | 0.0090 | 0.0042 |
| Neptune | 21665-08-30 21:50 G | 9634281.17 | 9634281.41 | 9634281.65 | 0.0090 | 0.0038 |
| Jupiter | 21666-06-12 08:24 G | 9634566.73 | 9634566.85 | 9634566.97 | 0.0521 | 0.0442 |
| Neptune | 21666-09-02 10:19 G | 9634648.72 | 9634648.93 | 9634649.18 | 0.0090 | 0.0038 |
| Jupiter | 21667-07-19 08:52 G | 9634968.68 | 9634968.87 | 9634969.06 | 0.0536 | 0.0289 |

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| Neptune | 21667-09-04 21:21 G | 9635016.15 | 9635016.39 | 9635016.64 | 0.0090 | 0.0035 |
| Neptune | 21668-09-06 14:38 G | 9635383.89 | 9635384.11 | 9635384.36 | 0.0089 | 0.0033 |
| Neptune | 21669-09-08 21:50 G | 9635751.17 | 9635751.41 | 9635751.66 | 0.0089 | 0.0031 |
| Neptune | 21670-09-11 17:16 G | 9636118.99 | 9636119.22 | 9636119.48 | 0.0089 | 0.0028 |
| Neptune | 21671-09-13 23:02 G | 9636486.23 | 9636486.46 | 9636486.72 | 0.0089 | 0.0027 |
| Jupiter | 21671-12-11 19:12 G | 9636575.21 | 9636575.30 | 9636575.39 | 0.0507 | 0.0463 |
| Saturn | 21672-06-09 21:50 G | 9636756.16 | 9636756.41 | 9636756.66 | 0.0288 | 0.0032 |
| Neptune | 21672-09-15 18:14 G | 9636854.01 | 9636854.26 | 9636854.52 | 0.0089 | 0.0023 |
| Jupiter | 21673-01-11 18:28 G | 9636972.05 | 9636972.27 | 9636972.50 | 0.0493 | 0.0159 |
| Neptune | 21673-09-18 01:40 G | 9637221.33 | 9637221.57 | 9637221.82 | 0.0089 | 0.0023 |
| Neptune | 21674-09-20 17:02 G | 9637588.96 | 9637589.21 | 9637589.48 | 0.0089 | 0.0019 |
| Neptune | 21675-09-23 04:48 G | 9637956.47 | 9637956.70 | 9637956.96 | 0.0089 | 0.0019 |
| Neptune | 21676-09-24 16:04 G | 9638323.91 | 9638324.17 | 9638324.44 | 0.0089 | 0.0013 |
| Neptune | 21677-09-27 08:24 G | 9638691.61 | 9638691.85 | 9638692.11 | 0.0089 | 0.0014 |
| Jupiter | 21678-06-17 14:24 G | 9638954.94 | 9638955.10 | 9638955.25 | 0.0524 | 0.0389 |
| Neptune | 21678-09-29 15:07 G | 9639058.88 | 9639059.13 | 9639059.40 | 0.0089 | 0.0008 |
| Jupiter | 21679-07-24 08:38 G | 9639356.69 | 9639356.86 | 9639357.05 | 0.0538 | 0.0360 |
| Neptune | 21679-10-02 10:19 G | 9639426.68 | 9639426.93 | 9639427.19 | 0.0089 | 0.0010 |
| Neptune | 21680-10-03 15:50 G | 9639793.91 | 9639794.16 | 9639794.42 | 0.0089 | 0.0003 |
| Neptune | 21681-10-06 10:48 G | 9640161.69 | 9640161.95 | 9640162.21 | 0.0089 | 0.0005 |
| Neptune | 21682-10-08 17:45 G | 9640528.99 | 9640529.24 | 9640529.49 | 0.0089 | 0.0003 |
| Neptune | 21683-10-11 09:07 G | 9640896.61 | 9640896.88 | 9640897.15 | 0.0089 | 0.0001 |
| Jupiter | 21683-12-16 16:19 G | 9640963.01 | 9640963.18 | 9640963.35 | 0.0504 | 0.0344 |
| Neptune | 21684-10-12 20:09 G | 9641264.10 | 9641264.34 | 9641264.60 | 0.0089 | 0.0009 |
| Jupiter | 21685-01-15 18:43 G | 9641359.07 | 9641359.28 | 9641359.49 | 0.0492 | 0.0199 |
| Neptune | 21685-10-15 07:12 G | 9641631.54 | 9641631.80 | 9641632.07 | 0.0089 | 0.0005 |
| Neptune | 21686-10-17 23:02 G | 9641999.21 | 9641999.46 | 9641999.71 | 0.0089 | 0.0013 |
| Saturn | 21686-12-04 21:07 G | 9642047.23 | 9642047.38 | 9642047.54 | 0.0271 | 0.0213 |
| Neptune | 21687-10-20 05:16 G | 9642366.46 | 9642366.72 | 9642366.98 | 0.0089 | 0.0010 |
| Saturn | 21687-12-16 22:33 G | 9642424.26 | 9642424.44 | 9642424.64 | 0.0272 | 0.0172 |

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| Neptune | 21688-10-21 23:45 G | 9642734.24 | 9642734.49 | 9642734.74 | 0.0089 | 0.0019 |
| Neptune | 21689-10-24 04:33 G | 9643101.44 | 9643101.69 | 9643101.95 | 0.0089 | 0.0015 |
| Jupiter | 21690-06-22 09:07 G | 9643342.67 | 9643342.88 | 9643343.08 | 0.0526 | 0.0269 |
| Neptune | 21690-10-26 22:48 G | 9643469.20 | 9643469.45 | 9643469.71 | 0.0089 | 0.0023 |
| Jupiter | 21691-07-29 19:40 G | 9643745.19 | 9643745.32 | 9643745.46 | 0.0540 | 0.0429 |
| Neptune | 21691-10-29 04:48 G | 9643836.47 | 9643836.70 | 9643836.96 | 0.0089 | 0.0019 |
| Neptune | 21692-10-30 19:40 G | 9644204.08 | 9644204.32 | 9644204.59 | 0.0089 | 0.0028 |
| Neptune | 21693-11-02 06:28 G | 9644571.54 | 9644571.77 | 9644572.02 | 0.0089 | 0.0024 |
| Neptune | 21694-11-04 16:48 G | 9644938.97 | 9644939.20 | 9644939.46 | 0.0089 | 0.0033 |
| Neptune | 21695-11-07 08:24 G | 9645306.62 | 9645306.85 | 9645307.10 | 0.0089 | 0.0028 |
| Jupiter | 21695-12-20 21:50 G | 9645350.21 | 9645350.41 | 9645350.63 | 0.0502 | 0.0237 |
| Neptune | 21696-11-08 14:24 G | 9645673.88 | 9645674.10 | 9645674.35 | 0.0089 | 0.0037 |
| Jupiter | 21697-01-20 08:38 G | 9645746.67 | 9645746.86 | 9645747.06 | 0.0490 | 0.0259 |
| Neptune | 21697-11-11 08:38 G | 9646041.62 | 9646041.86 | 9646042.10 | 0.0089 | 0.0031 |
| Neptune | 21698-11-13 12:43 G | 9646408.82 | 9646409.03 | 9646409.27 | 0.0089 | 0.0041 |
| Neptune | 21699-11-16 06:28 G | 9646776.54 | 9646776.77 | 9646777.02 | 0.0089 | 0.0035 |
| Pluto | 21700-10-07 12:28 G | 9647101.76 | 9647102.02 | 9647102.28 | 0.0064 | 0.0002 |
| Neptune | 21700-11-18 12:00 G | 9647143.81 | 9647144.00 | 9647144.24 | 0.0089 | 0.0046 |
| Saturn | 21701-06-05 03:07 G | 9647342.52 | 9647342.63 | 9647342.76 | 0.0288 | 0.0248 |
| Neptune | 21701-11-21 02:09 G | 9647511.37 | 9647511.59 | 9647511.85 | 0.0089 | 0.0040 |
| Saturn | 21702-06-19 03:21 G | 9647721.50 | 9647721.64 | 9647721.81 | 0.0287 | 0.0222 |
| Jupiter | 21702-06-28 17:02 G | 9647731.00 | 9647731.21 | 9647731.43 | 0.0529 | 0.0134 |
| Neptune | 21702-11-23 12:28 G | 9647878.83 | 9647879.02 | 9647879.24 | 0.0089 | 0.0049 |
| Uranus | 21703-11-04 05:45 G | 9648224.62 | 9648224.74 | 9648224.90 | 0.0142 | 0.0119 |
| Neptune | 21703-11-25 21:50 G | 9648246.20 | 9648246.41 | 9648246.66 | 0.0089 | 0.0043 |
| Uranus | 21704-11-07 19:26 G | 9648594.09 | 9648594.31 | 9648594.56 | 0.0143 | 0.0046 |
| Neptune | 21704-11-27 13:12 G | 9648613.86 | 9648614.05 | 9648614.27 | 0.0089 | 0.0052 |
| Uranus | 21705-11-12 23:45 G | 9648964.24 | 9648964.49 | 9648964.74 | 0.0143 | 0.0024 |
| Neptune | 21705-11-29 18:28 G | 9648981.06 | 9648981.27 | 9648981.51 | 0.0088 | 0.0046 |
| Uranus | 21706-11-17 13:55 G | 9649333.89 | 9649334.08 | 9649334.30 | 0.0143 | 0.0083 |

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| Neptune | 21706-12-02 12:14 G | 9649348.83 | 9649349.01 | 9649349.23 | 0.0088 | 0.0056 |
| Neptune | 21707-12-04 16:33 G | 9649715.99 | 9649716.19 | 9649716.41 | 0.0088 | 0.0049 |
| Jupiter | 21707-12-26 09:50 G | 9649737.70 | 9649737.91 | 9649738.12 | 0.0500 | 0.0184 |
| Neptune | 21708-12-06 09:21 G | 9650083.72 | 9650083.89 | 9650084.11 | 0.0088 | 0.0059 |
| Jupiter | 21709-01-25 04:19 G | 9650133.52 | 9650133.68 | 9650133.84 | 0.0489 | 0.0360 |
| Neptune | 21709-12-08 15:36 G | 9650450.96 | 9650451.15 | 9650451.37 | 0.0088 | 0.0051 |
| Neptune | 21710-12-11 05:02 G | 9650818.52 | 9650818.71 | 9650818.90 | 0.0088 | 0.0060 |
| Neptune | 21711-12-13 15:07 G | 9651185.95 | 9651186.13 | 9651186.34 | 0.0088 | 0.0053 |
| Neptune | 21712-12-14 23:45 G | 9651553.32 | 9651553.49 | 9651553.69 | 0.0088 | 0.0063 |
| Neptune | 21713-12-17 14:52 G | 9651920.94 | 9651921.12 | 9651921.33 | 0.0088 | 0.0055 |
| Jupiter | 21714-07-03 21:07 G | 9652119.14 | 9652119.38 | 9652119.62 | 0.0530 | 0.0066 |
| Neptune | 21714-12-19 19:26 G | 9652288.15 | 9652288.31 | 9652288.51 | 0.0088 | 0.0065 |
| Neptune | 21715-12-22 12:57 G | 9652655.86 | 9652656.04 | 9652656.26 | 0.0088 | 0.0056 |
| Saturn | 21716-12-12 08:52 G | 9653011.63 | 9653011.87 | 9653012.11 | 0.0272 | 0.0005 |
| Neptune | 21716-12-23 17:02 G | 9653023.05 | 9653023.21 | 9653023.38 | 0.0088 | 0.0066 |
| Neptune | 21717-12-26 09:21 G | 9653390.70 | 9653390.89 | 9653391.10 | 0.0088 | 0.0057 |
| Neptune | 21718-12-28 15:07 G | 9653757.99 | 9653758.13 | 9653758.31 | 0.0088 | 0.0068 |
| Jupiter | 21719-12-30 17:02 G | 9654124.98 | 9654125.21 | 9654125.44 | 0.0499 | 0.0134 |
| Neptune | 21719-12-31 04:04 G | 9654125.47 | 9654125.67 | 9654125.87 | 0.0088 | 0.0059 |
| Neptune | 21721-01-01 14:52 G | 9654492.97 | 9654493.12 | 9654493.28 | 0.0088 | 0.0067 |
| Jupiter | 21721-01-29 14:24 G | 9654521.03 | 9654521.10 | 9654521.19 | 0.0488 | 0.0458 |
| Neptune | 21722-01-03 22:04 G | 9654860.25 | 9654860.42 | 9654860.64 | 0.0088 | 0.0059 |
| Neptune | 21723-01-06 13:40 G | 9655227.94 | 9655228.07 | 9655228.26 | 0.0088 | 0.0068 |
| Neptune | 21724-01-08 18:00 G | 9655595.08 | 9655595.25 | 9655595.46 | 0.0088 | 0.0059 |
| Neptune | 21725-01-10 11:16 G | 9655962.83 | 9655962.97 | 9655963.15 | 0.0088 | 0.0068 |
| Neptune | 21726-01-12 14:52 G | 9656329.96 | 9656330.12 | 9656330.33 | 0.0088 | 0.0059 |
| Jupiter | 21726-07-08 13:40 G | 9656506.84 | 9656507.07 | 9656507.30 | 0.0532 | 0.0009 |
| Neptune | 21727-01-15 06:57 G | 9656697.63 | 9656697.79 | 9656697.97 | 0.0088 | 0.0067 |
| Neptune | 21728-01-17 13:26 G | 9657064.88 | 9657065.06 | 9657065.26 | 0.0088 | 0.0058 |
| Neptune | 21729-01-19 00:28 G | 9657432.36 | 9657432.52 | 9657432.71 | 0.0088 | 0.0066 |

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| Neptune | 21730-01-21 11:31 G | 9657799.82 | 9657799.98 | 9657800.20 | 0.0088 | 0.0058 |
| Neptune | 21731-01-23 18:28 G | 9658167.12 | 9658167.27 | 9658167.47 | 0.0088 | 0.0066 |
| Saturn | 21731-06-13 12:43 G | 9658307.79 | 9658308.03 | 9658308.27 | 0.0288 | 0.0032 |
| Jupiter | 21732-01-04 01:55 G | 9658512.35 | 9658512.58 | 9658512.80 | 0.0497 | 0.0038 |
| Neptune | 21732-01-26 10:48 G | 9658534.77 | 9658534.95 | 9658535.16 | 0.0088 | 0.0056 |
| Neptune | 21733-01-27 14:24 G | 9658901.94 | 9658902.10 | 9658902.29 | 0.0088 | 0.0064 |
| Neptune | 21734-01-30 07:55 G | 9659269.64 | 9659269.83 | 9659270.05 | 0.0088 | 0.0054 |
| Neptune | 21735-02-01 12:00 G | 9659636.84 | 9659637.00 | 9659637.19 | 0.0088 | 0.0062 |
| Neptune | 21736-02-04 03:36 G | 9660004.44 | 9660004.65 | 9660004.86 | 0.0088 | 0.0052 |
| Neptune | 21737-02-05 10:33 G | 9660371.77 | 9660371.94 | 9660372.13 | 0.0088 | 0.0060 |
| Jupiter | 21737-06-07 10:19 G | 9660493.88 | 9660493.93 | 9660493.98 | 0.0518 | 0.0506 |
| Neptune | 21738-02-07 20:52 G | 9660739.16 | 9660739.37 | 9660739.59 | 0.0088 | 0.0050 |
| Jupiter | 21738-07-14 01:12 G | 9660895.33 | 9660895.55 | 9660895.78 | 0.0534 | 0.0134 |
| Neptune | 21739-02-10 08:38 G | 9661106.70 | 9661106.86 | 9661107.08 | 0.0088 | 0.0058 |
| Neptune | 21740-02-12 14:52 G | 9661473.92 | 9661474.12 | 9661474.36 | 0.0088 | 0.0047 |
| Neptune | 21741-02-14 07:12 G | 9661841.62 | 9661841.80 | 9661842.02 | 0.0088 | 0.0055 |
| Neptune | 21742-02-16 11:16 G | 9662208.74 | 9662208.97 | 9662209.19 | 0.0088 | 0.0044 |
| Neptune | 21743-02-19 04:04 G | 9662576.48 | 9662576.67 | 9662576.90 | 0.0088 | 0.0052 |
| Jupiter | 21744-01-08 16:04 G | 9662899.94 | 9662900.17 | 9662900.40 | 0.0495 | 0.0080 |
| Neptune | 21744-02-21 08:38 G | 9662943.66 | 9662943.86 | 9662944.10 | 0.0088 | 0.0042 |
| Uranus | 21744-05-05 23:16 G | 9663018.28 | 9663018.47 | 9663018.70 | 0.0136 | 0.0081 |
| Neptune | 21745-02-22 23:31 G | 9663311.28 | 9663311.48 | 9663311.72 | 0.0088 | 0.0048 |
| Uranus | 21745-05-10 05:16 G | 9663387.48 | 9663387.72 | 9663387.97 | 0.0136 | 0.0027 |
| Saturn | 21745-12-07 03:07 G | 9663598.44 | 9663598.63 | 9663598.84 | 0.0271 | 0.0162 |
| Neptune | 21746-02-25 07:55 G | 9663678.62 | 9663678.83 | 9663679.07 | 0.0088 | 0.0038 |
| Uranus | 21746-05-14 22:48 G | 9663757.21 | 9663757.45 | 9663757.70 | 0.0135 | 0.0041 |
| Saturn | 21746-12-19 10:19 G | 9663975.81 | 9663975.93 | 9663976.06 | 0.0272 | 0.0229 |
| Neptune | 21747-02-27 18:00 G | 9664046.02 | 9664046.25 | 9664046.48 | 0.0088 | 0.0044 |
| Uranus | 21747-05-19 02:38 G | 9664126.43 | 9664126.61 | 9664126.82 | 0.0135 | 0.0085 |
| Neptune | 21748-03-01 06:57 G | 9664413.57 | 9664413.79 | 9664414.03 | 0.0088 | 0.0035 |

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| Neptune | 21749-03-03 12:28 G | 9664780.80 | 9664781.02 | 9664781.27 | 0.0088 | 0.0041 |
| Jupiter | 21749-06-12 15:07 G | 9664882.03 | 9664882.13 | 9664882.25 | 0.0521 | 0.0459 |
| Neptune | 21750-03-06 05:45 G | 9665148.51 | 9665148.74 | 9665148.99 | 0.0088 | 0.0030 |
| Jupiter | 21750-07-19 00:28 G | 9665283.32 | 9665283.52 | 9665283.74 | 0.0536 | 0.0271 |
| Neptune | 21751-03-08 09:07 G | 9665515.67 | 9665515.88 | 9665516.13 | 0.0088 | 0.0037 |
| Neptune | 21752-03-10 02:38 G | 9665883.37 | 9665883.61 | 9665883.87 | 0.0088 | 0.0026 |
| Neptune | 21753-03-12 07:55 G | 9666250.60 | 9666250.83 | 9666251.07 | 0.0088 | 0.0032 |
| Neptune | 21754-03-14 22:19 G | 9666618.18 | 9666618.43 | 9666618.70 | 0.0088 | 0.0022 |
| Jupiter | 21754-12-12 07:12 G | 9666890.71 | 9666890.80 | 9666890.88 | 0.0507 | 0.0467 |
| Neptune | 21755-03-17 07:26 G | 9666985.58 | 9666985.81 | 9666986.06 | 0.0088 | 0.0028 |
| Jupiter | 21756-01-12 16:48 G | 9667286.98 | 9667287.20 | 9667287.42 | 0.0493 | 0.0150 |
| Neptune | 21756-03-18 16:48 G | 9667352.95 | 9667353.20 | 9667353.47 | 0.0088 | 0.0018 |
| Neptune | 21757-03-21 06:57 G | 9667720.55 | 9667720.79 | 9667721.04 | 0.0088 | 0.0023 |
| Neptune | 21758-03-23 12:43 G | 9668087.77 | 9668088.03 | 9668088.29 | 0.0088 | 0.0012 |
| Neptune | 21759-03-26 06:28 G | 9668455.52 | 9668455.77 | 9668456.02 | 0.0088 | 0.0018 |
| Neptune | 21760-03-27 10:19 G | 9668822.68 | 9668822.93 | 9668823.19 | 0.0088 | 0.0008 |
| Mars | 21760-03-31 13:55 G | 9668826.92 | 9668827.08 | 9668827.24 | 0.1627 | 0.0900 |
| Saturn | 21760-06-06 16:33 G | 9668894.01 | 9668894.19 | 9668894.40 | 0.0288 | 0.0182 |
| Neptune | 21761-03-30 03:50 G | 9669190.41 | 9669190.66 | 9669190.93 | 0.0088 | 0.0014 |
| Jupiter | 21761-06-17 09:50 G | 9669269.77 | 9669269.91 | 9669270.07 | 0.0524 | 0.0398 |
| Saturn | 21761-06-20 13:12 G | 9669273.02 | 9669273.05 | 9669273.10 | 0.0287 | 0.0283 |
| Neptune | 21762-04-01 10:04 G | 9669557.67 | 9669557.92 | 9669558.17 | 0.0088 | 0.0003 |
| Jupiter | 21762-07-24 13:55 G | 9669671.90 | 9669672.08 | 9669672.25 | 0.0538 | 0.0339 |
| Neptune | 21763-04-04 00:28 G | 9669925.25 | 9669925.52 | 9669925.79 | 0.0088 | 0.0008 |
| Neptune | 21764-04-05 10:33 G | 9670292.69 | 9670292.94 | 9670293.19 | 0.0088 | 0.0002 |
| Neptune | 21765-04-07 19:26 G | 9670660.05 | 9670660.31 | 9670660.58 | 0.0088 | 0.0004 |
| Neptune | 21766-04-10 10:33 G | 9671027.68 | 9671027.94 | 9671028.19 | 0.0088 | 0.0007 |
| Mars | 21766-10-03 21:07 G | 9671204.19 | 9671204.38 | 9671204.56 | 0.1908 | 0.0498 |
| Jupiter | 21766-12-16 10:19 G | 9671277.76 | 9671277.93 | 9671278.10 | 0.0505 | 0.0351 |
| Neptune | 21767-04-12 16:04 G | 9671394.91 | 9671395.17 | 9671395.43 | 0.0088 | 0.0001 |

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| Jupiter | 21768-01-17 04:19 G | 9671674.47 | 9671674.68 | 9671674.90 | 0.0492 | 0.0187 |
| Neptune | 21768-04-14 10:04 G | 9671762.66 | 9671762.92 | 9671763.17 | 0.0088 | 0.0011 |
| Neptune | 21769-04-16 14:24 G | 9672129.85 | 9672130.10 | 9672130.36 | 0.0088 | 0.0007 |
| Neptune | 21770-04-19 08:24 G | 9672497.59 | 9672497.85 | 9672498.11 | 0.0088 | 0.0016 |
| Neptune | 21771-04-21 14:52 G | 9672864.88 | 9672865.12 | 9672865.38 | 0.0088 | 0.0013 |
| Neptune | 21772-04-23 05:45 G | 9673232.49 | 9673232.74 | 9673233.01 | 0.0088 | 0.0021 |
| Neptune | 21773-04-25 16:48 G | 9673599.95 | 9673600.20 | 9673600.44 | 0.0088 | 0.0017 |
| Jupiter | 21773-06-22 15:36 G | 9673657.96 | 9673658.15 | 9673658.34 | 0.0526 | 0.0275 |
| Neptune | 21774-04-28 02:09 G | 9673967.34 | 9673967.59 | 9673967.85 | 0.0088 | 0.0026 |
| Jupiter | 21774-07-29 21:50 G | 9674060.25 | 9674060.41 | 9674060.56 | 0.0539 | 0.0411 |
| Neptune | 21775-04-30 17:31 G | 9674335.00 | 9674335.23 | 9674335.49 | 0.0088 | 0.0023 |
| Saturn | 21775-12-14 15:21 G | 9674562.90 | 9674563.14 | 9674563.39 | 0.0272 | 0.0058 |
| Neptune | 21776-05-01 23:31 G | 9674702.24 | 9674702.48 | 9674702.73 | 0.0088 | 0.0031 |
| Neptune | 21777-05-04 18:14 G | 9675070.02 | 9675070.26 | 9675070.51 | 0.0088 | 0.0027 |
| Neptune | 21778-05-06 22:48 G | 9675437.23 | 9675437.45 | 9675437.70 | 0.0089 | 0.0034 |
| Jupiter | 21778-12-21 02:09 G | 9675665.40 | 9675665.59 | 9675665.79 | 0.0503 | 0.0249 |
| Neptune | 21779-05-09 17:16 G | 9675804.97 | 9675805.22 | 9675805.47 | 0.0089 | 0.0031 |
| Jupiter | 21780-01-21 03:36 G | 9676061.45 | 9676061.65 | 9676061.85 | 0.0491 | 0.0251 |
| Neptune | 21780-05-11 00:00 G | 9676172.29 | 9676172.50 | 9676172.74 | 0.0089 | 0.0039 |
| Neptune | 21781-05-13 14:52 G | 9676539.90 | 9676540.12 | 9676540.39 | 0.0089 | 0.0037 |
| Neptune | 21782-05-16 02:52 G | 9676907.41 | 9676907.62 | 9676907.84 | 0.0089 | 0.0043 |
| Neptune | 21783-05-18 12:57 G | 9677274.81 | 9677275.04 | 9677275.28 | 0.0089 | 0.0040 |
| Neptune | 21784-05-20 05:02 G | 9677642.50 | 9677642.71 | 9677642.93 | 0.0089 | 0.0046 |
| Neptune | 21785-05-22 11:16 G | 9678009.76 | 9678009.97 | 9678010.21 | 0.0089 | 0.0044 |
| Jupiter | 21785-06-27 11:31 G | 9678045.74 | 9678045.98 | 9678046.21 | 0.0527 | 0.0153 |
| Neptune | 21786-05-25 06:28 G | 9678377.58 | 9678377.77 | 9678378.00 | 0.0089 | 0.0050 |
| Neptune | 21787-05-27 11:45 G | 9678744.79 | 9678744.99 | 9678745.22 | 0.0089 | 0.0049 |
| Uranus | 21787-11-04 15:07 G | 9678905.97 | 9678906.13 | 9678906.32 | 0.0142 | 0.0105 |
| Neptune | 21788-05-29 06:57 G | 9679112.59 | 9679112.79 | 9679113.01 | 0.0089 | 0.0053 |
| Uranus | 21788-11-08 05:16 G | 9679275.49 | 9679275.72 | 9679275.96 | 0.0143 | 0.0047 |

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| Pluto | 21789-04-06 08:38 G | 9679424.78 | 9679424.86 | 9679425.00 | 0.0080 | 0.0072 |
| Neptune | 21789-05-31 13:55 G | 9679479.90 | 9679480.08 | 9679480.31 | 0.0089 | 0.0053 |
| Uranus | 21789-11-13 08:52 G | 9679645.62 | 9679645.87 | 9679646.13 | 0.0143 | 0.0022 |
| Neptune | 21790-06-03 05:45 G | 9679847.56 | 9679847.74 | 9679847.98 | 0.0089 | 0.0056 |
| Saturn | 21790-06-15 07:12 G | 9679859.59 | 9679859.80 | 9679860.03 | 0.0288 | 0.0099 |
| Uranus | 21790-11-17 23:02 G | 9680015.28 | 9680015.46 | 9680015.65 | 0.0143 | 0.0098 |
| Jupiter | 21790-12-25 11:45 G | 9680052.77 | 9680052.99 | 9680053.22 | 0.0501 | 0.0197 |
| Neptune | 21791-06-05 17:45 G | 9680215.05 | 9680215.24 | 9680215.44 | 0.0089 | 0.0055 |
| Jupiter | 21792-01-25 15:36 G | 9680449.00 | 9680449.15 | 9680449.30 | 0.0490 | 0.0362 |
| Neptune | 21792-06-07 04:04 G | 9680582.49 | 9680582.67 | 9680582.90 | 0.0089 | 0.0059 |
| Neptune | 21793-06-09 20:24 G | 9680950.18 | 9680950.35 | 9680950.56 | 0.0089 | 0.0059 |
| Neptune | 21794-06-12 03:50 G | 9681317.48 | 9681317.66 | 9681317.85 | 0.0089 | 0.0061 |
| Neptune | 21795-06-14 23:02 G | 9681685.29 | 9681685.46 | 9681685.66 | 0.0089 | 0.0061 |
| Neptune | 21796-06-16 04:48 G | 9682052.53 | 9682052.70 | 9682052.90 | 0.0089 | 0.0063 |
| Neptune | 21797-06-19 00:14 G | 9682420.34 | 9682420.51 | 9682420.71 | 0.0089 | 0.0063 |
| Jupiter | 21797-07-02 08:52 G | 9682433.65 | 9682433.87 | 9682434.10 | 0.0530 | 0.0089 |
| Neptune | 21798-06-21 07:40 G | 9682787.67 | 9682787.82 | 9682788.02 | 0.0089 | 0.0064 |
| Neptune | 21799-06-24 00:57 G | 9683155.36 | 9683155.54 | 9683155.72 | 0.0089 | 0.0066 |
| Neptune | 21800-06-26 11:45 G | 9683522.85 | 9683522.99 | 9683523.19 | 0.0089 | 0.0067 |
| Neptune | 21801-06-28 23:31 G | 9683890.34 | 9683890.48 | 9683890.69 | 0.0089 | 0.0068 |
| Neptune | 21802-07-01 15:36 G | 9684258.01 | 9684258.15 | 9684258.35 | 0.0089 | 0.0066 |
| Jupiter | 21802-12-30 21:50 G | 9684440.19 | 9684440.41 | 9684440.62 | 0.0499 | 0.0147 |
| Neptune | 21803-07-03 23:02 G | 9684625.31 | 9684625.46 | 9684625.66 | 0.0089 | 0.0068 |
| Jupiter | 21804-01-30 19:12 G | 9684836.21 | 9684836.30 | 9684836.41 | 0.0488 | 0.0445 |
| Neptune | 21804-07-05 18:57 G | 9684993.12 | 9684993.29 | 9684993.47 | 0.0089 | 0.0066 |
| Saturn | 21804-12-09 13:40 G | 9685149.86 | 9685150.07 | 9685150.29 | 0.0271 | 0.0107 |
| Neptune | 21805-07-08 00:28 G | 9685360.38 | 9685360.52 | 9685360.71 | 0.0089 | 0.0070 |
| Neptune | 21806-07-10 20:09 G | 9685728.20 | 9685728.34 | 9685728.55 | 0.0089 | 0.0067 |
| Neptune | 21807-07-13 03:50 G | 9686095.52 | 9686095.66 | 9686095.83 | 0.0089 | 0.0070 |
| Neptune | 21808-07-14 21:36 G | 9686463.22 | 9686463.40 | 9686463.59 | 0.0089 | 0.0065 |

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| Jupiter | 21809-07-08 20:09 G | 9686822.10 | 9686822.34 | 9686822.57 | 0.0532 | 0.0019 |
| Neptune | 21809-07-17 08:52 G | 9686830.72 | 9686830.87 | 9686831.03 | 0.0089 | 0.0069 |
| Neptune | 21810-07-19 21:21 G | 9687198.23 | 9687198.39 | 9687198.60 | 0.0089 | 0.0065 |
| Neptune | 21811-07-22 13:12 G | 9687565.90 | 9687566.05 | 9687566.21 | 0.0089 | 0.0069 |
| Neptune | 21812-07-23 21:21 G | 9687933.22 | 9687933.39 | 9687933.59 | 0.0089 | 0.0064 |
| Neptune | 21813-07-26 16:19 G | 9688301.04 | 9688301.18 | 9688301.37 | 0.0089 | 0.0069 |
| Neptune | 21814-07-28 23:02 G | 9688668.27 | 9688668.46 | 9688668.65 | 0.0089 | 0.0061 |
| Jupiter | 21815-01-04 12:43 G | 9688827.80 | 9688828.03 | 9688828.27 | 0.0497 | 0.0039 |
| Neptune | 21815-07-31 18:57 G | 9689036.12 | 9689036.29 | 9689036.47 | 0.0090 | 0.0066 |
| Jupiter | 21816-02-04 00:00 G | 9689223.50 | 9689223.50 | 9689223.52 | 0.0487 | 0.0487 |
| Neptune | 21816-08-02 01:40 G | 9689403.40 | 9689403.57 | 9689403.78 | 0.0090 | 0.0059 |
| Neptune | 21817-08-04 19:40 G | 9689771.16 | 9689771.32 | 9689771.52 | 0.0090 | 0.0065 |
| Neptune | 21818-08-07 06:28 G | 9690138.59 | 9690138.77 | 9690138.97 | 0.0090 | 0.0057 |
| Saturn | 21819-06-10 03:21 G | 9690445.41 | 9690445.64 | 9690445.88 | 0.0288 | 0.0117 |
| Neptune | 21819-08-09 20:09 G | 9690506.15 | 9690506.34 | 9690506.54 | 0.0090 | 0.0062 |
| Jupiter | 21820-06-07 19:55 G | 9690809.30 | 9690809.33 | 9690809.37 | 0.0518 | 0.0511 |
| Neptune | 21820-08-11 10:48 G | 9690873.76 | 9690873.95 | 9690874.16 | 0.0090 | 0.0054 |
| Jupiter | 21821-07-13 19:40 G | 9691210.09 | 9691210.32 | 9691210.55 | 0.0534 | 0.0120 |
| Neptune | 21821-08-13 19:55 G | 9691241.14 | 9691241.33 | 9691241.54 | 0.0090 | 0.0059 |
| Neptune | 21822-08-16 14:24 G | 9691608.91 | 9691609.10 | 9691609.33 | 0.0090 | 0.0051 |
| Neptune | 21823-08-18 21:07 G | 9691976.20 | 9691976.38 | 9691976.60 | 0.0090 | 0.0057 |
| Neptune | 21824-08-20 17:31 G | 9692344.02 | 9692344.23 | 9692344.47 | 0.0090 | 0.0047 |
| Neptune | 21825-08-23 00:00 G | 9692711.32 | 9692711.50 | 9692711.72 | 0.0090 | 0.0054 |
| Neptune | 21826-08-25 18:43 G | 9693079.06 | 9693079.28 | 9693079.52 | 0.0090 | 0.0043 |
| Jupiter | 21827-01-08 11:16 G | 9693214.75 | 9693214.97 | 9693215.20 | 0.0495 | 0.0071 |
| Neptune | 21827-08-28 04:04 G | 9693446.48 | 9693446.67 | 9693446.90 | 0.0090 | 0.0050 |
| Uranus | 21828-05-07 07:40 G | 9693699.61 | 9693699.82 | 9693700.03 | 0.0136 | 0.0080 |
| Neptune | 21828-08-29 18:43 G | 9693814.05 | 9693814.28 | 9693814.53 | 0.0090 | 0.0039 |
| Uranus | 21829-05-11 13:55 G | 9694068.83 | 9694069.08 | 9694069.33 | 0.0136 | 0.0018 |
| Neptune | 21829-09-01 08:24 G | 9694181.65 | 9694181.85 | 9694182.08 | 0.0090 | 0.0046 |

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| Uranus | 21830-05-16 06:14 G | 9694438.52 | 9694438.76 | 9694439.03 | 0.0135 | 0.0031 |
| Neptune | 21830-09-03 17:31 G | 9694549.00 | 9694549.23 | 9694549.49 | 0.0090 | 0.0035 |
| Uranus | 21831-05-20 11:02 G | 9694807.82 | 9694807.96 | 9694808.15 | 0.0135 | 0.0101 |
| Neptune | 21831-09-06 11:31 G | 9694916.77 | 9694916.98 | 9694917.22 | 0.0090 | 0.0042 |
| Jupiter | 21832-06-12 11:02 G | 9695196.86 | 9695196.96 | 9695197.07 | 0.0521 | 0.0464 |
| Neptune | 21832-09-07 18:14 G | 9695284.02 | 9695284.26 | 9695284.51 | 0.0089 | 0.0030 |
| Jupiter | 21833-07-19 06:43 G | 9695598.59 | 9695598.78 | 9695598.98 | 0.0536 | 0.0256 |
| Neptune | 21833-09-10 14:09 G | 9695651.86 | 9695652.09 | 9695652.34 | 0.0089 | 0.0037 |
| Neptune | 21834-09-12 20:38 G | 9696019.11 | 9696019.36 | 9696019.60 | 0.0089 | 0.0025 |
| Saturn | 21834-12-16 17:31 G | 9696114.00 | 9696114.23 | 9696114.46 | 0.0272 | 0.0111 |
| Neptune | 21835-09-15 15:07 G | 9696386.89 | 9696387.13 | 9696387.38 | 0.0089 | 0.0032 |
| Neptune | 21836-09-17 00:14 G | 9696754.27 | 9696754.51 | 9696754.76 | 0.0089 | 0.0021 |
| Neptune | 21837-09-19 14:52 G | 9697121.87 | 9697122.12 | 9697122.39 | 0.0089 | 0.0027 |
| Jupiter | 21837-12-12 00:14 G | 9697205.44 | 9697205.51 | 9697205.60 | 0.0508 | 0.0477 |
| Neptune | 21838-09-22 03:50 G | 9697489.42 | 9697489.66 | 9697489.92 | 0.0089 | 0.0015 |
| Jupiter | 21839-01-13 02:38 G | 9697602.38 | 9697602.61 | 9697602.83 | 0.0494 | 0.0138 |
| Mars | 21839-04-04 23:31 G | 9697684.29 | 9697684.48 | 9697684.67 | 0.1630 | 0.0461 |
| Neptune | 21839-09-24 13:12 G | 9697856.80 | 9697857.05 | 9697857.32 | 0.0089 | 0.0021 |
| Neptune | 21840-09-26 06:43 G | 9698224.53 | 9698224.78 | 9698225.03 | 0.0089 | 0.0010 |
| Neptune | 21841-09-28 12:43 G | 9698591.78 | 9698592.03 | 9698592.29 | 0.0089 | 0.0017 |
| Neptune | 21842-10-01 08:09 G | 9698959.59 | 9698959.84 | 9698960.10 | 0.0089 | 0.0005 |
| Neptune | 21843-10-03 13:40 G | 9699326.82 | 9699327.07 | 9699327.33 | 0.0089 | 0.0011 |
| Jupiter | 21844-06-17 12:14 G | 9699584.87 | 9699585.01 | 9699585.15 | 0.0522 | 0.0413 |
| Neptune | 21844-10-05 08:09 G | 9699694.57 | 9699694.84 | 9699695.10 | 0.0089 | 0.0001 |
| Jupiter | 21845-07-24 06:28 G | 9699986.58 | 9699986.77 | 9699986.97 | 0.0537 | 0.0310 |
| Neptune | 21845-10-07 16:19 G | 9700061.93 | 9700062.18 | 9700062.43 | 0.0089 | 0.0005 |
| Neptune | 21846-10-10 06:57 G | 9700429.52 | 9700429.79 | 9700430.05 | 0.0089 | 0.0006 |
| Neptune | 21847-10-12 19:26 G | 9700797.06 | 9700797.31 | 9700797.56 | 0.0089 | 0.0001 |
| Neptune | 21848-10-14 04:48 G | 9701164.44 | 9701164.70 | 9701164.97 | 0.0089 | 0.0011 |
| Saturn | 21849-06-17 22:33 G | 9701411.24 | 9701411.44 | 9701411.65 | 0.0288 | 0.0162 |

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| Neptune | 21849-10-16 21:21 G | 9701532.14 | 9701532.39 | 9701532.65 | 0.0089 | 0.0006 |
| Jupiter | 21849-12-16 18:28 G | 9701593.12 | 9701593.27 | 9701593.43 | 0.0506 | 0.0362 |
| Neptune | 21850-10-19 03:21 G | 9701899.39 | 9701899.64 | 9701899.90 | 0.0089 | 0.0017 |
| Jupiter | 21851-01-17 03:50 G | 9701989.44 | 9701989.66 | 9701989.88 | 0.0493 | 0.0174 |
| Neptune | 21851-10-21 22:19 G | 9702267.18 | 9702267.43 | 9702267.69 | 0.0089 | 0.0011 |
| Neptune | 21852-10-23 03:21 G | 9702634.40 | 9702634.64 | 9702634.89 | 0.0089 | 0.0021 |
| Neptune | 21853-10-25 21:07 G | 9703002.13 | 9703002.38 | 9703002.65 | 0.0089 | 0.0016 |
| Neptune | 21854-10-28 04:19 G | 9703369.46 | 9703369.68 | 9703369.94 | 0.0089 | 0.0026 |
| Neptune | 21855-10-30 18:43 G | 9703737.04 | 9703737.28 | 9703737.55 | 0.0089 | 0.0022 |
| Jupiter | 21856-06-22 08:38 G | 9703972.66 | 9703972.86 | 9703973.07 | 0.0525 | 0.0287 |
| Neptune | 21856-11-01 06:43 G | 9704104.56 | 9704104.78 | 9704105.02 | 0.0089 | 0.0031 |
| Jupiter | 21857-07-29 08:52 G | 9704374.72 | 9704374.87 | 9704375.03 | 0.0538 | 0.0389 |
| Neptune | 21857-11-03 15:50 G | 9704471.90 | 9704472.16 | 9704472.41 | 0.0089 | 0.0026 |
| Neptune | 21858-11-06 07:55 G | 9704839.60 | 9704839.83 | 9704840.06 | 0.0089 | 0.0035 |
| Neptune | 21859-11-08 12:57 G | 9705206.82 | 9705207.04 | 9705207.30 | 0.0089 | 0.0031 |
| Neptune | 21860-11-10 07:40 G | 9705574.60 | 9705574.82 | 9705575.06 | 0.0089 | 0.0040 |
| Neptune | 21861-11-12 12:28 G | 9705941.80 | 9705942.02 | 9705942.26 | 0.0089 | 0.0036 |
| Jupiter | 21861-12-21 05:45 G | 9705980.54 | 9705980.74 | 9705980.95 | 0.0504 | 0.0262 |
| Neptune | 21862-11-15 06:00 G | 9706309.53 | 9706309.75 | 9706309.98 | 0.0089 | 0.0044 |
| Jupiter | 21863-01-21 15:50 G | 9706376.97 | 9706377.16 | 9706377.36 | 0.0491 | 0.0248 |
| Neptune | 21863-11-17 12:57 G | 9706676.83 | 9706677.04 | 9706677.28 | 0.0089 | 0.0041 |
| Saturn | 21863-12-12 00:57 G | 9706701.30 | 9706701.54 | 9706701.77 | 0.0271 | 0.0053 |
| Neptune | 21864-11-19 02:38 G | 9707044.40 | 9707044.61 | 9707044.85 | 0.0089 | 0.0048 |
| Neptune | 21865-11-21 13:55 G | 9707411.89 | 9707412.08 | 9707412.32 | 0.0089 | 0.0045 |
| Neptune | 21866-11-23 22:19 G | 9707779.23 | 9707779.43 | 9707779.66 | 0.0089 | 0.0052 |
| Neptune | 21867-11-26 13:55 G | 9708146.89 | 9708147.08 | 9708147.31 | 0.0089 | 0.0049 |
| Jupiter | 21868-06-27 07:26 G | 9708360.59 | 9708360.81 | 9708361.02 | 0.0527 | 0.0166 |
| Neptune | 21868-11-27 18:43 G | 9708514.10 | 9708514.28 | 9708514.50 | 0.0089 | 0.0056 |
| Jupiter | 21869-08-04 00:00 G | 9708763.47 | 9708763.50 | 9708763.56 | 0.0540 | 0.0529 |
| Neptune | 21869-11-30 13:12 G | 9708881.84 | 9708882.05 | 9708882.26 | 0.0089 | 0.0052 |

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| Neptune | 21870-12-02 17:16 G | 9709249.03 | 9709249.22 | 9709249.41 | 0.0088 | 0.0058 |
| Uranus | 21871-11-06 00:57 G | 9709587.38 | 9709587.54 | 9709587.69 | 0.0142 | 0.0114 |
| Neptune | 21871-12-05 09:36 G | 9709616.71 | 9709616.90 | 9709617.12 | 0.0088 | 0.0055 |
| Uranus | 21872-11-09 15:36 G | 9709956.92 | 9709957.15 | 9709957.40 | 0.0143 | 0.0039 |
| Neptune | 21872-12-06 16:48 G | 9709984.04 | 9709984.20 | 9709984.40 | 0.0088 | 0.0061 |
| Uranus | 21873-11-14 18:57 G | 9710327.04 | 9710327.29 | 9710327.55 | 0.0143 | 0.0028 |
| Neptune | 21873-12-09 05:45 G | 9710351.55 | 9710351.74 | 9710351.95 | 0.0088 | 0.0058 |
| Jupiter | 21873-12-25 17:02 G | 9710368.01 | 9710368.21 | 9710368.41 | 0.0502 | 0.0215 |
| Uranus | 21874-11-19 09:36 G | 9710696.72 | 9710696.90 | 9710697.10 | 0.0143 | 0.0091 |
| Neptune | 21874-12-11 17:31 G | 9710719.07 | 9710719.23 | 9710719.42 | 0.0088 | 0.0064 |
| Jupiter | 21875-01-25 20:38 G | 9710764.19 | 9710764.36 | 9710764.52 | 0.0490 | 0.0355 |
| Neptune | 21875-12-14 00:43 G | 9711086.37 | 9711086.53 | 9711086.75 | 0.0088 | 0.0061 |
| Neptune | 21876-12-15 16:19 G | 9711454.04 | 9711454.18 | 9711454.38 | 0.0088 | 0.0066 |
| Neptune | 21877-12-17 20:52 G | 9711821.20 | 9711821.37 | 9711821.56 | 0.0088 | 0.0062 |
| Saturn | 21878-06-11 14:24 G | 9711996.86 | 9711997.10 | 9711997.34 | 0.0288 | 0.0053 |
| Neptune | 21878-12-20 14:09 G | 9712188.94 | 9712189.09 | 9712189.28 | 0.0088 | 0.0066 |
| Neptune | 21879-12-22 18:00 G | 9712556.10 | 9712556.25 | 9712556.44 | 0.0088 | 0.0065 |
| Jupiter | 21880-07-02 18:43 G | 9712749.04 | 9712749.28 | 9712749.51 | 0.0530 | 0.0103 |
| Neptune | 21880-12-24 09:36 G | 9712923.77 | 9712923.90 | 9712924.10 | 0.0088 | 0.0069 |
| Neptune | 21881-12-26 16:48 G | 9713291.06 | 9713291.20 | 9713291.39 | 0.0088 | 0.0067 |
| Neptune | 21882-12-29 04:48 G | 9713658.55 | 9713658.70 | 9713658.88 | 0.0088 | 0.0069 |
| Neptune | 21883-12-31 16:48 G | 9714026.06 | 9714026.20 | 9714026.39 | 0.0088 | 0.0066 |
| Neptune | 21885-01-01 23:16 G | 9714393.33 | 9714393.47 | 9714393.66 | 0.0088 | 0.0069 |
| Jupiter | 21885-12-30 06:14 G | 9714755.54 | 9714755.76 | 9714755.99 | 0.0499 | 0.0157 |
| Neptune | 21886-01-04 15:36 G | 9714761.00 | 9714761.15 | 9714761.33 | 0.0088 | 0.0067 |
| Neptune | 21887-01-06 19:12 G | 9715128.17 | 9715128.30 | 9715128.48 | 0.0088 | 0.0070 |
| Jupiter | 21887-01-29 23:16 G | 9715151.38 | 9715151.47 | 9715151.57 | 0.0489 | 0.0438 |
| Neptune | 21888-01-09 12:28 G | 9715495.88 | 9715496.02 | 9715496.21 | 0.0088 | 0.0068 |
| Neptune | 21889-01-10 16:48 G | 9715863.06 | 9715863.20 | 9715863.37 | 0.0088 | 0.0069 |
| Neptune | 21890-01-13 07:26 G | 9716230.67 | 9716230.81 | 9716231.01 | 0.0088 | 0.0067 |

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| Neptune | 21891-01-15 15:36 G | 9716598.01 | 9716598.15 | 9716598.32 | 0.0088 | 0.0068 |
| Neptune | 21892-01-18 02:09 G | 9716965.44 | 9716965.59 | 9716965.78 | 0.0088 | 0.0066 |
| Jupiter | 21892-07-07 14:52 G | 9717136.89 | 9717137.12 | 9717137.36 | 0.0532 | 0.0031 |
| Saturn | 21892-12-05 17:16 G | 9717288.10 | 9717288.22 | 9717288.37 | 0.0271 | 0.0227 |
| Neptune | 21893-01-19 14:38 G | 9717332.98 | 9717333.11 | 9717333.29 | 0.0088 | 0.0068 |
| Saturn | 21893-12-17 22:04 G | 9717665.23 | 9717665.42 | 9717665.61 | 0.0272 | 0.0162 |
| Neptune | 21894-01-21 20:38 G | 9717700.20 | 9717700.36 | 9717700.55 | 0.0088 | 0.0065 |
| Neptune | 21895-01-24 12:43 G | 9718067.89 | 9718068.03 | 9718068.22 | 0.0088 | 0.0066 |
| Neptune | 21896-01-26 16:33 G | 9718435.01 | 9718435.19 | 9718435.37 | 0.0088 | 0.0063 |
| Neptune | 21897-01-28 09:50 G | 9718802.73 | 9718802.91 | 9718803.09 | 0.0088 | 0.0063 |
| Jupiter | 21898-01-03 08:24 G | 9719142.62 | 9719142.85 | 9719143.08 | 0.0498 | 0.0050 |
| Neptune | 21898-01-30 13:26 G | 9719169.91 | 9719170.06 | 9719170.26 | 0.0088 | 0.0063 |
| Neptune | 21899-02-02 04:04 G | 9719537.50 | 9719537.67 | 9719537.88 | 0.0088 | 0.0062 |
| Jupiter | 21899-02-03 07:40 G | 9719538.77 | 9719538.82 | 9719538.89 | 0.0488 | 0.0470 |
| Neptune | 21900-02-04 12:28 G | 9719904.87 | 9719905.02 | 9719905.22 | 0.0088 | 0.0061 |
| Neptune | 21901-02-06 22:48 G | 9720272.26 | 9720272.45 | 9720272.65 | 0.0088 | 0.0059 |
| Neptune | 21902-02-09 12:00 G | 9720639.83 | 9720640.00 | 9720640.21 | 0.0088 | 0.0058 |
| Neptune | 21903-02-11 17:16 G | 9721007.04 | 9721007.22 | 9721007.44 | 0.0088 | 0.0057 |
| Neptune | 21904-02-14 10:19 G | 9721374.73 | 9721374.93 | 9721375.13 | 0.0088 | 0.0055 |
| Jupiter | 21904-07-13 21:07 G | 9721525.16 | 9721525.38 | 9721525.61 | 0.0533 | 0.0105 |
| Neptune | 21905-02-15 13:26 G | 9721741.87 | 9721742.06 | 9721742.27 | 0.0088 | 0.0054 |
| Neptune | 21906-02-18 06:00 G | 9722109.57 | 9722109.75 | 9722109.98 | 0.0088 | 0.0053 |
| Neptune | 21907-02-20 11:02 G | 9722476.77 | 9722476.96 | 9722477.18 | 0.0088 | 0.0050 |
| Saturn | 21907-06-07 08:38 G | 9722583.74 | 9722583.86 | 9722584.00 | 0.0289 | 0.0245 |
| Neptune | 21908-02-23 00:43 G | 9722844.32 | 9722844.53 | 9722844.76 | 0.0088 | 0.0048 |
| Saturn | 21908-06-20 07:40 G | 9722962.67 | 9722962.82 | 9722962.99 | 0.0288 | 0.0224 |
| Neptune | 21909-02-24 09:50 G | 9723211.71 | 9723211.91 | 9723212.14 | 0.0088 | 0.0046 |
| Jupiter | 21910-01-09 01:26 G | 9723530.33 | 9723530.56 | 9723530.79 | 0.0496 | 0.0060 |
| Neptune | 21910-02-26 18:57 G | 9723579.08 | 9723579.29 | 9723579.53 | 0.0088 | 0.0045 |
| Neptune | 21911-03-01 09:36 G | 9723946.69 | 9723946.90 | 9723947.13 | 0.0088 | 0.0043 |

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| Uranus | 21911-05-04 23:16 G | 9724011.43 | 9724011.47 | 9724011.52 | 0.0136 | 0.0134 |
| Neptune | 21912-03-02 14:24 G | 9724313.88 | 9724314.10 | 9724314.34 | 0.0088 | 0.0041 |
| Uranus | 21912-05-08 14:52 G | 9724380.92 | 9724381.12 | 9724381.34 | 0.0136 | 0.0079 |
| Neptune | 21913-03-05 07:26 G | 9724681.60 | 9724681.81 | 9724682.07 | 0.0088 | 0.0038 |
| Uranus | 21913-05-12 23:02 G | 9724750.21 | 9724750.46 | 9724750.70 | 0.0136 | 0.0022 |
| Neptune | 21914-03-07 11:31 G | 9725048.75 | 9725048.98 | 9725049.22 | 0.0088 | 0.0036 |
| Uranus | 21914-05-17 14:24 G | 9725119.87 | 9725120.10 | 9725120.36 | 0.0135 | 0.0045 |
| Neptune | 21915-03-10 04:04 G | 9725416.44 | 9725416.67 | 9725416.93 | 0.0088 | 0.0033 |
| Uranus | 21915-05-21 20:38 G | 9725489.18 | 9725489.36 | 9725489.55 | 0.0135 | 0.0089 |
| Jupiter | 21915-06-13 15:21 G | 9725512.05 | 9725512.14 | 9725512.22 | 0.0519 | 0.0480 |
| Neptune | 21916-03-11 09:36 G | 9725783.68 | 9725783.90 | 9725784.14 | 0.0088 | 0.0033 |
| Jupiter | 21916-07-18 22:19 G | 9725913.22 | 9725913.43 | 9725913.65 | 0.0535 | 0.0232 |
| Neptune | 21917-03-13 22:33 G | 9726151.20 | 9726151.44 | 9726151.71 | 0.0088 | 0.0029 |
| Neptune | 21918-03-16 09:07 G | 9726518.65 | 9726518.88 | 9726519.12 | 0.0088 | 0.0028 |
| Neptune | 21919-03-18 17:45 G | 9726885.99 | 9726886.24 | 9726886.50 | 0.0088 | 0.0023 |
| Neptune | 21920-03-20 08:38 G | 9727253.63 | 9727253.86 | 9727254.12 | 0.0088 | 0.0023 |
| Jupiter | 21920-12-12 10:48 G | 9727520.90 | 9727520.95 | 9727521.02 | 0.0509 | 0.0488 |
| Neptune | 21921-03-22 13:26 G | 9727620.81 | 9727621.06 | 9727621.33 | 0.0088 | 0.0018 |
| Jupiter | 21922-01-13 03:36 G | 9727917.42 | 9727917.65 | 9727917.88 | 0.0495 | 0.0122 |
| Neptune | 21922-03-25 07:12 G | 9727988.56 | 9727988.80 | 9727989.06 | 0.0088 | 0.0019 |
| Saturn | 21922-12-14 07:26 G | 9728252.56 | 9728252.81 | 9728253.05 | 0.0271 | 0.0006 |
| Neptune | 21923-03-27 11:16 G | 9728355.72 | 9728355.97 | 9728356.23 | 0.0088 | 0.0014 |
| Neptune | 21924-03-29 04:19 G | 9728723.42 | 9728723.68 | 9728723.94 | 0.0088 | 0.0014 |
| Neptune | 21925-03-31 10:33 G | 9729090.70 | 9729090.94 | 9729091.20 | 0.0088 | 0.0008 |
| Neptune | 21926-04-02 23:45 G | 9729458.23 | 9729458.49 | 9729458.76 | 0.0088 | 0.0008 |
| Neptune | 21927-04-05 11:02 G | 9729825.71 | 9729825.96 | 9729826.21 | 0.0088 | 0.0003 |
| Jupiter | 21927-06-18 09:07 G | 9729899.74 | 9729899.88 | 9729900.03 | 0.0522 | 0.0418 |
| Neptune | 21928-04-06 19:26 G | 9730193.05 | 9730193.31 | 9730193.58 | 0.0088 | 0.0003 |
| Jupiter | 21928-07-24 03:07 G | 9730301.44 | 9730301.63 | 9730301.82 | 0.0537 | 0.0295 |
| Neptune | 21929-04-09 11:45 G | 9730560.73 | 9730560.99 | 9730561.24 | 0.0088 | 0.0003 |

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| Neptune | 21930-04-11 16:33 G | 9730927.93 | 9730928.19 | 9730928.46 | 0.0088 | 0.0002 |
| Neptune | 21931-04-14 10:33 G | 9731295.69 | 9731295.94 | 9731296.21 | 0.0088 | 0.0009 |
| Neptune | 21932-04-15 15:21 G | 9731662.88 | 9731663.14 | 9731663.39 | 0.0088 | 0.0008 |
| Jupiter | 21932-12-16 23:16 G | 9731908.31 | 9731908.47 | 9731908.64 | 0.0506 | 0.0364 |
| Neptune | 21933-04-18 08:09 G | 9732030.59 | 9732030.84 | 9732031.11 | 0.0088 | 0.0015 |
| Jupiter | 21934-01-17 16:33 G | 9732304.98 | 9732305.19 | 9732305.40 | 0.0493 | 0.0161 |
| Neptune | 21934-04-20 15:21 G | 9732397.89 | 9732398.14 | 9732398.39 | 0.0088 | 0.0012 |
| Neptune | 21935-04-23 04:19 G | 9732765.42 | 9732765.68 | 9732765.95 | 0.0088 | 0.0019 |
| Neptune | 21936-04-24 16:19 G | 9733132.94 | 9733133.18 | 9733133.43 | 0.0088 | 0.0017 |
| Neptune | 21937-04-27 00:57 G | 9733500.30 | 9733500.54 | 9733500.81 | 0.0088 | 0.0025 |
| Saturn | 21937-06-14 03:50 G | 9733548.42 | 9733548.66 | 9733548.90 | 0.0288 | 0.0008 |
| Neptune | 21938-04-29 18:14 G | 9733868.01 | 9733868.26 | 9733868.50 | 0.0088 | 0.0023 |
| Neptune | 21939-05-01 23:16 G | 9734235.23 | 9734235.47 | 9734235.72 | 0.0088 | 0.0031 |
| Jupiter | 21939-06-23 10:19 G | 9734287.75 | 9734287.93 | 9734288.13 | 0.0525 | 0.0290 |
| Neptune | 21940-05-03 18:00 G | 9734603.02 | 9734603.25 | 9734603.51 | 0.0088 | 0.0027 |
| Jupiter | 21940-07-29 18:43 G | 9734690.11 | 9734690.28 | 9734690.45 | 0.0539 | 0.0377 |
| Neptune | 21941-05-05 23:02 G | 9734970.24 | 9734970.46 | 9734970.71 | 0.0088 | 0.0036 |
| Neptune | 21942-05-08 16:33 G | 9735337.96 | 9735338.19 | 9735338.45 | 0.0088 | 0.0032 |
| Neptune | 21943-05-11 00:14 G | 9735705.30 | 9735705.51 | 9735705.74 | 0.0089 | 0.0041 |
| Neptune | 21944-05-12 13:40 G | 9736072.83 | 9736073.07 | 9736073.32 | 0.0089 | 0.0037 |
| Jupiter | 21944-12-21 10:04 G | 9736295.73 | 9736295.92 | 9736296.11 | 0.0504 | 0.0274 |
| Neptune | 21945-05-15 01:55 G | 9736440.38 | 9736440.58 | 9736440.81 | 0.0089 | 0.0046 |
| Jupiter | 21946-01-21 19:55 G | 9736692.12 | 9736692.33 | 9736692.54 | 0.0491 | 0.0241 |
| Neptune | 21946-05-17 11:02 G | 9736807.73 | 9736807.96 | 9736808.21 | 0.0089 | 0.0041 |
| Neptune | 21947-05-20 04:04 G | 9737175.47 | 9737175.67 | 9737175.89 | 0.0089 | 0.0050 |
| Neptune | 21948-05-21 09:50 G | 9737542.70 | 9737542.91 | 9737543.15 | 0.0089 | 0.0045 |
| Pluto | 21948-10-10 19:26 G | 9737685.07 | 9737685.31 | 9737685.57 | 0.0064 | 0.0007 |
| Neptune | 21949-05-24 05:02 G | 9737910.53 | 9737910.71 | 9737910.94 | 0.0089 | 0.0055 |
| Neptune | 21950-05-26 10:48 G | 9738277.75 | 9738277.95 | 9738278.18 | 0.0089 | 0.0049 |
| Neptune | 21951-05-29 04:48 G | 9738645.53 | 9738645.70 | 9738645.92 | 0.0089 | 0.0059 |

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| Jupiter | 21951-06-28 18:14 G | 9738676.04 | 9738676.26 | 9738676.49 | 0.0527 | 0.0172 |
| Saturn | 21951-12-08 19:12 G | 9738839.12 | 9738839.30 | 9738839.48 | 0.0271 | 0.0180 |
| Neptune | 21952-05-30 13:26 G | 9739012.86 | 9739013.06 | 9739013.26 | 0.0089 | 0.0052 |
| Jupiter | 21952-08-03 19:55 G | 9739078.28 | 9739078.33 | 9739078.40 | 0.0540 | 0.0520 |
| Saturn | 21952-12-20 04:33 G | 9739216.56 | 9739216.69 | 9739216.85 | 0.0272 | 0.0212 |
| Neptune | 21953-06-02 02:52 G | 9739380.46 | 9739380.62 | 9739380.84 | 0.0089 | 0.0062 |
| Neptune | 21954-06-04 15:36 G | 9739747.98 | 9739748.15 | 9739748.37 | 0.0089 | 0.0056 |
| Neptune | 21955-06-07 01:26 G | 9740115.39 | 9740115.56 | 9740115.75 | 0.0089 | 0.0065 |
| Uranus | 21955-11-07 10:04 G | 9740268.75 | 9740268.92 | 9740269.12 | 0.0142 | 0.0099 |
| Neptune | 21956-06-08 18:43 G | 9740483.11 | 9740483.28 | 9740483.49 | 0.0089 | 0.0059 |
| Uranus | 21956-11-11 01:55 G | 9740638.35 | 9740638.58 | 9740638.82 | 0.0143 | 0.0043 |
| Jupiter | 21956-12-26 01:55 G | 9740683.37 | 9740683.58 | 9740683.79 | 0.0502 | 0.0231 |
| Neptune | 21957-06-11 01:26 G | 9740850.40 | 9740850.56 | 9740850.73 | 0.0089 | 0.0068 |
| Uranus | 21957-11-16 04:04 G | 9741008.43 | 9741008.67 | 9741008.93 | 0.0143 | 0.0029 |
| Jupiter | 21958-01-26 01:12 G | 9741079.41 | 9741079.55 | 9741079.72 | 0.0490 | 0.0352 |
| Neptune | 21958-06-13 21:07 G | 9741218.19 | 9741218.38 | 9741218.57 | 0.0089 | 0.0060 |
| Uranus | 21958-11-20 19:26 G | 9741378.14 | 9741378.31 | 9741378.48 | 0.0143 | 0.0103 |
| Neptune | 21959-06-16 02:09 G | 9741585.47 | 9741585.59 | 9741585.78 | 0.0089 | 0.0071 |
| Neptune | 21960-06-17 21:07 G | 9741953.22 | 9741953.38 | 9741953.59 | 0.0089 | 0.0063 |
| Neptune | 21961-06-20 05:31 G | 9742320.61 | 9742320.73 | 9742320.89 | 0.0089 | 0.0073 |
| Neptune | 21962-06-22 20:24 G | 9742688.19 | 9742688.35 | 9742688.56 | 0.0089 | 0.0066 |
| Neptune | 21963-06-25 08:52 G | 9743055.76 | 9743055.87 | 9743056.03 | 0.0089 | 0.0075 |
| Jupiter | 21963-07-03 09:07 G | 9743063.66 | 9743063.88 | 9743064.11 | 0.0528 | 0.0118 |
| Neptune | 21964-06-26 19:40 G | 9743423.17 | 9743423.32 | 9743423.52 | 0.0089 | 0.0066 |
| Mars | 21965-04-02 02:52 G | 9743702.57 | 9743702.62 | 9743702.67 | 0.1620 | 0.1547 |
| Neptune | 21965-06-29 13:40 G | 9743790.95 | 9743791.07 | 9743791.21 | 0.0089 | 0.0076 |
| Saturn | 21966-06-08 13:40 G | 9744134.88 | 9744135.07 | 9744135.26 | 0.0289 | 0.0190 |
| Neptune | 21966-07-01 20:09 G | 9744158.20 | 9744158.34 | 9744158.54 | 0.0089 | 0.0068 |
| Saturn | 21967-06-22 12:00 G | 9744513.94 | 9744514.00 | 9744514.06 | 0.0288 | 0.0278 |
| Neptune | 21967-07-04 16:04 G | 9744526.07 | 9744526.17 | 9744526.33 | 0.0089 | 0.0077 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 21968-07-05 22:04 G | 9744893.28 | 9744893.42 | 9744893.61 | 0.0089 | 0.0069 |
| Jupiter | 21968-12-30 05:16 G | 9745070.50 | 9745070.72 | 9745070.94 | 0.0501 | 0.0171 |
| Neptune | 21969-07-08 17:31 G | 9745261.13 | 9745261.23 | 9745261.39 | 0.0089 | 0.0077 |
| Jupiter | 21970-01-30 11:31 G | 9745466.87 | 9745466.98 | 9745467.11 | 0.0489 | 0.0423 |
| Neptune | 21970-07-11 01:26 G | 9745628.43 | 9745628.56 | 9745628.75 | 0.0089 | 0.0069 |
| Neptune | 21971-07-13 17:16 G | 9745996.11 | 9745996.22 | 9745996.38 | 0.0089 | 0.0077 |
| Neptune | 21972-07-15 05:16 G | 9746363.59 | 9746363.72 | 9746363.91 | 0.0089 | 0.0069 |
| Neptune | 21973-07-17 16:33 G | 9746731.08 | 9746731.19 | 9746731.36 | 0.0089 | 0.0077 |
| Neptune | 21974-07-20 09:50 G | 9747098.77 | 9747098.91 | 9747099.10 | 0.0089 | 0.0068 |
| Jupiter | 21975-07-08 18:28 G | 9747452.04 | 9747452.27 | 9747452.50 | 0.0530 | 0.0046 |
| Neptune | 21975-07-22 17:31 G | 9747466.12 | 9747466.23 | 9747466.40 | 0.0089 | 0.0076 |
| Neptune | 21976-07-24 14:09 G | 9747833.92 | 9747834.09 | 9747834.27 | 0.0089 | 0.0066 |
| Neptune | 21977-07-26 19:55 G | 9748201.21 | 9748201.33 | 9748201.50 | 0.0089 | 0.0074 |
| Neptune | 21978-07-29 16:04 G | 9748569.01 | 9748569.17 | 9748569.37 | 0.0089 | 0.0065 |
| Neptune | 21979-07-31 23:45 G | 9748936.36 | 9748936.49 | 9748936.66 | 0.0089 | 0.0072 |
| Neptune | 21980-08-02 16:19 G | 9749304.02 | 9749304.18 | 9749304.39 | 0.0090 | 0.0064 |
| Jupiter | 21981-01-04 00:14 G | 9749458.28 | 9749458.51 | 9749458.74 | 0.0499 | 0.0056 |
| Neptune | 21981-08-05 03:50 G | 9749671.51 | 9749671.66 | 9749671.83 | 0.0090 | 0.0069 |
| Saturn | 21981-12-15 06:57 G | 9749803.54 | 9749803.79 | 9749804.04 | 0.0271 | 0.0044 |
| Jupiter | 21982-02-03 12:00 G | 9749853.92 | 9749854.00 | 9749854.08 | 0.0488 | 0.0454 |
| Neptune | 21982-08-07 15:50 G | 9750038.97 | 9750039.16 | 9750039.37 | 0.0090 | 0.0060 |
| Neptune | 21983-08-10 07:55 G | 9750406.68 | 9750406.83 | 9750407.02 | 0.0090 | 0.0066 |
| Neptune | 21984-08-11 16:04 G | 9750773.99 | 9750774.17 | 9750774.39 | 0.0090 | 0.0058 |
| Neptune | 21985-08-14 11:45 G | 9751141.82 | 9751141.99 | 9751142.19 | 0.0090 | 0.0063 |
| Neptune | 21986-08-16 18:00 G | 9751509.06 | 9751509.25 | 9751509.46 | 0.0090 | 0.0055 |
| Jupiter | 21987-07-13 17:45 G | 9751840.00 | 9751840.24 | 9751840.48 | 0.0533 | 0.0097 |
| Neptune | 21987-08-19 13:55 G | 9751876.90 | 9751877.08 | 9751877.30 | 0.0090 | 0.0059 |
| Neptune | 21988-08-20 21:50 G | 9752244.20 | 9752244.41 | 9752244.61 | 0.0090 | 0.0051 |
| Neptune | 21989-08-23 14:52 G | 9752611.92 | 9752612.12 | 9752612.35 | 0.0090 | 0.0054 |
| Neptune | 21990-08-26 01:26 G | 9752979.36 | 9752979.56 | 9752979.78 | 0.0090 | 0.0048 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 21991-08-28 14:24 G | 9753346.88 | 9753347.10 | 9753347.33 | 0.0090 | 0.0050 |
| Neptune | 21992-08-30 06:00 G | 9753714.53 | 9753714.75 | 9753714.97 | 0.0090 | 0.0044 |
| Jupiter | 21993-01-08 03:36 G | 9753845.41 | 9753845.65 | 9753845.89 | 0.0497 | 0.0052 |
| Neptune | 21993-09-01 13:55 G | 9754081.88 | 9754082.08 | 9754082.33 | 0.0090 | 0.0046 |
| Neptune | 21994-09-04 09:21 G | 9754449.67 | 9754449.89 | 9754450.13 | 0.0090 | 0.0039 |
| Neptune | 21995-09-06 15:21 G | 9754816.92 | 9754817.14 | 9754817.38 | 0.0090 | 0.0040 |
| Uranus | 21996-05-08 23:16 G | 9755062.26 | 9755062.47 | 9755062.70 | 0.0136 | 0.0075 |
| Saturn | 21996-06-15 16:19 G | 9755099.95 | 9755100.18 | 9755100.42 | 0.0288 | 0.0063 |
| Neptune | 21996-09-08 11:31 G | 9755184.74 | 9755184.98 | 9755185.22 | 0.0090 | 0.0035 |
| Uranus | 21997-05-13 08:24 G | 9755431.61 | 9755431.85 | 9755432.10 | 0.0135 | 0.0016 |
| Neptune | 21997-09-10 18:14 G | 9755552.03 | 9755552.26 | 9755552.49 | 0.0089 | 0.0035 |
| Uranus | 21998-05-17 22:19 G | 9755801.18 | 9755801.43 | 9755801.69 | 0.0135 | 0.0036 |
| Jupiter | 21998-06-12 15:21 G | 9755827.06 | 9755827.14 | 9755827.23 | 0.0519 | 0.0486 |
| Neptune | 21998-09-13 11:45 G | 9755919.74 | 9755919.99 | 9755920.24 | 0.0089 | 0.0031 |
| Uranus | 21999-05-22 05:16 G | 9756170.58 | 9756170.72 | 9756170.89 | 0.0135 | 0.0105 |
| Jupiter | 21999-07-19 01:40 G | 9756228.36 | 9756228.57 | 9756228.77 | 0.0535 | 0.0222 |
| Neptune | 21999-09-15 21:21 G | 9756287.17 | 9756287.39 | 9756287.64 | 0.0089 | 0.0030 |
| Neptune | 22000-09-17 10:33 G | 9756654.69 | 9756654.94 | 9756655.21 | 0.0089 | 0.0025 |

23RD MILLENNIUM CE

This is a list of transits of Moon in the 23rd millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|------------|------------|------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Neptune | 22001-09-20 01:12 G | 9757022.32 | 9757022.55 | 9757022.80 | 0.0089 | 0.0023 | | |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 22002-09-22 10:04 G | 9757389.67 | 9757389.92 | 9757390.19 | 0.0089 | 0.0020 |
| Neptune | 22003-09-25 04:48 G | 9757757.46 | 9757757.70 | 9757757.96 | 0.0089 | 0.0018 |
| Jupiter | 22003-12-12 14:52 G | 9757836.06 | 9757836.12 | 9757836.19 | 0.0509 | 0.0488 |
| Neptune | 22004-09-26 10:33 G | 9758124.70 | 9758124.94 | 9758125.21 | 0.0089 | 0.0016 |
| Jupiter | 22005-01-12 15:21 G | 9758232.93 | 9758233.14 | 9758233.36 | 0.0495 | 0.0105 |
| Neptune | 22005-09-29 06:28 G | 9758492.52 | 9758492.77 | 9758493.03 | 0.0089 | 0.0012 |
| Neptune | 22006-10-01 12:28 G | 9758859.77 | 9758860.02 | 9758860.28 | 0.0089 | 0.0009 |
| Neptune | 22007-10-04 06:14 G | 9759227.50 | 9759227.76 | 9759228.03 | 0.0089 | 0.0005 |
| Neptune | 22008-10-05 15:07 G | 9759594.88 | 9759595.13 | 9759595.38 | 0.0089 | 0.0004 |
| Neptune | 22009-10-08 04:04 G | 9759962.40 | 9759962.67 | 9759962.94 | 0.0089 | 0.0000 |
| Jupiter | 22010-06-17 15:50 G | 9760215.04 | 9760215.16 | 9760215.30 | 0.0522 | 0.0423 |
| Neptune | 22010-10-10 17:45 G | 9760329.99 | 9760330.24 | 9760330.49 | 0.0089 | 0.0001 |
| Saturn | 22010-12-10 00:28 G | 9760390.32 | 9760390.52 | 9760390.73 | 0.0271 | 0.0135 |
| Jupiter | 22011-07-24 13:40 G | 9760616.87 | 9760617.07 | 9760617.28 | 0.0536 | 0.0280 |
| Neptune | 22011-10-13 02:24 G | 9760697.34 | 9760697.60 | 9760697.87 | 0.0089 | 0.0006 |
| Saturn | 22011-12-22 08:38 G | 9760767.79 | 9760767.86 | 9760767.95 | 0.0272 | 0.0257 |
| Neptune | 22012-10-14 20:24 G | 9761065.10 | 9761065.35 | 9761065.60 | 0.0089 | 0.0007 |
| Neptune | 22013-10-17 01:55 G | 9761432.33 | 9761432.58 | 9761432.85 | 0.0089 | 0.0013 |
| Neptune | 22014-10-19 21:21 G | 9761800.14 | 9761800.39 | 9761800.65 | 0.0089 | 0.0012 |
| Neptune | 22015-10-22 03:07 G | 9762167.39 | 9762167.63 | 9762167.88 | 0.0089 | 0.0018 |
| Jupiter | 22015-12-17 04:04 G | 9762223.52 | 9762223.67 | 9762223.83 | 0.0507 | 0.0368 |
| Neptune | 22016-10-23 20:24 G | 9762535.10 | 9762535.35 | 9762535.62 | 0.0089 | 0.0017 |
| Jupiter | 22017-01-16 21:50 G | 9762620.18 | 9762620.41 | 9762620.64 | 0.0493 | 0.0148 |
| Neptune | 22017-10-26 04:33 G | 9762902.46 | 9762902.69 | 9762902.94 | 0.0089 | 0.0025 |
| Neptune | 22018-10-28 17:16 G | 9763269.97 | 9763270.22 | 9763270.49 | 0.0089 | 0.0023 |
| Neptune | 22019-10-31 06:14 G | 9763637.54 | 9763637.76 | 9763638.00 | 0.0089 | 0.0030 |
| Neptune | 22020-11-01 14:24 G | 9764004.85 | 9764005.10 | 9764005.35 | 0.0089 | 0.0028 |
| Neptune | 22021-11-04 07:26 G | 9764372.59 | 9764372.81 | 9764373.06 | 0.0089 | 0.0035 |
| Jupiter | 22022-06-22 17:45 G | 9764603.05 | 9764603.24 | 9764603.44 | 0.0523 | 0.0295 |
| Neptune | 22022-11-06 12:43 G | 9764739.80 | 9764740.03 | 9764740.28 | 0.0089 | 0.0032 |

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| Jupiter | 22023-07-29 09:07 G | 9765004.71 | 9765004.88 | 9765005.06 | 0.0537 | 0.0358 |
| Neptune | 22023-11-09 07:26 G | 9765107.58 | 9765107.81 | 9765108.04 | 0.0089 | 0.0040 |
| Neptune | 22024-11-10 12:14 G | 9765474.80 | 9765475.01 | 9765475.26 | 0.0089 | 0.0038 |
| Saturn | 22025-06-09 14:52 G | 9765685.91 | 9765686.12 | 9765686.34 | 0.0289 | 0.0140 |
| Neptune | 22025-11-13 05:02 G | 9765842.51 | 9765842.71 | 9765842.96 | 0.0089 | 0.0046 |
| Neptune | 22026-11-15 13:26 G | 9766209.85 | 9766210.06 | 9766210.29 | 0.0089 | 0.0042 |
| Neptune | 22027-11-18 01:26 G | 9766577.36 | 9766577.56 | 9766577.80 | 0.0089 | 0.0050 |
| Jupiter | 22027-12-21 19:55 G | 9766611.14 | 9766611.33 | 9766611.53 | 0.0505 | 0.0289 |
| Neptune | 22028-11-19 14:09 G | 9766944.89 | 9766945.09 | 9766945.32 | 0.0089 | 0.0046 |
| Jupiter | 22029-01-21 03:50 G | 9767007.47 | 9767007.66 | 9767007.86 | 0.0492 | 0.0235 |
| Neptune | 22029-11-21 21:36 G | 9767312.21 | 9767312.40 | 9767312.63 | 0.0089 | 0.0054 |
| Neptune | 22030-11-24 14:52 G | 9767679.92 | 9767680.12 | 9767680.34 | 0.0089 | 0.0050 |
| Neptune | 22031-11-26 19:12 G | 9768047.13 | 9768047.30 | 9768047.51 | 0.0089 | 0.0059 |
| Neptune | 22032-11-28 13:12 G | 9768414.87 | 9768415.05 | 9768415.28 | 0.0089 | 0.0054 |
| Neptune | 22033-11-30 18:14 G | 9768782.09 | 9768782.26 | 9768782.45 | 0.0089 | 0.0062 |
| Jupiter | 22034-06-27 10:33 G | 9768990.72 | 9768990.94 | 9768991.16 | 0.0525 | 0.0187 |
| Neptune | 22034-12-03 10:04 G | 9769149.74 | 9769149.92 | 9769150.15 | 0.0089 | 0.0057 |
| Jupiter | 22035-08-03 22:04 G | 9769393.35 | 9769393.42 | 9769393.50 | 0.0539 | 0.0507 |
| Neptune | 22035-12-05 18:00 G | 9769517.11 | 9769517.25 | 9769517.44 | 0.0088 | 0.0066 |
| Neptune | 22036-12-07 05:31 G | 9769884.54 | 9769884.73 | 9769884.93 | 0.0088 | 0.0060 |
| Pluto | 22037-04-10 05:16 G | 9770008.64 | 9770008.72 | 9770008.83 | 0.0080 | 0.0075 |
| Neptune | 22037-12-09 17:45 G | 9770252.11 | 9770252.24 | 9770252.42 | 0.0088 | 0.0069 |
| Pluto | 22038-04-12 04:33 G | 9770375.67 | 9770375.69 | 9770375.73 | 0.0080 | 0.0079 |
| Neptune | 22038-12-12 00:43 G | 9770619.37 | 9770619.53 | 9770619.74 | 0.0088 | 0.0062 |
| Uranus | 22039-11-07 17:31 G | 9770950.08 | 9770950.23 | 9770950.40 | 0.0142 | 0.0110 |
| Neptune | 22039-12-14 17:45 G | 9770987.10 | 9770987.24 | 9770987.40 | 0.0088 | 0.0071 |
| Jupiter | 22039-12-26 02:24 G | 9770998.40 | 9770998.60 | 9770998.80 | 0.0503 | 0.0245 |
| Uranus | 22040-11-11 11:02 G | 9771319.72 | 9771319.96 | 9771320.20 | 0.0143 | 0.0033 |
| Neptune | 22040-12-15 22:04 G | 9771354.25 | 9771354.42 | 9771354.61 | 0.0088 | 0.0064 |
| Saturn | 22040-12-16 04:48 G | 9771354.48 | 9771354.70 | 9771354.94 | 0.0271 | 0.0090 * |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Jupiter | 22041-01-25 15:07 G | 9771394.97 | 9771395.13 | 9771395.31 | 0.0491 | 0.0344 |
| Uranus | 22041-11-16 12:14 G | 9771689.76 | 9771690.01 | 9771690.27 | 0.0143 | 0.0031 |
| Neptune | 22041-12-18 15:21 G | 9771722.02 | 9771722.14 | 9771722.31 | 0.0088 | 0.0073 |
| Uranus | 22042-11-21 04:19 G | 9772059.52 | 9772059.68 | 9772059.88 | 0.0143 | 0.0098 |
| Neptune | 22042-12-20 20:24 G | 9772089.20 | 9772089.35 | 9772089.53 | 0.0088 | 0.0066 |
| Neptune | 22043-12-23 12:14 G | 9772456.87 | 9772457.01 | 9772457.15 | 0.0088 | 0.0075 |
| Mars | 22044-04-03 22:04 G | 9772559.24 | 9772559.42 | 9772559.59 | 0.1623 | 0.0155 |
| Neptune | 22044-12-24 20:09 G | 9772824.18 | 9772824.34 | 9772824.50 | 0.0088 | 0.0068 |
| Neptune | 22045-12-27 06:00 G | 9773191.63 | 9773191.75 | 9773191.91 | 0.0088 | 0.0076 |
| Jupiter | 22046-07-02 18:43 G | 9773379.06 | 9773379.28 | 9773379.51 | 0.0528 | 0.0133 |
| Neptune | 22046-12-29 18:57 G | 9773559.15 | 9773559.29 | 9773559.46 | 0.0088 | 0.0068 |
| Neptune | 22048-01-01 00:43 G | 9773926.41 | 9773926.53 | 9773926.67 | 0.0088 | 0.0077 |
| Neptune | 22049-01-02 17:16 G | 9774294.09 | 9774294.22 | 9774294.40 | 0.0088 | 0.0069 |
| Neptune | 22050-01-04 21:21 G | 9774661.27 | 9774661.39 | 9774661.51 | 0.0088 | 0.0078 |
| Mars | 22050-10-04 18:28 G | 9774934.05 | 9774934.27 | 9774934.48 | 0.1916 | 0.0506 |
| Neptune | 22051-01-07 14:09 G | 9775028.95 | 9775029.09 | 9775029.28 | 0.0088 | 0.0069 |
| Jupiter | 22051-12-30 23:02 G | 9775386.25 | 9775386.46 | 9775386.68 | 0.0501 | 0.0174 |
| Neptune | 22052-01-09 19:12 G | 9775396.20 | 9775396.30 | 9775396.44 | 0.0088 | 0.0077 |
| Neptune | 22053-01-11 10:04 G | 9775763.76 | 9775763.92 | 9775764.09 | 0.0088 | 0.0068 |
| Jupiter | 22053-01-29 16:04 G | 9775782.06 | 9775782.17 | 9775782.30 | 0.0489 | 0.0413 |
| Neptune | 22054-01-13 18:28 G | 9776131.17 | 9776131.27 | 9776131.41 | 0.0088 | 0.0077 |
| Neptune | 22055-01-16 04:04 G | 9776498.52 | 9776498.67 | 9776498.85 | 0.0088 | 0.0068 |
| Saturn | 22055-06-17 20:52 G | 9776651.14 | 9776651.37 | 9776651.61 | 0.0288 | 0.0115 |
| Neptune | 22056-01-18 17:16 G | 9776866.11 | 9776866.22 | 9776866.35 | 0.0088 | 0.0076 |
| Neptune | 22057-01-19 22:04 G | 9777233.27 | 9777233.42 | 9777233.61 | 0.0088 | 0.0067 |
| Neptune | 22058-01-22 14:52 G | 9777601.01 | 9777601.12 | 9777601.27 | 0.0088 | 0.0075 |
| Jupiter | 22058-07-07 18:28 G | 9777767.03 | 9777767.27 | 9777767.51 | 0.0530 | 0.0051 |
| Neptune | 22059-01-24 18:14 G | 9777968.11 | 9777968.26 | 9777968.45 | 0.0088 | 0.0065 |
| Neptune | 22060-01-27 11:16 G | 9778335.84 | 9778335.97 | 9778336.12 | 0.0088 | 0.0073 |
| Neptune | 22061-01-28 16:04 G | 9778703.02 | 9778703.17 | 9778703.36 | 0.0088 | 0.0064 |

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|---------|---------------------|------------|------------|------------|--------|--------|
| Neptune | 22062-01-31 06:00 G | 9779070.61 | 9779070.75 | 9779070.92 | 0.0088 | 0.0071 |
| Neptune | 22063-02-02 15:07 G | 9779437.98 | 9779438.13 | 9779438.34 | 0.0088 | 0.0062 |
| Jupiter | 22064-01-04 01:55 G | 9779773.34 | 9779773.58 | 9779773.81 | 0.0499 | 0.0061 |
| Neptune | 22064-02-04 23:45 G | 9779805.34 | 9779805.49 | 9779805.67 | 0.0088 | 0.0068 |
| Jupiter | 22065-02-03 04:04 G | 9780169.57 | 9780169.67 | 9780169.77 | 0.0488 | 0.0437 |
| Neptune | 22065-02-06 13:40 G | 9780172.91 | 9780173.07 | 9780173.28 | 0.0088 | 0.0059 |
| Neptune | 22066-02-08 18:28 G | 9780540.12 | 9780540.27 | 9780540.46 | 0.0088 | 0.0066 |
| Neptune | 22067-02-11 11:31 G | 9780907.81 | 9780907.98 | 9780908.20 | 0.0088 | 0.0056 |
| Neptune | 22068-02-13 15:21 G | 9781274.97 | 9781275.14 | 9781275.32 | 0.0088 | 0.0063 |
| Neptune | 22069-02-15 07:40 G | 9781642.62 | 9781642.82 | 9781643.04 | 0.0088 | 0.0052 |
| Saturn | 22069-12-11 04:48 G | 9781941.47 | 9781941.70 | 9781941.93 | 0.0271 | 0.0090 |
| Neptune | 22070-02-17 13:40 G | 9782009.89 | 9782010.07 | 9782010.26 | 0.0088 | 0.0059 |
| Jupiter | 22070-07-13 01:40 G | 9782155.35 | 9782155.57 | 9782155.79 | 0.0532 | 0.0096 |
| Neptune | 22071-02-20 02:24 G | 9782377.40 | 9782377.60 | 9782377.84 | 0.0088 | 0.0049 |
| Neptune | 22072-02-22 12:28 G | 9782744.85 | 9782745.02 | 9782745.24 | 0.0088 | 0.0056 |
| Neptune | 22073-02-23 20:24 G | 9783112.14 | 9783112.35 | 9783112.59 | 0.0088 | 0.0045 |
| Neptune | 22074-02-26 11:16 G | 9783479.78 | 9783479.97 | 9783480.19 | 0.0088 | 0.0052 |
| Neptune | 22075-02-28 15:07 G | 9783846.93 | 9783847.13 | 9783847.38 | 0.0088 | 0.0041 |
| Jupiter | 22076-01-08 16:04 G | 9784160.95 | 9784161.17 | 9784161.40 | 0.0497 | 0.0044 |
| Neptune | 22076-03-02 08:52 G | 9784214.67 | 9784214.87 | 9784215.10 | 0.0088 | 0.0047 |
| Neptune | 22077-03-04 12:28 G | 9784581.81 | 9784582.02 | 9784582.27 | 0.0088 | 0.0036 |
| Neptune | 22078-03-07 04:48 G | 9784949.49 | 9784949.70 | 9784949.95 | 0.0088 | 0.0043 |
| Neptune | 22079-03-09 11:45 G | 9785316.77 | 9785316.99 | 9785317.24 | 0.0088 | 0.0032 |
| Uranus | 22079-05-05 18:28 G | 9785374.20 | 9785374.27 | 9785374.36 | 0.0136 | 0.0128 |
| Neptune | 22080-03-11 00:14 G | 9785684.29 | 9785684.51 | 9785684.77 | 0.0088 | 0.0038 |
| Uranus | 22080-05-09 07:12 G | 9785743.59 | 9785743.80 | 9785744.03 | 0.0136 | 0.0077 |
| Neptune | 22081-03-13 11:45 G | 9786051.77 | 9786051.99 | 9786052.24 | 0.0088 | 0.0027 |
| Uranus | 22081-05-13 18:00 G | 9786113.01 | 9786113.25 | 9786113.50 | 0.0135 | 0.0016 |
| Jupiter | 22081-06-11 22:19 G | 9786142.39 | 9786142.43 | 9786142.48 | 0.0518 | 0.0506 |
| Neptune | 22082-03-15 19:12 G | 9786419.06 | 9786419.30 | 9786419.55 | 0.0088 | 0.0032 |

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| Uranus | 22082-05-18 06:43 G | 9786482.54 | 9786482.78 | 9786483.04 | 0.0135 | 0.0047 |
| Jupiter | 22082-07-18 06:43 G | 9786543.56 | 9786543.78 | 9786544.01 | 0.0534 | 0.0203 |
| Neptune | 22083-03-18 10:33 G | 9786786.71 | 9786786.94 | 9786787.20 | 0.0088 | 0.0021 |
| Uranus | 22083-05-22 14:52 G | 9786851.96 | 9786852.12 | 9786852.31 | 0.0135 | 0.0095 |
| Neptune | 22084-03-19 14:38 G | 9787153.88 | 9787154.11 | 9787154.37 | 0.0088 | 0.0028 |
| Saturn | 22084-06-10 19:26 G | 9787237.09 | 9787237.31 | 9787237.54 | 0.0289 | 0.0090 |
| Neptune | 22085-03-22 08:38 G | 9787521.61 | 9787521.86 | 9787522.12 | 0.0088 | 0.0016 |
| Neptune | 22086-03-24 12:28 G | 9787888.78 | 9787889.02 | 9787889.28 | 0.0088 | 0.0022 |
| Jupiter | 22086-12-11 19:12 G | 9788151.25 | 9788151.30 | 9788151.35 | 0.0510 | 0.0497 |
| Neptune | 22087-03-27 04:48 G | 9788256.44 | 9788256.70 | 9788256.96 | 0.0088 | 0.0010 |
| Jupiter | 22088-01-12 22:48 G | 9788548.21 | 9788548.45 | 9788548.69 | 0.0496 | 0.0087 |
| Neptune | 22088-03-28 12:00 G | 9788623.76 | 9788624.00 | 9788624.25 | 0.0088 | 0.0016 |
| Neptune | 22089-03-31 00:28 G | 9788991.26 | 9788991.52 | 9788991.79 | 0.0088 | 0.0005 |
| Neptune | 22090-04-02 12:43 G | 9789358.79 | 9789359.03 | 9789359.29 | 0.0088 | 0.0011 |
| Neptune | 22091-04-04 20:09 G | 9789726.07 | 9789726.34 | 9789726.61 | 0.0088 | 0.0001 |
| Neptune | 22092-04-06 12:28 G | 9790093.77 | 9790094.02 | 9790094.28 | 0.0088 | 0.0006 |
| Neptune | 22093-04-08 17:02 G | 9790460.95 | 9790461.21 | 9790461.47 | 0.0088 | 0.0007 |
| Jupiter | 22093-06-16 23:16 G | 9790530.34 | 9790530.47 | 9790530.61 | 0.0520 | 0.0429 |
| Neptune | 22094-04-11 11:02 G | 9790828.70 | 9790828.96 | 9790829.22 | 0.0088 | 0.0002 |
| Jupiter | 22094-07-23 05:16 G | 9790931.53 | 9790931.72 | 9790931.93 | 0.0535 | 0.0261 |
| Neptune | 22095-04-13 15:36 G | 9791195.90 | 9791196.15 | 9791196.41 | 0.0088 | 0.0012 |
| Neptune | 22096-04-15 07:55 G | 9791563.56 | 9791563.83 | 9791564.09 | 0.0088 | 0.0007 |
| Neptune | 22097-04-17 15:50 G | 9791930.92 | 9791931.16 | 9791931.41 | 0.0088 | 0.0018 |
| Neptune | 22098-04-20 04:19 G | 9792298.42 | 9792298.68 | 9792298.94 | 0.0088 | 0.0012 |
| Saturn | 22098-12-06 01:55 G | 9792528.50 | 9792528.58 | 9792528.69 | 0.0270 | 0.0249 |
| Jupiter | 22098-12-16 14:38 G | 9792538.95 | 9792539.11 | 9792539.28 | 0.0508 | 0.0370 |
| Neptune | 22099-04-22 17:02 G | 9792665.98 | 9792666.21 | 9792666.46 | 0.0088 | 0.0024 |
| Saturn | 22099-12-18 07:40 G | 9792905.63 | 9792905.82 | 9792906.04 | 0.0271 | 0.0138 |
| Jupiter | 22100-01-17 06:28 G | 9792935.55 | 9792935.77 | 9792935.98 | 0.0494 | 0.0138 |
| Neptune | 22100-04-25 00:28 G | 9793033.27 | 9793033.52 | 9793033.79 | 0.0088 | 0.0018 |

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| Neptune | 22101-04-27 17:16 G | 9793401.00 | 9793401.22 | 9793401.48 | 0.0088 | 0.0030 |
| Neptune | 22102-04-29 22:04 G | 9793768.19 | 9793768.42 | 9793768.69 | 0.0088 | 0.0024 |
| Neptune | 22103-05-02 17:02 G | 9794135.97 | 9794136.21 | 9794136.46 | 0.0088 | 0.0034 |
| Neptune | 22104-05-03 22:04 G | 9794503.19 | 9794503.42 | 9794503.67 | 0.0088 | 0.0029 |
| Neptune | 22105-05-06 14:38 G | 9794870.89 | 9794871.11 | 9794871.37 | 0.0088 | 0.0040 |
| Jupiter | 22105-06-22 14:09 G | 9794917.90 | 9794918.09 | 9794918.28 | 0.0523 | 0.0304 |
| Neptune | 22106-05-08 23:31 G | 9795238.27 | 9795238.48 | 9795238.73 | 0.0088 | 0.0036 |
| Jupiter | 22106-07-29 18:14 G | 9795320.09 | 9795320.26 | 9795320.44 | 0.0537 | 0.0351 |
| Neptune | 22107-05-11 12:00 G | 9795605.79 | 9795606.00 | 9795606.26 | 0.0088 | 0.0045 |
| Neptune | 22108-05-13 02:09 G | 9795973.38 | 9795973.59 | 9795973.82 | 0.0089 | 0.0040 |
| Neptune | 22109-05-15 09:50 G | 9796340.71 | 9796340.91 | 9796341.15 | 0.0089 | 0.0049 |
| Neptune | 22110-05-18 03:21 G | 9796708.44 | 9796708.64 | 9796708.87 | 0.0089 | 0.0045 |
| Jupiter | 22110-12-21 23:31 G | 9796926.29 | 9796926.48 | 9796926.67 | 0.0506 | 0.0295 |
| Neptune | 22111-05-20 08:38 G | 9797075.67 | 9797075.86 | 9797076.07 | 0.0089 | 0.0054 |
| Jupiter | 22112-01-22 18:57 G | 9797323.09 | 9797323.29 | 9797323.51 | 0.0492 | 0.0235 |
| Neptune | 22112-05-22 03:36 G | 9797443.45 | 9797443.65 | 9797443.88 | 0.0089 | 0.0050 |
| Neptune | 22113-05-24 09:07 G | 9797810.71 | 9797810.88 | 9797811.09 | 0.0089 | 0.0058 |
| Neptune | 22114-05-27 02:09 G | 9798178.40 | 9798178.59 | 9798178.82 | 0.0089 | 0.0054 |
| Saturn | 22114-06-19 19:40 G | 9798202.12 | 9798202.32 | 9798202.53 | 0.0288 | 0.0167 |
| Neptune | 22115-05-29 11:31 G | 9798545.81 | 9798545.98 | 9798546.17 | 0.0089 | 0.0061 |
| Neptune | 22116-05-31 00:43 G | 9798913.35 | 9798913.53 | 9798913.76 | 0.0089 | 0.0058 |
| Neptune | 22117-06-02 15:21 G | 9799280.98 | 9799281.14 | 9799281.32 | 0.0089 | 0.0065 |
| Jupiter | 22117-06-28 00:00 G | 9799306.28 | 9799306.50 | 9799306.71 | 0.0525 | 0.0196 |
| Neptune | 22118-06-04 23:31 G | 9799648.31 | 9799648.48 | 9799648.69 | 0.0089 | 0.0062 |
| Jupiter | 22118-08-03 23:02 G | 9799708.38 | 9799708.46 | 9799708.56 | 0.0539 | 0.0498 |
| Neptune | 22119-06-07 17:45 G | 9800016.09 | 9800016.24 | 9800016.42 | 0.0089 | 0.0068 |
| Neptune | 22120-06-08 23:16 G | 9800383.32 | 9800383.47 | 9800383.67 | 0.0089 | 0.0065 |
| Neptune | 22121-06-11 18:57 G | 9800751.15 | 9800751.29 | 9800751.47 | 0.0089 | 0.0070 |
| Neptune | 22122-06-14 00:43 G | 9801118.39 | 9801118.53 | 9801118.71 | 0.0089 | 0.0068 |
| Jupiter | 22122-12-26 19:55 G | 9801314.14 | 9801314.33 | 9801314.53 | 0.0503 | 0.0253 |

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| Mars | 22123-04-07 19:40 G | 9801416.18 | 9801416.32 | 9801416.47 | 0.1626 | 0.1016 |
| Neptune | 22123-06-16 18:14 G | 9801486.14 | 9801486.26 | 9801486.44 | 0.0089 | 0.0073 |
| Uranus | 22123-11-09 00:43 G | 9801631.35 | 9801631.53 | 9801631.74 | 0.0142 | 0.0095 |
| Jupiter | 22124-01-26 19:12 G | 9801710.14 | 9801710.30 | 9801710.47 | 0.0491 | 0.0341 |
| Neptune | 22124-06-18 03:21 G | 9801853.52 | 9801853.64 | 9801853.81 | 0.0089 | 0.0072 |
| Uranus | 22124-11-12 19:12 G | 9802001.07 | 9802001.30 | 9802001.54 | 0.0143 | 0.0041 |
| Neptune | 22125-06-20 17:16 G | 9802221.11 | 9802221.22 | 9802221.40 | 0.0089 | 0.0075 |
| Uranus | 22125-11-17 18:43 G | 9802371.04 | 9802371.28 | 9802371.55 | 0.0143 | 0.0035 |
| Neptune | 22126-06-23 07:26 G | 9802588.69 | 9802588.81 | 9802588.98 | 0.0089 | 0.0073 |
| Uranus | 22126-11-22 12:00 G | 9802740.85 | 9802741.00 | 9802741.18 | 0.0143 | 0.0106 |
| Neptune | 22127-06-25 16:33 G | 9802956.09 | 9802956.19 | 9802956.37 | 0.0089 | 0.0077 |
| Neptune | 22128-06-27 11:02 G | 9803323.85 | 9803323.96 | 9803324.12 | 0.0089 | 0.0075 |
| Saturn | 22128-12-13 01:55 G | 9803492.33 | 9803492.58 | 9803492.83 | 0.0271 | 0.0044 |
| Neptune | 22129-06-29 17:31 G | 9803691.11 | 9803691.23 | 9803691.37 | 0.0089 | 0.0078 |
| Jupiter | 22129-07-02 21:07 G | 9803694.15 | 9803694.38 | 9803694.61 | 0.0528 | 0.0145 |
| Neptune | 22130-07-02 13:12 G | 9804058.95 | 9804059.05 | 9804059.20 | 0.0089 | 0.0077 |
| Neptune | 22131-07-04 19:12 G | 9804426.21 | 9804426.30 | 9804426.46 | 0.0089 | 0.0079 |
| Neptune | 22132-07-06 13:55 G | 9804793.97 | 9804794.08 | 9804794.24 | 0.0089 | 0.0078 |
| Neptune | 22133-07-08 22:48 G | 9805161.35 | 9805161.45 | 9805161.60 | 0.0089 | 0.0077 |
| Neptune | 22134-07-11 13:26 G | 9805528.95 | 9805529.06 | 9805529.22 | 0.0089 | 0.0078 |
| Jupiter | 22134-12-31 00:43 G | 9805701.31 | 9805701.53 | 9805701.75 | 0.0501 | 0.0177 |
| Neptune | 22135-07-14 03:21 G | 9805896.54 | 9805896.64 | 9805896.79 | 0.0089 | 0.0078 |
| Jupiter | 22136-01-31 08:52 G | 9806097.75 | 9806097.87 | 9806098.02 | 0.0490 | 0.0399 |
| Neptune | 22136-07-15 13:40 G | 9806263.96 | 9806264.07 | 9806264.22 | 0.0089 | 0.0078 |
| Neptune | 22137-07-18 07:12 G | 9806631.70 | 9806631.80 | 9806631.96 | 0.0089 | 0.0077 |
| Neptune | 22138-07-20 13:55 G | 9806998.97 | 9806999.08 | 9806999.24 | 0.0089 | 0.0077 |
| Neptune | 22139-07-23 10:19 G | 9807366.80 | 9807366.93 | 9807367.09 | 0.0089 | 0.0074 |
| Neptune | 22140-07-24 16:48 G | 9807734.07 | 9807734.20 | 9807734.33 | 0.0089 | 0.0076 |
| Jupiter | 22141-07-08 01:26 G | 9808082.33 | 9808082.56 | 9808082.78 | 0.0529 | 0.0063 |
| Neptune | 22141-07-27 11:16 G | 9808101.85 | 9808101.97 | 9808102.16 | 0.0089 | 0.0073 |

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| Neptune | 22142-07-29 19:55 G | 9808469.22 | 9808469.33 | 9808469.49 | 0.0089 | 0.0076 |
| Saturn | 22143-06-14 00:28 G | 9808788.28 | 9808788.52 | 9808788.75 | 0.0289 | 0.0043 |
| Neptune | 22143-08-01 12:14 G | 9808836.85 | 9808837.01 | 9808837.18 | 0.0089 | 0.0070 |
| Neptune | 22144-08-03 01:12 G | 9809204.42 | 9809204.55 | 9809204.71 | 0.0089 | 0.0073 |
| Neptune | 22145-08-05 12:14 G | 9809571.85 | 9809572.01 | 9809572.20 | 0.0089 | 0.0067 |
| Neptune | 22146-08-08 05:31 G | 9809939.60 | 9809939.73 | 9809939.91 | 0.0090 | 0.0071 |
| Jupiter | 22147-01-04 14:09 G | 9810088.86 | 9810089.09 | 9810089.31 | 0.0500 | 0.0062 |
| Neptune | 22147-08-10 12:28 G | 9810306.87 | 9810307.02 | 9810307.23 | 0.0090 | 0.0065 |
| Jupiter | 22148-02-04 07:40 G | 9810484.72 | 9810484.82 | 9810484.94 | 0.0489 | 0.0426 |
| Neptune | 22148-08-12 08:24 G | 9810674.71 | 9810674.85 | 9810675.04 | 0.0090 | 0.0069 |
| Neptune | 22149-08-14 14:38 G | 9811041.95 | 9811042.11 | 9811042.32 | 0.0090 | 0.0061 |
| Neptune | 22150-08-17 09:50 G | 9811409.76 | 9811409.91 | 9811410.12 | 0.0090 | 0.0065 |
| Neptune | 22151-08-19 18:14 G | 9811777.07 | 9811777.26 | 9811777.47 | 0.0090 | 0.0056 |
| Neptune | 22152-08-21 10:04 G | 9812144.75 | 9812144.92 | 9812145.15 | 0.0090 | 0.0061 |
| Jupiter | 22153-07-13 05:45 G | 9812470.50 | 9812470.74 | 9812470.98 | 0.0531 | 0.0082 |
| Neptune | 22153-08-23 22:33 G | 9812512.26 | 9812512.44 | 9812512.67 | 0.0090 | 0.0053 |
| Neptune | 22154-08-26 10:33 G | 9812879.75 | 9812879.94 | 9812880.17 | 0.0090 | 0.0057 |
| Neptune | 22155-08-29 03:36 G | 9813247.46 | 9813247.65 | 9813247.88 | 0.0090 | 0.0048 |
| Neptune | 22156-08-30 11:16 G | 9813614.77 | 9813614.97 | 9813615.20 | 0.0090 | 0.0052 |
| Neptune | 22157-09-02 06:43 G | 9813982.57 | 9813982.78 | 9813983.03 | 0.0090 | 0.0042 |
| Saturn | 22157-12-08 05:02 G | 9814079.56 | 9814079.71 | 9814079.87 | 0.0270 | 0.0204 |
| Neptune | 22158-09-04 12:28 G | 9814349.83 | 9814350.02 | 9814350.26 | 0.0090 | 0.0048 |
| Saturn | 22158-12-20 12:28 G | 9814456.86 | 9814457.02 | 9814457.21 | 0.0271 | 0.0185 |
| Jupiter | 22159-01-09 00:00 G | 9814476.26 | 9814476.50 | 9814476.74 | 0.0498 | 0.0033 |
| Neptune | 22159-09-07 08:24 G | 9814717.62 | 9814717.85 | 9814718.10 | 0.0090 | 0.0037 |
| Neptune | 22160-09-08 15:21 G | 9815084.94 | 9815085.14 | 9815085.38 | 0.0090 | 0.0043 |
| Neptune | 22161-09-11 07:40 G | 9815452.59 | 9815452.82 | 9815453.09 | 0.0090 | 0.0032 |
| Neptune | 22162-09-13 19:12 G | 9815820.09 | 9815820.30 | 9815820.54 | 0.0090 | 0.0037 |
| Neptune | 22163-09-16 07:26 G | 9816187.57 | 9816187.81 | 9816188.08 | 0.0089 | 0.0025 |
| Uranus | 22164-05-10 15:36 G | 9816424.93 | 9816425.15 | 9816425.39 | 0.0136 | 0.0069 |

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| Jupiter | 22164-06-12 06:00 G | 9816457.73 | 9816457.75 | 9816457.76 | 0.0517 | 0.0516 |
| Neptune | 22164-09-17 23:31 G | 9816555.25 | 9816555.48 | 9816555.72 | 0.0089 | 0.0031 |
| Uranus | 22165-05-15 03:36 G | 9816794.40 | 9816794.65 | 9816794.90 | 0.0135 | 0.0013 |
| Jupiter | 22165-07-18 03:50 G | 9816858.44 | 9816858.66 | 9816858.87 | 0.0533 | 0.0190 |
| Neptune | 22165-09-20 07:12 G | 9816922.55 | 9816922.80 | 9816923.06 | 0.0089 | 0.0020 |
| Uranus | 22166-05-19 14:24 G | 9817163.85 | 9817164.10 | 9817164.36 | 0.0135 | 0.0042 |
| Neptune | 22166-09-23 02:24 G | 9817290.36 | 9817290.60 | 9817290.85 | 0.0089 | 0.0026 |
| Uranus | 22167-05-23 23:45 G | 9817533.37 | 9817533.49 | 9817533.66 | 0.0135 | 0.0109 |
| Neptune | 22167-09-25 08:09 G | 9817657.59 | 9817657.84 | 9817658.10 | 0.0089 | 0.0014 |
| Neptune | 22168-09-27 03:36 G | 9818025.40 | 9818025.65 | 9818025.91 | 0.0089 | 0.0020 |
| Neptune | 22169-09-29 10:19 G | 9818392.68 | 9818392.93 | 9818393.18 | 0.0089 | 0.0007 |
| Jupiter | 22169-12-12 09:07 G | 9818466.82 | 9818466.88 | 9818466.96 | 0.0511 | 0.0487 |
| Neptune | 22170-10-02 02:52 G | 9818760.36 | 9818760.62 | 9818760.89 | 0.0089 | 0.0013 |
| Jupiter | 22171-01-13 08:38 G | 9818863.64 | 9818863.86 | 9818864.08 | 0.0496 | 0.0079 |
| Neptune | 22171-10-04 13:26 G | 9819127.81 | 9819128.06 | 9819128.31 | 0.0089 | 0.0002 |
| Saturn | 22172-06-06 18:00 G | 9819374.14 | 9819374.25 | 9819374.36 | 0.0289 | 0.0259 |
| Neptune | 22172-10-06 01:40 G | 9819495.30 | 9819495.57 | 9819495.84 | 0.0089 | 0.0007 |
| Saturn | 22173-06-20 20:38 G | 9819753.20 | 9819753.36 | 9819753.52 | 0.0288 | 0.0217 |
| Neptune | 22173-10-08 16:48 G | 9819862.95 | 9819863.20 | 9819863.45 | 0.0089 | 0.0005 |
| Neptune | 22174-10-11 00:28 G | 9820230.26 | 9820230.52 | 9820230.78 | 0.0089 | 0.0001 |
| Neptune | 22175-10-13 18:43 G | 9820598.03 | 9820598.28 | 9820598.54 | 0.0089 | 0.0011 |
| Jupiter | 22176-06-16 22:48 G | 9820845.32 | 9820845.45 | 9820845.57 | 0.0520 | 0.0437 |
| Neptune | 22176-10-15 00:00 G | 9820965.25 | 9820965.50 | 9820965.76 | 0.0089 | 0.0005 |
| Jupiter | 22177-07-23 18:14 G | 9821247.06 | 9821247.26 | 9821247.47 | 0.0535 | 0.0243 |
| Neptune | 22177-10-17 18:43 G | 9821333.04 | 9821333.28 | 9821333.55 | 0.0089 | 0.0017 |
| Neptune | 22178-10-20 00:57 G | 9821700.30 | 9821700.54 | 9821700.80 | 0.0089 | 0.0011 |
| Neptune | 22179-10-22 17:45 G | 9822067.98 | 9822068.24 | 9822068.49 | 0.0089 | 0.0023 |
| Neptune | 22180-10-24 03:21 G | 9822435.40 | 9822435.64 | 9822435.89 | 0.0089 | 0.0017 |
| Neptune | 22181-10-26 15:21 G | 9822802.90 | 9822803.14 | 9822803.41 | 0.0089 | 0.0029 |
| Jupiter | 22181-12-16 18:28 G | 9822854.12 | 9822854.27 | 9822854.43 | 0.0508 | 0.0371 |

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| Neptune | 22182-10-29 06:14 G | 9823170.53 | 9823170.76 | 9823171.01 | 0.0089 | 0.0023 |
| Jupiter | 22183-01-17 21:21 G | 9823251.16 | 9823251.39 | 9823251.62 | 0.0494 | 0.0131 |
| Neptune | 22183-10-31 13:26 G | 9823537.83 | 9823538.06 | 9823538.32 | 0.0089 | 0.0034 |
| Neptune | 22184-11-02 07:26 G | 9823905.58 | 9823905.81 | 9823906.06 | 0.0089 | 0.0028 |
| Neptune | 22185-11-04 12:00 G | 9824272.79 | 9824273.00 | 9824273.24 | 0.0089 | 0.0040 |
| Neptune | 22186-11-07 06:28 G | 9824640.55 | 9824640.77 | 9824641.03 | 0.0089 | 0.0035 |
| Neptune | 22187-11-09 12:14 G | 9825007.80 | 9825008.01 | 9825008.24 | 0.0089 | 0.0045 |
| Saturn | 22187-12-14 21:50 G | 9825043.16 | 9825043.41 | 9825043.66 | 0.0270 | 0.0003 |
| Jupiter | 22188-06-22 07:12 G | 9825233.62 | 9825233.80 | 9825233.99 | 0.0523 | 0.0305 |
| Neptune | 22188-11-11 03:36 G | 9825375.44 | 9825375.65 | 9825375.91 | 0.0089 | 0.0040 |
| Jupiter | 22189-07-28 21:07 G | 9825635.20 | 9825635.38 | 9825635.57 | 0.0537 | 0.0343 |
| Neptune | 22189-11-13 13:26 G | 9825742.85 | 9825743.06 | 9825743.27 | 0.0089 | 0.0049 |
| Neptune | 22190-11-16 00:43 G | 9826110.31 | 9826110.53 | 9826110.77 | 0.0089 | 0.0044 |
| Neptune | 22191-11-18 14:38 G | 9826477.94 | 9826478.11 | 9826478.33 | 0.0089 | 0.0055 |
| Neptune | 22192-11-19 22:04 G | 9826845.21 | 9826845.42 | 9826845.64 | 0.0089 | 0.0049 |
| Neptune | 22193-11-22 15:21 G | 9827212.97 | 9827213.14 | 9827213.34 | 0.0089 | 0.0059 |
| Jupiter | 22193-12-21 16:19 G | 9827242.00 | 9827242.18 | 9827242.37 | 0.0506 | 0.0302 |
| Neptune | 22194-11-24 19:40 G | 9827580.14 | 9827580.32 | 9827580.54 | 0.0089 | 0.0054 |
| Jupiter | 22195-01-21 23:02 G | 9827638.26 | 9827638.46 | 9827638.66 | 0.0493 | 0.0235 |
| Neptune | 22195-11-27 14:09 G | 9827947.91 | 9827948.09 | 9827948.28 | 0.0089 | 0.0062 |
| Pluto | 22196-10-13 09:36 G | 9828268.65 | 9828268.90 | 9828269.17 | 0.0064 | 0.0017 |
| Neptune | 22196-11-28 18:57 G | 9828315.12 | 9828315.29 | 9828315.50 | 0.0089 | 0.0058 |
| Neptune | 22197-12-01 10:19 G | 9828682.76 | 9828682.93 | 9828683.11 | 0.0089 | 0.0066 |
| Neptune | 22198-12-03 19:12 G | 9829050.13 | 9829050.30 | 9829050.48 | 0.0089 | 0.0062 |
| Neptune | 22199-12-06 05:16 G | 9829417.58 | 9829417.72 | 9829417.91 | 0.0089 | 0.0070 |
| Jupiter | 22200-06-28 00:43 G | 9829621.31 | 9829621.53 | 9829621.75 | 0.0524 | 0.0211 |
| Neptune | 22200-12-08 19:40 G | 9829785.16 | 9829785.32 | 9829785.50 | 0.0088 | 0.0065 |
| Jupiter | 22201-08-04 05:02 G | 9830023.62 | 9830023.71 | 9830023.81 | 0.0538 | 0.0485 |
| Neptune | 22201-12-11 01:55 G | 9830152.44 | 9830152.58 | 9830152.74 | 0.0088 | 0.0072 |
| Saturn | 22202-06-16 01:12 G | 9830339.30 | 9830339.55 | 9830339.80 | 0.0289 | 0.0003 |

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| Neptune | 22202-12-13 18:43 G | 9830520.14 | 9830520.28 | 9830520.46 | 0.0088 | 0.0068 |
| Neptune | 22203-12-15 22:19 G | 9830887.33 | 9830887.43 | 9830887.60 | 0.0088 | 0.0076 |
| Neptune | 22204-12-17 16:19 G | 9831255.04 | 9831255.18 | 9831255.35 | 0.0088 | 0.0071 |
| Neptune | 22205-12-19 21:21 G | 9831622.29 | 9831622.39 | 9831622.53 | 0.0088 | 0.0077 |
| Jupiter | 22205-12-26 18:43 G | 9831629.08 | 9831629.28 | 9831629.49 | 0.0504 | 0.0264 |
| Neptune | 22206-12-22 11:31 G | 9831989.86 | 9831989.98 | 9831990.17 | 0.0088 | 0.0073 |
| Jupiter | 22207-01-27 12:14 G | 9832025.84 | 9832026.01 | 9832026.18 | 0.0492 | 0.0336 |
| Uranus | 22207-11-10 06:14 G | 9832312.61 | 9832312.76 | 9832312.95 | 0.0142 | 0.0108 |
| Neptune | 22207-12-24 20:38 G | 9832357.28 | 9832357.36 | 9832357.50 | 0.0088 | 0.0079 |
| Uranus | 22208-11-14 02:38 G | 9832682.38 | 9832682.61 | 9832682.86 | 0.0143 | 0.0029 |
| Neptune | 22208-12-26 06:28 G | 9832724.65 | 9832724.77 | 9832724.94 | 0.0088 | 0.0073 |
| Uranus | 22209-11-19 01:12 G | 9833052.30 | 9833052.55 | 9833052.81 | 0.0143 | 0.0032 |
| Neptune | 22209-12-28 21:07 G | 9833092.29 | 9833092.38 | 9833092.50 | 0.0088 | 0.0080 |
| Uranus | 22210-11-23 20:09 G | 9833422.18 | 9833422.34 | 9833422.52 | 0.0143 | 0.0102 |
| Neptune | 22210-12-31 01:55 G | 9833459.47 | 9833459.58 | 9833459.74 | 0.0088 | 0.0075 |
| Neptune | 22212-01-02 19:12 G | 9833827.22 | 9833827.30 | 9833827.42 | 0.0088 | 0.0081 |
| Jupiter | 22212-07-03 05:02 G | 9834009.49 | 9834009.71 | 9834009.92 | 0.0526 | 0.0165 |
| Neptune | 22213-01-03 22:48 G | 9834194.33 | 9834194.45 | 9834194.59 | 0.0088 | 0.0075 |
| Neptune | 22214-01-06 16:04 G | 9834562.07 | 9834562.17 | 9834562.29 | 0.0088 | 0.0079 |
| Neptune | 22215-01-08 20:38 G | 9834929.27 | 9834929.36 | 9834929.52 | 0.0088 | 0.0076 |
| Neptune | 22216-01-11 09:50 G | 9835296.83 | 9835296.91 | 9835297.05 | 0.0088 | 0.0080 |
| Saturn | 22216-12-10 09:36 G | 9835630.71 | 9835630.90 | 9835631.09 | 0.0270 | 0.0160 |
| Neptune | 22217-01-12 19:55 G | 9835664.22 | 9835664.33 | 9835664.47 | 0.0088 | 0.0076 |
| Saturn | 22217-12-22 11:45 G | 9836007.87 | 9836007.99 | 9836008.13 | 0.0270 | 0.0230 |
| Jupiter | 22217-12-31 12:28 G | 9836016.81 | 9836017.02 | 9836017.23 | 0.0502 | 0.0181 |
| Neptune | 22218-01-15 04:19 G | 9836031.60 | 9836031.68 | 9836031.82 | 0.0088 | 0.0080 |
| Neptune | 22219-01-17 19:12 G | 9836399.20 | 9836399.30 | 9836399.45 | 0.0088 | 0.0075 |
| Jupiter | 22219-01-31 12:28 G | 9836412.88 | 9836413.02 | 9836413.17 | 0.0490 | 0.0387 |
| Neptune | 22220-01-20 00:14 G | 9836766.41 | 9836766.51 | 9836766.64 | 0.0088 | 0.0078 |
| Neptune | 22221-01-21 17:16 G | 9837134.11 | 9837134.22 | 9837134.38 | 0.0088 | 0.0074 |

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| Neptune | 22222-01-23 21:07 G | 9837501.27 | 9837501.38 | 9837501.51 | 0.0088 | 0.0077 |
| Neptune | 22223-01-26 13:40 G | 9837868.94 | 9837869.07 | 9837869.22 | 0.0088 | 0.0073 |
| Neptune | 22224-01-28 19:26 G | 9838236.18 | 9838236.31 | 9838236.43 | 0.0088 | 0.0075 |
| Jupiter | 22224-07-08 05:31 G | 9838397.49 | 9838397.73 | 9838397.97 | 0.0529 | 0.0071 |
| Neptune | 22225-01-30 06:57 G | 9838603.67 | 9838603.79 | 9838603.98 | 0.0088 | 0.0071 |
| Neptune | 22226-02-01 18:00 G | 9838971.11 | 9838971.25 | 9838971.39 | 0.0088 | 0.0072 |
| Neptune | 22227-02-04 00:57 G | 9839338.40 | 9839338.54 | 9839338.73 | 0.0088 | 0.0068 |
| Neptune | 22228-02-06 16:33 G | 9839706.05 | 9839706.19 | 9839706.35 | 0.0088 | 0.0070 |
| Neptune | 22229-02-07 20:24 G | 9840073.20 | 9840073.35 | 9840073.55 | 0.0088 | 0.0066 |
| Jupiter | 22230-01-05 00:14 G | 9840404.27 | 9840404.51 | 9840404.75 | 0.0500 | 0.0057 |
| Neptune | 22230-02-10 13:55 G | 9840440.93 | 9840441.08 | 9840441.26 | 0.0088 | 0.0067 |
| Jupiter | 22231-02-05 01:26 G | 9840800.45 | 9840800.56 | 9840800.67 | 0.0489 | 0.0421 |
| Neptune | 22231-02-12 17:31 G | 9840808.08 | 9840808.23 | 9840808.43 | 0.0088 | 0.0063 |
| Saturn | 22231-06-09 18:28 G | 9840925.12 | 9840925.27 | 9840925.44 | 0.0289 | 0.0213 |
| Neptune | 22232-02-15 10:19 G | 9841175.74 | 9841175.93 | 9841176.11 | 0.0088 | 0.0062 |
| Saturn | 22232-06-23 01:26 G | 9841304.48 | 9841304.56 | 9841304.66 | 0.0288 | 0.0267 |
| Neptune | 22233-02-16 16:19 G | 9841543.01 | 9841543.18 | 9841543.37 | 0.0088 | 0.0059 |
| Neptune | 22234-02-19 04:04 G | 9841910.48 | 9841910.67 | 9841910.87 | 0.0088 | 0.0059 |
| Neptune | 22235-02-21 14:38 G | 9842277.94 | 9842278.11 | 9842278.32 | 0.0088 | 0.0056 |
| Neptune | 22236-02-23 21:36 G | 9842645.22 | 9842645.40 | 9842645.63 | 0.0088 | 0.0056 |
| Jupiter | 22236-07-13 06:00 G | 9842785.53 | 9842785.75 | 9842785.98 | 0.0531 | 0.0075 |
| Neptune | 22237-02-25 13:40 G | 9843012.88 | 9843013.07 | 9843013.29 | 0.0088 | 0.0051 |
| Neptune | 22238-02-27 17:31 G | 9843380.03 | 9843380.23 | 9843380.45 | 0.0088 | 0.0050 |
| Neptune | 22239-03-02 10:33 G | 9843747.75 | 9843747.94 | 9843748.19 | 0.0088 | 0.0047 |
| Neptune | 22240-03-03 14:38 G | 9844114.91 | 9844115.11 | 9844115.34 | 0.0088 | 0.0046 |
| Neptune | 22241-03-06 06:14 G | 9844482.55 | 9844482.76 | 9844483.02 | 0.0088 | 0.0043 |
| Jupiter | 22242-01-09 08:52 G | 9844791.64 | 9844791.87 | 9844792.09 | 0.0498 | 0.0026 |
| Neptune | 22242-03-08 13:40 G | 9844849.87 | 9844850.07 | 9844850.31 | 0.0088 | 0.0041 |
| Jupiter | 22243-02-09 03:36 G | 9845187.63 | 9845187.65 | 9845187.67 | 0.0488 | 0.0485 |
| Neptune | 22243-03-11 00:28 G | 9845217.29 | 9845217.52 | 9845217.78 | 0.0088 | 0.0037 |

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| Neptune | 22244-03-12 12:57 G | 9845584.82 | 9845585.04 | 9845585.28 | 0.0088 | 0.0035 |
| Neptune | 22245-03-14 19:40 G | 9845952.08 | 9845952.32 | 9845952.57 | 0.0088 | 0.0031 |
| Neptune | 22246-03-17 12:00 G | 9846319.77 | 9846320.00 | 9846320.25 | 0.0088 | 0.0030 |
| Saturn | 22246-12-16 23:45 G | 9846594.26 | 9846594.49 | 9846594.73 | 0.0270 | 0.0050 |
| Neptune | 22247-03-19 16:04 G | 9846686.93 | 9846687.17 | 9846687.42 | 0.0088 | 0.0027 |
| Uranus | 22247-05-08 13:26 G | 9846736.97 | 9846737.06 | 9846737.18 | 0.0136 | 0.0123 |
| Neptune | 22248-03-21 09:50 G | 9847054.66 | 9847054.91 | 9847055.16 | 0.0088 | 0.0024 |
| Uranus | 22248-05-11 23:16 G | 9847106.27 | 9847106.47 | 9847106.71 | 0.0136 | 0.0074 |
| Jupiter | 22248-07-18 19:26 G | 9847174.10 | 9847174.31 | 9847174.54 | 0.0533 | 0.0176 |
| Neptune | 22249-03-23 14:24 G | 9847421.86 | 9847422.10 | 9847422.35 | 0.0088 | 0.0021 |
| Mars | 22249-04-05 06:28 G | 9847434.60 | 9847434.77 | 9847434.94 | 0.1617 | 0.0877 |
| Uranus | 22249-05-16 12:57 G | 9847475.79 | 9847476.04 | 9847476.29 | 0.0136 | 0.0010 |
| Neptune | 22250-03-26 06:00 G | 9847789.49 | 9847789.75 | 9847790.01 | 0.0088 | 0.0017 |
| Uranus | 22250-05-20 22:33 G | 9847845.20 | 9847845.44 | 9847845.69 | 0.0135 | 0.0050 |
| Neptune | 22251-03-28 13:55 G | 9848156.84 | 9848157.08 | 9848157.33 | 0.0088 | 0.0015 |
| Uranus | 22251-05-25 09:36 G | 9848214.75 | 9848214.90 | 9848215.08 | 0.0135 | 0.0101 |
| Neptune | 22252-03-30 00:28 G | 9848524.26 | 9848524.52 | 9848524.79 | 0.0088 | 0.0012 |
| Jupiter | 22252-12-12 11:45 G | 9848781.92 | 9848781.99 | 9848782.05 | 0.0511 | 0.0488 |
| Neptune | 22253-04-01 13:26 G | 9848891.82 | 9848892.06 | 9848892.32 | 0.0088 | 0.0010 |
| Jupiter | 22254-01-13 23:02 G | 9849179.23 | 9849179.46 | 9849179.70 | 0.0496 | 0.0068 |
| Neptune | 22254-04-03 19:40 G | 9849259.06 | 9849259.32 | 9849259.59 | 0.0088 | 0.0007 |
| Neptune | 22255-04-06 12:57 G | 9849626.79 | 9849627.04 | 9849627.30 | 0.0088 | 0.0004 |
| Neptune | 22256-04-07 17:16 G | 9849993.96 | 9849994.22 | 9849994.48 | 0.0088 | 0.0001 |
| Neptune | 22257-04-10 11:31 G | 9850361.71 | 9850361.98 | 9850362.24 | 0.0088 | 0.0002 |
| Neptune | 22258-04-12 16:48 G | 9850728.95 | 9850729.20 | 9850729.45 | 0.0088 | 0.0007 |
| Neptune | 22259-04-15 08:24 G | 9851096.59 | 9851096.85 | 9851097.12 | 0.0088 | 0.0007 |
| Jupiter | 22259-06-18 15:36 G | 9851161.04 | 9851161.15 | 9851161.28 | 0.0519 | 0.0439 |
| Neptune | 22260-04-16 17:16 G | 9851463.98 | 9851464.22 | 9851464.48 | 0.0088 | 0.0013 |
| Jupiter | 22260-07-23 17:16 G | 9851562.01 | 9851562.22 | 9851562.44 | 0.0534 | 0.0223 |
| Neptune | 22261-04-19 03:50 G | 9851831.41 | 9851831.66 | 9851831.94 | 0.0088 | 0.0015 |

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| Saturn | 22261-06-16 20:38 G | 9851890.11 | 9851890.36 | 9851890.61 | 0.0289 | 0.0049 |
| Neptune | 22262-04-21 17:45 G | 9852199.00 | 9852199.24 | 9852199.49 | 0.0088 | 0.0020 |
| Neptune | 22263-04-24 00:00 G | 9852566.25 | 9852566.50 | 9852566.77 | 0.0088 | 0.0020 |
| Neptune | 22264-04-25 17:45 G | 9852934.01 | 9852934.24 | 9852934.50 | 0.0088 | 0.0026 |
| Jupiter | 22264-12-17 06:28 G | 9853169.62 | 9853169.77 | 9853169.92 | 0.0509 | 0.0379 |
| Neptune | 22265-04-27 22:04 G | 9853301.19 | 9853301.42 | 9853301.68 | 0.0088 | 0.0025 |
| Jupiter | 22266-01-17 23:02 G | 9853566.24 | 9853566.46 | 9853566.68 | 0.0495 | 0.0123 |
| Neptune | 22266-04-30 16:33 G | 9853668.95 | 9853669.19 | 9853669.44 | 0.0088 | 0.0031 |
| Neptune | 22267-05-02 22:04 G | 9854036.20 | 9854036.42 | 9854036.68 | 0.0088 | 0.0032 |
| Neptune | 22268-05-04 14:24 G | 9854403.86 | 9854404.10 | 9854404.35 | 0.0088 | 0.0038 |
| Neptune | 22269-05-07 00:14 G | 9854771.29 | 9854771.51 | 9854771.74 | 0.0088 | 0.0037 |
| Neptune | 22270-05-09 11:02 G | 9855138.73 | 9855138.96 | 9855139.20 | 0.0088 | 0.0043 |
| Neptune | 22271-05-12 01:12 G | 9855506.35 | 9855506.55 | 9855506.79 | 0.0088 | 0.0042 |
| Jupiter | 22271-06-23 06:28 G | 9855548.59 | 9855548.77 | 9855548.97 | 0.0521 | 0.0311 |
| Neptune | 22272-05-13 07:55 G | 9855873.64 | 9855873.83 | 9855874.08 | 0.0089 | 0.0049 |
| Jupiter | 22272-07-29 02:38 G | 9855950.43 | 9855950.61 | 9855950.79 | 0.0536 | 0.0331 |
| Neptune | 22273-05-16 02:24 G | 9856241.40 | 9856241.60 | 9856241.84 | 0.0089 | 0.0047 |
| Neptune | 22274-05-18 07:12 G | 9856608.62 | 9856608.80 | 9856609.03 | 0.0089 | 0.0055 |
| Neptune | 22275-05-21 01:55 G | 9856976.39 | 9856976.58 | 9856976.82 | 0.0089 | 0.0052 |
| Saturn | 22275-12-12 11:02 G | 9857181.74 | 9857181.96 | 9857182.19 | 0.0270 | 0.0116 |
| Neptune | 22276-05-22 08:52 G | 9857343.68 | 9857343.87 | 9857344.05 | 0.0089 | 0.0059 |
| Jupiter | 22276-12-21 13:40 G | 9857556.88 | 9857557.07 | 9857557.26 | 0.0507 | 0.0313 |
| Neptune | 22277-05-25 00:57 G | 9857711.34 | 9857711.54 | 9857711.76 | 0.0089 | 0.0055 |
| Jupiter | 22278-01-22 14:38 G | 9857953.91 | 9857954.11 | 9857954.31 | 0.0494 | 0.0236 |
| Neptune | 22278-05-27 10:33 G | 9858078.79 | 9858078.94 | 9858079.14 | 0.0089 | 0.0064 |
| Neptune | 22279-05-29 22:04 G | 9858446.25 | 9858446.42 | 9858446.64 | 0.0089 | 0.0060 |
| Neptune | 22280-05-31 13:26 G | 9858813.91 | 9858814.06 | 9858814.23 | 0.0089 | 0.0068 |
| Neptune | 22281-06-02 20:09 G | 9859181.18 | 9859181.34 | 9859181.55 | 0.0089 | 0.0064 |
| Neptune | 22282-06-05 15:07 G | 9859549.00 | 9859549.13 | 9859549.30 | 0.0089 | 0.0072 |
| Neptune | 22283-06-07 20:52 G | 9859916.21 | 9859916.37 | 9859916.56 | 0.0089 | 0.0066 |

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| Jupiter | 22283-06-28 08:09 G | 9859936.64 | 9859936.84 | 9859937.04 | 0.0524 | 0.0227 |
| Neptune | 22284-06-09 16:19 G | 9860284.06 | 9860284.18 | 9860284.33 | 0.0089 | 0.0075 |
| Jupiter | 22284-08-03 06:28 G | 9860338.66 | 9860338.77 | 9860338.89 | 0.0538 | 0.0470 |
| Neptune | 22285-06-11 22:48 G | 9860651.32 | 9860651.45 | 9860651.63 | 0.0089 | 0.0070 |
| Pluto | 22286-04-15 16:04 G | 9860959.02 | 9860959.17 | 9860959.37 | 0.0080 | 0.0060 |
| Neptune | 22286-06-14 15:36 G | 9861019.06 | 9861019.15 | 9861019.30 | 0.0089 | 0.0079 |
| Neptune | 22287-06-17 02:09 G | 9861386.47 | 9861386.59 | 9861386.76 | 0.0089 | 0.0073 |
| Neptune | 22288-06-18 14:24 G | 9861754.02 | 9861754.10 | 9861754.24 | 0.0089 | 0.0081 |
| Jupiter | 22288-12-26 09:50 G | 9861944.73 | 9861944.91 | 9861945.11 | 0.0505 | 0.0273 |
| Neptune | 22289-06-21 05:31 G | 9862121.61 | 9862121.73 | 9862121.88 | 0.0089 | 0.0074 |
| Jupiter | 22290-01-26 16:48 G | 9862341.03 | 9862341.20 | 9862341.38 | 0.0492 | 0.0331 |
| Saturn | 22290-06-11 00:57 G | 9862476.34 | 9862476.54 | 9862476.73 | 0.0289 | 0.0165 |
| Neptune | 22290-06-23 12:57 G | 9862488.98 | 9862489.04 | 9862489.17 | 0.0089 | 0.0084 |
| Neptune | 22291-06-26 07:55 G | 9862856.73 | 9862856.83 | 9862856.99 | 0.0089 | 0.0077 |
| Uranus | 22291-11-10 13:40 G | 9862993.89 | 9862994.07 | 9862994.29 | 0.0142 | 0.0092 |
| Neptune | 22292-06-27 14:09 G | 9863224.04 | 9863224.09 | 9863224.18 | 0.0089 | 0.0086 |
| Uranus | 22292-11-14 11:16 G | 9863363.74 | 9863363.97 | 9863364.21 | 0.0143 | 0.0038 |
| Neptune | 22293-06-30 09:50 G | 9863591.80 | 9863591.91 | 9863592.07 | 0.0089 | 0.0077 |
| Uranus | 22293-11-19 07:55 G | 9863733.58 | 9863733.83 | 9863734.09 | 0.0143 | 0.0040 |
| Neptune | 22294-07-02 16:48 G | 9863959.16 | 9863959.20 | 9863959.28 | 0.0089 | 0.0086 |
| Uranus | 22294-11-24 03:50 G | 9864103.52 | 9864103.66 | 9864103.84 | 0.0143 | 0.0108 |
| Jupiter | 22295-07-03 09:07 G | 9864324.65 | 9864324.88 | 9864325.11 | 0.0526 | 0.0177 |
| Neptune | 22295-07-05 10:48 G | 9864326.84 | 9864326.95 | 9864327.10 | 0.0089 | 0.0078 |
| Neptune | 22296-07-06 20:52 G | 9864694.35 | 9864694.37 | 9864694.46 | 0.0089 | 0.0088 |
| Neptune | 22297-07-09 10:19 G | 9865061.83 | 9865061.93 | 9865062.09 | 0.0089 | 0.0079 |
| Neptune | 22298-07-12 01:12 G | 9865429.52 | 9865429.55 | 9865429.62 | 0.0089 | 0.0088 |
| Neptune | 22299-07-14 09:36 G | 9865796.81 | 9865796.90 | 9865797.06 | 0.0089 | 0.0079 |
| Neptune | 22300-07-17 04:48 G | 9866164.65 | 9866164.70 | 9866164.77 | 0.0089 | 0.0087 |
| Jupiter | 22300-12-31 22:04 G | 9866332.20 | 9866332.42 | 9866332.65 | 0.0502 | 0.0178 |
| Neptune | 22301-07-19 11:02 G | 9866531.84 | 9866531.96 | 9866532.10 | 0.0089 | 0.0077 |

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| Jupiter | 22302-02-01 04:33 G | 9866728.55 | 9866728.69 | 9866728.84 | 0.0490 | 0.0377 |
| Neptune | 22302-07-22 06:57 G | 9866899.73 | 9866899.79 | 9866899.88 | 0.0089 | 0.0086 |
| Neptune | 22303-07-24 13:12 G | 9867266.95 | 9867267.05 | 9867267.21 | 0.0089 | 0.0077 |
| Neptune | 22304-07-26 07:40 G | 9867634.76 | 9867634.82 | 9867634.94 | 0.0089 | 0.0085 |
| Neptune | 22305-07-28 17:45 G | 9868002.12 | 9868002.24 | 9868002.39 | 0.0089 | 0.0075 |
| Saturn | 22305-12-19 05:45 G | 9868145.53 | 9868145.74 | 9868145.97 | 0.0270 | 0.0098 |
| Neptune | 22306-07-31 07:55 G | 9868369.75 | 9868369.83 | 9868369.96 | 0.0089 | 0.0082 |
| Jupiter | 22307-07-09 10:04 G | 9868712.69 | 9868712.92 | 9868713.14 | 0.0529 | 0.0077 |
| Neptune | 22307-08-02 22:04 G | 9868737.30 | 9868737.42 | 9868737.59 | 0.0089 | 0.0073 |
| Neptune | 22308-08-04 07:26 G | 9869104.72 | 9869104.81 | 9869104.96 | 0.0089 | 0.0080 |
| Neptune | 22309-08-07 02:09 G | 9869472.45 | 9869472.59 | 9869472.77 | 0.0089 | 0.0070 |
| Neptune | 22310-08-09 09:07 G | 9869839.76 | 9869839.88 | 9869840.02 | 0.0089 | 0.0077 |
| Neptune | 22311-08-12 05:02 G | 9870207.56 | 9870207.71 | 9870207.91 | 0.0090 | 0.0067 |
| Neptune | 22312-08-13 11:31 G | 9870574.85 | 9870574.98 | 9870575.15 | 0.0090 | 0.0073 |
| Jupiter | 22313-01-05 07:26 G | 9870719.59 | 9870719.81 | 9870720.04 | 0.0500 | 0.0060 |
| Neptune | 22313-08-16 06:28 G | 9870942.60 | 9870942.77 | 9870942.97 | 0.0090 | 0.0063 |
| Jupiter | 22314-02-05 08:38 G | 9871115.74 | 9871115.86 | 9871116.00 | 0.0489 | 0.0410 |
| Neptune | 22314-08-18 15:36 G | 9871310.01 | 9871310.15 | 9871310.33 | 0.0090 | 0.0069 |
| Neptune | 22315-08-21 06:28 G | 9871677.60 | 9871677.77 | 9871678.00 | 0.0090 | 0.0060 |
| Neptune | 22316-08-22 19:55 G | 9872045.18 | 9872045.33 | 9872045.52 | 0.0090 | 0.0065 |
| Neptune | 22317-08-25 06:00 G | 9872412.55 | 9872412.75 | 9872412.97 | 0.0090 | 0.0055 |
| Neptune | 22318-08-27 23:31 G | 9872780.32 | 9872780.48 | 9872780.69 | 0.0090 | 0.0060 |
| Jupiter | 22319-07-14 19:55 G | 9873101.10 | 9873101.33 | 9873101.56 | 0.0530 | 0.0068 |
| Neptune | 22319-08-30 06:43 G | 9873147.58 | 9873147.78 | 9873148.01 | 0.0090 | 0.0050 |
| Saturn | 22320-06-18 18:43 G | 9873441.05 | 9873441.28 | 9873441.52 | 0.0289 | 0.0095 |
| Neptune | 22320-09-01 02:38 G | 9873515.43 | 9873515.61 | 9873515.84 | 0.0090 | 0.0055 |
| Neptune | 22321-09-03 09:07 G | 9873882.67 | 9873882.88 | 9873883.11 | 0.0090 | 0.0046 |
| Neptune | 22322-09-06 04:33 G | 9874250.48 | 9874250.69 | 9874250.92 | 0.0090 | 0.0049 |
| Neptune | 22323-09-08 13:12 G | 9874617.84 | 9874618.05 | 9874618.28 | 0.0090 | 0.0041 |
| Neptune | 22324-09-10 04:33 G | 9874985.47 | 9874985.69 | 9874985.95 | 0.0090 | 0.0043 |

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| Jupiter | 22325-01-09 19:12 G | 9875107.06 | 9875107.30 | 9875107.54 | 0.0499 | 0.0015 |
| Neptune | 22325-09-12 17:16 G | 9875353.00 | 9875353.22 | 9875353.46 | 0.0090 | 0.0035 |
| Jupiter | 22326-02-09 12:14 G | 9875503.00 | 9875503.01 | 9875503.02 | 0.0489 | 0.0488 |
| Neptune | 22326-09-15 03:50 G | 9875720.43 | 9875720.66 | 9875720.91 | 0.0089 | 0.0037 |
| Neptune | 22327-09-17 20:38 G | 9876088.13 | 9876088.36 | 9876088.61 | 0.0089 | 0.0030 |
| Mars | 22328-04-08 12:14 G | 9876291.84 | 9876292.01 | 9876292.18 | 0.1620 | 0.0718 |
| Neptune | 22328-09-19 03:36 G | 9876455.41 | 9876455.65 | 9876455.90 | 0.0089 | 0.0031 |
| Neptune | 22329-09-21 23:16 G | 9876823.23 | 9876823.47 | 9876823.73 | 0.0089 | 0.0024 |
| Neptune | 22330-09-24 05:02 G | 9877190.47 | 9877190.71 | 9877190.97 | 0.0089 | 0.0024 |
| Uranus | 22331-05-09 23:02 G | 9877418.44 | 9877418.46 | 9877418.52 | 0.0136 | 0.0134 |
| Jupiter | 22331-07-19 15:50 G | 9877488.93 | 9877489.16 | 9877489.39 | 0.0532 | 0.0156 |
| Neptune | 22331-09-27 00:14 G | 9877558.26 | 9877558.51 | 9877558.78 | 0.0089 | 0.0017 |
| Uranus | 22332-05-13 07:12 G | 9877787.58 | 9877787.80 | 9877788.05 | 0.0136 | 0.0063 |
| Neptune | 22332-09-28 08:09 G | 9877925.60 | 9877925.84 | 9877926.09 | 0.0089 | 0.0017 |
| Uranus | 22333-05-17 21:50 G | 9878157.17 | 9878157.41 | 9878157.66 | 0.0136 | 0.0011 |
| Neptune | 22333-10-01 00:14 G | 9878293.25 | 9878293.51 | 9878293.78 | 0.0089 | 0.0012 |
| Uranus | 22334-05-22 05:31 G | 9878526.50 | 9878526.73 | 9878526.99 | 0.0135 | 0.0050 |
| Neptune | 22334-10-03 12:14 G | 9878660.76 | 9878661.01 | 9878661.26 | 0.0089 | 0.0010 |
| Mars | 22334-10-06 17:16 G | 9878664.15 | 9878664.22 | 9878664.29 | 0.1924 | 0.1756 |
| Saturn | 22334-12-14 09:07 G | 9878732.64 | 9878732.88 | 9878733.13 | 0.0270 | 0.0068 |
| Uranus | 22335-05-26 18:00 G | 9878896.14 | 9878896.25 | 9878896.41 | 0.0135 | 0.0113 |
| Neptune | 22335-10-05 22:48 G | 9879028.19 | 9879028.45 | 9879028.72 | 0.0089 | 0.0005 |
| Jupiter | 22335-12-13 21:21 G | 9879097.34 | 9879097.39 | 9879097.45 | 0.0512 | 0.0495 |
| Neptune | 22336-10-07 15:07 G | 9879395.88 | 9879396.13 | 9879396.38 | 0.0089 | 0.0003 |
| Jupiter | 22337-01-13 22:48 G | 9879494.22 | 9879494.45 | 9879494.68 | 0.0497 | 0.0054 |
| Neptune | 22337-10-09 21:50 G | 9879763.15 | 9879763.41 | 9879763.67 | 0.0089 | 0.0002 |
| Neptune | 22338-10-12 17:02 G | 9880130.95 | 9880131.21 | 9880131.46 | 0.0089 | 0.0004 |
| Neptune | 22339-10-14 22:04 G | 9880498.17 | 9880498.42 | 9880498.68 | 0.0089 | 0.0008 |
| Neptune | 22340-10-16 16:48 G | 9880865.95 | 9880866.20 | 9880866.47 | 0.0089 | 0.0010 |
| Neptune | 22341-10-19 00:00 G | 9881233.25 | 9881233.50 | 9881233.75 | 0.0089 | 0.0013 |

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| Jupiter | 22342-06-18 11:02 G | 9881475.84 | 9881475.96 | 9881476.08 | 0.0518 | 0.0443 |
| Neptune | 22342-10-21 15:50 G | 9881600.90 | 9881601.16 | 9881601.42 | 0.0089 | 0.0018 |
| Jupiter | 22343-07-24 22:48 G | 9881877.25 | 9881877.45 | 9881877.67 | 0.0534 | 0.0209 |
| Neptune | 22343-10-24 02:38 G | 9881968.38 | 9881968.61 | 9881968.86 | 0.0089 | 0.0020 |
| Neptune | 22344-10-25 13:12 G | 9882335.80 | 9882336.05 | 9882336.31 | 0.0089 | 0.0024 |
| Neptune | 22345-10-28 04:48 G | 9882703.47 | 9882703.70 | 9882703.95 | 0.0089 | 0.0025 |
| Neptune | 22346-10-30 11:16 G | 9883070.73 | 9883070.97 | 9883071.22 | 0.0089 | 0.0029 |
| Neptune | 22347-11-02 06:00 G | 9883438.52 | 9883438.75 | 9883439.00 | 0.0089 | 0.0031 |
| Jupiter | 22347-12-18 07:40 G | 9883484.67 | 9883484.82 | 9883484.98 | 0.0510 | 0.0384 |
| Neptune | 22348-11-03 10:33 G | 9883805.73 | 9883805.94 | 9883806.19 | 0.0089 | 0.0037 |
| Jupiter | 22349-01-18 16:19 G | 9883881.96 | 9883882.18 | 9883882.40 | 0.0495 | 0.0123 |
| Saturn | 22349-06-13 06:28 G | 9884027.54 | 9884027.77 | 9884028.00 | 0.0290 | 0.0115 |
| Neptune | 22349-11-06 05:02 G | 9884173.49 | 9884173.71 | 9884173.97 | 0.0089 | 0.0037 |
| Neptune | 22350-11-08 11:31 G | 9884540.78 | 9884540.98 | 9884541.22 | 0.0089 | 0.0043 |
| Neptune | 22351-11-11 02:38 G | 9884908.40 | 9884908.61 | 9884908.87 | 0.0089 | 0.0042 |
| Neptune | 22352-11-12 13:12 G | 9885275.86 | 9885276.05 | 9885276.28 | 0.0089 | 0.0048 |
| Neptune | 22353-11-14 23:45 G | 9885643.27 | 9885643.49 | 9885643.72 | 0.0089 | 0.0047 |
| Jupiter | 22354-06-23 14:52 G | 9885863.94 | 9885864.12 | 9885864.30 | 0.0521 | 0.0313 |
| Neptune | 22354-11-17 14:09 G | 9886010.91 | 9886011.09 | 9886011.31 | 0.0089 | 0.0054 |
| Jupiter | 22355-07-30 03:36 G | 9886265.46 | 9886265.65 | 9886265.84 | 0.0536 | 0.0319 |
| Neptune | 22355-11-19 20:09 G | 9886378.15 | 9886378.34 | 9886378.57 | 0.0089 | 0.0053 |
| Neptune | 22356-11-21 14:09 G | 9886745.92 | 9886746.09 | 9886746.30 | 0.0089 | 0.0059 |
| Neptune | 22357-11-23 18:28 G | 9887113.10 | 9887113.27 | 9887113.49 | 0.0089 | 0.0057 |
| Neptune | 22358-11-26 12:43 G | 9887480.86 | 9887481.03 | 9887481.23 | 0.0089 | 0.0063 |
| Neptune | 22359-11-28 18:57 G | 9887848.13 | 9887848.29 | 9887848.49 | 0.0089 | 0.0061 |
| Jupiter | 22359-12-23 04:48 G | 9887872.53 | 9887872.70 | 9887872.87 | 0.0507 | 0.0329 |
| Neptune | 22360-11-30 09:36 G | 9888215.75 | 9888215.90 | 9888216.09 | 0.0089 | 0.0068 |
| Jupiter | 22361-01-22 18:14 G | 9888269.05 | 9888269.26 | 9888269.47 | 0.0494 | 0.0232 |
| Neptune | 22361-12-02 20:09 G | 9888583.20 | 9888583.34 | 9888583.53 | 0.0089 | 0.0066 |
| Neptune | 22362-12-05 05:16 G | 9888950.60 | 9888950.72 | 9888950.91 | 0.0089 | 0.0072 |

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| Neptune | 22363-12-07 20:38 G | 9889318.21 | 9889318.36 | 9889318.53 | 0.0089 | 0.0068 |
| Saturn | 22363-12-09 07:26 G | 9889319.72 | 9889319.81 | 9889319.92 | 0.0270 | 0.0245 |
| Neptune | 22364-12-09 01:26 G | 9889685.44 | 9889685.56 | 9889685.72 | 0.0088 | 0.0075 |
| Saturn | 22364-12-20 11:16 G | 9889696.77 | 9889696.97 | 9889697.18 | 0.0270 | 0.0144 |
| Neptune | 22365-12-11 19:12 G | 9890053.17 | 9890053.30 | 9890053.47 | 0.0088 | 0.0071 |
| Jupiter | 22366-06-28 14:09 G | 9890251.87 | 9890252.09 | 9890252.31 | 0.0523 | 0.0236 |
| Neptune | 22366-12-13 23:02 G | 9890420.37 | 9890420.46 | 9890420.60 | 0.0088 | 0.0079 |
| Jupiter | 22367-08-04 10:19 G | 9890653.82 | 9890653.93 | 9890654.05 | 0.0538 | 0.0465 |
| Neptune | 22367-12-16 16:19 G | 9890788.05 | 9890788.18 | 9890788.34 | 0.0088 | 0.0074 |
| Neptune | 22368-12-17 22:04 G | 9891155.35 | 9891155.42 | 9891155.55 | 0.0088 | 0.0082 |
| Neptune | 22369-12-20 12:00 G | 9891522.89 | 9891523.00 | 9891523.17 | 0.0088 | 0.0076 |
| Neptune | 22370-12-22 22:48 G | 9891890.38 | 9891890.45 | 9891890.55 | 0.0088 | 0.0083 |
| Neptune | 22371-12-25 07:26 G | 9892257.70 | 9892257.81 | 9892257.96 | 0.0088 | 0.0077 |
| Jupiter | 22371-12-27 17:16 G | 9892260.02 | 9892260.22 | 9892260.42 | 0.0505 | 0.0280 |
| Neptune | 22372-12-26 22:04 G | 9892625.39 | 9892625.42 | 9892625.52 | 0.0088 | 0.0086 |
| Jupiter | 22373-01-27 06:57 G | 9892656.62 | 9892656.79 | 9892656.96 | 0.0492 | 0.0324 |
| Neptune | 22373-12-29 02:52 G | 9892992.53 | 9892992.62 | 9892992.76 | 0.0088 | 0.0079 |
| Neptune | 22374-12-31 20:24 G | 9893360.32 | 9893360.35 | 9893360.43 | 0.0088 | 0.0086 |
| Uranus | 22375-11-11 22:04 G | 9893675.25 | 9893675.42 | 9893675.60 | 0.0142 | 0.0104 |
| Neptune | 22376-01-03 00:00 G | 9893727.42 | 9893727.50 | 9893727.63 | 0.0088 | 0.0080 |
| Uranus | 22376-11-15 21:07 G | 9894045.15 | 9894045.38 | 9894045.63 | 0.0143 | 0.0023 |
| Neptune | 22377-01-04 16:33 G | 9894095.16 | 9894095.19 | 9894095.26 | 0.0088 | 0.0086 |
| Uranus | 22377-11-20 16:48 G | 9894414.95 | 9894415.20 | 9894415.45 | 0.0143 | 0.0035 |
| Neptune | 22378-01-06 23:16 G | 9894462.36 | 9894462.47 | 9894462.57 | 0.0088 | 0.0080 |
| Jupiter | 22378-07-03 14:24 G | 9894639.88 | 9894640.10 | 9894640.31 | 0.0525 | 0.0188 |
| Uranus | 22378-11-25 14:24 G | 9894784.95 | 9894785.10 | 9894785.27 | 0.0143 | 0.0110 |
| Neptune | 22379-01-09 11:45 G | 9894829.95 | 9894829.99 | 9894830.04 | 0.0088 | 0.0086 |
| Saturn | 22379-06-21 00:43 G | 9894992.33 | 9894992.53 | 9894992.74 | 0.0289 | 0.0148 |
| Jupiter | 22379-08-10 00:00 G | 9895042.46 | 9895042.50 | 9895042.53 | 0.0538 | 0.0532 |
| Neptune | 22380-01-11 22:19 G | 9895197.35 | 9895197.43 | 9895197.56 | 0.0088 | 0.0080 |

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| Neptune | 22381-01-13 05:45 G | 9895564.71 | 9895564.74 | 9895564.82 | 0.0088 | 0.0086 |
| Neptune | 22382-01-15 21:21 G | 9895932.29 | 9895932.39 | 9895932.51 | 0.0088 | 0.0079 |
| Neptune | 22383-01-18 00:57 G | 9896299.50 | 9896299.54 | 9896299.63 | 0.0088 | 0.0085 |
| Jupiter | 22383-12-31 23:16 G | 9896647.27 | 9896647.47 | 9896647.68 | 0.0503 | 0.0187 |
| Neptune | 22384-01-20 18:28 G | 9896667.17 | 9896667.27 | 9896667.41 | 0.0088 | 0.0077 |
| Neptune | 22385-01-21 21:50 G | 9897034.38 | 9897034.41 | 9897034.51 | 0.0088 | 0.0085 |
| Jupiter | 22385-01-31 08:38 G | 9897043.70 | 9897043.86 | 9897044.03 | 0.0491 | 0.0362 |
| Neptune | 22386-01-24 13:55 G | 9897401.98 | 9897402.08 | 9897402.24 | 0.0088 | 0.0076 |
| Neptune | 22387-01-26 20:24 G | 9897769.30 | 9897769.35 | 9897769.46 | 0.0088 | 0.0083 |
| Neptune | 22388-01-29 08:24 G | 9898136.73 | 9898136.85 | 9898137.02 | 0.0088 | 0.0074 |
| Neptune | 22389-01-30 20:24 G | 9898504.26 | 9898504.35 | 9898504.46 | 0.0088 | 0.0080 |
| Neptune | 22390-02-02 03:21 G | 9898871.49 | 9898871.64 | 9898871.79 | 0.0088 | 0.0071 |
| Jupiter | 22390-07-08 20:38 G | 9899028.12 | 9899028.36 | 9899028.59 | 0.0527 | 0.0079 |
| Neptune | 22391-02-04 18:43 G | 9899239.18 | 9899239.28 | 9899239.40 | 0.0088 | 0.0078 |
| Neptune | 22392-02-06 21:50 G | 9899606.28 | 9899606.41 | 9899606.59 | 0.0088 | 0.0069 |
| Neptune | 22393-02-08 15:36 G | 9899974.02 | 9899974.15 | 9899974.28 | 0.0088 | 0.0075 |
| Saturn | 22393-12-15 10:48 G | 9900283.71 | 9900283.95 | 9900284.19 | 0.0270 | 0.0019 |
| Neptune | 22394-02-10 19:12 G | 9900341.14 | 9900341.30 | 9900341.48 | 0.0088 | 0.0065 |
| Neptune | 22395-02-13 10:19 G | 9900708.79 | 9900708.93 | 9900709.09 | 0.0088 | 0.0071 |
| Jupiter | 22396-01-05 15:36 G | 9901034.91 | 9901035.15 | 9901035.38 | 0.0501 | 0.0068 |
| Neptune | 22396-02-15 17:31 G | 9901076.07 | 9901076.23 | 9901076.42 | 0.0088 | 0.0062 |
| Jupiter | 22397-02-04 14:38 G | 9901430.99 | 9901431.11 | 9901431.24 | 0.0490 | 0.0402 |
| Neptune | 22397-02-17 04:33 G | 9901443.55 | 9901443.69 | 9901443.88 | 0.0088 | 0.0068 |
| Neptune | 22398-02-19 17:31 G | 9901811.05 | 9901811.23 | 9901811.42 | 0.0088 | 0.0058 |
| Neptune | 22399-02-21 23:16 G | 9902178.31 | 9902178.47 | 9902178.68 | 0.0088 | 0.0064 |
| Neptune | 22400-02-24 15:50 G | 9902545.97 | 9902546.16 | 9902546.37 | 0.0088 | 0.0053 |
| Neptune | 22401-02-25 19:26 G | 9902913.13 | 9902913.31 | 9902913.51 | 0.0088 | 0.0059 |
| Neptune | 22402-02-28 12:43 G | 9903280.82 | 9903281.03 | 9903281.25 | 0.0088 | 0.0048 |
| Jupiter | 22402-07-13 12:00 G | 9903415.77 | 9903416.00 | 9903416.24 | 0.0529 | 0.0058 |
| Neptune | 22403-03-02 16:33 G | 9903648.01 | 9903648.19 | 9903648.40 | 0.0088 | 0.0055 |

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| Neptune | 22404-03-04 07:12 G | 9904015.59 | 9904015.80 | 9904016.05 | 0.0088 | 0.0044 |
| Neptune | 22405-03-06 15:36 G | 9904382.95 | 9904383.15 | 9904383.36 | 0.0088 | 0.0049 |
| Neptune | 22406-03-09 01:40 G | 9904750.34 | 9904750.57 | 9904750.82 | 0.0088 | 0.0038 |
| Neptune | 22407-03-11 14:52 G | 9905117.93 | 9905118.12 | 9905118.36 | 0.0088 | 0.0044 |
| Jupiter | 22408-01-09 21:21 G | 9905422.16 | 9905422.39 | 9905422.63 | 0.0499 | 0.0011 |
| Neptune | 22408-03-12 21:07 G | 9905485.14 | 9905485.38 | 9905485.62 | 0.0088 | 0.0032 |
| Saturn | 22408-06-14 08:24 G | 9905578.61 | 9905578.85 | 9905579.11 | 0.0290 | 0.0058 |
| Jupiter | 22409-02-09 01:55 G | 9905818.58 | 9905818.58 | 9905818.60 | 0.0489 | 0.0488 |
| Neptune | 22409-03-15 13:26 G | 9905852.85 | 9905853.06 | 9905853.31 | 0.0088 | 0.0039 |
| Neptune | 22410-03-17 17:16 G | 9906219.99 | 9906220.22 | 9906220.48 | 0.0088 | 0.0027 |
| Neptune | 22411-03-20 10:33 G | 9906587.72 | 9906587.94 | 9906588.20 | 0.0088 | 0.0033 |
| Neptune | 22412-03-21 15:36 G | 9906954.92 | 9906955.15 | 9906955.41 | 0.0088 | 0.0021 |
| Neptune | 22413-03-24 06:00 G | 9907322.50 | 9907322.75 | 9907323.01 | 0.0088 | 0.0026 |
| Mars | 22413-10-10 07:40 G | 9907522.76 | 9907522.82 | 9907522.87 | 0.1918 | 0.1844 |
| Neptune | 22414-03-26 15:07 G | 9907689.89 | 9907690.13 | 9907690.38 | 0.0088 | 0.0015 |
| Jupiter | 22414-07-18 22:04 G | 9907804.20 | 9907804.42 | 9907804.64 | 0.0532 | 0.0141 |
| Neptune | 22415-03-29 00:57 G | 9908057.28 | 9908057.54 | 9908057.80 | 0.0088 | 0.0020 |
| Uranus | 22415-05-10 08:09 G | 9908099.74 | 9908099.84 | 9908099.98 | 0.0136 | 0.0119 |
| Neptune | 22416-03-30 15:21 G | 9908424.89 | 9908425.14 | 9908425.39 | 0.0088 | 0.0008 |
| Uranus | 22416-05-13 15:21 G | 9908468.93 | 9908469.14 | 9908469.38 | 0.0136 | 0.0071 |
| Neptune | 22417-04-01 20:38 G | 9908792.11 | 9908792.36 | 9908792.63 | 0.0088 | 0.0014 |
| Uranus | 22417-05-18 07:26 G | 9908838.56 | 9908838.81 | 9908839.06 | 0.0136 | 0.0003 |
| Neptune | 22418-04-04 14:09 G | 9909159.83 | 9909160.09 | 9909160.35 | 0.0088 | 0.0002 |
| Uranus | 22418-05-22 14:09 G | 9909207.86 | 9909208.09 | 9909208.34 | 0.0135 | 0.0053 |
| Jupiter | 22418-12-12 22:33 G | 9909412.39 | 9909412.44 | 9909412.49 | 0.0512 | 0.0499 |
| Neptune | 22419-04-06 18:00 G | 9909527.00 | 9909527.25 | 9909527.51 | 0.0088 | 0.0008 |
| Uranus | 22419-05-27 04:04 G | 9909577.54 | 9909577.67 | 9909577.84 | 0.0135 | 0.0107 |
| Jupiter | 22420-01-14 15:07 G | 9909809.90 | 9909810.13 | 9909810.36 | 0.0497 | 0.0039 |
| Neptune | 22420-04-08 11:31 G | 9909894.72 | 9909894.98 | 9909895.24 | 0.0088 | 0.0005 |
| Neptune | 22421-04-10 17:02 G | 9910261.96 | 9910262.21 | 9910262.46 | 0.0088 | 0.0002 |

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| Neptune | 22422-04-13 06:57 G | 9910629.53 | 9910629.79 | 9910630.06 | 0.0088 | 0.0011 |
| Saturn | 22422-12-10 15:07 G | 9910870.97 | 9910871.13 | 9910871.31 | 0.0270 | 0.0193 |
| Neptune | 22423-04-15 17:16 G | 9910996.97 | 9910997.22 | 9910997.47 | 0.0088 | 0.0006 |
| Saturn | 22423-12-22 13:12 G | 9911247.89 | 9911248.05 | 9911248.23 | 0.0270 | 0.0197 |
| Neptune | 22424-04-17 03:07 G | 9911364.37 | 9911364.63 | 9911364.89 | 0.0088 | 0.0018 |
| Neptune | 22425-04-19 18:14 G | 9911732.01 | 9911732.26 | 9911732.51 | 0.0088 | 0.0012 |
| Jupiter | 22425-06-17 22:33 G | 9911791.33 | 9911791.44 | 9911791.57 | 0.0518 | 0.0440 |
| Neptune | 22426-04-21 23:45 G | 9912099.25 | 9912099.49 | 9912099.76 | 0.0088 | 0.0024 |
| Jupiter | 22426-07-24 01:12 G | 9912192.33 | 9912192.55 | 9912192.78 | 0.0534 | 0.0197 |
| Neptune | 22427-04-24 17:45 G | 9912467.00 | 9912467.24 | 9912467.50 | 0.0088 | 0.0018 |
| Neptune | 22428-04-25 22:04 G | 9912834.19 | 9912834.42 | 9912834.67 | 0.0088 | 0.0030 |
| Neptune | 22429-04-28 16:04 G | 9913201.92 | 9913202.17 | 9913202.43 | 0.0088 | 0.0025 |
| Neptune | 22430-04-30 22:04 G | 9913569.20 | 9913569.42 | 9913569.66 | 0.0088 | 0.0037 |
| Jupiter | 22430-12-17 20:24 G | 9913800.21 | 9913800.35 | 9913800.50 | 0.0510 | 0.0392 |
| Neptune | 22431-05-03 12:43 G | 9913936.78 | 9913937.03 | 9913937.28 | 0.0088 | 0.0031 |
| Jupiter | 22432-01-18 18:00 G | 9914197.02 | 9914197.25 | 9914197.48 | 0.0496 | 0.0117 |
| Neptune | 22432-05-04 22:48 G | 9914304.25 | 9914304.45 | 9914304.69 | 0.0088 | 0.0043 |
| Neptune | 22433-05-07 08:38 G | 9914671.64 | 9914671.86 | 9914672.12 | 0.0088 | 0.0037 |
| Neptune | 22434-05-10 00:57 G | 9915039.34 | 9915039.54 | 9915039.76 | 0.0088 | 0.0048 |
| Neptune | 22435-05-12 06:57 G | 9915406.57 | 9915406.79 | 9915407.04 | 0.0088 | 0.0043 |
| Neptune | 22436-05-14 01:55 G | 9915774.38 | 9915774.58 | 9915774.79 | 0.0088 | 0.0054 |
| Neptune | 22437-05-16 06:57 G | 9916141.58 | 9916141.79 | 9916142.01 | 0.0088 | 0.0048 |
| Saturn | 22437-06-08 03:21 G | 9916164.59 | 9916164.64 | 9916164.70 | 0.0289 | 0.0280 |
| Jupiter | 22437-06-22 20:24 G | 9916179.16 | 9916179.35 | 9916179.55 | 0.0520 | 0.0313 |
| Neptune | 22438-05-19 00:43 G | 9916509.36 | 9916509.53 | 9916509.75 | 0.0089 | 0.0059 |
| Saturn | 22438-06-22 10:33 G | 9916543.78 | 9916543.94 | 9916544.12 | 0.0289 | 0.0203 |
| Jupiter | 22438-07-29 07:12 G | 9916580.63 | 9916580.80 | 9916580.99 | 0.0535 | 0.0315 |
| Neptune | 22439-05-21 07:40 G | 9916876.64 | 9916876.82 | 9916877.04 | 0.0089 | 0.0054 |
| Neptune | 22440-05-22 22:19 G | 9917244.27 | 9917244.43 | 9917244.65 | 0.0089 | 0.0064 |
| Neptune | 22441-05-25 09:36 G | 9917611.73 | 9917611.90 | 9917612.10 | 0.0089 | 0.0059 |

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| Neptune | 22442-05-27 19:40 G | 9917979.18 | 9917979.32 | 9917979.52 | 0.0089 | 0.0069 |
| Jupiter | 22442-12-22 04:19 G | 9918187.51 | 9918187.68 | 9918187.87 | 0.0508 | 0.0344 |
| Neptune | 22443-05-30 12:28 G | 9918346.85 | 9918347.02 | 9918347.20 | 0.0089 | 0.0063 |
| Jupiter | 22444-01-23 03:21 G | 9918584.44 | 9918584.64 | 9918584.84 | 0.0494 | 0.0226 |
| Neptune | 22444-05-31 18:14 G | 9918714.15 | 9918714.26 | 9918714.45 | 0.0089 | 0.0073 |
| Pluto | 22444-10-16 17:31 G | 9918852.02 | 9918852.23 | 9918852.47 | 0.0064 | 0.0028 |
| Neptune | 22445-06-03 13:40 G | 9919081.92 | 9919082.07 | 9919082.25 | 0.0089 | 0.0067 |
| Pluto | 22445-10-18 02:52 G | 9919218.49 | 9919218.62 | 9919218.81 | 0.0064 | 0.0052 |
| Neptune | 22446-06-05 19:12 G | 9919449.18 | 9919449.30 | 9919449.44 | 0.0089 | 0.0076 |
| Neptune | 22447-06-08 13:40 G | 9919816.95 | 9919817.07 | 9919817.25 | 0.0089 | 0.0072 |
| Neptune | 22448-06-09 21:07 G | 9920184.29 | 9920184.38 | 9920184.51 | 0.0089 | 0.0080 |
| Neptune | 22449-06-12 12:43 G | 9920551.90 | 9920552.03 | 9920552.19 | 0.0089 | 0.0075 |
| Jupiter | 22449-06-27 17:31 G | 9920567.04 | 9920567.23 | 9920567.44 | 0.0522 | 0.0246 |
| Neptune | 22450-06-15 00:14 G | 9920919.43 | 9920919.51 | 9920919.61 | 0.0089 | 0.0082 |
| Jupiter | 22450-08-03 17:16 G | 9920969.10 | 9920969.22 | 9920969.35 | 0.0536 | 0.0453 |
| Neptune | 22451-06-17 11:16 G | 9921286.85 | 9921286.97 | 9921287.11 | 0.0089 | 0.0077 |
| Neptune | 22452-06-19 03:21 G | 9921654.59 | 9921654.64 | 9921654.74 | 0.0089 | 0.0085 |
| Saturn | 22452-12-16 19:40 G | 9921835.09 | 9921835.32 | 9921835.56 | 0.0270 | 0.0034 |
| Neptune | 22453-06-21 11:02 G | 9922021.86 | 9922021.96 | 9922022.08 | 0.0089 | 0.0081 |
| Mars | 22454-04-05 05:02 G | 9922309.67 | 9922309.71 | 9922309.76 | 0.1611 | 0.1558 |
| Neptune | 22454-06-24 06:00 G | 9922389.72 | 9922389.75 | 9922389.82 | 0.0089 | 0.0087 |
| Jupiter | 22454-12-26 16:04 G | 9922574.98 | 9922575.17 | 9922575.35 | 0.0506 | 0.0294 |
| Neptune | 22455-06-26 11:31 G | 9922756.91 | 9922756.98 | 9922757.10 | 0.0089 | 0.0083 |
| Jupiter | 22456-01-27 08:38 G | 9922971.67 | 9922971.86 | 9922972.05 | 0.0493 | 0.0310 |
| Neptune | 22456-06-28 07:12 G | 9923124.77 | 9923124.80 | 9923124.87 | 0.0089 | 0.0087 |
| Neptune | 22457-06-30 14:09 G | 9923492.03 | 9923492.09 | 9923492.19 | 0.0089 | 0.0084 |
| Neptune | 22458-07-03 06:14 G | 9923859.75 | 9923859.76 | 9923859.83 | 0.0089 | 0.0089 |
| Neptune | 22459-07-05 17:31 G | 9924227.19 | 9924227.23 | 9924227.32 | 0.0089 | 0.0086 |
| Uranus | 22459-11-12 07:55 G | 9924356.62 | 9924356.83 | 9924357.04 | 0.0142 | 0.0087 |
| Neptune | 22460-07-07 05:31 G | 9924594.73 | 9924594.73 | 9924594.75 | 0.0089 | 0.0089 |

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| Uranus | 22460-11-16 07:55 G | 9924726.59 | 9924726.83 | 9924727.07 | 0.0143 | 0.0033 |
| Jupiter | 22461-07-02 18:00 G | 9924955.03 | 9924955.25 | 9924955.47 | 0.0525 | 0.0199 |
| Neptune | 22461-07-09 21:50 G | 9924962.37 | 9924962.41 | 9924962.49 | 0.0089 | 0.0086 |
| Uranus | 22461-11-21 01:40 G | 9925096.33 | 9925096.57 | 9925096.82 | 0.0143 | 0.0048 |
| Neptune | 22462-07-12 05:45 G | 9925329.73 | 9925329.74 | 9925329.80 | 0.0089 | 0.0089 |
| Jupiter | 22462-08-08 12:14 G | 9925356.96 | 9925357.01 | 9925357.08 | 0.0538 | 0.0518 |
| Uranus | 22462-11-26 00:28 G | 9925466.39 | 9925466.52 | 9925466.69 | 0.0143 | 0.0113 |
| Neptune | 22463-07-15 01:12 G | 9925697.52 | 9925697.55 | 9925697.65 | 0.0089 | 0.0087 |
| Neptune | 22464-07-16 07:40 G | 9926064.79 | 9926064.82 | 9926064.88 | 0.0089 | 0.0088 |
| Neptune | 22465-07-19 03:21 G | 9926432.60 | 9926432.64 | 9926432.73 | 0.0089 | 0.0087 |
| Neptune | 22466-07-21 10:19 G | 9926799.91 | 9926799.93 | 9926800.02 | 0.0089 | 0.0088 |
| Jupiter | 22466-12-31 10:48 G | 9926962.73 | 9926962.95 | 9926963.17 | 0.0504 | 0.0188 |
| Saturn | 22467-06-16 12:57 G | 9927129.79 | 9927130.04 | 9927130.29 | 0.0290 | 0.0003 |
| Neptune | 22467-07-24 03:36 G | 9927167.60 | 9927167.65 | 9927167.76 | 0.0089 | 0.0086 |
| Jupiter | 22468-01-31 16:04 G | 9927359.01 | 9927359.17 | 9927359.33 | 0.0492 | 0.0348 |
| Neptune | 22468-07-25 14:09 G | 9927535.04 | 9927535.09 | 9927535.20 | 0.0089 | 0.0085 |
| Neptune | 22469-07-28 03:07 G | 9927902.54 | 9927902.63 | 9927902.74 | 0.0089 | 0.0083 |
| Neptune | 22470-07-30 18:28 G | 9928270.21 | 9928270.27 | 9928270.40 | 0.0089 | 0.0083 |
| Neptune | 22471-08-02 03:21 G | 9928637.55 | 9928637.64 | 9928637.77 | 0.0089 | 0.0082 |
| Neptune | 22472-08-03 22:48 G | 9929005.36 | 9929005.45 | 9929005.59 | 0.0089 | 0.0080 |
| Jupiter | 22473-07-07 11:45 G | 9929342.77 | 9929342.99 | 9929343.23 | 0.0527 | 0.0089 |
| Neptune | 22473-08-06 05:02 G | 9929372.61 | 9929372.71 | 9929372.85 | 0.0089 | 0.0080 |
| Neptune | 22474-08-09 01:55 G | 9929740.44 | 9929740.58 | 9929740.73 | 0.0089 | 0.0075 |
| Neptune | 22475-08-11 08:52 G | 9930107.75 | 9930107.87 | 9930108.01 | 0.0089 | 0.0076 |
| Neptune | 22476-08-13 02:38 G | 9930475.46 | 9930475.61 | 9930475.79 | 0.0089 | 0.0071 |
| Neptune | 22477-08-15 12:43 G | 9930842.90 | 9930843.03 | 9930843.19 | 0.0090 | 0.0073 |
| Neptune | 22478-08-18 01:55 G | 9931210.43 | 9931210.58 | 9931210.78 | 0.0090 | 0.0068 |
| Jupiter | 22479-01-04 17:16 G | 9931349.99 | 9931350.22 | 9931350.45 | 0.0502 | 0.0074 |
| Neptune | 22479-08-20 17:02 G | 9931578.06 | 9931578.21 | 9931578.38 | 0.0090 | 0.0069 |
| Jupiter | 22480-02-05 03:07 G | 9931746.49 | 9931746.63 | 9931746.78 | 0.0490 | 0.0390 |

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| Neptune | 22480-08-22 02:24 G | 9931945.41 | 9931945.60 | 9931945.79 | 0.0090 | 0.0062 |
| Neptune | 22481-08-24 21:07 G | 9932313.21 | 9932313.38 | 9932313.57 | 0.0090 | 0.0064 |
| Saturn | 22481-12-11 18:57 G | 9932422.07 | 9932422.29 | 9932422.50 | 0.0270 | 0.0138 |
| Neptune | 22482-08-27 03:21 G | 9932680.46 | 9932680.64 | 9932680.86 | 0.0090 | 0.0057 |
| Saturn | 22482-12-23 16:48 G | 9932799.13 | 9932799.20 | 9932799.30 | 0.0270 | 0.0253 |
| Neptune | 22483-08-29 23:31 G | 9933048.30 | 9933048.48 | 9933048.69 | 0.0090 | 0.0060 |
| Neptune | 22484-08-31 06:00 G | 9933415.56 | 9933415.75 | 9933415.97 | 0.0090 | 0.0052 |
| Jupiter | 22485-07-12 22:19 G | 9933731.20 | 9933731.43 | 9933731.65 | 0.0529 | 0.0052 |
| Neptune | 22485-09-03 00:28 G | 9933783.32 | 9933783.52 | 9933783.74 | 0.0090 | 0.0055 |
| Neptune | 22486-09-05 09:50 G | 9934150.71 | 9934150.91 | 9934151.14 | 0.0090 | 0.0046 |
| Neptune | 22487-09-08 00:14 G | 9934518.28 | 9934518.51 | 9934518.73 | 0.0090 | 0.0048 |
| Neptune | 22488-09-09 13:55 G | 9934885.88 | 9934886.08 | 9934886.32 | 0.0090 | 0.0040 |
| Neptune | 22489-09-11 23:45 G | 9935253.27 | 9935253.49 | 9935253.74 | 0.0090 | 0.0043 |
| Neptune | 22490-09-14 18:00 G | 9935621.03 | 9935621.25 | 9935621.50 | 0.0090 | 0.0034 |
| Jupiter | 22491-01-09 11:16 G | 9935737.74 | 9935737.97 | 9935738.20 | 0.0500 | 0.0012 |
| Neptune | 22491-09-17 00:43 G | 9935988.30 | 9935988.53 | 9935988.77 | 0.0089 | 0.0037 |
| Jupiter | 22492-02-09 02:24 G | 9936133.57 | 9936133.60 | 9936133.64 | 0.0489 | 0.0480 |
| Neptune | 22492-09-18 20:24 G | 9936356.11 | 9936356.35 | 9936356.60 | 0.0089 | 0.0026 |
| Neptune | 22493-09-21 02:09 G | 9936723.37 | 9936723.59 | 9936723.85 | 0.0089 | 0.0031 |
| Neptune | 22494-09-23 21:07 G | 9937091.12 | 9937091.38 | 9937091.64 | 0.0089 | 0.0019 |
| Neptune | 22495-09-26 05:31 G | 9937458.49 | 9937458.73 | 9937458.97 | 0.0089 | 0.0024 |
| Saturn | 22496-06-09 15:21 G | 9937715.99 | 9937716.14 | 9937716.31 | 0.0289 | 0.0220 |
| Neptune | 22496-09-27 19:40 G | 9937826.06 | 9937826.32 | 9937826.59 | 0.0089 | 0.0013 |
| Saturn | 22497-06-23 18:14 G | 9938095.17 | 9938095.26 | 9938095.38 | 0.0289 | 0.0262 |
| Jupiter | 22497-07-17 23:02 G | 9938119.22 | 9938119.46 | 9938119.69 | 0.0531 | 0.0129 |
| Neptune | 22497-09-30 08:38 G | 9938193.63 | 9938193.86 | 9938194.12 | 0.0089 | 0.0018 |
| Neptune | 22498-10-02 18:43 G | 9938561.01 | 9938561.28 | 9938561.54 | 0.0089 | 0.0005 |
| Uranus | 22499-05-10 18:28 G | 9938781.22 | 9938781.27 | 9938781.36 | 0.0136 | 0.0130 |
| Neptune | 22499-10-05 12:28 G | 9938928.77 | 9938929.02 | 9938929.27 | 0.0089 | 0.0010 |
| Uranus | 22500-05-15 00:28 G | 9939150.29 | 9939150.52 | 9939150.77 | 0.0136 | 0.0057 |

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| Neptune | 22500-10-07 18:57 G | 9939296.03 | 9939296.29 | 9939296.55 | 0.0089 | 0.0002 |
| Uranus | 22501-05-19 17:16 G | 9939519.97 | 9939520.22 | 9939520.47 | 0.0136 | 0.0007 |
| Neptune | 22501-10-10 14:38 G | 9939663.85 | 9939664.11 | 9939664.37 | 0.0089 | 0.0004 |
| Jupiter | 22501-12-13 04:33 G | 9939727.65 | 9939727.69 | 9939727.73 | 0.0513 | 0.0503 |
| Uranus | 22502-05-23 22:19 G | 9939889.21 | 9939889.43 | 9939889.69 | 0.0135 | 0.0057 |
| Neptune | 22502-10-12 20:24 G | 9940031.10 | 9940031.35 | 9940031.60 | 0.0089 | 0.0009 |
| Jupiter | 22503-01-14 10:48 G | 9940124.71 | 9940124.95 | 9940125.19 | 0.0498 | 0.0027 |
| Uranus | 22503-05-28 13:26 G | 9940258.96 | 9940259.06 | 9940259.20 | 0.0135 | 0.0117 |
| Neptune | 22503-10-15 14:38 G | 9940398.85 | 9940399.11 | 9940399.37 | 0.0089 | 0.0003 |
| Neptune | 22504-10-16 22:33 G | 9940766.19 | 9940766.44 | 9940766.68 | 0.0089 | 0.0016 |
| Neptune | 22505-10-19 12:43 G | 9941133.76 | 9941134.03 | 9941134.30 | 0.0089 | 0.0010 |
| Neptune | 22506-10-22 00:43 G | 9941501.29 | 9941501.53 | 9941501.78 | 0.0089 | 0.0022 |
| Neptune | 22507-10-24 10:19 G | 9941868.67 | 9941868.93 | 9941869.19 | 0.0089 | 0.0017 |
| Jupiter | 22508-06-18 00:57 G | 9942106.41 | 9942106.54 | 9942106.67 | 0.0517 | 0.0434 |
| Neptune | 22508-10-26 03:07 G | 9942236.40 | 9942236.63 | 9942236.88 | 0.0089 | 0.0029 |
| Jupiter | 22509-07-24 03:07 G | 9942507.43 | 9942507.63 | 9942507.85 | 0.0533 | 0.0187 |
| Neptune | 22509-10-28 09:07 G | 9942603.64 | 9942603.88 | 9942604.14 | 0.0089 | 0.0023 |
| Neptune | 22510-10-31 04:04 G | 9942971.45 | 9942971.67 | 9942971.92 | 0.0089 | 0.0036 |
| Neptune | 22511-11-02 09:21 G | 9943338.66 | 9943338.89 | 9943339.14 | 0.0089 | 0.0030 |
| Saturn | 22511-12-20 06:14 G | 9943386.54 | 9943386.76 | 9943386.99 | 0.0270 | 0.0088 |
| Neptune | 22512-11-04 03:21 G | 9943706.43 | 9943706.64 | 9943706.89 | 0.0089 | 0.0042 |
| Neptune | 22513-11-06 11:02 G | 9944073.75 | 9944073.96 | 9944074.20 | 0.0089 | 0.0036 |
| Jupiter | 22513-12-17 16:19 G | 9944115.04 | 9944115.18 | 9944115.34 | 0.0511 | 0.0401 |
| Neptune | 22514-11-09 01:12 G | 9944441.33 | 9944441.55 | 9944441.78 | 0.0089 | 0.0047 |
| Jupiter | 22515-01-19 00:14 G | 9944512.29 | 9944512.51 | 9944512.73 | 0.0497 | 0.0109 |
| Neptune | 22515-11-11 12:43 G | 9944808.82 | 9944809.03 | 9944809.26 | 0.0089 | 0.0042 |
| Neptune | 22516-11-12 21:36 G | 9945176.21 | 9945176.40 | 9945176.63 | 0.0089 | 0.0054 |
| Neptune | 22517-11-15 14:09 G | 9945543.89 | 9945544.09 | 9945544.31 | 0.0089 | 0.0048 |
| Neptune | 22518-11-17 19:55 G | 9945911.14 | 9945911.33 | 9945911.52 | 0.0089 | 0.0059 |
| Neptune | 22519-11-20 13:55 G | 9946278.89 | 9946279.08 | 9946279.30 | 0.0089 | 0.0053 |

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| Jupiter | 22520-06-22 18:00 G | 9946494.08 | 9946494.25 | 9946494.43 | 0.0519 | 0.0323 |
| Neptune | 22520-11-21 18:57 G | 9946646.12 | 9946646.29 | 9946646.47 | 0.0089 | 0.0064 |
| Jupiter | 22521-07-29 06:43 G | 9946895.59 | 9946895.78 | 9946895.98 | 0.0534 | 0.0305 |
| Neptune | 22521-11-24 12:28 G | 9947013.83 | 9947014.02 | 9947014.22 | 0.0089 | 0.0058 |
| Neptune | 22522-11-26 19:26 G | 9947381.16 | 9947381.31 | 9947381.46 | 0.0089 | 0.0069 |
| Neptune | 22523-11-29 08:24 G | 9947748.68 | 9947748.85 | 9947749.05 | 0.0089 | 0.0063 |
| Neptune | 22524-11-30 19:26 G | 9948116.20 | 9948116.31 | 9948116.48 | 0.0089 | 0.0074 |
| Neptune | 22525-12-03 04:04 G | 9948483.52 | 9948483.67 | 9948483.86 | 0.0089 | 0.0067 |
| Jupiter | 22525-12-22 07:26 G | 9948502.66 | 9948502.81 | 9948502.97 | 0.0509 | 0.0358 |
| Saturn | 22526-06-19 01:40 G | 9948681.34 | 9948681.57 | 9948681.80 | 0.0289 | 0.0065 |
| Neptune | 22526-12-05 20:38 G | 9948851.24 | 9948851.36 | 9948851.49 | 0.0089 | 0.0077 |
| Jupiter | 22527-01-23 07:40 G | 9948899.61 | 9948899.82 | 9948900.04 | 0.0495 | 0.0220 |
| Neptune | 22527-12-08 01:26 G | 9949218.42 | 9949218.56 | 9949218.73 | 0.0089 | 0.0071 |
| Neptune | 22528-12-09 19:40 G | 9949586.23 | 9949586.32 | 9949586.43 | 0.0089 | 0.0081 |
| Neptune | 22529-12-11 23:45 G | 9949953.37 | 9949953.49 | 9949953.64 | 0.0088 | 0.0075 |
| Neptune | 22530-12-14 16:04 G | 9950321.12 | 9950321.17 | 9950321.29 | 0.0088 | 0.0084 |
| Neptune | 22531-12-16 23:16 G | 9950688.37 | 9950688.47 | 9950688.61 | 0.0088 | 0.0078 |
| Jupiter | 22532-06-27 18:57 G | 9950882.09 | 9950882.29 | 9950882.50 | 0.0522 | 0.0258 |
| Neptune | 22532-12-18 11:31 G | 9951055.94 | 9951055.98 | 9951056.07 | 0.0088 | 0.0086 |
| Mars | 22533-04-08 02:38 G | 9951166.43 | 9951166.61 | 9951166.80 | 0.1613 | 0.0370 |
| Jupiter | 22533-08-03 05:31 G | 9951283.60 | 9951283.73 | 9951283.86 | 0.0536 | 0.0439 |
| Neptune | 22533-12-20 22:48 G | 9951423.37 | 9951423.45 | 9951423.58 | 0.0088 | 0.0080 |
| Pluto | 22534-04-18 23:45 G | 9951542.29 | 9951542.49 | 9951542.72 | 0.0080 | 0.0040 |
| Neptune | 22534-12-23 06:43 G | 9951790.78 | 9951790.78 | 9951790.80 | 0.0088 | 0.0088 |
| Neptune | 22535-12-25 22:19 G | 9952158.37 | 9952158.43 | 9952158.55 | 0.0088 | 0.0082 |
| Jupiter | 22537-12-27 03:21 G | 9952890.45 | 9952890.64 | 9952890.83 | 0.0506 | 0.0301 |
| Neptune | 22537-12-29 20:38 G | 9952893.30 | 9952893.36 | 9952893.48 | 0.0088 | 0.0083 |
| Jupiter | 22539-01-27 14:52 G | 9953286.95 | 9953287.12 | 9953287.30 | 0.0493 | 0.0299 |
| Neptune | 22540-01-03 17:16 G | 9953628.17 | 9953628.22 | 9953628.32 | 0.0088 | 0.0085 |
| Saturn | 22540-12-14 00:00 G | 9953973.27 | 9953973.50 | 9953973.74 | 0.0270 | 0.0083 |

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| Neptune | 22542-01-07 11:45 G | 9954362.95 | 9954362.99 | 9954363.08 | 0.0088 | 0.0085 |
| Uranus | 22543-11-13 15:50 G | 9955038.00 | 9955038.16 | 9955038.37 | 0.0142 | 0.0099 |
| Neptune | 22544-01-12 06:00 G | 9955097.70 | 9955097.75 | 9955097.85 | 0.0088 | 0.0084 |
| Jupiter | 22544-07-02 13:12 G | 9955269.84 | 9955270.05 | 9955270.26 | 0.0524 | 0.0210 |
| Uranus | 22544-11-17 18:00 G | 9955408.01 | 9955408.25 | 9955408.50 | 0.0143 | 0.0016 |
| Jupiter | 22545-08-08 21:21 G | 9955672.32 | 9955672.39 | 9955672.47 | 0.0538 | 0.0505 |
| Uranus | 22545-11-22 11:02 G | 9955777.72 | 9955777.96 | 9955778.22 | 0.0143 | 0.0040 |
| Neptune | 22546-01-16 02:09 G | 9955832.53 | 9955832.59 | 9955832.68 | 0.0088 | 0.0084 |
| Uranus | 22546-11-27 11:45 G | 9956147.86 | 9956147.99 | 9956148.14 | 0.0143 | 0.0118 |
| Neptune | 22548-01-20 23:31 G | 9956567.43 | 9956567.48 | 9956567.58 | 0.0088 | 0.0084 |
| Neptune | 22549-01-22 15:21 G | 9956935.14 | 9956935.14 | 9956935.17 | 0.0088 | 0.0088 |
| Jupiter | 22549-12-31 10:04 G | 9957277.71 | 9957277.92 | 9957278.13 | 0.0504 | 0.0193 |
| Neptune | 22550-01-24 22:33 G | 9957302.38 | 9957302.44 | 9957302.56 | 0.0088 | 0.0082 |
| Neptune | 22551-01-27 09:07 G | 9957669.86 | 9957669.88 | 9957669.97 | 0.0088 | 0.0086 |
| Jupiter | 22551-02-01 02:52 G | 9957674.44 | 9957674.62 | 9957674.79 | 0.0492 | 0.0329 |
| Neptune | 22552-01-29 21:50 G | 9958037.33 | 9958037.41 | 9958037.53 | 0.0088 | 0.0080 |
| Neptune | 22553-01-31 04:04 G | 9958404.60 | 9958404.67 | 9958404.74 | 0.0088 | 0.0084 |
| Neptune | 22554-02-02 19:55 G | 9958772.24 | 9958772.33 | 9958772.47 | 0.0088 | 0.0078 |
| Neptune | 22555-02-04 23:31 G | 9959139.40 | 9959139.48 | 9959139.59 | 0.0088 | 0.0081 |
| Saturn | 22555-06-13 01:40 G | 9959267.36 | 9959267.57 | 9959267.79 | 0.0289 | 0.0157 |
| Neptune | 22556-02-07 16:33 G | 9959507.07 | 9959507.19 | 9959507.35 | 0.0088 | 0.0074 |
| Jupiter | 22556-07-07 23:16 G | 9959658.25 | 9959658.47 | 9959658.70 | 0.0526 | 0.0089 |
| Neptune | 22557-02-08 21:21 G | 9959874.28 | 9959874.39 | 9959874.52 | 0.0088 | 0.0077 |
| Neptune | 22558-02-11 11:45 G | 9960241.85 | 9960241.99 | 9960242.16 | 0.0088 | 0.0071 |
| Neptune | 22559-02-13 20:09 G | 9960609.22 | 9960609.34 | 9960609.48 | 0.0088 | 0.0074 |
| Neptune | 22560-02-16 05:45 G | 9960976.58 | 9960976.74 | 9960976.92 | 0.0088 | 0.0067 |
| Neptune | 22561-02-17 18:28 G | 9961344.14 | 9961344.27 | 9961344.44 | 0.0088 | 0.0070 |
| Jupiter | 22562-01-05 00:57 G | 9961665.31 | 9961665.54 | 9961665.77 | 0.0502 | 0.0081 |
| Neptune | 22562-02-20 00:00 G | 9961711.32 | 9961711.50 | 9961711.69 | 0.0088 | 0.0062 |
| Jupiter | 22563-02-04 22:48 G | 9962061.32 | 9962061.45 | 9962061.60 | 0.0491 | 0.0381 |

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| Neptune | 22563-02-22 16:33 G | 9962079.04 | 9962079.19 | 9962079.38 | 0.0088 | 0.0065 |
| Neptune | 22564-02-24 19:55 G | 9962446.16 | 9962446.33 | 9962446.54 | 0.0088 | 0.0059 |
| Neptune | 22565-02-26 12:57 G | 9962813.88 | 9962814.04 | 9962814.25 | 0.0088 | 0.0061 |
| Neptune | 22566-02-28 18:28 G | 9963181.07 | 9963181.27 | 9963181.47 | 0.0088 | 0.0054 |
| Neptune | 22567-03-03 08:09 G | 9963548.65 | 9963548.84 | 9963549.07 | 0.0088 | 0.0055 |
| Neptune | 22568-03-04 17:31 G | 9963916.04 | 9963916.23 | 9963916.46 | 0.0088 | 0.0049 |
| Jupiter | 22568-07-12 19:12 G | 9964046.06 | 9964046.30 | 9964046.54 | 0.0528 | 0.0043 |
| Neptune | 22569-03-07 02:24 G | 9964283.39 | 9964283.60 | 9964283.83 | 0.0088 | 0.0049 |
| Saturn | 22569-12-09 11:02 G | 9964560.88 | 9964560.96 | 9964561.05 | 0.0270 | 0.0252 |
| Neptune | 22570-03-09 16:33 G | 9964650.97 | 9964651.19 | 9964651.41 | 0.0088 | 0.0043 |
| Saturn | 22570-12-21 12:43 G | 9964937.82 | 9964938.03 | 9964938.25 | 0.0270 | 0.0142 |
| Neptune | 22571-03-11 21:07 G | 9965018.16 | 9965018.38 | 9965018.61 | 0.0088 | 0.0044 |
| Neptune | 22572-03-13 14:09 G | 9965385.87 | 9965386.09 | 9965386.33 | 0.0088 | 0.0038 |
| Neptune | 22573-03-15 18:00 G | 9965753.02 | 9965753.25 | 9965753.48 | 0.0088 | 0.0037 |
| Jupiter | 22574-01-09 04:33 G | 9966052.45 | 9966052.69 | 9966052.92 | 0.0500 | 0.0026 |
| Neptune | 22574-03-18 10:33 G | 9966120.70 | 9966120.94 | 9966121.19 | 0.0088 | 0.0031 |
| Jupiter | 22575-02-09 12:28 G | 9966448.97 | 9966449.02 | 9966449.08 | 0.0490 | 0.0474 |
| Neptune | 22575-03-20 16:19 G | 9966487.96 | 9966488.18 | 9966488.43 | 0.0088 | 0.0031 |
| Neptune | 22576-03-22 06:28 G | 9966855.51 | 9966855.77 | 9966856.02 | 0.0088 | 0.0025 |
| Neptune | 22577-03-24 16:33 G | 9967222.96 | 9967223.19 | 9967223.44 | 0.0088 | 0.0025 |
| Neptune | 22578-03-27 01:12 G | 9967590.30 | 9967590.55 | 9967590.82 | 0.0088 | 0.0019 |
| Neptune | 22579-03-29 16:04 G | 9967957.93 | 9967958.17 | 9967958.42 | 0.0088 | 0.0018 |
| Neptune | 22580-03-30 20:38 G | 9968325.11 | 9968325.36 | 9968325.63 | 0.0088 | 0.0012 |
| Jupiter | 22580-07-17 19:26 G | 9968434.09 | 9968434.31 | 9968434.53 | 0.0530 | 0.0112 |
| Neptune | 22581-04-02 14:38 G | 9968692.85 | 9968693.11 | 9968693.36 | 0.0088 | 0.0010 |
| Neptune | 22582-04-04 18:14 G | 9969060.01 | 9969060.26 | 9969060.52 | 0.0088 | 0.0006 |
| Neptune | 22583-04-07 11:16 G | 9969427.70 | 9969427.97 | 9969428.23 | 0.0088 | 0.0004 |
| Uranus | 22583-05-12 04:19 G | 9969462.56 | 9969462.68 | 9969462.84 | 0.0136 | 0.0113 |
| Neptune | 22584-04-08 17:45 G | 9969794.99 | 9969795.24 | 9969795.49 | 0.0088 | 0.0001 |
| Uranus | 22584-05-15 09:50 G | 9969831.69 | 9969831.91 | 9969832.14 | 0.0136 | 0.0067 |

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| Jupiter | 22584-12-12 03:21 G | 9970042.60 | 9970042.64 | 9970042.69 | 0.0514 | 0.0503 |
| Neptune | 22585-04-11 06:57 G | 9970162.53 | 9970162.79 | 9970163.06 | 0.0088 | 0.0003 |
| Uranus | 22585-05-20 03:21 G | 9970201.39 | 9970201.64 | 9970201.90 | 0.0135 | 0.0005 |
| Saturn | 22585-06-20 18:43 G | 9970233.08 | 9970233.28 | 9970233.50 | 0.0289 | 0.0131 |
| Jupiter | 22586-01-13 20:52 G | 9970440.14 | 9970440.37 | 9970440.59 | 0.0499 | 0.0020 |
| Neptune | 22586-04-13 18:14 G | 9970530.02 | 9970530.26 | 9970530.51 | 0.0088 | 0.0008 |
| Uranus | 22586-05-24 08:09 G | 9970570.61 | 9970570.84 | 9970571.08 | 0.0135 | 0.0057 |
| Neptune | 22587-04-16 02:38 G | 9970897.35 | 9970897.61 | 9970897.88 | 0.0088 | 0.0010 |
| Uranus | 22587-05-29 00:00 G | 9970940.39 | 9970940.50 | 9970940.66 | 0.0135 | 0.0114 |
| Neptune | 22588-04-17 18:14 G | 9971265.02 | 9971265.26 | 9971265.52 | 0.0088 | 0.0014 |
| Neptune | 22589-04-19 23:02 G | 9971632.21 | 9971632.46 | 9971632.73 | 0.0088 | 0.0017 |
| Neptune | 22590-04-22 17:16 G | 9971999.98 | 9972000.22 | 9972000.48 | 0.0088 | 0.0020 |
| Neptune | 22591-04-24 21:36 G | 9972367.17 | 9972367.40 | 9972367.66 | 0.0088 | 0.0025 |
| Jupiter | 22591-06-17 22:04 G | 9972421.31 | 9972421.42 | 9972421.54 | 0.0516 | 0.0446 |
| Neptune | 22592-04-26 14:52 G | 9972734.88 | 9972735.12 | 9972735.38 | 0.0088 | 0.0027 |
| Jupiter | 22592-07-23 00:00 G | 9972822.27 | 9972822.50 | 9972822.73 | 0.0532 | 0.0167 |
| Neptune | 22593-04-28 21:50 G | 9973102.19 | 9973102.41 | 9973102.66 | 0.0088 | 0.0032 |
| Neptune | 22594-05-01 11:16 G | 9973469.74 | 9973469.97 | 9973470.24 | 0.0088 | 0.0034 |
| Neptune | 22595-05-03 23:31 G | 9973837.27 | 9973837.48 | 9973837.72 | 0.0088 | 0.0037 |
| Neptune | 22596-05-05 07:55 G | 9974204.60 | 9974204.83 | 9974205.08 | 0.0088 | 0.0040 |
| Jupiter | 22596-12-16 20:52 G | 9974430.23 | 9974430.37 | 9974430.50 | 0.0512 | 0.0412 |
| Neptune | 22597-05-08 00:00 G | 9974572.30 | 9974572.50 | 9974572.74 | 0.0088 | 0.0045 |
| Jupiter | 22598-01-18 04:33 G | 9974827.45 | 9974827.69 | 9974827.92 | 0.0497 | 0.0103 |
| Neptune | 22598-05-10 05:02 G | 9974939.51 | 9974939.71 | 9974939.95 | 0.0088 | 0.0047 |
| Neptune | 22599-05-12 23:31 G | 9975307.30 | 9975307.48 | 9975307.72 | 0.0088 | 0.0052 |
| Saturn | 22599-12-16 10:48 G | 9975524.71 | 9975524.95 | 9975525.18 | 0.0270 | 0.0029 |
| Neptune | 22600-05-15 04:33 G | 9975674.50 | 9975674.69 | 9975674.92 | 0.0088 | 0.0051 |
| Neptune | 22601-05-17 21:50 G | 9976042.23 | 9976042.41 | 9976042.64 | 0.0088 | 0.0057 |
| Neptune | 22602-05-20 05:45 G | 9976409.57 | 9976409.74 | 9976409.96 | 0.0089 | 0.0057 |
| Neptune | 22603-05-22 20:09 G | 9976777.16 | 9976777.34 | 9976777.54 | 0.0089 | 0.0062 |

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| Jupiter | 22603-06-23 21:36 G | 9976809.21 | 9976809.40 | 9976809.58 | 0.0519 | 0.0330 |
| Neptune | 22604-05-24 08:24 G | 9977144.70 | 9977144.85 | 9977145.06 | 0.0089 | 0.0063 |
| Jupiter | 22604-07-29 00:00 G | 9977210.31 | 9977210.50 | 9977210.69 | 0.0534 | 0.0294 |
| Neptune | 22605-05-26 17:31 G | 9977512.08 | 9977512.23 | 9977512.43 | 0.0089 | 0.0068 |
| Neptune | 22606-05-29 10:19 G | 9977879.79 | 9977879.93 | 9977880.13 | 0.0089 | 0.0067 |
| Neptune | 22607-05-31 16:04 G | 9978247.04 | 9978247.17 | 9978247.34 | 0.0089 | 0.0072 |
| Neptune | 22608-06-02 11:16 G | 9978614.83 | 9978614.97 | 9978615.14 | 0.0089 | 0.0070 |
| Jupiter | 22608-12-22 16:33 G | 9978818.03 | 9978818.19 | 9978818.36 | 0.0509 | 0.0365 |
| Neptune | 22609-06-04 16:48 G | 9978982.08 | 9978982.20 | 9978982.33 | 0.0089 | 0.0077 |
| Jupiter | 22610-01-23 12:14 G | 9979214.81 | 9979215.01 | 9979215.22 | 0.0495 | 0.0217 |
| Neptune | 22610-06-07 10:04 G | 9979349.81 | 9979349.92 | 9979350.10 | 0.0089 | 0.0075 |
| Neptune | 22611-06-09 18:28 G | 9979717.19 | 9979717.27 | 9979717.38 | 0.0089 | 0.0082 |
| Mars | 22612-04-11 08:38 G | 9980023.75 | 9980023.86 | 9980023.98 | 0.1616 | 0.1304 |
| Neptune | 22612-06-11 08:38 G | 9980084.76 | 9980084.86 | 9980085.02 | 0.0089 | 0.0078 |
| Neptune | 22613-06-13 21:50 G | 9980452.36 | 9980452.41 | 9980452.51 | 0.0089 | 0.0085 |
| Saturn | 22614-06-15 12:00 G | 9980818.76 | 9980819.00 | 9980819.24 | 0.0289 | 0.0090 |
| Neptune | 22614-06-16 07:40 G | 9980819.74 | 9980819.82 | 9980819.96 | 0.0089 | 0.0081 |
| Neptune | 22615-06-19 01:12 G | 9981187.55 | 9981187.55 | 9981187.58 | 0.0089 | 0.0089 |
| Jupiter | 22615-06-28 16:33 G | 9981197.00 | 9981197.19 | 9981197.39 | 0.0521 | 0.0271 |
| Neptune | 22616-06-20 07:26 G | 9981554.75 | 9981554.81 | 9981554.91 | 0.0089 | 0.0084 |
| Jupiter | 22616-08-03 15:36 G | 9981599.02 | 9981599.15 | 9981599.29 | 0.0536 | 0.0429 |
| Neptune | 22618-06-25 08:24 G | 9982289.82 | 9982289.85 | 9982289.95 | 0.0089 | 0.0086 |
| Neptune | 22620-06-29 11:16 G | 9983024.94 | 9983024.97 | 9983025.04 | 0.0089 | 0.0087 |
| Jupiter | 22620-12-26 20:52 G | 9983205.19 | 9983205.37 | 9983205.55 | 0.0507 | 0.0311 |
| Jupiter | 22622-01-27 20:52 G | 9983602.18 | 9983602.37 | 9983602.57 | 0.0494 | 0.0285 |
| Neptune | 22622-07-04 15:36 G | 9983760.15 | 9983760.15 | 9983760.19 | 0.0089 | 0.0089 |
| Neptune | 22624-07-08 19:26 G | 9984495.29 | 9984495.31 | 9984495.34 | 0.0089 | 0.0089 |
| Neptune | 22626-07-13 21:36 G | 9985230.39 | 9985230.40 | 9985230.46 | 0.0089 | 0.0088 |
| Jupiter | 22627-07-03 23:02 G | 9985585.25 | 9985585.46 | 9985585.68 | 0.0524 | 0.0219 |
| Uranus | 22627-11-15 00:14 G | 9985719.32 | 9985719.51 | 9985719.74 | 0.0142 | 0.0084 |

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| Neptune | 22628-07-17 23:16 G | 9985965.43 | 9985965.47 | 9985965.53 | 0.0089 | 0.0088 |
| Jupiter | 22628-08-08 14:24 G | 9985987.01 | 9985987.10 | 9985987.20 | 0.0537 | 0.0490 |
| Uranus | 22628-11-19 03:07 G | 9986089.39 | 9986089.63 | 9986089.88 | 0.0143 | 0.0029 |
| Saturn | 22628-12-11 19:12 G | 9986112.13 | 9986112.30 | 9986112.47 | 0.0270 | 0.0197 |
| Uranus | 22629-11-23 18:57 G | 9986459.05 | 9986459.29 | 9986459.53 | 0.0143 | 0.0054 |
| Saturn | 22629-12-23 17:02 G | 9986489.04 | 9986489.21 | 9986489.38 | 0.0271 | 0.0198 |
| Neptune | 22630-07-22 23:02 G | 9986700.42 | 9986700.46 | 9986700.55 | 0.0089 | 0.0087 |
| Uranus | 22630-11-28 21:07 G | 9986829.24 | 9986829.38 | 9986829.52 | 0.0143 | 0.0116 |
| Neptune | 22632-07-26 23:02 G | 9987435.40 | 9987435.46 | 9987435.57 | 0.0089 | 0.0085 |
| Jupiter | 22632-12-31 15:36 G | 9987592.94 | 9987593.15 | 9987593.37 | 0.0505 | 0.0196 |
| Jupiter | 22634-01-31 20:52 G | 9987989.20 | 9987989.37 | 9987989.55 | 0.0492 | 0.0320 |
| Neptune | 22634-07-31 23:02 G | 9988170.39 | 9988170.46 | 9988170.58 | 0.0089 | 0.0083 |
| Neptune | 22636-08-05 00:43 G | 9988905.43 | 9988905.53 | 9988905.66 | 0.0089 | 0.0080 |
| Neptune | 22637-08-07 20:38 G | 9989273.31 | 9989273.36 | 9989273.43 | 0.0089 | 0.0087 |
| Neptune | 22638-08-10 03:50 G | 9989640.56 | 9989640.66 | 9989640.82 | 0.0089 | 0.0077 |
| Jupiter | 22639-07-08 12:00 G | 9989972.76 | 9989973.00 | 9989973.23 | 0.0525 | 0.0106 |
| Neptune | 22639-08-12 20:24 G | 9990008.29 | 9990008.35 | 9990008.48 | 0.0089 | 0.0084 |
| Neptune | 22640-08-14 08:38 G | 9990375.74 | 9990375.86 | 9990376.02 | 0.0089 | 0.0074 |
| Neptune | 22641-08-16 21:07 G | 9990743.29 | 9990743.38 | 9990743.53 | 0.0089 | 0.0080 |
| Neptune | 22642-08-19 13:40 G | 9991110.93 | 9991111.07 | 9991111.25 | 0.0089 | 0.0069 |
| Saturn | 22643-06-10 06:00 G | 9991405.72 | 9991405.75 | 9991405.78 | 0.0290 | 0.0287 |
| Neptune | 22643-08-21 21:36 G | 9991478.28 | 9991478.40 | 9991478.57 | 0.0090 | 0.0075 |
| Saturn | 22644-06-23 10:48 G | 9991784.78 | 9991784.95 | 9991785.15 | 0.0289 | 0.0196 |
| Neptune | 22644-08-23 17:16 G | 9991846.05 | 9991846.22 | 9991846.41 | 0.0090 | 0.0064 |
| Jupiter | 22645-01-04 22:04 G | 9991980.18 | 9991980.42 | 9991980.65 | 0.0503 | 0.0090 |
| Neptune | 22645-08-25 23:02 G | 9992213.33 | 9992213.46 | 9992213.64 | 0.0090 | 0.0071 |
| Jupiter | 22646-02-05 12:28 G | 9992376.87 | 9992377.02 | 9992377.17 | 0.0491 | 0.0373 |
| Neptune | 22646-08-28 19:26 G | 9992581.12 | 9992581.31 | 9992581.51 | 0.0090 | 0.0059 |
| Neptune | 22647-08-31 01:40 G | 9992948.42 | 9992948.57 | 9992948.77 | 0.0090 | 0.0065 |
| Neptune | 22648-09-01 19:26 G | 9993316.10 | 9993316.31 | 9993316.53 | 0.0090 | 0.0053 |

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| Neptune | 22649-09-04 06:28 G | 9993683.59 | 9993683.77 | 9993683.96 | 0.0090 | 0.0058 |
| Neptune | 22650-09-06 19:12 G | 9994051.09 | 9994051.30 | 9994051.54 | 0.0090 | 0.0048 |
| Jupiter | 22651-07-13 16:19 G | 9994360.96 | 9994361.18 | 9994361.41 | 0.0528 | 0.0024 |
| Neptune | 22651-09-09 10:48 G | 9994418.77 | 9994418.95 | 9994419.17 | 0.0089 | 0.0053 |
| Neptune | 22652-09-10 19:26 G | 9994786.09 | 9994786.31 | 9994786.56 | 0.0089 | 0.0042 |
| Neptune | 22653-09-13 14:24 G | 9995153.90 | 9995154.10 | 9995154.34 | 0.0089 | 0.0046 |
| Neptune | 22654-09-15 20:38 G | 9995521.14 | 9995521.36 | 9995521.61 | 0.0089 | 0.0035 |
| Neptune | 22655-09-18 16:33 G | 9995888.96 | 9995889.19 | 9995889.44 | 0.0089 | 0.0038 |
| Neptune | 22656-09-19 23:02 G | 9996256.23 | 9996256.46 | 9996256.71 | 0.0089 | 0.0029 |
| Jupiter | 22657-01-09 15:07 G | 9996367.91 | 9996368.13 | 9996368.36 | 0.0501 | 0.0037 |
| Neptune | 22657-09-22 16:33 G | 9996623.96 | 9996624.19 | 9996624.45 | 0.0089 | 0.0032 |
| Jupiter | 22658-02-09 11:16 G | 9996763.91 | 9996763.97 | 9996764.05 | 0.0490 | 0.0466 |
| Neptune | 22658-09-25 02:38 G | 9996991.38 | 9996991.61 | 9996991.86 | 0.0089 | 0.0022 |
| Saturn | 22658-12-19 00:28 G | 9997076.28 | 9997076.52 | 9997076.76 | 0.0270 | 0.0029 |
| Neptune | 22659-09-27 16:04 G | 9997358.92 | 9997359.17 | 9997359.43 | 0.0089 | 0.0024 |
| Neptune | 22660-09-29 06:57 G | 9997726.54 | 9997726.79 | 9997727.04 | 0.0089 | 0.0015 |
| Neptune | 22661-10-01 15:07 G | 9998093.88 | 9998094.13 | 9998094.41 | 0.0089 | 0.0017 |
| Neptune | 22662-10-04 09:36 G | 9998461.65 | 9998461.90 | 9998462.16 | 0.0089 | 0.0008 |
| Jupiter | 22663-07-18 18:57 G | 9998749.05 | 9998749.29 | 9998749.53 | 0.0530 | 0.0092 |
| Neptune | 22663-10-06 15:21 G | 9998828.89 | 9998829.14 | 9998829.40 | 0.0089 | 0.0009 |
| Neptune | 22664-10-08 11:02 G | 9999196.70 | 9999196.96 | 9999197.22 | 0.0089 | 0.0002 |
| Neptune | 22665-10-10 17:02 G | 9999563.96 | 9999564.21 | 9999564.47 | 0.0089 | 0.0002 |
| Neptune | 22666-10-13 10:33 G | 9999931.68 | 9999931.94 | 9999932.21 | 0.0089 | 0.0006 |
| Uranus | 22667-05-13 15:21 G | 10000144.05 | 10000144.14 | 10000144.25 | 0.0136 | 0.0125 |
| Neptune | 22667-10-15 19:40 G | 10000299.08 | 10000299.32 | 10000299.58 | 0.0089 | 0.0008 |
| Jupiter | 22667-12-13 07:26 G | 10000357.77 | 10000357.81 | 10000357.85 | 0.0514 | 0.0505 |
| Uranus | 22668-05-16 19:40 G | 10000513.10 | 10000513.32 | 10000513.57 | 0.0136 | 0.0051 |
| Neptune | 22668-10-17 09:07 G | 10000666.63 | 10000666.88 | 10000667.16 | 0.0089 | 0.0014 |
| Jupiter | 22669-01-13 23:31 G | 10000755.24 | 10000755.48 | 10000755.72 | 0.0499 | 0.0010 |
| Uranus | 22669-05-21 13:55 G | 10000882.83 | 10000883.08 | 10000883.33 | 0.0135 | 0.0002 |

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| Neptune | 22669-10-19 23:16 G | 10001034.23 | 10001034.47 | 10001034.72 | 0.0089 | 0.0014 |
| Uranus | 22670-05-25 17:45 G | 10001252.02 | 10001252.24 | 10001252.47 | 0.0135 | 0.0063 |
| Neptune | 22670-10-22 07:26 G | 10001401.57 | 10001401.81 | 10001402.09 | 0.0089 | 0.0021 |
| Uranus | 22671-05-30 10:19 G | 10001621.83 | 10001621.93 | 10001622.05 | 0.0135 | 0.0121 |
| Neptune | 22671-10-25 01:12 G | 10001769.31 | 10001769.55 | 10001769.80 | 0.0089 | 0.0022 |
| Neptune | 22672-10-26 06:43 G | 10002136.54 | 10002136.78 | 10002137.03 | 0.0089 | 0.0027 |
| Saturn | 22673-06-17 02:09 G | 10002370.35 | 10002370.59 | 10002370.83 | 0.0289 | 0.0023 |
| Neptune | 22673-10-29 01:40 G | 10002504.33 | 10002504.57 | 10002504.82 | 0.0089 | 0.0030 |
| Jupiter | 22674-06-18 03:07 G | 10002736.51 | 10002736.63 | 10002736.75 | 0.0516 | 0.0446 |
| Neptune | 22674-10-31 07:12 G | 10002871.56 | 10002871.80 | 10002872.03 | 0.0089 | 0.0033 |
| Jupiter | 22675-07-23 20:52 G | 10003137.15 | 10003137.37 | 10003137.59 | 0.0532 | 0.0155 |
| Neptune | 22675-11-02 23:45 G | 10003239.27 | 10003239.49 | 10003239.75 | 0.0089 | 0.0036 |
| Neptune | 22676-11-04 08:38 G | 10003606.65 | 10003606.86 | 10003607.10 | 0.0089 | 0.0039 |
| Neptune | 22677-11-06 21:50 G | 10003974.18 | 10003974.41 | 10003974.65 | 0.0089 | 0.0042 |
| Neptune | 22678-11-09 11:31 G | 10004341.78 | 10004341.98 | 10004342.20 | 0.0089 | 0.0046 |
| Neptune | 22679-11-11 19:40 G | 10004709.11 | 10004709.32 | 10004709.55 | 0.0089 | 0.0049 |
| Jupiter | 22679-12-18 00:14 G | 10004745.38 | 10004745.51 | 10004745.65 | 0.0512 | 0.0417 |
| Neptune | 22680-11-13 12:43 G | 10005076.85 | 10005077.03 | 10005077.26 | 0.0089 | 0.0052 |
| Jupiter | 22681-01-18 04:48 G | 10005142.48 | 10005142.70 | 10005142.92 | 0.0497 | 0.0100 |
| Neptune | 22681-11-15 17:45 G | 10005444.06 | 10005444.24 | 10005444.46 | 0.0089 | 0.0055 |
| Neptune | 22682-11-18 12:14 G | 10005811.83 | 10005812.01 | 10005812.23 | 0.0089 | 0.0057 |
| Neptune | 22683-11-20 17:31 G | 10006179.06 | 10006179.23 | 10006179.42 | 0.0089 | 0.0061 |
| Neptune | 22684-11-22 09:36 G | 10006546.74 | 10006546.90 | 10006547.12 | 0.0089 | 0.0063 |
| Neptune | 22685-11-24 18:14 G | 10006914.10 | 10006914.26 | 10006914.42 | 0.0089 | 0.0067 |
| Jupiter | 22686-06-22 19:26 G | 10007124.14 | 10007124.31 | 10007124.49 | 0.0519 | 0.0339 |
| Neptune | 22686-11-27 06:00 G | 10007281.61 | 10007281.75 | 10007281.95 | 0.0089 | 0.0068 |
| Jupiter | 22687-07-29 08:24 G | 10007525.66 | 10007525.85 | 10007526.05 | 0.0534 | 0.0286 |
| Neptune | 22687-11-29 19:12 G | 10007649.18 | 10007649.30 | 10007649.47 | 0.0089 | 0.0072 |
| Saturn | 22687-12-13 22:33 G | 10007663.24 | 10007663.44 | 10007663.67 | 0.0270 | 0.0141 |
| Neptune | 22688-12-01 02:52 G | 10008016.49 | 10008016.62 | 10008016.80 | 0.0089 | 0.0072 |

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| Saturn | 22688-12-25 00:00 G | 10008040.43 | 10008040.50 | 10008040.61 | 0.0271 | 0.0252 |
| Neptune | 22689-12-03 19:40 G | 10008384.22 | 10008384.32 | 10008384.47 | 0.0089 | 0.0077 |
| Neptune | 22690-12-06 00:14 G | 10008751.41 | 10008751.51 | 10008751.66 | 0.0089 | 0.0077 |
| Neptune | 22691-12-08 18:28 G | 10009119.20 | 10009119.27 | 10009119.40 | 0.0089 | 0.0082 |
| Jupiter | 22691-12-22 08:38 G | 10009132.71 | 10009132.86 | 10009133.01 | 0.0510 | 0.0377 |
| Pluto | 22692-10-19 22:48 G | 10009435.30 | 10009435.45 | 10009435.67 | 0.0064 | 0.0046 |
| Neptune | 22692-12-09 23:31 G | 10009486.39 | 10009486.48 | 10009486.61 | 0.0089 | 0.0080 |
| Jupiter | 22693-01-22 17:02 G | 10009530.00 | 10009530.21 | 10009530.43 | 0.0496 | 0.0212 |
| Pluto | 22693-10-21 15:50 G | 10009801.96 | 10009802.16 | 10009802.40 | 0.0064 | 0.0032 |
| Neptune | 22693-12-12 15:07 G | 10009854.08 | 10009854.13 | 10009854.24 | 0.0088 | 0.0085 |
| Neptune | 22694-12-14 23:02 G | 10010221.40 | 10010221.46 | 10010221.58 | 0.0088 | 0.0083 |
| Neptune | 22695-12-17 10:33 G | 10010588.93 | 10010588.94 | 10010589.02 | 0.0088 | 0.0088 |
| Neptune | 22696-12-19 00:00 G | 10010956.46 | 10010956.50 | 10010956.57 | 0.0088 | 0.0086 |
| Mars | 22697-10-11 17:45 G | 10011253.11 | 10011253.24 | 10011253.37 | 0.1925 | 0.1361 |
| Jupiter | 22698-06-27 19:55 G | 10011512.14 | 10011512.33 | 10011512.53 | 0.0520 | 0.0293 |
| Neptune | 22698-12-23 23:16 G | 10011691.45 | 10011691.47 | 10011691.52 | 0.0088 | 0.0088 |
| Jupiter | 22699-08-03 00:28 G | 10011913.36 | 10011913.52 | 10011913.67 | 0.0535 | 0.0405 |
| Neptune | 22700-12-28 20:52 G | 10012426.37 | 10012426.37 | 10012426.41 | 0.0088 | 0.0088 |
| Saturn | 22702-06-12 22:04 G | 10012957.27 | 10012957.42 | 10012957.60 | 0.0290 | 0.0217 |
| Saturn | 22703-06-26 23:31 G | 10013336.39 | 10013336.48 | 10013336.59 | 0.0289 | 0.0264 |
| Jupiter | 22703-12-28 06:00 G | 10013520.57 | 10013520.75 | 10013520.93 | 0.0508 | 0.0319 |
| Jupiter | 22705-01-27 19:26 G | 10013917.12 | 10013917.31 | 10013917.50 | 0.0494 | 0.0277 |
| Jupiter | 22710-07-03 10:33 G | 10015899.73 | 10015899.94 | 10015900.15 | 0.0523 | 0.0237 |
| Jupiter | 22711-08-09 10:19 G | 10016301.83 | 10016301.93 | 10016302.04 | 0.0537 | 0.0468 |
| Uranus | 22711-11-16 07:55 G | 10016400.65 | 10016400.83 | 10016401.03 | 0.0142 | 0.0094 |
| Uranus | 22712-11-20 11:31 G | 10016770.73 | 10016770.98 | 10016771.23 | 0.0143 | 0.0012 |
| Neptune | 22713-01-23 23:16 G | 10016835.46 | 10016835.47 | 10016835.51 | 0.0088 | 0.0087 |
| Uranus | 22713-11-25 02:38 G | 10017140.37 | 10017140.61 | 10017140.87 | 0.0143 | 0.0044 |
| Uranus | 22714-11-30 06:14 G | 10017510.64 | 10017510.76 | 10017510.88 | 0.0143 | 0.0124 |
| Neptune | 22715-01-28 22:19 G | 10017570.41 | 10017570.43 | 10017570.51 | 0.0088 | 0.0086 |

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| Jupiter | 22716-01-01 13:40 G | 10017907.86 | 10017908.07 | 10017908.29 | 0.0506 | 0.0202 |
| Jupiter | 22717-02-01 11:16 G | 10018304.79 | 10018304.97 | 10018305.15 | 0.0493 | 0.0308 |
| Neptune | 22717-02-01 20:38 G | 10018305.31 | 10018305.36 | 10018305.48 | 0.0088 | 0.0083 |
| Saturn | 22717-12-21 11:31 G | 10018627.75 | 10018627.98 | 10018628.22 | 0.0270 | 0.0085 |
| Neptune | 22718-02-04 00:14 G | 10018672.51 | 10018672.51 | 10018672.55 | 0.0088 | 0.0088 |
| Neptune | 22719-02-06 17:16 G | 10019040.13 | 10019040.22 | 10019040.36 | 0.0088 | 0.0079 |
| Neptune | 22720-02-08 22:19 G | 10019407.39 | 10019407.43 | 10019407.52 | 0.0088 | 0.0085 |
| Neptune | 22721-02-10 12:00 G | 10019774.88 | 10019775.00 | 10019775.14 | 0.0088 | 0.0076 |
| Neptune | 22722-02-12 20:38 G | 10020142.30 | 10020142.36 | 10020142.48 | 0.0088 | 0.0082 |
| Jupiter | 22722-07-08 15:21 G | 10020287.92 | 10020288.14 | 10020288.36 | 0.0525 | 0.0118 |
| Neptune | 22723-02-15 06:00 G | 10020509.60 | 10020509.75 | 10020509.90 | 0.0088 | 0.0072 |
| Jupiter | 22723-08-14 18:00 G | 10020690.21 | 10020690.25 | 10020690.31 | 0.0539 | 0.0525 |
| Neptune | 22724-02-17 19:55 G | 10020877.23 | 10020877.33 | 10020877.47 | 0.0088 | 0.0077 |
| Neptune | 22725-02-19 00:28 G | 10021244.38 | 10021244.52 | 10021244.71 | 0.0088 | 0.0068 |
| Neptune | 22726-02-21 17:31 G | 10021612.11 | 10021612.23 | 10021612.40 | 0.0088 | 0.0073 |
| Neptune | 22727-02-23 21:21 G | 10021979.22 | 10021979.39 | 10021979.57 | 0.0088 | 0.0063 |
| Jupiter | 22728-01-06 08:09 G | 10022295.62 | 10022295.84 | 10022296.06 | 0.0503 | 0.0098 |
| Neptune | 22728-02-26 14:09 G | 10022346.93 | 10022347.09 | 10022347.26 | 0.0088 | 0.0068 |
| Jupiter | 22729-02-05 10:48 G | 10022691.79 | 10022691.95 | 10022692.10 | 0.0491 | 0.0365 |
| Neptune | 22729-02-27 19:40 G | 10022714.14 | 10022714.32 | 10022714.52 | 0.0088 | 0.0058 |
| Neptune | 22730-03-02 08:24 G | 10023081.67 | 10023081.85 | 10023082.05 | 0.0088 | 0.0062 |
| Neptune | 22731-03-04 18:14 G | 10023449.08 | 10023449.26 | 10023449.48 | 0.0088 | 0.0053 |
| Neptune | 22732-03-06 02:09 G | 10023816.41 | 10023816.59 | 10023816.81 | 0.0088 | 0.0057 |
| Saturn | 22732-06-19 20:52 G | 10023922.13 | 10023922.37 | 10023922.60 | 0.0289 | 0.0048 |
| Neptune | 22733-03-08 17:31 G | 10024184.03 | 10024184.23 | 10024184.46 | 0.0088 | 0.0047 |
| Neptune | 22734-03-10 21:36 G | 10024551.21 | 10024551.40 | 10024551.63 | 0.0088 | 0.0052 |
| Jupiter | 22734-07-13 17:31 G | 10024675.98 | 10024676.23 | 10024676.47 | 0.0528 | 0.0013 |
| Neptune | 22735-03-13 15:36 G | 10024918.92 | 10024919.15 | 10024919.38 | 0.0088 | 0.0040 |
| Neptune | 22736-03-14 18:57 G | 10025286.09 | 10025286.29 | 10025286.52 | 0.0088 | 0.0045 |
| Neptune | 22737-03-17 11:02 G | 10025653.74 | 10025653.96 | 10025654.22 | 0.0088 | 0.0034 |

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| Neptune | 22738-03-19 17:31 G | 10026021.02 | 10026021.23 | 10026021.47 | 0.0088 | 0.0039 |
| Mars | 22738-04-09 19:40 G | 10026042.16 | 10026042.32 | 10026042.48 | 0.1608 | 0.0755 |
| Neptune | 22739-03-22 05:31 G | 10026388.49 | 10026388.73 | 10026389.00 | 0.0088 | 0.0028 |
| Jupiter | 22740-01-10 13:55 G | 10026682.84 | 10026683.08 | 10026683.33 | 0.0501 | 0.0049 |
| Neptune | 22740-03-23 16:48 G | 10026755.97 | 10026756.20 | 10026756.43 | 0.0088 | 0.0032 |
| Jupiter | 22741-02-09 19:40 G | 10027079.26 | 10027079.32 | 10027079.39 | 0.0490 | 0.0467 |
| Neptune | 22741-03-26 00:00 G | 10027123.25 | 10027123.50 | 10027123.77 | 0.0088 | 0.0021 |
| Neptune | 22742-03-28 16:04 G | 10027490.93 | 10027491.17 | 10027491.42 | 0.0088 | 0.0025 |
| Neptune | 22743-03-30 20:38 G | 10027858.10 | 10027858.36 | 10027858.62 | 0.0088 | 0.0013 |
| Neptune | 22744-04-01 14:09 G | 10028225.85 | 10028226.09 | 10028226.36 | 0.0088 | 0.0019 |
| Neptune | 22745-04-03 18:28 G | 10028593.02 | 10028593.27 | 10028593.53 | 0.0088 | 0.0007 |
| Neptune | 22746-04-06 10:48 G | 10028960.70 | 10028960.95 | 10028961.22 | 0.0088 | 0.0012 |
| Jupiter | 22746-07-18 17:16 G | 10029063.99 | 10029064.22 | 10029064.44 | 0.0529 | 0.0075 |
| Saturn | 22746-12-16 04:19 G | 10029214.46 | 10029214.68 | 10029214.92 | 0.0270 | 0.0084 |
| Neptune | 22747-04-08 18:14 G | 10029328.01 | 10029328.26 | 10029328.51 | 0.0088 | 0.0001 |
| Neptune | 22748-04-10 05:45 G | 10029695.48 | 10029695.74 | 10029696.01 | 0.0088 | 0.0004 |
| Neptune | 22749-04-12 17:45 G | 10030063.00 | 10030063.24 | 10030063.49 | 0.0088 | 0.0008 |
| Neptune | 22750-04-15 00:57 G | 10030430.28 | 10030430.54 | 10030430.81 | 0.0088 | 0.0003 |
| Jupiter | 22750-12-13 08:52 G | 10030672.85 | 10030672.87 | 10030672.91 | 0.0515 | 0.0510 |
| Neptune | 22751-04-17 17:31 G | 10030797.98 | 10030798.23 | 10030798.48 | 0.0088 | 0.0015 |
| Uranus | 22751-05-15 00:57 G | 10030825.41 | 10030825.54 | 10030825.72 | 0.0136 | 0.0107 |
| Jupiter | 22752-01-14 23:31 G | 10031070.26 | 10031070.48 | 10031070.71 | 0.0499 | 0.0006 |
| Neptune | 22752-04-18 21:50 G | 10031165.16 | 10031165.41 | 10031165.68 | 0.0088 | 0.0010 |
| Uranus | 22752-05-18 06:00 G | 10031194.52 | 10031194.75 | 10031194.97 | 0.0136 | 0.0061 |
| Neptune | 22753-04-21 16:04 G | 10031532.92 | 10031533.17 | 10031533.43 | 0.0088 | 0.0022 |
| Uranus | 22753-05-23 00:14 G | 10031564.26 | 10031564.51 | 10031564.76 | 0.0135 | 0.0011 |
| Neptune | 22754-04-23 20:52 G | 10031900.13 | 10031900.37 | 10031900.63 | 0.0088 | 0.0018 |
| Uranus | 22754-05-27 03:50 G | 10031933.44 | 10031933.66 | 10031933.90 | 0.0135 | 0.0062 |
| Neptune | 22755-04-26 13:40 G | 10032267.82 | 10032268.07 | 10032268.32 | 0.0088 | 0.0029 |
| Uranus | 22755-05-31 20:52 G | 10032303.29 | 10032303.37 | 10032303.50 | 0.0135 | 0.0122 |

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| Neptune | 22756-04-27 21:36 G | 10032635.17 | 10032635.40 | 10032635.65 | 0.0088 | 0.0024 |
| Neptune | 22757-04-30 09:21 G | 10033002.66 | 10033002.89 | 10033003.15 | 0.0088 | 0.0036 |
| Jupiter | 22757-06-17 21:21 G | 10033051.29 | 10033051.39 | 10033051.49 | 0.0515 | 0.0461 |
| Neptune | 22758-05-02 22:19 G | 10033370.21 | 10033370.43 | 10033370.68 | 0.0088 | 0.0031 |
| Jupiter | 22758-07-23 22:04 G | 10033452.20 | 10033452.42 | 10033452.65 | 0.0531 | 0.0133 |
| Neptune | 22759-05-05 05:31 G | 10033737.52 | 10033737.73 | 10033737.98 | 0.0088 | 0.0043 |
| Neptune | 22760-05-06 22:48 G | 10034105.24 | 10034105.45 | 10034105.70 | 0.0088 | 0.0038 |
| Neptune | 22761-05-09 03:21 G | 10034472.45 | 10034472.64 | 10034472.88 | 0.0088 | 0.0051 |
| Saturn | 22761-06-14 07:55 G | 10034508.61 | 10034508.83 | 10034509.05 | 0.0290 | 0.0146 |
| Neptune | 22762-05-11 22:04 G | 10034840.22 | 10034840.42 | 10034840.67 | 0.0088 | 0.0045 |
| Jupiter | 22762-12-17 19:26 G | 10035060.20 | 10035060.31 | 10035060.44 | 0.0513 | 0.0433 |
| Neptune | 22763-05-14 03:21 G | 10035207.47 | 10035207.64 | 10035207.86 | 0.0088 | 0.0057 |
| Jupiter | 22764-01-19 13:40 G | 10035457.84 | 10035458.07 | 10035458.31 | 0.0498 | 0.0098 |
| Neptune | 22764-05-15 20:09 G | 10035575.14 | 10035575.34 | 10035575.57 | 0.0088 | 0.0051 |
| Neptune | 22765-05-18 05:02 G | 10035942.55 | 10035942.71 | 10035942.90 | 0.0088 | 0.0063 |
| Neptune | 22766-05-20 17:16 G | 10036310.03 | 10036310.22 | 10036310.44 | 0.0088 | 0.0057 |
| Neptune | 22767-05-23 06:28 G | 10036677.64 | 10036677.77 | 10036677.95 | 0.0089 | 0.0069 |
| Neptune | 22768-05-24 14:24 G | 10037044.93 | 10037045.10 | 10037045.30 | 0.0089 | 0.0062 |
| Neptune | 22769-05-27 08:09 G | 10037412.72 | 10037412.84 | 10037413.00 | 0.0089 | 0.0074 |
| Jupiter | 22769-06-22 22:33 G | 10037439.28 | 10037439.44 | 10037439.62 | 0.0517 | 0.0352 |
| Neptune | 22770-05-29 13:26 G | 10037779.92 | 10037780.06 | 10037780.25 | 0.0089 | 0.0068 |
| Jupiter | 22770-07-28 16:48 G | 10037840.00 | 10037840.20 | 10037840.41 | 0.0533 | 0.0259 |
| Neptune | 22771-06-01 08:38 G | 10038147.77 | 10038147.86 | 10038148.00 | 0.0089 | 0.0079 |
| Neptune | 22772-06-02 14:24 G | 10038514.98 | 10038515.10 | 10038515.26 | 0.0089 | 0.0073 |
| Neptune | 22773-06-05 07:55 G | 10038882.75 | 10038882.83 | 10038882.93 | 0.0089 | 0.0083 |
| Neptune | 22774-06-07 17:16 G | 10039250.10 | 10039250.22 | 10039250.35 | 0.0089 | 0.0077 |
| Jupiter | 22774-12-22 19:26 G | 10039448.17 | 10039448.31 | 10039448.46 | 0.0511 | 0.0395 |
| Neptune | 22775-06-10 05:16 G | 10039617.69 | 10039617.72 | 10039617.81 | 0.0089 | 0.0087 |
| Saturn | 22775-12-11 16:48 G | 10039802.12 | 10039802.20 | 10039802.31 | 0.0270 | 0.0246 |
| Jupiter | 22776-01-23 17:02 G | 10039845.00 | 10039845.21 | 10039845.42 | 0.0496 | 0.0205 |

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| Neptune | 22776-06-11 19:12 G | 10039985.22 | 10039985.30 | 10039985.42 | 0.0089 | 0.0081 |
| Saturn | 22776-12-22 15:50 G | 10040178.95 | 10040179.16 | 10040179.38 | 0.0270 | 0.0142 |
| Neptune | 22778-06-16 21:21 G | 10040720.34 | 10040720.39 | 10040720.49 | 0.0089 | 0.0085 |
| Neptune | 22780-06-20 23:02 G | 10041455.42 | 10041455.46 | 10041455.52 | 0.0089 | 0.0087 |
| Jupiter | 22781-06-27 11:45 G | 10041826.80 | 10041826.99 | 10041827.18 | 0.0520 | 0.0305 |
| Pluto | 22782-04-22 00:57 G | 10042125.28 | 10042125.54 | 10042125.81 | 0.0080 | 0.0005 |
| Jupiter | 22782-08-03 04:33 G | 10042228.55 | 10042228.69 | 10042228.85 | 0.0535 | 0.0390 |
| Jupiter | 22786-12-27 04:33 G | 10043835.51 | 10043835.69 | 10043835.88 | 0.0508 | 0.0324 |
| Jupiter | 22788-01-28 09:36 G | 10044232.70 | 10044232.90 | 10044233.09 | 0.0494 | 0.0267 |
| Saturn | 22791-06-22 14:38 G | 10045473.89 | 10045474.11 | 10045474.34 | 0.0289 | 0.0118 |
| Jupiter | 22793-07-02 18:28 G | 10046215.07 | 10046215.27 | 10046215.47 | 0.0522 | 0.0246 |
| Jupiter | 22794-08-08 11:16 G | 10046616.85 | 10046616.97 | 10046617.11 | 0.0537 | 0.0446 |
| Uranus | 22795-11-16 15:21 G | 10047081.95 | 10047082.14 | 10047082.36 | 0.0142 | 0.0081 |
| Uranus | 22796-11-20 19:26 G | 10047452.07 | 10047452.31 | 10047452.56 | 0.0143 | 0.0025 |
| Uranus | 22797-11-25 09:50 G | 10047821.68 | 10047821.91 | 10047822.15 | 0.0143 | 0.0059 |
| Uranus | 22798-11-30 13:40 G | 10048191.95 | 10048192.07 | 10048192.22 | 0.0143 | 0.0119 |
| Jupiter | 22798-12-31 21:50 G | 10048223.20 | 10048223.41 | 10048223.61 | 0.0506 | 0.0207 |
| Jupiter | 22800-02-01 07:12 G | 10048619.62 | 10048619.80 | 10048619.99 | 0.0493 | 0.0299 |
| Neptune | 22800-08-05 15:36 G | 10048806.14 | 10048806.15 | 10048806.23 | 0.0089 | 0.0089 |
| Neptune | 22801-08-08 00:28 G | 10049173.51 | 10049173.52 | 10049173.59 | 0.0089 | 0.0089 |
| Neptune | 22802-08-10 16:04 G | 10049541.12 | 10049541.17 | 10049541.27 | 0.0089 | 0.0086 |
| Neptune | 22803-08-13 04:48 G | 10049908.65 | 10049908.70 | 10049908.81 | 0.0089 | 0.0085 |
| Neptune | 22804-08-14 15:36 G | 10050276.05 | 10050276.15 | 10050276.28 | 0.0089 | 0.0081 |
| Jupiter | 22805-07-07 16:19 G | 10050602.95 | 10050603.18 | 10050603.42 | 0.0525 | 0.0122 |
| Neptune | 22805-08-17 09:21 G | 10050643.78 | 10050643.89 | 10050644.01 | 0.0089 | 0.0079 |
| Saturn | 22805-12-17 14:09 G | 10050765.85 | 10050766.09 | 10050766.33 | 0.0270 | 0.0030 |
| Jupiter | 22806-08-13 15:36 G | 10051005.10 | 10051005.15 | 10051005.22 | 0.0538 | 0.0514 |
| Neptune | 22806-08-19 16:19 G | 10051011.07 | 10051011.18 | 10051011.33 | 0.0089 | 0.0077 |
| Neptune | 22807-08-22 12:14 G | 10051378.90 | 10051379.01 | 10051379.18 | 0.0089 | 0.0075 |
| Neptune | 22808-08-23 18:28 G | 10051746.15 | 10051746.27 | 10051746.44 | 0.0090 | 0.0074 |

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| Neptune | 22809-08-26 14:09 G | 10052113.95 | 10052114.09 | 10052114.29 | 0.0090 | 0.0069 |
| Neptune | 22810-08-28 22:33 G | 10052481.29 | 10052481.44 | 10052481.62 | 0.0090 | 0.0068 |
| Jupiter | 22811-01-05 06:28 G | 10052610.54 | 10052610.77 | 10052611.01 | 0.0504 | 0.0109 |
| Neptune | 22811-08-31 14:38 G | 10052848.94 | 10052849.11 | 10052849.32 | 0.0090 | 0.0062 |
| Jupiter | 22812-02-05 19:26 G | 10053007.17 | 10053007.31 | 10053007.47 | 0.0492 | 0.0365 |
| Neptune | 22812-09-02 03:07 G | 10053216.46 | 10053216.63 | 10053216.82 | 0.0090 | 0.0062 |
| Neptune | 22813-09-04 13:40 G | 10053583.89 | 10053584.07 | 10053584.30 | 0.0090 | 0.0057 |
| Neptune | 22814-09-07 06:28 G | 10053951.59 | 10053951.77 | 10053951.98 | 0.0090 | 0.0057 |
| Neptune | 22815-09-09 13:55 G | 10054318.87 | 10054319.08 | 10054319.31 | 0.0090 | 0.0050 |
| Neptune | 22816-09-11 09:50 G | 10054686.71 | 10054686.91 | 10054687.13 | 0.0090 | 0.0050 |
| Mars | 22817-04-11 16:04 G | 10054899.00 | 10054899.17 | 10054899.34 | 0.1610 | 0.0355 |
| Jupiter | 22817-07-12 12:14 G | 10054990.78 | 10054991.01 | 10054991.23 | 0.0526 | 0.0009 |
| Neptune | 22817-09-13 15:50 G | 10055053.94 | 10055054.16 | 10055054.40 | 0.0089 | 0.0042 |
| Neptune | 22818-09-16 11:02 G | 10055421.75 | 10055421.96 | 10055422.21 | 0.0089 | 0.0044 |
| Neptune | 22819-09-18 19:12 G | 10055789.08 | 10055789.30 | 10055789.54 | 0.0089 | 0.0035 |
| Saturn | 22820-06-15 16:48 G | 10056059.96 | 10056060.20 | 10056060.44 | 0.0290 | 0.0080 |
| Neptune | 22820-09-20 12:14 G | 10056156.77 | 10056157.01 | 10056157.26 | 0.0089 | 0.0037 |
| Neptune | 22821-09-22 23:31 G | 10056524.25 | 10056524.48 | 10056524.73 | 0.0089 | 0.0028 |
| Neptune | 22822-09-25 11:16 G | 10056891.72 | 10056891.97 | 10056892.22 | 0.0089 | 0.0029 |
| Jupiter | 22823-01-09 18:14 G | 10056998.03 | 10056998.26 | 10056998.48 | 0.0502 | 0.0066 |
| Neptune | 22823-09-28 02:52 G | 10057259.38 | 10057259.62 | 10057259.87 | 0.0089 | 0.0019 |
| Jupiter | 22824-02-10 00:14 G | 10057394.44 | 10057394.51 | 10057394.60 | 0.0491 | 0.0463 |
| Neptune | 22824-09-29 10:19 G | 10057626.69 | 10057626.93 | 10057627.20 | 0.0089 | 0.0022 |
| Neptune | 22825-10-02 05:45 G | 10057994.49 | 10057994.74 | 10057994.99 | 0.0089 | 0.0012 |
| Neptune | 22826-10-04 11:02 G | 10058361.72 | 10058361.96 | 10058362.22 | 0.0089 | 0.0015 |
| Neptune | 22827-10-07 06:43 G | 10058729.52 | 10058729.78 | 10058730.04 | 0.0089 | 0.0004 |
| Neptune | 22828-10-08 13:40 G | 10059096.82 | 10059097.07 | 10059097.33 | 0.0089 | 0.0007 |
| Jupiter | 22829-07-17 18:14 G | 10059379.03 | 10059379.26 | 10059379.50 | 0.0528 | 0.0050 |
| Neptune | 22829-10-11 06:28 G | 10059464.51 | 10059464.77 | 10059465.04 | 0.0089 | 0.0004 |
| Neptune | 22830-10-13 17:16 G | 10059831.97 | 10059832.22 | 10059832.47 | 0.0089 | 0.0001 |

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| Neptune | 22831-10-16 05:02 G | 10060199.45 | 10060199.71 | 10060199.98 | 0.0089 | 0.0012 |
| Neptune | 22832-10-17 20:09 G | 10060567.10 | 10060567.34 | 10060567.60 | 0.0089 | 0.0008 |
| Neptune | 22833-10-20 03:36 G | 10060934.40 | 10060934.65 | 10060934.92 | 0.0089 | 0.0020 |
| Neptune | 22834-10-22 22:19 G | 10061302.18 | 10061302.43 | 10061302.69 | 0.0089 | 0.0015 |
| Saturn | 22834-12-12 19:55 G | 10061353.17 | 10061353.33 | 10061353.52 | 0.0269 | 0.0192 |
| Jupiter | 22835-01-14 10:04 G | 10061385.68 | 10061385.92 | 10061386.16 | 0.0500 | 0.0014 |
| Uranus | 22835-05-15 11:31 G | 10061506.87 | 10061506.98 | 10061507.12 | 0.0136 | 0.0118 |
| Neptune | 22835-10-25 03:21 G | 10061669.42 | 10061669.64 | 10061669.90 | 0.0089 | 0.0029 |
| Saturn | 22835-12-24 18:14 G | 10061730.10 | 10061730.26 | 10061730.43 | 0.0270 | 0.0198 |
| Uranus | 22836-05-18 16:19 G | 10061875.94 | 10061876.18 | 10061876.42 | 0.0136 | 0.0044 |
| Neptune | 22836-10-26 22:33 G | 10062037.20 | 10062037.44 | 10062037.71 | 0.0089 | 0.0023 |
| Uranus | 22837-05-23 10:48 G | 10062245.69 | 10062245.95 | 10062246.20 | 0.0135 | 0.0004 |
| Neptune | 22837-10-29 04:48 G | 10062404.48 | 10062404.70 | 10062404.95 | 0.0089 | 0.0035 |
| Uranus | 22838-05-27 14:09 G | 10062614.88 | 10062615.09 | 10062615.31 | 0.0135 | 0.0071 |
| Neptune | 22838-10-31 21:07 G | 10062772.15 | 10062772.38 | 10062772.65 | 0.0089 | 0.0031 |
| Uranus | 22839-06-01 06:57 G | 10062984.73 | 10062984.79 | 10062984.90 | 0.0135 | 0.0127 |
| Neptune | 22839-11-03 07:12 G | 10063139.60 | 10063139.80 | 10063140.04 | 0.0089 | 0.0042 |
| Jupiter | 22840-06-17 03:50 G | 10063366.56 | 10063366.66 | 10063366.77 | 0.0515 | 0.0458 |
| Neptune | 22840-11-04 18:43 G | 10063507.05 | 10063507.28 | 10063507.54 | 0.0089 | 0.0038 |
| Jupiter | 22841-07-22 12:57 G | 10063766.81 | 10063767.04 | 10063767.27 | 0.0531 | 0.0117 |
| Neptune | 22841-11-07 09:21 G | 10063874.69 | 10063874.89 | 10063875.10 | 0.0089 | 0.0049 |
| Neptune | 22842-11-09 15:50 G | 10064241.95 | 10064242.16 | 10064242.41 | 0.0089 | 0.0044 |
| Neptune | 22843-11-12 10:04 G | 10064609.74 | 10064609.92 | 10064610.14 | 0.0089 | 0.0056 |
| Neptune | 22844-11-13 15:07 G | 10064976.94 | 10064977.13 | 10064977.36 | 0.0089 | 0.0050 |
| Neptune | 22845-11-16 09:50 G | 10065344.74 | 10065344.91 | 10065345.11 | 0.0089 | 0.0062 |
| Jupiter | 22845-12-17 08:24 G | 10065375.74 | 10065375.85 | 10065375.97 | 0.0514 | 0.0442 |
| Neptune | 22846-11-18 15:21 G | 10065711.98 | 10065712.14 | 10065712.36 | 0.0089 | 0.0057 |
| Jupiter | 22847-01-18 14:24 G | 10065772.87 | 10065773.10 | 10065773.33 | 0.0498 | 0.0093 |
| Neptune | 22847-11-21 07:55 G | 10066079.68 | 10066079.83 | 10066080.01 | 0.0089 | 0.0068 |
| Neptune | 22848-11-22 17:02 G | 10066447.06 | 10066447.21 | 10066447.42 | 0.0089 | 0.0063 |

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| Neptune | 22849-11-25 04:33 G | 10066814.55 | 10066814.69 | 10066814.85 | 0.0089 | 0.0073 |
| Saturn | 22850-06-24 00:43 G | 10067025.33 | 10067025.53 | 10067025.72 | 0.0289 | 0.0183 |
| Neptune | 22850-11-27 18:00 G | 10067182.11 | 10067182.25 | 10067182.44 | 0.0089 | 0.0068 |
| Neptune | 22851-11-30 00:28 G | 10067549.42 | 10067549.52 | 10067549.66 | 0.0089 | 0.0079 |
| Jupiter | 22852-06-21 18:14 G | 10067754.09 | 10067754.26 | 10067754.43 | 0.0517 | 0.0358 |
| Neptune | 22852-12-01 18:00 G | 10067917.13 | 10067917.25 | 10067917.42 | 0.0089 | 0.0073 |
| Jupiter | 22853-07-28 02:52 G | 10068155.42 | 10068155.62 | 10068155.82 | 0.0533 | 0.0254 |
| Neptune | 22853-12-03 22:19 G | 10068284.37 | 10068284.43 | 10068284.53 | 0.0089 | 0.0084 |
| Neptune | 22854-12-06 16:19 G | 10068652.07 | 10068652.18 | 10068652.33 | 0.0089 | 0.0077 |
| Neptune | 22855-12-08 21:50 G | 10069019.40 | 10069019.41 | 10069019.47 | 0.0089 | 0.0088 |
| Neptune | 22856-12-10 13:12 G | 10069386.97 | 10069387.05 | 10069387.18 | 0.0089 | 0.0081 |
| Jupiter | 22857-12-21 16:48 G | 10069763.06 | 10069763.20 | 10069763.34 | 0.0511 | 0.0407 |
| Neptune | 22858-12-15 09:07 G | 10070121.83 | 10070121.88 | 10070121.99 | 0.0088 | 0.0085 |
| Jupiter | 22859-01-23 05:31 G | 10070160.52 | 10070160.73 | 10070160.95 | 0.0496 | 0.0198 |
| Neptune | 22860-12-19 04:33 G | 10070856.69 | 10070856.69 | 10070856.77 | 0.0088 | 0.0088 |
| Jupiter | 22864-06-26 23:16 G | 10072142.29 | 10072142.47 | 10072142.65 | 0.0520 | 0.0317 |
| Saturn | 22864-12-18 21:50 G | 10072317.16 | 10072317.41 | 10072317.65 | 0.0270 | 0.0023 |
| Jupiter | 22865-08-02 05:16 G | 10072543.55 | 10072543.72 | 10072543.89 | 0.0535 | 0.0375 |
| Jupiter | 22869-12-26 12:43 G | 10074150.87 | 10074151.03 | 10074151.21 | 0.0509 | 0.0332 |
| Jupiter | 22871-01-27 06:28 G | 10074547.56 | 10074547.77 | 10074547.97 | 0.0495 | 0.0256 |
| Jupiter | 22876-07-01 14:52 G | 10076529.92 | 10076530.12 | 10076530.34 | 0.0521 | 0.0258 |
| Jupiter | 22877-08-07 05:16 G | 10076931.59 | 10076931.72 | 10076931.86 | 0.0536 | 0.0424 |
| Saturn | 22879-06-18 04:04 G | 10077611.43 | 10077611.67 | 10077611.91 | 0.0290 | 0.0020 |
| Uranus | 22879-11-17 00:28 G | 10077763.34 | 10077763.52 | 10077763.73 | 0.0142 | 0.0089 |
| Uranus | 22880-11-21 04:48 G | 10078133.44 | 10078133.70 | 10078133.95 | 0.0143 | 0.0008 |
| Neptune | 22881-02-01 00:00 G | 10078205.49 | 10078205.50 | 10078205.56 | 0.0088 | 0.0087 |
| Uranus | 22881-11-25 18:57 G | 10078503.05 | 10078503.29 | 10078503.54 | 0.0143 | 0.0047 |
| Jupiter | 22881-12-30 22:04 G | 10078538.21 | 10078538.42 | 10078538.64 | 0.0507 | 0.0218 |
| Uranus | 22882-11-30 23:31 G | 10078873.39 | 10078873.48 | 10078873.60 | 0.0143 | 0.0130 |
| Jupiter | 22883-01-31 20:09 G | 10078935.16 | 10078935.34 | 10078935.53 | 0.0494 | 0.0286 |

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| Neptune | 22883-02-05 22:19 G | 10078940.39 | 10078940.43 | 10078940.52 | 0.0088 | 0.0085 |
| Neptune | 22885-02-09 21:50 G | 10079675.34 | 10079675.41 | 10079675.53 | 0.0088 | 0.0081 |
| Neptune | 22886-02-12 05:31 G | 10080042.69 | 10080042.73 | 10080042.82 | 0.0088 | 0.0085 |
| Neptune | 22887-02-14 20:24 G | 10080410.26 | 10080410.35 | 10080410.50 | 0.0088 | 0.0077 |
| Neptune | 22888-02-17 00:57 G | 10080777.45 | 10080777.54 | 10080777.64 | 0.0088 | 0.0081 |
| Jupiter | 22888-07-06 13:40 G | 10080917.86 | 10080918.07 | 10080918.29 | 0.0523 | 0.0135 |
| Neptune | 22889-02-18 17:16 G | 10081145.11 | 10081145.22 | 10081145.40 | 0.0088 | 0.0073 |
| Jupiter | 22889-08-12 15:36 G | 10081320.06 | 10081320.15 | 10081320.25 | 0.0537 | 0.0489 |
| Neptune | 22890-02-20 20:52 G | 10081512.28 | 10081512.37 | 10081512.52 | 0.0088 | 0.0077 |
| Neptune | 22891-02-23 13:12 G | 10081879.89 | 10081880.05 | 10081880.22 | 0.0088 | 0.0067 |
| Neptune | 22892-02-25 19:12 G | 10082247.17 | 10082247.30 | 10082247.47 | 0.0088 | 0.0071 |
| Neptune | 22893-02-27 06:57 G | 10082614.63 | 10082614.79 | 10082615.00 | 0.0088 | 0.0062 |
| Saturn | 22893-12-13 20:38 G | 10082904.16 | 10082904.36 | 10082904.58 | 0.0269 | 0.0140 |
| Jupiter | 22894-01-04 12:43 G | 10082925.82 | 10082926.03 | 10082926.25 | 0.0505 | 0.0124 |
| Neptune | 22894-03-01 18:43 G | 10082982.14 | 10082982.28 | 10082982.47 | 0.0088 | 0.0066 |
| Saturn | 22894-12-26 00:28 G | 10083281.43 | 10083281.52 | 10083281.61 | 0.0270 | 0.0248 |
| Jupiter | 22895-02-05 01:40 G | 10083322.42 | 10083322.57 | 10083322.75 | 0.0492 | 0.0359 |
| Neptune | 22895-03-04 01:40 G | 10083349.39 | 10083349.57 | 10083349.79 | 0.0088 | 0.0057 |
| Neptune | 22896-03-05 17:31 G | 10083717.07 | 10083717.23 | 10083717.44 | 0.0088 | 0.0060 |
| Neptune | 22897-03-07 21:36 G | 10084084.20 | 10084084.40 | 10084084.62 | 0.0088 | 0.0050 |
| Neptune | 22898-03-10 14:38 G | 10084451.93 | 10084452.11 | 10084452.34 | 0.0088 | 0.0053 |
| Neptune | 22899-03-12 18:57 G | 10084819.08 | 10084819.29 | 10084819.52 | 0.0088 | 0.0044 |
| Neptune | 22900-03-15 10:19 G | 10085186.71 | 10085186.93 | 10085187.16 | 0.0088 | 0.0046 |
| Jupiter | 22900-07-12 17:31 G | 10085305.99 | 10085306.23 | 10085306.47 | 0.0526 | 0.0019 |
| Neptune | 22901-03-17 17:45 G | 10085554.02 | 10085554.24 | 10085554.46 | 0.0088 | 0.0038 |
| Neptune | 22902-03-20 04:33 G | 10085921.47 | 10085921.69 | 10085921.95 | 0.0088 | 0.0040 |
| Neptune | 22903-03-22 17:16 G | 10086289.00 | 10086289.22 | 10086289.47 | 0.0088 | 0.0031 |
| Neptune | 22904-03-23 23:45 G | 10086656.26 | 10086656.49 | 10086656.75 | 0.0088 | 0.0032 |
| Neptune | 22905-03-26 16:04 G | 10087023.94 | 10087024.17 | 10087024.43 | 0.0088 | 0.0024 |
| Jupiter | 22906-01-10 06:00 G | 10087313.52 | 10087313.75 | 10087313.99 | 0.0503 | 0.0083 |

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| Neptune | 22906-03-28 19:40 G | 10087391.09 | 10087391.32 | 10087391.58 | 0.0088 | 0.0026 |
| Jupiter | 22907-02-10 08:38 G | 10087709.79 | 10087709.86 | 10087709.94 | 0.0491 | 0.0463 |
| Neptune | 22907-03-31 13:26 G | 10087758.82 | 10087759.06 | 10087759.33 | 0.0088 | 0.0018 |
| Neptune | 22908-04-01 18:00 G | 10088126.01 | 10088126.25 | 10088126.51 | 0.0088 | 0.0018 |
| Saturn | 22908-06-12 04:33 G | 10088197.55 | 10088197.69 | 10088197.84 | 0.0290 | 0.0239 |
| Neptune | 22909-04-04 09:21 G | 10088493.63 | 10088493.89 | 10088494.16 | 0.0088 | 0.0010 |
| Saturn | 22909-06-26 05:16 G | 10088576.60 | 10088576.72 | 10088576.86 | 0.0289 | 0.0246 |
| Neptune | 22910-04-06 17:31 G | 10088860.99 | 10088861.23 | 10088861.49 | 0.0088 | 0.0010 |
| Neptune | 22911-04-09 04:33 G | 10089228.42 | 10089228.69 | 10089228.95 | 0.0088 | 0.0002 |
| Neptune | 22912-04-10 18:00 G | 10089596.01 | 10089596.25 | 10089596.51 | 0.0088 | 0.0003 |
| Jupiter | 22912-07-17 14:09 G | 10089693.86 | 10089694.09 | 10089694.32 | 0.0528 | 0.0040 |
| Neptune | 22913-04-13 00:14 G | 10089963.25 | 10089963.51 | 10089963.78 | 0.0088 | 0.0005 |
| Neptune | 22914-04-15 17:31 G | 10090330.97 | 10090331.23 | 10090331.48 | 0.0088 | 0.0005 |
| Neptune | 22915-04-17 21:07 G | 10090698.14 | 10090698.38 | 10090698.65 | 0.0088 | 0.0014 |
| Neptune | 22916-04-19 14:52 G | 10091065.87 | 10091066.12 | 10091066.39 | 0.0088 | 0.0014 |
| Neptune | 22917-04-21 19:55 G | 10091433.09 | 10091433.33 | 10091433.58 | 0.0088 | 0.0021 |
| Jupiter | 22918-01-14 09:50 G | 10091700.68 | 10091700.91 | 10091701.14 | 0.0500 | 0.0024 |
| Neptune | 22918-04-24 10:48 G | 10091800.71 | 10091800.95 | 10091801.22 | 0.0088 | 0.0022 |
| Neptune | 22919-04-26 19:40 G | 10092168.10 | 10092168.32 | 10092168.57 | 0.0088 | 0.0027 |
| Uranus | 22919-05-16 21:07 G | 10092188.23 | 10092188.38 | 10092188.57 | 0.0136 | 0.0102 |
| Neptune | 22920-04-28 06:28 G | 10092535.53 | 10092535.77 | 10092536.04 | 0.0088 | 0.0028 |
| Uranus | 22920-05-20 02:24 G | 10092557.37 | 10092557.60 | 10092557.83 | 0.0136 | 0.0055 |
| Neptune | 22921-04-30 21:21 G | 10092903.16 | 10092903.39 | 10092903.62 | 0.0088 | 0.0035 |
| Uranus | 22921-05-24 20:38 G | 10092927.11 | 10092927.36 | 10092927.62 | 0.0135 | 0.0018 |
| Neptune | 22922-05-03 03:21 G | 10093270.42 | 10093270.64 | 10093270.90 | 0.0088 | 0.0037 |
| Uranus | 22922-05-29 00:14 G | 10093296.31 | 10093296.51 | 10093296.74 | 0.0135 | 0.0068 |
| Neptune | 22923-05-05 21:36 G | 10093638.18 | 10093638.40 | 10093638.63 | 0.0088 | 0.0042 |
| Uranus | 22923-06-02 17:45 G | 10093666.20 | 10093666.24 | 10093666.33 | 0.0135 | 0.0130 |
| Jupiter | 22923-06-18 03:21 G | 10093681.53 | 10093681.64 | 10093681.74 | 0.0514 | 0.0458 |
| Saturn | 22923-12-21 22:33 G | 10093868.20 | 10093868.44 | 10093868.69 | 0.0270 | 0.0070 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 22924-05-07 01:26 G | 10094005.36 | 10094005.56 | 10094005.81 | 0.0088 | 0.0044 |
| Jupiter | 22924-07-23 02:09 G | 10094082.37 | 10094082.59 | 10094082.82 | 0.0530 | 0.0112 |
| Neptune | 22925-05-09 19:55 G | 10094373.13 | 10094373.33 | 10094373.57 | 0.0088 | 0.0048 |
| Neptune | 22926-05-12 01:26 G | 10094740.38 | 10094740.56 | 10094740.79 | 0.0088 | 0.0051 |
| Neptune | 22927-05-14 16:48 G | 10095108.01 | 10095108.20 | 10095108.43 | 0.0088 | 0.0055 |
| Neptune | 22928-05-16 02:38 G | 10095475.43 | 10095475.61 | 10095475.81 | 0.0088 | 0.0058 |
| Jupiter | 22928-12-17 05:31 G | 10095690.63 | 10095690.73 | 10095690.84 | 0.0514 | 0.0454 |
| Neptune | 22929-05-18 13:40 G | 10095842.88 | 10095843.07 | 10095843.26 | 0.0088 | 0.0061 |
| Jupiter | 22930-01-19 03:50 G | 10096088.43 | 10096088.66 | 10096088.89 | 0.0499 | 0.0088 |
| Neptune | 22930-05-21 04:19 G | 10096210.52 | 10096210.68 | 10096210.87 | 0.0088 | 0.0064 |
| Neptune | 22931-05-23 10:48 G | 10096577.81 | 10096577.95 | 10096578.15 | 0.0089 | 0.0067 |
| Neptune | 22932-05-25 05:16 G | 10096945.58 | 10096945.72 | 10096945.90 | 0.0089 | 0.0070 |
| Neptune | 22933-05-27 10:04 G | 10097312.80 | 10097312.92 | 10097313.10 | 0.0089 | 0.0073 |
| Neptune | 22934-05-30 05:02 G | 10097680.61 | 10097680.71 | 10097680.87 | 0.0089 | 0.0077 |
| Neptune | 22935-06-01 11:31 G | 10098047.88 | 10098047.98 | 10098048.12 | 0.0089 | 0.0078 |
| Jupiter | 22935-06-23 04:48 G | 10098069.55 | 10098069.70 | 10098069.87 | 0.0516 | 0.0371 |
| Neptune | 22936-06-03 03:36 G | 10098415.56 | 10098415.65 | 10098415.77 | 0.0089 | 0.0081 |
| Jupiter | 22936-07-27 21:21 G | 10098470.17 | 10098470.39 | 10098470.61 | 0.0532 | 0.0237 |
| Neptune | 22937-06-05 13:40 G | 10098782.99 | 10098783.07 | 10098783.19 | 0.0089 | 0.0082 |
| Neptune | 22938-06-08 00:43 G | 10099150.49 | 10099150.53 | 10099150.63 | 0.0089 | 0.0086 |
| Saturn | 22938-06-20 13:55 G | 10099162.85 | 10099163.08 | 10099163.32 | 0.0290 | 0.0039 |
| Neptune | 22939-06-10 16:04 G | 10099518.15 | 10099518.17 | 10099518.26 | 0.0089 | 0.0087 |
| Jupiter | 22940-12-22 01:26 G | 10100078.44 | 10100078.56 | 10100078.69 | 0.0512 | 0.0426 |
| Pluto | 22941-10-24 15:36 G | 10100384.90 | 10100385.15 | 10100385.41 | 0.0064 | 0.0013 |
| Jupiter | 22942-01-23 05:16 G | 10100475.50 | 10100475.72 | 10100475.94 | 0.0497 | 0.0186 |
| Jupiter | 22947-06-27 20:09 G | 10102457.16 | 10102457.34 | 10102457.53 | 0.0518 | 0.0327 |
| Jupiter | 22948-08-02 01:55 G | 10102858.42 | 10102858.58 | 10102858.75 | 0.0534 | 0.0356 |
| Saturn | 22952-12-16 00:00 G | 10104455.28 | 10104455.50 | 10104455.72 | 0.0269 | 0.0093 |
| Jupiter | 22952-12-26 14:24 G | 10104465.93 | 10104466.10 | 10104466.29 | 0.0510 | 0.0341 |
| Jupiter | 22954-01-27 20:52 G | 10104863.17 | 10104863.37 | 10104863.57 | 0.0496 | 0.0238 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 22959-07-02 18:00 G | 10106845.07 | 10106845.25 | 10106845.45 | 0.0521 | 0.0265 |
| Jupiter | 22960-08-07 10:33 G | 10107246.79 | 10107246.94 | 10107247.10 | 0.0536 | 0.0406 |
| Uranus | 22963-11-18 11:31 G | 10108444.78 | 10108444.98 | 10108445.20 | 0.0142 | 0.0076 |
| Uranus | 22964-11-22 15:21 G | 10108814.89 | 10108815.14 | 10108815.39 | 0.0143 | 0.0019 |
| Jupiter | 22964-12-31 07:40 G | 10108853.62 | 10108853.82 | 10108854.03 | 0.0508 | 0.0219 |
| Neptune | 22965-08-08 09:50 G | 10109073.87 | 10109073.91 | 10109073.96 | 0.0089 | 0.0088 |
| Uranus | 22965-11-27 05:02 G | 10109184.50 | 10109184.71 | 10109184.95 | 0.0143 | 0.0066 |
| Jupiter | 22966-02-01 03:50 G | 10109250.46 | 10109250.66 | 10109250.86 | 0.0494 | 0.0274 |
| Uranus | 22966-12-02 09:50 G | 10109554.80 | 10109554.91 | 10109555.05 | 0.0143 | 0.0124 |
| Saturn | 22967-06-14 06:00 G | 10109748.56 | 10109748.75 | 10109748.95 | 0.0290 | 0.0180 |
| Neptune | 22967-08-13 09:21 G | 10109808.82 | 10109808.89 | 10109809.01 | 0.0089 | 0.0084 |
| Neptune | 22969-08-17 10:33 G | 10110543.85 | 10110543.94 | 10110544.09 | 0.0089 | 0.0080 |
| Neptune | 22970-08-20 06:43 G | 10110911.74 | 10110911.78 | 10110911.88 | 0.0089 | 0.0087 |
| Jupiter | 22971-07-07 22:19 G | 10111233.20 | 10111233.43 | 10111233.66 | 0.0523 | 0.0131 |
| Neptune | 22971-08-22 13:26 G | 10111278.95 | 10111279.06 | 10111279.23 | 0.0089 | 0.0075 |
| Jupiter | 22972-08-12 13:12 G | 10111634.96 | 10111635.05 | 10111635.16 | 0.0537 | 0.0482 |
| Neptune | 22972-08-24 08:24 G | 10111646.76 | 10111646.85 | 10111646.99 | 0.0089 | 0.0081 |
| Neptune | 22973-08-26 17:45 G | 10112014.10 | 10112014.24 | 10112014.41 | 0.0089 | 0.0069 |
| Neptune | 22974-08-29 08:09 G | 10112381.71 | 10112381.84 | 10112382.01 | 0.0089 | 0.0075 |
| Neptune | 22975-08-31 22:04 G | 10112749.26 | 10112749.42 | 10112749.61 | 0.0090 | 0.0064 |
| Neptune | 22976-09-02 08:24 G | 10113116.70 | 10113116.85 | 10113117.03 | 0.0090 | 0.0069 |
| Jupiter | 22977-01-05 00:28 G | 10113241.29 | 10113241.52 | 10113241.75 | 0.0505 | 0.0135 |
| Neptune | 22977-09-05 02:38 G | 10113484.43 | 10113484.61 | 10113484.82 | 0.0090 | 0.0057 |
| Jupiter | 22978-02-05 09:36 G | 10113637.74 | 10113637.90 | 10113638.05 | 0.0492 | 0.0356 |
| Neptune | 22978-09-07 09:36 G | 10113851.71 | 10113851.90 | 10113852.09 | 0.0090 | 0.0062 |
| Neptune | 22979-09-10 05:16 G | 10114219.52 | 10114219.72 | 10114219.95 | 0.0090 | 0.0050 |
| Neptune | 22980-09-11 11:16 G | 10114586.79 | 10114586.97 | 10114587.19 | 0.0090 | 0.0056 |
| Neptune | 22981-09-14 06:14 G | 10114954.55 | 10114954.76 | 10114955.01 | 0.0090 | 0.0043 |
| Mars | 22981-10-12 20:24 G | 10114983.14 | 10114983.35 | 10114983.57 | 0.1932 | 0.0466 |
| Saturn | 22981-12-10 22:48 G | 10115042.44 | 10115042.45 | 10115042.47 | 0.0269 | 0.0269 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 22982-09-16 14:52 G | 10115321.92 | 10115322.12 | 10115322.34 | 0.0089 | 0.0048 |
| Saturn | 22982-12-22 19:12 G | 10115419.07 | 10115419.30 | 10115419.52 | 0.0270 | 0.0118 |
| Jupiter | 22983-07-12 17:45 G | 10115621.01 | 10115621.24 | 10115621.47 | 0.0526 | 0.0025 |
| Neptune | 22983-09-19 06:00 G | 10115689.51 | 10115689.75 | 10115690.00 | 0.0089 | 0.0036 |
| Neptune | 22984-09-20 18:43 G | 10116057.07 | 10116057.28 | 10116057.51 | 0.0089 | 0.0040 |
| Neptune | 22985-09-23 05:31 G | 10116424.48 | 10116424.73 | 10116424.99 | 0.0089 | 0.0028 |
| Neptune | 22986-09-25 22:48 G | 10116792.23 | 10116792.45 | 10116792.70 | 0.0089 | 0.0033 |
| Neptune | 22987-09-28 06:00 G | 10117159.50 | 10117159.75 | 10117160.01 | 0.0089 | 0.0021 |
| Neptune | 22988-09-30 01:40 G | 10117527.33 | 10117527.57 | 10117527.83 | 0.0089 | 0.0025 |
| Jupiter | 22989-01-09 06:43 G | 10117628.55 | 10117628.78 | 10117629.00 | 0.0503 | 0.0095 |
| Neptune | 22989-10-02 07:26 G | 10117894.57 | 10117894.81 | 10117895.07 | 0.0089 | 0.0013 |
| Jupiter | 22990-02-09 20:09 G | 10118025.26 | 10118025.34 | 10118025.43 | 0.0491 | 0.0456 |
| Neptune | 22990-10-05 02:24 G | 10118262.35 | 10118262.60 | 10118262.87 | 0.0089 | 0.0015 |
| Neptune | 22991-10-07 10:19 G | 10118629.68 | 10118629.93 | 10118630.18 | 0.0089 | 0.0005 |
| Neptune | 22992-10-09 01:12 G | 10118997.29 | 10118997.55 | 10118997.82 | 0.0089 | 0.0007 |
| Neptune | 22993-10-11 13:12 G | 10119364.80 | 10119365.05 | 10119365.30 | 0.0089 | 0.0003 |
| Neptune | 22994-10-13 23:45 G | 10119732.22 | 10119732.49 | 10119732.75 | 0.0089 | 0.0001 |
| Jupiter | 22995-07-18 01:26 G | 10120009.33 | 10120009.56 | 10120009.79 | 0.0527 | 0.0024 |
| Neptune | 22995-10-16 16:19 G | 10120099.94 | 10120100.18 | 10120100.44 | 0.0089 | 0.0011 |
| Neptune | 22996-10-17 23:16 G | 10120467.21 | 10120467.47 | 10120467.73 | 0.0089 | 0.0009 |
| Saturn | 22997-06-21 18:28 G | 10120714.04 | 10120714.27 | 10120714.51 | 0.0290 | 0.0091 |
| Neptune | 22997-10-20 18:14 G | 10120835.02 | 10120835.26 | 10120835.52 | 0.0089 | 0.0019 |
| Neptune | 22998-10-23 00:00 G | 10121202.25 | 10121202.50 | 10121202.75 | 0.0089 | 0.0017 |
| Neptune | 22999-10-25 18:57 G | 10121570.04 | 10121570.29 | 10121570.54 | 0.0089 | 0.0026 |
| Neptune | 23000-10-28 01:55 G | 10121937.35 | 10121937.58 | 10121937.83 | 0.0089 | 0.0025 |

24TH MILLENNIUM CE

This is a list of transits of Moon in the 24th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 23001-01-15 00:14 | G | 10122016.27 | 10122016.51 | 10122016.74 | 0.0502 | 0.0033 | |
| Neptune | 23001-10-30 17:02 | G | 10122304.97 | 10122305.21 | 10122305.46 | 0.0089 | 0.0033 | |
| Neptune | 23002-11-02 03:50 | G | 10122672.45 | 10122672.66 | 10122672.91 | 0.0089 | 0.0034 | |
| Uranus | 23003-05-18 08:24 | G | 10122869.71 | 10122869.85 | 10122870.01 | 0.0136 | 0.0111 | |
| Neptune | 23003-11-04 14:24 | G | 10123039.87 | 10123040.10 | 10123040.34 | 0.0089 | 0.0042 | |
| Uranus | 23004-05-21 14:09 | G | 10123238.86 | 10123239.09 | 10123239.34 | 0.0136 | 0.0038 | |
| Neptune | 23004-11-06 06:28 | G | 10123407.56 | 10123407.77 | 10123408.00 | 0.0089 | 0.0041 | |
| Uranus | 23005-05-26 08:09 | G | 10123608.58 | 10123608.84 | 10123609.09 | 0.0135 | 0.0010 | |
| Neptune | 23005-11-08 12:28 | G | 10123774.82 | 10123775.02 | 10123775.26 | 0.0089 | 0.0048 | |
| Uranus | 23006-05-30 12:00 | G | 10123977.81 | 10123978.00 | 10123978.21 | 0.0135 | 0.0079 | |
| Jupiter | 23006-06-18 16:04 | G | 10123997.07 | 10123997.17 | 10123997.27 | 0.0513 | 0.0459 | |
| Neptune | 23006-11-11 07:26 | G | 10124142.61 | 10124142.81 | 10124143.04 | 0.0089 | 0.0048 | |
| Uranus | 23007-06-04 04:33 | G | 10124347.67 | 10124347.69 | 10124347.76 | 0.0135 | 0.0133 | |
| Jupiter | 23007-07-23 20:38 | G | 10124397.12 | 10124397.36 | 10124397.59 | 0.0529 | 0.0097 | |
| Neptune | 23007-11-13 12:14 | G | 10124509.83 | 10124510.01 | 10124510.23 | 0.0089 | 0.0055 | |
| Neptune | 23008-11-15 06:43 | G | 10124877.59 | 10124877.78 | 10124877.99 | 0.0089 | 0.0056 | |
| Neptune | 23009-11-17 13:12 | G | 10125244.90 | 10125245.05 | 10125245.25 | 0.0089 | 0.0062 | |
| Neptune | 23010-11-20 03:50 | G | 10125612.50 | 10125612.66 | 10125612.88 | 0.0089 | 0.0063 | |
| Neptune | 23011-11-22 15:07 | G | 10125979.98 | 10125980.13 | 10125980.30 | 0.0089 | 0.0067 | |
| Jupiter | 23011-12-18 15:36 | G | 10126006.06 | 10126006.15 | 10126006.24 | 0.0515 | 0.0472 | |
| Saturn | 23011-12-19 05:31 | G | 10126006.49 | 10126006.73 | 10126006.96 | 0.0269 | 0.0044 | |
| Neptune | 23012-11-24 00:57 | G | 10126347.38 | 10126347.54 | 10126347.72 | 0.0089 | 0.0068 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 23013-01-19 04:33 G | 10126403.46 | 10126403.69 | 10126403.92 | 0.0500 | 0.0078 |
| Neptune | 23013-11-26 16:33 G | 10126715.06 | 10126715.19 | 10126715.34 | 0.0089 | 0.0073 |
| Neptune | 23014-11-28 22:19 G | 10127082.31 | 10127082.43 | 10127082.59 | 0.0089 | 0.0075 |
| Neptune | 23015-12-01 16:33 G | 10127450.10 | 10127450.19 | 10127450.33 | 0.0089 | 0.0079 |
| Neptune | 23016-12-02 20:38 G | 10127817.28 | 10127817.36 | 10127817.49 | 0.0089 | 0.0081 |
| Neptune | 23017-12-05 14:24 G | 10128185.04 | 10128185.10 | 10128185.23 | 0.0089 | 0.0083 |
| Jupiter | 23018-06-23 03:36 G | 10128384.49 | 10128384.65 | 10128384.82 | 0.0515 | 0.0376 |
| Neptune | 23018-12-07 21:07 G | 10128552.33 | 10128552.38 | 10128552.46 | 0.0089 | 0.0085 |
| Jupiter | 23019-07-29 01:12 G | 10128785.35 | 10128785.55 | 10128785.75 | 0.0531 | 0.0236 |
| Neptune | 23019-12-10 10:48 G | 10128919.92 | 10128919.95 | 10128920.03 | 0.0089 | 0.0087 |
| Mars | 23022-04-12 18:14 G | 10129774.06 | 10129774.26 | 10129774.47 | 0.1605 | 0.0104 |
| Jupiter | 23023-12-23 07:12 G | 10130393.67 | 10130393.80 | 10130393.93 | 0.0513 | 0.0428 |
| Jupiter | 23025-01-23 21:36 G | 10130791.19 | 10130791.40 | 10130791.61 | 0.0498 | 0.0180 |
| Saturn | 23026-06-16 09:07 G | 10131299.67 | 10131299.88 | 10131300.11 | 0.0290 | 0.0126 |
| Pluto | 23030-04-25 09:50 G | 10132708.72 | 10132708.91 | 10132709.13 | 0.0080 | 0.0047 |
| Jupiter | 23030-06-28 03:50 G | 10132772.49 | 10132772.66 | 10132772.83 | 0.0518 | 0.0338 |
| Jupiter | 23031-08-03 10:19 G | 10133173.75 | 10133173.93 | 10133174.12 | 0.0534 | 0.0346 |
| Jupiter | 23035-12-28 00:57 G | 10134781.38 | 10134781.54 | 10134781.71 | 0.0510 | 0.0342 |
| Jupiter | 23037-01-28 04:19 G | 10135178.47 | 10135178.68 | 10135178.90 | 0.0496 | 0.0221 |
| Saturn | 23040-12-12 18:00 G | 10136593.11 | 10136593.25 | 10136593.40 | 0.0269 | 0.0220 |
| Saturn | 23041-12-24 18:14 G | 10136970.07 | 10136970.26 | 10136970.46 | 0.0269 | 0.0162 |
| Jupiter | 23042-07-03 05:45 G | 10137160.53 | 10137160.74 | 10137160.95 | 0.0521 | 0.0264 |
| Jupiter | 23043-08-08 12:00 G | 10137561.86 | 10137562.00 | 10137562.16 | 0.0535 | 0.0398 |
| Uranus | 23047-11-19 23:02 G | 10139126.27 | 10139126.46 | 10139126.68 | 0.0142 | 0.0081 |
| Jupiter | 23048-01-01 18:57 G | 10139169.08 | 10139169.29 | 10139169.51 | 0.0508 | 0.0217 |
| Uranus | 23048-11-24 02:38 G | 10139496.35 | 10139496.61 | 10139496.86 | 0.0143 | 0.0001 |
| Jupiter | 23049-02-01 11:45 G | 10139565.81 | 10139565.99 | 10139566.19 | 0.0494 | 0.0266 |
| Uranus | 23049-11-28 16:48 G | 10139865.98 | 10139866.20 | 10139866.44 | 0.0143 | 0.0055 |
| Neptune | 23050-02-13 20:09 G | 10139943.29 | 10139943.34 | 10139943.43 | 0.0088 | 0.0084 |
| Uranus | 23050-12-03 21:36 G | 10140236.36 | 10140236.40 | 10140236.48 | 0.0144 | 0.0140 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 23051-02-15 23:45 G | 10140310.48 | 10140310.49 | 10140310.55 | 0.0088 | 0.0087 |
| Neptune | 23052-02-18 17:02 G | 10140678.13 | 10140678.21 | 10140678.34 | 0.0088 | 0.0080 |
| Neptune | 23053-02-19 20:52 G | 10141045.32 | 10141045.37 | 10141045.49 | 0.0088 | 0.0083 |
| Neptune | 23054-02-22 12:43 G | 10141412.90 | 10141413.03 | 10141413.18 | 0.0088 | 0.0074 |
| Jupiter | 23054-07-07 22:19 G | 10141548.21 | 10141548.43 | 10141548.66 | 0.0522 | 0.0139 |
| Neptune | 23055-02-24 20:09 G | 10141780.24 | 10141780.34 | 10141780.48 | 0.0088 | 0.0077 |
| Jupiter | 23055-08-13 23:02 G | 10141950.35 | 10141950.46 | 10141950.57 | 0.0536 | 0.0470 |
| Neptune | 23056-02-27 06:28 G | 10142147.63 | 10142147.77 | 10142147.95 | 0.0088 | 0.0069 |
| Saturn | 23056-06-23 14:38 G | 10142264.90 | 10142265.11 | 10142265.34 | 0.0290 | 0.0145 |
| Neptune | 23057-02-28 18:43 G | 10142515.16 | 10142515.28 | 10142515.44 | 0.0088 | 0.0072 |
| Neptune | 23058-03-03 00:14 G | 10142882.36 | 10142882.51 | 10142882.71 | 0.0088 | 0.0064 |
| Neptune | 23059-03-05 16:48 G | 10143250.05 | 10143250.20 | 10143250.39 | 0.0088 | 0.0066 |
| Jupiter | 23060-01-05 23:45 G | 10143556.27 | 10143556.49 | 10143556.71 | 0.0506 | 0.0148 |
| Neptune | 23060-03-06 20:09 G | 10143617.17 | 10143617.34 | 10143617.56 | 0.0088 | 0.0057 |
| Jupiter | 23061-02-05 22:33 G | 10143953.28 | 10143953.44 | 10143953.61 | 0.0493 | 0.0349 |
| Neptune | 23061-03-09 13:40 G | 10143984.89 | 10143985.07 | 10143985.27 | 0.0088 | 0.0059 |
| Neptune | 23062-03-11 18:28 G | 10144352.07 | 10144352.27 | 10144352.48 | 0.0088 | 0.0050 |
| Neptune | 23063-03-14 09:07 G | 10144719.68 | 10144719.88 | 10144720.10 | 0.0088 | 0.0053 |
| Neptune | 23064-03-15 17:45 G | 10145087.04 | 10145087.24 | 10145087.47 | 0.0088 | 0.0044 |
| Neptune | 23065-03-18 03:21 G | 10145454.43 | 10145454.64 | 10145454.89 | 0.0088 | 0.0046 |
| Neptune | 23066-03-20 16:48 G | 10145821.98 | 10145822.20 | 10145822.44 | 0.0088 | 0.0036 |
| Jupiter | 23066-07-13 05:31 G | 10145936.50 | 10145936.73 | 10145936.97 | 0.0524 | 0.0037 |
| Neptune | 23067-03-22 22:04 G | 10146189.19 | 10146189.42 | 10146189.66 | 0.0088 | 0.0038 |
| Neptune | 23068-03-24 15:07 G | 10146556.89 | 10146557.13 | 10146557.37 | 0.0088 | 0.0028 |
| Neptune | 23069-03-26 18:14 G | 10146924.04 | 10146924.26 | 10146924.52 | 0.0088 | 0.0032 |
| Neptune | 23070-03-29 11:45 G | 10147291.74 | 10147291.99 | 10147292.25 | 0.0088 | 0.0021 |
| Saturn | 23070-12-20 06:43 G | 10147557.54 | 10147557.78 | 10147558.03 | 0.0269 | 0.0006 |
| Neptune | 23071-03-31 16:48 G | 10147658.96 | 10147659.20 | 10147659.44 | 0.0088 | 0.0024 |
| Jupiter | 23072-01-10 21:21 G | 10147944.16 | 10147944.39 | 10147944.62 | 0.0504 | 0.0108 |
| Neptune | 23072-04-02 07:12 G | 10148026.54 | 10148026.80 | 10148027.07 | 0.0088 | 0.0013 |

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| Jupiter | 23073-02-10 00:57 G | 10148340.46 | 10148340.54 | 10148340.63 | 0.0492 | 0.0452 |
| Neptune | 23073-04-04 16:48 G | 10148393.96 | 10148394.20 | 10148394.45 | 0.0088 | 0.0016 |
| Neptune | 23074-04-07 02:09 G | 10148761.33 | 10148761.59 | 10148761.86 | 0.0088 | 0.0006 |
| Neptune | 23075-04-09 16:33 G | 10149128.94 | 10149129.19 | 10149129.44 | 0.0088 | 0.0009 |
| Neptune | 23076-04-10 21:50 G | 10149496.15 | 10149496.41 | 10149496.67 | 0.0088 | 0.0002 |
| Neptune | 23077-04-13 15:21 G | 10149863.89 | 10149864.14 | 10149864.40 | 0.0088 | 0.0001 |
| Neptune | 23078-04-15 19:12 G | 10150231.05 | 10150231.30 | 10150231.56 | 0.0088 | 0.0011 |
| Jupiter | 23078-07-17 21:36 G | 10150324.16 | 10150324.40 | 10150324.64 | 0.0527 | 0.0014 |
| Neptune | 23079-04-18 12:28 G | 10150598.76 | 10150599.02 | 10150599.28 | 0.0088 | 0.0007 |
| Neptune | 23080-04-19 18:14 G | 10150966.03 | 10150966.26 | 10150966.52 | 0.0088 | 0.0019 |
| Neptune | 23081-04-22 08:24 G | 10151333.60 | 10151333.85 | 10151334.13 | 0.0088 | 0.0015 |
| Neptune | 23082-04-24 19:12 G | 10151701.06 | 10151701.30 | 10151701.54 | 0.0088 | 0.0026 |
| Neptune | 23083-04-27 04:04 G | 10152068.43 | 10152068.67 | 10152068.94 | 0.0088 | 0.0023 |
| Jupiter | 23084-01-15 03:50 G | 10152331.42 | 10152331.66 | 10152331.89 | 0.0502 | 0.0035 |
| Neptune | 23084-04-28 18:57 G | 10152436.08 | 10152436.29 | 10152436.54 | 0.0088 | 0.0035 |
| Neptune | 23085-05-01 00:43 G | 10152803.28 | 10152803.53 | 10152803.77 | 0.0088 | 0.0031 |
| Saturn | 23085-06-17 15:36 G | 10152850.93 | 10152851.15 | 10152851.39 | 0.0290 | 0.0073 |
| Neptune | 23086-05-03 18:43 G | 10153171.06 | 10153171.28 | 10153171.51 | 0.0088 | 0.0043 |
| Neptune | 23087-05-05 22:48 G | 10153538.23 | 10153538.45 | 10153538.69 | 0.0088 | 0.0038 |
| Uranus | 23087-05-18 19:12 G | 10153551.13 | 10153551.30 | 10153551.50 | 0.0136 | 0.0095 |
| Neptune | 23088-05-07 16:33 G | 10153905.98 | 10153906.19 | 10153906.42 | 0.0088 | 0.0050 |
| Uranus | 23088-05-22 01:55 G | 10153920.35 | 10153920.58 | 10153920.81 | 0.0136 | 0.0048 |
| Neptune | 23089-05-09 23:02 G | 10154273.27 | 10154273.46 | 10154273.70 | 0.0088 | 0.0046 |
| Uranus | 23089-05-26 18:57 G | 10154290.04 | 10154290.29 | 10154290.55 | 0.0135 | 0.0026 |
| Jupiter | 23089-06-17 16:33 G | 10154312.09 | 10154312.19 | 10154312.29 | 0.0513 | 0.0461 |
| Neptune | 23090-05-12 13:26 G | 10154640.88 | 10154641.06 | 10154641.28 | 0.0088 | 0.0057 |
| Uranus | 23090-05-30 23:31 G | 10154659.28 | 10154659.48 | 10154659.70 | 0.0135 | 0.0074 |
| Jupiter | 23090-07-23 05:02 G | 10154712.49 | 10154712.71 | 10154712.94 | 0.0529 | 0.0095 |
| Neptune | 23091-05-15 00:57 G | 10155008.35 | 10155008.54 | 10155008.75 | 0.0088 | 0.0053 |
| Neptune | 23092-05-16 10:33 G | 10155375.76 | 10155375.94 | 10155376.13 | 0.0088 | 0.0064 |

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| Neptune | 23093-05-19 02:09 G | 10155743.41 | 10155743.59 | 10155743.79 | 0.0088 | 0.0059 |
| Neptune | 23094-05-21 07:26 G | 10156110.68 | 10156110.81 | 10156110.99 | 0.0088 | 0.0071 |
| Jupiter | 23094-12-17 22:04 G | 10156321.33 | 10156321.42 | 10156321.51 | 0.0515 | 0.0475 |
| Neptune | 23095-05-24 01:40 G | 10156478.43 | 10156478.57 | 10156478.77 | 0.0089 | 0.0066 |
| Jupiter | 23096-01-19 20:52 G | 10156719.15 | 10156719.37 | 10156719.59 | 0.0500 | 0.0081 |
| Neptune | 23096-05-25 06:28 G | 10156845.68 | 10156845.77 | 10156845.92 | 0.0089 | 0.0078 |
| Neptune | 23097-05-28 00:28 G | 10157213.39 | 10157213.52 | 10157213.70 | 0.0089 | 0.0072 |
| Neptune | 23098-05-30 07:55 G | 10157580.75 | 10157580.83 | 10157580.92 | 0.0089 | 0.0083 |
| Neptune | 23099-06-01 22:19 G | 10157948.32 | 10157948.43 | 10157948.59 | 0.0089 | 0.0077 |
| Saturn | 23099-12-14 17:16 G | 10158144.05 | 10158144.22 | 10158144.42 | 0.0269 | 0.0174 |
| Neptune | 23100-06-04 10:48 G | 10158315.93 | 10158315.95 | 10158315.98 | 0.0089 | 0.0088 |
| Saturn | 23100-12-26 21:50 G | 10158521.27 | 10158521.41 | 10158521.57 | 0.0269 | 0.0207 |
| Mars | 23101-04-16 01:55 G | 10158631.44 | 10158631.58 | 10158631.72 | 0.1607 | 0.1073 |
| Neptune | 23101-06-06 20:38 G | 10158683.28 | 10158683.36 | 10158683.48 | 0.0089 | 0.0082 |
| Jupiter | 23101-06-23 16:04 G | 10158700.02 | 10158700.17 | 10158700.32 | 0.0515 | 0.0387 |
| Jupiter | 23102-07-29 12:00 G | 10159100.79 | 10159101.00 | 10159101.22 | 0.0531 | 0.0235 |
| Neptune | 23103-06-11 18:43 G | 10159418.25 | 10159418.28 | 10159418.36 | 0.0089 | 0.0087 |
| Jupiter | 23106-12-23 17:02 G | 10160709.10 | 10160709.21 | 10160709.33 | 0.0513 | 0.0436 |
| Jupiter | 23108-01-25 05:16 G | 10161106.49 | 10161106.72 | 10161106.95 | 0.0498 | 0.0171 |
| Jupiter | 23113-06-28 15:07 G | 10163087.96 | 10163088.13 | 10163088.31 | 0.0517 | 0.0352 |
| Saturn | 23114-06-12 05:16 G | 10163436.71 | 10163436.72 | 10163436.75 | 0.0291 | 0.0290 |
| Jupiter | 23114-08-03 10:19 G | 10163488.75 | 10163488.93 | 10163489.11 | 0.0532 | 0.0333 |
| Saturn | 23115-06-26 11:16 G | 10163815.80 | 10163815.97 | 10163816.16 | 0.0291 | 0.0195 |
| Jupiter | 23118-12-28 07:55 G | 10165096.66 | 10165096.83 | 10165097.01 | 0.0511 | 0.0341 |
| Jupiter | 23120-01-29 11:16 G | 10165493.77 | 10165493.97 | 10165494.18 | 0.0497 | 0.0209 |
| Jupiter | 23125-07-03 06:43 G | 10167475.59 | 10167475.78 | 10167475.98 | 0.0519 | 0.0271 |
| Jupiter | 23126-08-08 21:21 G | 10167877.23 | 10167877.39 | 10167877.56 | 0.0534 | 0.0376 |
| Saturn | 23129-12-22 01:55 G | 10169108.33 | 10169108.58 | 10169108.83 | 0.0269 | 0.0048 |
| Uranus | 23130-11-16 18:43 G | 10169438.25 | 10169438.28 | 10169438.33 | 0.0142 | 0.0140 |
| Jupiter | 23131-01-01 18:00 G | 10169484.05 | 10169484.25 | 10169484.46 | 0.0509 | 0.0223 |

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| Uranus | 23131-11-21 09:50 G | 10169807.71 | 10169807.91 | 10169808.14 | 0.0142 | 0.0072 |
| Jupiter | 23132-02-03 01:12 G | 10169881.34 | 10169881.55 | 10169881.75 | 0.0495 | 0.0256 |
| Uranus | 23132-11-25 12:57 G | 10170177.78 | 10170178.04 | 10170178.30 | 0.0143 | 0.0011 |
| Neptune | 23133-08-19 00:28 G | 10170444.50 | 10170444.52 | 10170444.61 | 0.0090 | 0.0088 |
| Uranus | 23133-11-30 03:36 G | 10170547.45 | 10170547.65 | 10170547.87 | 0.0143 | 0.0074 |
| Neptune | 23134-08-21 07:55 G | 10170811.78 | 10170811.83 | 10170811.90 | 0.0090 | 0.0087 |
| Uranus | 23134-12-05 08:09 G | 10170917.75 | 10170917.84 | 10170917.95 | 0.0144 | 0.0131 |
| Neptune | 23135-08-24 01:12 G | 10171179.46 | 10171179.55 | 10171179.68 | 0.0090 | 0.0082 |
| Neptune | 23136-08-25 11:45 G | 10171546.92 | 10171546.99 | 10171547.12 | 0.0090 | 0.0082 |
| Jupiter | 23137-07-08 10:33 G | 10171863.71 | 10171863.94 | 10171864.16 | 0.0522 | 0.0142 |
| Neptune | 23137-08-28 01:26 G | 10171914.44 | 10171914.56 | 10171914.72 | 0.0090 | 0.0077 |
| Jupiter | 23138-08-13 18:43 G | 10172265.17 | 10172265.28 | 10172265.41 | 0.0536 | 0.0461 |
| Neptune | 23138-08-30 17:02 G | 10172282.09 | 10172282.21 | 10172282.36 | 0.0090 | 0.0076 |
| Neptune | 23139-09-02 01:55 G | 10172649.43 | 10172649.58 | 10172649.75 | 0.0090 | 0.0071 |
| Neptune | 23140-09-03 21:07 G | 10173017.22 | 10173017.38 | 10173017.55 | 0.0090 | 0.0068 |
| Neptune | 23141-09-06 03:07 G | 10173384.46 | 10173384.63 | 10173384.82 | 0.0090 | 0.0064 |
| Neptune | 23142-09-08 22:48 G | 10173752.29 | 10173752.45 | 10173752.67 | 0.0090 | 0.0061 |
| Jupiter | 23143-01-06 18:00 G | 10173872.04 | 10173872.25 | 10173872.48 | 0.0507 | 0.0154 |
| Neptune | 23143-09-11 05:31 G | 10174119.56 | 10174119.73 | 10174119.94 | 0.0090 | 0.0059 |
| Jupiter | 23144-02-07 04:33 G | 10174268.54 | 10174268.69 | 10174268.86 | 0.0493 | 0.0351 |
| Saturn | 23144-06-19 18:00 G | 10174402.00 | 10174402.25 | 10174402.50 | 0.0291 | 0.0021 |
| Neptune | 23144-09-12 23:16 G | 10174487.28 | 10174487.47 | 10174487.71 | 0.0090 | 0.0054 |
| Neptune | 23145-09-15 09:21 G | 10174854.70 | 10174854.89 | 10174855.11 | 0.0090 | 0.0052 |
| Neptune | 23146-09-17 23:16 G | 10175222.26 | 10175222.47 | 10175222.72 | 0.0089 | 0.0046 |
| Neptune | 23147-09-20 13:55 G | 10175589.88 | 10175590.08 | 10175590.32 | 0.0089 | 0.0044 |
| Neptune | 23148-09-21 23:02 G | 10175957.24 | 10175957.46 | 10175957.72 | 0.0089 | 0.0038 |
| Jupiter | 23149-07-13 03:36 G | 10176251.41 | 10176251.65 | 10176251.89 | 0.0524 | 0.0046 |
| Neptune | 23149-09-24 17:16 G | 10176325.01 | 10176325.22 | 10176325.47 | 0.0089 | 0.0037 |
| Neptune | 23150-09-26 23:45 G | 10176692.26 | 10176692.49 | 10176692.75 | 0.0089 | 0.0030 |
| Neptune | 23151-09-29 19:55 G | 10177060.09 | 10177060.33 | 10177060.58 | 0.0089 | 0.0029 |

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| Neptune | 23152-10-01 01:55 G | 10177427.35 | 10177427.58 | 10177427.84 | 0.0089 | 0.0021 |
| Neptune | 23153-10-03 20:09 G | 10177795.09 | 10177795.34 | 10177795.61 | 0.0089 | 0.0020 |
| Neptune | 23154-10-06 05:31 G | 10178162.49 | 10178162.73 | 10178162.98 | 0.0089 | 0.0011 |
| Jupiter | 23155-01-11 00:57 G | 10178259.31 | 10178259.54 | 10178259.78 | 0.0504 | 0.0113 |
| Neptune | 23155-10-08 19:40 G | 10178530.06 | 10178530.32 | 10178530.59 | 0.0089 | 0.0012 |
| Jupiter | 23156-02-11 19:12 G | 10178656.21 | 10178656.30 | 10178656.39 | 0.0492 | 0.0449 |
| Neptune | 23156-10-10 09:36 G | 10178897.66 | 10178897.90 | 10178898.15 | 0.0089 | 0.0004 |
| Neptune | 23157-10-12 18:57 G | 10179265.02 | 10179265.29 | 10179265.55 | 0.0089 | 0.0004 |
| Neptune | 23158-10-15 12:28 G | 10179632.77 | 10179633.02 | 10179633.27 | 0.0089 | 0.0006 |
| Saturn | 23158-12-16 22:19 G | 10179695.23 | 10179695.43 | 10179695.64 | 0.0269 | 0.0128 |
| Neptune | 23159-10-17 18:28 G | 10180000.01 | 10180000.27 | 10180000.53 | 0.0089 | 0.0005 |
| Saturn | 23159-12-29 00:43 G | 10180072.45 | 10180072.53 | 10180072.63 | 0.0269 | 0.0250 |
| Neptune | 23160-10-19 13:40 G | 10180367.82 | 10180368.07 | 10180368.33 | 0.0089 | 0.0015 |
| Jupiter | 23161-07-18 11:16 G | 10180639.75 | 10180639.97 | 10180640.20 | 0.0527 | 0.0002 |
| Neptune | 23161-10-21 19:26 G | 10180735.06 | 10180735.31 | 10180735.56 | 0.0089 | 0.0013 |
| Neptune | 23162-10-24 13:12 G | 10181102.80 | 10181103.05 | 10181103.32 | 0.0089 | 0.0024 |
| Neptune | 23163-10-26 21:36 G | 10181470.17 | 10181470.40 | 10181470.65 | 0.0089 | 0.0021 |
| Neptune | 23164-10-28 11:45 G | 10181837.76 | 10181837.99 | 10181838.25 | 0.0089 | 0.0032 |
| Neptune | 23165-10-31 01:12 G | 10182205.32 | 10182205.55 | 10182205.79 | 0.0089 | 0.0030 |
| Neptune | 23166-11-02 10:19 G | 10182572.71 | 10182572.93 | 10182573.18 | 0.0089 | 0.0040 |
| Jupiter | 23167-01-15 19:12 G | 10182647.08 | 10182647.30 | 10182647.53 | 0.0502 | 0.0033 |
| Neptune | 23167-11-05 03:21 G | 10182940.42 | 10182940.64 | 10182940.88 | 0.0089 | 0.0037 |
| Neptune | 23168-11-06 08:38 G | 10183307.66 | 10183307.86 | 10183308.10 | 0.0089 | 0.0048 |
| Neptune | 23169-11-09 03:36 G | 10183675.45 | 10183675.65 | 10183675.89 | 0.0089 | 0.0044 |
| Neptune | 23170-11-11 08:52 G | 10184042.69 | 10184042.87 | 10184043.08 | 0.0089 | 0.0056 |
| Uranus | 23171-05-20 07:26 G | 10184232.66 | 10184232.81 | 10184233.00 | 0.0136 | 0.0104 |
| Neptune | 23171-11-14 01:55 G | 10184410.39 | 10184410.58 | 10184410.82 | 0.0089 | 0.0052 |
| Uranus | 23172-05-23 15:07 G | 10184601.90 | 10184602.13 | 10184602.38 | 0.0136 | 0.0031 |
| Jupiter | 23172-06-18 06:43 G | 10184627.69 | 10184627.78 | 10184627.87 | 0.0512 | 0.0463 |
| Neptune | 23172-11-15 10:04 G | 10184777.75 | 10184777.92 | 10184778.10 | 0.0089 | 0.0063 |

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| Uranus | 23173-05-28 07:26 G | 10184971.55 | 10184971.81 | 10184972.07 | 0.0135 | 0.0017 |
| Saturn | 23173-06-13 04:04 G | 10184987.55 | 10184987.67 | 10184987.81 | 0.0291 | 0.0245 |
| Jupiter | 23173-07-23 13:40 G | 10185027.83 | 10185028.07 | 10185028.31 | 0.0528 | 0.0087 |
| Neptune | 23173-11-17 23:31 G | 10185145.29 | 10185145.48 | 10185145.69 | 0.0089 | 0.0058 |
| Uranus | 23174-06-01 12:28 G | 10185340.84 | 10185341.02 | 10185341.22 | 0.0135 | 0.0088 |
| Saturn | 23174-06-27 14:24 G | 10185366.97 | 10185367.10 | 10185367.24 | 0.0291 | 0.0241 |
| Neptune | 23174-11-20 12:00 G | 10185512.87 | 10185513.00 | 10185513.17 | 0.0089 | 0.0070 |
| Neptune | 23175-11-22 20:52 G | 10185880.21 | 10185880.37 | 10185880.57 | 0.0089 | 0.0065 |
| Neptune | 23176-11-24 13:12 G | 10186247.95 | 10186248.05 | 10186248.20 | 0.0089 | 0.0077 |
| Neptune | 23177-11-26 18:57 G | 10186615.14 | 10186615.29 | 10186615.45 | 0.0089 | 0.0071 |
| Jupiter | 23177-12-18 02:24 G | 10186636.54 | 10186636.60 | 10186636.68 | 0.0516 | 0.0489 |
| Neptune | 23178-11-29 13:26 G | 10186982.99 | 10186983.06 | 10186983.16 | 0.0089 | 0.0083 |
| Jupiter | 23179-01-20 01:12 G | 10187034.32 | 10187034.55 | 10187034.79 | 0.0501 | 0.0080 |
| Neptune | 23179-12-01 18:00 G | 10187350.14 | 10187350.25 | 10187350.39 | 0.0089 | 0.0077 |
| Neptune | 23180-12-03 11:02 G | 10187717.94 | 10187717.96 | 10187718.01 | 0.0089 | 0.0088 |
| Neptune | 23181-12-05 18:43 G | 10188085.19 | 10188085.28 | 10188085.37 | 0.0089 | 0.0082 |
| Neptune | 23183-12-10 19:12 G | 10188820.29 | 10188820.30 | 10188820.37 | 0.0089 | 0.0088 |
| Jupiter | 23184-06-23 02:24 G | 10189015.45 | 10189015.60 | 10189015.76 | 0.0514 | 0.0395 |
| Jupiter | 23185-07-28 11:45 G | 10189415.79 | 10189415.99 | 10189416.20 | 0.0530 | 0.0225 |
| Saturn | 23188-12-22 23:31 G | 10190659.26 | 10190659.48 | 10190659.72 | 0.0269 | 0.0093 |
| Pluto | 23189-10-28 02:52 G | 10190968.37 | 10190968.62 | 10190968.88 | 0.0064 | 0.0014 |
| Jupiter | 23189-12-22 22:19 G | 10191024.31 | 10191024.43 | 10191024.55 | 0.0514 | 0.0443 |
| Pluto | 23190-10-29 08:38 G | 10191334.85 | 10191334.86 | 10191334.94 | 0.0064 | 0.0064 |
| Jupiter | 23191-01-24 11:02 G | 10191421.75 | 10191421.96 | 10191422.17 | 0.0499 | 0.0163 |
| Jupiter | 23196-06-27 14:38 G | 10193402.95 | 10193403.11 | 10193403.28 | 0.0516 | 0.0363 |
| Jupiter | 23197-08-02 19:40 G | 10193804.13 | 10193804.32 | 10193804.51 | 0.0532 | 0.0318 |
| Jupiter | 23201-12-27 11:45 G | 10195411.83 | 10195411.99 | 10195412.17 | 0.0512 | 0.0339 |
| Jupiter | 23203-01-29 03:07 G | 10195809.41 | 10195809.63 | 10195809.85 | 0.0497 | 0.0199 |
| Saturn | 23203-06-21 14:52 G | 10195952.87 | 10195953.12 | 10195953.38 | 0.0291 | 0.0027 |
| Jupiter | 23208-07-02 19:26 G | 10197791.11 | 10197791.31 | 10197791.51 | 0.0519 | 0.0274 |

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| Jupiter | 23209-08-07 18:43 G | 10198192.10 | 10198192.28 | 10198192.45 | 0.0534 | 0.0362 |
| Jupiter | 23214-01-01 12:43 G | 10199799.82 | 10199800.03 | 10199800.24 | 0.0509 | 0.0222 |
| Neptune | 23214-02-13 22:19 G | 10199843.42 | 10199843.43 | 10199843.49 | 0.0088 | 0.0087 |
| Uranus | 23214-11-17 04:19 G | 10200119.66 | 10200119.68 | 10200119.74 | 0.0142 | 0.0140 |
| Jupiter | 23215-02-02 06:14 G | 10200196.56 | 10200196.76 | 10200196.96 | 0.0495 | 0.0252 |
| Uranus | 23215-11-21 20:24 G | 10200489.15 | 10200489.35 | 10200489.58 | 0.0142 | 0.0074 |
| Neptune | 23216-02-18 20:38 G | 10200578.28 | 10200578.36 | 10200578.45 | 0.0088 | 0.0082 |
| Uranus | 23216-11-25 22:19 G | 10200859.17 | 10200859.43 | 10200859.69 | 0.0143 | 0.0004 |
| Neptune | 23217-02-20 10:48 G | 10200945.93 | 10200945.95 | 10200945.98 | 0.0088 | 0.0087 |
| Uranus | 23217-11-30 13:55 G | 10201228.86 | 10201229.08 | 10201229.31 | 0.0143 | 0.0062 |
| Saturn | 23217-12-18 02:09 G | 10201246.36 | 10201246.59 | 10201246.82 | 0.0269 | 0.0082 |
| Neptune | 23218-02-22 18:43 G | 10201313.19 | 10201313.28 | 10201313.42 | 0.0088 | 0.0078 |
| Neptune | 23219-02-25 03:50 G | 10201680.60 | 10201680.66 | 10201680.78 | 0.0088 | 0.0083 |
| Neptune | 23220-02-27 18:00 G | 10202048.12 | 10202048.25 | 10202048.40 | 0.0088 | 0.0072 |
| Jupiter | 23220-07-07 11:31 G | 10202178.76 | 10202178.98 | 10202179.21 | 0.0521 | 0.0148 |
| Neptune | 23221-02-28 22:48 G | 10202415.35 | 10202415.45 | 10202415.60 | 0.0088 | 0.0077 |
| Jupiter | 23221-08-13 07:26 G | 10202580.71 | 10202580.81 | 10202580.93 | 0.0536 | 0.0461 |
| Neptune | 23222-03-03 15:36 G | 10202783.01 | 10202783.15 | 10202783.35 | 0.0088 | 0.0066 |
| Neptune | 23223-03-05 18:57 G | 10203150.17 | 10203150.29 | 10203150.47 | 0.0088 | 0.0071 |
| Neptune | 23224-03-07 12:00 G | 10203517.83 | 10203518.00 | 10203518.21 | 0.0088 | 0.0060 |
| Neptune | 23225-03-09 17:31 G | 10203885.07 | 10203885.23 | 10203885.41 | 0.0088 | 0.0064 |
| Jupiter | 23226-01-05 20:09 G | 10204187.11 | 10204187.34 | 10204187.56 | 0.0507 | 0.0158 |
| Neptune | 23226-03-12 06:43 G | 10204252.58 | 10204252.78 | 10204253.00 | 0.0088 | 0.0053 |
| Jupiter | 23227-02-06 21:50 G | 10204584.26 | 10204584.41 | 10204584.58 | 0.0494 | 0.0356 |
| Neptune | 23227-03-14 16:04 G | 10204620.00 | 10204620.17 | 10204620.37 | 0.0088 | 0.0057 |
| Mars | 23227-04-13 01:26 G | 10204649.42 | 10204649.56 | 10204649.70 | 0.1600 | 0.0935 |
| Neptune | 23228-03-16 00:28 G | 10204987.31 | 10204987.52 | 10204987.77 | 0.0088 | 0.0046 |
| Neptune | 23229-03-18 15:50 G | 10205354.95 | 10205355.16 | 10205355.37 | 0.0088 | 0.0049 |
| Neptune | 23230-03-20 20:38 G | 10205722.13 | 10205722.36 | 10205722.59 | 0.0088 | 0.0038 |
| Neptune | 23231-03-23 13:40 G | 10206089.86 | 10206090.07 | 10206090.31 | 0.0088 | 0.0042 |

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| Neptune | 23232-03-24 17:16 G | 10206457.00 | 10206457.22 | 10206457.47 | 0.0088 | 0.0031 |
| Saturn | 23232-06-14 07:55 G | 10206538.67 | 10206538.83 | 10206539.01 | 0.0291 | 0.0200 |
| Jupiter | 23232-07-12 18:14 G | 10206567.03 | 10206567.26 | 10206567.48 | 0.0523 | 0.0061 |
| Neptune | 23233-03-27 10:04 G | 10206824.69 | 10206824.92 | 10206825.18 | 0.0088 | 0.0034 |
| Saturn | 23233-06-28 18:00 G | 10206918.22 | 10206918.25 | 10206918.29 | 0.0291 | 0.0287 |
| Neptune | 23234-03-29 16:04 G | 10207191.94 | 10207192.17 | 10207192.42 | 0.0088 | 0.0023 |
| Neptune | 23235-04-01 04:48 G | 10207559.45 | 10207559.70 | 10207559.96 | 0.0088 | 0.0025 |
| Neptune | 23236-04-02 15:07 G | 10207926.89 | 10207927.13 | 10207927.38 | 0.0088 | 0.0015 |
| Neptune | 23237-04-04 23:02 G | 10208294.20 | 10208294.46 | 10208294.72 | 0.0088 | 0.0018 |
| Jupiter | 23238-01-10 11:31 G | 10208574.76 | 10208574.98 | 10208575.20 | 0.0505 | 0.0123 |
| Neptune | 23238-04-07 14:38 G | 10208661.86 | 10208662.11 | 10208662.36 | 0.0088 | 0.0007 |
| Jupiter | 23239-02-10 20:24 G | 10208971.25 | 10208971.35 | 10208971.45 | 0.0493 | 0.0442 |
| Neptune | 23239-04-09 19:12 G | 10209029.04 | 10209029.30 | 10209029.56 | 0.0088 | 0.0009 |
| Neptune | 23240-04-11 12:57 G | 10209396.78 | 10209397.04 | 10209397.30 | 0.0088 | 0.0002 |
| Neptune | 23241-04-13 17:16 G | 10209763.96 | 10209764.22 | 10209764.47 | 0.0088 | 0.0001 |
| Neptune | 23242-04-16 09:50 G | 10210131.65 | 10210131.91 | 10210132.18 | 0.0088 | 0.0009 |
| Neptune | 23243-04-18 16:48 G | 10210498.95 | 10210499.20 | 10210499.45 | 0.0088 | 0.0008 |
| Neptune | 23244-04-20 05:16 G | 10210866.46 | 10210866.72 | 10210866.99 | 0.0088 | 0.0017 |
| Jupiter | 23244-07-17 17:02 G | 10210954.97 | 10210955.21 | 10210955.46 | 0.0525 | 0.0017 |
| Neptune | 23245-04-22 16:33 G | 10211233.95 | 10211234.19 | 10211234.44 | 0.0088 | 0.0016 |
| Neptune | 23246-04-25 00:14 G | 10211601.26 | 10211601.51 | 10211601.77 | 0.0088 | 0.0026 |
| Saturn | 23246-12-13 00:57 G | 10211833.46 | 10211833.54 | 10211833.66 | 0.0269 | 0.0245 |
| Neptune | 23247-04-27 16:04 G | 10211968.95 | 10211969.17 | 10211969.43 | 0.0088 | 0.0025 |
| Saturn | 23247-12-25 04:48 G | 10212210.50 | 10212210.70 | 10212210.91 | 0.0269 | 0.0135 |
| Neptune | 23248-04-28 20:52 G | 10212336.15 | 10212336.37 | 10212336.63 | 0.0088 | 0.0034 |
| Neptune | 23249-05-01 15:07 G | 10212703.90 | 10212704.13 | 10212704.39 | 0.0088 | 0.0033 |
| Jupiter | 23250-01-14 21:50 G | 10212962.16 | 10212962.41 | 10212962.65 | 0.0503 | 0.0035 |
| Neptune | 23250-05-03 19:26 G | 10213071.10 | 10213071.31 | 10213071.55 | 0.0088 | 0.0042 |
| Jupiter | 23251-02-15 09:21 G | 10213358.86 | 10213358.89 | 10213358.93 | 0.0491 | 0.0483 |
| Neptune | 23251-05-06 12:28 G | 10213438.80 | 10213439.02 | 10213439.27 | 0.0088 | 0.0041 |

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| Neptune | 23252-05-07 20:24 G | 10213806.15 | 10213806.35 | 10213806.57 | 0.0088 | 0.0049 |
| Neptune | 23253-05-10 08:38 G | 10214173.66 | 10214173.86 | 10214174.11 | 0.0088 | 0.0049 |
| Neptune | 23254-05-12 21:07 G | 10214541.20 | 10214541.38 | 10214541.59 | 0.0088 | 0.0057 |
| Neptune | 23255-05-15 05:02 G | 10214908.52 | 10214908.71 | 10214908.93 | 0.0088 | 0.0056 |
| Uranus | 23255-05-20 19:12 G | 10214914.12 | 10214914.30 | 10214914.52 | 0.0136 | 0.0088 |
| Jupiter | 23255-06-18 12:00 G | 10214942.90 | 10214943.00 | 10214943.11 | 0.0511 | 0.0460 |
| Neptune | 23256-05-16 22:04 G | 10215276.26 | 10215276.42 | 10215276.61 | 0.0088 | 0.0064 |
| Uranus | 23256-05-24 03:36 G | 10215283.42 | 10215283.65 | 10215283.89 | 0.0136 | 0.0040 |
| Jupiter | 23256-07-22 12:14 G | 10215342.79 | 10215343.01 | 10215343.24 | 0.0527 | 0.0078 |
| Neptune | 23257-05-19 03:07 G | 10215643.47 | 10215643.63 | 10215643.83 | 0.0088 | 0.0064 |
| Uranus | 23257-05-28 18:43 G | 10215653.03 | 10215653.28 | 10215653.54 | 0.0135 | 0.0034 |
| Neptune | 23258-05-21 21:50 G | 10216011.27 | 10216011.41 | 10216011.58 | 0.0088 | 0.0071 |
| Uranus | 23258-06-02 00:43 G | 10216022.34 | 10216022.53 | 10216022.73 | 0.0135 | 0.0082 |
| Neptune | 23259-05-24 02:38 G | 10216378.49 | 10216378.61 | 10216378.79 | 0.0088 | 0.0072 |
| Neptune | 23260-05-25 20:09 G | 10216746.23 | 10216746.34 | 10216746.50 | 0.0089 | 0.0077 |
| Jupiter | 23260-12-17 11:45 G | 10216951.94 | 10216951.99 | 10216952.06 | 0.0517 | 0.0498 |
| Neptune | 23261-05-28 04:19 G | 10217113.58 | 10217113.68 | 10217113.82 | 0.0089 | 0.0078 |
| Jupiter | 23262-01-19 10:04 G | 10217349.70 | 10217349.92 | 10217350.14 | 0.0501 | 0.0083 |
| Neptune | 23262-05-30 17:45 G | 10217481.15 | 10217481.24 | 10217481.34 | 0.0089 | 0.0082 |
| Saturn | 23262-06-22 13:55 G | 10217503.85 | 10217504.08 | 10217504.32 | 0.0291 | 0.0077 |
| Neptune | 23263-06-02 06:14 G | 10217848.70 | 10217848.76 | 10217848.85 | 0.0089 | 0.0084 |
| Mars | 23265-10-13 01:55 G | 10218712.42 | 10218712.58 | 10218712.74 | 0.1939 | 0.1149 |
| Jupiter | 23267-06-23 02:09 G | 10219330.45 | 10219330.59 | 10219330.73 | 0.0514 | 0.0405 |
| Jupiter | 23268-07-27 21:07 G | 10219731.17 | 10219731.38 | 10219731.60 | 0.0530 | 0.0218 |
| Jupiter | 23272-12-22 03:07 G | 10221339.52 | 10221339.63 | 10221339.74 | 0.0514 | 0.0450 |
| Jupiter | 23274-01-24 02:09 G | 10221737.36 | 10221737.59 | 10221737.82 | 0.0499 | 0.0156 |
| Saturn | 23276-12-19 02:24 G | 10222797.35 | 10222797.60 | 10222797.86 | 0.0269 | 0.0038 |
| Pluto | 23279-04-29 13:40 G | 10223658.91 | 10223659.07 | 10223659.24 | 0.0079 | 0.0061 |
| Jupiter | 23279-06-28 05:45 G | 10223718.58 | 10223718.74 | 10223718.91 | 0.0516 | 0.0370 |
| Jupiter | 23280-08-01 19:40 G | 10224119.13 | 10224119.32 | 10224119.51 | 0.0532 | 0.0305 |

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| Jupiter | 23284-12-27 04:04 G | 10225727.50 | 10225727.67 | 10225727.85 | 0.0512 | 0.0335 |
| Jupiter | 23286-01-28 06:14 G | 10226124.55 | 10226124.76 | 10226124.97 | 0.0497 | 0.0191 |
| Saturn | 23291-06-16 13:12 G | 10228089.85 | 10228090.05 | 10228090.27 | 0.0291 | 0.0149 |
| Jupiter | 23291-07-02 21:07 G | 10228106.18 | 10228106.38 | 10228106.58 | 0.0518 | 0.0277 |
| Jupiter | 23292-08-07 06:57 G | 10228507.63 | 10228507.79 | 10228507.97 | 0.0533 | 0.0348 |
| Jupiter | 23296-12-31 07:26 G | 10230114.61 | 10230114.81 | 10230115.03 | 0.0510 | 0.0231 |
| Jupiter | 23298-02-01 18:57 G | 10230512.09 | 10230512.29 | 10230512.49 | 0.0496 | 0.0249 |
| Neptune | 23298-08-20 18:14 G | 10230712.22 | 10230712.26 | 10230712.36 | 0.0089 | 0.0087 |
| Uranus | 23298-11-17 11:45 G | 10230800.93 | 10230800.99 | 10230801.09 | 0.0142 | 0.0134 |
| Uranus | 23299-11-22 05:16 G | 10231170.52 | 10231170.72 | 10231170.95 | 0.0142 | 0.0069 |
| Neptune | 23300-08-25 17:31 G | 10231447.15 | 10231447.23 | 10231447.37 | 0.0090 | 0.0082 |
| Uranus | 23300-11-27 06:14 G | 10231540.50 | 10231540.76 | 10231541.03 | 0.0143 | 0.0006 |
| Neptune | 23301-08-28 10:19 G | 10231814.89 | 10231814.93 | 10231815.01 | 0.0090 | 0.0087 |
| Uranus | 23301-12-01 22:48 G | 10231910.26 | 10231910.45 | 10231910.67 | 0.0143 | 0.0079 |
| Neptune | 23302-08-30 18:00 G | 10232182.13 | 10232182.25 | 10232182.42 | 0.0090 | 0.0075 |
| Uranus | 23302-12-07 01:55 G | 10232280.51 | 10232280.58 | 10232280.68 | 0.0144 | 0.0136 |
| Jupiter | 23303-07-09 01:12 G | 10232494.33 | 10232494.55 | 10232494.77 | 0.0520 | 0.0148 |
| Neptune | 23303-09-02 14:09 G | 10232549.99 | 10232550.09 | 10232550.22 | 0.0090 | 0.0080 |
| Jupiter | 23304-08-13 08:52 G | 10232895.74 | 10232895.87 | 10232896.00 | 0.0535 | 0.0446 |
| Neptune | 23304-09-03 19:55 G | 10232917.19 | 10232917.33 | 10232917.53 | 0.0090 | 0.0068 |
| Neptune | 23305-09-06 15:50 G | 10233285.04 | 10233285.16 | 10233285.34 | 0.0090 | 0.0074 |
| Saturn | 23305-12-15 06:28 G | 10233384.61 | 10233384.77 | 10233384.93 | 0.0269 | 0.0198 |
| Mars | 23306-04-15 20:38 G | 10233506.20 | 10233506.36 | 10233506.53 | 0.1602 | 0.0622 |
| Neptune | 23306-09-09 00:14 G | 10233652.33 | 10233652.51 | 10233652.70 | 0.0090 | 0.0061 |
| Saturn | 23306-12-27 11:31 G | 10233761.80 | 10233761.98 | 10233762.16 | 0.0269 | 0.0180 |
| Neptune | 23307-09-11 17:02 G | 10234020.05 | 10234020.21 | 10234020.41 | 0.0090 | 0.0066 |
| Neptune | 23308-09-13 04:19 G | 10234387.50 | 10234387.68 | 10234387.90 | 0.0090 | 0.0054 |
| Jupiter | 23309-01-06 04:04 G | 10234502.46 | 10234502.67 | 10234502.89 | 0.0508 | 0.0173 |
| Neptune | 23309-09-15 16:19 G | 10234754.99 | 10234755.18 | 10234755.40 | 0.0090 | 0.0058 |
| Jupiter | 23310-02-06 20:52 G | 10234899.21 | 10234899.37 | 10234899.54 | 0.0495 | 0.0353 |

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| Neptune | 23310-09-18 08:24 G | 10235122.64 | 10235122.85 | 10235123.07 | 0.0090 | 0.0045 |
| Neptune | 23311-09-20 16:19 G | 10235489.97 | 10235490.18 | 10235490.40 | 0.0090 | 0.0050 |
| Neptune | 23312-09-22 11:31 G | 10235857.75 | 10235857.98 | 10235858.22 | 0.0090 | 0.0037 |
| Neptune | 23313-09-24 17:16 G | 10236225.00 | 10236225.22 | 10236225.46 | 0.0089 | 0.0042 |
| Neptune | 23314-09-27 12:57 G | 10236592.81 | 10236593.04 | 10236593.30 | 0.0089 | 0.0029 |
| Jupiter | 23315-07-13 17:45 G | 10236882.00 | 10236882.24 | 10236882.49 | 0.0522 | 0.0075 |
| Neptune | 23315-09-29 20:09 G | 10236960.11 | 10236960.34 | 10236960.58 | 0.0089 | 0.0033 |
| Neptune | 23316-10-01 13:40 G | 10237327.81 | 10237328.07 | 10237328.33 | 0.0089 | 0.0020 |
| Neptune | 23317-10-04 00:14 G | 10237695.28 | 10237695.51 | 10237695.76 | 0.0089 | 0.0024 |
| Neptune | 23318-10-06 12:57 G | 10238062.78 | 10238063.04 | 10238063.31 | 0.0089 | 0.0011 |
| Neptune | 23319-10-09 03:50 G | 10238430.42 | 10238430.66 | 10238430.92 | 0.0089 | 0.0016 |
| Neptune | 23320-10-10 12:00 G | 10238797.74 | 10238798.00 | 10238798.26 | 0.0089 | 0.0002 |
| Jupiter | 23321-01-10 17:02 G | 10238889.98 | 10238890.21 | 10238890.45 | 0.0506 | 0.0129 |
| Saturn | 23321-06-24 20:09 G | 10239055.13 | 10239055.34 | 10239055.56 | 0.0291 | 0.0127 |
| Neptune | 23321-10-13 06:43 G | 10239165.53 | 10239165.78 | 10239166.04 | 0.0089 | 0.0006 |
| Jupiter | 23322-02-11 11:16 G | 10239286.88 | 10239286.97 | 10239287.07 | 0.0493 | 0.0440 |
| Neptune | 23322-10-15 12:43 G | 10239532.77 | 10239533.03 | 10239533.28 | 0.0089 | 0.0007 |
| Neptune | 23323-10-18 07:55 G | 10239900.57 | 10239900.83 | 10239901.09 | 0.0089 | 0.0003 |
| Neptune | 23324-10-19 14:24 G | 10240267.85 | 10240268.10 | 10240268.35 | 0.0089 | 0.0015 |
| Neptune | 23325-10-22 07:26 G | 10240635.56 | 10240635.81 | 10240636.09 | 0.0089 | 0.0013 |
| Neptune | 23326-10-24 17:16 G | 10241002.99 | 10241003.22 | 10241003.47 | 0.0089 | 0.0024 |
| Jupiter | 23327-07-18 16:04 G | 10241269.94 | 10241270.17 | 10241270.40 | 0.0525 | 0.0028 |
| Neptune | 23327-10-27 05:45 G | 10241370.49 | 10241370.74 | 10241371.01 | 0.0089 | 0.0022 |
| Neptune | 23328-10-28 19:55 G | 10241738.11 | 10241738.33 | 10241738.57 | 0.0089 | 0.0032 |
| Neptune | 23329-10-31 03:50 G | 10242105.42 | 10242105.66 | 10242105.92 | 0.0089 | 0.0029 |
| Neptune | 23330-11-02 22:19 G | 10242473.21 | 10242473.43 | 10242473.66 | 0.0089 | 0.0040 |
| Neptune | 23331-11-05 03:36 G | 10242840.43 | 10242840.65 | 10242840.90 | 0.0089 | 0.0038 |
| Neptune | 23332-11-06 22:33 G | 10243208.25 | 10243208.44 | 10243208.68 | 0.0089 | 0.0049 |
| Jupiter | 23333-01-15 06:00 G | 10243277.53 | 10243277.75 | 10243277.98 | 0.0504 | 0.0034 |
| Neptune | 23333-11-09 04:48 G | 10243575.50 | 10243575.70 | 10243575.92 | 0.0089 | 0.0047 |

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| Jupiter | 23334-02-15 15:50 G | 10243674.11 | 10243674.16 | 10243674.24 | 0.0491 | 0.0471 |
| Neptune | 23334-11-11 21:36 G | 10243943.22 | 10243943.40 | 10243943.63 | 0.0089 | 0.0057 |
| Neptune | 23335-11-14 06:43 G | 10244310.61 | 10244310.78 | 10244311.00 | 0.0089 | 0.0055 |
| Saturn | 23335-12-22 03:36 G | 10244348.40 | 10244348.65 | 10244348.90 | 0.0269 | 0.0013 |
| Neptune | 23336-11-15 19:12 G | 10244678.13 | 10244678.30 | 10244678.50 | 0.0089 | 0.0063 |
| Neptune | 23337-11-18 08:52 G | 10245045.70 | 10245045.87 | 10245046.05 | 0.0089 | 0.0062 |
| Jupiter | 23338-06-18 14:38 G | 10245258.02 | 10245258.11 | 10245258.21 | 0.0511 | 0.0461 |
| Neptune | 23338-11-20 16:04 G | 10245413.03 | 10245413.17 | 10245413.34 | 0.0089 | 0.0071 |
| Uranus | 23339-05-22 07:55 G | 10245595.65 | 10245595.83 | 10245596.03 | 0.0136 | 0.0094 |
| Jupiter | 23339-07-24 00:00 G | 10245658.26 | 10245658.50 | 10245658.73 | 0.0527 | 0.0074 |
| Neptune | 23339-11-23 09:21 G | 10245780.76 | 10245780.89 | 10245781.07 | 0.0089 | 0.0070 |
| Uranus | 23340-05-25 17:31 G | 10245964.99 | 10245965.23 | 10245965.47 | 0.0136 | 0.0022 |
| Neptune | 23340-11-24 14:09 G | 10246147.99 | 10246148.09 | 10246148.24 | 0.0089 | 0.0078 |
| Uranus | 23341-05-30 07:12 G | 10246334.55 | 10246334.80 | 10246335.06 | 0.0135 | 0.0026 |
| Neptune | 23341-11-27 09:07 G | 10246515.77 | 10246515.88 | 10246516.03 | 0.0089 | 0.0076 |
| Uranus | 23342-06-03 13:55 G | 10246703.93 | 10246704.08 | 10246704.27 | 0.0135 | 0.0098 |
| Neptune | 23342-11-29 14:38 G | 10246883.04 | 10246883.11 | 10246883.21 | 0.0089 | 0.0083 |
| Neptune | 23343-12-02 06:43 G | 10247250.72 | 10247250.78 | 10247250.91 | 0.0089 | 0.0083 |
| Jupiter | 23343-12-18 14:52 G | 10247267.09 | 10247267.12 | 10247267.15 | 0.0517 | 0.0511 |
| Jupiter | 23345-01-19 22:48 G | 10247665.21 | 10247665.45 | 10247665.69 | 0.0501 | 0.0081 |
| Neptune | 23345-12-06 03:50 G | 10247985.66 | 10247985.66 | 10247985.69 | 0.0089 | 0.0089 |
| Saturn | 23350-06-18 15:50 G | 10249640.92 | 10249641.16 | 10249641.40 | 0.0291 | 0.0097 |
| Jupiter | 23350-06-23 18:00 G | 10249646.12 | 10249646.25 | 10249646.39 | 0.0513 | 0.0411 |
| Jupiter | 23351-07-28 21:07 G | 10250046.17 | 10250046.38 | 10250046.60 | 0.0529 | 0.0211 |
| Jupiter | 23355-12-23 11:16 G | 10251654.87 | 10251654.97 | 10251655.08 | 0.0515 | 0.0457 |
| Jupiter | 23357-01-23 23:16 G | 10252052.25 | 10252052.47 | 10252052.69 | 0.0500 | 0.0147 |
| Jupiter | 23362-06-28 05:31 G | 10254033.57 | 10254033.73 | 10254033.90 | 0.0515 | 0.0370 |
| Jupiter | 23363-08-03 06:00 G | 10254434.56 | 10254434.75 | 10254434.94 | 0.0531 | 0.0288 |
| Saturn | 23364-12-16 15:50 G | 10254935.96 | 10254936.16 | 10254936.36 | 0.0269 | 0.0147 |
| Saturn | 23365-12-28 15:36 G | 10255313.02 | 10255313.15 | 10255313.29 | 0.0269 | 0.0226 |

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| Jupiter | 23367-12-27 19:40 G | 10256042.15 | 10256042.32 | 10256042.50 | 0.0513 | 0.0348 |
| Jupiter | 23369-01-28 16:19 G | 10256439.96 | 10256440.18 | 10256440.39 | 0.0498 | 0.0177 |
| Jupiter | 23374-07-03 04:48 G | 10258421.52 | 10258421.70 | 10258421.90 | 0.0517 | 0.0279 |
| Jupiter | 23375-08-08 01:55 G | 10258822.39 | 10258822.58 | 10258822.77 | 0.0533 | 0.0332 |
| Jupiter | 23380-01-01 19:40 G | 10260430.13 | 10260430.32 | 10260430.53 | 0.0511 | 0.0239 |
| Saturn | 23380-06-26 07:55 G | 10260606.65 | 10260606.83 | 10260607.02 | 0.0291 | 0.0185 |
| Jupiter | 23381-02-01 20:24 G | 10260827.15 | 10260827.35 | 10260827.56 | 0.0497 | 0.0245 |
| Neptune | 23382-02-23 01:55 G | 10261213.57 | 10261213.58 | 10261213.64 | 0.0088 | 0.0087 |
| Uranus | 23382-11-18 20:52 G | 10261482.32 | 10261482.37 | 10261482.45 | 0.0142 | 0.0137 |
| Neptune | 23383-02-25 16:33 G | 10261581.13 | 10261581.19 | 10261581.30 | 0.0088 | 0.0082 |
| Uranus | 23383-11-23 15:50 G | 10261851.94 | 10261852.16 | 10261852.37 | 0.0142 | 0.0067 |
| Neptune | 23384-02-27 20:38 G | 10261948.28 | 10261948.36 | 10261948.48 | 0.0088 | 0.0081 |
| Uranus | 23384-11-27 14:52 G | 10262221.86 | 10262222.12 | 10262222.38 | 0.0143 | 0.0008 |
| Neptune | 23385-03-01 13:55 G | 10262315.97 | 10262316.08 | 10262316.23 | 0.0088 | 0.0075 |
| Uranus | 23385-12-02 08:38 G | 10262591.65 | 10262591.86 | 10262592.08 | 0.0143 | 0.0067 |
| Neptune | 23386-03-03 17:16 G | 10262683.11 | 10262683.22 | 10262683.37 | 0.0088 | 0.0075 |
| Jupiter | 23386-07-07 22:04 G | 10262809.19 | 10262809.42 | 10262809.65 | 0.0520 | 0.0153 |
| Neptune | 23387-03-06 09:07 G | 10263050.74 | 10263050.88 | 10263051.07 | 0.0088 | 0.0069 |
| Jupiter | 23387-08-13 06:57 G | 10263210.67 | 10263210.79 | 10263210.92 | 0.0535 | 0.0439 |
| Neptune | 23388-03-07 15:36 G | 10263418.00 | 10263418.15 | 10263418.31 | 0.0088 | 0.0069 |
| Neptune | 23389-03-10 03:21 G | 10263785.48 | 10263785.64 | 10263785.85 | 0.0088 | 0.0062 |
| Neptune | 23390-03-12 14:24 G | 10264152.95 | 10264153.10 | 10264153.30 | 0.0088 | 0.0062 |
| Neptune | 23391-03-14 22:19 G | 10264520.22 | 10264520.43 | 10264520.64 | 0.0088 | 0.0054 |
| Jupiter | 23392-01-06 09:07 G | 10264817.66 | 10264817.88 | 10264818.11 | 0.0508 | 0.0188 |
| Neptune | 23392-03-16 13:12 G | 10264887.87 | 10264888.05 | 10264888.27 | 0.0088 | 0.0055 |
| Jupiter | 23393-02-06 10:33 G | 10265214.79 | 10265214.94 | 10265215.10 | 0.0495 | 0.0353 |
| Neptune | 23393-03-18 17:02 G | 10265255.02 | 10265255.21 | 10265255.45 | 0.0088 | 0.0048 |
| Neptune | 23394-03-21 10:33 G | 10265622.74 | 10265622.94 | 10265623.17 | 0.0088 | 0.0048 |
| Saturn | 23394-12-23 10:48 G | 10265899.72 | 10265899.95 | 10265900.19 | 0.0269 | 0.0063 |
| Neptune | 23395-03-23 14:38 G | 10265989.89 | 10265990.11 | 10265990.35 | 0.0088 | 0.0039 |

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| Neptune | 23396-03-25 06:28 G | 10266357.54 | 10266357.77 | 10266358.01 | 0.0088 | 0.0039 |
| Neptune | 23397-03-27 13:12 G | 10266724.83 | 10266725.05 | 10266725.30 | 0.0088 | 0.0031 |
| Neptune | 23398-03-30 00:43 G | 10267092.30 | 10267092.53 | 10267092.80 | 0.0088 | 0.0031 |
| Jupiter | 23398-07-12 20:52 G | 10267197.14 | 10267197.37 | 10267197.59 | 0.0522 | 0.0086 |
| Neptune | 23399-04-01 13:12 G | 10267459.82 | 10267460.05 | 10267460.30 | 0.0088 | 0.0023 |
| Neptune | 23400-04-03 19:55 G | 10267827.09 | 10267827.33 | 10267827.60 | 0.0088 | 0.0023 |
| Neptune | 23401-04-06 12:14 G | 10268194.77 | 10268195.01 | 10268195.27 | 0.0088 | 0.0014 |
| Neptune | 23402-04-08 15:50 G | 10268561.92 | 10268562.16 | 10268562.43 | 0.0088 | 0.0014 |
| Neptune | 23403-04-11 09:50 G | 10268929.65 | 10268929.91 | 10268930.17 | 0.0088 | 0.0004 |
| Jupiter | 23404-01-11 23:02 G | 10269205.24 | 10269205.46 | 10269205.67 | 0.0506 | 0.0139 |
| Neptune | 23404-04-12 13:55 G | 10269296.84 | 10269297.08 | 10269297.34 | 0.0088 | 0.0006 |
| Jupiter | 23405-02-11 15:50 G | 10269602.06 | 10269602.16 | 10269602.29 | 0.0493 | 0.0430 |
| Neptune | 23405-04-15 05:31 G | 10269664.47 | 10269664.73 | 10269665.00 | 0.0088 | 0.0004 |
| Neptune | 23406-04-17 13:26 G | 10270031.81 | 10270032.06 | 10270032.31 | 0.0088 | 0.0003 |
| Neptune | 23407-04-20 00:43 G | 10270399.27 | 10270399.53 | 10270399.80 | 0.0088 | 0.0012 |
| Neptune | 23408-04-21 13:55 G | 10270766.84 | 10270767.08 | 10270767.33 | 0.0088 | 0.0012 |
| Neptune | 23409-04-23 20:38 G | 10271134.12 | 10271134.36 | 10271134.63 | 0.0088 | 0.0022 |
| Saturn | 23409-06-20 19:40 G | 10271192.08 | 10271192.32 | 10271192.57 | 0.0290 | 0.0039 |
| Neptune | 23410-04-26 13:40 G | 10271501.83 | 10271502.07 | 10271502.32 | 0.0088 | 0.0020 |
| Jupiter | 23410-07-19 03:21 G | 10271585.40 | 10271585.64 | 10271585.88 | 0.0524 | 0.0036 |
| Neptune | 23411-04-28 17:31 G | 10271869.01 | 10271869.23 | 10271869.49 | 0.0088 | 0.0031 |
| Neptune | 23412-04-30 11:31 G | 10272236.75 | 10272236.98 | 10272237.25 | 0.0088 | 0.0028 |
| Neptune | 23413-05-02 16:19 G | 10272603.97 | 10272604.18 | 10272604.42 | 0.0088 | 0.0039 |
| Neptune | 23414-05-05 08:09 G | 10272971.60 | 10272971.84 | 10272972.09 | 0.0088 | 0.0037 |
| Neptune | 23415-05-07 16:33 G | 10273338.99 | 10273339.19 | 10273339.41 | 0.0088 | 0.0048 |
| Jupiter | 23416-01-16 11:45 G | 10273592.75 | 10273592.99 | 10273593.23 | 0.0504 | 0.0041 |
| Neptune | 23416-05-09 03:21 G | 10273706.43 | 10273706.64 | 10273706.89 | 0.0088 | 0.0045 |
| Jupiter | 23417-02-15 19:55 G | 10273989.26 | 10273989.33 | 10273989.41 | 0.0492 | 0.0460 |
| Neptune | 23417-05-11 17:31 G | 10274074.05 | 10274074.23 | 10274074.44 | 0.0088 | 0.0055 |
| Neptune | 23418-05-14 00:14 G | 10274441.32 | 10274441.51 | 10274441.74 | 0.0088 | 0.0052 |

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| Neptune | 23419-05-16 18:00 G | 10274809.09 | 10274809.25 | 10274809.44 | 0.0088 | 0.0064 |
| Neptune | 23420-05-17 22:19 G | 10275176.27 | 10275176.43 | 10275176.64 | 0.0088 | 0.0061 |
| Neptune | 23421-05-20 17:02 G | 10275544.07 | 10275544.21 | 10275544.37 | 0.0088 | 0.0072 |
| Jupiter | 23421-06-19 04:33 G | 10275573.59 | 10275573.69 | 10275573.79 | 0.0510 | 0.0458 |
| Neptune | 23422-05-22 22:33 G | 10275911.30 | 10275911.44 | 10275911.62 | 0.0088 | 0.0068 |
| Jupiter | 23422-07-23 21:07 G | 10275973.15 | 10275973.38 | 10275973.61 | 0.0526 | 0.0070 |
| Uranus | 23423-05-23 19:12 G | 10276277.09 | 10276277.30 | 10276277.52 | 0.0136 | 0.0081 |
| Neptune | 23423-05-25 14:09 G | 10276278.99 | 10276279.09 | 10276279.24 | 0.0088 | 0.0079 |
| Saturn | 23423-12-19 21:50 G | 10276487.18 | 10276487.41 | 10276487.65 | 0.0269 | 0.0096 |
| Neptune | 23424-05-26 23:16 G | 10276646.36 | 10276646.47 | 10276646.63 | 0.0088 | 0.0075 |
| Uranus | 23424-05-27 05:31 G | 10276646.49 | 10276646.73 | 10276646.97 | 0.0136 | 0.0030 * |
| Neptune | 23425-05-29 11:02 G | 10277013.90 | 10277013.96 | 10277014.05 | 0.0089 | 0.0085 |
| Uranus | 23425-05-31 18:00 G | 10277016.01 | 10277016.25 | 10277016.51 | 0.0135 | 0.0043 |
| Neptune | 23426-06-01 01:40 G | 10277381.48 | 10277381.57 | 10277381.68 | 0.0089 | 0.0081 |
| Uranus | 23426-06-05 02:09 G | 10277385.43 | 10277385.59 | 10277385.79 | 0.0135 | 0.0091 |
| Jupiter | 23428-01-20 16:48 G | 10277979.98 | 10277980.20 | 10277980.43 | 0.0502 | 0.0071 |
| Neptune | 23428-06-05 02:24 G | 10278116.58 | 10278116.60 | 10278116.69 | 0.0089 | 0.0087 |
| Mars | 23432-04-13 07:55 G | 10279524.73 | 10279524.83 | 10279524.93 | 0.1596 | 0.1371 |
| Jupiter | 23433-06-23 10:48 G | 10279960.82 | 10279960.95 | 10279961.09 | 0.0512 | 0.0416 |
| Jupiter | 23434-07-29 00:57 G | 10280361.34 | 10280361.54 | 10280361.76 | 0.0528 | 0.0203 |
| Pluto | 23437-10-31 00:28 G | 10281551.35 | 10281551.52 | 10281551.68 | 0.0064 | 0.0048 |
| Saturn | 23438-06-15 12:28 G | 10281778.89 | 10281779.02 | 10281779.17 | 0.0291 | 0.0236 |
| Pluto | 23438-11-01 15:07 G | 10281917.94 | 10281918.13 | 10281918.38 | 0.0064 | 0.0038 |
| Jupiter | 23438-12-23 06:43 G | 10281969.68 | 10281969.78 | 10281969.88 | 0.0516 | 0.0466 |
| Saturn | 23439-06-29 18:57 G | 10282158.17 | 10282158.29 | 10282158.44 | 0.0291 | 0.0244 |
| Jupiter | 23440-01-25 12:28 G | 10282367.80 | 10282368.02 | 10282368.25 | 0.0501 | 0.0133 |
| Jupiter | 23445-06-28 11:45 G | 10284348.84 | 10284348.99 | 10284349.15 | 0.0515 | 0.0379 |
| Jupiter | 23446-08-02 22:04 G | 10284749.21 | 10284749.42 | 10284749.63 | 0.0530 | 0.0272 |
| Jupiter | 23450-12-28 08:52 G | 10286357.70 | 10286357.87 | 10286358.03 | 0.0513 | 0.0351 |
| Jupiter | 23452-01-29 17:02 G | 10286754.99 | 10286755.21 | 10286755.44 | 0.0498 | 0.0165 |

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| Saturn | 23452-12-13 18:28 G | 10287074.23 | 10287074.27 | 10287074.35 | 0.0269 | 0.0260 |
| Saturn | 23453-12-25 23:45 G | 10287451.28 | 10287451.49 | 10287451.71 | 0.0269 | 0.0116 |
| Jupiter | 23457-07-03 03:07 G | 10288736.43 | 10288736.63 | 10288736.84 | 0.0517 | 0.0278 |
| Jupiter | 23458-08-08 04:48 G | 10289137.52 | 10289137.70 | 10289137.88 | 0.0533 | 0.0323 |
| Jupiter | 23463-01-01 21:50 G | 10290745.20 | 10290745.41 | 10290745.62 | 0.0511 | 0.0245 |
| Jupiter | 23464-02-03 07:40 G | 10291142.62 | 10291142.82 | 10291143.02 | 0.0497 | 0.0242 |
| Neptune | 23464-08-26 03:36 G | 10291347.61 | 10291347.65 | 10291347.72 | 0.0090 | 0.0087 |
| Neptune | 23465-08-28 10:19 G | 10291714.91 | 10291714.93 | 10291714.98 | 0.0090 | 0.0089 |
| Neptune | 23466-08-31 06:43 G | 10292082.68 | 10292082.78 | 10292082.90 | 0.0090 | 0.0081 |
| Uranus | 23466-11-20 06:00 G | 10292163.66 | 10292163.75 | 10292163.89 | 0.0142 | 0.0127 |
| Neptune | 23467-09-02 12:28 G | 10292449.95 | 10292450.02 | 10292450.14 | 0.0090 | 0.0083 |
| Uranus | 23467-11-25 02:24 G | 10292533.39 | 10292533.60 | 10292533.83 | 0.0142 | 0.0064 |
| Saturn | 23468-06-22 08:24 G | 10292743.61 | 10292743.85 | 10292744.09 | 0.0290 | 0.0023 |
| Neptune | 23468-09-04 07:26 G | 10292817.70 | 10292817.81 | 10292817.98 | 0.0090 | 0.0076 |
| Uranus | 23468-11-29 00:28 G | 10292903.26 | 10292903.52 | 10292903.78 | 0.0143 | 0.0003 |
| Jupiter | 23469-07-08 03:07 G | 10293124.42 | 10293124.63 | 10293124.85 | 0.0519 | 0.0157 |
| Neptune | 23469-09-06 16:33 G | 10293185.07 | 10293185.19 | 10293185.34 | 0.0090 | 0.0075 |
| Uranus | 23469-12-03 19:26 G | 10293273.12 | 10293273.31 | 10293273.52 | 0.0143 | 0.0084 |
| Jupiter | 23470-08-13 14:09 G | 10293525.96 | 10293526.09 | 10293526.24 | 0.0534 | 0.0436 |
| Neptune | 23470-09-09 07:26 G | 10293552.66 | 10293552.81 | 10293553.01 | 0.0090 | 0.0068 |
| Uranus | 23470-12-08 20:09 G | 10293643.32 | 10293643.34 | 10293643.40 | 0.0144 | 0.0142 |
| Neptune | 23471-09-11 20:38 G | 10293920.22 | 10293920.36 | 10293920.55 | 0.0090 | 0.0067 |
| Neptune | 23472-09-13 07:40 G | 10294287.64 | 10294287.82 | 10294288.03 | 0.0090 | 0.0060 |
| Neptune | 23473-09-16 01:40 G | 10294655.39 | 10294655.57 | 10294655.77 | 0.0090 | 0.0059 |
| Neptune | 23474-09-18 08:38 G | 10295022.67 | 10295022.86 | 10295023.09 | 0.0090 | 0.0053 |
| Jupiter | 23475-01-06 08:52 G | 10295132.66 | 10295132.87 | 10295133.07 | 0.0509 | 0.0203 |
| Neptune | 23475-09-21 04:33 G | 10295390.49 | 10295390.69 | 10295390.92 | 0.0090 | 0.0050 |
| Jupiter | 23476-02-07 09:36 G | 10295529.73 | 10295529.90 | 10295530.08 | 0.0495 | 0.0343 |
| Neptune | 23476-09-22 10:48 G | 10295757.74 | 10295757.95 | 10295758.18 | 0.0089 | 0.0044 |
| Neptune | 23477-09-25 06:00 G | 10296125.53 | 10296125.75 | 10296126.00 | 0.0089 | 0.0040 |

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| Neptune | 23478-09-27 13:55 G | 10296492.86 | 10296493.08 | 10296493.32 | 0.0089 | 0.0036 |
| Neptune | 23479-09-30 05:45 G | 10296860.49 | 10296860.74 | 10296860.99 | 0.0089 | 0.0031 |
| Neptune | 23480-10-01 17:31 G | 10297228.00 | 10297228.23 | 10297228.47 | 0.0089 | 0.0027 |
| Jupiter | 23481-07-13 05:02 G | 10297512.47 | 10297512.71 | 10297512.94 | 0.0522 | 0.0093 |
| Neptune | 23481-10-04 04:48 G | 10297595.45 | 10297595.70 | 10297595.96 | 0.0089 | 0.0022 |
| Neptune | 23482-10-06 21:50 G | 10297963.17 | 10297963.41 | 10297963.66 | 0.0089 | 0.0018 |
| Saturn | 23482-12-21 00:43 G | 10298038.29 | 10298038.53 | 10298038.79 | 0.0269 | 0.0045 |
| Neptune | 23483-10-09 05:02 G | 10298330.46 | 10298330.71 | 10298330.98 | 0.0089 | 0.0012 |
| Neptune | 23484-10-11 00:43 G | 10298698.28 | 10298698.53 | 10298698.79 | 0.0089 | 0.0009 |
| Neptune | 23485-10-13 06:43 G | 10299065.52 | 10299065.78 | 10299066.04 | 0.0089 | 0.0002 |
| Neptune | 23486-10-16 01:55 G | 10299433.32 | 10299433.58 | 10299433.84 | 0.0089 | 0.0001 |
| Jupiter | 23487-01-11 01:26 G | 10299520.33 | 10299520.56 | 10299520.79 | 0.0507 | 0.0150 |
| Neptune | 23487-10-18 09:07 G | 10299800.63 | 10299800.88 | 10299801.13 | 0.0089 | 0.0007 |
| Jupiter | 23488-02-11 17:16 G | 10299917.11 | 10299917.22 | 10299917.34 | 0.0494 | 0.0420 |
| Neptune | 23488-10-20 00:43 G | 10300168.27 | 10300168.53 | 10300168.80 | 0.0089 | 0.0009 |
| Neptune | 23489-10-22 11:45 G | 10300535.75 | 10300535.99 | 10300536.24 | 0.0089 | 0.0018 |
| Neptune | 23490-10-24 22:48 G | 10300903.20 | 10300903.45 | 10300903.72 | 0.0089 | 0.0018 |
| Neptune | 23491-10-27 14:38 G | 10301270.88 | 10301271.11 | 10301271.36 | 0.0089 | 0.0027 |
| Neptune | 23492-10-28 21:50 G | 10301638.17 | 10301638.41 | 10301638.67 | 0.0089 | 0.0027 |
| Jupiter | 23493-07-17 17:31 G | 10301900.00 | 10301900.23 | 10301900.46 | 0.0523 | 0.0049 |
| Neptune | 23493-10-31 16:48 G | 10302005.98 | 10302006.20 | 10302006.45 | 0.0089 | 0.0036 |
| Neptune | 23494-11-02 22:04 G | 10302373.19 | 10302373.42 | 10302373.66 | 0.0089 | 0.0035 |
| Neptune | 23495-11-05 17:02 G | 10302741.00 | 10302741.21 | 10302741.44 | 0.0089 | 0.0045 |
| Neptune | 23496-11-06 23:45 G | 10303108.29 | 10303108.49 | 10303108.72 | 0.0089 | 0.0044 |
| Saturn | 23497-06-17 00:43 G | 10303330.34 | 10303330.53 | 10303330.74 | 0.0291 | 0.0172 |
| Neptune | 23497-11-09 15:21 G | 10303475.94 | 10303476.14 | 10303476.37 | 0.0089 | 0.0054 |
| Neptune | 23498-11-12 01:40 G | 10303843.39 | 10303843.57 | 10303843.80 | 0.0089 | 0.0052 |
| Jupiter | 23499-01-15 09:36 G | 10303907.68 | 10303907.90 | 10303908.13 | 0.0505 | 0.0051 |
| Neptune | 23499-11-14 12:43 G | 10304210.85 | 10304211.03 | 10304211.23 | 0.0089 | 0.0061 |
| Jupiter | 23500-02-16 05:31 G | 10304304.64 | 10304304.73 | 10304304.84 | 0.0493 | 0.0442 |

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| Neptune | 23500-11-17 04:04 G | 10304578.50 | 10304578.67 | 10304578.87 | 0.0089 | 0.0060 |
| Neptune | 23501-11-19 10:48 G | 10304945.81 | 10304945.95 | 10304946.13 | 0.0089 | 0.0070 |
| Neptune | 23502-11-22 05:16 G | 10305313.56 | 10305313.72 | 10305313.90 | 0.0089 | 0.0067 |
| Neptune | 23503-11-24 10:04 G | 10305680.80 | 10305680.92 | 10305681.05 | 0.0089 | 0.0077 |
| Jupiter | 23504-06-18 19:12 G | 10305888.22 | 10305888.30 | 10305888.40 | 0.0509 | 0.0467 |
| Neptune | 23504-11-26 04:33 G | 10306048.55 | 10306048.69 | 10306048.84 | 0.0089 | 0.0073 |
| Jupiter | 23505-07-23 23:45 G | 10306288.26 | 10306288.49 | 10306288.72 | 0.0526 | 0.0062 |
| Neptune | 23505-11-28 10:48 G | 10306415.88 | 10306415.95 | 10306416.03 | 0.0089 | 0.0084 |
| Neptune | 23506-12-01 01:12 G | 10306783.47 | 10306783.55 | 10306783.70 | 0.0089 | 0.0081 |
| Uranus | 23507-05-25 07:12 G | 10306958.61 | 10306958.80 | 10306959.02 | 0.0136 | 0.0084 |
| Uranus | 23508-05-28 19:26 G | 10307328.06 | 10307328.31 | 10307328.55 | 0.0136 | 0.0014 |
| Neptune | 23508-12-04 21:36 G | 10307518.38 | 10307518.40 | 10307518.48 | 0.0089 | 0.0087 |
| Uranus | 23509-06-02 06:28 G | 10307697.53 | 10307697.77 | 10307698.04 | 0.0136 | 0.0035 |
| Uranus | 23510-06-06 16:04 G | 10308067.03 | 10308067.17 | 10308067.33 | 0.0135 | 0.0108 |
| Jupiter | 23511-01-21 06:00 G | 10308295.52 | 10308295.75 | 10308295.99 | 0.0503 | 0.0065 |
| Mars | 23511-04-17 14:38 G | 10308381.92 | 10308382.11 | 10308382.30 | 0.1598 | 0.0172 |
| Saturn | 23511-12-17 07:55 G | 10308625.68 | 10308625.83 | 10308625.99 | 0.0269 | 0.0206 |
| Jupiter | 23512-02-21 06:28 G | 10308691.74 | 10308691.77 | 10308691.81 | 0.0491 | 0.0484 |
| Saturn | 23512-12-28 10:48 G | 10309002.77 | 10309002.95 | 10309003.15 | 0.0269 | 0.0169 |
| Jupiter | 23516-06-23 19:26 G | 10310276.19 | 10310276.31 | 10310276.44 | 0.0512 | 0.0427 |
| Jupiter | 23517-07-28 19:26 G | 10310676.09 | 10310676.31 | 10310676.54 | 0.0528 | 0.0191 |
| Jupiter | 23521-12-23 18:14 G | 10312285.17 | 10312285.26 | 10312285.35 | 0.0516 | 0.0469 |
| Jupiter | 23523-01-25 11:02 G | 10312682.73 | 10312682.96 | 10312683.19 | 0.0501 | 0.0119 |
| Pluto | 23527-05-03 08:09 G | 10314241.59 | 10314241.84 | 10314242.10 | 0.0080 | 0.0005 |
| Saturn | 23527-06-26 02:52 G | 10314295.39 | 10314295.62 | 10314295.85 | 0.0290 | 0.0086 |
| Jupiter | 23528-06-28 10:33 G | 10314663.78 | 10314663.94 | 10314664.11 | 0.0514 | 0.0383 |
| Jupiter | 23529-08-03 03:50 G | 10315064.46 | 10315064.66 | 10315064.85 | 0.0530 | 0.0262 |
| Jupiter | 23533-12-28 03:21 G | 10316672.48 | 10316672.64 | 10316672.82 | 0.0514 | 0.0355 |
| Jupiter | 23535-01-29 22:33 G | 10317070.23 | 10317070.44 | 10317070.66 | 0.0499 | 0.0155 |
| Jupiter | 23540-07-03 08:09 G | 10319051.65 | 10319051.84 | 10319052.03 | 0.0517 | 0.0278 |

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| Jupiter | 23541-08-08 07:40 G | 10319452.63 | 10319452.82 | 10319453.02 | 0.0532 | 0.0312 |
| Saturn | 23541-12-23 07:40 G | 10319589.58 | 10319589.82 | 10319590.06 | 0.0269 | 0.0009 |
| Jupiter | 23546-01-01 19:26 G | 10321060.12 | 10321060.31 | 10321060.51 | 0.0512 | 0.0258 |
| Jupiter | 23547-02-03 04:33 G | 10321457.48 | 10321457.69 | 10321457.91 | 0.0497 | 0.0232 |
| Neptune | 23547-02-26 17:31 G | 10321481.17 | 10321481.23 | 10321481.33 | 0.0088 | 0.0083 |
| Neptune | 23549-03-02 15:21 G | 10322216.02 | 10322216.14 | 10322216.26 | 0.0088 | 0.0077 |
| Neptune | 23550-03-05 06:14 G | 10322583.70 | 10322583.76 | 10322583.88 | 0.0088 | 0.0083 |
| Uranus | 23550-11-21 18:28 G | 10322845.19 | 10322845.27 | 10322845.39 | 0.0142 | 0.0131 |
| Neptune | 23551-03-07 13:55 G | 10322950.95 | 10322951.08 | 10322951.24 | 0.0088 | 0.0071 |
| Uranus | 23551-11-26 15:50 G | 10323214.95 | 10323215.16 | 10323215.40 | 0.0142 | 0.0058 |
| Neptune | 23552-03-09 00:43 G | 10323318.41 | 10323318.53 | 10323318.68 | 0.0088 | 0.0075 |
| Jupiter | 23552-07-08 02:52 G | 10323439.40 | 10323439.62 | 10323439.86 | 0.0518 | 0.0168 |
| Uranus | 23552-11-30 12:28 G | 10323584.76 | 10323585.02 | 10323585.29 | 0.0143 | 0.0015 |
| Neptune | 23553-03-11 12:57 G | 10323685.87 | 10323686.04 | 10323686.22 | 0.0088 | 0.0063 |
| Jupiter | 23553-08-13 01:40 G | 10323840.43 | 10323840.57 | 10323840.71 | 0.0533 | 0.0421 |
| Uranus | 23553-12-05 08:24 G | 10323954.66 | 10323954.85 | 10323955.08 | 0.0143 | 0.0078 |
| Neptune | 23554-03-13 18:28 G | 10324053.12 | 10324053.27 | 10324053.45 | 0.0088 | 0.0068 |
| Neptune | 23555-03-16 10:33 G | 10324420.77 | 10324420.94 | 10324421.15 | 0.0088 | 0.0056 |
| Neptune | 23556-03-17 14:09 G | 10324787.92 | 10324788.09 | 10324788.29 | 0.0088 | 0.0061 |
| Saturn | 23556-06-19 11:31 G | 10324881.75 | 10324881.98 | 10324882.22 | 0.0291 | 0.0107 |
| Neptune | 23557-03-20 07:12 G | 10325155.60 | 10325155.80 | 10325156.04 | 0.0088 | 0.0048 |
| Jupiter | 23558-01-06 14:24 G | 10325447.88 | 10325448.10 | 10325448.31 | 0.0510 | 0.0216 |
| Neptune | 23558-03-22 12:00 G | 10325522.80 | 10325523.00 | 10325523.20 | 0.0088 | 0.0052 |
| Jupiter | 23559-02-07 14:38 G | 10325844.96 | 10325845.11 | 10325845.28 | 0.0496 | 0.0340 |
| Neptune | 23559-03-25 02:38 G | 10325890.39 | 10325890.61 | 10325890.87 | 0.0088 | 0.0040 |
| Neptune | 23560-03-26 11:16 G | 10326257.76 | 10326257.97 | 10326258.19 | 0.0088 | 0.0044 |
| Neptune | 23561-03-28 21:21 G | 10326625.15 | 10326625.39 | 10326625.65 | 0.0088 | 0.0032 |
| Neptune | 23562-03-31 10:19 G | 10326992.71 | 10326992.93 | 10326993.17 | 0.0088 | 0.0036 |
| Neptune | 23563-04-02 15:50 G | 10327359.92 | 10327360.16 | 10327360.43 | 0.0088 | 0.0023 |
| Neptune | 23564-04-04 08:38 G | 10327727.63 | 10327727.86 | 10327728.12 | 0.0088 | 0.0027 |

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| Jupiter | 23564-07-12 18:28 G | 10327827.04 | 10327827.27 | 10327827.49 | 0.0521 | 0.0109 |
| Neptune | 23565-04-06 12:14 G | 10328094.76 | 10328095.01 | 10328095.27 | 0.0088 | 0.0014 |
| Neptune | 23566-04-09 05:31 G | 10328462.48 | 10328462.73 | 10328462.99 | 0.0088 | 0.0018 |
| Neptune | 23567-04-11 10:33 G | 10328829.69 | 10328829.94 | 10328830.20 | 0.0088 | 0.0006 |
| Neptune | 23568-04-13 01:12 G | 10329197.29 | 10329197.55 | 10329197.82 | 0.0088 | 0.0009 |
| Neptune | 23569-04-15 10:33 G | 10329564.69 | 10329564.94 | 10329565.19 | 0.0088 | 0.0004 |
| Jupiter | 23570-01-11 00:14 G | 10329835.30 | 10329835.51 | 10329835.73 | 0.0508 | 0.0161 |
| Neptune | 23570-04-17 20:09 G | 10329932.07 | 10329932.34 | 10329932.61 | 0.0088 | 0.0001 |
| Saturn | 23570-12-18 19:40 G | 10330177.12 | 10330177.32 | 10330177.53 | 0.0269 | 0.0150 |
| Jupiter | 23571-02-12 02:52 G | 10330232.49 | 10330232.62 | 10330232.76 | 0.0494 | 0.0404 |
| Neptune | 23571-04-20 10:04 G | 10330299.67 | 10330299.92 | 10330300.17 | 0.0088 | 0.0013 |
| Saturn | 23571-12-30 16:48 G | 10330554.05 | 10330554.20 | 10330554.34 | 0.0269 | 0.0219 |
| Neptune | 23572-04-21 15:21 G | 10330666.88 | 10330667.14 | 10330667.41 | 0.0088 | 0.0009 |
| Neptune | 23573-04-24 08:38 G | 10331034.62 | 10331034.86 | 10331035.12 | 0.0088 | 0.0022 |
| Neptune | 23574-04-26 12:43 G | 10331401.79 | 10331402.03 | 10331402.29 | 0.0088 | 0.0018 |
| Neptune | 23575-04-29 06:00 G | 10331769.53 | 10331769.75 | 10331770.02 | 0.0088 | 0.0031 |
| Neptune | 23576-04-30 12:00 G | 10332136.77 | 10332137.00 | 10332137.24 | 0.0088 | 0.0028 |
| Jupiter | 23576-07-17 23:45 G | 10332215.26 | 10332215.49 | 10332215.72 | 0.0523 | 0.0062 |
| Neptune | 23577-05-03 02:38 G | 10332504.38 | 10332504.61 | 10332504.85 | 0.0088 | 0.0039 |
| Neptune | 23578-05-05 12:28 G | 10332871.82 | 10332872.02 | 10332872.27 | 0.0088 | 0.0038 |
| Neptune | 23579-05-07 22:04 G | 10333239.22 | 10333239.42 | 10333239.67 | 0.0088 | 0.0048 |
| Neptune | 23580-05-09 13:12 G | 10333606.84 | 10333607.05 | 10333607.28 | 0.0088 | 0.0045 |
| Neptune | 23581-05-11 18:00 G | 10333974.08 | 10333974.25 | 10333974.48 | 0.0088 | 0.0058 |
| Jupiter | 23582-01-15 21:36 G | 10334223.16 | 10334223.40 | 10334223.63 | 0.0505 | 0.0050 |
| Neptune | 23582-05-14 12:14 G | 10334341.83 | 10334342.01 | 10334342.23 | 0.0088 | 0.0055 |
| Jupiter | 23583-02-16 04:19 G | 10334619.58 | 10334619.68 | 10334619.80 | 0.0493 | 0.0431 |
| Neptune | 23583-05-16 16:33 G | 10334709.04 | 10334709.19 | 10334709.39 | 0.0088 | 0.0065 |
| Neptune | 23584-05-18 10:04 G | 10335076.77 | 10335076.92 | 10335077.14 | 0.0088 | 0.0063 |
| Neptune | 23585-05-20 17:16 G | 10335444.08 | 10335444.22 | 10335444.37 | 0.0088 | 0.0072 |
| Neptune | 23586-05-23 07:55 G | 10335811.68 | 10335811.83 | 10335812.01 | 0.0088 | 0.0070 |

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| Saturn | 23586-06-27 20:38 G | 10335847.16 | 10335847.36 | 10335847.58 | 0.0290 | 0.0154 |
| Neptune | 23587-05-25 19:12 G | 10336179.20 | 10336179.30 | 10336179.41 | 0.0088 | 0.0080 |
| Jupiter | 23587-06-19 06:00 G | 10336203.67 | 10336203.75 | 10336203.84 | 0.0509 | 0.0472 |
| Neptune | 23588-05-27 04:48 G | 10336546.60 | 10336546.70 | 10336546.85 | 0.0088 | 0.0078 |
| Jupiter | 23588-07-22 19:26 G | 10336603.08 | 10336603.31 | 10336603.55 | 0.0525 | 0.0057 |
| Neptune | 23589-05-29 20:38 G | 10336914.33 | 10336914.36 | 10336914.41 | 0.0088 | 0.0087 |
| Mars | 23590-04-19 13:40 G | 10337238.99 | 10337239.07 | 10337239.14 | 0.1600 | 0.1450 |
| Neptune | 23590-06-01 02:38 G | 10337281.54 | 10337281.61 | 10337281.69 | 0.0089 | 0.0084 |
| Uranus | 23591-05-25 19:12 G | 10337640.09 | 10337640.30 | 10337640.54 | 0.0136 | 0.0074 |
| Uranus | 23592-05-29 08:09 G | 10338009.60 | 10338009.84 | 10338010.09 | 0.0136 | 0.0021 |
| Uranus | 23593-06-02 18:14 G | 10338379.03 | 10338379.26 | 10338379.51 | 0.0136 | 0.0053 |
| Jupiter | 23594-01-19 23:31 G | 10338610.24 | 10338610.48 | 10338610.71 | 0.0503 | 0.0056 |
| Uranus | 23594-06-07 05:02 G | 10338748.56 | 10338748.71 | 10338748.89 | 0.0135 | 0.0100 |
| Jupiter | 23595-02-20 15:36 G | 10339007.10 | 10339007.15 | 10339007.21 | 0.0491 | 0.0476 |
| Jupiter | 23599-06-23 17:16 G | 10340591.10 | 10340591.22 | 10340591.35 | 0.0512 | 0.0436 |
| Jupiter | 23600-07-28 01:12 G | 10340991.34 | 10340991.55 | 10340991.76 | 0.0527 | 0.0183 |
| Saturn | 23600-12-24 18:57 G | 10341141.06 | 10341141.29 | 10341141.52 | 0.0269 | 0.0060 |
| Jupiter | 23604-12-22 09:50 G | 10342599.83 | 10342599.91 | 10342600.01 | 0.0517 | 0.0475 |
| Jupiter | 23606-01-24 15:21 G | 10342997.92 | 10342998.14 | 10342998.36 | 0.0501 | 0.0106 |
| Jupiter | 23611-06-28 10:48 G | 10344978.82 | 10344978.95 | 10344979.10 | 0.0513 | 0.0399 |
| Jupiter | 23612-08-01 21:21 G | 10345379.18 | 10345379.39 | 10345379.61 | 0.0529 | 0.0241 |
| Saturn | 23615-06-22 01:40 G | 10346433.33 | 10346433.57 | 10346433.81 | 0.0291 | 0.0037 |
| Jupiter | 23616-12-27 04:48 G | 10346987.55 | 10346987.70 | 10346987.87 | 0.0515 | 0.0362 |
| Jupiter | 23618-01-28 23:31 G | 10347385.25 | 10347385.48 | 10347385.71 | 0.0500 | 0.0143 |
| Jupiter | 23623-07-03 06:14 G | 10349366.56 | 10349366.76 | 10349366.96 | 0.0515 | 0.0289 |
| Jupiter | 23624-08-06 19:40 G | 10349767.14 | 10349767.32 | 10349767.52 | 0.0531 | 0.0293 |
| Mars | 23628-10-19 03:21 G | 10351301.55 | 10351301.64 | 10351301.72 | 0.1940 | 0.1714 |
| Jupiter | 23629-01-01 01:26 G | 10351375.36 | 10351375.56 | 10351375.77 | 0.0513 | 0.0267 |
| Neptune | 23629-08-28 22:04 G | 10351615.38 | 10351615.42 | 10351615.48 | 0.0090 | 0.0088 |
| Saturn | 23629-12-20 02:38 G | 10351728.37 | 10351728.61 | 10351728.85 | 0.0269 | 0.0095 |

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| Jupiter | 23630-02-02 10:33 G | 10351772.75 | 10351772.94 | 10351773.14 | 0.0498 | 0.0229 |
| Neptune | 23631-09-02 21:50 G | 10352350.34 | 10352350.41 | 10352350.56 | 0.0090 | 0.0082 |
| Neptune | 23632-09-04 08:38 G | 10352717.80 | 10352717.86 | 10352717.95 | 0.0090 | 0.0085 |
| Neptune | 23633-09-06 22:19 G | 10353085.30 | 10353085.43 | 10353085.61 | 0.0090 | 0.0074 |
| Neptune | 23634-09-09 13:40 G | 10353452.96 | 10353453.07 | 10353453.21 | 0.0090 | 0.0077 |
| Uranus | 23634-11-22 06:00 G | 10353526.62 | 10353526.75 | 10353526.92 | 0.0142 | 0.0117 |
| Jupiter | 23635-07-07 21:07 G | 10353754.17 | 10353754.38 | 10353754.60 | 0.0518 | 0.0180 |
| Neptune | 23635-09-11 22:19 G | 10353820.28 | 10353820.43 | 10353820.64 | 0.0090 | 0.0066 |
| Uranus | 23635-11-27 05:02 G | 10353896.49 | 10353896.71 | 10353896.94 | 0.0142 | 0.0056 |
| Jupiter | 23636-08-12 06:43 G | 10354155.64 | 10354155.78 | 10354155.93 | 0.0533 | 0.0413 |
| Neptune | 23636-09-13 17:16 G | 10354188.08 | 10354188.22 | 10354188.39 | 0.0090 | 0.0070 |
| Uranus | 23636-12-01 00:43 G | 10354266.27 | 10354266.53 | 10354266.79 | 0.0143 | 0.0014 |
| Neptune | 23637-09-15 23:31 G | 10354555.31 | 10354555.48 | 10354555.71 | 0.0090 | 0.0058 |
| Uranus | 23637-12-05 22:04 G | 10354636.25 | 10354636.42 | 10354636.62 | 0.0143 | 0.0093 |
| Neptune | 23638-09-18 19:40 G | 10354923.16 | 10354923.32 | 10354923.53 | 0.0090 | 0.0062 |
| Neptune | 23639-09-21 02:38 G | 10355290.40 | 10355290.61 | 10355290.83 | 0.0090 | 0.0048 |
| Neptune | 23640-09-22 21:07 G | 10355658.16 | 10355658.38 | 10355658.59 | 0.0090 | 0.0052 |
| Jupiter | 23641-01-05 13:12 G | 10355762.84 | 10355763.05 | 10355763.25 | 0.0510 | 0.0224 |
| Neptune | 23641-09-25 06:14 G | 10356025.55 | 10356025.76 | 10356026.00 | 0.0090 | 0.0039 |
| Jupiter | 23642-02-06 23:02 G | 10356160.29 | 10356160.46 | 10356160.65 | 0.0496 | 0.0336 |
| Neptune | 23642-09-27 20:24 G | 10356393.14 | 10356393.35 | 10356393.61 | 0.0090 | 0.0044 |
| Neptune | 23643-09-30 11:02 G | 10356760.72 | 10356760.96 | 10356761.19 | 0.0089 | 0.0030 |
| Saturn | 23644-06-15 06:43 G | 10357019.66 | 10357019.78 | 10357019.91 | 0.0290 | 0.0251 |
| Neptune | 23644-10-01 20:09 G | 10357128.11 | 10357128.34 | 10357128.60 | 0.0089 | 0.0034 |
| Saturn | 23645-06-29 10:19 G | 10357398.77 | 10357398.93 | 10357399.10 | 0.0290 | 0.0221 |
| Neptune | 23645-10-04 14:24 G | 10357495.85 | 10357496.10 | 10357496.35 | 0.0089 | 0.0020 |
| Neptune | 23646-10-06 20:09 G | 10357863.11 | 10357863.34 | 10357863.61 | 0.0089 | 0.0025 |
| Jupiter | 23647-07-13 03:07 G | 10358142.40 | 10358142.63 | 10358142.86 | 0.0520 | 0.0124 |
| Neptune | 23647-10-09 16:19 G | 10358230.93 | 10358231.18 | 10358231.44 | 0.0089 | 0.0010 |
| Jupiter | 23648-08-17 06:43 G | 10358543.78 | 10358543.78 | 10358543.78 | 0.0535 | 0.0535 |

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| Neptune | 23648-10-10 22:19 G | 10358598.19 | 10358598.43 | 10358598.69 | 0.0089 | 0.0015 |
| Neptune | 23649-10-13 17:02 G | 10358965.94 | 10358966.21 | 10358966.47 | 0.0089 | 0.0001 |
| Neptune | 23650-10-16 01:40 G | 10359333.32 | 10359333.57 | 10359333.82 | 0.0089 | 0.0005 |
| Neptune | 23651-10-18 16:19 G | 10359700.92 | 10359701.18 | 10359701.45 | 0.0089 | 0.0010 |
| Neptune | 23652-10-20 06:00 G | 10360068.50 | 10360068.75 | 10360069.00 | 0.0089 | 0.0005 |
| Jupiter | 23653-01-10 08:09 G | 10360150.62 | 10360150.84 | 10360151.06 | 0.0508 | 0.0168 |
| Neptune | 23653-10-22 15:50 G | 10360435.90 | 10360436.16 | 10360436.42 | 0.0089 | 0.0018 |
| Jupiter | 23654-02-10 22:19 G | 10360547.30 | 10360547.43 | 10360547.58 | 0.0494 | 0.0396 |
| Neptune | 23654-10-25 08:52 G | 10360803.62 | 10360803.87 | 10360804.12 | 0.0089 | 0.0014 |
| Neptune | 23655-10-27 14:52 G | 10361170.88 | 10361171.12 | 10361171.37 | 0.0089 | 0.0028 |
| Neptune | 23656-10-29 10:19 G | 10361538.69 | 10361538.93 | 10361539.18 | 0.0089 | 0.0024 |
| Neptune | 23657-10-31 15:21 G | 10361905.93 | 10361906.14 | 10361906.39 | 0.0089 | 0.0038 |
| Neptune | 23658-11-03 09:36 G | 10362273.67 | 10362273.90 | 10362274.16 | 0.0089 | 0.0034 |
| Saturn | 23658-12-15 00:00 G | 10362315.46 | 10362315.50 | 10362315.57 | 0.0270 | 0.0262 |
| Jupiter | 23659-07-17 19:12 G | 10362530.07 | 10362530.30 | 10362530.54 | 0.0523 | 0.0072 |
| Neptune | 23659-11-05 17:31 G | 10362641.03 | 10362641.23 | 10362641.45 | 0.0089 | 0.0046 |
| Saturn | 23659-12-27 06:14 G | 10362692.54 | 10362692.76 | 10362692.98 | 0.0269 | 0.0114 |
| Neptune | 23660-11-07 07:40 G | 10363008.61 | 10363008.82 | 10363009.08 | 0.0089 | 0.0044 |
| Neptune | 23661-11-09 20:38 G | 10363376.18 | 10363376.36 | 10363376.57 | 0.0089 | 0.0056 |
| Neptune | 23662-11-12 06:14 G | 10363743.56 | 10363743.76 | 10363743.99 | 0.0089 | 0.0052 |
| Neptune | 23663-11-14 23:02 G | 10364111.30 | 10364111.46 | 10364111.65 | 0.0089 | 0.0064 |
| Neptune | 23664-11-16 05:02 G | 10364478.53 | 10364478.71 | 10364478.91 | 0.0089 | 0.0060 |
| Jupiter | 23665-01-14 13:26 G | 10364537.83 | 10364538.06 | 10364538.30 | 0.0506 | 0.0057 |
| Neptune | 23665-11-18 23:31 G | 10364846.36 | 10364846.48 | 10364846.66 | 0.0089 | 0.0072 |
| Jupiter | 23666-02-15 13:12 G | 10364934.93 | 10364935.05 | 10364935.17 | 0.0493 | 0.0419 |
| Neptune | 23666-11-21 04:48 G | 10365213.55 | 10365213.70 | 10365213.87 | 0.0089 | 0.0068 |
| Neptune | 23667-11-23 22:33 G | 10365581.33 | 10365581.44 | 10365581.57 | 0.0089 | 0.0079 |
| Neptune | 23668-11-25 05:31 G | 10365948.62 | 10365948.73 | 10365948.87 | 0.0089 | 0.0077 |
| Neptune | 23669-11-27 19:26 G | 10366316.28 | 10366316.31 | 10366316.39 | 0.0089 | 0.0087 |
| Jupiter | 23670-06-17 23:16 G | 10366518.41 | 10366518.47 | 10366518.55 | 0.0508 | 0.0485 |

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| Neptune | 23670-11-30 07:12 G | 10366683.75 | 10366683.80 | 10366683.90 | 0.0089 | 0.0084 |
| Jupiter | 23671-07-22 20:24 G | 10366918.12 | 10366918.35 | 10366918.57 | 0.0524 | 0.0040 |
| Uranus | 23674-05-21 23:31 G | 10367952.45 | 10367952.48 | 10367952.55 | 0.0137 | 0.0134 |
| Saturn | 23674-06-23 19:12 G | 10367985.07 | 10367985.30 | 10367985.54 | 0.0291 | 0.0030 |
| Uranus | 23675-05-26 09:07 G | 10368321.66 | 10368321.88 | 10368322.11 | 0.0136 | 0.0074 |
| Uranus | 23676-05-29 23:16 G | 10368691.23 | 10368691.47 | 10368691.72 | 0.0136 | 0.0005 |
| Jupiter | 23677-01-19 07:40 G | 10368925.60 | 10368925.82 | 10368926.05 | 0.0504 | 0.0045 |
| Uranus | 23677-06-03 08:09 G | 10369060.60 | 10369060.84 | 10369061.10 | 0.0136 | 0.0045 |
| Jupiter | 23678-02-19 13:40 G | 10369322.00 | 10369322.07 | 10369322.14 | 0.0492 | 0.0467 |
| Uranus | 23678-06-07 19:55 G | 10369430.24 | 10369430.33 | 10369430.47 | 0.0135 | 0.0119 |
| Jupiter | 23682-06-22 18:43 G | 10370906.19 | 10370906.28 | 10370906.39 | 0.0510 | 0.0457 |
| Jupiter | 23683-07-27 17:02 G | 10371305.98 | 10371306.21 | 10371306.45 | 0.0526 | 0.0162 |
| Pluto | 23686-11-03 16:33 G | 10372500.94 | 10372501.19 | 10372501.44 | 0.0064 | 0.0001 |
| Jupiter | 23687-12-22 13:55 G | 10372915.00 | 10372915.08 | 10372915.16 | 0.0518 | 0.0484 |
| Saturn | 23688-12-21 06:28 G | 10373279.53 | 10373279.77 | 10373280.02 | 0.0269 | 0.0040 |
| Jupiter | 23689-01-23 17:31 G | 10373312.99 | 10373313.23 | 10373313.47 | 0.0502 | 0.0093 |
| Jupiter | 23694-06-27 11:16 G | 10375293.82 | 10375293.97 | 10375294.12 | 0.0513 | 0.0405 |
| Jupiter | 23695-08-01 16:48 G | 10375694.00 | 10375694.20 | 10375694.41 | 0.0529 | 0.0224 |
| Jupiter | 23699-12-27 11:16 G | 10377302.81 | 10377302.97 | 10377303.15 | 0.0515 | 0.0359 |
| Jupiter | 23701-01-29 05:31 G | 10377700.52 | 10377700.73 | 10377700.95 | 0.0500 | 0.0137 |
| Saturn | 23703-06-18 18:57 G | 10378571.10 | 10378571.29 | 10378571.49 | 0.0290 | 0.0184 |
| Saturn | 23704-07-01 21:50 G | 10378950.38 | 10378950.41 | 10378950.44 | 0.0290 | 0.0288 |
| Jupiter | 23706-07-03 04:19 G | 10379681.50 | 10379681.68 | 10379681.87 | 0.0515 | 0.0297 |
| Jupiter | 23707-08-08 03:50 G | 10380082.46 | 10380082.66 | 10380082.86 | 0.0531 | 0.0280 |
| Jupiter | 23712-01-01 22:19 G | 10381690.24 | 10381690.43 | 10381690.62 | 0.0513 | 0.0276 |
| Jupiter | 23713-02-02 16:19 G | 10382087.97 | 10382088.18 | 10382088.39 | 0.0498 | 0.0226 |
| Neptune | 23713-03-03 02:09 G | 10382116.56 | 10382116.59 | 10382116.67 | 0.0088 | 0.0086 |
| Neptune | 23714-03-05 10:19 G | 10382483.88 | 10382483.93 | 10382484.04 | 0.0088 | 0.0083 |
| Neptune | 23715-03-07 20:09 G | 10382851.23 | 10382851.34 | 10382851.47 | 0.0088 | 0.0078 |
| Neptune | 23716-03-09 09:36 G | 10383218.80 | 10383218.90 | 10383219.05 | 0.0088 | 0.0076 |

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| Mars | 23716-04-16 11:16 G | 10383256.80 | 10383256.97 | 10383257.13 | 0.1594 | 0.0685 |
| Neptune | 23717-03-11 14:38 G | 10383585.99 | 10383586.11 | 10383586.28 | 0.0088 | 0.0072 |
| Saturn | 23717-12-17 11:31 G | 10383866.83 | 10383866.98 | 10383867.14 | 0.0269 | 0.0206 |
| Neptune | 23718-03-14 07:55 G | 10383953.68 | 10383953.83 | 10383954.00 | 0.0088 | 0.0068 |
| Jupiter | 23718-07-08 07:12 G | 10384069.58 | 10384069.80 | 10384070.02 | 0.0518 | 0.0187 |
| Uranus | 23718-11-23 18:57 G | 10384208.17 | 10384208.29 | 10384208.43 | 0.0142 | 0.0123 |
| Saturn | 23718-12-29 12:00 G | 10384243.81 | 10384244.00 | 10384244.20 | 0.0269 | 0.0164 |
| Neptune | 23719-03-16 11:16 G | 10384320.80 | 10384320.97 | 10384321.15 | 0.0088 | 0.0064 |
| Jupiter | 23719-08-13 00:43 G | 10384470.38 | 10384470.53 | 10384470.69 | 0.0533 | 0.0401 |
| Uranus | 23719-11-28 18:28 G | 10384578.05 | 10384578.27 | 10384578.51 | 0.0142 | 0.0047 |
| Neptune | 23720-03-18 04:04 G | 10384688.49 | 10384688.67 | 10384688.87 | 0.0088 | 0.0059 |
| Uranus | 23720-12-02 12:57 G | 10384947.79 | 10384948.04 | 10384948.30 | 0.0143 | 0.0023 |
| Neptune | 23721-03-20 08:52 G | 10385055.70 | 10385055.87 | 10385056.08 | 0.0088 | 0.0056 |
| Uranus | 23721-12-07 11:45 G | 10385317.81 | 10385317.99 | 10385318.19 | 0.0143 | 0.0087 |
| Neptune | 23722-03-22 22:19 G | 10385423.23 | 10385423.43 | 10385423.66 | 0.0088 | 0.0051 |
| Neptune | 23723-03-25 07:40 G | 10385790.62 | 10385790.82 | 10385791.03 | 0.0088 | 0.0048 |
| Jupiter | 23724-01-06 19:55 G | 10386078.13 | 10386078.33 | 10386078.55 | 0.0511 | 0.0238 |
| Neptune | 23724-03-26 16:04 G | 10386157.95 | 10386158.17 | 10386158.41 | 0.0088 | 0.0043 |
| Jupiter | 23725-02-06 18:57 G | 10386475.12 | 10386475.29 | 10386475.46 | 0.0497 | 0.0331 |
| Neptune | 23725-03-29 06:43 G | 10386525.56 | 10386525.78 | 10386526.01 | 0.0088 | 0.0039 |
| Neptune | 23726-03-31 11:16 G | 10386892.75 | 10386892.97 | 10386893.23 | 0.0088 | 0.0034 |
| Neptune | 23727-04-03 05:02 G | 10387260.48 | 10387260.71 | 10387260.96 | 0.0088 | 0.0030 |
| Neptune | 23728-04-04 08:52 G | 10387627.62 | 10387627.87 | 10387628.11 | 0.0088 | 0.0024 |
| Neptune | 23729-04-07 01:40 G | 10387995.32 | 10387995.57 | 10387995.83 | 0.0088 | 0.0022 |
| Neptune | 23730-04-09 07:26 G | 10388362.57 | 10388362.81 | 10388363.07 | 0.0088 | 0.0016 |
| Jupiter | 23730-07-12 18:14 G | 10388457.04 | 10388457.26 | 10388457.49 | 0.0519 | 0.0144 |
| Neptune | 23731-04-11 20:38 G | 10388730.09 | 10388730.36 | 10388730.62 | 0.0088 | 0.0012 |
| Jupiter | 23731-08-18 07:12 G | 10388858.75 | 10388858.80 | 10388858.87 | 0.0534 | 0.0515 |
| Neptune | 23732-04-13 06:43 G | 10389097.53 | 10389097.78 | 10389098.03 | 0.0088 | 0.0005 |
| Neptune | 23733-04-15 14:38 G | 10389464.85 | 10389465.11 | 10389465.38 | 0.0088 | 0.0002 |

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| Saturn | 23733-06-26 12:14 G | 10389536.78 | 10389537.01 | 10389537.23 | 0.0291 | 0.0096 |
| Neptune | 23734-04-18 06:00 G | 10389832.50 | 10389832.75 | 10389833.00 | 0.0088 | 0.0004 |
| Neptune | 23735-04-20 10:48 G | 10390199.69 | 10390199.95 | 10390200.21 | 0.0088 | 0.0006 |
| Jupiter | 23736-01-11 02:38 G | 10390465.39 | 10390465.61 | 10390465.83 | 0.0509 | 0.0179 |
| Neptune | 23736-04-22 04:04 G | 10390567.43 | 10390567.67 | 10390567.94 | 0.0088 | 0.0014 |
| Jupiter | 23737-02-11 11:45 G | 10390862.84 | 10390862.99 | 10390863.14 | 0.0495 | 0.0384 |
| Neptune | 23737-04-24 08:24 G | 10390934.60 | 10390934.85 | 10390935.10 | 0.0088 | 0.0015 |
| Neptune | 23738-04-27 01:12 G | 10391302.30 | 10391302.55 | 10391302.81 | 0.0088 | 0.0024 |
| Neptune | 23739-04-29 07:55 G | 10391669.60 | 10391669.83 | 10391670.08 | 0.0088 | 0.0026 |
| Neptune | 23740-04-30 20:38 G | 10392037.13 | 10392037.36 | 10392037.62 | 0.0088 | 0.0033 |
| Neptune | 23741-05-03 07:40 G | 10392404.61 | 10392404.82 | 10392405.07 | 0.0088 | 0.0035 |
| Neptune | 23742-05-05 16:04 G | 10392771.94 | 10392772.17 | 10392772.41 | 0.0088 | 0.0042 |
| Jupiter | 23742-07-17 21:36 G | 10392845.17 | 10392845.40 | 10392845.62 | 0.0521 | 0.0090 |
| Neptune | 23743-05-08 07:55 G | 10393139.63 | 10393139.83 | 10393140.07 | 0.0088 | 0.0043 |
| Neptune | 23744-05-09 12:57 G | 10393506.83 | 10393507.04 | 10393507.25 | 0.0088 | 0.0052 |
| Neptune | 23745-05-12 06:43 G | 10393874.59 | 10393874.78 | 10393875.01 | 0.0088 | 0.0052 |
| Neptune | 23746-05-14 11:31 G | 10394241.81 | 10394241.98 | 10394242.17 | 0.0088 | 0.0061 |
| Neptune | 23747-05-17 04:19 G | 10394609.50 | 10394609.68 | 10394609.89 | 0.0088 | 0.0060 |
| Saturn | 23747-12-24 13:55 G | 10394830.84 | 10394831.08 | 10394831.32 | 0.0269 | 0.0012 |
| Jupiter | 23748-01-15 23:45 G | 10394853.27 | 10394853.49 | 10394853.72 | 0.0507 | 0.0061 |
| Neptune | 23748-05-18 12:00 G | 10394976.85 | 10394977.00 | 10394977.16 | 0.0088 | 0.0069 |
| Jupiter | 23749-02-15 12:28 G | 10395249.90 | 10395250.02 | 10395250.16 | 0.0494 | 0.0411 |
| Neptune | 23749-05-21 00:14 G | 10395344.37 | 10395344.51 | 10395344.71 | 0.0088 | 0.0069 |
| Neptune | 23750-05-23 12:43 G | 10395711.92 | 10395712.03 | 10395712.16 | 0.0088 | 0.0078 |
| Neptune | 23751-05-25 20:24 G | 10396079.25 | 10396079.35 | 10396079.51 | 0.0088 | 0.0077 |
| Neptune | 23752-05-27 13:12 G | 10396447.01 | 10396447.05 | 10396447.14 | 0.0088 | 0.0086 |
| Neptune | 23753-05-29 18:57 G | 10396814.21 | 10396814.29 | 10396814.39 | 0.0088 | 0.0083 |
| Jupiter | 23753-06-18 04:19 G | 10396833.65 | 10396833.68 | 10396833.74 | 0.0508 | 0.0496 |
| Jupiter | 23754-07-22 16:04 G | 10397232.93 | 10397233.17 | 10397233.41 | 0.0524 | 0.0028 |
| Uranus | 23758-05-23 14:09 G | 10398634.02 | 10398634.09 | 10398634.20 | 0.0137 | 0.0127 |

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| Uranus | 23759-05-27 22:19 G | 10399003.21 | 10399003.43 | 10399003.67 | 0.0136 | 0.0064 |
| Jupiter | 23760-01-20 10:48 G | 10399240.71 | 10399240.95 | 10399241.19 | 0.0505 | 0.0038 |
| Uranus | 23760-05-31 13:26 G | 10399372.81 | 10399373.06 | 10399373.31 | 0.0136 | 0.0010 |
| Jupiter | 23761-02-20 02:52 G | 10399637.56 | 10399637.62 | 10399637.69 | 0.0492 | 0.0467 |
| Uranus | 23761-06-04 21:21 G | 10399742.16 | 10399742.39 | 10399742.63 | 0.0135 | 0.0063 |
| Uranus | 23762-06-09 10:19 G | 10400111.81 | 10400111.93 | 10400112.09 | 0.0135 | 0.0110 |
| Saturn | 23762-06-20 03:50 G | 10400122.43 | 10400122.66 | 10400122.89 | 0.0291 | 0.0120 |
| Jupiter | 23765-06-22 21:36 G | 10401221.30 | 10401221.40 | 10401221.50 | 0.0510 | 0.0463 |
| Jupiter | 23766-07-27 18:28 G | 10401621.06 | 10401621.27 | 10401621.49 | 0.0526 | 0.0152 |
| Jupiter | 23770-12-22 18:43 G | 10403230.20 | 10403230.28 | 10403230.37 | 0.0518 | 0.0485 |
| Jupiter | 23772-01-24 22:19 G | 10403628.20 | 10403628.43 | 10403628.65 | 0.0502 | 0.0082 |
| Pluto | 23775-05-05 04:19 G | 10404824.55 | 10404824.68 | 10404824.86 | 0.0080 | 0.0065 |
| Saturn | 23776-12-18 16:04 G | 10405417.98 | 10405418.17 | 10405418.39 | 0.0269 | 0.0156 |
| Jupiter | 23777-06-27 12:57 G | 10405608.92 | 10405609.04 | 10405609.18 | 0.0512 | 0.0414 |
| Saturn | 23777-12-30 12:00 G | 10405794.86 | 10405795.00 | 10405795.17 | 0.0269 | 0.0211 |
| Jupiter | 23778-08-02 02:09 G | 10406009.37 | 10406009.59 | 10406009.81 | 0.0528 | 0.0203 |
| Jupiter | 23782-12-27 08:24 G | 10407617.70 | 10407617.85 | 10407618.01 | 0.0516 | 0.0369 |
| Jupiter | 23784-01-29 11:31 G | 10408015.75 | 10408015.98 | 10408016.21 | 0.0500 | 0.0127 |
| Jupiter | 23789-07-02 11:45 G | 10409996.80 | 10409996.99 | 10409997.18 | 0.0514 | 0.0303 |
| Jupiter | 23790-08-06 17:31 G | 10410397.02 | 10410397.23 | 10410397.43 | 0.0530 | 0.0259 |
| Saturn | 23792-06-27 22:48 G | 10411088.24 | 10411088.45 | 10411088.67 | 0.0291 | 0.0156 |
| Jupiter | 23795-01-01 05:45 G | 10412005.55 | 10412005.74 | 10412005.94 | 0.0514 | 0.0290 |
| Mars | 23795-04-19 12:14 G | 10412113.82 | 10412114.01 | 10412114.20 | 0.1596 | 0.0366 |
| Neptune | 23795-09-03 00:00 G | 10412250.47 | 10412250.50 | 10412250.60 | 0.0090 | 0.0087 |
| Jupiter | 23796-02-02 15:36 G | 10412402.95 | 10412403.15 | 10412403.36 | 0.0499 | 0.0222 |
| Neptune | 23796-09-04 12:28 G | 10412618.00 | 10412618.02 | 10412618.05 | 0.0090 | 0.0089 |
| Neptune | 23797-09-07 04:04 G | 10412985.59 | 10412985.67 | 10412985.82 | 0.0090 | 0.0080 |
| Neptune | 23798-09-09 12:00 G | 10413352.92 | 10413353.00 | 10413353.13 | 0.0090 | 0.0082 |
| Neptune | 23799-09-12 08:09 G | 10413720.69 | 10413720.84 | 10413721.00 | 0.0090 | 0.0071 |
| Neptune | 23800-09-14 13:55 G | 10414087.95 | 10414088.08 | 10414088.25 | 0.0090 | 0.0073 |

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| Jupiter | 23801-07-07 23:31 G | 10414384.27 | 10414384.48 | 10414384.70 | 0.0516 | 0.0201 |
| Neptune | 23801-09-17 09:50 G | 10414455.75 | 10414455.91 | 10414456.12 | 0.0090 | 0.0063 |
| Jupiter | 23802-08-13 03:21 G | 10414785.48 | 10414785.64 | 10414785.80 | 0.0532 | 0.0382 |
| Neptune | 23802-09-19 17:31 G | 10414823.07 | 10414823.23 | 10414823.43 | 0.0090 | 0.0064 |
| Uranus | 23802-11-25 04:48 G | 10414889.55 | 10414889.70 | 10414889.89 | 0.0142 | 0.0108 |
| Neptune | 23803-09-22 10:48 G | 10415190.77 | 10415190.95 | 10415191.19 | 0.0090 | 0.0055 |
| Uranus | 23803-11-30 06:14 G | 10415259.53 | 10415259.76 | 10415260.00 | 0.0142 | 0.0049 |
| Neptune | 23804-09-23 22:19 G | 10415558.25 | 10415558.43 | 10415558.65 | 0.0090 | 0.0055 |
| Uranus | 23804-12-03 23:31 G | 10415629.22 | 10415629.48 | 10415629.74 | 0.0143 | 0.0024 |
| Neptune | 23805-09-26 11:16 G | 10415925.74 | 10415925.97 | 10415926.20 | 0.0090 | 0.0045 |
| Uranus | 23805-12-08 23:31 G | 10415999.32 | 10415999.48 | 10415999.67 | 0.0143 | 0.0102 |
| Neptune | 23806-09-29 02:38 G | 10416293.39 | 10416293.61 | 10416293.83 | 0.0090 | 0.0044 |
| Saturn | 23806-12-26 23:16 G | 10416382.24 | 10416382.47 | 10416382.71 | 0.0268 | 0.0061 |
| Jupiter | 23807-01-06 16:19 G | 10416392.98 | 10416393.18 | 10416393.38 | 0.0512 | 0.0253 |
| Neptune | 23807-10-01 10:48 G | 10416660.71 | 10416660.95 | 10416661.19 | 0.0090 | 0.0035 |
| Jupiter | 23808-02-08 09:50 G | 10416790.74 | 10416790.91 | 10416791.09 | 0.0497 | 0.0325 |
| Neptune | 23808-10-03 06:00 G | 10417028.52 | 10417028.75 | 10417028.99 | 0.0090 | 0.0034 |
| Neptune | 23809-10-05 11:45 G | 10417395.75 | 10417395.99 | 10417396.25 | 0.0089 | 0.0026 |
| Neptune | 23810-10-08 07:26 G | 10417763.58 | 10417763.81 | 10417764.08 | 0.0089 | 0.0025 |
| Neptune | 23811-10-10 14:38 G | 10418130.86 | 10418131.11 | 10418131.36 | 0.0089 | 0.0017 |
| Neptune | 23812-10-12 08:24 G | 10418498.58 | 10418498.85 | 10418499.11 | 0.0089 | 0.0013 |
| Jupiter | 23813-07-13 01:26 G | 10418772.35 | 10418772.56 | 10418772.78 | 0.0519 | 0.0159 |
| Neptune | 23813-10-14 18:28 G | 10418866.03 | 10418866.27 | 10418866.52 | 0.0089 | 0.0006 |
| Jupiter | 23814-08-18 01:55 G | 10419173.50 | 10419173.58 | 10419173.67 | 0.0534 | 0.0497 |
| Neptune | 23814-10-17 07:12 G | 10419233.54 | 10419233.80 | 10419234.07 | 0.0089 | 0.0003 |
| Neptune | 23815-10-19 22:04 G | 10419601.17 | 10419601.42 | 10419601.67 | 0.0089 | 0.0003 |
| Neptune | 23816-10-21 06:14 G | 10419968.50 | 10419968.76 | 10419969.03 | 0.0089 | 0.0007 |
| Neptune | 23817-10-24 00:57 G | 10420336.29 | 10420336.54 | 10420336.79 | 0.0089 | 0.0013 |
| Neptune | 23818-10-26 06:28 G | 10420703.53 | 10420703.77 | 10420704.04 | 0.0089 | 0.0019 |
| Jupiter | 23819-01-11 15:36 G | 10420780.95 | 10420781.15 | 10420781.37 | 0.0509 | 0.0182 |

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| Neptune | 23819-10-29 02:09 G | 10421071.35 | 10421071.59 | 10421071.85 | 0.0089 | 0.0023 |
| Jupiter | 23820-02-12 12:00 G | 10421177.86 | 10421178.00 | 10421178.16 | 0.0496 | 0.0377 |
| Neptune | 23820-10-30 08:09 G | 10421438.62 | 10421438.84 | 10421439.10 | 0.0089 | 0.0030 |
| Saturn | 23821-06-22 14:38 G | 10421673.88 | 10421674.11 | 10421674.35 | 0.0291 | 0.0063 |
| Neptune | 23821-11-02 01:40 G | 10421806.34 | 10421806.57 | 10421806.84 | 0.0089 | 0.0033 |
| Neptune | 23822-11-04 11:16 G | 10422173.76 | 10422173.97 | 10422174.21 | 0.0089 | 0.0038 |
| Neptune | 23823-11-07 00:00 G | 10422541.28 | 10422541.50 | 10422541.75 | 0.0089 | 0.0042 |
| Neptune | 23824-11-08 13:55 G | 10422908.88 | 10422909.08 | 10422909.30 | 0.0089 | 0.0049 |
| Jupiter | 23825-07-17 20:24 G | 10423160.12 | 10423160.35 | 10423160.59 | 0.0521 | 0.0097 |
| Neptune | 23825-11-10 21:50 G | 10423276.20 | 10423276.41 | 10423276.63 | 0.0089 | 0.0051 |
| Neptune | 23826-11-13 15:36 G | 10423643.98 | 10423644.15 | 10423644.36 | 0.0089 | 0.0058 |
| Neptune | 23827-11-15 21:21 G | 10424011.21 | 10424011.39 | 10424011.59 | 0.0089 | 0.0059 |
| Neptune | 23828-11-17 16:48 G | 10424379.03 | 10424379.20 | 10424379.37 | 0.0089 | 0.0066 |
| Neptune | 23829-11-19 22:19 G | 10424746.28 | 10424746.43 | 10424746.61 | 0.0089 | 0.0067 |
| Neptune | 23830-11-22 15:07 G | 10425114.03 | 10425114.13 | 10425114.30 | 0.0089 | 0.0076 |
| Jupiter | 23831-01-16 02:09 G | 10425168.35 | 10425168.59 | 10425168.83 | 0.0507 | 0.0065 |
| Neptune | 23831-11-25 00:43 G | 10425481.42 | 10425481.53 | 10425481.67 | 0.0089 | 0.0076 |
| Jupiter | 23832-02-17 01:12 G | 10425565.43 | 10425565.55 | 10425565.69 | 0.0494 | 0.0402 |
| Neptune | 23832-11-26 12:57 G | 10425848.98 | 10425849.04 | 10425849.15 | 0.0089 | 0.0084 |
| Neptune | 23833-11-29 02:38 G | 10426216.53 | 10426216.61 | 10426216.69 | 0.0089 | 0.0083 |
| Saturn | 23835-12-21 15:36 G | 10426968.93 | 10426969.15 | 10426969.39 | 0.0269 | 0.0109 |
| Jupiter | 23836-06-18 10:04 G | 10427148.88 | 10427148.92 | 10427148.97 | 0.0507 | 0.0498 |
| Saturn | 23837-01-01 14:09 G | 10427346.02 | 10427346.09 | 10427346.17 | 0.0269 | 0.0255 |
| Jupiter | 23837-07-22 22:19 G | 10427548.20 | 10427548.43 | 10427548.65 | 0.0524 | 0.0026 |
| Uranus | 23842-05-25 05:02 G | 10429315.62 | 10429315.71 | 10429315.83 | 0.0137 | 0.0124 |
| Jupiter | 23843-01-20 16:04 G | 10429555.95 | 10429556.17 | 10429556.40 | 0.0505 | 0.0028 |
| Uranus | 23843-05-29 12:14 G | 10429684.80 | 10429685.01 | 10429685.26 | 0.0136 | 0.0063 |
| Jupiter | 23844-02-21 05:02 G | 10429952.64 | 10429952.71 | 10429952.80 | 0.0493 | 0.0464 |
| Uranus | 23844-06-02 04:48 G | 10430054.46 | 10430054.70 | 10430054.95 | 0.0136 | 0.0006 |
| Uranus | 23845-06-06 11:45 G | 10430423.76 | 10430423.99 | 10430424.24 | 0.0135 | 0.0056 |

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| Uranus | 23846-06-11 01:55 G | 10430793.52 | 10430793.58 | 10430793.66 | 0.0135 | 0.0129 |
| Jupiter | 23848-06-22 23:45 G | 10431536.42 | 10431536.49 | 10431536.58 | 0.0509 | 0.0477 |
| Jupiter | 23849-07-27 23:45 G | 10431936.26 | 10431936.49 | 10431936.72 | 0.0525 | 0.0135 |
| Saturn | 23850-06-16 20:38 G | 10432260.27 | 10432260.36 | 10432260.47 | 0.0291 | 0.0267 |
| Saturn | 23851-07-01 00:43 G | 10432639.36 | 10432639.53 | 10432639.72 | 0.0291 | 0.0208 |
| Jupiter | 23853-12-22 15:07 G | 10433545.08 | 10433545.13 | 10433545.19 | 0.0519 | 0.0501 |
| Jupiter | 23855-01-25 05:31 G | 10433943.49 | 10433943.73 | 10433943.97 | 0.0503 | 0.0063 |
| Jupiter | 23860-06-27 21:50 G | 10435924.28 | 10435924.41 | 10435924.56 | 0.0511 | 0.0417 |
| Jupiter | 23861-08-01 17:16 G | 10436324.01 | 10436324.22 | 10436324.44 | 0.0527 | 0.0185 |
| Saturn | 23864-12-16 01:40 G | 10437556.53 | 10437556.57 | 10437556.63 | 0.0268 | 0.0263 |
| Jupiter | 23865-12-27 17:02 G | 10437933.05 | 10437933.21 | 10437933.38 | 0.0517 | 0.0377 |
| Saturn | 23865-12-28 04:04 G | 10437933.44 | 10437933.67 | 10437933.90 | 0.0268 | 0.0105 |
| Jupiter | 23867-01-29 12:43 G | 10438330.81 | 10438331.03 | 10438331.26 | 0.0502 | 0.0117 |
| Jupiter | 23872-07-02 07:26 G | 10440311.62 | 10440311.81 | 10440312.00 | 0.0513 | 0.0304 |
| Jupiter | 23873-08-07 02:09 G | 10440712.38 | 10440712.59 | 10440712.79 | 0.0529 | 0.0249 |
| Jupiter | 23878-01-01 06:14 G | 10442320.58 | 10442320.76 | 10442320.95 | 0.0515 | 0.0300 |
| Neptune | 23878-03-05 16:19 G | 10442384.12 | 10442384.18 | 10442384.29 | 0.0088 | 0.0083 |
| Jupiter | 23879-02-03 08:38 G | 10442718.65 | 10442718.86 | 10442719.06 | 0.0499 | 0.0223 |
| Neptune | 23880-03-09 11:02 G | 10443118.85 | 10443118.96 | 10443119.11 | 0.0088 | 0.0076 |
| Saturn | 23880-06-24 02:09 G | 10443225.35 | 10443225.59 | 10443225.83 | 0.0291 | 0.0010 |
| Neptune | 23881-03-12 04:04 G | 10443486.60 | 10443486.67 | 10443486.79 | 0.0088 | 0.0081 |
| Neptune | 23882-03-14 07:40 G | 10443853.68 | 10443853.82 | 10443854.00 | 0.0088 | 0.0068 |
| Neptune | 23883-03-17 00:00 G | 10444221.36 | 10444221.50 | 10444221.65 | 0.0088 | 0.0072 |
| Neptune | 23884-03-18 05:31 G | 10444588.57 | 10444588.73 | 10444588.93 | 0.0088 | 0.0060 |
| Jupiter | 23884-07-07 10:48 G | 10444699.74 | 10444699.95 | 10444700.16 | 0.0516 | 0.0209 |
| Neptune | 23885-03-20 17:45 G | 10444956.08 | 10444956.24 | 10444956.44 | 0.0088 | 0.0064 |
| Jupiter | 23885-08-12 01:12 G | 10445100.39 | 10445100.55 | 10445100.73 | 0.0532 | 0.0374 |
| Neptune | 23886-03-23 04:33 G | 10445323.52 | 10445323.69 | 10445323.92 | 0.0088 | 0.0052 |
| Uranus | 23886-11-25 16:19 G | 10445571.05 | 10445571.18 | 10445571.34 | 0.0142 | 0.0117 |
| Neptune | 23887-03-25 12:28 G | 10445690.82 | 10445691.02 | 10445691.23 | 0.0088 | 0.0055 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 23887-11-30 18:14 G | 10445941.03 | 10445941.26 | 10445941.50 | 0.0142 | 0.0038 |
| Neptune | 23888-03-27 03:21 G | 10446058.43 | 10446058.64 | 10446058.88 | 0.0088 | 0.0042 |
| Uranus | 23888-12-04 10:33 G | 10446310.68 | 10446310.94 | 10446311.19 | 0.0143 | 0.0029 |
| Neptune | 23889-03-29 07:26 G | 10446425.59 | 10446425.81 | 10446426.03 | 0.0088 | 0.0046 |
| Uranus | 23889-12-09 11:31 G | 10446680.81 | 10446680.98 | 10446681.17 | 0.0143 | 0.0096 |
| Jupiter | 23890-01-06 06:14 G | 10446708.57 | 10446708.76 | 10446708.96 | 0.0512 | 0.0267 |
| Neptune | 23890-04-01 00:28 G | 10446793.29 | 10446793.52 | 10446793.77 | 0.0088 | 0.0033 |
| Jupiter | 23891-02-07 10:04 G | 10447105.74 | 10447105.92 | 10447106.10 | 0.0497 | 0.0317 |
| Neptune | 23891-04-03 04:04 G | 10447160.46 | 10447160.67 | 10447160.92 | 0.0088 | 0.0038 |
| Neptune | 23892-04-04 19:55 G | 10447528.09 | 10447528.33 | 10447528.60 | 0.0088 | 0.0024 |
| Neptune | 23893-04-07 02:38 G | 10447895.39 | 10447895.61 | 10447895.86 | 0.0088 | 0.0028 |
| Neptune | 23894-04-09 14:38 G | 10448262.85 | 10448263.11 | 10448263.38 | 0.0088 | 0.0014 |
| Saturn | 23894-12-22 16:48 G | 10448519.96 | 10448520.20 | 10448520.43 | 0.0269 | 0.0064 |
| Neptune | 23895-04-12 02:38 G | 10448630.38 | 10448630.61 | 10448630.87 | 0.0088 | 0.0018 |
| Neptune | 23896-04-13 09:50 G | 10448997.65 | 10448997.91 | 10448998.18 | 0.0088 | 0.0004 |
| Jupiter | 23896-07-12 03:50 G | 10449087.43 | 10449087.66 | 10449087.89 | 0.0519 | 0.0166 |
| Neptune | 23897-04-16 01:40 G | 10449365.33 | 10449365.57 | 10449365.83 | 0.0088 | 0.0009 |
| Jupiter | 23897-08-17 09:36 G | 10449488.82 | 10449488.90 | 10449488.99 | 0.0534 | 0.0489 |
| Neptune | 23898-04-18 05:45 G | 10449732.49 | 10449732.74 | 10449733.00 | 0.0088 | 0.0006 |
| Neptune | 23899-04-20 23:16 G | 10450100.21 | 10450100.47 | 10450100.73 | 0.0088 | 0.0002 |
| Neptune | 23900-04-23 03:21 G | 10450467.40 | 10450467.64 | 10450467.90 | 0.0088 | 0.0016 |
| Neptune | 23901-04-25 18:57 G | 10450835.03 | 10450835.29 | 10450835.56 | 0.0088 | 0.0012 |
| Jupiter | 23902-01-11 18:00 G | 10451096.03 | 10451096.25 | 10451096.48 | 0.0510 | 0.0187 |
| Neptune | 23902-04-28 02:24 G | 10451202.37 | 10451202.60 | 10451202.85 | 0.0088 | 0.0025 |
| Jupiter | 23903-02-13 01:40 G | 10451493.42 | 10451493.57 | 10451493.73 | 0.0496 | 0.0364 |
| Neptune | 23903-04-30 13:55 G | 10451569.82 | 10451570.08 | 10451570.34 | 0.0088 | 0.0021 |
| Neptune | 23904-05-02 02:38 G | 10451937.40 | 10451937.61 | 10451937.86 | 0.0088 | 0.0035 |
| Neptune | 23905-05-04 09:36 G | 10452304.67 | 10452304.90 | 10452305.17 | 0.0088 | 0.0031 |
| Neptune | 23906-05-07 02:38 G | 10452672.41 | 10452672.61 | 10452672.85 | 0.0088 | 0.0045 |
| Neptune | 23907-05-09 06:57 G | 10453039.57 | 10453039.79 | 10453040.03 | 0.0088 | 0.0041 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 23908-05-11 00:43 G | 10453407.35 | 10453407.53 | 10453407.76 | 0.0088 | 0.0054 |
| Jupiter | 23908-07-18 03:07 G | 10453475.41 | 10453475.63 | 10453475.85 | 0.0520 | 0.0106 |
| Neptune | 23909-05-13 06:14 G | 10453774.56 | 10453774.76 | 10453774.97 | 0.0088 | 0.0050 |
| Saturn | 23909-06-18 19:40 G | 10453811.16 | 10453811.32 | 10453811.49 | 0.0291 | 0.0220 |
| Jupiter | 23909-08-23 15:07 G | 10453877.09 | 10453877.13 | 10453877.19 | 0.0535 | 0.0521 |
| Neptune | 23910-05-15 21:36 G | 10454142.22 | 10454142.40 | 10454142.60 | 0.0088 | 0.0062 |
| Saturn | 23910-07-03 02:24 G | 10454190.50 | 10454190.60 | 10454190.73 | 0.0291 | 0.0256 |
| Neptune | 23911-05-18 06:00 G | 10454509.58 | 10454509.75 | 10454509.95 | 0.0088 | 0.0059 |
| Neptune | 23912-05-19 17:16 G | 10454877.07 | 10454877.22 | 10454877.38 | 0.0088 | 0.0072 |
| Mars | 23912-10-21 14:38 G | 10455031.93 | 10455032.11 | 10455032.29 | 0.1944 | 0.0968 |
| Neptune | 23913-05-22 06:43 G | 10455244.65 | 10455244.78 | 10455244.97 | 0.0088 | 0.0069 |
| Jupiter | 23914-01-16 07:26 G | 10455483.59 | 10455483.81 | 10455484.04 | 0.0508 | 0.0074 |
| Neptune | 23914-05-24 13:40 G | 10455611.99 | 10455612.07 | 10455612.21 | 0.0088 | 0.0081 |
| Jupiter | 23915-02-17 06:00 G | 10455880.61 | 10455880.75 | 10455880.91 | 0.0495 | 0.0388 |
| Neptune | 23915-05-27 07:40 G | 10455979.70 | 10455979.82 | 10455979.95 | 0.0088 | 0.0076 |
| Neptune | 23916-05-28 12:00 G | 10456347.00 | 10456347.00 | 10456347.04 | 0.0088 | 0.0088 |
| Neptune | 23917-05-31 06:14 G | 10456714.71 | 10456714.76 | 10456714.87 | 0.0088 | 0.0085 |
| Jupiter | 23919-06-19 15:21 G | 10457464.14 | 10457464.14 | 10457464.16 | 0.0506 | 0.0506 |
| Jupiter | 23920-07-23 03:36 G | 10457863.41 | 10457863.65 | 10457863.89 | 0.0522 | 0.0023 |
| Mars | 23921-04-18 07:55 G | 10458132.72 | 10458132.83 | 10458132.93 | 0.1591 | 0.1333 |
| Saturn | 23923-12-19 06:14 G | 10459107.63 | 10459107.76 | 10459107.92 | 0.0268 | 0.0216 |
| Saturn | 23924-12-30 01:55 G | 10459484.37 | 10459484.58 | 10459484.80 | 0.0268 | 0.0145 |
| Jupiter | 23926-01-21 00:28 G | 10459871.28 | 10459871.52 | 10459871.77 | 0.0506 | 0.0017 |
| Uranus | 23926-05-26 19:26 G | 10459997.19 | 10459997.31 | 10459997.45 | 0.0137 | 0.0115 |
| Jupiter | 23927-02-21 14:52 G | 10460268.06 | 10460268.12 | 10460268.20 | 0.0493 | 0.0464 |
| Uranus | 23927-05-31 01:40 G | 10460366.35 | 10460366.57 | 10460366.82 | 0.0136 | 0.0055 |
| Uranus | 23928-06-03 18:57 G | 10460736.04 | 10460736.29 | 10460736.54 | 0.0136 | 0.0002 |
| Uranus | 23929-06-08 00:57 G | 10461105.33 | 10461105.54 | 10461105.77 | 0.0136 | 0.0074 |
| Uranus | 23930-06-12 16:19 G | 10461475.08 | 10461475.18 | 10461475.30 | 0.0135 | 0.0121 |
| Jupiter | 23931-06-24 09:50 G | 10461851.84 | 10461851.91 | 10461851.99 | 0.0508 | 0.0480 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 23932-07-27 19:40 G | 10462251.10 | 10462251.32 | 10462251.54 | 0.0525 | 0.0127 |
| Pluto | 23934-11-07 12:57 G | 10463083.87 | 10463084.04 | 10463084.26 | 0.0064 | 0.0044 |
| Pluto | 23935-11-09 06:57 G | 10463450.63 | 10463450.79 | 10463451.01 | 0.0064 | 0.0043 |
| Jupiter | 23936-12-23 05:02 G | 10463860.65 | 10463860.71 | 10463860.78 | 0.0520 | 0.0498 |
| Jupiter | 23938-01-25 10:04 G | 10464258.69 | 10464258.92 | 10464259.15 | 0.0504 | 0.0051 |
| Saturn | 23939-06-27 06:43 G | 10464776.54 | 10464776.78 | 10464777.03 | 0.0291 | 0.0041 |
| Jupiter | 23943-06-28 20:52 G | 10466239.24 | 10466239.37 | 10466239.50 | 0.0511 | 0.0418 |
| Jupiter | 23944-08-02 06:00 G | 10466639.53 | 10466639.75 | 10466639.97 | 0.0527 | 0.0175 |
| Jupiter | 23948-12-27 18:57 G | 10468248.14 | 10468248.29 | 10468248.46 | 0.0517 | 0.0381 |
| Jupiter | 23950-01-30 05:45 G | 10468646.51 | 10468646.74 | 10468646.96 | 0.0502 | 0.0111 |
| Saturn | 23953-12-24 21:07 G | 10470071.14 | 10470071.38 | 10470071.61 | 0.0268 | 0.0022 |
| Jupiter | 23955-07-03 23:16 G | 10470627.28 | 10470627.47 | 10470627.65 | 0.0513 | 0.0300 |
| Jupiter | 23956-08-07 03:21 G | 10471027.43 | 10471027.64 | 10471027.86 | 0.0529 | 0.0243 |
| Neptune | 23960-09-05 19:12 G | 10472518.30 | 10472518.30 | 10472518.32 | 0.0090 | 0.0090 |
| Jupiter | 23961-01-01 20:24 G | 10472636.18 | 10472636.35 | 10472636.53 | 0.0515 | 0.0314 |
| Jupiter | 23962-02-03 09:21 G | 10473033.67 | 10473033.89 | 10473034.10 | 0.0500 | 0.0215 |
| Neptune | 23962-09-10 21:50 G | 10473253.32 | 10473253.41 | 10473253.55 | 0.0090 | 0.0081 |
| Neptune | 23963-09-13 03:50 G | 10473620.59 | 10473620.66 | 10473620.80 | 0.0090 | 0.0082 |
| Neptune | 23964-09-14 23:31 G | 10473988.34 | 10473988.48 | 10473988.66 | 0.0090 | 0.0071 |
| Neptune | 23965-09-17 08:09 G | 10474355.70 | 10474355.84 | 10474355.99 | 0.0090 | 0.0073 |
| Neptune | 23966-09-19 23:02 G | 10474723.29 | 10474723.46 | 10474723.67 | 0.0090 | 0.0063 |
| Jupiter | 23967-07-08 13:26 G | 10475014.85 | 10475015.06 | 10475015.29 | 0.0515 | 0.0216 |
| Neptune | 23967-09-22 11:45 G | 10475090.84 | 10475090.99 | 10475091.19 | 0.0090 | 0.0065 |
| Saturn | 23968-06-19 20:09 G | 10475362.15 | 10475362.34 | 10475362.53 | 0.0291 | 0.0175 |
| Jupiter | 23968-08-12 08:38 G | 10475415.71 | 10475415.86 | 10475416.02 | 0.0531 | 0.0371 |
| Neptune | 23968-09-23 23:02 G | 10475458.26 | 10475458.46 | 10475458.69 | 0.0090 | 0.0053 |
| Neptune | 23969-09-26 16:33 G | 10475826.01 | 10475826.19 | 10475826.41 | 0.0090 | 0.0055 |
| Neptune | 23970-09-29 00:00 G | 10476193.29 | 10476193.50 | 10476193.75 | 0.0090 | 0.0043 |
| Uranus | 23970-11-27 03:07 G | 10476252.44 | 10476252.63 | 10476252.81 | 0.0142 | 0.0099 |
| Neptune | 23971-10-01 20:24 G | 10476561.14 | 10476561.35 | 10476561.58 | 0.0090 | 0.0045 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 23971-12-02 05:31 G | 10476622.50 | 10476622.73 | 10476622.98 | 0.0142 | 0.0042 |
| Neptune | 23972-10-03 02:24 G | 10476928.38 | 10476928.60 | 10476928.85 | 0.0090 | 0.0033 |
| Uranus | 23972-12-05 20:52 G | 10476992.12 | 10476992.37 | 10476992.62 | 0.0143 | 0.0033 |
| Jupiter | 23973-01-06 05:31 G | 10477023.53 | 10477023.73 | 10477023.93 | 0.0513 | 0.0278 |
| Neptune | 23973-10-05 21:50 G | 10477296.18 | 10477296.41 | 10477296.67 | 0.0090 | 0.0036 |
| Uranus | 23973-12-10 22:48 G | 10477362.31 | 10477362.45 | 10477362.63 | 0.0143 | 0.0109 |
| Jupiter | 23974-02-08 00:14 G | 10477421.33 | 10477421.51 | 10477421.69 | 0.0499 | 0.0308 |
| Neptune | 23974-10-08 05:45 G | 10477663.50 | 10477663.74 | 10477663.99 | 0.0090 | 0.0022 |
| Neptune | 23975-10-10 21:21 G | 10478031.15 | 10478031.39 | 10478031.66 | 0.0089 | 0.0025 |
| Neptune | 23976-10-12 09:21 G | 10478398.65 | 10478398.89 | 10478399.14 | 0.0089 | 0.0011 |
| Neptune | 23977-10-14 20:38 G | 10478766.10 | 10478766.36 | 10478766.62 | 0.0089 | 0.0014 |
| Neptune | 23978-10-17 13:26 G | 10479133.81 | 10479134.06 | 10479134.31 | 0.0089 | 0.0001 |
| Jupiter | 23979-07-13 12:28 G | 10479402.81 | 10479403.02 | 10479403.24 | 0.0517 | 0.0177 |
| Neptune | 23979-10-19 20:52 G | 10479501.11 | 10479501.37 | 10479501.63 | 0.0089 | 0.0004 |
| Jupiter | 23980-08-17 13:26 G | 10479803.95 | 10479804.06 | 10479804.17 | 0.0532 | 0.0470 |
| Neptune | 23980-10-21 16:19 G | 10479868.93 | 10479869.18 | 10479869.44 | 0.0089 | 0.0011 |
| Neptune | 23981-10-23 22:04 G | 10480236.17 | 10480236.42 | 10480236.68 | 0.0089 | 0.0007 |
| Neptune | 23982-10-26 17:31 G | 10480603.98 | 10480604.23 | 10480604.49 | 0.0089 | 0.0021 |
| Saturn | 23982-12-20 04:19 G | 10480658.48 | 10480658.68 | 10480658.87 | 0.0268 | 0.0173 |
| Neptune | 23983-10-29 00:57 G | 10480971.30 | 10480971.54 | 10480971.79 | 0.0089 | 0.0017 |
| Saturn | 23983-12-31 23:16 G | 10481035.30 | 10481035.47 | 10481035.65 | 0.0268 | 0.0184 |
| Neptune | 23984-10-30 16:48 G | 10481338.96 | 10481339.20 | 10481339.46 | 0.0089 | 0.0031 |
| Jupiter | 23985-01-11 00:28 G | 10481411.31 | 10481411.52 | 10481411.72 | 0.0511 | 0.0194 |
| Neptune | 23985-11-02 03:50 G | 10481706.42 | 10481706.66 | 10481706.90 | 0.0089 | 0.0028 |
| Jupiter | 23986-02-12 07:12 G | 10481808.64 | 10481808.80 | 10481808.98 | 0.0497 | 0.0347 |
| Neptune | 23986-11-04 15:07 G | 10482073.90 | 10482074.13 | 10482074.37 | 0.0089 | 0.0042 |
| Neptune | 23987-11-07 06:43 G | 10482441.57 | 10482441.78 | 10482442.02 | 0.0089 | 0.0039 |
| Neptune | 23988-11-08 13:40 G | 10482808.88 | 10482809.07 | 10482809.31 | 0.0089 | 0.0053 |
| Neptune | 23989-11-11 08:52 G | 10483176.66 | 10483176.87 | 10483177.10 | 0.0089 | 0.0047 |
| Neptune | 23990-11-13 13:55 G | 10483543.91 | 10483544.08 | 10483544.28 | 0.0089 | 0.0062 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 23991-07-18 09:07 G | 10483790.64 | 10483790.88 | 10483791.11 | 0.0519 | 0.0108 |
| Neptune | 23991-11-16 08:52 G | 10483911.69 | 10483911.87 | 10483912.09 | 0.0089 | 0.0057 |
| Jupiter | 23992-08-22 11:16 G | 10484191.91 | 10484191.97 | 10484192.03 | 0.0534 | 0.0514 |
| Neptune | 23992-11-17 15:21 G | 10484279.01 | 10484279.14 | 10484279.31 | 0.0089 | 0.0071 |
| Neptune | 23993-11-20 07:26 G | 10484646.64 | 10484646.81 | 10484646.99 | 0.0089 | 0.0066 |
| Neptune | 23994-11-22 17:45 G | 10485014.13 | 10485014.24 | 10485014.35 | 0.0089 | 0.0079 |
| Neptune | 23995-11-25 04:19 G | 10485381.56 | 10485381.68 | 10485381.85 | 0.0089 | 0.0075 |
| Neptune | 23996-11-26 19:26 G | 10485749.30 | 10485749.31 | 10485749.38 | 0.0089 | 0.0088 |
| Jupiter | 23997-01-15 19:40 G | 10485799.08 | 10485799.32 | 10485799.56 | 0.0509 | 0.0071 |
| Neptune | 23997-11-29 02:24 G | 10486116.54 | 10486116.60 | 10486116.73 | 0.0089 | 0.0083 |
| Jupiter | 23998-02-16 17:31 G | 10486196.09 | 10486196.23 | 10486196.37 | 0.0495 | 0.0383 |
| Saturn | 23998-06-28 04:33 G | 10486327.45 | 10486327.69 | 10486327.94 | 0.0291 | 0.0085 |
| Mars | 24000-04-20 05:16 G | 10486989.54 | 10486989.72 | 10486989.89 | 0.1592 | 0.0173 |

25TH MILLENNIUM CE

This is a list of transits of Moon in the 25th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|-------------|-------------|-------------|--------|--------|-------|---|
| Jupiter | 24003-07-23 03:21 G | 10488178.41 | 10488178.64 | 10488178.87 | 0.0522 | 0.0022 | | |
| Jupiter | 24009-01-20 06:00 G | 10490186.52 | 10490186.75 | 10490186.98 | 0.0506 | 0.0005 | | |
| Jupiter | 24010-02-21 05:02 G | 10490583.63 | 10490583.71 | 10490583.80 | 0.0493 | 0.0460 | | |
| Uranus | 24010-05-27 09:07 G | 10490678.75 | 10490678.88 | 10490679.02 | 0.0137 | 0.0114 | | |
| Uranus | 24011-05-31 15:07 G | 10491047.90 | 10491048.13 | 10491048.38 | 0.0136 | 0.0051 | | |
| Uranus | 24012-06-04 09:21 G | 10491417.65 | 10491417.89 | 10491418.14 | 0.0136 | 0.0016 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 24012-12-26 00:43 G | 10491622.29 | 10491622.53 | 10491622.78 | 0.0268 | 0.0021 |
| Uranus | 24013-06-08 15:07 G | 10491786.91 | 10491787.13 | 10491787.36 | 0.0136 | 0.0067 |
| Jupiter | 24014-06-23 12:57 G | 10492166.98 | 10492167.04 | 10492167.11 | 0.0508 | 0.0488 |
| Jupiter | 24015-07-28 12:43 G | 10492566.80 | 10492567.03 | 10492567.25 | 0.0524 | 0.0121 |
| Jupiter | 24019-12-23 06:43 G | 10494175.72 | 10494175.78 | 10494175.84 | 0.0520 | 0.0498 |
| Jupiter | 24021-01-25 02:52 G | 10494574.39 | 10494574.62 | 10494574.85 | 0.0504 | 0.0039 |
| Pluto | 24024-05-09 00:14 G | 10495774.27 | 10495774.51 | 10495774.78 | 0.0080 | 0.0021 |
| Jupiter | 24026-06-28 14:24 G | 10496554.97 | 10496555.10 | 10496555.24 | 0.0510 | 0.0414 |
| Saturn | 24027-06-21 22:48 G | 10496913.24 | 10496913.45 | 10496913.66 | 0.0291 | 0.0136 |
| Jupiter | 24027-08-02 06:00 G | 10496954.53 | 10496954.75 | 10496954.98 | 0.0526 | 0.0165 |
| Jupiter | 24031-12-28 04:48 G | 10498563.55 | 10498563.70 | 10498563.85 | 0.0518 | 0.0384 |
| Jupiter | 24033-01-29 04:33 G | 10498961.46 | 10498961.69 | 10498961.92 | 0.0503 | 0.0102 |
| Jupiter | 24038-07-03 02:38 G | 10500942.42 | 10500942.61 | 10500942.81 | 0.0512 | 0.0299 |
| Jupiter | 24039-08-07 12:00 G | 10501342.80 | 10501343.00 | 10501343.20 | 0.0528 | 0.0238 |
| Saturn | 24041-12-20 23:45 G | 10502209.28 | 10502209.49 | 10502209.71 | 0.0268 | 0.0132 |
| Saturn | 24043-01-02 00:43 G | 10502586.41 | 10502586.53 | 10502586.67 | 0.0268 | 0.0224 |
| Jupiter | 24044-01-01 18:57 G | 10502951.11 | 10502951.29 | 10502951.48 | 0.0516 | 0.0323 |
| Neptune | 24044-03-09 23:45 G | 10503019.43 | 10503019.49 | 10503019.60 | 0.0088 | 0.0083 |
| Jupiter | 24045-02-02 23:16 G | 10503349.26 | 10503349.47 | 10503349.67 | 0.0501 | 0.0214 |
| Neptune | 24045-03-12 03:50 G | 10503386.59 | 10503386.66 | 10503386.76 | 0.0088 | 0.0082 |
| Neptune | 24046-03-14 19:26 G | 10503754.19 | 10503754.31 | 10503754.46 | 0.0088 | 0.0075 |
| Neptune | 24047-03-17 02:38 G | 10504121.51 | 10504121.61 | 10504121.77 | 0.0088 | 0.0075 |
| Neptune | 24048-03-18 13:40 G | 10504488.91 | 10504489.07 | 10504489.25 | 0.0088 | 0.0067 |
| Neptune | 24049-03-21 01:26 G | 10504856.42 | 10504856.56 | 10504856.75 | 0.0088 | 0.0066 |
| Neptune | 24050-03-23 07:12 G | 10505223.63 | 10505223.80 | 10505224.02 | 0.0088 | 0.0058 |
| Jupiter | 24050-07-07 22:33 G | 10505330.24 | 10505330.44 | 10505330.64 | 0.0514 | 0.0224 |
| Neptune | 24051-03-25 23:31 G | 10505591.30 | 10505591.48 | 10505591.69 | 0.0088 | 0.0056 |
| Jupiter | 24051-08-12 12:28 G | 10505730.86 | 10505731.02 | 10505731.21 | 0.0530 | 0.0369 |
| Neptune | 24052-03-27 02:52 G | 10505958.43 | 10505958.62 | 10505958.85 | 0.0088 | 0.0049 |
| Neptune | 24053-03-29 20:09 G | 10506326.14 | 10506326.34 | 10506326.58 | 0.0088 | 0.0047 |

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| Neptune | 24054-04-01 00:14 G | 10506693.31 | 10506693.51 | 10506693.76 | 0.0088 | 0.0041 |
| Uranus | 24054-11-27 17:02 G | 10506934.06 | 10506934.21 | 10506934.39 | 0.0142 | 0.0108 |
| Neptune | 24055-04-03 15:21 G | 10507060.91 | 10507061.14 | 10507061.40 | 0.0088 | 0.0037 |
| Uranus | 24055-12-02 19:55 G | 10507304.09 | 10507304.33 | 10507304.58 | 0.0142 | 0.0027 |
| Jupiter | 24056-01-06 17:16 G | 10507339.03 | 10507339.22 | 10507339.41 | 0.0514 | 0.0284 |
| Neptune | 24056-04-04 23:45 G | 10507428.26 | 10507428.49 | 10507428.73 | 0.0088 | 0.0030 |
| Uranus | 24056-12-06 09:50 G | 10507673.67 | 10507673.91 | 10507674.17 | 0.0143 | 0.0038 |
| Jupiter | 24057-02-07 08:24 G | 10507736.66 | 10507736.85 | 10507737.05 | 0.0499 | 0.0301 |
| Neptune | 24057-04-07 09:50 G | 10507795.67 | 10507795.91 | 10507796.17 | 0.0088 | 0.0027 |
| Saturn | 24057-06-29 01:40 G | 10507878.35 | 10507878.57 | 10507878.79 | 0.0292 | 0.0128 |
| Uranus | 24057-12-11 12:57 G | 10508043.88 | 10508044.04 | 10508044.21 | 0.0143 | 0.0106 |
| Neptune | 24058-04-09 23:02 G | 10508163.22 | 10508163.46 | 10508163.71 | 0.0088 | 0.0020 |
| Neptune | 24059-04-12 04:04 G | 10508530.43 | 10508530.67 | 10508530.94 | 0.0088 | 0.0018 |
| Neptune | 24060-04-13 21:07 G | 10508898.14 | 10508898.38 | 10508898.64 | 0.0088 | 0.0011 |
| Neptune | 24061-04-16 00:57 G | 10509265.29 | 10509265.54 | 10509265.80 | 0.0088 | 0.0007 |
| Neptune | 24062-04-18 18:14 G | 10509633.00 | 10509633.26 | 10509633.52 | 0.0088 | 0.0000 |
| Jupiter | 24062-07-12 19:26 G | 10509718.08 | 10509718.31 | 10509718.54 | 0.0517 | 0.0186 |
| Neptune | 24063-04-20 23:02 G | 10510000.21 | 10510000.46 | 10510000.72 | 0.0088 | 0.0005 |
| Jupiter | 24063-08-17 13:40 G | 10510118.96 | 10510119.07 | 10510119.18 | 0.0532 | 0.0466 |
| Neptune | 24064-04-22 13:26 G | 10510367.81 | 10510368.06 | 10510368.33 | 0.0088 | 0.0010 |
| Neptune | 24065-04-24 22:48 G | 10510735.21 | 10510735.45 | 10510735.70 | 0.0088 | 0.0014 |
| Neptune | 24066-04-27 08:24 G | 10511102.60 | 10511102.85 | 10511103.12 | 0.0088 | 0.0020 |
| Neptune | 24067-04-29 22:19 G | 10511470.19 | 10511470.43 | 10511470.67 | 0.0088 | 0.0024 |
| Jupiter | 24068-01-11 13:26 G | 10511726.84 | 10511727.06 | 10511727.28 | 0.0511 | 0.0189 |
| Neptune | 24068-05-01 03:36 G | 10511837.40 | 10511837.65 | 10511837.89 | 0.0088 | 0.0030 |
| Jupiter | 24069-02-11 18:28 G | 10512124.10 | 10512124.27 | 10512124.43 | 0.0497 | 0.0334 |
| Neptune | 24069-05-03 20:52 G | 10512205.14 | 10512205.37 | 10512205.61 | 0.0088 | 0.0035 |
| Neptune | 24070-05-06 00:14 G | 10512572.30 | 10512572.51 | 10512572.76 | 0.0088 | 0.0040 |
| Neptune | 24071-05-08 18:14 G | 10512940.04 | 10512940.26 | 10512940.49 | 0.0088 | 0.0044 |
| Saturn | 24071-12-27 23:16 G | 10513173.22 | 10513173.47 | 10513173.72 | 0.0268 | 0.0058 |

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| Neptune | 24072-05-10 00:00 G | 10513307.29 | 10513307.50 | 10513307.71 | 0.0088 | 0.0049 |
| Neptune | 24073-05-12 14:24 G | 10513674.90 | 10513675.10 | 10513675.32 | 0.0088 | 0.0055 |
| Neptune | 24074-05-15 00:28 G | 10514042.36 | 10514042.52 | 10514042.73 | 0.0088 | 0.0059 |
| Jupiter | 24074-07-17 13:40 G | 10514105.84 | 10514106.07 | 10514106.29 | 0.0519 | 0.0109 |
| Neptune | 24075-05-17 10:04 G | 10514409.76 | 10514409.92 | 10514410.12 | 0.0088 | 0.0065 |
| Jupiter | 24075-08-23 03:50 G | 10514507.59 | 10514507.66 | 10514507.74 | 0.0534 | 0.0502 |
| Neptune | 24076-05-19 01:26 G | 10514777.40 | 10514777.56 | 10514777.72 | 0.0088 | 0.0068 |
| Neptune | 24077-05-21 06:43 G | 10515144.64 | 10515144.78 | 10515144.94 | 0.0088 | 0.0073 |
| Neptune | 24078-05-24 00:28 G | 10515512.40 | 10515512.52 | 10515512.66 | 0.0088 | 0.0076 |
| Mars | 24079-04-22 22:04 G | 10515846.30 | 10515846.42 | 10515846.55 | 0.1594 | 0.1123 |
| Neptune | 24079-05-26 04:33 G | 10515879.62 | 10515879.69 | 10515879.80 | 0.0088 | 0.0082 |
| Jupiter | 24080-01-16 00:28 G | 10516114.30 | 10516114.52 | 10516114.75 | 0.0509 | 0.0070 |
| Neptune | 24080-05-27 22:04 G | 10516247.38 | 10516247.42 | 10516247.53 | 0.0088 | 0.0085 |
| Jupiter | 24081-02-16 07:40 G | 10516511.67 | 10516511.82 | 10516511.98 | 0.0495 | 0.0373 |
| Saturn | 24086-06-23 00:14 G | 10518464.28 | 10518464.51 | 10518464.75 | 0.0291 | 0.0096 |
| Jupiter | 24086-07-22 20:38 G | 10518494.13 | 10518494.36 | 10518494.59 | 0.0521 | 0.0022 |
| Jupiter | 24092-01-20 18:28 G | 10520502.03 | 10520502.27 | 10520502.50 | 0.0507 | 0.0009 |
| Jupiter | 24093-02-20 08:09 G | 10520898.76 | 10520898.84 | 10520898.93 | 0.0494 | 0.0458 |
| Uranus | 24094-05-27 23:02 G | 10521360.31 | 10521360.46 | 10521360.63 | 0.0137 | 0.0104 |
| Uranus | 24095-06-01 04:33 G | 10521729.46 | 10521729.69 | 10521729.95 | 0.0136 | 0.0046 |
| Uranus | 24096-06-04 23:16 G | 10522099.22 | 10522099.47 | 10522099.72 | 0.0136 | 0.0013 |
| Uranus | 24097-06-09 04:04 G | 10522468.48 | 10522468.67 | 10522468.89 | 0.0136 | 0.0085 |
| Jupiter | 24097-06-23 07:26 G | 10522482.76 | 10522482.81 | 10522482.87 | 0.0507 | 0.0493 |
| Uranus | 24098-06-13 20:52 G | 10522838.34 | 10522838.37 | 10522838.44 | 0.0135 | 0.0133 |
| Jupiter | 24098-07-27 12:14 G | 10522881.77 | 10522882.01 | 10522882.24 | 0.0523 | 0.0113 |
| Saturn | 24100-12-23 01:40 G | 10523760.35 | 10523760.57 | 10523760.79 | 0.0268 | 0.0095 |
| Saturn | 24102-01-04 05:02 G | 10524137.66 | 10524137.71 | 10524137.76 | 0.0268 | 0.0260 |
| Jupiter | 24102-12-23 15:07 G | 10524491.07 | 10524491.13 | 10524491.20 | 0.0521 | 0.0497 |
| Jupiter | 24104-01-26 00:43 G | 10524889.30 | 10524889.53 | 10524889.77 | 0.0505 | 0.0032 |
| Jupiter | 24109-06-28 15:21 G | 10526870.00 | 10526870.14 | 10526870.28 | 0.0509 | 0.0413 |

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| Jupiter | 24110-08-02 15:21 G | 10527269.92 | 10527270.14 | 10527270.35 | 0.0525 | 0.0153 |
| Jupiter | 24114-12-28 08:24 G | 10528878.69 | 10528878.85 | 10528879.01 | 0.0519 | 0.0383 |
| Jupiter | 24116-01-30 22:04 G | 10529277.20 | 10529277.42 | 10529277.64 | 0.0503 | 0.0105 |
| Saturn | 24116-07-01 03:36 G | 10529429.46 | 10529429.65 | 10529429.85 | 0.0292 | 0.0169 |
| Jupiter | 24121-07-03 12:28 G | 10531257.84 | 10531258.02 | 10531258.21 | 0.0512 | 0.0303 |
| Jupiter | 24122-08-07 16:19 G | 10531657.96 | 10531658.18 | 10531658.40 | 0.0528 | 0.0234 |
| Neptune | 24126-09-10 18:00 G | 10533153.18 | 10533153.25 | 10533153.35 | 0.0090 | 0.0084 |
| Jupiter | 24127-01-02 08:24 G | 10533266.68 | 10533266.85 | 10533267.02 | 0.0516 | 0.0332 |
| Neptune | 24127-09-13 12:00 G | 10533520.96 | 10533521.00 | 10533521.06 | 0.0090 | 0.0088 |
| Jupiter | 24128-02-04 07:26 G | 10533664.59 | 10533664.81 | 10533665.03 | 0.0501 | 0.0215 |
| Neptune | 24128-09-14 22:19 G | 10533888.31 | 10533888.43 | 10533888.57 | 0.0090 | 0.0076 |
| Neptune | 24129-09-17 12:00 G | 10534255.89 | 10534256.00 | 10534256.14 | 0.0090 | 0.0079 |
| Saturn | 24129-12-18 00:28 G | 10534347.48 | 10534347.52 | 10534347.59 | 0.0268 | 0.0261 |
| Neptune | 24130-09-20 02:38 G | 10534623.48 | 10534623.61 | 10534623.81 | 0.0090 | 0.0067 |
| Saturn | 24130-12-29 18:57 G | 10534724.06 | 10534724.29 | 10534724.53 | 0.0268 | 0.0094 |
| Neptune | 24131-09-22 12:14 G | 10534990.86 | 10534991.01 | 10534991.20 | 0.0090 | 0.0069 |
| Neptune | 24132-09-24 06:43 G | 10535358.60 | 10535358.78 | 10535358.99 | 0.0090 | 0.0057 |
| Jupiter | 24133-07-08 07:55 G | 10535645.62 | 10535645.83 | 10535646.06 | 0.0514 | 0.0233 |
| Neptune | 24133-09-26 12:57 G | 10535725.87 | 10535726.04 | 10535726.25 | 0.0090 | 0.0060 |
| Jupiter | 24134-08-12 17:45 G | 10536046.07 | 10536046.24 | 10536046.40 | 0.0530 | 0.0368 |
| Neptune | 24134-09-29 09:36 G | 10536093.68 | 10536093.90 | 10536094.12 | 0.0090 | 0.0047 |
| Neptune | 24135-10-01 15:50 G | 10536460.96 | 10536461.16 | 10536461.39 | 0.0090 | 0.0049 |
| Neptune | 24136-10-03 10:19 G | 10536828.70 | 10536828.93 | 10536829.19 | 0.0090 | 0.0037 |
| Neptune | 24137-10-05 20:09 G | 10537196.11 | 10537196.34 | 10537196.56 | 0.0090 | 0.0037 |
| Neptune | 24138-10-08 10:33 G | 10537563.69 | 10537563.94 | 10537564.20 | 0.0090 | 0.0026 |
| Uranus | 24138-11-29 06:57 G | 10537615.60 | 10537615.79 | 10537616.00 | 0.0142 | 0.0088 |
| Jupiter | 24139-01-07 04:19 G | 10537654.48 | 10537654.68 | 10537654.88 | 0.0514 | 0.0286 |
| Neptune | 24139-10-11 00:43 G | 10537931.30 | 10537931.53 | 10537931.78 | 0.0090 | 0.0027 |
| Uranus | 24139-12-04 10:04 G | 10537985.68 | 10537985.92 | 10537986.18 | 0.0142 | 0.0031 |
| Jupiter | 24140-02-08 18:14 G | 10538052.09 | 10538052.26 | 10538052.45 | 0.0499 | 0.0295 |

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| Neptune | 24140-10-12 10:19 G | 10538298.68 | 10538298.93 | 10538299.20 | 0.0090 | 0.0016 |
| Uranus | 24140-12-07 23:45 G | 10538355.26 | 10538355.49 | 10538355.75 | 0.0143 | 0.0046 |
| Neptune | 24141-10-15 04:04 G | 10538666.43 | 10538666.67 | 10538666.93 | 0.0090 | 0.0016 |
| Uranus | 24141-12-13 03:07 G | 10538725.51 | 10538725.63 | 10538725.78 | 0.0143 | 0.0119 |
| Neptune | 24142-10-17 10:33 G | 10539033.68 | 10539033.94 | 10539034.20 | 0.0089 | 0.0004 |
| Neptune | 24143-10-20 06:28 G | 10539401.51 | 10539401.77 | 10539402.03 | 0.0089 | 0.0003 |
| Neptune | 24144-10-21 12:14 G | 10539768.76 | 10539769.01 | 10539769.27 | 0.0089 | 0.0006 |
| Saturn | 24145-06-24 20:09 G | 10540015.09 | 10540015.34 | 10540015.59 | 0.0291 | 0.0059 |
| Jupiter | 24145-07-13 01:55 G | 10540033.37 | 10540033.58 | 10540033.80 | 0.0516 | 0.0198 |
| Neptune | 24145-10-24 06:43 G | 10540136.51 | 10540136.78 | 10540137.04 | 0.0089 | 0.0007 |
| Jupiter | 24146-08-18 04:33 G | 10540434.57 | 10540434.69 | 10540434.81 | 0.0531 | 0.0453 |
| Neptune | 24146-10-26 15:07 G | 10540503.89 | 10540504.13 | 10540504.38 | 0.0089 | 0.0016 |
| Neptune | 24147-10-29 06:00 G | 10540871.50 | 10540871.75 | 10540872.02 | 0.0089 | 0.0019 |
| Neptune | 24148-10-30 19:12 G | 10541239.08 | 10541239.30 | 10541239.55 | 0.0089 | 0.0028 |
| Neptune | 24149-11-02 05:31 G | 10541606.48 | 10541606.73 | 10541606.98 | 0.0089 | 0.0030 |
| Neptune | 24150-11-04 22:48 G | 10541974.23 | 10541974.45 | 10541974.68 | 0.0089 | 0.0038 |
| Jupiter | 24151-01-11 12:14 G | 10542041.80 | 10542042.01 | 10542042.22 | 0.0512 | 0.0191 |
| Neptune | 24151-11-07 04:33 G | 10542341.48 | 10542341.69 | 10542341.94 | 0.0089 | 0.0040 |
| Jupiter | 24152-02-13 05:02 G | 10542439.53 | 10542439.71 | 10542439.90 | 0.0498 | 0.0322 |
| Neptune | 24152-11-09 00:00 G | 10542709.30 | 10542709.50 | 10542709.74 | 0.0089 | 0.0047 |
| Neptune | 24153-11-11 05:16 G | 10543076.53 | 10543076.72 | 10543076.95 | 0.0089 | 0.0051 |
| Neptune | 24154-11-13 23:45 G | 10543444.30 | 10543444.49 | 10543444.71 | 0.0089 | 0.0057 |
| Neptune | 24155-11-16 07:12 G | 10543811.65 | 10543811.80 | 10543812.00 | 0.0089 | 0.0062 |
| Neptune | 24156-11-17 21:36 G | 10544179.25 | 10544179.40 | 10544179.60 | 0.0089 | 0.0067 |
| Jupiter | 24157-07-18 06:00 G | 10544421.53 | 10544421.75 | 10544421.98 | 0.0518 | 0.0108 |
| Neptune | 24157-11-20 10:19 G | 10544546.80 | 10544546.93 | 10544547.10 | 0.0089 | 0.0071 |
| Jupiter | 24158-08-23 00:43 G | 10544822.44 | 10544822.53 | 10544822.63 | 0.0533 | 0.0488 |
| Neptune | 24158-11-22 20:24 G | 10544914.22 | 10544914.35 | 10544914.50 | 0.0089 | 0.0075 |
| Neptune | 24159-11-25 12:57 G | 10545281.94 | 10545282.04 | 10545282.16 | 0.0089 | 0.0080 |
| Saturn | 24159-12-25 06:43 G | 10545311.55 | 10545311.78 | 10545312.02 | 0.0268 | 0.0058 |

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| Neptune | 24160-11-26 18:28 G | 10545649.22 | 10545649.27 | 10545649.37 | 0.0089 | 0.0085 |
| Jupiter | 24163-01-16 11:02 G | 10546429.73 | 10546429.96 | 10546430.19 | 0.0510 | 0.0072 |
| Jupiter | 24164-02-17 09:07 G | 10546826.73 | 10546826.88 | 10546827.03 | 0.0496 | 0.0369 |
| Jupiter | 24169-07-22 16:48 G | 10548808.96 | 10548809.20 | 10548809.44 | 0.0520 | 0.0013 |
| Saturn | 24174-06-18 23:02 G | 10550601.36 | 10550601.46 | 10550601.55 | 0.0291 | 0.0267 |
| Jupiter | 24175-01-20 20:24 G | 10550817.12 | 10550817.35 | 10550817.59 | 0.0508 | 0.0011 |
| Saturn | 24175-07-03 09:21 G | 10550980.74 | 10550980.89 | 10550981.07 | 0.0292 | 0.0211 |
| Jupiter | 24176-02-22 02:24 G | 10551214.52 | 10551214.60 | 10551214.68 | 0.0495 | 0.0463 |
| Uranus | 24178-05-29 12:43 G | 10552041.89 | 10552042.03 | 10552042.21 | 0.0137 | 0.0105 |
| Uranus | 24179-06-02 18:28 G | 10552411.04 | 10552411.27 | 10552411.53 | 0.0137 | 0.0040 |
| Uranus | 24180-06-06 13:55 G | 10552780.84 | 10552781.08 | 10552781.33 | 0.0136 | 0.0026 |
| Jupiter | 24180-06-23 07:12 G | 10552797.76 | 10552797.80 | 10552797.86 | 0.0507 | 0.0495 |
| Uranus | 24181-06-10 18:28 G | 10553150.07 | 10553150.27 | 10553150.49 | 0.0136 | 0.0079 |
| Jupiter | 24181-07-27 22:19 G | 10553197.20 | 10553197.43 | 10553197.65 | 0.0523 | 0.0100 |
| Pluto | 24183-11-10 21:50 G | 10554033.15 | 10554033.41 | 10554033.67 | 0.0064 | 0.0004 |
| Jupiter | 24185-12-22 19:40 G | 10554806.24 | 10554806.32 | 10554806.40 | 0.0521 | 0.0491 |
| Jupiter | 24187-01-25 18:14 G | 10555205.04 | 10555205.26 | 10555205.49 | 0.0505 | 0.0028 |
| Saturn | 24188-12-18 21:50 G | 10555898.28 | 10555898.41 | 10555898.56 | 0.0268 | 0.0222 |
| Saturn | 24189-12-30 20:52 G | 10556275.17 | 10556275.37 | 10556275.59 | 0.0268 | 0.0133 |
| Jupiter | 24192-06-28 03:50 G | 10557185.54 | 10557185.66 | 10557185.80 | 0.0509 | 0.0413 |
| Jupiter | 24193-08-01 21:36 G | 10557585.16 | 10557585.40 | 10557585.63 | 0.0525 | 0.0139 |
| Mars | 24196-10-20 12:14 G | 10558760.81 | 10558761.01 | 10558761.20 | 0.1949 | 0.0742 |
| Jupiter | 24197-12-27 20:09 G | 10559194.19 | 10559194.34 | 10559194.49 | 0.0519 | 0.0387 |
| Jupiter | 24199-01-30 04:19 G | 10559592.44 | 10559592.68 | 10559592.92 | 0.0503 | 0.0108 |
| Saturn | 24204-06-26 17:02 G | 10561565.97 | 10561566.21 | 10561566.46 | 0.0291 | 0.0020 |
| Jupiter | 24204-07-03 22:48 G | 10561573.26 | 10561573.45 | 10561573.66 | 0.0511 | 0.0300 |
| Mars | 24205-04-21 07:12 G | 10561864.63 | 10561864.80 | 10561864.98 | 0.1589 | 0.0743 |
| Jupiter | 24205-08-07 22:19 G | 10561973.23 | 10561973.43 | 10561973.64 | 0.0527 | 0.0232 |
| Neptune | 24209-03-13 14:52 G | 10563287.05 | 10563287.12 | 10563287.24 | 0.0088 | 0.0082 |
| Jupiter | 24210-01-02 11:02 G | 10563581.79 | 10563581.96 | 10563582.15 | 0.0517 | 0.0340 |

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| Neptune | 24210-03-15 23:02 G | 10563654.43 | 10563654.46 | 10563654.54 | 0.0088 | 0.0086 |
| Jupiter | 24211-02-04 11:45 G | 10563979.80 | 10563979.99 | 10563980.20 | 0.0502 | 0.0218 |
| Neptune | 24211-03-18 08:09 G | 10564021.72 | 10564021.84 | 10564022.01 | 0.0088 | 0.0074 |
| Neptune | 24212-03-19 21:50 G | 10564389.32 | 10564389.41 | 10564389.56 | 0.0088 | 0.0077 |
| Neptune | 24213-03-22 03:21 G | 10564756.48 | 10564756.64 | 10564756.83 | 0.0088 | 0.0064 |
| Neptune | 24214-03-24 19:55 G | 10565124.19 | 10565124.33 | 10565124.52 | 0.0088 | 0.0068 |
| Neptune | 24215-03-26 23:31 G | 10565491.30 | 10565491.48 | 10565491.69 | 0.0088 | 0.0055 |
| Neptune | 24216-03-28 16:04 G | 10565859.00 | 10565859.17 | 10565859.39 | 0.0088 | 0.0059 |
| Jupiter | 24216-07-08 14:24 G | 10565960.90 | 10565961.10 | 10565961.30 | 0.0513 | 0.0242 |
| Neptune | 24217-03-30 21:21 G | 10566226.19 | 10566226.39 | 10566226.62 | 0.0088 | 0.0046 |
| Jupiter | 24217-08-13 05:45 G | 10566361.57 | 10566361.74 | 10566361.92 | 0.0529 | 0.0362 |
| Neptune | 24218-04-02 10:48 G | 10566593.74 | 10566593.95 | 10566594.18 | 0.0088 | 0.0048 |
| Saturn | 24218-12-27 08:24 G | 10566862.60 | 10566862.85 | 10566863.10 | 0.0268 | 0.0018 |
| Neptune | 24219-04-04 19:26 G | 10566961.11 | 10566961.31 | 10566961.56 | 0.0088 | 0.0036 |
| Neptune | 24220-04-06 04:04 G | 10567328.45 | 10567328.67 | 10567328.92 | 0.0088 | 0.0038 |
| Neptune | 24221-04-08 18:28 G | 10567696.05 | 10567696.27 | 10567696.53 | 0.0088 | 0.0026 |
| Jupiter | 24222-01-07 00:57 G | 10567969.36 | 10567969.54 | 10567969.73 | 0.0515 | 0.0295 |
| Neptune | 24222-04-10 23:02 G | 10568063.23 | 10568063.46 | 10568063.73 | 0.0088 | 0.0029 |
| Uranus | 24222-11-30 22:33 G | 10568297.28 | 10568297.44 | 10568297.64 | 0.0142 | 0.0097 |
| Jupiter | 24223-02-09 02:52 G | 10568367.43 | 10568367.62 | 10568367.82 | 0.0500 | 0.0287 |
| Neptune | 24223-04-13 16:33 G | 10568430.95 | 10568431.19 | 10568431.45 | 0.0088 | 0.0015 |
| Uranus | 24223-12-06 01:40 G | 10568667.33 | 10568667.57 | 10568667.83 | 0.0142 | 0.0015 |
| Neptune | 24224-04-14 20:24 G | 10568798.10 | 10568798.35 | 10568798.60 | 0.0088 | 0.0018 |
| Uranus | 24224-12-09 15:07 G | 10569036.89 | 10569037.13 | 10569037.37 | 0.0143 | 0.0049 |
| Neptune | 24225-04-17 13:26 G | 10569165.79 | 10569166.06 | 10569166.32 | 0.0088 | 0.0004 |
| Uranus | 24225-12-14 18:28 G | 10569407.16 | 10569407.27 | 10569407.43 | 0.0143 | 0.0120 |
| Neptune | 24226-04-19 19:12 G | 10569533.06 | 10569533.30 | 10569533.55 | 0.0088 | 0.0008 |
| Neptune | 24227-04-22 08:09 G | 10569900.57 | 10569900.84 | 10569901.11 | 0.0088 | 0.0006 |
| Neptune | 24228-04-23 18:28 G | 10570268.02 | 10570268.27 | 10570268.52 | 0.0088 | 0.0003 |
| Jupiter | 24228-07-13 12:57 G | 10570348.82 | 10570349.04 | 10570349.26 | 0.0515 | 0.0207 |

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| Neptune | 24229-04-26 02:09 G | 10570635.34 | 10570635.59 | 10570635.86 | 0.0088 | 0.0017 |
| Jupiter | 24229-08-17 21:50 G | 10570749.29 | 10570749.41 | 10570749.54 | 0.0531 | 0.0441 |
| Neptune | 24230-04-28 17:31 G | 10571002.99 | 10571003.23 | 10571003.49 | 0.0088 | 0.0014 |
| Neptune | 24231-04-30 22:04 G | 10571370.18 | 10571370.42 | 10571370.68 | 0.0088 | 0.0028 |
| Neptune | 24232-05-02 15:50 G | 10571737.92 | 10571738.16 | 10571738.42 | 0.0088 | 0.0024 |
| Neptune | 24233-05-04 19:40 G | 10572105.10 | 10572105.32 | 10572105.56 | 0.0088 | 0.0038 |
| Saturn | 24233-06-21 05:02 G | 10572152.55 | 10572152.71 | 10572152.87 | 0.0291 | 0.0222 |
| Jupiter | 24234-01-12 02:52 G | 10572357.40 | 10572357.62 | 10572357.84 | 0.0513 | 0.0185 |
| Neptune | 24234-05-07 12:28 G | 10572472.79 | 10572473.02 | 10572473.28 | 0.0088 | 0.0034 |
| Saturn | 24234-07-05 12:14 G | 10572531.89 | 10572532.01 | 10572532.13 | 0.0292 | 0.0254 |
| Jupiter | 24235-02-13 08:52 G | 10572754.70 | 10572754.87 | 10572755.05 | 0.0498 | 0.0318 |
| Neptune | 24235-05-09 19:12 G | 10572840.10 | 10572840.30 | 10572840.52 | 0.0088 | 0.0048 |
| Neptune | 24236-05-11 07:40 G | 10573207.61 | 10573207.82 | 10573208.07 | 0.0088 | 0.0045 |
| Neptune | 24237-05-13 18:57 G | 10573575.13 | 10573575.29 | 10573575.50 | 0.0088 | 0.0059 |
| Neptune | 24238-05-16 03:07 G | 10573942.43 | 10573942.63 | 10573942.85 | 0.0088 | 0.0055 |
| Neptune | 24239-05-18 19:12 G | 10574310.16 | 10574310.30 | 10574310.47 | 0.0088 | 0.0068 |
| Neptune | 24240-05-19 23:45 G | 10574677.34 | 10574677.49 | 10574677.70 | 0.0088 | 0.0065 |
| Jupiter | 24240-07-18 01:12 G | 10574736.32 | 10574736.55 | 10574736.78 | 0.0518 | 0.0117 |
| Neptune | 24241-05-22 18:00 G | 10575045.16 | 10575045.25 | 10575045.40 | 0.0088 | 0.0078 |
| Jupiter | 24241-08-23 08:24 G | 10575137.76 | 10575137.85 | 10575137.96 | 0.0533 | 0.0475 |
| Neptune | 24242-05-24 23:02 G | 10575412.33 | 10575412.46 | 10575412.60 | 0.0088 | 0.0074 |
| Neptune | 24243-05-27 15:21 G | 10575780.13 | 10575780.14 | 10575780.22 | 0.0088 | 0.0088 |
| Neptune | 24244-05-28 23:31 G | 10576147.41 | 10576147.48 | 10576147.57 | 0.0088 | 0.0083 |
| Jupiter | 24246-01-16 13:12 G | 10576744.82 | 10576745.05 | 10576745.29 | 0.0510 | 0.0075 |
| Jupiter | 24247-02-18 02:24 G | 10577142.45 | 10577142.60 | 10577142.76 | 0.0496 | 0.0367 |
| Saturn | 24247-12-22 01:12 G | 10577449.38 | 10577449.55 | 10577449.74 | 0.0268 | 0.0178 |
| Saturn | 24249-01-02 05:02 G | 10577826.54 | 10577826.71 | 10577826.90 | 0.0268 | 0.0174 |
| Jupiter | 24252-07-23 06:14 G | 10579124.54 | 10579124.76 | 10579124.99 | 0.0520 | 0.0014 |
| Jupiter | 24258-01-21 11:45 G | 10581132.76 | 10581132.99 | 10581133.22 | 0.0508 | 0.0018 |
| Jupiter | 24259-02-22 04:33 G | 10581529.62 | 10581529.69 | 10581529.78 | 0.0495 | 0.0463 |

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| Uranus | 24262-05-31 03:50 G | 10582723.49 | 10582723.66 | 10582723.87 | 0.0137 | 0.0093 |
| Uranus | 24263-06-04 09:50 G | 10583092.66 | 10583092.91 | 10583093.16 | 0.0136 | 0.0035 |
| Jupiter | 24263-06-24 21:21 G | 10583113.35 | 10583113.39 | 10583113.43 | 0.0507 | 0.0498 |
| Saturn | 24263-06-28 23:16 G | 10583117.23 | 10583117.47 | 10583117.71 | 0.0291 | 0.0029 |
| Uranus | 24264-06-08 04:48 G | 10583462.46 | 10583462.70 | 10583462.95 | 0.0136 | 0.0025 |
| Jupiter | 24264-07-28 04:04 G | 10583512.43 | 10583512.67 | 10583512.91 | 0.0522 | 0.0087 |
| Uranus | 24265-06-12 08:38 G | 10583831.70 | 10583831.86 | 10583832.06 | 0.0136 | 0.0096 |
| Jupiter | 24268-12-22 23:45 G | 10585121.43 | 10585121.49 | 10585121.56 | 0.0522 | 0.0495 |
| Jupiter | 24270-01-25 17:02 G | 10585519.97 | 10585520.21 | 10585520.46 | 0.0506 | 0.0020 |
| Pluto | 24272-05-11 18:28 G | 10586357.14 | 10586357.27 | 10586357.42 | 0.0080 | 0.0067 |
| Jupiter | 24275-06-29 12:43 G | 10587500.88 | 10587501.03 | 10587501.18 | 0.0509 | 0.0404 |
| Jupiter | 24276-08-02 02:24 G | 10587900.38 | 10587900.60 | 10587900.82 | 0.0524 | 0.0130 |
| Saturn | 24277-12-28 07:12 G | 10588413.55 | 10588413.80 | 10588414.06 | 0.0268 | 0.0024 |
| Jupiter | 24280-12-27 18:43 G | 10589509.13 | 10589509.28 | 10589509.44 | 0.0520 | 0.0393 |
| Jupiter | 24282-01-30 06:00 G | 10589907.54 | 10589907.75 | 10589907.97 | 0.0504 | 0.0107 |
| Mars | 24284-04-23 13:12 G | 10590721.89 | 10590722.05 | 10590722.21 | 0.1590 | 0.0926 |
| Jupiter | 24287-07-03 23:31 G | 10591888.31 | 10591888.48 | 10591888.67 | 0.0510 | 0.0304 |
| Jupiter | 24288-08-07 04:04 G | 10592288.46 | 10592288.67 | 10592288.89 | 0.0526 | 0.0221 |
| Neptune | 24291-09-13 12:14 G | 10593421.00 | 10593421.01 | 10593421.06 | 0.0090 | 0.0089 |
| Saturn | 24292-06-22 09:07 G | 10593703.68 | 10593703.88 | 10593704.09 | 0.0291 | 0.0168 |
| Neptune | 24292-09-14 23:45 G | 10593788.42 | 10593788.49 | 10593788.59 | 0.0090 | 0.0085 |
| Jupiter | 24293-01-01 12:43 G | 10593896.87 | 10593897.03 | 10593897.19 | 0.0518 | 0.0354 |
| Neptune | 24293-09-17 16:04 G | 10594156.08 | 10594156.17 | 10594156.31 | 0.0090 | 0.0079 |
| Jupiter | 24294-02-03 23:31 G | 10594295.27 | 10594295.48 | 10594295.70 | 0.0502 | 0.0218 |
| Neptune | 24294-09-19 23:45 G | 10594523.38 | 10594523.49 | 10594523.66 | 0.0090 | 0.0076 |
| Neptune | 24295-09-22 19:40 G | 10594891.18 | 10594891.32 | 10594891.51 | 0.0090 | 0.0069 |
| Neptune | 24296-09-24 02:09 G | 10595258.43 | 10595258.59 | 10595258.77 | 0.0090 | 0.0067 |
| Neptune | 24297-09-26 22:04 G | 10595626.23 | 10595626.42 | 10595626.62 | 0.0090 | 0.0058 |
| Neptune | 24298-09-29 05:31 G | 10595993.55 | 10595993.73 | 10595993.94 | 0.0090 | 0.0057 |
| Jupiter | 24299-07-08 22:48 G | 10596276.25 | 10596276.45 | 10596276.66 | 0.0513 | 0.0253 |

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| Neptune | 24299-10-01 22:48 G | 10596361.24 | 10596361.45 | 10596361.70 | 0.0090 | 0.0047 |
| Jupiter | 24300-08-12 22:19 G | 10596676.26 | 10596676.43 | 10596676.60 | 0.0528 | 0.0350 |
| Neptune | 24300-10-04 10:04 G | 10596728.72 | 10596728.92 | 10596729.15 | 0.0090 | 0.0046 |
| Neptune | 24301-10-06 22:48 G | 10597096.21 | 10597096.45 | 10597096.70 | 0.0090 | 0.0036 |
| Neptune | 24302-10-09 14:38 G | 10597463.88 | 10597464.11 | 10597464.34 | 0.0090 | 0.0036 |
| Neptune | 24303-10-11 23:02 G | 10597831.20 | 10597831.46 | 10597831.71 | 0.0090 | 0.0025 |
| Neptune | 24304-10-13 18:00 G | 10598199.02 | 10598199.25 | 10598199.51 | 0.0090 | 0.0025 |
| Jupiter | 24305-01-07 15:36 G | 10598284.96 | 10598285.15 | 10598285.34 | 0.0515 | 0.0300 |
| Neptune | 24305-10-16 00:14 G | 10598566.26 | 10598566.51 | 10598566.77 | 0.0090 | 0.0013 |
| Jupiter | 24306-02-09 06:00 G | 10598682.57 | 10598682.75 | 10598682.94 | 0.0500 | 0.0282 |
| Neptune | 24306-10-18 20:09 G | 10598934.09 | 10598934.34 | 10598934.60 | 0.0090 | 0.0013 |
| Uranus | 24306-12-02 12:00 G | 10598978.79 | 10598979.00 | 10598979.21 | 0.0142 | 0.0076 |
| Saturn | 24306-12-24 10:19 G | 10599000.73 | 10599000.93 | 10599001.14 | 0.0268 | 0.0133 |
| Neptune | 24307-10-21 03:07 G | 10599301.38 | 10599301.63 | 10599301.88 | 0.0089 | 0.0001 |
| Uranus | 24307-12-07 14:52 G | 10599348.87 | 10599349.12 | 10599349.37 | 0.0142 | 0.0020 |
| Saturn | 24308-01-05 12:00 G | 10599377.86 | 10599378.00 | 10599378.15 | 0.0268 | 0.0218 |
| Neptune | 24308-10-22 20:38 G | 10599669.09 | 10599669.36 | 10599669.62 | 0.0089 | 0.0002 |
| Uranus | 24308-12-11 04:04 G | 10599718.44 | 10599718.67 | 10599718.91 | 0.0142 | 0.0059 |
| Neptune | 24309-10-25 06:43 G | 10600036.54 | 10600036.78 | 10600037.04 | 0.0089 | 0.0011 |
| Uranus | 24309-12-16 08:09 G | 10600088.75 | 10600088.84 | 10600088.95 | 0.0143 | 0.0130 |
| Neptune | 24310-10-27 19:40 G | 10600404.06 | 10600404.32 | 10600404.59 | 0.0089 | 0.0009 |
| Jupiter | 24311-07-14 10:04 G | 10600663.71 | 10600663.92 | 10600664.13 | 0.0515 | 0.0212 |
| Neptune | 24311-10-30 10:04 G | 10600771.69 | 10600771.92 | 10600772.17 | 0.0089 | 0.0023 |
| Jupiter | 24312-08-18 09:21 G | 10601064.76 | 10601064.89 | 10601065.03 | 0.0531 | 0.0425 |
| Neptune | 24312-10-31 18:28 G | 10601139.02 | 10601139.27 | 10601139.53 | 0.0089 | 0.0021 |
| Neptune | 24313-11-03 13:12 G | 10601506.82 | 10601507.05 | 10601507.29 | 0.0089 | 0.0034 |
| Neptune | 24314-11-05 19:12 G | 10601874.06 | 10601874.30 | 10601874.55 | 0.0089 | 0.0031 |
| Neptune | 24315-11-08 14:38 G | 10602241.90 | 10602242.11 | 10602242.35 | 0.0089 | 0.0045 |
| Neptune | 24316-11-09 20:38 G | 10602609.16 | 10602609.36 | 10602609.61 | 0.0089 | 0.0043 |
| Jupiter | 24317-01-12 02:24 G | 10602672.38 | 10602672.60 | 10602672.82 | 0.0513 | 0.0188 |

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| Neptune | 24317-11-12 14:52 G | 10602976.92 | 10602977.12 | 10602977.33 | 0.0089 | 0.0056 |
| Jupiter | 24318-02-13 23:45 G | 10603070.32 | 10603070.49 | 10603070.68 | 0.0498 | 0.0309 |
| Neptune | 24318-11-15 00:00 G | 10603344.32 | 10603344.50 | 10603344.72 | 0.0089 | 0.0053 |
| Neptune | 24319-11-17 13:12 G | 10603711.87 | 10603712.05 | 10603712.23 | 0.0089 | 0.0066 |
| Neptune | 24320-11-19 02:52 G | 10604079.45 | 10604079.62 | 10604079.81 | 0.0089 | 0.0062 |
| Neptune | 24321-11-21 11:02 G | 10604446.82 | 10604446.96 | 10604447.10 | 0.0089 | 0.0076 |
| Saturn | 24322-07-01 10:33 G | 10604668.71 | 10604668.94 | 10604669.17 | 0.0291 | 0.0082 |
| Neptune | 24322-11-24 04:19 G | 10604814.56 | 10604814.68 | 10604814.85 | 0.0089 | 0.0073 |
| Jupiter | 24323-07-19 15:50 G | 10605051.94 | 10605052.16 | 10605052.39 | 0.0517 | 0.0115 |
| Neptune | 24323-11-26 09:36 G | 10605181.86 | 10605181.90 | 10605181.99 | 0.0089 | 0.0086 |
| Jupiter | 24324-08-23 10:48 G | 10605452.84 | 10605452.95 | 10605453.08 | 0.0532 | 0.0462 |
| Neptune | 24324-11-28 04:48 G | 10605549.62 | 10605549.70 | 10605549.83 | 0.0089 | 0.0081 |
| Jupiter | 24329-01-16 21:07 G | 10607060.15 | 10607060.38 | 10607060.60 | 0.0511 | 0.0084 |
| Jupiter | 24330-02-17 22:33 G | 10607457.28 | 10607457.44 | 10607457.60 | 0.0497 | 0.0363 |
| Jupiter | 24335-07-24 08:52 G | 10609439.63 | 10609439.87 | 10609440.11 | 0.0519 | 0.0009 |
| Saturn | 24336-12-30 10:33 G | 10609964.71 | 10609964.94 | 10609965.18 | 0.0268 | 0.0069 |
| Jupiter | 24341-01-21 06:43 G | 10611447.54 | 10611447.78 | 10611448.02 | 0.0509 | 0.0030 |
| Jupiter | 24342-02-22 12:28 G | 10611844.95 | 10611845.02 | 10611845.10 | 0.0496 | 0.0466 |
| Uranus | 24346-06-01 17:45 G | 10613405.08 | 10613405.24 | 10613405.44 | 0.0137 | 0.0095 |
| Jupiter | 24346-06-24 22:48 G | 10613428.42 | 10613428.45 | 10613428.50 | 0.0506 | 0.0499 |
| Uranus | 24347-06-05 23:45 G | 10613774.24 | 10613774.49 | 10613774.74 | 0.0137 | 0.0027 |
| Jupiter | 24347-07-29 03:07 G | 10613827.41 | 10613827.63 | 10613827.86 | 0.0521 | 0.0072 |
| Uranus | 24348-06-09 18:57 G | 10614144.05 | 10614144.29 | 10614144.54 | 0.0136 | 0.0037 |
| Uranus | 24349-06-13 23:02 G | 10614513.29 | 10614513.46 | 10614513.67 | 0.0136 | 0.0091 |
| Saturn | 24351-06-25 14:24 G | 10615254.87 | 10615255.10 | 10615255.33 | 0.0292 | 0.0114 |
| Jupiter | 24351-12-24 00:57 G | 10615436.47 | 10615436.54 | 10615436.60 | 0.0523 | 0.0499 |
| Jupiter | 24353-01-25 23:02 G | 10615835.24 | 10615835.46 | 10615835.69 | 0.0507 | 0.0012 |
| Jupiter | 24358-06-29 11:16 G | 10617815.84 | 10617815.97 | 10617816.11 | 0.0508 | 0.0406 |
| Jupiter | 24359-08-03 05:16 G | 10618215.49 | 10618215.72 | 10618215.95 | 0.0524 | 0.0115 |
| Jupiter | 24363-12-28 21:36 G | 10619824.27 | 10619824.40 | 10619824.55 | 0.0520 | 0.0405 |

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| Jupiter | 24365-01-30 17:16 G | 10620222.99 | 10620223.22 | 10620223.45 | 0.0505 | 0.0105 |
| Saturn | 24365-12-25 20:38 G | 10620552.13 | 10620552.36 | 10620552.59 | 0.0268 | 0.0083 |
| Saturn | 24367-01-06 15:50 G | 10620929.16 | 10620929.16 | 10620929.20 | 0.0268 | 0.0267 |
| Jupiter | 24370-07-04 08:52 G | 10622203.68 | 10622203.87 | 10622204.06 | 0.0510 | 0.0304 |
| Jupiter | 24371-08-07 23:45 G | 10622603.28 | 10622603.49 | 10622603.70 | 0.0526 | 0.0213 |
| Neptune | 24373-03-13 21:07 G | 10623187.38 | 10623187.38 | 10623187.39 | 0.0088 | 0.0088 |
| Neptune | 24375-03-18 19:12 G | 10623922.22 | 10623922.30 | 10623922.44 | 0.0088 | 0.0079 |
| Jupiter | 24376-01-03 00:28 G | 10624212.36 | 10624212.52 | 10624212.69 | 0.0518 | 0.0367 |
| Neptune | 24376-03-19 23:16 G | 10624289.40 | 10624289.47 | 10624289.60 | 0.0088 | 0.0081 |
| Jupiter | 24377-02-04 00:00 G | 10624610.29 | 10624610.50 | 10624610.71 | 0.0503 | 0.0213 |
| Neptune | 24377-03-22 16:19 G | 10624657.06 | 10624657.18 | 10624657.36 | 0.0088 | 0.0071 |
| Neptune | 24378-03-24 19:40 G | 10625024.21 | 10625024.32 | 10625024.50 | 0.0088 | 0.0072 |
| Neptune | 24379-03-27 12:00 G | 10625391.83 | 10625392.00 | 10625392.21 | 0.0088 | 0.0061 |
| Neptune | 24380-03-28 18:00 G | 10625759.09 | 10625759.25 | 10625759.45 | 0.0088 | 0.0061 |
| Neptune | 24381-03-31 06:43 G | 10626126.56 | 10626126.78 | 10626127.00 | 0.0088 | 0.0050 |
| Saturn | 24381-07-02 22:04 G | 10626220.21 | 10626220.42 | 10626220.65 | 0.0291 | 0.0143 |
| Neptune | 24382-04-02 17:16 G | 10626494.03 | 10626494.22 | 10626494.44 | 0.0088 | 0.0051 |
| Jupiter | 24382-07-08 21:07 G | 10626591.17 | 10626591.38 | 10626591.58 | 0.0512 | 0.0256 |
| Neptune | 24383-04-05 00:28 G | 10626861.31 | 10626861.52 | 10626861.78 | 0.0088 | 0.0041 |
| Jupiter | 24383-08-13 10:48 G | 10626991.78 | 10626991.95 | 10626992.12 | 0.0528 | 0.0348 |
| Neptune | 24384-04-06 16:04 G | 10627228.96 | 10627229.17 | 10627229.40 | 0.0088 | 0.0041 |
| Neptune | 24385-04-08 19:40 G | 10627596.09 | 10627596.32 | 10627596.57 | 0.0088 | 0.0030 |
| Neptune | 24386-04-11 13:12 G | 10627963.81 | 10627964.05 | 10627964.29 | 0.0088 | 0.0029 |
| Neptune | 24387-04-13 16:48 G | 10628330.95 | 10628331.20 | 10628331.45 | 0.0088 | 0.0019 |
| Jupiter | 24388-01-07 07:26 G | 10628599.63 | 10628599.81 | 10628600.00 | 0.0516 | 0.0311 |
| Neptune | 24388-04-15 08:09 G | 10628698.59 | 10628698.84 | 10628699.11 | 0.0088 | 0.0019 |
| Jupiter | 24389-02-08 14:24 G | 10628997.91 | 10628998.10 | 10628998.30 | 0.0501 | 0.0271 |
| Neptune | 24389-04-17 14:52 G | 10629065.88 | 10629066.12 | 10629066.38 | 0.0088 | 0.0010 |
| Uranus | 24389-11-28 12:14 G | 10629291.01 | 10629291.01 | 10629291.07 | 0.0141 | 0.0141 |
| Neptune | 24390-04-20 02:38 G | 10629433.34 | 10629433.61 | 10629433.87 | 0.0088 | 0.0008 |

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| Uranus | 24390-12-03 01:12 G | 10629660.37 | 10629660.55 | 10629660.76 | 0.0142 | 0.0087 |
| Neptune | 24391-04-22 14:52 G | 10629800.87 | 10629801.12 | 10629801.37 | 0.0088 | 0.0002 |
| Uranus | 24391-12-08 03:50 G | 10630030.41 | 10630030.66 | 10630030.92 | 0.0142 | 0.0004 |
| Neptune | 24392-04-23 21:50 G | 10630168.15 | 10630168.41 | 10630168.67 | 0.0088 | 0.0003 |
| Uranus | 24392-12-11 16:48 G | 10630399.98 | 10630400.20 | 10630400.44 | 0.0142 | 0.0059 |
| Neptune | 24393-04-26 13:55 G | 10630535.83 | 10630536.08 | 10630536.33 | 0.0088 | 0.0013 |
| Uranus | 24393-12-16 20:52 G | 10630770.28 | 10630770.37 | 10630770.48 | 0.0143 | 0.0131 |
| Neptune | 24394-04-28 17:31 G | 10630902.99 | 10630903.23 | 10630903.50 | 0.0088 | 0.0014 |
| Jupiter | 24394-07-13 23:31 G | 10630979.27 | 10630979.48 | 10630979.69 | 0.0515 | 0.0216 |
| Saturn | 24394-12-20 16:33 G | 10631139.08 | 10631139.19 | 10631139.30 | 0.0269 | 0.0240 |
| Neptune | 24395-05-01 11:02 G | 10631270.72 | 10631270.96 | 10631271.22 | 0.0088 | 0.0023 |
| Jupiter | 24395-08-18 07:40 G | 10631379.67 | 10631379.82 | 10631379.97 | 0.0530 | 0.0411 |
| Saturn | 24396-01-01 20:09 G | 10631516.13 | 10631516.34 | 10631516.55 | 0.0269 | 0.0118 |
| Neptune | 24396-05-02 15:21 G | 10631637.91 | 10631638.14 | 10631638.39 | 0.0088 | 0.0025 |
| Neptune | 24397-05-05 06:28 G | 10632005.55 | 10632005.77 | 10632006.04 | 0.0088 | 0.0034 |
| Neptune | 24398-05-07 13:55 G | 10632372.88 | 10632373.08 | 10632373.33 | 0.0088 | 0.0037 |
| Neptune | 24399-05-10 01:12 G | 10632740.34 | 10632740.55 | 10632740.80 | 0.0088 | 0.0045 |
| Jupiter | 24400-01-12 06:57 G | 10632987.59 | 10632987.79 | 10632988.01 | 0.0513 | 0.0198 |
| Neptune | 24400-05-11 14:24 G | 10633107.90 | 10633108.10 | 10633108.32 | 0.0088 | 0.0047 |
| Jupiter | 24401-02-12 17:02 G | 10633385.02 | 10633385.21 | 10633385.40 | 0.0499 | 0.0297 |
| Neptune | 24401-05-13 20:38 G | 10633475.18 | 10633475.36 | 10633475.60 | 0.0088 | 0.0055 |
| Neptune | 24402-05-16 13:55 G | 10633842.90 | 10633843.08 | 10633843.29 | 0.0088 | 0.0057 |
| Neptune | 24403-05-18 18:00 G | 10634210.10 | 10634210.25 | 10634210.44 | 0.0088 | 0.0065 |
| Neptune | 24404-05-20 12:00 G | 10634577.86 | 10634578.00 | 10634578.19 | 0.0088 | 0.0069 |
| Neptune | 24405-05-22 17:02 G | 10634945.11 | 10634945.21 | 10634945.37 | 0.0088 | 0.0076 |
| Neptune | 24406-05-25 09:07 G | 10635312.76 | 10635312.88 | 10635313.01 | 0.0088 | 0.0078 |
| Jupiter | 24406-07-18 09:50 G | 10635366.68 | 10635366.91 | 10635367.15 | 0.0516 | 0.0121 |
| Neptune | 24407-05-27 17:02 G | 10635680.17 | 10635680.21 | 10635680.32 | 0.0088 | 0.0084 |
| Jupiter | 24407-08-23 07:55 G | 10635767.71 | 10635767.83 | 10635767.95 | 0.0531 | 0.0450 |
| Neptune | 24408-05-29 04:19 G | 10636047.65 | 10636047.68 | 10636047.76 | 0.0088 | 0.0087 |

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| Mars | 24410-04-21 22:33 G | 10636740.31 | 10636740.44 | 10636740.57 | 0.1587 | 0.1064 |
| Saturn | 24410-06-27 01:40 G | 10636806.33 | 10636806.57 | 10636806.81 | 0.0292 | 0.0052 |
| Jupiter | 24412-01-16 18:57 G | 10637375.05 | 10637375.29 | 10637375.53 | 0.0512 | 0.0095 |
| Jupiter | 24413-02-17 09:50 G | 10637772.75 | 10637772.91 | 10637773.06 | 0.0498 | 0.0363 |
| Jupiter | 24418-07-23 06:57 G | 10639754.56 | 10639754.79 | 10639755.01 | 0.0519 | 0.0010 |
| Jupiter | 24424-01-21 13:26 G | 10641762.84 | 10641763.06 | 10641763.28 | 0.0509 | 0.0048 |
| Saturn | 24424-12-27 02:52 G | 10642103.37 | 10642103.62 | 10642103.87 | 0.0268 | 0.0034 |
| Jupiter | 24425-02-21 16:19 G | 10642160.09 | 10642160.18 | 10642160.27 | 0.0496 | 0.0459 |
| Jupiter | 24429-06-23 23:16 G | 10643743.47 | 10643743.47 | 10643743.49 | 0.0505 | 0.0504 |
| Uranus | 24430-06-02 08:38 G | 10644086.67 | 10644086.86 | 10644087.08 | 0.0137 | 0.0081 |
| Jupiter | 24430-07-28 07:12 G | 10644142.56 | 10644142.80 | 10644143.04 | 0.0521 | 0.0062 |
| Uranus | 24431-06-06 14:38 G | 10644455.87 | 10644456.11 | 10644456.36 | 0.0137 | 0.0024 |
| Pluto | 24431-11-14 00:57 G | 10644616.44 | 10644616.54 | 10644616.71 | 0.0064 | 0.0055 |
| Uranus | 24432-06-10 09:21 G | 10644825.65 | 10644825.89 | 10644826.14 | 0.0136 | 0.0037 |
| Pluto | 24432-11-14 09:50 G | 10644982.71 | 10644982.91 | 10644983.15 | 0.0064 | 0.0033 |
| Uranus | 24433-06-14 13:12 G | 10645194.91 | 10645195.05 | 10645195.22 | 0.0136 | 0.0107 |
| Jupiter | 24434-12-23 03:21 G | 10645751.58 | 10645751.64 | 10645751.70 | 0.0523 | 0.0502 |
| Jupiter | 24436-01-26 07:26 G | 10646150.57 | 10646150.81 | 10646151.05 | 0.0507 | 0.0008 |
| Saturn | 24439-06-21 04:33 G | 10647392.60 | 10647392.69 | 10647392.79 | 0.0291 | 0.0268 |
| Saturn | 24440-07-04 08:38 G | 10647771.69 | 10647771.86 | 10647772.05 | 0.0291 | 0.0205 |
| Jupiter | 24441-06-28 21:07 G | 10648131.24 | 10648131.38 | 10648131.53 | 0.0508 | 0.0399 |
| Jupiter | 24442-08-02 02:52 G | 10648530.40 | 10648530.62 | 10648530.85 | 0.0523 | 0.0109 |
| Jupiter | 24446-12-28 02:24 G | 10650139.46 | 10650139.60 | 10650139.75 | 0.0520 | 0.0413 |
| Jupiter | 24448-01-30 11:16 G | 10650537.75 | 10650537.97 | 10650538.20 | 0.0505 | 0.0095 |
| Jupiter | 24453-07-03 06:14 G | 10652518.58 | 10652518.76 | 10652518.95 | 0.0510 | 0.0308 |
| Saturn | 24453-12-22 03:21 G | 10652690.49 | 10652690.64 | 10652690.82 | 0.0269 | 0.0191 |
| Jupiter | 24454-08-07 10:04 G | 10652918.71 | 10652918.92 | 10652919.14 | 0.0525 | 0.0214 |
| Saturn | 24455-01-03 08:24 G | 10653067.66 | 10653067.85 | 10653068.04 | 0.0269 | 0.0167 |
| Neptune | 24455-09-13 12:00 G | 10653321.00 | 10653321.00 | 10653321.03 | 0.0090 | 0.0089 |
| Neptune | 24457-09-17 13:55 G | 10654055.96 | 10654056.08 | 10654056.19 | 0.0090 | 0.0080 |

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| Neptune | 24458-09-20 09:36 G | 10654423.84 | 10654423.90 | 10654424.00 | 0.0090 | 0.0085 |
| Jupiter | 24459-01-01 13:12 G | 10654526.90 | 10654527.05 | 10654527.22 | 0.0518 | 0.0378 |
| Neptune | 24459-09-22 15:50 G | 10654791.03 | 10654791.16 | 10654791.34 | 0.0090 | 0.0071 |
| Jupiter | 24460-02-04 05:45 G | 10654925.53 | 10654925.74 | 10654925.95 | 0.0503 | 0.0204 |
| Neptune | 24460-09-24 11:16 G | 10655158.83 | 10655158.97 | 10655159.13 | 0.0090 | 0.0074 |
| Neptune | 24461-09-26 19:40 G | 10655526.15 | 10655526.32 | 10655526.52 | 0.0090 | 0.0060 |
| Neptune | 24462-09-29 11:02 G | 10655893.78 | 10655893.96 | 10655894.16 | 0.0090 | 0.0063 |
| Neptune | 24463-10-01 23:31 G | 10656261.29 | 10656261.48 | 10656261.71 | 0.0090 | 0.0050 |
| Neptune | 24464-10-03 10:19 G | 10656628.73 | 10656628.93 | 10656629.16 | 0.0090 | 0.0053 |
| Jupiter | 24465-07-08 03:50 G | 10656906.47 | 10656906.66 | 10656906.86 | 0.0511 | 0.0268 |
| Neptune | 24465-10-06 04:04 G | 10656996.46 | 10656996.67 | 10656996.91 | 0.0090 | 0.0039 |
| Jupiter | 24466-08-11 23:45 G | 10657306.31 | 10657306.49 | 10657306.68 | 0.0527 | 0.0332 |
| Neptune | 24466-10-08 11:31 G | 10657363.76 | 10657363.98 | 10657364.22 | 0.0090 | 0.0041 |
| Neptune | 24467-10-11 07:26 G | 10657731.58 | 10657731.81 | 10657732.07 | 0.0090 | 0.0027 |
| Neptune | 24468-10-12 13:26 G | 10658098.84 | 10658099.06 | 10658099.32 | 0.0090 | 0.0030 |
| Saturn | 24469-06-28 20:38 G | 10658358.12 | 10658358.36 | 10658358.59 | 0.0292 | 0.0015 |
| Neptune | 24469-10-15 09:21 G | 10658466.64 | 10658466.89 | 10658467.16 | 0.0090 | 0.0016 |
| Neptune | 24470-10-17 17:31 G | 10658833.99 | 10658834.23 | 10658834.48 | 0.0090 | 0.0017 |
| Jupiter | 24471-01-06 15:21 G | 10658914.96 | 10658915.14 | 10658915.32 | 0.0517 | 0.0321 |
| Neptune | 24471-10-20 09:07 G | 10659201.62 | 10659201.88 | 10659202.15 | 0.0090 | 0.0004 |
| Jupiter | 24472-02-08 10:48 G | 10659312.76 | 10659312.95 | 10659313.16 | 0.0502 | 0.0258 |
| Neptune | 24472-10-21 21:07 G | 10659569.13 | 10659569.38 | 10659569.63 | 0.0089 | 0.0005 |
| Neptune | 24473-10-24 08:09 G | 10659936.58 | 10659936.84 | 10659937.12 | 0.0089 | 0.0009 |
| Neptune | 24474-10-27 00:57 G | 10660304.30 | 10660304.54 | 10660304.80 | 0.0089 | 0.0007 |
| Uranus | 24474-12-03 12:28 G | 10660341.80 | 10660342.02 | 10660342.24 | 0.0141 | 0.0067 |
| Neptune | 24475-10-29 08:24 G | 10660671.60 | 10660671.85 | 10660672.11 | 0.0089 | 0.0020 |
| Uranus | 24475-12-08 14:24 G | 10660711.84 | 10660712.10 | 10660712.36 | 0.0142 | 0.0011 |
| Neptune | 24476-10-31 03:50 G | 10661039.41 | 10661039.66 | 10661039.92 | 0.0089 | 0.0018 |
| Uranus | 24476-12-12 03:36 G | 10661081.45 | 10661081.65 | 10661081.89 | 0.0142 | 0.0070 |
| Jupiter | 24477-07-12 14:24 G | 10661293.89 | 10661294.10 | 10661294.32 | 0.0514 | 0.0227 |

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| Neptune | 24477-11-02 09:21 G | 10661406.67 | 10661406.89 | 10661407.15 | 0.0089 | 0.0031 |
| Uranus | 24477-12-17 08:09 G | 10661451.78 | 10661451.84 | 10661451.90 | 0.0143 | 0.0138 |
| Jupiter | 24478-08-17 04:04 G | 10661694.53 | 10661694.67 | 10661694.82 | 0.0529 | 0.0396 |
| Neptune | 24478-11-05 04:48 G | 10661774.47 | 10661774.70 | 10661774.96 | 0.0089 | 0.0031 |
| Neptune | 24479-11-07 12:14 G | 10662141.80 | 10662142.01 | 10662142.24 | 0.0089 | 0.0043 |
| Neptune | 24480-11-09 04:19 G | 10662509.45 | 10662509.68 | 10662509.92 | 0.0089 | 0.0043 |
| Neptune | 24481-11-11 15:07 G | 10662876.95 | 10662877.13 | 10662877.35 | 0.0089 | 0.0053 |
| Neptune | 24482-11-14 02:24 G | 10663244.41 | 10663244.60 | 10663244.83 | 0.0089 | 0.0053 |
| Jupiter | 24483-01-11 04:48 G | 10663302.48 | 10663302.70 | 10663302.92 | 0.0514 | 0.0206 |
| Neptune | 24483-11-16 18:57 G | 10663612.12 | 10663612.29 | 10663612.47 | 0.0089 | 0.0064 |
| Saturn | 24483-12-29 07:55 G | 10663654.59 | 10663654.83 | 10663655.09 | 0.0268 | 0.0016 |
| Jupiter | 24484-02-13 04:33 G | 10663700.50 | 10663700.69 | 10663700.87 | 0.0500 | 0.0285 |
| Neptune | 24484-11-18 01:55 G | 10663979.42 | 10663979.58 | 10663979.78 | 0.0089 | 0.0065 |
| Neptune | 24485-11-20 20:52 G | 10664347.25 | 10664347.37 | 10664347.53 | 0.0089 | 0.0075 |
| Neptune | 24486-11-23 01:55 G | 10664714.47 | 10664714.58 | 10664714.74 | 0.0089 | 0.0076 |
| Neptune | 24487-11-25 20:52 G | 10665082.30 | 10665082.37 | 10665082.48 | 0.0089 | 0.0083 |
| Neptune | 24488-11-27 03:21 G | 10665449.60 | 10665449.64 | 10665449.74 | 0.0089 | 0.0085 |
| Mars | 24489-04-23 14:38 G | 10665596.94 | 10665597.11 | 10665597.29 | 0.1588 | 0.0063 |
| Jupiter | 24489-07-17 11:31 G | 10665681.77 | 10665681.98 | 10665682.20 | 0.0516 | 0.0123 |
| Jupiter | 24490-08-22 07:26 G | 10666082.67 | 10666082.81 | 10666082.95 | 0.0531 | 0.0436 |
| Jupiter | 24495-01-16 00:57 G | 10667690.32 | 10667690.54 | 10667690.76 | 0.0512 | 0.0104 |
| Jupiter | 24496-02-17 11:31 G | 10668087.81 | 10668087.98 | 10668088.15 | 0.0498 | 0.0355 |
| Saturn | 24498-06-22 15:50 G | 10668943.99 | 10668944.16 | 10668944.35 | 0.0291 | 0.0203 |
| Saturn | 24499-07-06 20:52 G | 10669323.29 | 10669323.37 | 10669323.47 | 0.0291 | 0.0271 |
| Jupiter | 24501-07-23 11:45 G | 10670069.75 | 10670069.99 | 10670070.23 | 0.0518 | 0.0005 |
| Jupiter | 24507-01-21 15:36 G | 10672077.91 | 10672078.15 | 10672078.39 | 0.0510 | 0.0063 |
| Jupiter | 24508-02-22 18:00 G | 10672475.16 | 10672475.25 | 10672475.34 | 0.0496 | 0.0454 |
| Jupiter | 24512-06-24 08:38 G | 10674058.85 | 10674058.86 | 10674058.86 | 0.0505 | 0.0505 |
| Saturn | 24512-12-24 16:19 G | 10674241.99 | 10674242.18 | 10674242.40 | 0.0269 | 0.0141 |
| Uranus | 24513-05-30 01:12 G | 10674398.54 | 10674398.55 | 10674398.57 | 0.0138 | 0.0137 |

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| Jupiter | 24513-07-28 04:33 G | 10674457.47 | 10674457.69 | 10674457.92 | 0.0521 | 0.0055 |
| Saturn | 24514-01-05 16:48 G | 10674619.05 | 10674619.20 | 10674619.35 | 0.0269 | 0.0216 |
| Uranus | 24514-06-03 20:24 G | 10674768.16 | 10674768.35 | 10674768.57 | 0.0137 | 0.0085 |
| Uranus | 24515-06-08 02:52 G | 10675137.38 | 10675137.62 | 10675137.88 | 0.0137 | 0.0016 |
| Uranus | 24516-06-11 21:36 G | 10675507.16 | 10675507.40 | 10675507.64 | 0.0136 | 0.0047 |
| Uranus | 24517-06-16 02:09 G | 10675876.44 | 10675876.59 | 10675876.76 | 0.0136 | 0.0102 |
| Jupiter | 24517-12-23 04:04 G | 10676066.61 | 10676066.67 | 10676066.74 | 0.0523 | 0.0503 |
| Jupiter | 24519-01-25 23:45 G | 10676465.26 | 10676465.49 | 10676465.72 | 0.0508 | 0.0012 |
| Pluto | 24521-05-16 12:43 G | 10677306.76 | 10677307.03 | 10677307.29 | 0.0080 | 0.0002 |
| Jupiter | 24524-06-28 13:40 G | 10678445.94 | 10678446.07 | 10678446.21 | 0.0507 | 0.0411 |
| Jupiter | 24525-08-02 06:00 G | 10678845.52 | 10678845.75 | 10678845.98 | 0.0522 | 0.0092 |
| Saturn | 24528-07-01 15:36 G | 10679909.92 | 10679910.15 | 10679910.39 | 0.0292 | 0.0080 |
| Jupiter | 24529-12-27 17:02 G | 10680454.08 | 10680454.21 | 10680454.34 | 0.0522 | 0.0426 |
| Jupiter | 24531-01-30 20:24 G | 10680853.12 | 10680853.35 | 10680853.58 | 0.0506 | 0.0088 |
| Jupiter | 24536-07-03 12:14 G | 10682833.83 | 10682834.01 | 10682834.19 | 0.0509 | 0.0319 |
| Jupiter | 24537-08-06 20:52 G | 10683233.15 | 10683233.37 | 10683233.60 | 0.0524 | 0.0199 |
| Neptune | 24540-03-20 13:40 G | 10684189.96 | 10684190.07 | 10684190.17 | 0.0088 | 0.0079 |
| Neptune | 24541-03-22 16:33 G | 10684557.12 | 10684557.19 | 10684557.32 | 0.0088 | 0.0081 |
| Jupiter | 24542-01-01 22:04 G | 10684842.28 | 10684842.42 | 10684842.58 | 0.0520 | 0.0392 |
| Neptune | 24542-03-25 08:24 G | 10684924.70 | 10684924.85 | 10684925.02 | 0.0088 | 0.0069 |
| Saturn | 24542-12-31 18:43 G | 10685206.05 | 10685206.28 | 10685206.52 | 0.0268 | 0.0068 |
| Jupiter | 24543-02-04 03:07 G | 10685240.41 | 10685240.63 | 10685240.85 | 0.0504 | 0.0194 |
| Neptune | 24543-03-27 15:50 G | 10685292.02 | 10685292.16 | 10685292.32 | 0.0088 | 0.0070 |
| Neptune | 24544-03-29 02:09 G | 10685659.43 | 10685659.59 | 10685659.82 | 0.0088 | 0.0060 |
| Neptune | 24545-03-31 14:24 G | 10686026.94 | 10686027.10 | 10686027.30 | 0.0088 | 0.0061 |
| Neptune | 24546-04-02 20:24 G | 10686394.15 | 10686394.35 | 10686394.58 | 0.0088 | 0.0050 |
| Neptune | 24547-04-05 12:28 G | 10686761.83 | 10686762.02 | 10686762.24 | 0.0088 | 0.0051 |
| Neptune | 24548-04-06 15:50 G | 10687128.95 | 10687129.16 | 10687129.41 | 0.0088 | 0.0039 |
| Jupiter | 24548-07-07 20:24 G | 10687221.15 | 10687221.35 | 10687221.56 | 0.0511 | 0.0277 |
| Neptune | 24549-04-09 09:36 G | 10687496.67 | 10687496.90 | 10687497.13 | 0.0088 | 0.0039 |

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| Jupiter | 24549-08-12 01:55 G | 10687621.41 | 10687621.58 | 10687621.76 | 0.0527 | 0.0324 |
| Neptune | 24550-04-11 13:40 G | 10687863.83 | 10687864.07 | 10687864.31 | 0.0088 | 0.0027 |
| Neptune | 24551-04-14 04:19 G | 10688231.44 | 10688231.68 | 10688231.94 | 0.0088 | 0.0029 |
| Neptune | 24552-04-15 12:43 G | 10688598.80 | 10688599.03 | 10688599.28 | 0.0088 | 0.0017 |
| Neptune | 24553-04-17 22:33 G | 10688966.19 | 10688966.44 | 10688966.72 | 0.0088 | 0.0018 |
| Jupiter | 24554-01-06 12:28 G | 10689229.84 | 10689230.02 | 10689230.21 | 0.0517 | 0.0325 |
| Neptune | 24554-04-20 11:45 G | 10689333.74 | 10689333.99 | 10689334.24 | 0.0088 | 0.0005 |
| Jupiter | 24555-02-08 21:21 G | 10689628.20 | 10689628.39 | 10689628.59 | 0.0502 | 0.0243 |
| Neptune | 24555-04-22 17:02 G | 10689700.96 | 10689701.21 | 10689701.48 | 0.0088 | 0.0006 |
| Neptune | 24556-04-24 09:50 G | 10690068.66 | 10690068.91 | 10690069.17 | 0.0088 | 0.0007 |
| Neptune | 24557-04-26 13:40 G | 10690435.81 | 10690436.07 | 10690436.32 | 0.0088 | 0.0005 |
| Saturn | 24557-06-25 06:28 G | 10690495.56 | 10690495.77 | 10690495.99 | 0.0291 | 0.0136 |
| Uranus | 24557-11-30 11:16 G | 10690653.90 | 10690653.97 | 10690654.08 | 0.0141 | 0.0132 |
| Neptune | 24558-04-29 06:43 G | 10690803.53 | 10690803.78 | 10690804.05 | 0.0088 | 0.0018 |
| Uranus | 24558-12-05 01:12 G | 10691023.36 | 10691023.55 | 10691023.78 | 0.0141 | 0.0078 |
| Neptune | 24559-05-01 11:45 G | 10691170.75 | 10691170.99 | 10691171.25 | 0.0088 | 0.0016 |
| Mars | 24559-10-27 04:33 G | 10691349.60 | 10691349.69 | 10691349.78 | 0.1950 | 0.1711 |
| Uranus | 24559-12-10 02:24 G | 10691393.35 | 10691393.60 | 10691393.87 | 0.0142 | 0.0007 |
| Neptune | 24560-05-03 02:38 G | 10691538.36 | 10691538.61 | 10691538.86 | 0.0088 | 0.0029 |
| Jupiter | 24560-07-12 19:40 G | 10691609.12 | 10691609.32 | 10691609.52 | 0.0513 | 0.0234 |
| Uranus | 24560-12-13 16:19 G | 10691762.96 | 10691763.18 | 10691763.40 | 0.0142 | 0.0067 |
| Neptune | 24561-05-05 11:31 G | 10691905.76 | 10691905.98 | 10691906.23 | 0.0088 | 0.0028 |
| Jupiter | 24561-08-17 04:33 G | 10692009.53 | 10692009.69 | 10692009.87 | 0.0529 | 0.0384 |
| Uranus | 24561-12-18 19:26 G | 10692133.29 | 10692133.31 | 10692133.36 | 0.0143 | 0.0141 |
| Neptune | 24562-05-07 21:21 G | 10692273.16 | 10692273.39 | 10692273.63 | 0.0088 | 0.0040 |
| Neptune | 24563-05-10 11:31 G | 10692640.75 | 10692640.98 | 10692641.20 | 0.0088 | 0.0038 |
| Neptune | 24564-05-11 16:04 G | 10693007.98 | 10693008.17 | 10693008.40 | 0.0088 | 0.0051 |
| Neptune | 24565-05-14 09:21 G | 10693375.70 | 10693375.89 | 10693376.12 | 0.0088 | 0.0049 |
| Jupiter | 24566-01-11 07:55 G | 10693617.63 | 10693617.83 | 10693618.03 | 0.0514 | 0.0209 |
| Neptune | 24566-05-16 13:40 G | 10693742.89 | 10693743.07 | 10693743.25 | 0.0088 | 0.0062 |

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| Jupiter | 24567-02-13 01:40 G | 10694015.37 | 10694015.57 | 10694015.78 | 0.0500 | 0.0273 |
| Neptune | 24567-05-19 06:28 G | 10694110.60 | 10694110.77 | 10694110.98 | 0.0088 | 0.0060 |
| Mars | 24568-04-26 11:45 G | 10694453.95 | 10694453.99 | 10694454.02 | 0.1589 | 0.1559 |
| Neptune | 24568-05-20 12:14 G | 10694477.89 | 10694478.01 | 10694478.16 | 0.0088 | 0.0073 |
| Neptune | 24569-05-23 02:52 G | 10694845.46 | 10694845.62 | 10694845.79 | 0.0088 | 0.0070 |
| Neptune | 24570-05-25 12:43 G | 10695212.98 | 10695213.03 | 10695213.14 | 0.0088 | 0.0083 |
| Neptune | 24571-05-27 22:48 G | 10695580.36 | 10695580.45 | 10695580.58 | 0.0088 | 0.0080 |
| Saturn | 24571-12-27 00:57 G | 10695793.31 | 10695793.54 | 10695793.78 | 0.0269 | 0.0086 |
| Jupiter | 24572-07-17 15:50 G | 10695996.92 | 10695997.16 | 10695997.40 | 0.0516 | 0.0124 |
| Saturn | 24573-01-06 20:24 G | 10696170.32 | 10696170.35 | 10696170.39 | 0.0269 | 0.0265 |
| Jupiter | 24573-08-22 05:16 G | 10696397.60 | 10696397.72 | 10696397.86 | 0.0531 | 0.0429 |
| Jupiter | 24578-01-16 00:43 G | 10698005.30 | 10698005.53 | 10698005.77 | 0.0512 | 0.0114 |
| Jupiter | 24579-02-17 12:00 G | 10698402.85 | 10698403.00 | 10698403.17 | 0.0498 | 0.0350 |
| Jupiter | 24584-07-22 04:48 G | 10700384.47 | 10700384.70 | 10700384.92 | 0.0517 | 0.0022 |
| Jupiter | 24585-08-27 09:50 G | 10700785.90 | 10700785.91 | 10700785.93 | 0.0532 | 0.0530 |
| Saturn | 24587-07-04 05:31 G | 10701461.52 | 10701461.73 | 10701461.95 | 0.0292 | 0.0148 |
| Jupiter | 24590-01-20 11:02 G | 10702392.74 | 10702392.96 | 10702393.19 | 0.0511 | 0.0076 |
| Jupiter | 24591-02-22 00:00 G | 10702790.40 | 10702790.50 | 10702790.61 | 0.0497 | 0.0447 |
| Jupiter | 24596-07-27 06:43 G | 10704772.54 | 10704772.78 | 10704773.02 | 0.0519 | 0.0034 |
| Uranus | 24598-06-04 09:07 G | 10705449.67 | 10705449.88 | 10705450.12 | 0.0137 | 0.0071 |
| Uranus | 24599-06-08 16:19 G | 10705818.94 | 10705819.18 | 10705819.43 | 0.0137 | 0.0015 |
| Uranus | 24600-06-13 10:04 G | 10706188.69 | 10706188.92 | 10706189.18 | 0.0136 | 0.0049 |
| Saturn | 24600-12-22 02:24 G | 10706380.48 | 10706380.60 | 10706380.73 | 0.0269 | 0.0231 |
| Jupiter | 24600-12-22 20:09 G | 10706381.31 | 10706381.34 | 10706381.39 | 0.0525 | 0.0514 |
| Uranus | 24601-06-17 15:07 G | 10706558.01 | 10706558.13 | 10706558.27 | 0.0136 | 0.0116 |
| Saturn | 24602-01-03 07:40 G | 10706757.62 | 10706757.82 | 10706758.04 | 0.0268 | 0.0121 |
| Jupiter | 24602-01-26 10:04 G | 10706780.68 | 10706780.92 | 10706781.15 | 0.0509 | 0.0023 |
| Jupiter | 24607-06-29 21:36 G | 10708761.28 | 10708761.40 | 10708761.54 | 0.0506 | 0.0415 |
| Jupiter | 24608-08-01 20:24 G | 10709160.12 | 10709160.35 | 10709160.59 | 0.0522 | 0.0080 |
| Jupiter | 24612-12-28 03:36 G | 10710769.53 | 10710769.65 | 10710769.78 | 0.0522 | 0.0433 |

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| Jupiter | 24614-01-30 17:45 G | 10711168.01 | 10711168.24 | 10711168.47 | 0.0506 | 0.0084 |
| Saturn | 24616-06-28 00:57 G | 10712047.31 | 10712047.54 | 10712047.78 | 0.0291 | 0.0066 |
| Jupiter | 24619-07-04 06:43 G | 10713148.61 | 10713148.78 | 10713148.97 | 0.0508 | 0.0327 |
| Jupiter | 24620-08-07 03:36 G | 10713548.44 | 10713548.65 | 10713548.86 | 0.0524 | 0.0196 |
| Neptune | 24622-09-21 05:45 G | 10714323.69 | 10714323.74 | 10714323.82 | 0.0090 | 0.0086 |
| Neptune | 24623-09-23 23:31 G | 10714691.37 | 10714691.48 | 10714691.62 | 0.0090 | 0.0079 |
| Neptune | 24624-09-25 10:04 G | 10715058.80 | 10715058.92 | 10715059.07 | 0.0090 | 0.0075 |
| Jupiter | 24625-01-01 16:33 G | 10715157.04 | 10715157.19 | 10715157.35 | 0.0520 | 0.0397 |
| Neptune | 24625-09-28 00:00 G | 10715426.35 | 10715426.50 | 10715426.69 | 0.0090 | 0.0069 |
| Jupiter | 24626-02-04 10:48 G | 10715555.74 | 10715555.95 | 10715556.16 | 0.0504 | 0.0186 |
| Neptune | 24626-09-30 14:52 G | 10715793.97 | 10715794.12 | 10715794.32 | 0.0090 | 0.0065 |
| Neptune | 24627-10-03 00:28 G | 10716161.32 | 10716161.52 | 10716161.72 | 0.0090 | 0.0058 |
| Neptune | 24628-10-04 18:57 G | 10716529.09 | 10716529.29 | 10716529.51 | 0.0090 | 0.0052 |
| Neptune | 24629-10-07 00:57 G | 10716896.34 | 10716896.54 | 10716896.78 | 0.0090 | 0.0047 |
| Neptune | 24630-10-09 21:07 G | 10717264.17 | 10717264.38 | 10717264.63 | 0.0090 | 0.0040 |
| Saturn | 24630-12-29 04:48 G | 10717344.45 | 10717344.70 | 10717344.95 | 0.0269 | 0.0037 |
| Jupiter | 24631-07-09 04:19 G | 10717536.50 | 10717536.68 | 10717536.87 | 0.0511 | 0.0295 |
| Neptune | 24631-10-12 03:36 G | 10717631.43 | 10717631.65 | 10717631.90 | 0.0090 | 0.0036 |
| Jupiter | 24632-08-12 02:09 G | 10717936.40 | 10717936.59 | 10717936.79 | 0.0526 | 0.0312 |
| Neptune | 24632-10-13 22:04 G | 10717999.18 | 10717999.42 | 10717999.68 | 0.0090 | 0.0028 |
| Neptune | 24633-10-16 07:40 G | 10718366.59 | 10718366.82 | 10718367.07 | 0.0090 | 0.0025 |
| Neptune | 24634-10-18 22:04 G | 10718734.17 | 10718734.42 | 10718734.70 | 0.0090 | 0.0016 |
| Neptune | 24635-10-21 12:43 G | 10719101.79 | 10719102.03 | 10719102.28 | 0.0090 | 0.0012 |
| Neptune | 24636-10-22 22:33 G | 10719469.18 | 10719469.44 | 10719469.71 | 0.0090 | 0.0003 |
| Jupiter | 24637-01-06 15:36 G | 10719544.98 | 10719545.15 | 10719545.32 | 0.0517 | 0.0332 |
| Neptune | 24637-10-25 16:33 G | 10719836.94 | 10719837.19 | 10719837.45 | 0.0090 | 0.0001 |
| Jupiter | 24638-02-08 18:00 G | 10719943.04 | 10719943.25 | 10719943.47 | 0.0502 | 0.0230 |
| Neptune | 24638-10-27 22:48 G | 10720204.20 | 10720204.45 | 10720204.71 | 0.0089 | 0.0009 |
| Neptune | 24639-10-30 18:28 G | 10720572.02 | 10720572.27 | 10720572.53 | 0.0089 | 0.0011 |
| Neptune | 24640-11-01 00:14 G | 10720939.28 | 10720939.51 | 10720939.77 | 0.0089 | 0.0023 |

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| Neptune | 24641-11-03 18:43 G | 10721307.03 | 10721307.28 | 10721307.54 | 0.0089 | 0.0024 |
| Uranus | 24641-12-01 23:45 G | 10721335.46 | 10721335.49 | 10721335.57 | 0.0141 | 0.0138 |
| Neptune | 24642-11-06 02:52 G | 10721674.41 | 10721674.62 | 10721674.87 | 0.0089 | 0.0036 |
| Uranus | 24642-12-06 14:52 G | 10721704.89 | 10721705.12 | 10721705.35 | 0.0141 | 0.0057 |
| Jupiter | 24643-07-13 19:40 G | 10721924.11 | 10721924.32 | 10721924.53 | 0.0512 | 0.0247 |
| Neptune | 24643-11-08 17:31 G | 10722042.00 | 10722042.23 | 10722042.49 | 0.0089 | 0.0036 |
| Uranus | 24643-12-11 14:52 G | 10722074.86 | 10722075.12 | 10722075.38 | 0.0142 | 0.0002 |
| Jupiter | 24644-08-16 22:48 G | 10722324.29 | 10722324.45 | 10722324.61 | 0.0528 | 0.0365 |
| Neptune | 24644-11-10 06:57 G | 10722409.60 | 10722409.79 | 10722410.02 | 0.0089 | 0.0047 |
| Uranus | 24644-12-15 05:16 G | 10722444.53 | 10722444.72 | 10722444.94 | 0.0142 | 0.0081 |
| Saturn | 24645-06-22 11:45 G | 10722633.88 | 10722633.99 | 10722634.12 | 0.0291 | 0.0257 |
| Neptune | 24645-11-12 16:48 G | 10722776.99 | 10722777.20 | 10722777.45 | 0.0089 | 0.0047 |
| Saturn | 24646-07-06 15:36 G | 10723012.98 | 10723013.15 | 10723013.32 | 0.0292 | 0.0214 |
| Neptune | 24646-11-15 10:19 G | 10723144.76 | 10723144.93 | 10723145.14 | 0.0089 | 0.0059 |
| Neptune | 24647-11-17 16:19 G | 10723512.01 | 10723512.18 | 10723512.40 | 0.0089 | 0.0059 |
| Neptune | 24648-11-19 12:00 G | 10723879.86 | 10723880.00 | 10723880.18 | 0.0089 | 0.0071 |
| Jupiter | 24649-01-11 07:40 G | 10723932.60 | 10723932.82 | 10723933.04 | 0.0516 | 0.0214 |
| Neptune | 24649-11-21 17:45 G | 10724247.09 | 10724247.24 | 10724247.42 | 0.0089 | 0.0069 |
| Jupiter | 24650-02-13 06:28 G | 10724330.58 | 10724330.77 | 10724330.96 | 0.0501 | 0.0264 |
| Neptune | 24650-11-24 12:00 G | 10724614.90 | 10724615.00 | 10724615.12 | 0.0089 | 0.0081 |
| Neptune | 24651-11-26 19:55 G | 10724982.22 | 10724982.33 | 10724982.45 | 0.0089 | 0.0078 |
| Neptune | 24653-11-30 22:48 G | 10725717.45 | 10725717.45 | 10725717.47 | 0.0089 | 0.0089 |
| Jupiter | 24655-07-18 10:04 G | 10726311.70 | 10726311.92 | 10726312.14 | 0.0514 | 0.0140 |
| Jupiter | 24656-08-22 04:19 G | 10726712.54 | 10726712.68 | 10726712.84 | 0.0530 | 0.0407 |
| Saturn | 24659-12-24 14:09 G | 10727931.92 | 10727932.09 | 10727932.27 | 0.0269 | 0.0181 |
| Saturn | 24661-01-04 17:31 G | 10728309.04 | 10728309.23 | 10728309.42 | 0.0268 | 0.0171 |
| Jupiter | 24661-01-15 22:19 G | 10728320.21 | 10728320.43 | 10728320.65 | 0.0514 | 0.0125 |
| Jupiter | 24662-02-17 19:40 G | 10728718.15 | 10728718.32 | 10728718.50 | 0.0499 | 0.0345 |
| Jupiter | 24667-07-23 09:50 G | 10730699.67 | 10730699.91 | 10730700.15 | 0.0517 | 0.0031 |
| Jupiter | 24668-08-26 23:45 G | 10731100.44 | 10731100.49 | 10731100.54 | 0.0532 | 0.0517 |

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| Jupiter | 24673-01-20 22:48 G | 10732708.22 | 10732708.45 | 10732708.68 | 0.0511 | 0.0085 |
| Jupiter | 24674-02-22 01:26 G | 10733105.46 | 10733105.56 | 10733105.66 | 0.0497 | 0.0446 |
| Saturn | 24675-06-30 18:57 G | 10733599.06 | 10733599.29 | 10733599.53 | 0.0291 | 0.0006 |
| Jupiter | 24679-07-28 00:57 G | 10735087.31 | 10735087.54 | 10735087.78 | 0.0519 | 0.0021 |
| Pluto | 24680-11-17 05:31 G | 10735565.50 | 10735565.73 | 10735566.00 | 0.0064 | 0.0021 |
| Uranus | 24681-06-01 01:12 G | 10735761.49 | 10735761.55 | 10735761.65 | 0.0138 | 0.0130 |
| Pluto | 24681-11-18 21:07 G | 10735932.31 | 10735932.38 | 10735932.49 | 0.0064 | 0.0060 |
| Uranus | 24682-06-05 19:12 G | 10736131.10 | 10736131.30 | 10736131.53 | 0.0137 | 0.0078 |
| Uranus | 24683-06-10 03:21 G | 10736500.39 | 10736500.64 | 10736500.89 | 0.0137 | 0.0006 |
| Jupiter | 24683-12-23 06:57 G | 10736696.76 | 10736696.79 | 10736696.84 | 0.0525 | 0.0516 |
| Uranus | 24684-06-13 20:38 G | 10736870.13 | 10736870.36 | 10736870.60 | 0.0136 | 0.0055 |
| Jupiter | 24685-01-25 06:00 G | 10737095.51 | 10737095.75 | 10737095.98 | 0.0509 | 0.0031 |
| Uranus | 24685-06-18 02:24 G | 10737239.48 | 10737239.60 | 10737239.76 | 0.0136 | 0.0113 |
| Jupiter | 24686-02-26 15:07 G | 10737493.12 | 10737493.13 | 10737493.16 | 0.0495 | 0.0494 |
| Saturn | 24689-12-30 08:24 G | 10738895.61 | 10738895.85 | 10738896.10 | 0.0269 | 0.0012 |
| Jupiter | 24690-06-28 18:43 G | 10739076.16 | 10739076.28 | 10739076.42 | 0.0506 | 0.0421 |
| Jupiter | 24691-08-02 06:28 G | 10739475.54 | 10739475.77 | 10739476.00 | 0.0522 | 0.0071 |
| Mars | 24694-04-25 08:38 G | 10740472.66 | 10740472.86 | 10740473.05 | 0.1586 | 0.0313 |
| Jupiter | 24695-12-27 20:52 G | 10741084.25 | 10741084.37 | 10741084.50 | 0.0522 | 0.0441 |
| Jupiter | 24697-01-30 01:55 G | 10741483.35 | 10741483.58 | 10741483.80 | 0.0507 | 0.0084 |
| Jupiter | 24702-07-04 14:38 G | 10743463.94 | 10743464.11 | 10743464.28 | 0.0508 | 0.0342 |
| Jupiter | 24703-08-07 22:48 G | 10743863.23 | 10743863.45 | 10743863.68 | 0.0523 | 0.0178 |
| Neptune | 24704-03-21 15:21 G | 10744090.08 | 10744090.14 | 10744090.24 | 0.0088 | 0.0083 |
| Saturn | 24704-06-24 18:28 G | 10744185.10 | 10744185.27 | 10744185.46 | 0.0291 | 0.0200 |
| Neptune | 24705-03-24 05:31 G | 10744457.68 | 10744457.73 | 10744457.81 | 0.0088 | 0.0085 |
| Saturn | 24705-07-09 01:55 G | 10744564.52 | 10744564.58 | 10744564.67 | 0.0292 | 0.0277 |
| Neptune | 24706-03-26 13:12 G | 10744824.95 | 10744825.05 | 10744825.22 | 0.0088 | 0.0074 |
| Neptune | 24707-03-28 22:33 G | 10745192.34 | 10745192.44 | 10745192.60 | 0.0088 | 0.0076 |
| Jupiter | 24708-01-02 19:40 G | 10745472.20 | 10745472.32 | 10745472.46 | 0.0521 | 0.0415 |
| Neptune | 24708-03-30 12:00 G | 10745559.85 | 10745560.00 | 10745560.20 | 0.0088 | 0.0064 |

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| Jupiter | 24709-02-04 09:50 G | 10745870.68 | 10745870.91 | 10745871.13 | 0.0505 | 0.0176 |
| Neptune | 24709-04-01 17:02 G | 10745927.07 | 10745927.21 | 10745927.42 | 0.0088 | 0.0066 |
| Neptune | 24710-04-04 10:33 G | 10746294.74 | 10746294.94 | 10746295.15 | 0.0088 | 0.0052 |
| Neptune | 24711-04-06 13:26 G | 10746661.89 | 10746662.06 | 10746662.29 | 0.0088 | 0.0055 |
| Neptune | 24712-04-08 06:43 G | 10747029.57 | 10747029.78 | 10747030.03 | 0.0088 | 0.0042 |
| Neptune | 24713-04-10 11:45 G | 10747396.79 | 10747396.99 | 10747397.22 | 0.0088 | 0.0044 |
| Neptune | 24714-04-13 01:26 G | 10747764.32 | 10747764.56 | 10747764.82 | 0.0088 | 0.0031 |
| Jupiter | 24714-07-09 04:48 G | 10747851.52 | 10747851.70 | 10747851.90 | 0.0509 | 0.0309 |
| Neptune | 24715-04-15 10:19 G | 10748131.71 | 10748131.93 | 10748132.17 | 0.0088 | 0.0032 |
| Jupiter | 24715-08-12 22:33 G | 10748251.26 | 10748251.44 | 10748251.63 | 0.0525 | 0.0295 |
| Neptune | 24716-04-16 18:43 G | 10748499.03 | 10748499.28 | 10748499.55 | 0.0088 | 0.0019 |
| Neptune | 24717-04-19 09:07 G | 10748866.64 | 10748866.88 | 10748867.13 | 0.0088 | 0.0020 |
| Neptune | 24718-04-21 13:55 G | 10749233.82 | 10749234.08 | 10749234.34 | 0.0088 | 0.0008 |
| Saturn | 24718-12-26 23:31 G | 10749483.27 | 10749483.48 | 10749483.69 | 0.0268 | 0.0134 |
| Neptune | 24719-04-24 07:12 G | 10749601.54 | 10749601.80 | 10749602.06 | 0.0088 | 0.0009 |
| Jupiter | 24720-01-07 15:36 G | 10749859.97 | 10749860.15 | 10749860.34 | 0.0519 | 0.0338 |
| Saturn | 24720-01-07 20:09 G | 10749860.21 | 10749860.34 | 10749860.50 | 0.0268 | 0.0219 * |
| Neptune | 24720-04-25 10:33 G | 10749968.69 | 10749968.94 | 10749969.20 | 0.0088 | 0.0004 |
| Jupiter | 24721-02-09 00:43 G | 10750258.33 | 10750258.53 | 10750258.74 | 0.0503 | 0.0219 |
| Neptune | 24721-04-28 03:21 G | 10750336.38 | 10750336.64 | 10750336.91 | 0.0088 | 0.0003 |
| Neptune | 24722-04-30 09:07 G | 10750703.65 | 10750703.88 | 10750704.14 | 0.0088 | 0.0016 |
| Neptune | 24723-05-02 22:33 G | 10751071.17 | 10751071.44 | 10751071.70 | 0.0088 | 0.0015 |
| Neptune | 24724-05-04 08:24 G | 10751438.62 | 10751438.85 | 10751439.09 | 0.0088 | 0.0027 |
| Neptune | 24725-05-06 16:33 G | 10751805.94 | 10751806.19 | 10751806.45 | 0.0088 | 0.0026 |
| Uranus | 24725-12-03 13:55 G | 10752016.97 | 10752017.08 | 10752017.23 | 0.0141 | 0.0122 |
| Neptune | 24726-05-09 07:55 G | 10752173.61 | 10752173.83 | 10752174.06 | 0.0088 | 0.0038 |
| Jupiter | 24726-07-13 18:00 G | 10752239.06 | 10752239.25 | 10752239.45 | 0.0512 | 0.0257 |
| Uranus | 24726-12-08 06:00 G | 10752386.54 | 10752386.75 | 10752386.98 | 0.0141 | 0.0066 |
| Neptune | 24727-05-11 12:14 G | 10752540.79 | 10752541.01 | 10752541.26 | 0.0088 | 0.0038 |
| Jupiter | 24727-08-18 01:55 G | 10752639.40 | 10752639.58 | 10752639.76 | 0.0528 | 0.0344 |

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| Uranus | 24727-12-13 05:31 G | 10752756.47 | 10752756.73 | 10752756.99 | 0.0142 | 0.0018 |
| Neptune | 24728-05-13 06:00 G | 10752908.56 | 10752908.75 | 10752908.98 | 0.0088 | 0.0050 |
| Uranus | 24728-12-16 20:38 G | 10753126.16 | 10753126.36 | 10753126.57 | 0.0142 | 0.0078 |
| Neptune | 24729-05-15 09:50 G | 10753275.72 | 10753275.91 | 10753276.14 | 0.0088 | 0.0050 |
| Neptune | 24730-05-18 03:07 G | 10753643.44 | 10753643.63 | 10753643.83 | 0.0088 | 0.0060 |
| Neptune | 24731-05-20 09:21 G | 10754010.73 | 10754010.89 | 10754011.09 | 0.0088 | 0.0061 |
| Jupiter | 24732-01-12 09:36 G | 10754247.70 | 10754247.90 | 10754248.11 | 0.0516 | 0.0217 |
| Neptune | 24732-05-21 21:50 G | 10754378.28 | 10754378.41 | 10754378.60 | 0.0088 | 0.0071 |
| Jupiter | 24733-02-13 15:21 G | 10754645.94 | 10754646.14 | 10754646.35 | 0.0501 | 0.0257 |
| Neptune | 24733-05-24 08:52 G | 10754745.76 | 10754745.87 | 10754746.05 | 0.0088 | 0.0072 |
| Neptune | 24734-05-26 17:02 G | 10755113.14 | 10755113.21 | 10755113.33 | 0.0088 | 0.0082 |
| Saturn | 24734-07-03 06:43 G | 10755150.54 | 10755150.78 | 10755151.03 | 0.0291 | 0.0063 |
| Neptune | 24735-05-29 09:07 G | 10755480.81 | 10755480.88 | 10755480.99 | 0.0088 | 0.0082 |
| Jupiter | 24738-07-18 18:28 G | 10756627.04 | 10756627.27 | 10756627.50 | 0.0514 | 0.0142 |
| Jupiter | 24739-08-22 23:16 G | 10757027.32 | 10757027.47 | 10757027.63 | 0.0530 | 0.0396 |
| Jupiter | 24744-01-17 09:50 G | 10758635.69 | 10758635.91 | 10758636.14 | 0.0514 | 0.0133 |
| Jupiter | 24745-02-17 20:09 G | 10759033.18 | 10759033.34 | 10759033.51 | 0.0499 | 0.0346 |
| Saturn | 24749-01-01 15:50 G | 10760446.93 | 10760447.16 | 10760447.39 | 0.0268 | 0.0057 |
| Jupiter | 24750-07-23 08:09 G | 10761014.60 | 10761014.84 | 10761015.07 | 0.0517 | 0.0040 |
| Jupiter | 24751-08-28 11:31 G | 10761415.93 | 10761415.98 | 10761416.04 | 0.0532 | 0.0513 |
| Jupiter | 24756-01-21 18:43 G | 10763023.06 | 10763023.28 | 10763023.51 | 0.0512 | 0.0096 |
| Jupiter | 24757-02-22 12:57 G | 10763420.94 | 10763421.04 | 10763421.15 | 0.0497 | 0.0443 |
| Jupiter | 24762-07-28 10:19 G | 10765402.70 | 10765402.93 | 10765403.16 | 0.0518 | 0.0006 |
| Saturn | 24763-06-27 01:55 G | 10765736.38 | 10765736.58 | 10765736.80 | 0.0291 | 0.0146 |
| Uranus | 24766-06-07 07:55 G | 10766812.61 | 10766812.83 | 10766813.07 | 0.0137 | 0.0062 |
| Uranus | 24767-06-11 17:02 G | 10767181.97 | 10767182.21 | 10767182.46 | 0.0137 | 0.0008 |
| Jupiter | 24768-01-26 14:52 G | 10767410.89 | 10767411.12 | 10767411.35 | 0.0510 | 0.0037 |
| Uranus | 24768-06-15 09:21 G | 10767551.66 | 10767551.89 | 10767552.14 | 0.0136 | 0.0058 |
| Jupiter | 24769-02-26 13:55 G | 10767808.04 | 10767808.08 | 10767808.13 | 0.0496 | 0.0485 |
| Uranus | 24769-06-19 16:04 G | 10767921.08 | 10767921.17 | 10767921.28 | 0.0136 | 0.0124 |

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| Pluto | 24770-05-20 22:19 G | 10768256.27 | 10768256.43 | 10768256.64 | 0.0079 | 0.0058 |
| Mars | 24773-04-28 08:38 G | 10769329.70 | 10769329.86 | 10769330.03 | 0.1586 | 0.0718 |
| Jupiter | 24773-06-29 05:31 G | 10769391.61 | 10769391.73 | 10769391.86 | 0.0505 | 0.0420 |
| Jupiter | 24774-08-02 02:24 G | 10769790.36 | 10769790.60 | 10769790.84 | 0.0520 | 0.0056 |
| Saturn | 24777-12-28 00:43 G | 10771034.29 | 10771034.53 | 10771034.77 | 0.0268 | 0.0091 |
| Jupiter | 24778-12-28 02:09 G | 10771399.49 | 10771399.59 | 10771399.71 | 0.0524 | 0.0458 |
| Saturn | 24779-01-08 19:40 G | 10771411.28 | 10771411.32 | 10771411.38 | 0.0268 | 0.0261 |
| Jupiter | 24780-01-31 02:09 G | 10771798.35 | 10771798.59 | 10771798.83 | 0.0508 | 0.0078 |
| Jupiter | 24785-07-03 16:19 G | 10773779.01 | 10773779.18 | 10773779.36 | 0.0507 | 0.0347 |
| Jupiter | 24786-08-07 01:12 G | 10774178.33 | 10774178.55 | 10774178.76 | 0.0523 | 0.0172 |
| Neptune | 24786-09-21 13:12 G | 10774224.00 | 10774224.05 | 10774224.15 | 0.0090 | 0.0086 |
| Neptune | 24787-09-24 01:26 G | 10774591.56 | 10774591.56 | 10774591.60 | 0.0090 | 0.0089 |
| Neptune | 24788-09-25 13:12 G | 10774958.93 | 10774959.05 | 10774959.22 | 0.0090 | 0.0076 |
| Neptune | 24789-09-28 05:45 G | 10775326.64 | 10775326.74 | 10775326.88 | 0.0090 | 0.0079 |
| Neptune | 24790-09-30 13:40 G | 10775693.90 | 10775694.07 | 10775694.27 | 0.0090 | 0.0064 |
| Jupiter | 24791-01-02 00:14 G | 10775787.37 | 10775787.51 | 10775787.65 | 0.0522 | 0.0423 |
| Neptune | 24791-10-03 09:36 G | 10776061.74 | 10776061.90 | 10776062.07 | 0.0090 | 0.0067 |
| Jupiter | 24792-02-04 19:26 G | 10776186.10 | 10776186.31 | 10776186.52 | 0.0506 | 0.0171 |
| Neptune | 24792-10-04 15:36 G | 10776428.95 | 10776429.15 | 10776429.37 | 0.0090 | 0.0052 |
| Saturn | 24793-07-04 10:33 G | 10776701.71 | 10776701.94 | 10776702.18 | 0.0292 | 0.0118 |
| Neptune | 24793-10-07 11:16 G | 10776796.79 | 10776796.97 | 10776797.20 | 0.0090 | 0.0056 |
| Neptune | 24794-10-09 18:43 G | 10777164.07 | 10777164.28 | 10777164.52 | 0.0090 | 0.0041 |
| Neptune | 24795-10-12 11:45 G | 10777531.78 | 10777531.99 | 10777532.25 | 0.0090 | 0.0044 |
| Neptune | 24796-10-13 23:16 G | 10777899.25 | 10777899.47 | 10777899.72 | 0.0090 | 0.0029 |
| Jupiter | 24797-07-08 06:57 G | 10778166.62 | 10778166.79 | 10778166.98 | 0.0509 | 0.0319 |
| Neptune | 24797-10-16 11:31 G | 10778266.75 | 10778266.98 | 10778267.25 | 0.0090 | 0.0031 |
| Jupiter | 24798-08-12 04:48 G | 10778566.50 | 10778566.70 | 10778566.91 | 0.0525 | 0.0285 |
| Neptune | 24798-10-19 03:21 G | 10778634.40 | 10778634.64 | 10778634.90 | 0.0090 | 0.0016 |
| Neptune | 24799-10-21 11:31 G | 10779001.73 | 10779001.98 | 10779002.25 | 0.0090 | 0.0019 |
| Neptune | 24800-10-23 07:12 G | 10779369.55 | 10779369.80 | 10779370.06 | 0.0090 | 0.0003 |

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| Neptune | 24801-10-25 13:26 G | 10779736.80 | 10779737.06 | 10779737.32 | 0.0089 | 0.0006 |
| Neptune | 24802-10-28 09:21 G | 10780104.63 | 10780104.89 | 10780105.15 | 0.0089 | 0.0010 |
| Jupiter | 24803-01-06 19:40 G | 10780175.16 | 10780175.32 | 10780175.50 | 0.0519 | 0.0343 |
| Neptune | 24803-10-30 16:19 G | 10780471.93 | 10780472.18 | 10780472.43 | 0.0089 | 0.0007 |
| Jupiter | 24804-02-09 09:36 G | 10780573.68 | 10780573.90 | 10780574.12 | 0.0503 | 0.0206 |
| Neptune | 24804-11-01 09:36 G | 10780839.66 | 10780839.90 | 10780840.18 | 0.0089 | 0.0023 |
| Neptune | 24805-11-03 19:55 G | 10781207.10 | 10781207.33 | 10781207.59 | 0.0089 | 0.0021 |
| Neptune | 24806-11-06 09:07 G | 10781574.63 | 10781574.88 | 10781575.13 | 0.0089 | 0.0034 |
| Saturn | 24806-12-22 18:14 G | 10781621.20 | 10781621.26 | 10781621.33 | 0.0269 | 0.0257 |
| Neptune | 24807-11-08 23:31 G | 10781942.26 | 10781942.48 | 10781942.72 | 0.0089 | 0.0032 |
| Saturn | 24808-01-03 22:33 G | 10781998.22 | 10781998.44 | 10781998.67 | 0.0268 | 0.0098 |
| Neptune | 24808-11-10 07:40 G | 10782309.61 | 10782309.82 | 10782310.06 | 0.0089 | 0.0047 |
| Jupiter | 24809-07-13 05:45 G | 10782554.54 | 10782554.74 | 10782554.95 | 0.0512 | 0.0260 |
| Neptune | 24809-11-13 02:24 G | 10782677.39 | 10782677.60 | 10782677.82 | 0.0089 | 0.0045 |
| Uranus | 24809-12-04 02:52 G | 10782698.52 | 10782698.62 | 10782698.76 | 0.0141 | 0.0126 |
| Jupiter | 24810-08-17 01:26 G | 10782954.38 | 10782954.56 | 10782954.74 | 0.0527 | 0.0330 |
| Neptune | 24810-11-15 07:55 G | 10783044.65 | 10783044.83 | 10783045.04 | 0.0089 | 0.0059 |
| Uranus | 24810-12-08 19:55 G | 10783068.11 | 10783068.33 | 10783068.57 | 0.0141 | 0.0046 |
| Neptune | 24811-11-18 03:36 G | 10783412.46 | 10783412.65 | 10783412.87 | 0.0089 | 0.0056 |
| Uranus | 24811-12-13 18:14 G | 10783438.00 | 10783438.26 | 10783438.53 | 0.0142 | 0.0011 |
| Neptune | 24812-11-19 09:50 G | 10783779.77 | 10783779.91 | 10783780.09 | 0.0089 | 0.0070 |
| Uranus | 24812-12-17 10:33 G | 10783807.77 | 10783807.94 | 10783808.14 | 0.0142 | 0.0093 |
| Neptune | 24813-11-22 03:21 G | 10784147.49 | 10784147.64 | 10784147.83 | 0.0089 | 0.0068 |
| Neptune | 24814-11-24 12:57 G | 10784514.97 | 10784515.04 | 10784515.17 | 0.0089 | 0.0081 |
| Jupiter | 24815-01-11 20:52 G | 10784563.16 | 10784563.37 | 10784563.59 | 0.0517 | 0.0220 |
| Neptune | 24815-11-27 02:24 G | 10784882.50 | 10784882.60 | 10784882.74 | 0.0089 | 0.0080 |
| Jupiter | 24816-02-13 17:02 G | 10784961.02 | 10784961.21 | 10784961.41 | 0.0501 | 0.0250 |
| Jupiter | 24821-07-17 17:31 G | 10786942.01 | 10786942.23 | 10786942.46 | 0.0513 | 0.0147 |
| Saturn | 24822-06-28 10:33 G | 10787287.72 | 10787287.94 | 10787288.17 | 0.0292 | 0.0095 |
| Jupiter | 24822-08-22 09:21 G | 10787342.73 | 10787342.89 | 10787343.05 | 0.0529 | 0.0382 |

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| Jupiter | 24827-01-16 04:19 G | 10788950.46 | 10788950.68 | 10788950.90 | 0.0515 | 0.0145 |
| Jupiter | 24828-02-18 09:21 G | 10789348.73 | 10789348.89 | 10789349.06 | 0.0500 | 0.0345 |
| Jupiter | 24833-07-22 19:26 G | 10791330.08 | 10791330.31 | 10791330.54 | 0.0515 | 0.0050 |
| Jupiter | 24834-08-27 04:33 G | 10791730.60 | 10791730.69 | 10791730.77 | 0.0530 | 0.0493 |
| Saturn | 24836-12-28 22:48 G | 10792585.21 | 10792585.45 | 10792585.70 | 0.0268 | 0.0052 |
| Jupiter | 24839-01-21 05:16 G | 10793338.50 | 10793338.72 | 10793338.94 | 0.0513 | 0.0112 |
| Jupiter | 24840-02-22 13:12 G | 10793735.94 | 10793736.05 | 10793736.17 | 0.0498 | 0.0437 |
| Mars | 24843-10-28 13:26 G | 10795079.88 | 10795080.06 | 10795080.25 | 0.1953 | 0.0702 |
| Jupiter | 24845-07-27 08:09 G | 10795717.60 | 10795717.84 | 10795718.08 | 0.0518 | 0.0010 |
| Uranus | 24849-06-03 02:38 G | 10797124.52 | 10797124.61 | 10797124.74 | 0.0138 | 0.0122 |
| Uranus | 24850-06-07 18:00 G | 10797494.04 | 10797494.25 | 10797494.49 | 0.0137 | 0.0070 |
| Jupiter | 24851-01-25 18:57 G | 10797726.05 | 10797726.29 | 10797726.53 | 0.0511 | 0.0038 |
| Uranus | 24851-06-12 04:33 G | 10797863.44 | 10797863.69 | 10797863.94 | 0.0137 | 0.0004 |
| Jupiter | 24852-02-27 06:57 G | 10798123.74 | 10798123.79 | 10798123.86 | 0.0497 | 0.0479 |
| Uranus | 24852-06-15 19:55 G | 10798233.10 | 10798233.33 | 10798233.57 | 0.0136 | 0.0062 |
| Saturn | 24852-07-05 11:31 G | 10798252.79 | 10798252.98 | 10798253.19 | 0.0292 | 0.0170 |
| Uranus | 24853-06-20 03:50 G | 10798602.57 | 10798602.66 | 10798602.78 | 0.0136 | 0.0123 |
| Jupiter | 24856-06-28 09:21 G | 10799706.75 | 10799706.89 | 10799707.03 | 0.0504 | 0.0414 |
| Jupiter | 24857-08-01 09:21 G | 10800105.66 | 10800105.89 | 10800106.11 | 0.0520 | 0.0052 |
| Jupiter | 24861-12-27 07:55 G | 10801714.73 | 10801714.83 | 10801714.95 | 0.0524 | 0.0467 |
| Jupiter | 24863-01-30 12:57 G | 10802113.82 | 10802114.04 | 10802114.26 | 0.0508 | 0.0077 |
| Jupiter | 24864-03-02 11:02 G | 10802510.96 | 10802510.96 | 10802510.97 | 0.0495 | 0.0495 |
| Saturn | 24865-12-23 23:45 G | 10803172.36 | 10803172.49 | 10803172.64 | 0.0269 | 0.0217 |
| Saturn | 24867-01-04 22:19 G | 10803549.22 | 10803549.43 | 10803549.66 | 0.0268 | 0.0138 |
| Jupiter | 24868-07-02 23:02 G | 10804094.31 | 10804094.46 | 10804094.63 | 0.0507 | 0.0354 |
| Neptune | 24869-03-23 12:14 G | 10804357.98 | 10804358.01 | 10804358.08 | 0.0088 | 0.0086 |
| Jupiter | 24869-08-06 10:48 G | 10804493.72 | 10804493.95 | 10804494.18 | 0.0523 | 0.0173 |
| Neptune | 24870-03-25 20:52 G | 10804725.30 | 10804725.37 | 10804725.46 | 0.0088 | 0.0083 |
| Neptune | 24871-03-28 10:48 G | 10805092.85 | 10805092.95 | 10805093.11 | 0.0088 | 0.0076 |
| Neptune | 24872-03-29 15:36 G | 10805460.00 | 10805460.15 | 10805460.30 | 0.0088 | 0.0072 |

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| Neptune | 24873-04-01 07:55 G | 10805827.68 | 10805827.83 | 10805828.03 | 0.0088 | 0.0064 |
| Jupiter | 24874-01-01 05:16 G | 10806102.60 | 10806102.72 | 10806102.84 | 0.0522 | 0.0435 |
| Neptune | 24874-04-03 11:31 G | 10806194.82 | 10806194.98 | 10806195.18 | 0.0088 | 0.0062 |
| Jupiter | 24875-02-04 04:33 G | 10806501.47 | 10806501.69 | 10806501.92 | 0.0506 | 0.0162 |
| Neptune | 24875-04-06 03:50 G | 10806562.46 | 10806562.66 | 10806562.88 | 0.0088 | 0.0053 |
| Neptune | 24876-04-07 09:21 G | 10806929.71 | 10806929.89 | 10806930.11 | 0.0088 | 0.0052 |
| Neptune | 24877-04-09 22:04 G | 10807297.20 | 10807297.42 | 10807297.67 | 0.0088 | 0.0042 |
| Neptune | 24878-04-12 08:52 G | 10807664.67 | 10807664.87 | 10807665.12 | 0.0088 | 0.0040 |
| Neptune | 24879-04-14 16:48 G | 10808031.96 | 10808032.20 | 10808032.46 | 0.0088 | 0.0030 |
| Neptune | 24880-04-16 08:09 G | 10808399.61 | 10808399.84 | 10808400.09 | 0.0088 | 0.0028 |
| Jupiter | 24880-07-07 20:52 G | 10808482.19 | 10808482.37 | 10808482.55 | 0.0508 | 0.0324 |
| Neptune | 24881-04-18 12:14 G | 10808766.76 | 10808767.01 | 10808767.26 | 0.0088 | 0.0018 |
| Saturn | 24881-06-29 14:09 G | 10808838.85 | 10808839.09 | 10808839.34 | 0.0292 | 0.0049 |
| Jupiter | 24881-08-11 05:02 G | 10808881.52 | 10808881.71 | 10808881.91 | 0.0524 | 0.0274 |
| Neptune | 24882-04-21 05:16 G | 10809134.48 | 10809134.72 | 10809134.98 | 0.0088 | 0.0017 |
| Neptune | 24883-04-23 09:07 G | 10809501.63 | 10809501.88 | 10809502.14 | 0.0088 | 0.0006 |
| Neptune | 24884-04-25 00:43 G | 10809869.27 | 10809869.53 | 10809869.80 | 0.0088 | 0.0005 |
| Neptune | 24885-04-27 07:12 G | 10810236.56 | 10810236.80 | 10810237.06 | 0.0088 | 0.0007 |
| Jupiter | 24886-01-06 02:38 G | 10810490.44 | 10810490.61 | 10810490.79 | 0.0520 | 0.0349 |
| Neptune | 24886-04-29 18:57 G | 10810604.03 | 10810604.29 | 10810604.56 | 0.0088 | 0.0008 |
| Jupiter | 24887-02-08 10:48 G | 10810888.74 | 10810888.95 | 10810889.16 | 0.0505 | 0.0192 |
| Neptune | 24887-05-02 06:57 G | 10810971.54 | 10810971.79 | 10810972.03 | 0.0088 | 0.0018 |
| Neptune | 24888-05-03 14:09 G | 10811338.83 | 10811339.09 | 10811339.34 | 0.0088 | 0.0019 |
| Neptune | 24889-05-06 05:45 G | 10811706.52 | 10811706.74 | 10811706.99 | 0.0088 | 0.0031 |
| Neptune | 24890-05-08 09:36 G | 10812073.68 | 10812073.90 | 10812074.16 | 0.0088 | 0.0032 |
| Neptune | 24891-05-11 03:50 G | 10812441.44 | 10812441.66 | 10812441.89 | 0.0088 | 0.0043 |
| Neptune | 24892-05-12 07:55 G | 10812808.62 | 10812808.83 | 10812809.05 | 0.0088 | 0.0043 |
| Jupiter | 24892-07-12 07:26 G | 10812869.61 | 10812869.81 | 10812870.01 | 0.0510 | 0.0261 |
| Neptune | 24893-05-14 23:45 G | 10813176.28 | 10813176.49 | 10813176.70 | 0.0088 | 0.0054 |
| Jupiter | 24893-08-16 12:28 G | 10813269.84 | 10813270.02 | 10813270.21 | 0.0526 | 0.0315 |

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| Uranus | 24893-12-04 14:52 G | 10813379.98 | 10813380.12 | 10813380.29 | 0.0141 | 0.0113 |
| Neptune | 24894-05-17 06:57 G | 10813543.60 | 10813543.79 | 10813543.99 | 0.0088 | 0.0054 |
| Uranus | 24894-12-09 09:36 G | 10813749.68 | 10813749.90 | 10813750.13 | 0.0141 | 0.0055 |
| Neptune | 24895-05-19 18:14 G | 10813911.09 | 10813911.26 | 10813911.44 | 0.0088 | 0.0065 |
| Uranus | 24895-12-14 06:43 G | 10814119.53 | 10814119.78 | 10814120.04 | 0.0142 | 0.0029 |
| Saturn | 24895-12-31 00:57 G | 10814136.30 | 10814136.54 | 10814136.78 | 0.0268 | 0.0012 |
| Neptune | 24896-05-21 06:43 G | 10814278.64 | 10814278.78 | 10814278.97 | 0.0088 | 0.0066 |
| Uranus | 24896-12-18 00:14 G | 10814489.32 | 10814489.51 | 10814489.71 | 0.0142 | 0.0087 |
| Neptune | 24897-05-23 13:40 G | 10814645.96 | 10814646.07 | 10814646.21 | 0.0088 | 0.0077 |
| Jupiter | 24898-01-10 16:04 G | 10814877.96 | 10814878.17 | 10814878.37 | 0.0518 | 0.0230 |
| Neptune | 24898-05-26 06:43 G | 10815013.66 | 10815013.78 | 10815013.91 | 0.0088 | 0.0077 |
| Jupiter | 24899-02-13 06:57 G | 10815276.59 | 10815276.79 | 10815276.99 | 0.0503 | 0.0244 |
| Mars | 24899-04-25 08:24 G | 10815347.75 | 10815347.85 | 10815347.97 | 0.1584 | 0.1243 |
| Neptune | 24899-05-28 10:33 G | 10815380.94 | 10815380.94 | 10815380.97 | 0.0088 | 0.0088 |
| Neptune | 24900-05-31 04:19 G | 10815748.65 | 10815748.68 | 10815748.76 | 0.0088 | 0.0086 |
| Jupiter | 24904-07-18 06:00 G | 10817257.53 | 10817257.75 | 10817257.97 | 0.0512 | 0.0142 |
| Jupiter | 24905-08-22 04:48 G | 10817657.54 | 10817657.70 | 10817657.87 | 0.0528 | 0.0373 |
| Jupiter | 24910-01-16 20:09 G | 10819266.13 | 10819266.34 | 10819266.56 | 0.0516 | 0.0156 |
| Saturn | 24910-06-24 05:45 G | 10819424.65 | 10819424.74 | 10819424.86 | 0.0291 | 0.0262 |
| Jupiter | 24911-02-18 12:28 G | 10819663.86 | 10819664.02 | 10819664.20 | 0.0501 | 0.0344 |
| Saturn | 24911-07-08 16:04 G | 10819804.02 | 10819804.17 | 10819804.33 | 0.0292 | 0.0220 |
| Jupiter | 24916-07-22 19:40 G | 10821645.08 | 10821645.32 | 10821645.56 | 0.0515 | 0.0055 |
| Jupiter | 24917-08-27 13:40 G | 10822046.00 | 10822046.07 | 10822046.15 | 0.0530 | 0.0496 |
| Jupiter | 24922-01-21 10:33 G | 10823653.71 | 10823653.94 | 10823654.18 | 0.0513 | 0.0121 |
| Jupiter | 24923-02-23 06:43 G | 10824051.67 | 10824051.78 | 10824051.89 | 0.0498 | 0.0432 |
| Saturn | 24924-12-26 00:28 G | 10824723.34 | 10824723.52 | 10824723.72 | 0.0268 | 0.0174 |
| Saturn | 24926-01-06 18:00 G | 10825100.07 | 10825100.25 | 10825100.44 | 0.0267 | 0.0178 |
| Jupiter | 24928-07-27 20:24 G | 10826033.12 | 10826033.35 | 10826033.57 | 0.0517 | 0.0020 |
| Pluto | 24929-11-21 12:43 G | 10826514.78 | 10826515.03 | 10826515.29 | 0.0064 | 0.0015 |
| Uranus | 24933-06-04 16:04 G | 10827806.12 | 10827806.17 | 10827806.26 | 0.0138 | 0.0131 |

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| Jupiter | 24934-01-26 06:00 G | 10828041.52 | 10828041.75 | 10828041.97 | 0.0511 | 0.0040 |
| Uranus | 24934-06-09 06:43 G | 10828175.55 | 10828175.78 | 10828176.03 | 0.0137 | 0.0053 |
| Jupiter | 24935-02-27 12:14 G | 10828438.94 | 10828439.01 | 10828439.10 | 0.0497 | 0.0465 |
| Uranus | 24935-06-13 18:14 G | 10828545.02 | 10828545.26 | 10828545.51 | 0.0137 | 0.0001 |
| Uranus | 24936-06-17 08:24 G | 10828914.63 | 10828914.85 | 10828915.09 | 0.0136 | 0.0068 |
| Uranus | 24937-06-21 17:16 G | 10829284.18 | 10829284.22 | 10829284.30 | 0.0136 | 0.0132 |
| Jupiter | 24939-06-29 18:43 G | 10830022.17 | 10830022.28 | 10830022.42 | 0.0504 | 0.0413 |
| Saturn | 24940-07-01 09:07 G | 10830389.63 | 10830389.88 | 10830390.14 | 0.0292 | 0.0002 |
| Jupiter | 24940-08-01 18:57 G | 10830421.05 | 10830421.29 | 10830421.54 | 0.0519 | 0.0050 |
| Jupiter | 24944-12-27 08:24 G | 10832029.77 | 10832029.85 | 10832029.94 | 0.0525 | 0.0481 |
| Jupiter | 24946-01-30 18:43 G | 10832429.04 | 10832429.28 | 10832429.52 | 0.0509 | 0.0072 |
| Jupiter | 24947-03-03 20:38 G | 10832826.34 | 10832826.36 | 10832826.41 | 0.0496 | 0.0489 |
| Jupiter | 24951-07-04 14:38 G | 10834409.94 | 10834410.11 | 10834410.29 | 0.0506 | 0.0354 |
| Jupiter | 24952-08-06 12:43 G | 10834808.82 | 10834809.03 | 10834809.25 | 0.0521 | 0.0174 |
| Neptune | 24952-09-25 21:36 G | 10834859.33 | 10834859.40 | 10834859.53 | 0.0090 | 0.0083 |
| Neptune | 24953-09-28 05:02 G | 10835226.62 | 10835226.71 | 10835226.84 | 0.0090 | 0.0081 |
| Neptune | 24954-10-01 01:26 G | 10835594.41 | 10835594.56 | 10835594.73 | 0.0090 | 0.0071 |
| Saturn | 24955-01-02 05:02 G | 10835687.47 | 10835687.71 | 10835687.95 | 0.0268 | 0.0027 |
| Neptune | 24955-10-03 07:26 G | 10835961.68 | 10835961.81 | 10835962.00 | 0.0090 | 0.0070 |
| Neptune | 24956-10-05 02:52 G | 10836329.45 | 10836329.62 | 10836329.84 | 0.0090 | 0.0061 |
| Jupiter | 24957-01-01 11:16 G | 10836417.85 | 10836417.97 | 10836418.10 | 0.0523 | 0.0443 |
| Neptune | 24957-10-07 11:45 G | 10836696.80 | 10836696.99 | 10836697.19 | 0.0090 | 0.0057 |
| Jupiter | 24958-02-04 06:00 G | 10836816.53 | 10836816.75 | 10836816.97 | 0.0507 | 0.0152 |
| Neptune | 24958-10-10 02:52 G | 10837064.41 | 10837064.62 | 10837064.86 | 0.0090 | 0.0048 |
| Neptune | 24959-10-12 15:36 G | 10837431.94 | 10837432.15 | 10837432.38 | 0.0090 | 0.0044 |
| Neptune | 24960-10-14 02:24 G | 10837799.37 | 10837799.60 | 10837799.86 | 0.0090 | 0.0035 |
| Neptune | 24961-10-16 20:09 G | 10838167.11 | 10838167.34 | 10838167.58 | 0.0090 | 0.0031 |
| Neptune | 24962-10-19 03:07 G | 10838534.39 | 10838534.63 | 10838534.89 | 0.0090 | 0.0023 |
| Jupiter | 24963-07-08 21:21 G | 10838797.22 | 10838797.39 | 10838797.57 | 0.0508 | 0.0330 |
| Neptune | 24963-10-21 23:16 G | 10838902.22 | 10838902.47 | 10838902.73 | 0.0090 | 0.0018 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 24964-08-11 16:48 G | 10839197.00 | 10839197.20 | 10839197.40 | 0.0523 | 0.0267 |
| Neptune | 24964-10-23 05:16 G | 10839269.47 | 10839269.72 | 10839269.98 | 0.0090 | 0.0010 |
| Neptune | 24965-10-26 00:43 G | 10839637.27 | 10839637.53 | 10839637.80 | 0.0090 | 0.0004 |
| Neptune | 24966-10-28 08:52 G | 10840004.62 | 10840004.87 | 10840005.12 | 0.0090 | 0.0003 |
| Neptune | 24967-10-31 00:43 G | 10840372.27 | 10840372.53 | 10840372.80 | 0.0089 | 0.0010 |
| Neptune | 24968-11-01 12:28 G | 10840739.78 | 10840740.02 | 10840740.27 | 0.0089 | 0.0015 |
| Jupiter | 24969-01-06 04:04 G | 10840805.51 | 10840805.67 | 10840805.85 | 0.0521 | 0.0352 |
| Saturn | 24969-06-25 09:50 G | 10840975.76 | 10840975.91 | 10840976.07 | 0.0291 | 0.0214 |
| Neptune | 24969-11-03 23:31 G | 10841107.23 | 10841107.48 | 10841107.75 | 0.0089 | 0.0022 |
| Jupiter | 24970-02-09 04:33 G | 10841204.47 | 10841204.69 | 10841204.90 | 0.0505 | 0.0180 |
| Saturn | 24970-07-09 20:38 G | 10841355.28 | 10841355.36 | 10841355.46 | 0.0292 | 0.0269 |
| Neptune | 24970-11-06 16:19 G | 10841474.95 | 10841475.18 | 10841475.43 | 0.0089 | 0.0028 |
| Neptune | 24971-11-08 23:31 G | 10841842.26 | 10841842.48 | 10841842.74 | 0.0089 | 0.0036 |
| Neptune | 24972-11-10 18:57 G | 10842210.08 | 10842210.29 | 10842210.54 | 0.0089 | 0.0041 |
| Neptune | 24973-11-13 00:43 G | 10842577.32 | 10842577.53 | 10842577.75 | 0.0089 | 0.0049 |
| Neptune | 24974-11-15 19:40 G | 10842945.13 | 10842945.32 | 10842945.56 | 0.0089 | 0.0052 |
| Jupiter | 24975-07-13 21:07 G | 10843185.19 | 10843185.38 | 10843185.58 | 0.0510 | 0.0256 |
| Neptune | 24975-11-18 02:52 G | 10843312.46 | 10843312.62 | 10843312.83 | 0.0089 | 0.0062 |
| Jupiter | 24976-08-16 10:19 G | 10843584.74 | 10843584.93 | 10843585.13 | 0.0526 | 0.0309 |
| Neptune | 24976-11-19 18:57 G | 10843680.12 | 10843680.29 | 10843680.50 | 0.0089 | 0.0064 |
| Neptune | 24977-11-22 06:14 G | 10844047.63 | 10844047.76 | 10844047.90 | 0.0089 | 0.0074 |
| Uranus | 24977-12-06 01:12 G | 10844061.41 | 10844061.55 | 10844061.71 | 0.0141 | 0.0116 |
| Mars | 24978-04-28 06:43 G | 10844204.59 | 10844204.78 | 10844204.97 | 0.1585 | 0.0336 |
| Neptune | 24978-11-24 17:16 G | 10844415.10 | 10844415.22 | 10844415.38 | 0.0089 | 0.0075 |
| Uranus | 24978-12-10 20:52 G | 10844431.14 | 10844431.37 | 10844431.61 | 0.0141 | 0.0038 |
| Neptune | 24979-11-27 09:07 G | 10844782.84 | 10844782.88 | 10844782.98 | 0.0089 | 0.0086 |
| Uranus | 24979-12-15 16:48 G | 10844800.94 | 10844801.20 | 10844801.46 | 0.0142 | 0.0019 |
| Neptune | 24980-11-28 16:48 G | 10845150.15 | 10845150.20 | 10845150.30 | 0.0089 | 0.0086 |
| Uranus | 24980-12-19 11:16 G | 10845170.82 | 10845170.97 | 10845171.16 | 0.0142 | 0.0103 |
| Jupiter | 24981-01-11 10:19 G | 10845193.72 | 10845193.93 | 10845194.13 | 0.0518 | 0.0228 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 24982-02-13 10:33 G | 10845591.74 | 10845591.94 | 10845592.16 | 0.0503 | 0.0240 |
| Saturn | 24983-12-27 20:24 G | 10846274.15 | 10846274.35 | 10846274.58 | 0.0268 | 0.0138 |
| Saturn | 24985-01-07 18:00 G | 10846651.12 | 10846651.25 | 10846651.39 | 0.0267 | 0.0218 |
| Jupiter | 24987-07-18 09:36 G | 10847572.67 | 10847572.90 | 10847573.14 | 0.0512 | 0.0140 |
| Jupiter | 24988-08-21 19:26 G | 10847973.16 | 10847973.31 | 10847973.47 | 0.0528 | 0.0374 |
| Jupiter | 24993-01-16 00:43 G | 10849581.30 | 10849581.53 | 10849581.75 | 0.0516 | 0.0164 |
| Jupiter | 24994-02-18 05:45 G | 10849979.58 | 10849979.74 | 10849979.91 | 0.0501 | 0.0344 |
| Saturn | 24999-07-03 03:36 G | 10851940.41 | 10851940.65 | 10851940.90 | 0.0292 | 0.0043 |
| Jupiter | 24999-07-23 09:50 G | 10851960.69 | 10851960.91 | 10851961.14 | 0.0514 | 0.0062 |
| Jupiter | 25000-08-27 21:21 G | 10852361.31 | 10852361.39 | 10852361.48 | 0.0529 | 0.0495 |

26TH MILLENNIUM CE

This is a list of transits of Moon in the 26th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|-------------|-------------|-------------|--------|--------|-------|---|
| Jupiter | 25005-01-21 16:48 G | 10853968.98 | 10853969.20 | 10853969.42 | 0.0514 | 0.0130 | | |
| Jupiter | 25006-02-23 09:07 G | 10854366.76 | 10854366.88 | 10854367.02 | 0.0500 | 0.0423 | | |
| Jupiter | 25011-07-29 06:00 G | 10856348.51 | 10856348.75 | 10856348.99 | 0.0516 | 0.0024 | | |
| Saturn | 25014-01-04 06:14 G | 10857238.53 | 10857238.76 | 10857239.01 | 0.0268 | 0.0067 | | |
| Jupiter | 25017-01-26 10:33 G | 10858356.70 | 10858356.94 | 10858357.18 | 0.0512 | 0.0043 | | |
| Uranus | 25017-06-06 03:07 G | 10858487.50 | 10858487.63 | 10858487.78 | 0.0138 | 0.0114 | | |
| Jupiter | 25018-02-27 21:21 G | 10858754.30 | 10858754.39 | 10858754.48 | 0.0498 | 0.0453 | | |
| Pluto | 25018-05-23 15:07 G | 10858838.90 | 10858839.13 | 10858839.37 | 0.0080 | 0.0031 | | |
| Uranus | 25018-06-10 15:50 G | 10858856.93 | 10858857.16 | 10858857.40 | 0.0137 | 0.0063 | | |

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| Uranus | 25019-06-15 04:48 G | 10859226.46 | 10859226.70 | 10859226.95 | 0.0137 | 0.0013 |
| Uranus | 25020-06-18 17:45 G | 10859596.02 | 10859596.24 | 10859596.48 | 0.0136 | 0.0069 |
| Uranus | 25021-06-23 04:19 G | 10859965.65 | 10859965.68 | 10859965.75 | 0.0136 | 0.0133 |
| Jupiter | 25022-06-30 07:55 G | 10860337.70 | 10860337.83 | 10860337.97 | 0.0503 | 0.0407 |
| Jupiter | 25023-08-02 20:24 G | 10860736.12 | 10860736.35 | 10860736.57 | 0.0518 | 0.0049 |
| Jupiter | 25027-12-28 20:09 G | 10862345.25 | 10862345.34 | 10862345.43 | 0.0525 | 0.0486 |
| Saturn | 25028-06-27 11:31 G | 10862526.78 | 10862526.98 | 10862527.18 | 0.0292 | 0.0171 |
| Jupiter | 25029-01-31 00:57 G | 10862744.32 | 10862744.54 | 10862744.77 | 0.0510 | 0.0075 |
| Jupiter | 25030-03-04 11:31 G | 10863141.93 | 10863141.98 | 10863142.04 | 0.0496 | 0.0481 |
| Neptune | 25033-03-24 18:28 G | 10864258.26 | 10864258.27 | 10864258.32 | 0.0088 | 0.0087 |
| Jupiter | 25034-07-04 15:36 G | 10864724.99 | 10864725.15 | 10864725.31 | 0.0505 | 0.0359 |
| Neptune | 25035-03-29 13:55 G | 10864992.96 | 10864993.08 | 10864993.21 | 0.0088 | 0.0076 |
| Jupiter | 25035-08-08 01:12 G | 10865124.33 | 10865124.55 | 10865124.78 | 0.0521 | 0.0176 |
| Neptune | 25036-03-31 06:43 G | 10865360.69 | 10865360.78 | 10865360.90 | 0.0088 | 0.0080 |
| Neptune | 25037-04-02 10:33 G | 10865727.79 | 10865727.94 | 10865728.12 | 0.0088 | 0.0066 |
| Neptune | 25038-04-05 01:55 G | 10866095.44 | 10866095.58 | 10866095.77 | 0.0088 | 0.0069 |
| Neptune | 25039-04-07 09:07 G | 10866462.70 | 10866462.88 | 10866463.09 | 0.0088 | 0.0055 |
| Jupiter | 25040-01-02 15:21 G | 10866733.03 | 10866733.14 | 10866733.27 | 0.0523 | 0.0447 |
| Neptune | 25040-04-08 20:09 G | 10866830.16 | 10866830.34 | 10866830.56 | 0.0088 | 0.0057 |
| Jupiter | 25041-02-05 00:14 G | 10867132.29 | 10867132.51 | 10867132.73 | 0.0507 | 0.0142 |
| Neptune | 25041-04-11 07:55 G | 10867197.63 | 10867197.83 | 10867198.07 | 0.0088 | 0.0043 |
| Neptune | 25042-04-13 13:55 G | 10867564.88 | 10867565.08 | 10867565.33 | 0.0088 | 0.0046 |
| Saturn | 25042-12-29 19:40 G | 10867825.10 | 10867825.32 | 10867825.55 | 0.0268 | 0.0100 |
| Neptune | 25043-04-16 06:28 G | 10867932.53 | 10867932.77 | 10867933.01 | 0.0088 | 0.0031 |
| Saturn | 25044-01-10 22:33 G | 10868202.39 | 10868202.44 | 10868202.49 | 0.0267 | 0.0261 |
| Neptune | 25044-04-17 09:50 G | 10868299.69 | 10868299.91 | 10868300.16 | 0.0088 | 0.0034 |
| Neptune | 25045-04-20 03:21 G | 10868667.39 | 10868667.64 | 10868667.90 | 0.0088 | 0.0019 |
| Neptune | 25046-04-22 07:40 G | 10869034.58 | 10869034.82 | 10869035.07 | 0.0088 | 0.0021 |
| Jupiter | 25046-07-09 14:24 G | 10869112.93 | 10869113.10 | 10869113.27 | 0.0508 | 0.0336 |
| Neptune | 25047-04-24 22:48 G | 10869402.19 | 10869402.45 | 10869402.72 | 0.0088 | 0.0006 |

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| Jupiter | 25047-08-12 18:14 G | 10869512.06 | 10869512.26 | 10869512.46 | 0.0523 | 0.0263 |
| Neptune | 25048-04-26 06:43 G | 10869769.54 | 10869769.78 | 10869770.04 | 0.0088 | 0.0009 |
| Neptune | 25049-04-28 17:16 G | 10870136.96 | 10870137.22 | 10870137.49 | 0.0088 | 0.0006 |
| Neptune | 25050-05-01 06:00 G | 10870504.50 | 10870504.75 | 10870505.00 | 0.0088 | 0.0004 |
| Neptune | 25051-05-03 11:31 G | 10870871.73 | 10870871.98 | 10870872.24 | 0.0088 | 0.0018 |
| Jupiter | 25052-01-07 21:36 G | 10871121.23 | 10871121.40 | 10871121.57 | 0.0521 | 0.0343 |
| Neptune | 25052-05-05 03:50 G | 10871239.43 | 10871239.66 | 10871239.93 | 0.0088 | 0.0017 |
| Jupiter | 25053-02-09 07:12 G | 10871519.58 | 10871519.80 | 10871520.03 | 0.0505 | 0.0174 |
| Neptune | 25053-05-07 07:40 G | 10871606.59 | 10871606.82 | 10871607.07 | 0.0088 | 0.0031 |
| Neptune | 25054-05-10 00:57 G | 10871974.31 | 10871974.54 | 10871974.80 | 0.0088 | 0.0029 |
| Neptune | 25055-05-12 06:00 G | 10872341.53 | 10872341.75 | 10872341.97 | 0.0088 | 0.0042 |
| Neptune | 25056-05-13 20:38 G | 10872709.14 | 10872709.36 | 10872709.61 | 0.0088 | 0.0041 |
| Mars | 25057-05-01 12:14 G | 10873061.92 | 10873062.01 | 10873062.11 | 0.1585 | 0.1382 |
| Neptune | 25057-05-16 06:14 G | 10873076.57 | 10873076.76 | 10873076.96 | 0.0088 | 0.0054 |
| Neptune | 25058-05-18 16:04 G | 10873443.97 | 10873444.17 | 10873444.40 | 0.0088 | 0.0053 |
| Saturn | 25058-07-05 04:48 G | 10873491.48 | 10873491.70 | 10873491.93 | 0.0292 | 0.0088 |
| Jupiter | 25058-07-14 02:52 G | 10873500.41 | 10873500.62 | 10873500.83 | 0.0510 | 0.0251 |
| Neptune | 25059-05-21 05:31 G | 10873811.60 | 10873811.73 | 10873811.92 | 0.0088 | 0.0067 |
| Jupiter | 25059-08-18 02:09 G | 10873900.41 | 10873900.59 | 10873900.78 | 0.0525 | 0.0301 |
| Neptune | 25060-05-22 11:16 G | 10874178.81 | 10874178.97 | 10874179.16 | 0.0088 | 0.0064 |
| Neptune | 25061-05-25 04:04 G | 10874546.59 | 10874546.67 | 10874546.82 | 0.0088 | 0.0078 |
| Uranus | 25061-12-07 10:33 G | 10874742.79 | 10874742.94 | 10874743.13 | 0.0141 | 0.0108 |
| Neptune | 25062-05-27 07:55 G | 10874913.74 | 10874913.83 | 10874913.99 | 0.0088 | 0.0077 |
| Uranus | 25062-12-12 07:55 G | 10875112.61 | 10875112.83 | 10875113.07 | 0.0141 | 0.0047 |
| Uranus | 25063-12-17 02:09 G | 10875482.35 | 10875482.59 | 10875482.86 | 0.0142 | 0.0037 |
| Jupiter | 25064-01-12 06:57 G | 10875508.58 | 10875508.79 | 10875509.01 | 0.0519 | 0.0231 |
| Neptune | 25064-05-31 07:26 G | 10875648.79 | 10875648.81 | 10875648.84 | 0.0088 | 0.0088 |
| Uranus | 25064-12-20 22:19 G | 10875852.26 | 10875852.43 | 10875852.62 | 0.0142 | 0.0094 |
| Jupiter | 25065-02-13 23:02 G | 10875907.27 | 10875907.46 | 10875907.67 | 0.0504 | 0.0239 |
| Jupiter | 25070-07-19 00:43 G | 10877888.31 | 10877888.53 | 10877888.75 | 0.0512 | 0.0137 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 25071-08-23 00:57 G | 10878288.37 | 10878288.54 | 10878288.71 | 0.0527 | 0.0372 |
| Saturn | 25071-12-25 06:43 G | 10878412.71 | 10878412.78 | 10878412.87 | 0.0269 | 0.0254 |
| Saturn | 25073-01-05 02:52 G | 10878789.39 | 10878789.62 | 10878789.85 | 0.0268 | 0.0105 |
| Jupiter | 25076-01-17 05:31 G | 10879896.52 | 10879896.73 | 10879896.94 | 0.0517 | 0.0175 |
| Jupiter | 25077-02-18 06:43 G | 10880294.61 | 10880294.78 | 10880294.97 | 0.0502 | 0.0341 |
| Jupiter | 25082-07-23 15:21 G | 10882275.90 | 10882276.14 | 10882276.39 | 0.0513 | 0.0069 |
| Jupiter | 25083-08-27 21:21 G | 10882676.32 | 10882676.39 | 10882676.47 | 0.0529 | 0.0495 |
| Saturn | 25087-06-29 09:07 G | 10884077.65 | 10884077.88 | 10884078.11 | 0.0292 | 0.0124 |
| Jupiter | 25088-01-22 01:55 G | 10884284.35 | 10884284.58 | 10884284.82 | 0.0515 | 0.0134 |
| Jupiter | 25089-02-22 21:21 G | 10884682.27 | 10884682.39 | 10884682.51 | 0.0500 | 0.0419 |
| Jupiter | 25093-06-25 04:04 G | 10886265.65 | 10886265.67 | 10886265.71 | 0.0501 | 0.0497 |
| Jupiter | 25094-07-28 07:40 G | 10886663.60 | 10886663.82 | 10886664.05 | 0.0516 | 0.0036 |
| Jupiter | 25100-01-26 18:00 G | 10888672.03 | 10888672.25 | 10888672.48 | 0.0512 | 0.0040 |
| Jupiter | 25101-02-28 11:45 G | 10889069.89 | 10889069.99 | 10889070.11 | 0.0498 | 0.0438 |
| Uranus | 25101-06-07 14:38 G | 10889169.02 | 10889169.11 | 10889169.23 | 0.0138 | 0.0124 |
| Saturn | 25102-01-01 01:26 G | 10889376.33 | 10889376.56 | 10889376.79 | 0.0268 | 0.0060 |
| Uranus | 25102-06-12 02:38 G | 10889538.37 | 10889538.61 | 10889538.86 | 0.0137 | 0.0046 |
| Uranus | 25103-06-16 17:16 G | 10889907.97 | 10889908.22 | 10889908.46 | 0.0137 | 0.0006 |
| Mars | 25104-04-27 04:33 G | 10890223.66 | 10890223.69 | 10890223.72 | 0.1583 | 0.1560 |
| Uranus | 25104-06-20 04:33 G | 10890277.49 | 10890277.69 | 10890277.93 | 0.0136 | 0.0078 |
| Jupiter | 25105-06-30 10:48 G | 10890652.82 | 10890652.95 | 10890653.09 | 0.0503 | 0.0409 |
| Jupiter | 25106-08-03 11:45 G | 10891051.75 | 10891051.99 | 10891052.22 | 0.0518 | 0.0051 |
| Jupiter | 25110-12-28 23:16 G | 10892660.40 | 10892660.47 | 10892660.56 | 0.0526 | 0.0489 |
| Jupiter | 25112-02-01 17:31 G | 10893060.00 | 10893060.23 | 10893060.46 | 0.0510 | 0.0079 |
| Jupiter | 25113-03-04 16:19 G | 10893457.13 | 10893457.18 | 10893457.24 | 0.0496 | 0.0478 |
| Jupiter | 25117-07-05 10:04 G | 10895040.77 | 10895040.92 | 10895041.09 | 0.0505 | 0.0369 |
| Saturn | 25117-07-07 08:52 G | 10895042.66 | 10895042.87 | 10895043.08 | 0.0292 | 0.0135 |
| Neptune | 25117-09-29 17:02 G | 10895127.11 | 10895127.21 | 10895127.34 | 0.0090 | 0.0080 |
| Jupiter | 25118-08-08 03:50 G | 10895439.44 | 10895439.66 | 10895439.89 | 0.0520 | 0.0174 |
| Neptune | 25118-10-02 00:00 G | 10895494.41 | 10895494.50 | 10895494.61 | 0.0090 | 0.0082 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 25119-10-04 17:45 G | 10895862.10 | 10895862.24 | 10895862.44 | 0.0090 | 0.0069 |
| Neptune | 25120-10-06 04:04 G | 10896229.53 | 10896229.67 | 10896229.84 | 0.0090 | 0.0070 |
| Neptune | 25121-10-08 18:14 G | 10896597.08 | 10896597.26 | 10896597.50 | 0.0090 | 0.0056 |
| Neptune | 25122-10-11 09:36 G | 10896964.72 | 10896964.90 | 10896965.10 | 0.0090 | 0.0057 |
| Jupiter | 25123-01-03 00:43 G | 10897048.42 | 10897048.53 | 10897048.65 | 0.0523 | 0.0450 |
| Neptune | 25123-10-13 18:57 G | 10897332.07 | 10897332.29 | 10897332.54 | 0.0090 | 0.0043 |
| Jupiter | 25124-02-05 20:24 G | 10897447.13 | 10897447.35 | 10897447.58 | 0.0508 | 0.0136 |
| Neptune | 25124-10-15 13:26 G | 10897699.85 | 10897700.06 | 10897700.29 | 0.0090 | 0.0045 |
| Neptune | 25125-10-17 19:40 G | 10898067.09 | 10898067.32 | 10898067.58 | 0.0090 | 0.0030 |
| Neptune | 25126-10-20 15:50 G | 10898434.93 | 10898435.16 | 10898435.41 | 0.0090 | 0.0032 |
| Neptune | 25127-10-22 22:19 G | 10898802.18 | 10898802.43 | 10898802.68 | 0.0090 | 0.0016 |
| Mars | 25127-10-29 11:31 G | 10898808.79 | 10898808.98 | 10898809.16 | 0.1956 | 0.1109 |
| Neptune | 25128-10-24 16:33 G | 10899169.93 | 10899170.19 | 10899170.45 | 0.0090 | 0.0018 |
| Jupiter | 25129-07-09 19:55 G | 10899428.15 | 10899428.33 | 10899428.51 | 0.0507 | 0.0336 |
| Neptune | 25129-10-27 01:40 G | 10899537.32 | 10899537.57 | 10899537.82 | 0.0090 | 0.0003 |
| Jupiter | 25130-08-13 09:21 G | 10899827.69 | 10899827.89 | 10899828.09 | 0.0522 | 0.0256 |
| Neptune | 25130-10-29 16:33 G | 10899904.92 | 10899905.19 | 10899905.46 | 0.0090 | 0.0005 |
| Saturn | 25130-12-27 04:04 G | 10899963.52 | 10899963.67 | 10899963.83 | 0.0269 | 0.0215 |
| Neptune | 25131-11-01 06:28 G | 10900272.53 | 10900272.77 | 10900273.02 | 0.0089 | 0.0011 |
| Saturn | 25132-01-08 00:57 G | 10900340.33 | 10900340.54 | 10900340.74 | 0.0268 | 0.0145 |
| Neptune | 25132-11-02 16:33 G | 10900639.93 | 10900640.19 | 10900640.46 | 0.0089 | 0.0009 |
| Neptune | 25133-11-05 10:19 G | 10901007.70 | 10901007.93 | 10901008.18 | 0.0089 | 0.0025 |
| Neptune | 25134-11-07 17:02 G | 10901374.96 | 10901375.21 | 10901375.46 | 0.0089 | 0.0022 |
| Jupiter | 25135-01-07 15:07 G | 10901435.95 | 10901436.13 | 10901436.31 | 0.0521 | 0.0343 |
| Neptune | 25135-11-10 12:43 G | 10901742.81 | 10901743.03 | 10901743.27 | 0.0089 | 0.0038 |
| Jupiter | 25136-02-10 17:31 G | 10901835.02 | 10901835.23 | 10901835.44 | 0.0506 | 0.0168 |
| Neptune | 25136-11-11 18:43 G | 10902110.05 | 10902110.28 | 10902110.51 | 0.0089 | 0.0035 |
| Neptune | 25137-11-14 12:43 G | 10902477.83 | 10902478.03 | 10902478.27 | 0.0089 | 0.0051 |
| Neptune | 25138-11-16 21:07 G | 10902845.19 | 10902845.38 | 10902845.61 | 0.0089 | 0.0049 |
| Neptune | 25139-11-19 11:45 G | 10903212.82 | 10903212.99 | 10903213.20 | 0.0089 | 0.0063 |

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| Neptune | 25140-11-21 00:43 G | 10903580.37 | 10903580.53 | 10903580.73 | 0.0089 | 0.0062 |
| Jupiter | 25141-07-14 13:12 G | 10903815.86 | 10903816.05 | 10903816.25 | 0.0509 | 0.0252 |
| Neptune | 25141-11-23 10:48 G | 10903947.83 | 10903947.95 | 10903948.11 | 0.0089 | 0.0075 |
| Jupiter | 25142-08-18 02:09 G | 10904215.39 | 10904215.59 | 10904215.79 | 0.0524 | 0.0287 |
| Neptune | 25142-11-26 04:04 G | 10904315.54 | 10904315.67 | 10904315.83 | 0.0089 | 0.0073 |
| Neptune | 25143-11-28 10:04 G | 10904682.89 | 10904682.92 | 10904683.00 | 0.0089 | 0.0087 |
| Neptune | 25144-11-30 05:31 G | 10905050.67 | 10905050.73 | 10905050.83 | 0.0089 | 0.0085 |
| Uranus | 25145-12-08 20:52 G | 10905424.22 | 10905424.37 | 10905424.55 | 0.0141 | 0.0108 |
| Saturn | 25146-07-01 06:57 G | 10905628.56 | 10905628.79 | 10905629.04 | 0.0292 | 0.0074 |
| Uranus | 25146-12-13 19:12 G | 10905794.06 | 10905794.30 | 10905794.54 | 0.0141 | 0.0032 |
| Jupiter | 25147-01-12 17:31 G | 10905824.03 | 10905824.23 | 10905824.43 | 0.0520 | 0.0234 |
| Uranus | 25147-12-18 12:00 G | 10906163.74 | 10906164.00 | 10906164.26 | 0.0141 | 0.0026 |
| Jupiter | 25148-02-15 03:50 G | 10906222.45 | 10906222.66 | 10906222.87 | 0.0504 | 0.0238 |
| Uranus | 25148-12-22 09:21 G | 10906533.74 | 10906533.89 | 10906534.04 | 0.0142 | 0.0110 |
| Jupiter | 25153-07-19 04:19 G | 10908203.45 | 10908203.68 | 10908203.92 | 0.0511 | 0.0141 |
| Jupiter | 25154-08-23 01:40 G | 10908603.41 | 10908603.57 | 10908603.73 | 0.0527 | 0.0370 |
| Jupiter | 25159-01-17 15:07 G | 10910211.90 | 10910212.13 | 10910212.36 | 0.0517 | 0.0181 |
| Jupiter | 25160-02-19 18:57 G | 10910610.13 | 10910610.29 | 10910610.45 | 0.0502 | 0.0347 |
| Saturn | 25161-01-02 07:40 G | 10910927.58 | 10910927.82 | 10910928.06 | 0.0268 | 0.0017 |
| Jupiter | 25165-07-23 20:24 G | 10912591.12 | 10912591.35 | 10912591.57 | 0.0513 | 0.0080 |
| Jupiter | 25166-08-28 10:19 G | 10912991.85 | 10912991.93 | 10912992.02 | 0.0529 | 0.0492 |
| Jupiter | 25171-01-22 07:55 G | 10914599.61 | 10914599.83 | 10914600.05 | 0.0515 | 0.0137 |
| Jupiter | 25172-02-24 09:50 G | 10914997.78 | 10914997.91 | 10914998.05 | 0.0500 | 0.0411 |
| Jupiter | 25176-06-25 08:24 G | 10916580.82 | 10916580.85 | 10916580.88 | 0.0501 | 0.0495 |
| Saturn | 25176-07-08 12:14 G | 10916593.82 | 10916594.01 | 10916594.21 | 0.0292 | 0.0184 |
| Jupiter | 25177-07-29 00:00 G | 10916979.27 | 10916979.50 | 10916979.74 | 0.0516 | 0.0043 |
| Pluto | 25177-11-24 15:07 G | 10917097.93 | 10917098.13 | 10917098.35 | 0.0064 | 0.0038 |
| Pluto | 25178-11-25 21:07 G | 10917464.22 | 10917464.38 | 10917464.60 | 0.0064 | 0.0044 |
| Jupiter | 25183-01-27 02:24 G | 10918987.37 | 10918987.60 | 10918987.84 | 0.0513 | 0.0037 |
| Mars | 25183-04-30 02:52 G | 10919080.45 | 10919080.62 | 10919080.80 | 0.1583 | 0.0428 |

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| Jupiter | 25184-02-28 10:33 G | 10919384.84 | 10919384.94 | 10919385.06 | 0.0499 | 0.0436 |
| Uranus | 25185-06-07 23:31 G | 10919850.35 | 10919850.48 | 10919850.64 | 0.0138 | 0.0110 |
| Uranus | 25186-06-12 09:50 G | 10920219.68 | 10920219.91 | 10920220.16 | 0.0137 | 0.0058 |
| Uranus | 25187-06-17 01:55 G | 10920589.34 | 10920589.58 | 10920589.83 | 0.0137 | 0.0020 |
| Uranus | 25188-06-20 12:14 G | 10920958.81 | 10920959.01 | 10920959.25 | 0.0137 | 0.0074 |
| Jupiter | 25188-06-30 05:02 G | 10920968.58 | 10920968.71 | 10920968.85 | 0.0503 | 0.0408 |
| Jupiter | 25189-08-02 12:43 G | 10921366.80 | 10921367.03 | 10921367.27 | 0.0517 | 0.0048 |
| Saturn | 25189-12-28 03:50 G | 10921514.47 | 10921514.66 | 10921514.84 | 0.0269 | 0.0174 |
| Saturn | 25191-01-09 06:28 G | 10921891.60 | 10921891.77 | 10921891.93 | 0.0268 | 0.0191 |
| Jupiter | 25193-12-28 04:48 G | 10922975.64 | 10922975.70 | 10922975.78 | 0.0526 | 0.0498 |
| Jupiter | 25195-01-31 10:48 G | 10923374.72 | 10923374.95 | 10923375.18 | 0.0511 | 0.0074 |
| Jupiter | 25196-03-04 03:21 G | 10923772.59 | 10923772.64 | 10923772.72 | 0.0497 | 0.0476 |
| Neptune | 25199-03-30 06:28 G | 10924893.73 | 10924893.77 | 10924893.83 | 0.0088 | 0.0086 |
| Neptune | 25200-03-31 10:33 G | 10925260.87 | 10925260.94 | 10925261.06 | 0.0088 | 0.0081 |
| Jupiter | 25200-07-04 09:36 G | 10925355.75 | 10925355.90 | 10925356.07 | 0.0504 | 0.0377 |
| Neptune | 25201-04-03 01:26 G | 10925628.43 | 10925628.56 | 10925628.70 | 0.0088 | 0.0075 |
| Jupiter | 25201-08-07 13:40 G | 10925754.85 | 10925755.07 | 10925755.28 | 0.0519 | 0.0167 |
| Neptune | 25202-04-05 08:52 G | 10925995.74 | 10925995.87 | 10925996.04 | 0.0088 | 0.0069 |
| Neptune | 25203-04-07 18:28 G | 10926363.11 | 10926363.27 | 10926363.48 | 0.0088 | 0.0063 |
| Neptune | 25204-04-09 07:40 G | 10926730.65 | 10926730.82 | 10926731.03 | 0.0088 | 0.0057 |
| Neptune | 25205-04-11 12:57 G | 10927097.86 | 10927098.04 | 10927098.28 | 0.0088 | 0.0052 |
| Saturn | 25205-07-02 12:14 G | 10927179.77 | 10927180.01 | 10927180.25 | 0.0292 | 0.0019 |
| Jupiter | 25206-01-01 21:50 G | 10927363.30 | 10927363.41 | 10927363.53 | 0.0524 | 0.0456 |
| Neptune | 25206-04-14 06:14 G | 10927465.55 | 10927465.76 | 10927465.99 | 0.0088 | 0.0045 |
| Jupiter | 25207-02-05 10:48 G | 10927762.73 | 10927762.95 | 10927763.17 | 0.0509 | 0.0129 |
| Neptune | 25207-04-16 09:21 G | 10927832.68 | 10927832.89 | 10927833.13 | 0.0088 | 0.0040 |
| Neptune | 25208-04-18 02:38 G | 10928200.38 | 10928200.61 | 10928200.87 | 0.0088 | 0.0032 |
| Neptune | 25209-04-20 07:40 G | 10928567.59 | 10928567.82 | 10928568.07 | 0.0088 | 0.0027 |
| Neptune | 25210-04-22 21:36 G | 10928935.15 | 10928935.40 | 10928935.67 | 0.0088 | 0.0019 |
| Neptune | 25211-04-25 06:28 G | 10929302.53 | 10929302.77 | 10929303.02 | 0.0088 | 0.0015 |

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| Neptune | 25212-04-26 15:36 G | 10929669.89 | 10929670.15 | 10929670.42 | 0.0088 | 0.0007 |
| Jupiter | 25212-07-09 04:04 G | 10929743.51 | 10929743.67 | 10929743.84 | 0.0506 | 0.0344 |
| Neptune | 25213-04-29 05:45 G | 10930037.49 | 10930037.74 | 10930037.99 | 0.0088 | 0.0002 |
| Jupiter | 25213-08-12 06:28 G | 10930142.56 | 10930142.77 | 10930142.99 | 0.0522 | 0.0240 |
| Neptune | 25214-05-01 10:33 G | 10930404.69 | 10930404.94 | 10930405.21 | 0.0088 | 0.0007 |
| Neptune | 25215-05-04 03:50 G | 10930772.41 | 10930772.66 | 10930772.91 | 0.0088 | 0.0011 |
| Neptune | 25216-05-05 07:12 G | 10931139.56 | 10931139.80 | 10931140.06 | 0.0088 | 0.0020 |
| Neptune | 25217-05-08 00:14 G | 10931507.27 | 10931507.51 | 10931507.77 | 0.0088 | 0.0023 |
| Jupiter | 25218-01-07 02:52 G | 10931751.45 | 10931751.62 | 10931751.79 | 0.0522 | 0.0342 |
| Neptune | 25218-05-10 05:45 G | 10931874.51 | 10931874.74 | 10931874.98 | 0.0088 | 0.0032 |
| Jupiter | 25219-02-09 21:50 G | 10932150.18 | 10932150.41 | 10932150.64 | 0.0506 | 0.0163 |
| Neptune | 25219-05-12 18:57 G | 10932242.06 | 10932242.29 | 10932242.55 | 0.0088 | 0.0036 |
| Saturn | 25220-01-04 09:21 G | 10932478.64 | 10932478.89 | 10932479.15 | 0.0268 | 0.0030 |
| Neptune | 25220-05-14 05:02 G | 10932609.50 | 10932609.71 | 10932609.93 | 0.0088 | 0.0045 |
| Neptune | 25221-05-16 13:12 G | 10932976.85 | 10932977.05 | 10932977.29 | 0.0088 | 0.0049 |
| Neptune | 25222-05-19 04:04 G | 10933344.50 | 10933344.67 | 10933344.88 | 0.0088 | 0.0058 |
| Neptune | 25223-05-21 09:21 G | 10933711.71 | 10933711.89 | 10933712.09 | 0.0088 | 0.0060 |
| Neptune | 25224-05-23 03:21 G | 10934079.49 | 10934079.64 | 10934079.80 | 0.0088 | 0.0069 |
| Jupiter | 25224-07-13 17:31 G | 10934131.02 | 10934131.23 | 10934131.45 | 0.0509 | 0.0251 |
| Neptune | 25225-05-25 06:43 G | 10934446.67 | 10934446.78 | 10934446.96 | 0.0088 | 0.0072 |
| Jupiter | 25225-08-17 06:43 G | 10934530.60 | 10934530.78 | 10934530.98 | 0.0524 | 0.0277 |
| Neptune | 25226-05-27 23:45 G | 10934814.43 | 10934814.49 | 10934814.62 | 0.0088 | 0.0083 |
| Neptune | 25227-05-30 06:28 G | 10935181.72 | 10935181.77 | 10935181.86 | 0.0088 | 0.0084 |
| Uranus | 25229-12-09 08:52 G | 10936105.70 | 10936105.87 | 10936106.06 | 0.0141 | 0.0101 |
| Jupiter | 25230-01-12 00:14 G | 10936139.29 | 10936139.51 | 10936139.72 | 0.0520 | 0.0235 |
| Uranus | 25230-12-14 08:09 G | 10936475.61 | 10936475.84 | 10936476.08 | 0.0141 | 0.0038 |
| Jupiter | 25231-02-14 13:26 G | 10936537.86 | 10936538.06 | 10936538.25 | 0.0504 | 0.0244 |
| Uranus | 25231-12-18 23:31 G | 10936845.24 | 10936845.48 | 10936845.74 | 0.0141 | 0.0044 |
| Uranus | 25232-12-22 21:36 G | 10937215.25 | 10937215.40 | 10937215.59 | 0.0142 | 0.0102 |
| Saturn | 25234-06-26 10:04 G | 10937765.78 | 10937765.92 | 10937766.07 | 0.0291 | 0.0238 |

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| Saturn | 25235-07-10 14:09 G | 10938144.96 | 10938145.09 | 10938145.24 | 0.0292 | 0.0242 |
| Jupiter | 25236-07-18 10:48 G | 10938518.74 | 10938518.95 | 10938519.17 | 0.0511 | 0.0142 |
| Jupiter | 25237-08-22 14:09 G | 10938918.93 | 10938919.09 | 10938919.27 | 0.0526 | 0.0367 |
| Jupiter | 25242-01-16 13:26 G | 10940526.85 | 10940527.06 | 10940527.27 | 0.0517 | 0.0191 |
| Jupiter | 25243-02-19 00:00 G | 10940925.33 | 10940925.50 | 10940925.68 | 0.0503 | 0.0347 |
| Jupiter | 25248-07-23 10:33 G | 10942906.71 | 10942906.94 | 10942907.18 | 0.0513 | 0.0090 |
| Saturn | 25248-12-29 10:04 G | 10943065.72 | 10943065.92 | 10943066.14 | 0.0269 | 0.0127 |
| Jupiter | 25249-08-27 08:24 G | 10943306.77 | 10943306.85 | 10943306.94 | 0.0528 | 0.0487 |
| Saturn | 25250-01-10 15:07 G | 10943443.03 | 10943443.13 | 10943443.24 | 0.0268 | 0.0239 |
| Jupiter | 25254-01-21 12:14 G | 10944914.79 | 10944915.01 | 10944915.24 | 0.0515 | 0.0146 |
| Jupiter | 25255-02-23 05:31 G | 10945312.61 | 10945312.73 | 10945312.87 | 0.0501 | 0.0409 |
| Jupiter | 25259-06-25 20:38 G | 10946896.33 | 10946896.36 | 10946896.41 | 0.0500 | 0.0492 |
| Jupiter | 25260-07-27 18:14 G | 10947294.03 | 10947294.26 | 10947294.50 | 0.0515 | 0.0053 |
| Mars | 25262-05-01 20:24 G | 10947937.24 | 10947937.35 | 10947937.48 | 0.1584 | 0.1155 |
| Saturn | 25264-07-04 01:40 G | 10948731.33 | 10948731.57 | 10948731.80 | 0.0292 | 0.0044 |
| Jupiter | 25266-01-25 23:31 G | 10949302.25 | 10949302.48 | 10949302.72 | 0.0514 | 0.0040 |
| Jupiter | 25267-02-28 00:57 G | 10949700.43 | 10949700.54 | 10949700.67 | 0.0499 | 0.0427 |
| Pluto | 25267-05-27 07:26 G | 10949788.57 | 10949788.81 | 10949789.05 | 0.0079 | 0.0027 |
| Uranus | 25269-06-08 10:19 G | 10950531.82 | 10950531.93 | 10950532.07 | 0.0138 | 0.0119 |
| Uranus | 25270-06-12 20:09 G | 10950901.09 | 10950901.34 | 10950901.59 | 0.0137 | 0.0041 |
| Uranus | 25271-06-17 13:26 G | 10951270.82 | 10951271.06 | 10951271.31 | 0.0137 | 0.0010 |
| Jupiter | 25271-06-30 01:26 G | 10951283.43 | 10951283.56 | 10951283.70 | 0.0502 | 0.0413 |
| Uranus | 25272-06-20 22:19 G | 10951640.24 | 10951640.43 | 10951640.65 | 0.0137 | 0.0085 |
| Jupiter | 25272-08-01 20:24 G | 10951682.12 | 10951682.35 | 10951682.58 | 0.0517 | 0.0041 |
| Jupiter | 25276-12-27 02:09 G | 10953290.54 | 10953290.59 | 10953290.65 | 0.0527 | 0.0510 |
| Jupiter | 25278-01-31 01:12 G | 10953690.32 | 10953690.55 | 10953690.78 | 0.0511 | 0.0069 |
| Saturn | 25279-01-05 11:31 G | 10954029.74 | 10954029.98 | 10954030.22 | 0.0268 | 0.0080 |
| Jupiter | 25279-03-04 04:33 G | 10954087.62 | 10954087.69 | 10954087.76 | 0.0497 | 0.0472 |
| Neptune | 25281-09-28 18:28 G | 10955027.21 | 10955027.27 | 10955027.35 | 0.0090 | 0.0086 |
| Neptune | 25282-10-01 11:31 G | 10955394.93 | 10955394.98 | 10955395.07 | 0.0090 | 0.0086 |

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| Jupiter | 25283-07-04 18:43 G | 10955671.14 | 10955671.28 | 10955671.43 | 0.0504 | 0.0387 |
| Neptune | 25283-10-03 22:48 G | 10955762.33 | 10955762.45 | 10955762.62 | 0.0090 | 0.0074 |
| Jupiter | 25284-08-06 11:45 G | 10956069.76 | 10956069.99 | 10956070.22 | 0.0519 | 0.0160 |
| Neptune | 25284-10-05 11:31 G | 10956129.83 | 10956129.98 | 10956130.14 | 0.0090 | 0.0073 |
| Neptune | 25285-10-08 02:52 G | 10956497.46 | 10956497.62 | 10956497.83 | 0.0090 | 0.0062 |
| Neptune | 25286-10-10 11:31 G | 10956864.80 | 10956864.98 | 10956865.18 | 0.0090 | 0.0061 |
| Neptune | 25287-10-13 06:57 G | 10957232.59 | 10957232.79 | 10957233.02 | 0.0090 | 0.0049 |
| Neptune | 25288-10-14 13:12 G | 10957599.84 | 10957600.05 | 10957600.28 | 0.0090 | 0.0047 |
| Jupiter | 25289-01-01 08:38 G | 10957678.75 | 10957678.86 | 10957678.97 | 0.0525 | 0.0459 |
| Neptune | 25289-10-17 09:21 G | 10957967.65 | 10957967.89 | 10957968.14 | 0.0090 | 0.0035 |
| Jupiter | 25290-02-04 12:14 G | 10958077.77 | 10958078.01 | 10958078.24 | 0.0509 | 0.0122 |
| Neptune | 25290-10-19 16:19 G | 10958334.96 | 10958335.18 | 10958335.43 | 0.0090 | 0.0033 |
| Neptune | 25291-10-22 09:50 G | 10958702.67 | 10958702.91 | 10958703.18 | 0.0090 | 0.0023 |
| Neptune | 25292-10-23 20:38 G | 10959070.13 | 10959070.36 | 10959070.62 | 0.0090 | 0.0020 |
| Saturn | 25293-06-27 15:21 G | 10959316.95 | 10959317.14 | 10959317.35 | 0.0291 | 0.0175 |
| Neptune | 25293-10-26 09:36 G | 10959437.64 | 10959437.90 | 10959438.17 | 0.0090 | 0.0009 |
| Neptune | 25294-10-29 00:43 G | 10959805.28 | 10959805.53 | 10959805.78 | 0.0090 | 0.0005 |
| Jupiter | 25295-07-09 08:52 G | 10960058.70 | 10960058.87 | 10960059.05 | 0.0506 | 0.0343 |
| Neptune | 25295-10-31 09:07 G | 10960172.62 | 10960172.88 | 10960173.14 | 0.0090 | 0.0006 |
| Jupiter | 25296-08-11 13:26 G | 10960457.86 | 10960458.06 | 10960458.27 | 0.0521 | 0.0229 |
| Neptune | 25296-11-02 03:50 G | 10960540.41 | 10960540.66 | 10960540.92 | 0.0089 | 0.0010 |
| Neptune | 25297-11-04 10:04 G | 10960907.67 | 10960907.92 | 10960908.18 | 0.0089 | 0.0019 |
| Neptune | 25298-11-07 06:00 G | 10961275.51 | 10961275.75 | 10961276.02 | 0.0089 | 0.0023 |
| Neptune | 25299-11-09 12:28 G | 10961642.80 | 10961643.02 | 10961643.28 | 0.0089 | 0.0032 |
| Neptune | 25300-11-12 06:43 G | 10962010.55 | 10962010.78 | 10962011.03 | 0.0089 | 0.0038 |
| Jupiter | 25301-01-07 00:57 G | 10962066.37 | 10962066.54 | 10962066.73 | 0.0522 | 0.0346 |
| Neptune | 25301-11-14 16:33 G | 10962378.00 | 10962378.19 | 10962378.43 | 0.0089 | 0.0046 |
| Jupiter | 25302-02-10 00:43 G | 10962465.32 | 10962465.53 | 10962465.74 | 0.0507 | 0.0155 |
| Neptune | 25302-11-17 05:45 G | 10962745.55 | 10962745.74 | 10962745.98 | 0.0089 | 0.0052 |
| Neptune | 25303-11-19 20:24 G | 10963113.17 | 10963113.35 | 10963113.55 | 0.0089 | 0.0058 |

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| Neptune | 25304-11-21 04:19 G | 10963480.52 | 10963480.68 | 10963480.89 | 0.0089 | 0.0064 |
| Neptune | 25305-11-23 23:02 G | 10963848.31 | 10963848.46 | 10963848.62 | 0.0089 | 0.0070 |
| Neptune | 25306-11-26 04:19 G | 10964215.58 | 10964215.68 | 10964215.84 | 0.0089 | 0.0078 |
| Jupiter | 25307-07-14 23:31 G | 10964446.28 | 10964446.48 | 10964446.68 | 0.0508 | 0.0248 |
| Neptune | 25307-11-29 00:00 G | 10964583.42 | 10964583.50 | 10964583.62 | 0.0089 | 0.0083 |
| Saturn | 25308-01-01 20:09 G | 10964617.11 | 10964617.34 | 10964617.57 | 0.0269 | 0.0079 |
| Jupiter | 25308-08-17 16:04 G | 10964845.97 | 10964846.17 | 10964846.38 | 0.0523 | 0.0266 |
| Jupiter | 25313-01-11 19:40 G | 10966454.12 | 10966454.32 | 10966454.52 | 0.0520 | 0.0247 |
| Uranus | 25313-12-10 21:07 G | 10966787.20 | 10966787.38 | 10966787.57 | 0.0141 | 0.0098 |
| Jupiter | 25314-02-14 15:07 G | 10966852.92 | 10966853.13 | 10966853.34 | 0.0505 | 0.0241 |
| Uranus | 25314-12-15 20:52 G | 10967157.13 | 10967157.37 | 10967157.62 | 0.0141 | 0.0024 |
| Uranus | 25315-12-20 11:02 G | 10967526.72 | 10967526.96 | 10967527.22 | 0.0141 | 0.0036 |
| Uranus | 25316-12-24 10:48 G | 10967896.83 | 10967896.95 | 10967897.09 | 0.0142 | 0.0120 |
| Jupiter | 25319-07-19 17:31 G | 10968834.01 | 10968834.23 | 10968834.46 | 0.0510 | 0.0148 |
| Jupiter | 25320-08-22 05:02 G | 10969233.55 | 10969233.71 | 10969233.89 | 0.0525 | 0.0352 |
| Saturn | 25323-07-07 14:38 G | 10970282.89 | 10970283.11 | 10970283.35 | 0.0292 | 0.0109 |
| Jupiter | 25325-01-16 19:55 G | 10970842.12 | 10970842.33 | 10970842.55 | 0.0518 | 0.0209 |
| Jupiter | 25326-02-18 23:31 G | 10971240.32 | 10971240.48 | 10971240.65 | 0.0503 | 0.0344 |
| Jupiter | 25331-07-24 02:09 G | 10973221.37 | 10973221.59 | 10973221.82 | 0.0512 | 0.0100 |
| Jupiter | 25332-08-27 12:14 G | 10973621.92 | 10973622.01 | 10973622.11 | 0.0527 | 0.0475 |
| Saturn | 25336-12-26 18:57 G | 10975204.17 | 10975204.29 | 10975204.42 | 0.0269 | 0.0233 |
| Jupiter | 25337-01-21 09:36 G | 10975229.68 | 10975229.90 | 10975230.13 | 0.0516 | 0.0155 |
| Saturn | 25338-01-07 19:55 G | 10975581.13 | 10975581.33 | 10975581.54 | 0.0268 | 0.0133 |
| Jupiter | 25338-02-23 19:26 G | 10975628.18 | 10975628.31 | 10975628.46 | 0.0501 | 0.0400 |
| Jupiter | 25342-06-25 16:48 G | 10977211.16 | 10977211.20 | 10977211.25 | 0.0500 | 0.0489 |
| Jupiter | 25343-07-29 03:36 G | 10977609.42 | 10977609.65 | 10977609.88 | 0.0514 | 0.0060 |
| Jupiter | 25349-01-26 12:00 G | 10979617.77 | 10979618.00 | 10979618.23 | 0.0514 | 0.0042 |
| Jupiter | 25350-02-27 23:16 G | 10980015.36 | 10980015.47 | 10980015.61 | 0.0499 | 0.0421 |
| Saturn | 25352-06-30 04:33 G | 10980868.47 | 10980868.69 | 10980868.91 | 0.0291 | 0.0110 |
| Uranus | 25353-06-09 20:24 G | 10981213.19 | 10981213.35 | 10981213.51 | 0.0138 | 0.0105 |

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| Uranus | 25354-06-14 04:19 G | 10981582.45 | 10981582.68 | 10981582.93 | 0.0137 | 0.0052 |
| Jupiter | 25354-06-30 11:16 G | 10981598.85 | 10981598.97 | 10981599.10 | 0.0502 | 0.0418 |
| Uranus | 25355-06-18 22:48 G | 10981952.21 | 10981952.45 | 10981952.70 | 0.0137 | 0.0026 |
| Jupiter | 25355-08-02 18:57 G | 10981997.05 | 10981997.29 | 10981997.53 | 0.0517 | 0.0038 |
| Uranus | 25356-06-22 06:28 G | 10982321.57 | 10982321.77 | 10982322.00 | 0.0137 | 0.0078 |
| Jupiter | 25361-01-30 18:57 G | 10984005.06 | 10984005.29 | 10984005.53 | 0.0511 | 0.0060 |
| Jupiter | 25362-03-04 11:45 G | 10984402.92 | 10984402.99 | 10984403.06 | 0.0498 | 0.0473 |
| Neptune | 25364-04-01 00:14 G | 10985161.41 | 10985161.51 | 10985161.62 | 0.0088 | 0.0080 |
| Neptune | 25365-04-03 09:07 G | 10985528.84 | 10985528.88 | 10985528.99 | 0.0088 | 0.0084 |
| Neptune | 25366-04-05 18:14 G | 10985896.12 | 10985896.26 | 10985896.45 | 0.0088 | 0.0069 |
| Jupiter | 25366-07-04 22:04 G | 10985986.27 | 10985986.42 | 10985986.58 | 0.0504 | 0.0390 |
| Saturn | 25367-01-03 04:04 G | 10986168.43 | 10986168.67 | 10986168.92 | 0.0269 | 0.0028 |
| Neptune | 25367-04-08 08:24 G | 10986263.73 | 10986263.85 | 10986264.01 | 0.0088 | 0.0072 |
| Jupiter | 25367-08-07 18:14 G | 10986385.05 | 10986385.26 | 10986385.48 | 0.0519 | 0.0158 |
| Neptune | 25368-04-09 12:57 G | 10986630.86 | 10986631.04 | 10986631.26 | 0.0088 | 0.0057 |
| Neptune | 25369-04-12 06:00 G | 10986998.58 | 10986998.75 | 10986998.95 | 0.0088 | 0.0060 |
| Neptune | 25370-04-14 09:36 G | 10987365.68 | 10987365.90 | 10987366.12 | 0.0088 | 0.0044 |
| Neptune | 25371-04-17 01:40 G | 10987733.37 | 10987733.57 | 10987733.81 | 0.0088 | 0.0047 |
| Jupiter | 25372-01-02 01:55 G | 10987993.48 | 10987993.58 | 10987993.69 | 0.0525 | 0.0467 |
| Neptune | 25372-04-18 07:12 G | 10988100.58 | 10988100.80 | 10988101.05 | 0.0088 | 0.0032 |
| Jupiter | 25373-02-04 12:28 G | 10988392.80 | 10988393.02 | 10988393.24 | 0.0509 | 0.0107 |
| Neptune | 25373-04-20 20:09 G | 10988468.10 | 10988468.34 | 10988468.59 | 0.0088 | 0.0034 |
| Neptune | 25374-04-23 06:28 G | 10988835.54 | 10988835.77 | 10988836.03 | 0.0088 | 0.0020 |
| Neptune | 25375-04-25 15:07 G | 10989202.87 | 10989203.13 | 10989203.39 | 0.0088 | 0.0021 |
| Neptune | 25376-04-27 06:14 G | 10989570.51 | 10989570.76 | 10989571.01 | 0.0088 | 0.0006 |
| Neptune | 25377-04-29 10:33 G | 10989937.68 | 10989937.94 | 10989938.20 | 0.0088 | 0.0008 |
| Neptune | 25378-05-02 03:50 G | 10990305.41 | 10990305.66 | 10990305.92 | 0.0088 | 0.0008 |
| Jupiter | 25378-07-09 09:07 G | 10990373.73 | 10990373.88 | 10990374.05 | 0.0505 | 0.0353 |
| Neptune | 25379-05-04 07:40 G | 10990672.57 | 10990672.82 | 10990673.07 | 0.0088 | 0.0005 |
| Jupiter | 25379-08-12 13:40 G | 10990772.86 | 10990773.07 | 10990773.30 | 0.0520 | 0.0212 |

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| Neptune | 25380-05-06 00:00 G | 10991040.24 | 10991040.50 | 10991040.75 | 0.0088 | 0.0020 |
| Neptune | 25381-05-08 05:31 G | 10991407.50 | 10991407.73 | 10991407.99 | 0.0088 | 0.0019 |
| Neptune | 25382-05-10 17:45 G | 10991775.01 | 10991775.24 | 10991775.51 | 0.0088 | 0.0034 |
| Saturn | 25382-07-09 01:40 G | 10991834.38 | 10991834.57 | 10991834.79 | 0.0292 | 0.0176 |
| Neptune | 25383-05-13 05:16 G | 10992142.50 | 10992142.72 | 10992142.97 | 0.0088 | 0.0032 |
| Jupiter | 25384-01-06 23:16 G | 10992381.31 | 10992381.47 | 10992381.63 | 0.0523 | 0.0360 |
| Neptune | 25384-05-14 12:57 G | 10992509.83 | 10992510.04 | 10992510.28 | 0.0088 | 0.0047 |
| Jupiter | 25385-02-09 04:48 G | 10992780.47 | 10992780.70 | 10992780.94 | 0.0508 | 0.0142 |
| Neptune | 25385-05-17 04:48 G | 10992877.49 | 10992877.70 | 10992877.93 | 0.0088 | 0.0044 |
| Neptune | 25386-05-19 09:07 G | 10993244.69 | 10993244.88 | 10993245.07 | 0.0088 | 0.0059 |
| Neptune | 25387-05-22 02:38 G | 10993612.43 | 10993612.61 | 10993612.82 | 0.0088 | 0.0057 |
| Mars | 25388-04-29 03:21 G | 10993955.47 | 10993955.64 | 10993955.80 | 0.1582 | 0.0841 |
| Neptune | 25388-05-23 06:57 G | 10993979.66 | 10993979.79 | 10993979.94 | 0.0088 | 0.0072 |
| Neptune | 25389-05-25 22:48 G | 10994347.31 | 10994347.45 | 10994347.63 | 0.0088 | 0.0070 |
| Neptune | 25390-05-28 06:00 G | 10994714.70 | 10994714.75 | 10994714.84 | 0.0088 | 0.0084 |
| Jupiter | 25390-07-14 03:07 G | 10994761.43 | 10994761.63 | 10994761.84 | 0.0507 | 0.0249 |
| Neptune | 25391-05-30 18:00 G | 10995082.17 | 10995082.25 | 10995082.37 | 0.0088 | 0.0081 |
| Jupiter | 25391-08-17 05:31 G | 10995160.53 | 10995160.73 | 10995160.93 | 0.0523 | 0.0252 |
| Saturn | 25395-12-29 03:21 G | 10996755.46 | 10996755.64 | 10996755.82 | 0.0269 | 0.0181 |
| Jupiter | 25396-01-12 01:26 G | 10996769.36 | 10996769.56 | 10996769.77 | 0.0521 | 0.0258 |
| Saturn | 25397-01-09 08:38 G | 10997132.70 | 10997132.86 | 10997133.04 | 0.0268 | 0.0188 |
| Jupiter | 25397-02-13 15:07 G | 10997167.93 | 10997168.13 | 10997168.33 | 0.0506 | 0.0235 |
| Uranus | 25397-12-11 08:24 G | 10997468.67 | 10997468.85 | 10997469.05 | 0.0141 | 0.0094 |
| Uranus | 25398-12-16 09:07 G | 10997838.64 | 10997838.88 | 10997839.13 | 0.0141 | 0.0028 |
| Uranus | 25399-12-20 22:33 G | 10998208.21 | 10998208.44 | 10998208.69 | 0.0141 | 0.0053 |
| Uranus | 25400-12-25 23:16 G | 10998578.32 | 10998578.47 | 10998578.63 | 0.0142 | 0.0110 |
| Jupiter | 25402-07-19 10:48 G | 10999148.73 | 10999148.95 | 10999149.17 | 0.0509 | 0.0153 |
| Jupiter | 25403-08-23 11:45 G | 10999548.82 | 10999548.99 | 10999549.16 | 0.0525 | 0.0346 |
| Jupiter | 25408-01-17 16:33 G | 11001156.99 | 11001157.19 | 11001157.41 | 0.0519 | 0.0221 |
| Jupiter | 25409-02-19 11:16 G | 11001555.81 | 11001555.97 | 11001556.15 | 0.0504 | 0.0339 |

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| Saturn | 25411-07-03 23:16 G | 11002420.24 | 11002420.47 | 11002420.71 | 0.0291 | 0.0042 |
| Jupiter | 25414-07-24 12:57 G | 11003536.82 | 11003537.04 | 11003537.27 | 0.0512 | 0.0108 |
| Jupiter | 25415-08-28 07:55 G | 11003936.73 | 11003936.83 | 11003936.94 | 0.0527 | 0.0469 |
| Jupiter | 25420-01-22 16:33 G | 11005544.98 | 11005545.19 | 11005545.41 | 0.0516 | 0.0165 |
| Jupiter | 25421-02-23 12:14 G | 11005942.86 | 11005943.01 | 11005943.16 | 0.0502 | 0.0390 |
| Jupiter | 25425-06-26 02:24 G | 11007526.56 | 11007526.60 | 11007526.65 | 0.0500 | 0.0490 |
| Saturn | 25426-01-05 08:52 G | 11007719.61 | 11007719.87 | 11007720.12 | 0.0269 | 0.0026 |
| Jupiter | 25426-07-29 00:43 G | 11007924.29 | 11007924.53 | 11007924.77 | 0.0514 | 0.0065 |
| Pluto | 25426-11-28 23:45 G | 11008047.22 | 11008047.49 | 11008047.76 | 0.0064 | 0.0001 |
| Jupiter | 25427-09-02 13:55 G | 11008325.06 | 11008325.08 | 11008325.10 | 0.0529 | 0.0526 |
| Jupiter | 25432-01-27 02:38 G | 11009932.37 | 11009932.61 | 11009932.85 | 0.0514 | 0.0056 |
| Jupiter | 25433-02-28 04:48 G | 11010330.57 | 11010330.70 | 11010330.83 | 0.0500 | 0.0408 |
| Uranus | 25437-06-11 07:12 G | 11011894.68 | 11011894.80 | 11011894.97 | 0.0138 | 0.0113 |
| Jupiter | 25437-06-30 09:50 G | 11011913.79 | 11011913.91 | 11011914.04 | 0.0501 | 0.0425 |
| Uranus | 25438-06-15 15:21 G | 11012263.89 | 11012264.14 | 11012264.39 | 0.0137 | 0.0035 |
| Jupiter | 25438-08-02 20:09 G | 11012312.12 | 11012312.34 | 11012312.57 | 0.0516 | 0.0032 |
| Uranus | 25439-06-20 10:33 G | 11012633.70 | 11012633.94 | 11012634.19 | 0.0137 | 0.0015 |
| Uranus | 25440-06-23 17:02 G | 11013003.03 | 11013003.21 | 11013003.42 | 0.0137 | 0.0092 |
| Saturn | 25440-06-27 11:02 G | 11013006.83 | 11013006.96 | 11013007.12 | 0.0291 | 0.0236 |
| Saturn | 25441-07-11 14:24 G | 11013385.98 | 11013386.10 | 11013386.24 | 0.0292 | 0.0247 |
| Jupiter | 25444-01-31 22:48 G | 11014320.23 | 11014320.45 | 11014320.68 | 0.0513 | 0.0046 |
| Jupiter | 25445-03-04 11:31 G | 11014717.90 | 11014717.98 | 11014718.07 | 0.0499 | 0.0465 |
| Neptune | 25446-10-02 17:45 G | 11015295.19 | 11015295.24 | 11015295.33 | 0.0090 | 0.0086 |
| Neptune | 25447-10-05 04:33 G | 11015662.62 | 11015662.69 | 11015662.80 | 0.0090 | 0.0084 |
| Neptune | 25448-10-06 22:33 G | 11016030.30 | 11016030.44 | 11016030.59 | 0.0090 | 0.0073 |
| Jupiter | 25449-07-04 21:50 G | 11016301.28 | 11016301.41 | 11016301.55 | 0.0503 | 0.0403 |
| Neptune | 25449-10-09 05:31 G | 11016397.60 | 11016397.73 | 11016397.91 | 0.0090 | 0.0072 |
| Jupiter | 25450-08-07 15:36 G | 11016699.91 | 11016700.15 | 11016700.38 | 0.0518 | 0.0145 |
| Neptune | 25450-10-12 02:09 G | 11016765.40 | 11016765.59 | 11016765.78 | 0.0090 | 0.0059 |
| Neptune | 25451-10-14 07:40 G | 11017132.65 | 11017132.82 | 11017133.04 | 0.0090 | 0.0059 |

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| Neptune | 25452-10-16 03:36 G | 11017500.44 | 11017500.65 | 11017500.90 | 0.0090 | 0.0045 |
| Neptune | 25453-10-18 12:00 G | 11017867.79 | 11017868.00 | 11017868.23 | 0.0090 | 0.0045 |
| Neptune | 25454-10-21 03:50 G | 11018235.43 | 11018235.66 | 11018235.93 | 0.0090 | 0.0032 |
| Saturn | 25454-12-31 17:02 G | 11018307.01 | 11018307.21 | 11018307.43 | 0.0269 | 0.0127 |
| Jupiter | 25455-01-02 01:40 G | 11018308.49 | 11018308.57 | 11018308.66 | 0.0526 | 0.0481 |
| Neptune | 25455-10-23 15:50 G | 11018602.94 | 11018603.16 | 11018603.41 | 0.0090 | 0.0032 |
| Saturn | 25456-01-12 20:52 G | 11018684.27 | 11018684.37 | 11018684.48 | 0.0268 | 0.0240 |
| Jupiter | 25456-02-05 16:33 G | 11018707.95 | 11018708.19 | 11018708.43 | 0.0510 | 0.0088 |
| Neptune | 25456-10-25 03:36 G | 11018970.39 | 11018970.65 | 11018970.91 | 0.0090 | 0.0017 |
| Neptune | 25457-10-27 20:38 G | 11019338.11 | 11019338.36 | 11019338.60 | 0.0090 | 0.0017 |
| Neptune | 25458-10-30 04:04 G | 11019705.41 | 11019705.67 | 11019705.94 | 0.0090 | 0.0003 |
| Neptune | 25459-11-01 23:31 G | 11020073.23 | 11020073.48 | 11020073.74 | 0.0090 | 0.0004 |
| Neptune | 25460-11-03 05:16 G | 11020440.48 | 11020440.72 | 11020440.99 | 0.0090 | 0.0013 |
| Jupiter | 25461-07-09 12:57 G | 11020688.88 | 11020689.04 | 11020689.22 | 0.0505 | 0.0356 |
| Neptune | 25461-11-06 01:12 G | 11020808.29 | 11020808.55 | 11020808.81 | 0.0089 | 0.0011 |
| Jupiter | 25462-08-12 06:57 G | 11021087.58 | 11021087.79 | 11021088.00 | 0.0520 | 0.0203 |
| Neptune | 25462-11-08 08:24 G | 11021175.62 | 11021175.85 | 11021176.10 | 0.0089 | 0.0026 |
| Neptune | 25463-11-11 00:43 G | 11021543.29 | 11021543.53 | 11021543.80 | 0.0089 | 0.0025 |
| Neptune | 25464-11-12 12:00 G | 11021910.78 | 11021911.00 | 11021911.23 | 0.0089 | 0.0041 |
| Neptune | 25465-11-15 00:00 G | 11022278.26 | 11022278.50 | 11022278.74 | 0.0089 | 0.0039 |
| Neptune | 25466-11-17 15:50 G | 11022645.98 | 11022646.16 | 11022646.38 | 0.0089 | 0.0054 |
| Jupiter | 25467-01-07 04:48 G | 11022696.53 | 11022696.70 | 11022696.88 | 0.0524 | 0.0358 |
| Mars | 25467-05-03 09:36 G | 11022812.71 | 11022812.90 | 11022813.10 | 0.1583 | 0.0287 |
| Neptune | 25467-11-20 00:00 G | 11023013.29 | 11023013.50 | 11023013.71 | 0.0089 | 0.0052 |
| Jupiter | 25468-02-10 04:04 G | 11023095.46 | 11023095.67 | 11023095.89 | 0.0508 | 0.0134 |
| Neptune | 25468-11-21 18:28 G | 11023381.14 | 11023381.27 | 11023381.47 | 0.0089 | 0.0069 |
| Neptune | 25469-11-24 00:28 G | 11023748.37 | 11023748.52 | 11023748.71 | 0.0089 | 0.0066 |
| Saturn | 25470-07-05 19:55 G | 11023972.09 | 11023972.33 | 11023972.57 | 0.0291 | 0.0029 |
| Neptune | 25470-11-26 19:40 G | 11024116.24 | 11024116.32 | 11024116.45 | 0.0089 | 0.0081 |
| Neptune | 25471-11-29 02:24 G | 11024483.51 | 11024483.60 | 11024483.75 | 0.0089 | 0.0079 |

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| Jupiter | 25473-07-13 22:19 G | 11025076.23 | 11025076.43 | 11025076.63 | 0.0507 | 0.0252 |
| Jupiter | 25474-08-17 13:55 G | 11025475.88 | 11025476.08 | 11025476.29 | 0.0522 | 0.0243 |
| Jupiter | 25479-01-11 18:57 G | 11027084.10 | 11027084.29 | 11027084.49 | 0.0521 | 0.0270 |
| Jupiter | 25480-02-14 22:04 G | 11027483.21 | 11027483.42 | 11027483.63 | 0.0506 | 0.0226 |
| Uranus | 25481-12-12 18:14 G | 11028150.08 | 11028150.26 | 11028150.47 | 0.0141 | 0.0090 |
| Uranus | 25482-12-17 19:40 G | 11028520.07 | 11028520.32 | 11028520.57 | 0.0141 | 0.0017 |
| Uranus | 25483-12-22 07:55 G | 11028889.60 | 11028889.83 | 11028890.09 | 0.0141 | 0.0044 |
| Uranus | 25484-12-26 09:50 G | 11029259.81 | 11029259.91 | 11029260.01 | 0.0142 | 0.0128 |
| Saturn | 25485-01-06 14:38 G | 11029270.88 | 11029271.11 | 11029271.34 | 0.0269 | 0.0080 |
| Jupiter | 25485-07-18 21:50 G | 11029464.19 | 11029464.41 | 11029464.63 | 0.0509 | 0.0159 |
| Jupiter | 25486-08-22 06:28 G | 11029863.60 | 11029863.77 | 11029863.95 | 0.0524 | 0.0342 |
| Mars | 25490-11-03 02:52 G | 11031397.51 | 11031397.62 | 11031397.74 | 0.1956 | 0.1591 |
| Jupiter | 25491-01-16 21:36 G | 11031472.20 | 11031472.40 | 11031472.61 | 0.0519 | 0.0235 |
| Jupiter | 25492-02-19 02:24 G | 11031870.43 | 11031870.60 | 11031870.78 | 0.0504 | 0.0327 |
| Jupiter | 25497-07-23 05:02 G | 11033851.48 | 11033851.71 | 11033851.94 | 0.0511 | 0.0119 |
| Jupiter | 25498-08-27 08:09 G | 11034251.73 | 11034251.84 | 11034251.95 | 0.0526 | 0.0456 |
| Saturn | 25499-06-29 23:02 G | 11034558.26 | 11034558.46 | 11034558.67 | 0.0291 | 0.0166 |
| Jupiter | 25503-01-22 07:55 G | 11035859.61 | 11035859.83 | 11035860.06 | 0.0517 | 0.0178 |
| Jupiter | 25504-02-24 21:21 G | 11036258.24 | 11036258.39 | 11036258.54 | 0.0503 | 0.0373 |
| Jupiter | 25508-06-26 00:57 G | 11037841.51 | 11037841.54 | 11037841.58 | 0.0499 | 0.0492 |
| Jupiter | 25509-07-29 02:09 G | 11038239.37 | 11038239.59 | 11038239.81 | 0.0513 | 0.0077 |
| Jupiter | 25510-09-02 05:31 G | 11038639.67 | 11038639.73 | 11038639.80 | 0.0528 | 0.0507 |
| Saturn | 25514-01-03 06:14 G | 11039858.52 | 11039858.76 | 11039858.99 | 0.0269 | 0.0071 |
| Jupiter | 25515-01-27 08:09 G | 11040247.62 | 11040247.84 | 11040248.07 | 0.0515 | 0.0063 |
| Pluto | 25515-05-30 16:04 G | 11040371.01 | 11040371.17 | 11040371.38 | 0.0080 | 0.0055 |
| Jupiter | 25516-02-29 05:02 G | 11040645.57 | 11040645.71 | 11040645.86 | 0.0501 | 0.0395 |
| Jupiter | 25520-06-30 11:02 G | 11042228.86 | 11042228.96 | 11042229.07 | 0.0500 | 0.0435 |
| Uranus | 25521-06-12 17:16 G | 11042576.07 | 11042576.22 | 11042576.41 | 0.0138 | 0.0101 |
| Jupiter | 25521-08-02 18:28 G | 11042627.03 | 11042627.27 | 11042627.52 | 0.0515 | 0.0028 |
| Uranus | 25522-06-17 00:14 G | 11042945.27 | 11042945.51 | 11042945.76 | 0.0137 | 0.0046 |

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| Uranus | 25523-06-21 19:55 G | 11043315.09 | 11043315.33 | 11043315.57 | 0.0137 | 0.0032 |
| Uranus | 25524-06-25 01:26 G | 11043684.38 | 11043684.56 | 11043684.79 | 0.0137 | 0.0083 |
| Jupiter | 25527-02-01 02:24 G | 11044635.36 | 11044635.60 | 11044635.84 | 0.0513 | 0.0038 |
| Jupiter | 25528-03-04 17:45 G | 11045033.17 | 11045033.24 | 11045033.33 | 0.0499 | 0.0464 |
| Neptune | 25529-04-04 17:31 G | 11045429.21 | 11045429.23 | 11045429.33 | 0.0088 | 0.0086 |
| Saturn | 25529-07-08 11:45 G | 11045523.75 | 11045523.99 | 11045524.23 | 0.0291 | 0.0100 |
| Neptune | 25530-04-07 09:21 G | 11045796.78 | 11045796.89 | 11045797.01 | 0.0088 | 0.0077 |
| Neptune | 25531-04-09 13:26 G | 11046163.93 | 11046164.06 | 11046164.21 | 0.0088 | 0.0073 |
| Neptune | 25532-04-11 06:14 G | 11046531.62 | 11046531.76 | 11046531.97 | 0.0088 | 0.0065 |
| Jupiter | 25532-07-05 03:07 G | 11046616.49 | 11046616.63 | 11046616.76 | 0.0502 | 0.0413 |
| Neptune | 25533-04-13 10:04 G | 11046898.75 | 11046898.92 | 11046899.12 | 0.0088 | 0.0060 |
| Jupiter | 25533-08-07 12:28 G | 11047014.80 | 11047015.02 | 11047015.24 | 0.0517 | 0.0139 |
| Neptune | 25534-04-16 02:09 G | 11047266.39 | 11047266.59 | 11047266.82 | 0.0088 | 0.0052 |
| Neptune | 25535-04-18 09:07 G | 11047633.68 | 11047633.88 | 11047634.09 | 0.0088 | 0.0047 |
| Neptune | 25536-04-19 21:07 G | 11048001.14 | 11048001.38 | 11048001.62 | 0.0088 | 0.0039 |
| Neptune | 25537-04-22 08:09 G | 11048368.61 | 11048368.84 | 11048369.07 | 0.0088 | 0.0034 |
| Jupiter | 25538-01-02 04:33 G | 11048623.60 | 11048623.69 | 11048623.79 | 0.0526 | 0.0483 |
| Neptune | 25538-04-24 14:38 G | 11048735.86 | 11048736.11 | 11048736.37 | 0.0088 | 0.0025 |
| Jupiter | 25539-02-05 13:40 G | 11049022.84 | 11049023.07 | 11049023.29 | 0.0510 | 0.0075 |
| Neptune | 25539-04-27 06:14 G | 11049103.52 | 11049103.76 | 11049104.01 | 0.0088 | 0.0020 |
| Neptune | 25540-04-28 10:19 G | 11049470.67 | 11049470.93 | 11049471.18 | 0.0088 | 0.0012 |
| Neptune | 25541-05-01 03:36 G | 11049838.40 | 11049838.65 | 11049838.91 | 0.0088 | 0.0007 |
| Neptune | 25542-05-03 07:40 G | 11050205.57 | 11050205.82 | 11050206.08 | 0.0088 | 0.0001 |
| Saturn | 25542-12-28 20:52 G | 11050445.27 | 11050445.37 | 11050445.51 | 0.0270 | 0.0235 |
| Neptune | 25543-05-05 23:31 G | 11050573.22 | 11050573.48 | 11050573.75 | 0.0088 | 0.0007 |
| Saturn | 25544-01-10 01:55 G | 11050822.39 | 11050822.58 | 11050822.80 | 0.0269 | 0.0137 |
| Neptune | 25544-05-07 07:12 G | 11050940.55 | 11050940.80 | 11050941.04 | 0.0088 | 0.0014 |
| Jupiter | 25544-07-09 10:04 G | 11051003.77 | 11051003.92 | 11051004.09 | 0.0505 | 0.0364 |
| Neptune | 25545-05-09 18:14 G | 11051308.01 | 11051308.26 | 11051308.53 | 0.0088 | 0.0021 |
| Jupiter | 25545-08-12 16:19 G | 11051402.96 | 11051403.18 | 11051403.40 | 0.0520 | 0.0191 |

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| Neptune | 25546-05-12 06:14 G | 11051675.54 | 11051675.76 | 11051676.01 | 0.0088 | 0.0028 |
| Neptune | 25547-05-14 12:14 G | 11052042.79 | 11052043.01 | 11052043.28 | 0.0088 | 0.0034 |
| Neptune | 25548-05-16 05:02 G | 11052410.49 | 11052410.71 | 11052410.94 | 0.0088 | 0.0040 |
| Neptune | 25549-05-18 08:38 G | 11052777.65 | 11052777.86 | 11052778.08 | 0.0088 | 0.0047 |
| Jupiter | 25550-01-06 21:36 G | 11053011.24 | 11053011.40 | 11053011.57 | 0.0524 | 0.0365 |
| Neptune | 25550-05-21 01:55 G | 11053145.40 | 11053145.58 | 11053145.81 | 0.0088 | 0.0054 |
| Jupiter | 25551-02-10 10:04 G | 11053410.69 | 11053410.92 | 11053411.15 | 0.0508 | 0.0122 |
| Neptune | 25551-05-23 06:43 G | 11053512.61 | 11053512.78 | 11053512.97 | 0.0088 | 0.0061 |
| Neptune | 25552-05-24 22:04 G | 11053880.26 | 11053880.42 | 11053880.60 | 0.0088 | 0.0066 |
| Neptune | 25553-05-27 06:14 G | 11054247.65 | 11054247.76 | 11054247.92 | 0.0088 | 0.0074 |
| Neptune | 25554-05-29 17:45 G | 11054615.13 | 11054615.24 | 11054615.37 | 0.0088 | 0.0078 |
| Neptune | 25555-06-01 06:43 G | 11054982.75 | 11054982.78 | 11054982.85 | 0.0088 | 0.0087 |
| Jupiter | 25556-07-14 07:12 G | 11055391.60 | 11055391.80 | 11055392.00 | 0.0506 | 0.0260 |
| Jupiter | 25557-08-17 03:36 G | 11055790.44 | 11055790.65 | 11055790.87 | 0.0521 | 0.0228 |
| Saturn | 25558-07-02 15:21 G | 11056109.92 | 11056110.14 | 11056110.37 | 0.0291 | 0.0097 |
| Jupiter | 25562-01-11 23:16 G | 11057399.28 | 11057399.47 | 11057399.67 | 0.0522 | 0.0283 |
| Jupiter | 25563-02-14 15:50 G | 11057797.95 | 11057798.16 | 11057798.37 | 0.0507 | 0.0215 |
| Uranus | 25565-12-14 02:38 G | 11058831.43 | 11058831.61 | 11058831.82 | 0.0141 | 0.0091 |
| Uranus | 25566-12-19 04:33 G | 11059201.44 | 11059201.69 | 11059201.94 | 0.0141 | 0.0021 |
| Uranus | 25567-12-23 16:33 G | 11059570.96 | 11059571.19 | 11059571.43 | 0.0141 | 0.0058 |
| Jupiter | 25568-07-18 14:09 G | 11059778.86 | 11059779.09 | 11059779.31 | 0.0508 | 0.0171 |
| Uranus | 25568-12-27 18:43 G | 11059941.15 | 11059941.28 | 11059941.44 | 0.0142 | 0.0116 |
| Jupiter | 25569-08-22 07:26 G | 11060178.64 | 11060178.81 | 11060178.99 | 0.0523 | 0.0333 |
| Saturn | 25573-01-04 12:28 G | 11061409.77 | 11061410.02 | 11061410.28 | 0.0268 | 0.0016 |
| Jupiter | 25574-01-16 13:26 G | 11061786.86 | 11061787.06 | 11061787.28 | 0.0520 | 0.0245 |
| Jupiter | 25575-02-19 13:12 G | 11062185.87 | 11062186.05 | 11062186.22 | 0.0505 | 0.0320 |
| Jupiter | 25580-07-23 09:50 G | 11064166.70 | 11064166.91 | 11064167.13 | 0.0510 | 0.0134 |
| Jupiter | 25581-08-27 02:38 G | 11064566.49 | 11064566.61 | 11064566.74 | 0.0526 | 0.0444 |
| Jupiter | 25586-01-21 16:48 G | 11066174.99 | 11066175.20 | 11066175.41 | 0.0518 | 0.0181 |
| Jupiter | 25587-02-23 21:50 G | 11066573.25 | 11066573.41 | 11066573.59 | 0.0503 | 0.0360 |

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| Saturn | 25588-07-09 21:50 G | 11067075.21 | 11067075.41 | 11067075.62 | 0.0292 | 0.0171 |
| Jupiter | 25591-06-26 04:33 G | 11068156.68 | 11068156.69 | 11068156.70 | 0.0498 | 0.0497 |
| Jupiter | 25592-07-28 02:24 G | 11068554.36 | 11068554.60 | 11068554.85 | 0.0512 | 0.0085 |
| Mars | 25593-04-30 23:02 G | 11068831.42 | 11068831.46 | 11068831.51 | 0.1582 | 0.1521 |
| Jupiter | 25593-09-01 05:45 G | 11068954.67 | 11068954.74 | 11068954.81 | 0.0528 | 0.0500 |
| Jupiter | 25598-01-26 09:50 G | 11070562.67 | 11070562.91 | 11070563.15 | 0.0515 | 0.0064 |
| Jupiter | 25599-02-28 09:50 G | 11070960.77 | 11070960.91 | 11070961.05 | 0.0501 | 0.0387 |
| Saturn | 25601-12-30 07:12 G | 11071996.63 | 11071996.80 | 11071996.98 | 0.0270 | 0.0182 |
| Saturn | 25603-01-11 13:26 G | 11072373.90 | 11072374.06 | 11072374.24 | 0.0268 | 0.0191 |
| Jupiter | 25603-06-30 17:45 G | 11072544.14 | 11072544.24 | 11072544.36 | 0.0500 | 0.0443 |
| Jupiter | 25604-08-01 19:12 G | 11072942.07 | 11072942.30 | 11072942.52 | 0.0515 | 0.0023 |
| Uranus | 25605-06-13 03:21 G | 11073257.49 | 11073257.64 | 11073257.81 | 0.0138 | 0.0106 |
| Uranus | 25606-06-17 10:04 G | 11073626.68 | 11073626.92 | 11073627.17 | 0.0137 | 0.0031 |
| Uranus | 25607-06-22 06:14 G | 11073996.51 | 11073996.76 | 11073997.01 | 0.0137 | 0.0021 |
| Uranus | 25608-06-25 11:45 G | 11074365.81 | 11074365.99 | 11074366.17 | 0.0137 | 0.0098 |
| Jupiter | 25610-01-31 00:00 G | 11074950.27 | 11074950.50 | 11074950.72 | 0.0513 | 0.0029 |
| Neptune | 25610-10-03 00:00 G | 11075195.49 | 11075195.50 | 11075195.56 | 0.0090 | 0.0089 |
| Jupiter | 25611-03-04 20:52 G | 11075348.28 | 11075348.37 | 11075348.47 | 0.0499 | 0.0455 |
| Neptune | 25612-10-07 00:43 G | 11075930.41 | 11075930.53 | 11075930.69 | 0.0090 | 0.0076 |
| Neptune | 25613-10-09 21:07 G | 11076298.26 | 11076298.38 | 11076298.52 | 0.0090 | 0.0077 |
| Neptune | 25614-10-12 02:52 G | 11076665.47 | 11076665.62 | 11076665.83 | 0.0090 | 0.0063 |
| Jupiter | 25615-07-05 00:28 G | 11076931.40 | 11076931.52 | 11076931.64 | 0.0502 | 0.0428 |
| Neptune | 25615-10-14 21:21 G | 11077033.23 | 11077033.39 | 11077033.61 | 0.0090 | 0.0064 |
| Jupiter | 25616-08-06 18:28 G | 11077330.04 | 11077330.27 | 11077330.50 | 0.0516 | 0.0126 |
| Neptune | 25616-10-16 06:57 G | 11077400.59 | 11077400.79 | 11077401.01 | 0.0090 | 0.0050 |
| Saturn | 25617-07-04 07:40 G | 11077661.58 | 11077661.82 | 11077662.06 | 0.0291 | 0.0031 |
| Neptune | 25617-10-18 21:50 G | 11077768.21 | 11077768.41 | 11077768.65 | 0.0090 | 0.0050 |
| Neptune | 25618-10-21 12:00 G | 11078135.78 | 11078136.00 | 11078136.24 | 0.0090 | 0.0036 |
| Neptune | 25619-10-23 22:19 G | 11078503.20 | 11078503.43 | 11078503.69 | 0.0090 | 0.0035 |
| Neptune | 25620-10-25 16:19 G | 11078870.95 | 11078871.18 | 11078871.44 | 0.0090 | 0.0021 |

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| Jupiter | 25620-12-31 19:55 G | 11078938.26 | 11078938.33 | 11078938.41 | 0.0527 | 0.0495 |
| Neptune | 25621-10-27 23:02 G | 11079238.22 | 11079238.46 | 11079238.73 | 0.0090 | 0.0021 |
| Jupiter | 25622-02-04 20:09 G | 11079338.11 | 11079338.34 | 11079338.58 | 0.0512 | 0.0062 |
| Neptune | 25622-10-30 18:57 G | 11079606.04 | 11079606.29 | 11079606.56 | 0.0090 | 0.0008 |
| Neptune | 25623-11-02 01:12 G | 11079973.30 | 11079973.55 | 11079973.81 | 0.0090 | 0.0005 |
| Neptune | 25624-11-03 20:09 G | 11080341.08 | 11080341.34 | 11080341.60 | 0.0090 | 0.0008 |
| Neptune | 25625-11-06 04:19 G | 11080708.44 | 11080708.68 | 11080708.93 | 0.0090 | 0.0011 |
| Neptune | 25626-11-08 19:26 G | 11081076.07 | 11081076.31 | 11081076.58 | 0.0089 | 0.0023 |
| Jupiter | 25627-07-09 20:52 G | 11081319.22 | 11081319.37 | 11081319.53 | 0.0503 | 0.0369 |
| Neptune | 25627-11-11 08:38 G | 11081443.63 | 11081443.86 | 11081444.11 | 0.0089 | 0.0025 |
| Jupiter | 25628-08-11 06:57 G | 11081717.57 | 11081717.79 | 11081718.01 | 0.0518 | 0.0175 |
| Neptune | 25628-11-12 19:26 G | 11081811.07 | 11081811.31 | 11081811.56 | 0.0089 | 0.0036 |
| Neptune | 25629-11-15 12:28 G | 11082178.81 | 11082179.02 | 11082179.26 | 0.0089 | 0.0039 |
| Neptune | 25630-11-17 19:12 G | 11082546.10 | 11082546.30 | 11082546.53 | 0.0089 | 0.0051 |
| Neptune | 25631-11-20 14:52 G | 11082913.93 | 11082914.12 | 11082914.34 | 0.0089 | 0.0055 |
| Saturn | 25632-01-06 15:50 G | 11082960.91 | 11082961.16 | 11082961.41 | 0.0268 | 0.0037 |
| Neptune | 25632-11-21 20:38 G | 11083281.21 | 11083281.36 | 11083281.56 | 0.0089 | 0.0065 |
| Jupiter | 25633-01-06 02:38 G | 11083326.45 | 11083326.61 | 11083326.78 | 0.0525 | 0.0370 |
| Neptune | 25633-11-24 15:21 G | 11083649.00 | 11083649.14 | 11083649.34 | 0.0089 | 0.0069 |
| Jupiter | 25634-02-09 05:31 G | 11083725.50 | 11083725.73 | 11083725.96 | 0.0510 | 0.0113 |
| Neptune | 25634-11-26 23:16 G | 11084016.36 | 11084016.47 | 11084016.61 | 0.0089 | 0.0077 |
| Neptune | 25635-11-29 14:24 G | 11084384.02 | 11084384.10 | 11084384.24 | 0.0089 | 0.0082 |
| Jupiter | 25639-07-14 01:12 G | 11085706.35 | 11085706.55 | 11085706.75 | 0.0505 | 0.0268 |
| Jupiter | 25640-08-16 09:21 G | 11086105.69 | 11086105.89 | 11086106.10 | 0.0521 | 0.0218 |
| Jupiter | 25645-01-10 19:40 G | 11087714.12 | 11087714.32 | 11087714.52 | 0.0523 | 0.0287 |
| Jupiter | 25646-02-14 04:48 G | 11088113.50 | 11088113.70 | 11088113.91 | 0.0507 | 0.0220 |
| Saturn | 25646-06-28 03:36 G | 11088247.52 | 11088247.65 | 11088247.80 | 0.0290 | 0.0240 |
| Saturn | 25647-07-12 08:38 G | 11088626.73 | 11088626.86 | 11088627.01 | 0.0292 | 0.0238 |
| Uranus | 25649-12-14 10:48 G | 11089512.76 | 11089512.95 | 11089513.17 | 0.0141 | 0.0085 |
| Uranus | 25650-12-19 12:28 G | 11089882.77 | 11089883.02 | 11089883.27 | 0.0141 | 0.0015 |

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| Jupiter | 25651-07-18 22:33 G | 11090094.23 | 11090094.44 | 11090094.66 | 0.0508 | 0.0181 |
| Uranus | 25651-12-24 00:14 G | 11090252.27 | 11090252.51 | 11090252.75 | 0.0141 | 0.0049 |
| Jupiter | 25652-08-21 05:16 G | 11090493.53 | 11090493.72 | 11090493.91 | 0.0523 | 0.0325 |
| Uranus | 25652-12-28 02:24 G | 11090622.53 | 11090622.60 | 11090622.71 | 0.0142 | 0.0133 |
| Jupiter | 25657-01-16 00:14 G | 11092102.31 | 11092102.51 | 11092102.71 | 0.0520 | 0.0254 |
| Jupiter | 25658-02-18 12:57 G | 11092500.85 | 11092501.04 | 11092501.23 | 0.0505 | 0.0312 |
| Saturn | 25660-12-31 17:45 G | 11093548.04 | 11093548.24 | 11093548.45 | 0.0269 | 0.0132 |
| Saturn | 25662-01-12 18:43 G | 11093925.17 | 11093925.28 | 11093925.39 | 0.0268 | 0.0240 |
| Jupiter | 25663-07-23 12:43 G | 11094481.80 | 11094482.03 | 11094482.27 | 0.0510 | 0.0148 |
| Jupiter | 25664-08-26 07:26 G | 11094881.69 | 11094881.81 | 11094881.94 | 0.0525 | 0.0438 |
| Jupiter | 25669-01-20 17:16 G | 11096490.00 | 11096490.22 | 11096490.45 | 0.0518 | 0.0184 |
| Jupiter | 25670-02-23 03:36 G | 11096888.49 | 11096888.65 | 11096888.81 | 0.0503 | 0.0350 |
| Mars | 25672-05-02 16:04 G | 11097687.99 | 11097688.17 | 11097688.35 | 0.1582 | 0.0060 |
| Jupiter | 25674-06-25 12:43 G | 11098472.01 | 11098472.03 | 11098472.05 | 0.0498 | 0.0496 |
| Pluto | 25674-11-30 19:55 G | 11098630.20 | 11098630.33 | 11098630.50 | 0.0064 | 0.0051 |
| Jupiter | 25675-07-28 03:50 G | 11098869.44 | 11098869.66 | 11098869.89 | 0.0512 | 0.0097 |
| Pluto | 25675-12-02 04:19 G | 11098996.47 | 11098996.68 | 11098996.93 | 0.0064 | 0.0032 |
| Saturn | 25676-07-05 17:02 G | 11099212.96 | 11099213.21 | 11099213.46 | 0.0291 | 0.0028 |
| Jupiter | 25676-08-31 08:52 G | 11099269.77 | 11099269.87 | 11099269.97 | 0.0527 | 0.0476 |
| Jupiter | 25681-01-25 07:26 G | 11100877.59 | 11100877.81 | 11100878.03 | 0.0517 | 0.0069 |
| Jupiter | 25682-02-27 14:38 G | 11101275.96 | 11101276.11 | 11101276.28 | 0.0502 | 0.0377 |
| Jupiter | 25686-06-29 18:57 G | 11102859.19 | 11102859.29 | 11102859.38 | 0.0499 | 0.0452 |
| Jupiter | 25687-08-02 02:38 G | 11103257.37 | 11103257.61 | 11103257.85 | 0.0514 | 0.0017 |
| Jupiter | 25688-09-05 03:21 G | 11103657.60 | 11103657.64 | 11103657.69 | 0.0529 | 0.0515 |
| Uranus | 25689-06-13 11:16 G | 11103938.81 | 11103938.97 | 11103939.17 | 0.0138 | 0.0098 |
| Uranus | 25690-06-17 17:45 G | 11104308.01 | 11104308.24 | 11104308.50 | 0.0138 | 0.0042 |
| Saturn | 25691-01-07 20:52 G | 11104512.15 | 11104512.37 | 11104512.60 | 0.0268 | 0.0085 |
| Uranus | 25691-06-22 13:40 G | 11104677.84 | 11104678.07 | 11104678.33 | 0.0137 | 0.0037 |
| Uranus | 25692-06-25 18:43 G | 11105047.10 | 11105047.28 | 11105047.50 | 0.0137 | 0.0087 |
| Jupiter | 25693-01-30 07:40 G | 11105265.58 | 11105265.82 | 11105266.06 | 0.0515 | 0.0019 |

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| Neptune | 25693-04-04 10:04 G | 11105329.88 | 11105329.92 | 11105330.00 | 0.0088 | 0.0085 |
| Jupiter | 25694-03-03 23:31 G | 11105663.40 | 11105663.48 | 11105663.57 | 0.0500 | 0.0457 |
| Neptune | 25694-04-06 13:40 G | 11105697.06 | 11105697.07 | 11105697.13 | 0.0088 | 0.0087 |
| Neptune | 25695-04-09 07:26 G | 11106064.68 | 11106064.81 | 11106064.98 | 0.0088 | 0.0072 |
| Neptune | 25696-04-10 11:45 G | 11106431.87 | 11106431.99 | 11106432.13 | 0.0088 | 0.0074 |
| Neptune | 25697-04-13 03:07 G | 11106799.44 | 11106799.63 | 11106799.83 | 0.0088 | 0.0059 |
| Neptune | 25698-04-15 09:50 G | 11107166.76 | 11107166.91 | 11107167.12 | 0.0088 | 0.0062 |
| Jupiter | 25698-07-04 12:28 G | 11107246.90 | 11107247.02 | 11107247.13 | 0.0501 | 0.0434 |
| Neptune | 25699-04-17 20:24 G | 11107534.15 | 11107534.35 | 11107534.60 | 0.0088 | 0.0047 |
| Jupiter | 25699-08-06 12:43 G | 11107644.81 | 11107645.03 | 11107645.26 | 0.0516 | 0.0117 |
| Neptune | 25700-04-20 09:07 G | 11107901.69 | 11107901.88 | 11107902.10 | 0.0088 | 0.0048 |
| Neptune | 25701-04-22 15:07 G | 11108268.90 | 11108269.13 | 11108269.39 | 0.0088 | 0.0033 |
| Neptune | 25702-04-25 07:55 G | 11108636.60 | 11108636.83 | 11108637.07 | 0.0088 | 0.0034 |
| Neptune | 25703-04-27 11:31 G | 11109003.73 | 11109003.98 | 11109004.24 | 0.0088 | 0.0019 |
| Jupiter | 25704-01-02 06:43 G | 11109253.70 | 11109253.78 | 11109253.87 | 0.0528 | 0.0493 |
| Neptune | 25704-04-29 04:48 G | 11109371.45 | 11109371.70 | 11109371.96 | 0.0088 | 0.0021 |
| Jupiter | 25705-02-04 19:40 G | 11109653.09 | 11109653.32 | 11109653.55 | 0.0512 | 0.0057 |
| Neptune | 25705-05-01 09:21 G | 11109738.64 | 11109738.89 | 11109739.15 | 0.0088 | 0.0005 |
| Saturn | 25705-06-30 11:16 G | 11109798.79 | 11109798.97 | 11109799.16 | 0.0291 | 0.0185 |
| Neptune | 25706-05-04 00:00 G | 11110106.24 | 11110106.50 | 11110106.77 | 0.0088 | 0.0007 |
| Neptune | 25707-05-06 08:24 G | 11110473.60 | 11110473.85 | 11110474.10 | 0.0088 | 0.0009 |
| Neptune | 25708-05-07 18:00 G | 11110840.99 | 11110841.25 | 11110841.53 | 0.0088 | 0.0008 |
| Neptune | 25709-05-10 07:26 G | 11111208.58 | 11111208.81 | 11111209.06 | 0.0088 | 0.0023 |
| Neptune | 25710-05-12 13:12 G | 11111575.81 | 11111576.05 | 11111576.32 | 0.0088 | 0.0021 |
| Jupiter | 25710-07-09 17:31 G | 11111634.08 | 11111634.23 | 11111634.39 | 0.0503 | 0.0372 |
| Neptune | 25711-05-15 06:14 G | 11111943.54 | 11111943.76 | 11111944.01 | 0.0088 | 0.0037 |
| Jupiter | 25711-08-12 17:02 G | 11112033.00 | 11112033.21 | 11112033.43 | 0.0518 | 0.0160 |
| Neptune | 25712-05-16 09:50 G | 11112310.68 | 11112310.91 | 11112311.16 | 0.0088 | 0.0035 |
| Neptune | 25713-05-19 03:07 G | 11112678.43 | 11112678.63 | 11112678.86 | 0.0088 | 0.0051 |
| Neptune | 25714-05-21 08:09 G | 11113045.65 | 11113045.84 | 11113046.07 | 0.0088 | 0.0049 |

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| Neptune | 25715-05-23 22:19 G | 11113413.27 | 11113413.43 | 11113413.64 | 0.0088 | 0.0064 |
| Jupiter | 25716-01-07 01:12 G | 11113641.39 | 11113641.55 | 11113641.72 | 0.0525 | 0.0375 |
| Neptune | 25716-05-25 07:26 G | 11113780.65 | 11113780.81 | 11113781.01 | 0.0088 | 0.0062 |
| Jupiter | 25717-02-09 19:26 G | 11114041.09 | 11114041.31 | 11114041.54 | 0.0510 | 0.0110 |
| Neptune | 25717-05-27 16:33 G | 11114148.09 | 11114148.19 | 11114148.34 | 0.0088 | 0.0077 |
| Neptune | 25718-05-30 06:57 G | 11114515.68 | 11114515.79 | 11114515.94 | 0.0088 | 0.0075 |
| Saturn | 25720-01-03 23:02 G | 11115099.23 | 11115099.46 | 11115099.71 | 0.0269 | 0.0085 |
| Neptune | 25720-06-03 06:14 G | 11115250.74 | 11115250.76 | 11115250.80 | 0.0088 | 0.0087 |
| Jupiter | 25722-07-14 14:09 G | 11116021.90 | 11116022.09 | 11116022.28 | 0.0505 | 0.0269 |
| Jupiter | 25723-08-17 10:33 G | 11116420.72 | 11116420.94 | 11116421.16 | 0.0521 | 0.0208 |
| Jupiter | 25728-01-12 06:57 G | 11118029.60 | 11118029.79 | 11118029.97 | 0.0523 | 0.0297 |
| Jupiter | 25729-02-14 05:02 G | 11118428.50 | 11118428.71 | 11118428.93 | 0.0508 | 0.0218 |
| Uranus | 25733-12-15 19:55 G | 11120194.14 | 11120194.33 | 11120194.53 | 0.0140 | 0.0088 |
| Jupiter | 25734-07-19 02:38 G | 11120409.39 | 11120409.61 | 11120409.84 | 0.0507 | 0.0190 |
| Uranus | 25734-12-20 21:07 G | 11120564.13 | 11120564.38 | 11120564.64 | 0.0141 | 0.0015 |
| Saturn | 25735-07-08 18:28 G | 11120764.03 | 11120764.27 | 11120764.52 | 0.0292 | 0.0081 |
| Jupiter | 25735-08-22 10:33 G | 11120808.76 | 11120808.94 | 11120809.12 | 0.0522 | 0.0318 |
| Uranus | 25735-12-25 08:52 G | 11120933.65 | 11120933.87 | 11120934.11 | 0.0141 | 0.0061 |
| Uranus | 25736-12-29 12:00 G | 11121303.87 | 11121304.00 | 11121304.13 | 0.0142 | 0.0120 |
| Jupiter | 25740-01-16 20:24 G | 11122417.14 | 11122417.35 | 11122417.56 | 0.0521 | 0.0265 |
| Jupiter | 25741-02-18 19:12 G | 11122816.13 | 11122816.30 | 11122816.48 | 0.0506 | 0.0306 |
| Jupiter | 25746-07-23 17:45 G | 11124797.02 | 11124797.24 | 11124797.45 | 0.0509 | 0.0160 |
| Jupiter | 25747-08-27 10:48 G | 11125196.82 | 11125196.95 | 11125197.10 | 0.0524 | 0.0422 |
| Saturn | 25748-12-28 22:19 G | 11125686.33 | 11125686.43 | 11125686.54 | 0.0269 | 0.0240 |
| Saturn | 25750-01-10 04:04 G | 11126063.47 | 11126063.67 | 11126063.88 | 0.0268 | 0.0132 |
| Mars | 25751-05-06 11:31 G | 11126544.82 | 11126544.98 | 11126545.13 | 0.1582 | 0.0894 |
| Jupiter | 25752-01-21 17:02 G | 11126805.00 | 11126805.21 | 11126805.42 | 0.0520 | 0.0190 |
| Jupiter | 25753-02-23 10:04 G | 11127203.74 | 11127203.92 | 11127204.10 | 0.0504 | 0.0340 |
| Jupiter | 25757-06-25 14:24 G | 11128787.08 | 11128787.10 | 11128787.12 | 0.0497 | 0.0495 |
| Jupiter | 25758-07-28 12:43 G | 11129184.80 | 11129185.03 | 11129185.27 | 0.0511 | 0.0101 |

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| Jupiter | 25759-09-01 04:19 G | 11129584.58 | 11129584.68 | 11129584.79 | 0.0526 | 0.0464 |
| Jupiter | 25764-01-26 19:55 G | 11131193.10 | 11131193.33 | 11131193.57 | 0.0517 | 0.0067 |
| Pluto | 25764-06-02 13:12 G | 11131320.81 | 11131321.05 | 11131321.30 | 0.0079 | 0.0011 |
| Saturn | 25764-07-01 19:26 G | 11131350.11 | 11131350.31 | 11131350.53 | 0.0291 | 0.0132 |
| Jupiter | 25765-02-27 20:38 G | 11131591.22 | 11131591.36 | 11131591.51 | 0.0502 | 0.0375 |
| Jupiter | 25769-06-30 08:38 G | 11133174.77 | 11133174.86 | 11133174.95 | 0.0499 | 0.0457 |
| Jupiter | 25770-08-02 00:43 G | 11133572.30 | 11133572.53 | 11133572.76 | 0.0513 | 0.0011 |
| Jupiter | 25771-09-06 14:38 G | 11133973.06 | 11133973.11 | 11133973.18 | 0.0529 | 0.0508 |
| Uranus | 25773-06-14 18:43 G | 11134620.12 | 11134620.28 | 11134620.47 | 0.0138 | 0.0102 |
| Uranus | 25774-06-19 01:55 G | 11134989.34 | 11134989.58 | 11134989.83 | 0.0138 | 0.0029 |
| Mars | 25774-11-04 11:02 G | 11135127.77 | 11135127.96 | 11135128.15 | 0.1957 | 0.0426 |
| Uranus | 25775-06-23 22:04 G | 11135359.17 | 11135359.42 | 11135359.68 | 0.0137 | 0.0024 |
| Jupiter | 25776-01-31 09:07 G | 11135580.65 | 11135580.88 | 11135581.11 | 0.0515 | 0.0014 |
| Uranus | 25776-06-27 03:07 G | 11135728.49 | 11135728.63 | 11135728.82 | 0.0137 | 0.0103 |
| Neptune | 25776-10-07 17:02 G | 11135831.16 | 11135831.21 | 11135831.30 | 0.0090 | 0.0086 |
| Jupiter | 25777-03-04 14:24 G | 11135979.02 | 11135979.10 | 11135979.20 | 0.0500 | 0.0461 |
| Neptune | 25777-10-10 00:00 G | 11136198.39 | 11136198.50 | 11136198.65 | 0.0090 | 0.0077 |
| Neptune | 25778-10-12 18:14 G | 11136566.11 | 11136566.26 | 11136566.41 | 0.0090 | 0.0073 |
| Saturn | 25779-01-04 20:52 G | 11136650.12 | 11136650.37 | 11136650.63 | 0.0269 | 0.0038 |
| Neptune | 25779-10-15 04:48 G | 11136933.53 | 11136933.70 | 11136933.88 | 0.0090 | 0.0063 |
| Neptune | 25780-10-16 17:45 G | 11137301.05 | 11137301.24 | 11137301.45 | 0.0090 | 0.0059 |
| Jupiter | 25781-07-04 12:28 G | 11137561.91 | 11137562.02 | 11137562.14 | 0.0501 | 0.0436 |
| Neptune | 25781-10-19 08:38 G | 11137668.66 | 11137668.86 | 11137669.08 | 0.0090 | 0.0048 |
| Jupiter | 25782-08-07 03:50 G | 11137960.43 | 11137960.66 | 11137960.88 | 0.0516 | 0.0109 |
| Neptune | 25782-10-21 17:16 G | 11138036.00 | 11138036.22 | 11138036.46 | 0.0090 | 0.0044 |
| Neptune | 25783-10-24 12:14 G | 11138403.79 | 11138404.01 | 11138404.26 | 0.0090 | 0.0033 |
| Neptune | 25784-10-25 18:43 G | 11138771.05 | 11138771.28 | 11138771.54 | 0.0090 | 0.0031 |
| Neptune | 25785-10-28 15:07 G | 11139138.88 | 11139139.13 | 11139139.39 | 0.0090 | 0.0018 |
| Neptune | 25786-10-30 21:50 G | 11139506.16 | 11139506.41 | 11139506.66 | 0.0090 | 0.0016 |
| Jupiter | 25787-01-01 05:31 G | 11139568.66 | 11139568.73 | 11139568.81 | 0.0528 | 0.0497 |

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| Neptune | 25787-11-02 16:19 G | 11139873.91 | 11139874.18 | 11139874.44 | 0.0090 | 0.0002 |
| Jupiter | 25788-02-05 10:19 G | 11139968.70 | 11139968.93 | 11139969.16 | 0.0512 | 0.0046 |
| Neptune | 25788-11-04 02:09 G | 11140241.34 | 11140241.59 | 11140241.84 | 0.0090 | 0.0001 |
| Neptune | 25789-11-06 15:36 G | 11140608.90 | 11140609.15 | 11140609.43 | 0.0090 | 0.0014 |
| Neptune | 25790-11-09 05:45 G | 11140976.50 | 11140976.74 | 11140976.99 | 0.0090 | 0.0014 |
| Neptune | 25791-11-11 14:38 G | 11141343.86 | 11141344.11 | 11141344.37 | 0.0089 | 0.0028 |
| Neptune | 25792-11-13 08:53 G | 11141711.64 | 11141711.87 | 11141712.12 | 0.0089 | 0.0028 |
| Jupiter | 25793-07-09 09:21 G | 11141949.74 | 11141949.89 | 11141950.05 | 0.0503 | 0.0370 |
| Neptune | 25793-11-15 14:53 G | 11142078.91 | 11142079.12 | 11142079.36 | 0.0089 | 0.0044 |
| Saturn | 25794-07-09 16:48 G | 11142314.99 | 11142315.20 | 11142315.43 | 0.0292 | 0.0131 |
| Jupiter | 25794-08-11 18:43 G | 11142348.05 | 11142348.28 | 11142348.51 | 0.0517 | 0.0146 |
| Neptune | 25794-11-18 10:33 G | 11142446.74 | 11142446.94 | 11142447.19 | 0.0089 | 0.0044 |
| Neptune | 25795-11-20 16:48 G | 11142814.03 | 11142814.20 | 11142814.42 | 0.0089 | 0.0059 |
| Neptune | 25796-11-22 11:31 G | 11143181.79 | 11143181.98 | 11143182.20 | 0.0089 | 0.0057 |
| Neptune | 25797-11-24 20:24 G | 11143549.23 | 11143549.35 | 11143549.53 | 0.0089 | 0.0073 |
| Neptune | 25798-11-27 11:17 G | 11143916.81 | 11143916.97 | 11143917.14 | 0.0089 | 0.0071 |
| Jupiter | 25799-01-06 08:09 G | 11143956.68 | 11143956.84 | 11143956.99 | 0.0526 | 0.0382 |
| Neptune | 25799-11-30 00:14 G | 11144284.47 | 11144284.51 | 11144284.59 | 0.0089 | 0.0087 |
| Jupiter | 25800-02-09 17:17 G | 11144355.99 | 11144356.22 | 11144356.46 | 0.0511 | 0.0105 |
| Neptune | 25800-12-02 09:36 G | 11144651.84 | 11144651.90 | 11144652.00 | 0.0089 | 0.0085 |
| Jupiter | 25805-07-14 20:38 G | 11146337.15 | 11146337.36 | 11146337.57 | 0.0504 | 0.0262 |
| Jupiter | 25806-08-17 18:29 G | 11146736.07 | 11146736.27 | 11146736.48 | 0.0519 | 0.0203 |
| Saturn | 25808-01-01 04:33 G | 11147237.53 | 11147237.69 | 11147237.85 | 0.0269 | 0.0196 |
| Saturn | 25809-01-12 07:55 G | 11147614.65 | 11147614.83 | 11147615.02 | 0.0268 | 0.0176 |
| Jupiter | 25811-01-12 02:24 G | 11148344.41 | 11148344.60 | 11148344.80 | 0.0524 | 0.0308 |
| Jupiter | 25812-02-15 12:29 G | 11148743.82 | 11148744.02 | 11148744.23 | 0.0509 | 0.0219 |
| Jupiter | 25817-07-19 08:24 G | 11150724.65 | 11150724.85 | 11150725.06 | 0.0506 | 0.0197 |
| Uranus | 25817-12-17 06:57 G | 11150875.58 | 11150875.79 | 11150876.00 | 0.0140 | 0.0078 |
| Jupiter | 25818-08-22 15:07 G | 11151123.94 | 11151124.13 | 11151124.33 | 0.0521 | 0.0313 |
| Uranus | 25818-12-22 07:26 G | 11151245.56 | 11151245.81 | 11151246.07 | 0.0141 | 0.0011 |

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| Uranus | 25819-12-26 19:41 G | 11151615.09 | 11151615.32 | 11151615.55 | 0.0141 | 0.0056 |
| Uranus | 25820-12-30 21:50 G | 11151985.37 | 11151985.41 | 11151985.48 | 0.0142 | 0.0138 |
| Jupiter | 25823-01-17 03:36 G | 11152732.47 | 11152732.65 | 11152732.85 | 0.0522 | 0.0277 |
| Saturn | 25823-07-05 00:00 G | 11152901.26 | 11152901.50 | 11152901.73 | 0.0291 | 0.0082 |
| Jupiter | 25824-02-20 05:31 G | 11153131.54 | 11153131.73 | 11153131.93 | 0.0507 | 0.0302 |
| Jupiter | 25829-07-24 04:19 G | 11155112.46 | 11155112.68 | 11155112.91 | 0.0508 | 0.0166 |
| Jupiter | 25830-08-27 11:02 G | 11155511.83 | 11155511.96 | 11155512.10 | 0.0524 | 0.0417 |
| Jupiter | 25835-01-22 07:41 G | 11157120.60 | 11157120.82 | 11157121.04 | 0.0520 | 0.0189 |
| Jupiter | 25836-02-24 17:02 G | 11157519.05 | 11157519.21 | 11157519.39 | 0.0504 | 0.0332 |
| Saturn | 25838-01-06 19:55 G | 11158201.08 | 11158201.33 | 11158201.57 | 0.0268 | 0.0008 |
| Jupiter | 25840-06-26 06:57 G | 11159102.76 | 11159102.79 | 11159102.83 | 0.0497 | 0.0490 |
| Jupiter | 25841-07-28 15:21 G | 11159499.91 | 11159500.14 | 11159500.36 | 0.0511 | 0.0103 |
| Jupiter | 25842-09-01 20:24 G | 11159900.23 | 11159900.35 | 11159900.47 | 0.0526 | 0.0449 |
| Jupiter | 25847-01-26 21:36 G | 11161508.17 | 11161508.40 | 11161508.63 | 0.0517 | 0.0071 |
| Jupiter | 25848-02-29 12:14 G | 11161906.85 | 11161907.01 | 11161907.17 | 0.0502 | 0.0371 |
| Jupiter | 25852-06-30 12:00 G | 11163489.92 | 11163490.00 | 11163490.10 | 0.0499 | 0.0457 |
| Saturn | 25853-07-11 18:00 G | 11163866.08 | 11163866.25 | 11163866.45 | 0.0292 | 0.0175 |
| Jupiter | 25853-08-02 17:45 G | 11163888.01 | 11163888.24 | 11163888.48 | 0.0513 | 0.0019 |
| Jupiter | 25854-09-06 14:24 G | 11164288.03 | 11164288.10 | 11164288.18 | 0.0528 | 0.0497 |
| Uranus | 25857-06-16 02:53 G | 11165301.44 | 11165301.62 | 11165301.81 | 0.0138 | 0.0096 |
| Uranus | 25858-06-20 10:19 G | 11165670.70 | 11165670.93 | 11165671.18 | 0.0138 | 0.0037 |
| Jupiter | 25859-01-31 19:41 G | 11165896.09 | 11165896.32 | 11165896.55 | 0.0516 | 0.0008 |
| Neptune | 25859-04-10 12:43 G | 11165964.94 | 11165965.03 | 11165965.15 | 0.0088 | 0.0079 |
| Uranus | 25859-06-25 05:45 G | 11166040.49 | 11166040.74 | 11166040.98 | 0.0137 | 0.0040 |
| Jupiter | 25860-03-04 13:55 G | 11166293.99 | 11166294.08 | 11166294.17 | 0.0501 | 0.0460 |
| Neptune | 25860-04-12 02:53 G | 11166332.52 | 11166332.62 | 11166332.77 | 0.0088 | 0.0077 |
| Uranus | 25860-06-28 11:17 G | 11166409.79 | 11166409.97 | 11166410.17 | 0.0137 | 0.0090 |
| Neptune | 25861-04-14 12:00 G | 11166699.85 | 11166700.00 | 11166700.17 | 0.0088 | 0.0066 |
| Neptune | 25862-04-16 21:50 G | 11167067.24 | 11167067.41 | 11167067.61 | 0.0088 | 0.0063 |
| Neptune | 25863-04-19 11:31 G | 11167434.79 | 11167434.98 | 11167435.19 | 0.0088 | 0.0052 |

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| Neptune | 25864-04-20 16:19 G | 11167801.99 | 11167802.18 | 11167802.42 | 0.0088 | 0.0050 |
| Jupiter | 25864-07-05 07:26 G | 11167877.70 | 11167877.81 | 11167877.92 | 0.0500 | 0.0435 |
| Neptune | 25865-04-23 09:21 G | 11168169.67 | 11168169.89 | 11168170.13 | 0.0088 | 0.0039 |
| Jupiter | 25865-08-07 06:57 G | 11168275.55 | 11168275.79 | 11168276.02 | 0.0514 | 0.0104 |
| Neptune | 25866-04-25 12:57 G | 11168536.81 | 11168537.04 | 11168537.28 | 0.0088 | 0.0036 |
| Saturn | 25867-01-02 06:43 G | 11168788.59 | 11168788.78 | 11168788.99 | 0.0269 | 0.0154 |
| Neptune | 25867-04-28 05:45 G | 11168904.49 | 11168904.74 | 11168904.99 | 0.0088 | 0.0025 |
| Saturn | 25868-01-14 04:19 G | 11169165.53 | 11169165.68 | 11169165.82 | 0.0268 | 0.0220 |
| Neptune | 25868-04-29 10:33 G | 11169271.70 | 11169271.94 | 11169272.19 | 0.0088 | 0.0021 |
| Neptune | 25869-05-02 00:00 G | 11169639.25 | 11169639.50 | 11169639.78 | 0.0088 | 0.0011 |
| Jupiter | 25870-01-01 12:43 G | 11169883.97 | 11169884.03 | 11169884.10 | 0.0529 | 0.0502 |
| Neptune | 25870-05-04 09:50 G | 11170006.66 | 11170006.91 | 11170007.16 | 0.0088 | 0.0007 |
| Jupiter | 25871-02-05 07:41 G | 11170283.58 | 11170283.82 | 11170284.06 | 0.0514 | 0.0036 |
| Neptune | 25871-05-06 18:57 G | 11170374.03 | 11170374.29 | 11170374.56 | 0.0088 | 0.0003 |
| Neptune | 25872-05-08 09:21 G | 11170741.64 | 11170741.89 | 11170742.14 | 0.0088 | 0.0007 |
| Neptune | 25873-05-10 13:55 G | 11171108.83 | 11171109.08 | 11171109.35 | 0.0088 | 0.0018 |
| Neptune | 25874-05-13 07:26 G | 11171476.57 | 11171476.81 | 11171477.06 | 0.0088 | 0.0022 |
| Neptune | 25875-05-15 11:17 G | 11171843.73 | 11171843.97 | 11171844.20 | 0.0088 | 0.0032 |
| Neptune | 25876-05-17 03:50 G | 11172211.43 | 11172211.66 | 11172211.91 | 0.0088 | 0.0037 |
| Jupiter | 25876-07-09 14:38 G | 11172264.95 | 11172265.11 | 11172265.28 | 0.0502 | 0.0361 |
| Mars | 25877-05-04 07:41 G | 11172563.65 | 11172563.82 | 11172563.99 | 0.1582 | 0.0831 |
| Neptune | 25877-05-19 09:07 G | 11172578.69 | 11172578.88 | 11172579.12 | 0.0088 | 0.0046 |
| Jupiter | 25877-08-12 03:50 G | 11172663.44 | 11172663.66 | 11172663.88 | 0.0517 | 0.0138 |
| Neptune | 25878-05-21 22:33 G | 11172946.24 | 11172946.44 | 11172946.67 | 0.0088 | 0.0050 |
| Neptune | 25879-05-24 09:21 G | 11173313.71 | 11173313.89 | 11173314.08 | 0.0088 | 0.0059 |
| Neptune | 25880-05-25 17:45 G | 11173681.07 | 11173681.24 | 11173681.43 | 0.0088 | 0.0064 |
| Neptune | 25881-05-28 08:38 G | 11174048.75 | 11174048.86 | 11174049.02 | 0.0088 | 0.0074 |
| Jupiter | 25882-01-06 09:50 G | 11174271.75 | 11174271.91 | 11174272.08 | 0.0527 | 0.0383 |
| Neptune | 25882-05-30 13:26 G | 11174415.96 | 11174416.06 | 11174416.20 | 0.0088 | 0.0078 |
| Saturn | 25882-07-05 20:24 G | 11174452.10 | 11174452.35 | 11174452.61 | 0.0291 | 0.0037 |

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| Jupiter | 25883-02-10 06:14 G | 11174671.54 | 11174671.76 | 11174671.98 | 0.0512 | 0.0109 |
| Neptune | 25883-06-02 06:43 G | 11174783.76 | 11174783.78 | 11174783.87 | 0.0088 | 0.0086 |
| Jupiter | 25888-07-14 03:36 G | 11176652.46 | 11176652.65 | 11176652.85 | 0.0504 | 0.0259 |
| Jupiter | 25889-08-17 00:43 G | 11177051.31 | 11177051.53 | 11177051.76 | 0.0519 | 0.0199 |
| Jupiter | 25894-01-11 14:09 G | 11178659.91 | 11178660.09 | 11178660.27 | 0.0525 | 0.0321 |
| Jupiter | 25895-02-15 00:14 G | 11179059.30 | 11179059.51 | 11179059.73 | 0.0509 | 0.0219 |
| Saturn | 25897-01-07 23:31 G | 11179752.25 | 11179752.48 | 11179752.72 | 0.0268 | 0.0052 |
| Jupiter | 25900-07-19 22:19 G | 11181040.22 | 11181040.43 | 11181040.66 | 0.0506 | 0.0200 |
| Jupiter | 25901-08-22 20:38 G | 11181439.19 | 11181439.36 | 11181439.55 | 0.0521 | 0.0319 |
| Uranus | 25901-12-18 17:17 G | 11181557.03 | 11181557.22 | 11181557.43 | 0.0140 | 0.0083 |
| Uranus | 25902-12-23 17:31 G | 11181926.97 | 11181927.23 | 11181927.49 | 0.0141 | 0.0008 |
| Uranus | 25903-12-28 06:43 G | 11182296.56 | 11182296.78 | 11182297.00 | 0.0141 | 0.0067 |
| Uranus | 25905-01-01 08:53 G | 11182666.78 | 11182666.87 | 11182667.00 | 0.0142 | 0.0128 |
| Jupiter | 25906-01-17 17:17 G | 11183048.03 | 11183048.22 | 11183048.43 | 0.0522 | 0.0283 |
| Jupiter | 25907-02-20 12:43 G | 11183446.85 | 11183447.03 | 11183447.21 | 0.0507 | 0.0297 |
| Saturn | 25911-06-30 11:17 G | 11185037.88 | 11185037.97 | 11185038.09 | 0.0290 | 0.0259 |
| Saturn | 25912-07-13 20:24 G | 11185417.19 | 11185417.35 | 11185417.51 | 0.0292 | 0.0217 |
| Jupiter | 25912-07-24 09:50 G | 11185427.69 | 11185427.91 | 11185428.13 | 0.0508 | 0.0168 |
| Jupiter | 25913-08-28 03:50 G | 11185827.52 | 11185827.66 | 11185827.81 | 0.0523 | 0.0410 |
| Jupiter | 25918-01-22 03:21 G | 11187435.44 | 11187435.64 | 11187435.86 | 0.0520 | 0.0198 |
| Jupiter | 25919-02-25 04:48 G | 11187834.52 | 11187834.70 | 11187834.89 | 0.0505 | 0.0318 |
| Jupiter | 25923-06-27 13:12 G | 11189418.01 | 11189418.05 | 11189418.10 | 0.0497 | 0.0486 |
| Pluto | 25923-12-06 10:19 G | 11189579.68 | 11189579.93 | 11189580.19 | 0.0064 | 0.0008 |
| Jupiter | 25924-07-29 10:05 G | 11189815.70 | 11189815.92 | 11189816.15 | 0.0510 | 0.0096 |
| Jupiter | 25925-09-01 20:24 G | 11190215.22 | 11190215.35 | 11190215.48 | 0.0525 | 0.0442 |
| Saturn | 25926-01-04 03:07 G | 11190339.40 | 11190339.63 | 11190339.87 | 0.0269 | 0.0111 |
| Saturn | 25927-01-15 23:31 G | 11190716.45 | 11190716.48 | 11190716.51 | 0.0267 | 0.0265 |
| Jupiter | 25930-01-27 07:26 G | 11191823.58 | 11191823.81 | 11191824.04 | 0.0518 | 0.0074 |
| Jupiter | 25931-03-01 11:02 G | 11192221.81 | 11192221.96 | 11192222.13 | 0.0504 | 0.0368 |
| Jupiter | 25935-07-02 04:48 G | 11193805.62 | 11193805.70 | 11193805.78 | 0.0498 | 0.0463 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 25936-08-02 18:43 G | 11194203.04 | 11194203.28 | 11194203.52 | 0.0512 | 0.0018 |
| Jupiter | 25937-09-07 00:29 G | 11194603.46 | 11194603.52 | 11194603.60 | 0.0527 | 0.0497 |
| Uranus | 25941-06-17 10:33 G | 11195982.78 | 11195982.94 | 11195983.15 | 0.0138 | 0.0097 |
| Saturn | 25941-07-07 14:24 G | 11196002.86 | 11196003.10 | 11196003.35 | 0.0292 | 0.0009 |
| Neptune | 25941-10-11 13:41 G | 11196098.95 | 11196099.07 | 11196099.20 | 0.0090 | 0.0079 |
| Jupiter | 25942-01-31 22:33 G | 11196211.20 | 11196211.44 | 11196211.67 | 0.0516 | 0.0011 |
| Uranus | 25942-06-21 19:26 G | 11196352.07 | 11196352.31 | 11196352.56 | 0.0137 | 0.0027 |
| Neptune | 25942-10-14 00:57 G | 11196466.45 | 11196466.54 | 11196466.67 | 0.0090 | 0.0081 |
| Jupiter | 25943-03-06 08:24 G | 11196609.78 | 11196609.85 | 11196609.94 | 0.0502 | 0.0465 |
| Uranus | 25943-06-26 14:24 G | 11196721.85 | 11196722.10 | 11196722.35 | 0.0137 | 0.0028 |
| Neptune | 25943-10-16 12:43 G | 11196833.87 | 11196834.03 | 11196834.24 | 0.0090 | 0.0065 |
| Uranus | 25944-06-29 20:38 G | 11197091.23 | 11197091.36 | 11197091.54 | 0.0137 | 0.0107 |
| Neptune | 25944-10-18 05:45 G | 11197201.58 | 11197201.74 | 11197201.92 | 0.0090 | 0.0066 |
| Neptune | 25945-10-20 13:26 G | 11197568.86 | 11197569.06 | 11197569.29 | 0.0090 | 0.0050 |
| Neptune | 25946-10-23 08:53 G | 11197936.68 | 11197936.87 | 11197937.10 | 0.0090 | 0.0052 |
| Jupiter | 25947-07-06 12:29 G | 11198192.90 | 11198193.02 | 11198193.14 | 0.0500 | 0.0434 |
| Neptune | 25947-10-25 15:07 G | 11198303.91 | 11198304.13 | 11198304.38 | 0.0090 | 0.0036 |
| Jupiter | 25948-08-07 17:02 G | 11198590.99 | 11198591.21 | 11198591.43 | 0.0514 | 0.0098 |
| Neptune | 25948-10-27 11:02 G | 11198671.74 | 11198671.96 | 11198672.21 | 0.0090 | 0.0036 |
| Neptune | 25949-10-29 18:43 G | 11199039.04 | 11199039.28 | 11199039.53 | 0.0090 | 0.0020 |
| Neptune | 25950-11-01 11:45 G | 11199406.73 | 11199406.99 | 11199407.25 | 0.0090 | 0.0020 |
| Neptune | 25951-11-03 22:48 G | 11199774.20 | 11199774.45 | 11199774.70 | 0.0090 | 0.0005 |
| Neptune | 25952-11-05 11:17 G | 11200141.71 | 11200141.97 | 11200142.24 | 0.0090 | 0.0005 |
| Jupiter | 25953-01-01 16:48 G | 11200199.13 | 11200199.20 | 11200199.28 | 0.0529 | 0.0499 |
| Neptune | 25953-11-08 03:07 G | 11200509.38 | 11200509.63 | 11200509.88 | 0.0089 | 0.0010 |
| Jupiter | 25954-02-05 22:48 G | 11200599.23 | 11200599.45 | 11200599.68 | 0.0514 | 0.0028 |
| Neptune | 25954-11-10 11:31 G | 11200876.72 | 11200876.98 | 11200877.25 | 0.0089 | 0.0011 |
| Neptune | 25955-11-13 06:29 G | 11201244.54 | 11201244.77 | 11201245.03 | 0.0089 | 0.0027 |
| Saturn | 25956-01-11 02:38 G | 11201303.39 | 11201303.61 | 11201303.84 | 0.0268 | 0.0095 |
| Mars | 25956-05-07 09:36 G | 11201420.74 | 11201420.90 | 11201421.06 | 0.1582 | 0.0789 |

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|---------|---------------------|-------------|-------------|-------------|--------|----------|
| Neptune | 25956-11-14 12:29 G | 11201611.78 | 11201612.02 | 11201612.28 | 0.0089 | 0.0027 |
| Neptune | 25957-11-17 08:09 G | 11201979.62 | 11201979.84 | 11201980.09 | 0.0089 | 0.0041 |
| Neptune | 25958-11-19 15:07 G | 11202346.91 | 11202347.13 | 11202347.36 | 0.0089 | 0.0042 |
| Jupiter | 25959-07-11 00:29 G | 11202580.36 | 11202580.52 | 11202580.68 | 0.0502 | 0.0354 |
| Neptune | 25959-11-22 08:09 G | 11202714.65 | 11202714.84 | 11202715.07 | 0.0089 | 0.0055 |
| Jupiter | 25960-08-12 12:57 G | 11202978.81 | 11202979.04 | 11202979.28 | 0.0517 | 0.0132 |
| Neptune | 25960-11-23 18:00 G | 11203082.08 | 11203082.25 | 11203082.46 | 0.0089 | 0.0058 |
| Neptune | 25961-11-26 06:57 G | 11203449.63 | 11203449.79 | 11203449.96 | 0.0089 | 0.0070 |
| Neptune | 25962-11-28 21:36 G | 11203817.28 | 11203817.40 | 11203817.57 | 0.0089 | 0.0073 |
| Neptune | 25963-12-01 06:29 G | 11204184.70 | 11204184.77 | 11204184.88 | 0.0089 | 0.0084 |
| Neptune | 25964-12-03 01:12 G | 11204552.50 | 11204552.55 | 11204552.63 | 0.0089 | 0.0086 |
| Jupiter | 25965-01-06 22:05 G | 11204587.27 | 11204587.42 | 11204587.58 | 0.0527 | 0.0382 |
| Jupiter | 25966-02-10 17:02 G | 11204986.97 | 11204987.21 | 11204987.45 | 0.0512 | 0.0108 |
| Saturn | 25970-07-01 12:43 G | 11206588.87 | 11206589.03 | 11206589.19 | 0.0290 | 0.0216 |
| Saturn | 25971-07-15 17:31 G | 11206968.13 | 11206968.23 | 11206968.36 | 0.0292 | 0.0257 |
| Jupiter | 25971-07-15 20:09 G | 11206968.13 | 11206968.34 | 11206968.55 | 0.0504 | 0.0251 * |
| Jupiter | 25972-08-17 08:53 G | 11207366.66 | 11207366.87 | 11207367.08 | 0.0518 | 0.0203 |
| Jupiter | 25977-01-11 19:26 G | 11208975.13 | 11208975.31 | 11208975.50 | 0.0525 | 0.0329 |
| Jupiter | 25978-02-15 01:55 G | 11209374.38 | 11209374.58 | 11209374.79 | 0.0510 | 0.0218 |
| Jupiter | 25983-07-20 05:02 G | 11211355.50 | 11211355.71 | 11211355.93 | 0.0505 | 0.0200 |
| Jupiter | 25984-08-22 13:12 G | 11211754.87 | 11211755.05 | 11211755.23 | 0.0520 | 0.0326 |
| Saturn | 25985-01-04 22:48 G | 11211890.21 | 11211890.45 | 11211890.69 | 0.0269 | 0.0070 |
| Uranus | 25985-12-19 04:19 G | 11212238.47 | 11212238.68 | 11212238.89 | 0.0140 | 0.0071 |
| Uranus | 25986-12-24 03:21 G | 11212608.38 | 11212608.64 | 11212608.90 | 0.0141 | 0.0006 |
| Uranus | 25987-12-28 17:17 G | 11212978.00 | 11212978.22 | 11212978.44 | 0.0141 | 0.0064 |
| Jupiter | 25989-01-16 12:00 G | 11213362.81 | 11213363.00 | 11213363.19 | 0.0523 | 0.0290 |
| Jupiter | 25990-02-19 22:48 G | 11213762.26 | 11213762.45 | 11213762.65 | 0.0508 | 0.0287 |
| Jupiter | 25995-07-25 01:12 G | 11215743.33 | 11215743.55 | 11215743.77 | 0.0507 | 0.0174 |
| Jupiter | 25996-08-27 00:57 G | 11216142.40 | 11216142.54 | 11216142.70 | 0.0522 | 0.0405 |
| Saturn | 26000-07-08 14:53 G | 11217553.88 | 11217554.12 | 11217554.35 | 0.0292 | 0.0048 |

27TH MILLENNIUM CE

This is a list of transits of Moon in the 27th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 26001-01-21 18:57 | G | 11217751.08 | 11217751.29 | 11217751.51 | 0.0521 | 0.0194 | |
| Jupiter | 26002-02-24 07:55 | G | 11218149.65 | 11218149.83 | 11218150.02 | 0.0506 | 0.0311 | |
| Jupiter | 26006-06-27 04:33 | G | 11219733.66 | 11219733.69 | 11219733.72 | 0.0496 | 0.0490 | |
| Jupiter | 26007-07-29 10:19 | G | 11220130.69 | 11220130.93 | 11220131.16 | 0.0509 | 0.0094 | |
| Jupiter | 26008-09-01 07:41 | G | 11220530.70 | 11220530.82 | 11220530.95 | 0.0525 | 0.0436 | |
| Pluto | 26012-06-05 03:07 | G | 11221903.49 | 11221903.63 | 11221903.82 | 0.0080 | 0.0063 | |
| Jupiter | 26013-01-26 11:31 | G | 11222138.75 | 11222138.98 | 11222139.22 | 0.0519 | 0.0074 | |
| Saturn | 26013-12-31 01:26 | G | 11222477.46 | 11222477.56 | 11222477.67 | 0.0269 | 0.0242 | |
| Jupiter | 26014-03-01 06:00 | G | 11222537.60 | 11222537.75 | 11222537.91 | 0.0504 | 0.0369 | |
| Saturn | 26015-01-12 01:41 | G | 11222854.35 | 11222854.57 | 11222854.79 | 0.0268 | 0.0137 | |
| Jupiter | 26018-07-01 10:48 | G | 11224120.88 | 11224120.95 | 11224121.04 | 0.0498 | 0.0467 | |
| Jupiter | 26019-08-03 08:09 | G | 11224518.61 | 11224518.84 | 11224519.06 | 0.0512 | 0.0023 | |
| Jupiter | 26020-09-06 06:29 | G | 11224918.70 | 11224918.77 | 11224918.86 | 0.0527 | 0.0496 | |
| Neptune | 26024-04-12 14:24 | G | 11226232.99 | 11226233.10 | 11226233.23 | 0.0088 | 0.0076 | |
| Jupiter | 26025-01-31 12:43 | G | 11226526.80 | 11226527.03 | 11226527.25 | 0.0517 | 0.0015 | |
| Neptune | 26025-04-14 22:48 | G | 11226600.32 | 11226600.45 | 11226600.59 | 0.0088 | 0.0075 | |
| Uranus | 26025-06-17 19:55 | G | 11226664.15 | 11226664.33 | 11226664.53 | 0.0138 | 0.0094 | |
| Jupiter | 26026-03-05 13:55 | G | 11226924.99 | 11226925.08 | 11226925.18 | 0.0502 | 0.0462 | |
| Neptune | 26026-04-17 12:57 | G | 11226967.88 | 11226968.04 | 11226968.23 | 0.0088 | 0.0062 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 26026-06-22 05:45 G | 11227033.50 | 11227033.74 | 11227033.98 | 0.0137 | 0.0031 |
| Neptune | 26027-04-19 17:45 G | 11227335.06 | 11227335.24 | 11227335.43 | 0.0088 | 0.0062 |
| Uranus | 26027-06-26 22:48 G | 11227403.21 | 11227403.45 | 11227403.71 | 0.0137 | 0.0043 |
| Neptune | 26028-04-21 11:02 G | 11227702.76 | 11227702.96 | 11227703.18 | 0.0088 | 0.0048 |
| Uranus | 26028-06-30 06:14 G | 11227772.59 | 11227772.76 | 11227772.95 | 0.0137 | 0.0095 |
| Neptune | 26029-04-23 14:24 G | 11228069.91 | 11228070.10 | 11228070.33 | 0.0088 | 0.0049 |
| Saturn | 26029-07-02 08:38 G | 11228139.66 | 11228139.86 | 11228140.06 | 0.0290 | 0.0176 |
| Neptune | 26030-04-26 07:12 G | 11228437.57 | 11228437.80 | 11228438.06 | 0.0088 | 0.0034 |
| Jupiter | 26030-07-06 00:14 G | 11228508.41 | 11228508.51 | 11228508.62 | 0.0500 | 0.0436 |
| Neptune | 26031-04-28 13:12 G | 11228804.83 | 11228805.05 | 11228805.29 | 0.0088 | 0.0034 |
| Jupiter | 26031-08-08 03:50 G | 11228906.42 | 11228906.66 | 11228906.90 | 0.0514 | 0.0094 |
| Neptune | 26032-04-30 02:09 G | 11229172.34 | 11229172.59 | 11229172.86 | 0.0088 | 0.0019 |
| Neptune | 26033-05-02 12:43 G | 11229539.79 | 11229540.03 | 11229540.27 | 0.0088 | 0.0019 |
| Neptune | 26034-05-04 20:09 G | 11229907.08 | 11229907.34 | 11229907.61 | 0.0088 | 0.0005 |
| Neptune | 26035-05-07 11:02 G | 11230274.71 | 11230274.96 | 11230275.21 | 0.0088 | 0.0005 |
| Jupiter | 26036-01-01 22:33 G | 11230514.37 | 11230514.44 | 11230514.52 | 0.0529 | 0.0496 |
| Neptune | 26036-05-08 15:21 G | 11230641.88 | 11230642.14 | 11230642.39 | 0.0088 | 0.0010 |
| Jupiter | 26037-02-05 01:41 G | 11230914.33 | 11230914.57 | 11230914.81 | 0.0514 | 0.0021 |
| Neptune | 26037-05-11 08:38 G | 11231009.61 | 11231009.86 | 11231010.12 | 0.0088 | 0.0010 |
| Neptune | 26038-05-13 12:00 G | 11231376.78 | 11231377.00 | 11231377.26 | 0.0088 | 0.0026 |
| Neptune | 26039-05-16 04:48 G | 11231744.45 | 11231744.70 | 11231744.95 | 0.0088 | 0.0024 |
| Neptune | 26040-05-17 11:17 G | 11232111.76 | 11232111.97 | 11232112.21 | 0.0088 | 0.0040 |
| Neptune | 26041-05-19 23:45 G | 11232479.27 | 11232479.49 | 11232479.75 | 0.0088 | 0.0039 |
| Neptune | 26042-05-22 11:31 G | 11232846.79 | 11232846.98 | 11232847.18 | 0.0088 | 0.0054 |
| Jupiter | 26042-07-10 17:45 G | 11232896.07 | 11232896.24 | 11232896.41 | 0.0501 | 0.0343 |
| Neptune | 26043-05-24 18:29 G | 11233214.07 | 11233214.27 | 11233214.49 | 0.0088 | 0.0053 |
| Jupiter | 26043-08-12 21:21 G | 11233294.17 | 11233294.39 | 11233294.61 | 0.0516 | 0.0128 |
| Saturn | 26044-01-07 00:14 G | 11233441.27 | 11233441.51 | 11233441.75 | 0.0269 | 0.0027 |
| Neptune | 26044-05-26 09:50 G | 11233581.78 | 11233581.91 | 11233582.09 | 0.0088 | 0.0069 |
| Neptune | 26045-05-28 14:09 G | 11233948.94 | 11233949.09 | 11233949.28 | 0.0088 | 0.0067 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 26046-05-31 07:55 G | 11234316.75 | 11234316.83 | 11234316.93 | 0.0088 | 0.0082 |
| Neptune | 26047-06-02 12:14 G | 11234683.92 | 11234684.01 | 11234684.12 | 0.0088 | 0.0080 |
| Jupiter | 26048-01-06 23:31 G | 11234902.32 | 11234902.48 | 11234902.65 | 0.0527 | 0.0382 |
| Jupiter | 26049-02-09 16:33 G | 11235301.97 | 11235302.19 | 11235302.41 | 0.0513 | 0.0106 |
| Jupiter | 26054-07-14 22:05 G | 11237283.23 | 11237283.42 | 11237283.63 | 0.0503 | 0.0255 |
| Jupiter | 26055-08-17 20:09 G | 11237682.13 | 11237682.34 | 11237682.56 | 0.0518 | 0.0203 |
| Mars | 26058-11-04 17:17 G | 11238857.05 | 11238857.22 | 11238857.38 | 0.1956 | 0.1357 |
| Saturn | 26059-07-10 19:55 G | 11239105.11 | 11239105.33 | 11239105.57 | 0.0292 | 0.0092 |
| Jupiter | 26060-01-11 19:41 G | 11239290.15 | 11239290.32 | 11239290.50 | 0.0526 | 0.0336 |
| Jupiter | 26061-02-14 16:05 G | 11239689.96 | 11239690.17 | 11239690.39 | 0.0511 | 0.0222 |
| Jupiter | 26066-07-19 18:43 G | 11241671.07 | 11241671.28 | 11241671.50 | 0.0505 | 0.0210 |
| Jupiter | 26067-08-22 09:36 G | 11242069.71 | 11242069.90 | 11242070.08 | 0.0520 | 0.0321 |
| Uranus | 26068-12-14 20:53 G | 11242550.32 | 11242550.37 | 11242550.43 | 0.0140 | 0.0136 |
| Uranus | 26069-12-19 12:29 G | 11242919.83 | 11242920.02 | 11242920.24 | 0.0140 | 0.0080 |
| Uranus | 26070-12-24 11:02 G | 11243289.70 | 11243289.96 | 11243290.22 | 0.0141 | 0.0001 |
| Uranus | 26071-12-29 02:09 G | 11243659.39 | 11243659.59 | 11243659.81 | 0.0141 | 0.0071 |
| Jupiter | 26072-01-17 04:48 G | 11243678.51 | 11243678.70 | 11243678.89 | 0.0524 | 0.0293 |
| Saturn | 26073-01-01 01:55 G | 11244028.42 | 11244028.58 | 11244028.77 | 0.0269 | 0.0196 |
| Uranus | 26073-01-02 03:21 G | 11244029.56 | 11244029.64 | 11244029.72 | 0.0142 | 0.0134 |
| Jupiter | 26073-02-19 02:38 G | 11244077.42 | 11244077.61 | 11244077.81 | 0.0508 | 0.0280 |
| Saturn | 26074-01-12 22:48 G | 11244405.28 | 11244405.45 | 11244405.65 | 0.0268 | 0.0184 |
| Jupiter | 26078-07-24 02:38 G | 11246058.39 | 11246058.61 | 11246058.83 | 0.0507 | 0.0178 |
| Jupiter | 26079-08-27 15:50 G | 11246458.02 | 11246458.16 | 11246458.31 | 0.0522 | 0.0399 |
| Mars | 26082-05-04 11:45 G | 11247438.90 | 11247438.99 | 11247439.08 | 0.1583 | 0.1334 |
| Jupiter | 26084-01-21 21:21 G | 11248066.17 | 11248066.39 | 11248066.61 | 0.0521 | 0.0188 |
| Jupiter | 26085-02-24 00:57 G | 11248465.36 | 11248465.54 | 11248465.72 | 0.0506 | 0.0306 |
| Saturn | 26088-07-03 05:31 G | 11249690.52 | 11249690.73 | 11249690.96 | 0.0290 | 0.0134 |
| Jupiter | 26089-06-26 12:00 G | 11250048.97 | 11250049.00 | 11250049.03 | 0.0496 | 0.0491 |
| Jupiter | 26090-07-29 01:26 G | 11250446.34 | 11250446.56 | 11250446.78 | 0.0509 | 0.0087 |
| Jupiter | 26091-09-01 13:26 G | 11250845.93 | 11250846.06 | 11250846.20 | 0.0524 | 0.0429 |

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| Jupiter | 26096-01-26 18:14 G | 11252454.04 | 11252454.26 | 11252454.49 | 0.0519 | 0.0077 |
| Jupiter | 26097-02-28 04:19 G | 11252852.52 | 11252852.68 | 11252852.85 | 0.0504 | 0.0364 |
| Jupiter | 26101-07-01 22:48 G | 11254436.40 | 11254436.45 | 11254436.52 | 0.0498 | 0.0479 |
| Jupiter | 26102-08-03 17:45 G | 11254834.00 | 11254834.24 | 11254834.48 | 0.0511 | 0.0024 |
| Saturn | 26103-01-09 06:43 G | 11254992.54 | 11254992.78 | 11254993.02 | 0.0269 | 0.0021 |
| Jupiter | 26103-09-07 13:55 G | 11255234.02 | 11255234.08 | 11255234.14 | 0.0526 | 0.0502 |
| Neptune | 26105-10-11 23:17 G | 11255999.43 | 11255999.47 | 11255999.52 | 0.0090 | 0.0088 |
| Neptune | 26106-10-14 09:36 G | 11256366.81 | 11256366.90 | 11256367.04 | 0.0090 | 0.0081 |
| Neptune | 26107-10-17 03:36 G | 11256734.52 | 11256734.65 | 11256734.80 | 0.0090 | 0.0074 |
| Jupiter | 26108-02-01 11:45 G | 11256841.75 | 11256841.99 | 11256842.24 | 0.0517 | 0.0024 |
| Neptune | 26108-10-18 09:50 G | 11257101.76 | 11257101.91 | 11257102.11 | 0.0090 | 0.0067 |
| Jupiter | 26109-03-05 19:41 G | 11257240.24 | 11257240.32 | 11257240.40 | 0.0503 | 0.0467 |
| Uranus | 26109-06-19 04:05 G | 11257345.48 | 11257345.67 | 11257345.88 | 0.0138 | 0.0090 |
| Neptune | 26109-10-21 05:45 G | 11257469.58 | 11257469.74 | 11257469.96 | 0.0090 | 0.0061 |
| Uranus | 26110-06-23 15:07 G | 11257714.89 | 11257715.13 | 11257715.38 | 0.0137 | 0.0023 |
| Neptune | 26110-10-23 12:00 G | 11257836.81 | 11257837.00 | 11257837.23 | 0.0090 | 0.0051 |
| Uranus | 26111-06-28 07:26 G | 11258084.57 | 11258084.81 | 11258085.08 | 0.0137 | 0.0035 |
| Neptune | 26111-10-26 07:12 G | 11258204.59 | 11258204.80 | 11258205.04 | 0.0090 | 0.0045 |
| Uranus | 26112-07-01 16:33 G | 11258454.05 | 11258454.19 | 11258454.34 | 0.0137 | 0.0111 |
| Neptune | 26112-10-27 15:36 G | 11258571.92 | 11258572.15 | 11258572.38 | 0.0090 | 0.0034 |
| Jupiter | 26113-07-06 12:14 G | 11258823.90 | 11258824.01 | 11258824.13 | 0.0499 | 0.0438 |
| Neptune | 26113-10-30 07:26 G | 11258939.56 | 11258939.81 | 11258940.06 | 0.0090 | 0.0029 |
| Jupiter | 26114-08-08 06:43 G | 11259221.56 | 11259221.78 | 11259222.01 | 0.0513 | 0.0084 |
| Neptune | 26114-11-01 20:09 G | 11259307.10 | 11259307.34 | 11259307.59 | 0.0090 | 0.0019 |
| Neptune | 26115-11-04 07:41 G | 11259674.55 | 11259674.82 | 11259675.08 | 0.0090 | 0.0014 |
| Neptune | 26116-11-06 00:29 G | 11260042.27 | 11260042.52 | 11260042.78 | 0.0090 | 0.0003 |
| Neptune | 26117-11-08 07:41 G | 11260409.56 | 11260409.82 | 11260410.09 | 0.0090 | 0.0003 |
| Saturn | 26118-07-12 23:31 G | 11260656.27 | 11260656.48 | 11260656.70 | 0.0292 | 0.0139 |
| Neptune | 26118-11-11 03:36 G | 11260777.40 | 11260777.65 | 11260777.90 | 0.0089 | 0.0015 |
| Jupiter | 26119-01-02 02:09 G | 11260829.51 | 11260829.59 | 11260829.68 | 0.0530 | 0.0491 |

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| Neptune | 26119-11-13 09:21 G | 11261144.65 | 11261144.89 | 11261145.15 | 0.0089 | 0.0018 |
| Jupiter | 26120-02-06 06:14 G | 11261229.53 | 11261229.76 | 11261229.98 | 0.0515 | 0.0017 |
| Neptune | 26120-11-15 04:33 G | 11261512.46 | 11261512.69 | 11261512.95 | 0.0089 | 0.0030 |
| Neptune | 26121-11-17 12:00 G | 11261879.78 | 11261880.00 | 11261880.25 | 0.0089 | 0.0033 |
| Neptune | 26122-11-20 04:19 G | 11262247.46 | 11262247.68 | 11262247.92 | 0.0089 | 0.0046 |
| Neptune | 26123-11-22 16:05 G | 11262614.98 | 11262615.17 | 11262615.39 | 0.0089 | 0.0048 |
| Neptune | 26124-11-24 03:21 G | 11262982.47 | 11262982.64 | 11262982.86 | 0.0089 | 0.0062 |
| Jupiter | 26125-07-10 17:02 G | 11263211.06 | 11263211.21 | 11263211.38 | 0.0501 | 0.0349 |
| Neptune | 26125-11-26 20:09 G | 11263350.17 | 11263350.34 | 11263350.52 | 0.0089 | 0.0063 |
| Jupiter | 26126-08-13 06:00 G | 11263609.52 | 11263609.75 | 11263609.98 | 0.0515 | 0.0114 |
| Neptune | 26126-11-29 02:38 G | 11263717.51 | 11263717.61 | 11263717.78 | 0.0089 | 0.0077 |
| Neptune | 26127-12-01 22:19 G | 11264085.31 | 11264085.43 | 11264085.57 | 0.0089 | 0.0077 |
| Jupiter | 26131-01-07 01:41 G | 11265217.42 | 11265217.57 | 11265217.73 | 0.0528 | 0.0387 |
| Saturn | 26132-01-04 00:43 G | 11265579.33 | 11265579.53 | 11265579.76 | 0.0269 | 0.0145 |
| Jupiter | 26132-02-11 06:57 G | 11265617.56 | 11265617.79 | 11265618.03 | 0.0513 | 0.0112 |
| Saturn | 26133-01-15 02:09 G | 11265956.47 | 11265956.59 | 11265956.71 | 0.0268 | 0.0231 |
| Jupiter | 26137-07-15 12:29 G | 11267598.82 | 11267599.02 | 11267599.22 | 0.0503 | 0.0256 |
| Jupiter | 26138-08-17 18:43 G | 11267997.06 | 11267997.28 | 11267997.49 | 0.0517 | 0.0200 |
| Jupiter | 26143-01-12 10:48 G | 11269605.77 | 11269605.95 | 11269606.13 | 0.0526 | 0.0340 |
| Jupiter | 26144-02-15 17:31 G | 11270005.03 | 11270005.23 | 11270005.45 | 0.0511 | 0.0222 |
| Saturn | 26147-07-06 11:17 G | 11271241.74 | 11271241.97 | 11271242.20 | 0.0290 | 0.0082 |
| Jupiter | 26149-07-19 21:07 G | 11271986.17 | 11271986.38 | 11271986.60 | 0.0505 | 0.0217 |
| Jupiter | 26150-08-23 01:26 G | 11272385.39 | 11272385.56 | 11272385.75 | 0.0520 | 0.0324 |
| Uranus | 26153-12-20 20:53 G | 11273601.17 | 11273601.37 | 11273601.60 | 0.0140 | 0.0068 |
| Uranus | 26154-12-25 17:45 G | 11273970.97 | 11273971.24 | 11273971.50 | 0.0141 | 0.0005 |
| Jupiter | 26155-01-16 22:33 G | 11273993.25 | 11273993.44 | 11273993.64 | 0.0524 | 0.0298 |
| Uranus | 26155-12-30 09:50 G | 11274340.71 | 11274340.91 | 11274341.14 | 0.0141 | 0.0070 |
| Jupiter | 26156-02-20 12:00 G | 11274392.81 | 11274393.00 | 11274393.19 | 0.0509 | 0.0273 |
| Mars | 26161-05-07 07:55 G | 11276295.65 | 11276295.83 | 11276296.02 | 0.1582 | 0.0252 |
| Jupiter | 26161-07-24 17:17 G | 11276374.01 | 11276374.22 | 11276374.43 | 0.0507 | 0.0182 |

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| Saturn | 26162-01-10 11:17 G | 11276543.73 | 11276543.97 | 11276544.21 | 0.0269 | 0.0070 |
| Jupiter | 26162-08-27 18:43 G | 11276773.13 | 11276773.28 | 11276773.45 | 0.0521 | 0.0391 |
| Jupiter | 26167-01-22 01:12 G | 11278381.34 | 11278381.55 | 11278381.76 | 0.0522 | 0.0189 |
| Jupiter | 26168-02-24 19:41 G | 11278780.14 | 11278780.32 | 11278780.52 | 0.0507 | 0.0301 |
| Pluto | 26171-12-08 00:57 G | 11280162.47 | 11280162.54 | 11280162.68 | 0.0064 | 0.0058 |
| Pluto | 26172-12-08 19:26 G | 11280529.08 | 11280529.31 | 11280529.57 | 0.0064 | 0.0027 |
| Jupiter | 26173-07-29 04:05 G | 11280761.44 | 11280761.67 | 11280761.91 | 0.0508 | 0.0093 |
| Jupiter | 26174-09-01 15:07 G | 11281161.00 | 11281161.13 | 11281161.26 | 0.0523 | 0.0417 |
| Saturn | 26176-06-30 01:55 G | 11281828.51 | 11281828.58 | 11281828.67 | 0.0290 | 0.0272 |
| Saturn | 26177-07-14 02:09 G | 11282207.41 | 11282207.59 | 11282207.79 | 0.0292 | 0.0190 |
| Jupiter | 26179-01-26 20:09 G | 11282769.10 | 11282769.34 | 11282769.58 | 0.0520 | 0.0081 |
| Jupiter | 26180-02-29 13:55 G | 11283167.94 | 11283168.08 | 11283168.24 | 0.0505 | 0.0369 |
| Jupiter | 26184-07-01 07:55 G | 11284751.79 | 11284751.83 | 11284751.89 | 0.0497 | 0.0486 |
| Jupiter | 26185-08-02 18:29 G | 11285149.04 | 11285149.27 | 11285149.49 | 0.0510 | 0.0016 |
| Jupiter | 26186-09-06 17:31 G | 11285549.15 | 11285549.23 | 11285549.31 | 0.0525 | 0.0493 |
| Neptune | 26188-04-13 00:00 G | 11286133.40 | 11286133.50 | 11286133.61 | 0.0088 | 0.0080 |
| Neptune | 26189-04-15 15:07 G | 11286501.06 | 11286501.13 | 11286501.25 | 0.0088 | 0.0081 |
| Neptune | 26190-04-17 19:26 G | 11286868.15 | 11286868.31 | 11286868.48 | 0.0088 | 0.0067 |
| Saturn | 26191-01-05 06:29 G | 11287130.55 | 11287130.77 | 11287131.00 | 0.0269 | 0.0092 |
| Jupiter | 26191-01-31 17:17 G | 11287156.99 | 11287157.22 | 11287157.44 | 0.0518 | 0.0031 |
| Neptune | 26191-04-20 12:14 G | 11287235.87 | 11287236.01 | 11287236.21 | 0.0088 | 0.0067 |
| Jupiter | 26192-03-05 05:31 G | 11287555.65 | 11287555.73 | 11287555.82 | 0.0503 | 0.0468 |
| Neptune | 26192-04-21 16:19 G | 11287603.00 | 11287603.18 | 11287603.40 | 0.0088 | 0.0053 |
| Neptune | 26193-04-24 08:24 G | 11287970.65 | 11287970.85 | 11287971.08 | 0.0088 | 0.0051 |
| Uranus | 26193-06-19 12:43 G | 11288026.84 | 11288027.03 | 11288027.23 | 0.0138 | 0.0091 |
| Neptune | 26194-04-26 14:53 G | 11288337.92 | 11288338.12 | 11288338.36 | 0.0088 | 0.0039 |
| Uranus | 26194-06-24 00:57 G | 11288396.30 | 11288396.54 | 11288396.79 | 0.0137 | 0.0025 |
| Neptune | 26195-04-29 02:24 G | 11288705.37 | 11288705.60 | 11288705.86 | 0.0088 | 0.0037 |
| Uranus | 26195-06-28 15:50 G | 11288765.91 | 11288766.16 | 11288766.41 | 0.0137 | 0.0046 |
| Neptune | 26196-04-30 14:24 G | 11289072.86 | 11289073.10 | 11289073.34 | 0.0088 | 0.0024 |

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| Uranus | 26196-07-02 01:26 G | 11289135.41 | 11289135.56 | 11289135.74 | 0.0137 | 0.0101 |
| Jupiter | 26196-07-05 11:31 G | 11289138.88 | 11289138.98 | 11289139.08 | 0.0499 | 0.0442 |
| Neptune | 26197-05-02 21:21 G | 11289440.14 | 11289440.39 | 11289440.65 | 0.0088 | 0.0022 |
| Jupiter | 26197-08-07 16:05 G | 11289536.93 | 11289537.17 | 11289537.40 | 0.0513 | 0.0071 |
| Neptune | 26198-05-05 13:12 G | 11289807.81 | 11289808.05 | 11289808.31 | 0.0088 | 0.0009 |
| Neptune | 26199-05-07 17:02 G | 11290174.96 | 11290175.21 | 11290175.48 | 0.0088 | 0.0007 |
| Neptune | 26200-05-10 10:48 G | 11290542.69 | 11290542.95 | 11290543.21 | 0.0088 | 0.0006 |
| Neptune | 26201-05-12 14:53 G | 11290909.87 | 11290910.12 | 11290910.37 | 0.0088 | 0.0008 |
| Jupiter | 26202-01-02 04:19 G | 11291144.61 | 11291144.68 | 11291144.77 | 0.0530 | 0.0493 |
| Neptune | 26202-05-15 06:29 G | 11291277.51 | 11291277.77 | 11291278.02 | 0.0088 | 0.0020 |
| Jupiter | 26203-02-06 17:45 G | 11291545.00 | 11291545.24 | 11291545.48 | 0.0515 | 0.0013 |
| Neptune | 26203-05-17 13:12 G | 11291644.83 | 11291645.05 | 11291645.31 | 0.0088 | 0.0024 |
| Neptune | 26204-05-19 00:14 G | 11292012.27 | 11292012.51 | 11292012.76 | 0.0088 | 0.0036 |
| Neptune | 26205-05-21 12:43 G | 11292379.82 | 11292380.03 | 11292380.26 | 0.0088 | 0.0039 |
| Neptune | 26206-05-23 18:57 G | 11292747.10 | 11292747.29 | 11292747.53 | 0.0088 | 0.0051 |
| Saturn | 26206-07-08 23:45 G | 11292793.25 | 11292793.49 | 11292793.72 | 0.0291 | 0.0027 |
| Neptune | 26207-05-26 12:00 G | 11293114.81 | 11293115.00 | 11293115.22 | 0.0088 | 0.0053 |
| Neptune | 26208-05-27 15:50 G | 11293482.01 | 11293482.16 | 11293482.35 | 0.0088 | 0.0065 |
| Jupiter | 26208-07-11 07:41 G | 11293526.66 | 11293526.82 | 11293527.00 | 0.0501 | 0.0344 |
| Neptune | 26209-05-30 09:36 G | 11293849.75 | 11293849.90 | 11293850.08 | 0.0088 | 0.0068 |
| Jupiter | 26209-08-13 05:31 G | 11293924.51 | 11293924.73 | 11293924.96 | 0.0515 | 0.0109 |
| Neptune | 26210-06-01 14:53 G | 11294217.01 | 11294217.12 | 11294217.22 | 0.0088 | 0.0080 |
| Neptune | 26211-06-04 05:31 G | 11294584.67 | 11294584.73 | 11294584.84 | 0.0088 | 0.0083 |
| Jupiter | 26214-01-07 09:07 G | 11295532.73 | 11295532.88 | 11295533.04 | 0.0528 | 0.0391 |
| Jupiter | 26215-02-11 00:43 G | 11295932.31 | 11295932.53 | 11295932.76 | 0.0513 | 0.0109 |
| Saturn | 26220-01-01 12:14 G | 11297717.95 | 11297718.01 | 11297718.08 | 0.0271 | 0.0261 |
| Jupiter | 26220-07-15 13:26 G | 11297913.86 | 11297914.06 | 11297914.27 | 0.0503 | 0.0260 |
| Saturn | 26221-01-12 12:00 G | 11298094.78 | 11298095.00 | 11298095.24 | 0.0269 | 0.0124 |
| Jupiter | 26221-08-18 09:07 G | 11298312.67 | 11298312.88 | 11298313.10 | 0.0517 | 0.0201 |
| Jupiter | 26226-01-12 00:14 G | 11299920.34 | 11299920.51 | 11299920.69 | 0.0526 | 0.0350 |

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| Jupiter | 26227-02-15 23:31 G | 11300320.27 | 11300320.48 | 11300320.69 | 0.0511 | 0.0217 |
| Jupiter | 26232-07-20 05:45 G | 11302301.55 | 11302301.74 | 11302301.95 | 0.0504 | 0.0233 |
| Jupiter | 26233-08-22 19:41 G | 11302700.14 | 11302700.32 | 11302700.52 | 0.0519 | 0.0309 |
| Saturn | 26235-07-03 08:09 G | 11303379.67 | 11303379.84 | 11303380.01 | 0.0290 | 0.0214 |
| Saturn | 26236-07-16 10:48 G | 11303758.83 | 11303758.95 | 11303759.08 | 0.0292 | 0.0251 |
| Uranus | 26236-12-17 08:38 G | 11303912.82 | 11303912.86 | 11303912.96 | 0.0140 | 0.0135 |
| Uranus | 26237-12-22 04:05 G | 11304282.48 | 11304282.67 | 11304282.89 | 0.0140 | 0.0079 |
| Jupiter | 26238-01-17 05:17 G | 11304308.53 | 11304308.72 | 11304308.90 | 0.0525 | 0.0308 |
| Uranus | 26238-12-26 23:17 G | 11304652.21 | 11304652.47 | 11304652.73 | 0.0141 | 0.0003 |
| Jupiter | 26239-02-20 09:50 G | 11304707.71 | 11304707.91 | 11304708.12 | 0.0510 | 0.0266 |
| Uranus | 26239-12-31 17:17 G | 11305022.02 | 11305022.22 | 11305022.44 | 0.0141 | 0.0071 |
| Mars | 26240-05-10 10:33 G | 11305152.87 | 11305152.94 | 11305153.02 | 0.1582 | 0.1461 |
| Uranus | 26241-01-04 15:07 G | 11305392.10 | 11305392.13 | 11305392.20 | 0.0142 | 0.0139 |
| Jupiter | 26244-07-24 16:33 G | 11306688.96 | 11306689.19 | 11306689.41 | 0.0506 | 0.0190 |
| Jupiter | 26245-08-27 18:43 G | 11307088.13 | 11307088.28 | 11307088.44 | 0.0521 | 0.0375 |
| Saturn | 26250-01-07 18:14 G | 11308682.02 | 11308682.26 | 11308682.49 | 0.0269 | 0.0037 |
| Jupiter | 26250-01-22 01:55 G | 11308696.36 | 11308696.58 | 11308696.80 | 0.0523 | 0.0192 |
| Jupiter | 26251-02-25 05:45 G | 11309095.56 | 11309095.74 | 11309095.92 | 0.0507 | 0.0295 |
| Jupiter | 26256-07-29 06:00 G | 11311076.53 | 11311076.75 | 11311076.97 | 0.0508 | 0.0095 |
| Jupiter | 26257-09-01 19:26 G | 11311476.16 | 11311476.31 | 11311476.46 | 0.0523 | 0.0402 |
| Pluto | 26261-06-09 22:19 G | 11312853.18 | 11312853.43 | 11312853.69 | 0.0079 | 0.0009 |
| Jupiter | 26262-01-27 00:29 G | 11313084.30 | 11313084.52 | 11313084.75 | 0.0520 | 0.0087 |
| Jupiter | 26263-03-01 21:07 G | 11313483.21 | 11313483.38 | 11313483.54 | 0.0505 | 0.0371 |
| Saturn | 26265-07-10 14:38 G | 11314344.87 | 11314345.11 | 11314345.36 | 0.0291 | 0.0036 |
| Jupiter | 26267-07-02 07:12 G | 11315066.77 | 11315066.80 | 11315066.84 | 0.0497 | 0.0490 |
| Jupiter | 26268-08-03 03:50 G | 11315464.42 | 11315464.66 | 11315464.90 | 0.0510 | 0.0015 |
| Jupiter | 26269-09-06 15:21 G | 11315864.07 | 11315864.14 | 11315864.23 | 0.0525 | 0.0490 |
| Neptune | 26270-10-15 00:00 G | 11316267.41 | 11316267.50 | 11316267.61 | 0.0090 | 0.0082 |
| Neptune | 26271-10-17 06:14 G | 11316634.69 | 11316634.76 | 11316634.88 | 0.0090 | 0.0084 |
| Neptune | 26272-10-19 02:38 G | 11317002.46 | 11317002.61 | 11317002.80 | 0.0090 | 0.0067 |

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| Neptune | 26273-10-21 09:36 G | 11317369.74 | 11317369.90 | 11317370.07 | 0.0090 | 0.0068 |
| Jupiter | 26274-01-31 21:07 G | 11317472.14 | 11317472.38 | 11317472.62 | 0.0518 | 0.0044 |
| Neptune | 26274-10-24 04:19 G | 11317737.47 | 11317737.68 | 11317737.90 | 0.0090 | 0.0051 |
| Jupiter | 26275-03-06 01:12 G | 11317870.48 | 11317870.55 | 11317870.64 | 0.0503 | 0.0468 |
| Neptune | 26275-10-26 13:26 G | 11318104.88 | 11318105.06 | 11318105.29 | 0.0090 | 0.0053 |
| Neptune | 26276-10-28 04:05 G | 11318472.43 | 11318472.67 | 11318472.93 | 0.0090 | 0.0036 |
| Uranus | 26277-06-20 18:43 G | 11318708.09 | 11318708.28 | 11318708.51 | 0.0138 | 0.0085 |
| Neptune | 26277-10-30 17:45 G | 11318840.02 | 11318840.24 | 11318840.48 | 0.0090 | 0.0037 |
| Uranus | 26278-06-25 09:21 G | 11319077.65 | 11319077.89 | 11319078.13 | 0.0137 | 0.0021 |
| Neptune | 26278-11-02 03:21 G | 11319207.39 | 11319207.64 | 11319207.91 | 0.0090 | 0.0020 |
| Saturn | 26279-01-02 16:19 G | 11319269.01 | 11319269.18 | 11319269.34 | 0.0271 | 0.0205 |
| Uranus | 26279-06-29 22:48 G | 11319447.21 | 11319447.45 | 11319447.71 | 0.0137 | 0.0040 |
| Jupiter | 26279-07-07 00:43 G | 11319454.43 | 11319454.53 | 11319454.64 | 0.0499 | 0.0443 |
| Neptune | 26279-11-04 21:07 G | 11319575.15 | 11319575.38 | 11319575.64 | 0.0090 | 0.0021 |
| Saturn | 26280-01-14 17:02 G | 11319646.04 | 11319646.21 | 11319646.40 | 0.0269 | 0.0179 |
| Uranus | 26280-07-03 10:19 G | 11319816.82 | 11319816.93 | 11319817.09 | 0.0137 | 0.0115 |
| Jupiter | 26280-08-07 14:38 G | 11319851.88 | 11319852.11 | 11319852.34 | 0.0512 | 0.0061 |
| Neptune | 26280-11-06 04:05 G | 11319942.41 | 11319942.67 | 11319942.93 | 0.0090 | 0.0003 |
| Neptune | 26281-11-09 00:14 G | 11320310.25 | 11320310.51 | 11320310.77 | 0.0090 | 0.0004 |
| Neptune | 26282-11-11 06:29 G | 11320677.52 | 11320677.77 | 11320678.03 | 0.0089 | 0.0013 |
| Neptune | 26283-11-14 01:41 G | 11321045.31 | 11321045.57 | 11321045.83 | 0.0089 | 0.0012 |
| Neptune | 26284-11-15 10:33 G | 11321412.71 | 11321412.94 | 11321413.18 | 0.0089 | 0.0029 |
| Jupiter | 26285-01-01 06:43 G | 11321459.71 | 11321459.78 | 11321459.86 | 0.0530 | 0.0499 |
| Neptune | 26285-11-18 01:26 G | 11321780.32 | 11321780.56 | 11321780.83 | 0.0089 | 0.0030 |
| Jupiter | 26286-02-05 08:09 G | 11321859.61 | 11321859.84 | 11321860.08 | 0.0516 | 0.0008 |
| Neptune | 26286-11-20 14:09 G | 11322147.90 | 11322148.09 | 11322148.33 | 0.0089 | 0.0046 |
| Neptune | 26287-11-23 00:14 G | 11322515.29 | 11322515.51 | 11322515.75 | 0.0089 | 0.0045 |
| Neptune | 26288-11-24 17:17 G | 11322883.06 | 11322883.22 | 11322883.43 | 0.0089 | 0.0061 |
| Neptune | 26289-11-27 00:00 G | 11323250.33 | 11323250.50 | 11323250.71 | 0.0089 | 0.0061 |
| Neptune | 26290-11-29 19:55 G | 11323618.21 | 11323618.33 | 11323618.48 | 0.0089 | 0.0076 |

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| Jupiter | 26291-07-11 03:36 G | 11323841.48 | 11323841.65 | 11323841.82 | 0.0500 | 0.0348 |
| Neptune | 26291-12-02 01:26 G | 11323985.45 | 11323985.56 | 11323985.71 | 0.0089 | 0.0077 |
| Jupiter | 26292-08-12 13:12 G | 11324239.82 | 11324240.05 | 11324240.27 | 0.0514 | 0.0095 |
| Saturn | 26294-07-04 19:26 G | 11324931.11 | 11324931.31 | 11324931.52 | 0.0290 | 0.0153 |
| Jupiter | 26297-01-05 22:33 G | 11325847.30 | 11325847.44 | 11325847.60 | 0.0529 | 0.0406 |
| Jupiter | 26298-02-10 09:21 G | 11326247.66 | 11326247.89 | 11326248.11 | 0.0514 | 0.0104 |
| Jupiter | 26303-07-16 20:09 G | 11328229.15 | 11328229.34 | 11328229.53 | 0.0502 | 0.0270 |
| Jupiter | 26304-08-18 00:14 G | 11328627.28 | 11328627.51 | 11328627.73 | 0.0516 | 0.0185 |
| Saturn | 26309-01-10 06:00 G | 11330233.50 | 11330233.75 | 11330233.99 | 0.0269 | 0.0019 |
| Jupiter | 26309-01-12 07:26 G | 11330235.65 | 11330235.81 | 11330235.97 | 0.0527 | 0.0369 |
| Jupiter | 26310-02-15 21:07 G | 11330635.16 | 11330635.38 | 11330635.60 | 0.0512 | 0.0208 |
| Jupiter | 26315-07-21 04:33 G | 11332616.48 | 11332616.69 | 11332616.90 | 0.0503 | 0.0239 |
| Jupiter | 26316-08-22 23:02 G | 11333015.28 | 11333015.46 | 11333015.64 | 0.0518 | 0.0303 |
| Jupiter | 26321-01-17 04:19 G | 11334623.49 | 11334623.68 | 11334623.88 | 0.0525 | 0.0312 |
| Uranus | 26321-12-23 13:41 G | 11334963.86 | 11334964.07 | 11334964.30 | 0.0140 | 0.0064 |
| Jupiter | 26322-02-20 18:14 G | 11335023.07 | 11335023.26 | 11335023.46 | 0.0510 | 0.0257 |
| Uranus | 26322-12-28 06:43 G | 11335333.52 | 11335333.78 | 11335334.05 | 0.0141 | 0.0004 |
| Uranus | 26324-01-02 01:55 G | 11335703.39 | 11335703.58 | 11335703.80 | 0.0141 | 0.0075 |
| Saturn | 26324-07-13 03:21 G | 11335896.41 | 11335896.64 | 11335896.88 | 0.0291 | 0.0100 |
| Jupiter | 26327-07-25 19:26 G | 11337004.11 | 11337004.31 | 11337004.52 | 0.0506 | 0.0195 |
| Jupiter | 26328-08-27 23:17 G | 11337403.30 | 11337403.47 | 11337403.65 | 0.0521 | 0.0360 |
| Jupiter | 26333-01-22 01:55 G | 11339011.37 | 11339011.58 | 11339011.79 | 0.0522 | 0.0202 |
| Jupiter | 26334-02-25 05:31 G | 11339410.53 | 11339410.73 | 11339410.93 | 0.0508 | 0.0283 |
| Saturn | 26338-01-04 22:05 G | 11340820.22 | 11340820.42 | 11340820.63 | 0.0271 | 0.0150 |
| Saturn | 26339-01-17 04:33 G | 11341197.58 | 11341197.69 | 11341197.82 | 0.0269 | 0.0232 |
| Jupiter | 26339-07-30 13:55 G | 11341391.85 | 11341392.08 | 11341392.32 | 0.0508 | 0.0093 |
| Jupiter | 26340-09-01 17:02 G | 11341791.06 | 11341791.21 | 11341791.36 | 0.0523 | 0.0395 |
| Jupiter | 26345-01-27 00:14 G | 11343399.27 | 11343399.51 | 11343399.74 | 0.0520 | 0.0099 |
| Jupiter | 26346-03-01 14:38 G | 11343797.96 | 11343798.11 | 11343798.27 | 0.0506 | 0.0366 |
| Jupiter | 26351-08-03 21:07 G | 11345779.15 | 11345779.38 | 11345779.61 | 0.0509 | 0.0008 |

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| Jupiter | 26352-09-06 19:12 G | 11346179.21 | 11346179.30 | 11346179.40 | 0.0524 | 0.0474 |
| Neptune | 26353-04-16 21:07 G | 11346401.30 | 11346401.38 | 11346401.51 | 0.0088 | 0.0080 |
| Saturn | 26353-07-07 14:38 G | 11346482.89 | 11346483.11 | 11346483.34 | 0.0290 | 0.0088 |
| Neptune | 26354-04-19 14:24 G | 11346769.01 | 11346769.10 | 11346769.24 | 0.0088 | 0.0078 |
| Neptune | 26355-04-21 18:14 G | 11347136.12 | 11347136.26 | 11347136.45 | 0.0088 | 0.0065 |
| Neptune | 26356-04-23 09:21 G | 11347503.73 | 11347503.89 | 11347504.09 | 0.0088 | 0.0063 |
| Jupiter | 26357-01-31 13:26 G | 11347786.83 | 11347787.06 | 11347787.29 | 0.0519 | 0.0062 |
| Neptune | 26357-04-25 17:45 G | 11347871.03 | 11347871.24 | 11347871.44 | 0.0088 | 0.0050 |
| Jupiter | 26358-03-06 10:33 G | 11348185.84 | 11348185.94 | 11348186.03 | 0.0504 | 0.0461 |
| Neptune | 26358-04-28 03:50 G | 11348238.46 | 11348238.66 | 11348238.90 | 0.0088 | 0.0049 |
| Neptune | 26359-04-30 16:48 G | 11348605.99 | 11348606.20 | 11348606.45 | 0.0088 | 0.0036 |
| Neptune | 26360-05-01 23:02 G | 11348973.22 | 11348973.46 | 11348973.71 | 0.0088 | 0.0033 |
| Neptune | 26361-05-04 15:36 G | 11349340.90 | 11349341.15 | 11349341.40 | 0.0088 | 0.0019 |
| Uranus | 26361-06-22 02:09 G | 11349389.41 | 11349389.59 | 11349389.81 | 0.0138 | 0.0091 |
| Neptune | 26362-05-06 18:57 G | 11349708.05 | 11349708.29 | 11349708.55 | 0.0088 | 0.0018 |
| Uranus | 26362-06-26 18:14 G | 11349759.02 | 11349759.26 | 11349759.50 | 0.0137 | 0.0020 |
| Jupiter | 26362-07-06 19:12 G | 11349769.20 | 11349769.30 | 11349769.40 | 0.0498 | 0.0446 |
| Neptune | 26363-05-09 12:14 G | 11350075.76 | 11350076.01 | 11350076.28 | 0.0088 | 0.0004 |
| Uranus | 26363-07-01 05:45 G | 11350128.50 | 11350128.74 | 11350129.00 | 0.0137 | 0.0048 |
| Jupiter | 26363-08-08 20:09 G | 11350167.11 | 11350167.34 | 11350167.57 | 0.0511 | 0.0047 |
| Neptune | 26364-05-10 16:48 G | 11350442.95 | 11350443.20 | 11350443.45 | 0.0088 | 0.0003 |
| Uranus | 26364-07-04 18:43 G | 11350498.14 | 11350498.28 | 11350498.45 | 0.0137 | 0.0105 |
| Neptune | 26365-05-13 07:12 G | 11350810.54 | 11350810.80 | 11350811.06 | 0.0088 | 0.0011 |
| Mars | 26366-05-09 05:45 G | 11351171.56 | 11351171.74 | 11351171.92 | 0.1583 | 0.0432 |
| Neptune | 26366-05-15 15:36 G | 11351177.91 | 11351178.15 | 11351178.40 | 0.0088 | 0.0013 |
| Neptune | 26367-05-18 01:26 G | 11351545.32 | 11351545.56 | 11351545.83 | 0.0088 | 0.0027 |
| Jupiter | 26368-01-01 20:38 G | 11351774.30 | 11351774.36 | 11351774.41 | 0.0531 | 0.0515 |
| Saturn | 26368-01-12 13:55 G | 11351784.84 | 11351785.08 | 11351785.33 | 0.0269 | 0.0074 |
| Neptune | 26368-05-19 15:21 G | 11351912.91 | 11351913.14 | 11351913.38 | 0.0088 | 0.0028 |
| Jupiter | 26369-02-05 17:02 G | 11352174.98 | 11352175.21 | 11352175.44 | 0.0517 | 0.0011 |

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| Neptune | 26369-05-21 20:24 G | 11352280.13 | 11352280.35 | 11352280.59 | 0.0088 | 0.0042 |
| Neptune | 26370-05-24 13:12 G | 11352647.85 | 11352648.05 | 11352648.29 | 0.0088 | 0.0043 |
| Neptune | 26371-05-26 17:02 G | 11353015.03 | 11353015.21 | 11353015.42 | 0.0088 | 0.0057 |
| Neptune | 26372-05-28 10:05 G | 11353382.75 | 11353382.92 | 11353383.14 | 0.0088 | 0.0058 |
| Neptune | 26373-05-30 15:07 G | 11353750.02 | 11353750.13 | 11353750.30 | 0.0088 | 0.0073 |
| Neptune | 26374-06-02 05:02 G | 11354117.60 | 11354117.71 | 11354117.89 | 0.0088 | 0.0073 |
| Jupiter | 26374-07-11 09:50 G | 11354156.76 | 11354156.91 | 11354157.08 | 0.0499 | 0.0348 |
| Neptune | 26375-06-04 15:07 G | 11354485.12 | 11354485.13 | 11354485.18 | 0.0088 | 0.0087 |
| Jupiter | 26375-08-13 04:48 G | 11354554.47 | 11354554.70 | 11354554.94 | 0.0513 | 0.0088 |
| Neptune | 26376-06-06 00:57 G | 11354852.51 | 11354852.54 | 11354852.60 | 0.0088 | 0.0087 |
| Jupiter | 26380-01-07 07:26 G | 11356162.67 | 11356162.81 | 11356162.95 | 0.0529 | 0.0415 |
| Jupiter | 26381-02-10 05:45 G | 11356562.51 | 11356562.74 | 11356562.97 | 0.0515 | 0.0096 |
| Saturn | 26383-07-15 16:33 G | 11357447.98 | 11357448.19 | 11357448.39 | 0.0291 | 0.0166 |
| Jupiter | 26386-07-15 19:12 G | 11358544.10 | 11358544.30 | 11358544.50 | 0.0501 | 0.0273 |
| Jupiter | 26387-08-18 06:00 G | 11358942.54 | 11358942.75 | 11358942.96 | 0.0516 | 0.0186 |
| Jupiter | 26392-01-12 02:09 G | 11360550.43 | 11360550.59 | 11360550.75 | 0.0527 | 0.0381 |
| Jupiter | 26393-02-15 01:41 G | 11360950.36 | 11360950.57 | 11360950.78 | 0.0512 | 0.0197 |
| Saturn | 26397-01-06 09:21 G | 11362371.67 | 11362371.89 | 11362372.11 | 0.0271 | 0.0093 |
| Jupiter | 26398-07-20 08:09 G | 11362931.65 | 11362931.84 | 11362932.04 | 0.0503 | 0.0249 |
| Jupiter | 26399-08-23 01:41 G | 11363330.38 | 11363330.57 | 11363330.78 | 0.0518 | 0.0297 |
| Jupiter | 26404-01-17 02:53 G | 11364938.44 | 11364938.62 | 11364938.79 | 0.0525 | 0.0326 |
| Uranus | 26404-12-19 01:26 G | 11365275.49 | 11365275.56 | 11365275.67 | 0.0140 | 0.0131 |
| Jupiter | 26405-02-19 15:07 G | 11365337.92 | 11365338.13 | 11365338.35 | 0.0510 | 0.0238 |
| Uranus | 26405-12-23 23:17 G | 11365645.27 | 11365645.47 | 11365645.69 | 0.0140 | 0.0075 |
| Uranus | 26406-12-28 15:07 G | 11366014.87 | 11366015.13 | 11366015.40 | 0.0141 | 0.0010 |
| Uranus | 26408-01-02 12:14 G | 11366384.81 | 11366385.01 | 11366385.22 | 0.0141 | 0.0074 |
| Jupiter | 26410-07-24 23:02 G | 11367319.24 | 11367319.46 | 11367319.68 | 0.0505 | 0.0203 |
| Jupiter | 26411-08-27 15:50 G | 11367717.99 | 11367718.16 | 11367718.33 | 0.0520 | 0.0347 |
| Saturn | 26412-07-09 10:19 G | 11368034.69 | 11368034.93 | 11368035.17 | 0.0290 | 0.0022 |
| Jupiter | 26416-01-21 23:45 G | 11369326.27 | 11369326.49 | 11369326.71 | 0.0524 | 0.0213 |

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| Jupiter | 26417-02-24 02:38 G | 11369725.43 | 11369725.61 | 11369725.81 | 0.0509 | 0.0272 |
| Pluto | 26420-12-11 16:48 G | 11371111.96 | 11371112.20 | 11371112.46 | 0.0064 | 0.0010 |
| Mars | 26421-11-09 23:45 G | 11371445.34 | 11371445.49 | 11371445.64 | 0.1956 | 0.1411 |
| Jupiter | 26422-07-29 06:43 G | 11371706.56 | 11371706.78 | 11371707.01 | 0.0507 | 0.0100 |
| Jupiter | 26423-09-01 18:29 G | 11372106.11 | 11372106.27 | 11372106.43 | 0.0522 | 0.0378 |
| Saturn | 26426-01-01 19:26 G | 11372959.22 | 11372959.31 | 11372959.41 | 0.0271 | 0.0249 |
| Saturn | 26427-01-13 19:41 G | 11373336.11 | 11373336.32 | 11373336.55 | 0.0269 | 0.0133 |
| Jupiter | 26428-01-26 17:45 G | 11373714.01 | 11373714.24 | 11373714.46 | 0.0522 | 0.0113 |
| Jupiter | 26429-03-01 00:00 G | 11374113.34 | 11374113.50 | 11374113.67 | 0.0507 | 0.0359 |
| Jupiter | 26434-08-03 03:36 G | 11376094.42 | 11376094.65 | 11376094.89 | 0.0509 | 0.0008 |
| Jupiter | 26435-09-06 08:24 G | 11376493.75 | 11376493.85 | 11376493.96 | 0.0524 | 0.0465 |
| Neptune | 26435-10-17 23:02 G | 11376535.41 | 11376535.46 | 11376535.58 | 0.0090 | 0.0085 |
| Neptune | 26436-10-19 06:29 G | 11376902.65 | 11376902.77 | 11376902.92 | 0.0090 | 0.0075 |
| Neptune | 26437-10-21 23:45 G | 11377270.35 | 11377270.49 | 11377270.69 | 0.0090 | 0.0069 |
| Neptune | 26438-10-24 10:19 G | 11377637.77 | 11377637.93 | 11377638.14 | 0.0090 | 0.0061 |
| Neptune | 26439-10-26 23:02 G | 11378005.27 | 11378005.46 | 11378005.70 | 0.0090 | 0.0054 |
| Jupiter | 26440-01-31 23:02 G | 11378102.23 | 11378102.46 | 11378102.69 | 0.0519 | 0.0076 |
| Neptune | 26440-10-28 14:38 G | 11378372.92 | 11378373.11 | 11378373.35 | 0.0090 | 0.0045 |
| Jupiter | 26441-03-05 06:43 G | 11378500.69 | 11378500.78 | 11378500.89 | 0.0505 | 0.0455 |
| Saturn | 26441-07-03 06:57 G | 11378620.64 | 11378620.79 | 11378620.96 | 0.0289 | 0.0223 |
| Neptune | 26441-10-31 00:00 G | 11378740.26 | 11378740.50 | 11378740.74 | 0.0090 | 0.0036 |
| Saturn | 26442-07-17 10:33 G | 11378999.82 | 11378999.94 | 11379000.09 | 0.0291 | 0.0237 |
| Neptune | 26442-11-02 18:43 G | 11379108.05 | 11379108.28 | 11379108.54 | 0.0090 | 0.0028 |
| Neptune | 26443-11-05 00:57 G | 11379475.30 | 11379475.54 | 11379475.80 | 0.0090 | 0.0019 |
| Neptune | 26444-11-06 20:53 G | 11379843.12 | 11379843.37 | 11379843.64 | 0.0090 | 0.0013 |
| Mars | 26445-05-10 23:31 G | 11380028.32 | 11380028.48 | 11380028.65 | 0.1583 | 0.0568 |
| Uranus | 26445-06-22 09:50 G | 11380070.70 | 11380070.91 | 11380071.12 | 0.0138 | 0.0080 |
| Jupiter | 26445-07-06 03:07 G | 11380084.53 | 11380084.63 | 11380084.73 | 0.0498 | 0.0446 |
| Neptune | 26445-11-09 03:50 G | 11380210.41 | 11380210.66 | 11380210.92 | 0.0090 | 0.0003 |
| Uranus | 26446-06-27 03:07 G | 11380440.39 | 11380440.63 | 11380440.87 | 0.0137 | 0.0020 |

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| Jupiter | 26446-08-07 13:26 G | 11380481.83 | 11380482.06 | 11380482.30 | 0.0511 | 0.0042 |
| Neptune | 26446-11-11 21:36 G | 11380578.14 | 11380578.40 | 11380578.67 | 0.0090 | 0.0004 |
| Uranus | 26447-07-01 13:26 G | 11380809.82 | 11380810.06 | 11380810.32 | 0.0137 | 0.0045 |
| Neptune | 26447-11-14 07:12 G | 11380945.56 | 11380945.80 | 11380946.05 | 0.0089 | 0.0015 |
| Uranus | 26448-07-05 04:05 G | 11381179.56 | 11381179.67 | 11381179.81 | 0.0137 | 0.0117 |
| Neptune | 26448-11-15 20:38 G | 11381313.11 | 11381313.36 | 11381313.63 | 0.0089 | 0.0021 |
| Neptune | 26449-11-18 11:31 G | 11381680.76 | 11381680.98 | 11381681.23 | 0.0089 | 0.0032 |
| Neptune | 26450-11-20 20:53 G | 11382048.14 | 11382048.37 | 11382048.62 | 0.0089 | 0.0037 |
| Jupiter | 26451-01-01 04:48 G | 11382089.65 | 11382089.70 | 11382089.75 | 0.0531 | 0.0516 |
| Neptune | 26451-11-23 15:36 G | 11382415.94 | 11382416.15 | 11382416.37 | 0.0089 | 0.0048 |
| Jupiter | 26452-02-05 10:33 G | 11382489.70 | 11382489.94 | 11382490.17 | 0.0517 | 0.0023 |
| Neptune | 26452-11-24 21:36 G | 11382783.21 | 11382783.40 | 11382783.63 | 0.0089 | 0.0053 |
| Jupiter | 26453-03-10 00:14 G | 11382888.49 | 11382888.51 | 11382888.54 | 0.0502 | 0.0498 |
| Neptune | 26453-11-27 17:17 G | 11383151.07 | 11383151.22 | 11383151.42 | 0.0089 | 0.0066 |
| Neptune | 26454-11-30 00:00 G | 11383518.35 | 11383518.50 | 11383518.67 | 0.0089 | 0.0069 |
| Neptune | 26455-12-02 18:00 G | 11383886.14 | 11383886.25 | 11383886.36 | 0.0089 | 0.0081 |
| Saturn | 26456-01-08 23:17 G | 11383923.23 | 11383923.47 | 11383923.71 | 0.0270 | 0.0034 |
| Neptune | 26456-12-04 02:24 G | 11384253.54 | 11384253.60 | 11384253.71 | 0.0089 | 0.0084 |
| Jupiter | 26457-07-10 09:21 G | 11384471.73 | 11384471.89 | 11384472.07 | 0.0499 | 0.0350 |
| Jupiter | 26458-08-12 12:57 G | 11384869.81 | 11384870.04 | 11384870.26 | 0.0513 | 0.0082 |
| Jupiter | 26463-01-05 23:02 G | 11386477.32 | 11386477.46 | 11386477.61 | 0.0529 | 0.0425 |
| Jupiter | 26464-02-10 09:21 G | 11386877.67 | 11386877.89 | 11386878.12 | 0.0515 | 0.0088 |
| Jupiter | 26469-07-14 21:36 G | 11388859.22 | 11388859.40 | 11388859.58 | 0.0501 | 0.0287 |
| Jupiter | 26470-08-17 03:36 G | 11389257.42 | 11389257.65 | 11389257.88 | 0.0515 | 0.0177 |
| Saturn | 26471-07-12 01:12 G | 11389586.30 | 11389586.55 | 11389586.80 | 0.0291 | 0.0047 |
| Jupiter | 26475-01-10 23:31 G | 11390865.34 | 11390865.48 | 11390865.63 | 0.0528 | 0.0398 |
| Jupiter | 26476-02-14 22:33 G | 11391265.21 | 11391265.44 | 11391265.67 | 0.0513 | 0.0183 |
| Jupiter | 26481-07-19 11:45 G | 11393246.78 | 11393246.99 | 11393247.20 | 0.0502 | 0.0259 |
| Jupiter | 26482-08-21 19:12 G | 11393645.12 | 11393645.30 | 11393645.49 | 0.0517 | 0.0286 |
| Saturn | 26485-01-03 00:43 G | 11394510.35 | 11394510.53 | 11394510.71 | 0.0271 | 0.0190 |

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| Saturn | 26486-01-15 04:19 G | 11394887.52 | 11394887.68 | 11394887.86 | 0.0269 | 0.0190 |
| Jupiter | 26487-01-15 23:45 G | 11395253.31 | 11395253.49 | 11395253.68 | 0.0526 | 0.0336 |
| Jupiter | 26488-02-19 14:09 G | 11395652.89 | 11395653.09 | 11395653.30 | 0.0511 | 0.0224 |
| Uranus | 26489-12-24 10:19 G | 11396326.71 | 11396326.93 | 11396327.16 | 0.0140 | 0.0058 |
| Uranus | 26490-12-29 00:29 G | 11396696.26 | 11396696.52 | 11396696.78 | 0.0141 | 0.0001 |
| Uranus | 26492-01-02 22:48 G | 11397066.25 | 11397066.45 | 11397066.65 | 0.0141 | 0.0082 |
| Jupiter | 26493-07-23 17:45 G | 11397634.03 | 11397634.24 | 11397634.45 | 0.0504 | 0.0210 |
| Jupiter | 26494-08-26 19:41 G | 11398033.15 | 11398033.32 | 11398033.51 | 0.0519 | 0.0335 |
| Jupiter | 26499-01-20 21:36 G | 11399641.19 | 11399641.40 | 11399641.60 | 0.0524 | 0.0217 |
| Jupiter | 26500-02-24 12:43 G | 11400040.83 | 11400041.03 | 11400041.24 | 0.0509 | 0.0262 |
| Saturn | 26500-07-05 22:33 G | 11400172.25 | 11400172.44 | 11400172.65 | 0.0290 | 0.0158 |
| Jupiter | 26505-07-29 15:36 G | 11402021.92 | 11402022.15 | 11402022.37 | 0.0506 | 0.0100 |
| Jupiter | 26506-09-01 11:17 G | 11402420.81 | 11402420.97 | 11402421.14 | 0.0521 | 0.0372 |
| Pluto | 26509-06-12 23:17 G | 11403436.32 | 11403436.47 | 11403436.69 | 0.0080 | 0.0057 |
| Jupiter | 26511-01-27 02:38 G | 11404029.38 | 11404029.61 | 11404029.84 | 0.0522 | 0.0123 |
| Jupiter | 26512-02-29 18:43 G | 11404428.12 | 11404428.28 | 11404428.45 | 0.0507 | 0.0348 |
| Saturn | 26515-01-11 08:38 G | 11405474.61 | 11405474.86 | 11405475.11 | 0.0270 | 0.0023 |
| Neptune | 26517-04-17 15:50 G | 11406302.10 | 11406302.16 | 11406302.27 | 0.0088 | 0.0083 |
| Jupiter | 26517-08-02 23:02 G | 11406409.22 | 11406409.46 | 11406409.70 | 0.0509 | 0.0012 |
| Neptune | 26518-04-19 20:38 G | 11406669.31 | 11406669.36 | 11406669.46 | 0.0088 | 0.0084 |
| Jupiter | 26518-09-06 17:45 G | 11406809.14 | 11406809.24 | 11406809.34 | 0.0524 | 0.0466 |
| Neptune | 26519-04-22 11:02 G | 11407036.82 | 11407036.96 | 11407037.15 | 0.0088 | 0.0069 |
| Neptune | 26520-04-23 20:09 G | 11407404.20 | 11407404.34 | 11407404.50 | 0.0088 | 0.0069 |
| Neptune | 26521-04-26 04:48 G | 11407771.51 | 11407771.70 | 11407771.93 | 0.0088 | 0.0054 |
| Neptune | 26522-04-28 18:14 G | 11408139.09 | 11408139.26 | 11408139.48 | 0.0088 | 0.0054 |
| Jupiter | 26523-01-31 15:07 G | 11408416.90 | 11408417.13 | 11408417.37 | 0.0520 | 0.0086 |
| Neptune | 26523-04-30 23:45 G | 11408506.26 | 11408506.49 | 11408506.73 | 0.0088 | 0.0038 |
| Jupiter | 26524-03-05 14:53 G | 11408816.02 | 11408816.12 | 11408816.23 | 0.0505 | 0.0447 |
| Neptune | 26524-05-02 16:48 G | 11408873.98 | 11408874.20 | 11408874.44 | 0.0088 | 0.0038 |
| Neptune | 26525-05-04 20:24 G | 11409241.11 | 11409241.35 | 11409241.60 | 0.0088 | 0.0023 |

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| Neptune | 26526-05-07 13:26 G | 11409608.81 | 11409609.06 | 11409609.32 | 0.0088 | 0.0023 |
| Neptune | 26527-05-09 18:57 G | 11409976.05 | 11409976.29 | 11409976.54 | 0.0088 | 0.0008 |
| Neptune | 26528-05-11 09:07 G | 11410343.61 | 11410343.88 | 11410344.14 | 0.0088 | 0.0006 |
| Jupiter | 26528-07-06 02:38 G | 11410399.52 | 11410399.61 | 11410399.72 | 0.0497 | 0.0448 |
| Neptune | 26529-05-13 18:29 G | 11410711.03 | 11410711.27 | 11410711.52 | 0.0088 | 0.0009 |
| Uranus | 26529-06-23 19:12 G | 11410752.10 | 11410752.30 | 11410752.50 | 0.0138 | 0.0088 |
| Jupiter | 26529-08-07 20:38 G | 11410797.13 | 11410797.36 | 11410797.59 | 0.0510 | 0.0027 |
| Neptune | 26530-05-16 02:53 G | 11411078.36 | 11411078.62 | 11411078.89 | 0.0088 | 0.0010 |
| Uranus | 26530-06-28 13:26 G | 11411121.82 | 11411122.06 | 11411122.31 | 0.0137 | 0.0014 |
| Saturn | 26530-07-14 10:05 G | 11411137.69 | 11411137.92 | 11411138.16 | 0.0291 | 0.0107 |
| Neptune | 26531-05-18 17:17 G | 11411445.98 | 11411446.22 | 11411446.47 | 0.0088 | 0.0024 |
| Uranus | 26531-07-02 22:05 G | 11411491.18 | 11411491.42 | 11411491.67 | 0.0137 | 0.0050 |
| Neptune | 26532-05-19 21:36 G | 11411813.17 | 11411813.40 | 11411813.67 | 0.0088 | 0.0025 |
| Uranus | 26532-07-06 13:26 G | 11411860.94 | 11411861.06 | 11411861.22 | 0.0137 | 0.0111 |
| Neptune | 26533-05-22 14:53 G | 11412180.91 | 11412181.12 | 11412181.37 | 0.0088 | 0.0040 |
| Jupiter | 26533-12-31 15:21 G | 11412404.10 | 11412404.14 | 11412404.17 | 0.0532 | 0.0523 |
| Neptune | 26534-05-24 18:43 G | 11412548.06 | 11412548.28 | 11412548.51 | 0.0088 | 0.0041 |
| Jupiter | 26535-02-05 14:24 G | 11412804.87 | 11412805.10 | 11412805.32 | 0.0518 | 0.0033 |
| Neptune | 26535-05-27 11:02 G | 11412915.79 | 11412915.96 | 11412916.19 | 0.0088 | 0.0056 |
| Jupiter | 26536-03-09 20:38 G | 11413203.30 | 11413203.36 | 11413203.43 | 0.0504 | 0.0483 |
| Neptune | 26536-05-28 17:31 G | 11413283.05 | 11413283.23 | 11413283.43 | 0.0088 | 0.0057 |
| Neptune | 26537-05-31 06:43 G | 11413650.64 | 11413650.78 | 11413650.96 | 0.0088 | 0.0070 |
| Neptune | 26538-06-02 17:17 G | 11414018.10 | 11414018.22 | 11414018.38 | 0.0088 | 0.0072 |
| Neptune | 26539-06-05 01:26 G | 11414385.52 | 11414385.56 | 11414385.65 | 0.0088 | 0.0085 |
| Neptune | 26540-06-06 16:33 G | 11414753.18 | 11414753.19 | 11414753.24 | 0.0088 | 0.0087 |
| Jupiter | 26540-07-10 14:38 G | 11414786.96 | 11414787.11 | 11414787.27 | 0.0498 | 0.0355 |
| Jupiter | 26541-08-12 10:19 G | 11415184.69 | 11415184.93 | 11415185.17 | 0.0512 | 0.0070 |
| Saturn | 26544-01-06 08:38 G | 11416061.66 | 11416061.86 | 11416062.08 | 0.0270 | 0.0136 |
| Saturn | 26545-01-17 16:33 G | 11416439.11 | 11416439.19 | 11416439.30 | 0.0268 | 0.0244 |
| Jupiter | 26546-01-05 22:19 G | 11416792.32 | 11416792.43 | 11416792.57 | 0.0531 | 0.0439 |

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| Jupiter | 26547-02-10 06:29 G | 11417192.53 | 11417192.77 | 11417193.01 | 0.0516 | 0.0081 |
| Jupiter | 26552-07-15 01:55 G | 11419174.38 | 11419174.58 | 11419174.77 | 0.0500 | 0.0292 |
| Jupiter | 26553-08-17 00:57 G | 11419572.33 | 11419572.54 | 11419572.75 | 0.0514 | 0.0174 |
| Jupiter | 26558-01-11 00:29 G | 11421180.37 | 11421180.52 | 11421180.68 | 0.0529 | 0.0403 |
| Jupiter | 26559-02-15 01:26 G | 11421580.35 | 11421580.56 | 11421580.78 | 0.0514 | 0.0178 |
| Saturn | 26559-07-08 15:36 G | 11421723.93 | 11421724.15 | 11421724.38 | 0.0290 | 0.0097 |
| Jupiter | 26564-07-19 09:07 G | 11423561.69 | 11423561.88 | 11423562.08 | 0.0502 | 0.0271 |
| Jupiter | 26565-08-22 01:55 G | 11423960.39 | 11423960.58 | 11423960.79 | 0.0517 | 0.0280 |
| Jupiter | 26570-01-16 00:43 G | 11425568.36 | 11425568.53 | 11425568.70 | 0.0526 | 0.0342 |
| Jupiter | 26571-02-19 23:31 G | 11425968.27 | 11425968.48 | 11425968.70 | 0.0511 | 0.0210 |
| Mars | 26571-05-09 03:50 G | 11426046.58 | 11426046.66 | 11426046.74 | 0.1584 | 0.1419 |
| Uranus | 26572-12-20 19:26 G | 11426638.21 | 11426638.31 | 11426638.41 | 0.0140 | 0.0128 |
| Uranus | 26573-12-25 18:57 G | 11427008.09 | 11427008.29 | 11427008.52 | 0.0141 | 0.0070 |
| Saturn | 26574-01-12 11:17 G | 11427025.73 | 11427025.97 | 11427026.22 | 0.0269 | 0.0076 |
| Uranus | 26574-12-30 08:24 G | 11427377.60 | 11427377.85 | 11427378.11 | 0.0141 | 0.0016 |
| Uranus | 26576-01-04 08:24 G | 11427747.65 | 11427747.85 | 11427748.06 | 0.0141 | 0.0078 |
| Jupiter | 26576-07-24 05:02 G | 11427949.51 | 11427949.71 | 11427949.93 | 0.0504 | 0.0214 |
| Jupiter | 26577-08-26 16:05 G | 11428348.00 | 11428348.17 | 11428348.36 | 0.0519 | 0.0328 |
| Jupiter | 26582-01-21 05:31 G | 11429956.52 | 11429956.73 | 11429956.95 | 0.0524 | 0.0215 |
| Jupiter | 26583-02-24 07:41 G | 11430355.63 | 11430355.82 | 11430356.03 | 0.0509 | 0.0254 |
| Jupiter | 26588-07-28 11:45 G | 11432336.76 | 11432336.99 | 11432337.22 | 0.0506 | 0.0110 |
| Saturn | 26589-07-15 16:48 G | 11432689.01 | 11432689.20 | 11432689.41 | 0.0291 | 0.0163 |
| Jupiter | 26589-08-31 19:26 G | 11432736.14 | 11432736.31 | 11432736.47 | 0.0520 | 0.0360 |
| Jupiter | 26594-01-25 16:19 G | 11434343.95 | 11434344.18 | 11434344.40 | 0.0523 | 0.0132 |
| Jupiter | 26595-03-01 03:50 G | 11434743.50 | 11434743.66 | 11434743.83 | 0.0508 | 0.0346 |
| Neptune | 26599-10-18 03:36 G | 11436435.57 | 11436435.65 | 11436435.72 | 0.0090 | 0.0085 |
| Jupiter | 26600-08-03 09:07 G | 11436724.66 | 11436724.88 | 11436725.11 | 0.0507 | 0.0022 |
| Neptune | 26600-10-20 19:12 G | 11436803.25 | 11436803.30 | 11436803.41 | 0.0090 | 0.0086 |
| Jupiter | 26601-09-06 11:31 G | 11437123.87 | 11437123.98 | 11437124.11 | 0.0522 | 0.0456 |
| Neptune | 26601-10-23 08:09 G | 11437170.70 | 11437170.84 | 11437171.01 | 0.0090 | 0.0070 |

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| Neptune | 26602-10-25 19:41 G | 11437538.17 | 11437538.32 | 11437538.51 | 0.0090 | 0.0070 |
| Saturn | 26603-01-08 19:12 G | 11437613.08 | 11437613.30 | 11437613.53 | 0.0270 | 0.0084 |
| Neptune | 26603-10-28 12:43 G | 11437905.84 | 11437906.03 | 11437906.24 | 0.0090 | 0.0053 |
| Neptune | 26604-10-29 20:24 G | 11438273.15 | 11438273.35 | 11438273.57 | 0.0090 | 0.0053 |
| Neptune | 26605-11-01 16:05 G | 11438640.94 | 11438641.17 | 11438641.41 | 0.0090 | 0.0036 |
| Jupiter | 26606-01-31 20:53 G | 11438732.15 | 11438732.37 | 11438732.59 | 0.0521 | 0.0096 |
| Neptune | 26606-11-03 22:05 G | 11439008.19 | 11439008.42 | 11439008.66 | 0.0090 | 0.0037 |
| Jupiter | 26607-03-06 12:29 G | 11439130.92 | 11439131.02 | 11439131.15 | 0.0506 | 0.0440 |
| Neptune | 26607-11-06 17:31 G | 11439375.98 | 11439376.23 | 11439376.50 | 0.0090 | 0.0019 |
| Neptune | 26608-11-08 00:57 G | 11439743.30 | 11439743.54 | 11439743.79 | 0.0090 | 0.0020 |
| Neptune | 26609-11-10 17:45 G | 11440110.98 | 11440111.24 | 11440111.51 | 0.0090 | 0.0002 |
| Neptune | 26610-11-13 05:02 G | 11440478.47 | 11440478.71 | 11440478.96 | 0.0090 | 0.0003 |
| Jupiter | 26611-07-07 08:53 G | 11440714.79 | 11440714.87 | 11440714.97 | 0.0496 | 0.0451 |
| Neptune | 26611-11-15 17:31 G | 11440845.97 | 11440846.23 | 11440846.49 | 0.0090 | 0.0015 |
| Jupiter | 26612-08-07 19:12 G | 11441112.06 | 11441112.30 | 11441112.54 | 0.0509 | 0.0015 |
| Neptune | 26612-11-17 09:21 G | 11441213.65 | 11441213.89 | 11441214.14 | 0.0089 | 0.0014 |
| Uranus | 26613-06-25 04:19 G | 11441433.47 | 11441433.68 | 11441433.90 | 0.0138 | 0.0074 |
| Neptune | 26613-11-19 17:02 G | 11441580.97 | 11441581.21 | 11441581.46 | 0.0089 | 0.0032 |
| Uranus | 26614-06-29 23:31 G | 11441803.24 | 11441803.48 | 11441803.73 | 0.0137 | 0.0017 |
| Neptune | 26614-11-22 12:00 G | 11441948.78 | 11441949.00 | 11441949.26 | 0.0089 | 0.0032 |
| Uranus | 26615-07-04 07:12 G | 11442172.57 | 11442172.80 | 11442173.05 | 0.0137 | 0.0052 |
| Neptune | 26615-11-24 18:14 G | 11442316.05 | 11442316.26 | 11442316.48 | 0.0089 | 0.0049 |
| Uranus | 26616-07-08 00:14 G | 11442542.41 | 11442542.51 | 11442542.64 | 0.0137 | 0.0121 |
| Neptune | 26616-11-26 13:41 G | 11442683.87 | 11442684.07 | 11442684.31 | 0.0089 | 0.0049 |
| Jupiter | 26616-12-31 22:48 G | 11442719.42 | 11442719.45 | 11442719.49 | 0.0533 | 0.0524 |
| Neptune | 26617-11-28 20:24 G | 11443051.21 | 11443051.35 | 11443051.55 | 0.0089 | 0.0066 |
| Jupiter | 26618-02-05 15:21 G | 11443119.90 | 11443120.14 | 11443120.38 | 0.0519 | 0.0033 |
| Saturn | 26618-07-11 02:53 G | 11443275.38 | 11443275.62 | 11443275.87 | 0.0290 | 0.0042 |
| Neptune | 26618-12-01 13:26 G | 11443418.90 | 11443419.06 | 11443419.27 | 0.0089 | 0.0065 |
| Jupiter | 26619-03-11 06:43 G | 11443518.72 | 11443518.78 | 11443518.86 | 0.0504 | 0.0476 |

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| Neptune | 26619-12-04 00:29 G | 11443786.43 | 11443786.52 | 11443786.64 | 0.0089 | 0.0081 |
| Neptune | 26620-12-05 12:57 G | 11444153.95 | 11444154.04 | 11444154.18 | 0.0089 | 0.0081 |
| Jupiter | 26623-07-11 20:53 G | 11445102.20 | 11445102.37 | 11445102.54 | 0.0498 | 0.0353 |
| Jupiter | 26624-08-12 12:00 G | 11445499.78 | 11445500.00 | 11445500.23 | 0.0512 | 0.0064 |
| Jupiter | 26629-01-06 01:26 G | 11447107.44 | 11447107.56 | 11447107.70 | 0.0531 | 0.0442 |
| Jupiter | 26630-02-10 12:00 G | 11447507.78 | 11447508.00 | 11447508.23 | 0.0516 | 0.0084 |
| Jupiter | 26631-03-15 18:43 G | 11447906.24 | 11447906.28 | 11447906.33 | 0.0502 | 0.0491 |
| Saturn | 26632-01-03 12:57 G | 11448199.97 | 11448200.04 | 11448200.11 | 0.0271 | 0.0258 |
| Saturn | 26633-01-14 14:24 G | 11448576.89 | 11448577.10 | 11448577.33 | 0.0269 | 0.0126 |
| Jupiter | 26635-07-16 02:53 G | 11449489.45 | 11449489.62 | 11449489.81 | 0.0500 | 0.0303 |
| Jupiter | 26636-08-17 11:17 G | 11449887.74 | 11449887.97 | 11449888.19 | 0.0514 | 0.0171 |
| Jupiter | 26641-01-11 02:53 G | 11451495.49 | 11451495.62 | 11451495.76 | 0.0529 | 0.0413 |
| Jupiter | 26642-02-15 10:48 G | 11451895.73 | 11451895.95 | 11451896.18 | 0.0514 | 0.0171 |
| Saturn | 26647-07-04 19:55 G | 11453861.23 | 11453861.33 | 11453861.46 | 0.0289 | 0.0252 |
| Jupiter | 26647-07-20 23:02 G | 11453877.27 | 11453877.46 | 11453877.65 | 0.0501 | 0.0282 |
| Saturn | 26648-07-18 01:55 G | 11454240.43 | 11454240.58 | 11454240.75 | 0.0291 | 0.0213 |
| Jupiter | 26648-08-21 23:31 G | 11454275.28 | 11454275.48 | 11454275.68 | 0.0516 | 0.0271 |
| Mars | 26650-05-12 07:55 G | 11454903.64 | 11454903.83 | 11454904.03 | 0.1584 | 0.0251 |
| Jupiter | 26653-01-16 03:36 G | 11455883.47 | 11455883.65 | 11455883.83 | 0.0527 | 0.0344 |
| Jupiter | 26654-02-19 17:45 G | 11456283.03 | 11456283.24 | 11456283.45 | 0.0513 | 0.0205 |
| Uranus | 26656-12-22 02:38 G | 11457319.58 | 11457319.61 | 11457319.68 | 0.0140 | 0.0137 |
| Uranus | 26657-12-27 03:36 G | 11457689.43 | 11457689.65 | 11457689.89 | 0.0141 | 0.0054 |
| Uranus | 26658-12-31 15:50 G | 11458058.91 | 11458059.16 | 11458059.42 | 0.0141 | 0.0005 |
| Jupiter | 26659-07-25 04:48 G | 11458264.49 | 11458264.70 | 11458264.92 | 0.0503 | 0.0217 |
| Uranus | 26660-01-05 16:48 G | 11458429.01 | 11458429.20 | 11458429.39 | 0.0141 | 0.0088 |
| Jupiter | 26660-08-27 02:24 G | 11458663.42 | 11458663.60 | 11458663.79 | 0.0517 | 0.0312 |
| Saturn | 26662-01-10 02:53 G | 11459164.38 | 11459164.62 | 11459164.87 | 0.0270 | 0.0035 |
| Jupiter | 26665-01-20 20:09 G | 11460271.13 | 11460271.34 | 11460271.55 | 0.0526 | 0.0223 |
| Jupiter | 26666-02-24 18:29 G | 11460671.07 | 11460671.27 | 11460671.47 | 0.0511 | 0.0250 |
| Pluto | 26668-12-14 16:19 G | 11461695.08 | 11461695.18 | 11461695.36 | 0.0064 | 0.0055 |

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| Pluto | 26669-12-16 07:55 G | 11462061.62 | 11462061.83 | 11462062.07 | 0.0064 | 0.0031 |
| Jupiter | 26671-07-29 23:17 G | 11462652.25 | 11462652.47 | 11462652.69 | 0.0505 | 0.0112 |
| Jupiter | 26672-08-31 15:36 G | 11463050.97 | 11463051.15 | 11463051.32 | 0.0520 | 0.0350 |
| Jupiter | 26677-01-26 04:48 G | 11464659.48 | 11464659.70 | 11464659.92 | 0.0524 | 0.0138 |
| Saturn | 26677-07-12 03:50 G | 11464826.41 | 11464826.66 | 11464826.91 | 0.0291 | 0.0003 |
| Jupiter | 26678-03-01 05:17 G | 11465058.55 | 11465058.72 | 11465058.90 | 0.0509 | 0.0349 |
| Neptune | 26682-04-20 12:14 G | 11466569.94 | 11466570.01 | 11466570.10 | 0.0088 | 0.0083 |
| Neptune | 26683-04-22 22:05 G | 11466937.32 | 11466937.42 | 11466937.53 | 0.0088 | 0.0079 |
| Jupiter | 26683-08-03 10:05 G | 11467039.67 | 11467039.92 | 11467040.16 | 0.0507 | 0.0030 |
| Neptune | 26684-04-24 06:14 G | 11467304.61 | 11467304.76 | 11467304.94 | 0.0088 | 0.0068 |
| Jupiter | 26684-09-05 17:17 G | 11467439.12 | 11467439.22 | 11467439.33 | 0.0522 | 0.0456 |
| Neptune | 26685-04-26 21:21 G | 11467672.22 | 11467672.39 | 11467672.56 | 0.0088 | 0.0063 |
| Neptune | 26686-04-29 01:41 G | 11468039.37 | 11468039.57 | 11468039.78 | 0.0088 | 0.0052 |
| Neptune | 26687-05-01 18:57 G | 11468407.08 | 11468407.29 | 11468407.50 | 0.0088 | 0.0048 |
| Neptune | 26688-05-02 22:19 G | 11468774.21 | 11468774.43 | 11468774.67 | 0.0088 | 0.0037 |
| Jupiter | 26689-01-31 00:00 G | 11469047.26 | 11469047.50 | 11469047.74 | 0.0521 | 0.0101 |
| Neptune | 26689-05-05 14:38 G | 11469141.87 | 11469142.11 | 11469142.36 | 0.0088 | 0.0033 |
| Jupiter | 26690-03-06 00:14 G | 11469446.41 | 11469446.51 | 11469446.63 | 0.0506 | 0.0438 |
| Neptune | 26690-05-07 20:24 G | 11469509.12 | 11469509.35 | 11469509.61 | 0.0088 | 0.0021 |
| Saturn | 26691-01-04 13:41 G | 11469750.93 | 11469751.07 | 11469751.24 | 0.0271 | 0.0209 |
| Neptune | 26691-05-10 09:07 G | 11469876.62 | 11469876.88 | 11469877.14 | 0.0088 | 0.0016 |
| Saturn | 26692-01-16 20:53 G | 11470128.19 | 11470128.37 | 11470128.56 | 0.0269 | 0.0171 |
| Neptune | 26692-05-11 19:41 G | 11470244.07 | 11470244.32 | 11470244.57 | 0.0088 | 0.0004 |
| Neptune | 26693-05-14 03:21 G | 11470611.38 | 11470611.64 | 11470611.91 | 0.0088 | 0.0002 |
| Neptune | 26694-05-16 18:57 G | 11470979.05 | 11470979.29 | 11470979.55 | 0.0088 | 0.0012 |
| Jupiter | 26694-07-06 18:00 G | 11471030.15 | 11471030.25 | 11471030.36 | 0.0496 | 0.0445 |
| Neptune | 26695-05-18 23:17 G | 11471346.22 | 11471346.47 | 11471346.73 | 0.0088 | 0.0015 |
| Jupiter | 26695-08-08 02:09 G | 11471427.37 | 11471427.59 | 11471427.82 | 0.0509 | 0.0001 |
| Neptune | 26696-05-20 16:48 G | 11471713.96 | 11471714.20 | 11471714.45 | 0.0088 | 0.0028 |
| Uranus | 26696-06-21 06:57 G | 11471745.78 | 11471745.79 | 11471745.81 | 0.0138 | 0.0138 |

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| Neptune | 26697-05-22 20:24 G | 11472081.13 | 11472081.35 | 11472081.60 | 0.0088 | 0.0032 |
| Uranus | 26697-06-25 14:09 G | 11472114.90 | 11472115.09 | 11472115.31 | 0.0138 | 0.0084 |
| Neptune | 26698-05-25 12:29 G | 11472448.81 | 11472449.02 | 11472449.26 | 0.0088 | 0.0045 |
| Uranus | 26698-06-30 10:19 G | 11472484.68 | 11472484.93 | 11472485.18 | 0.0137 | 0.0007 |
| Neptune | 26699-05-27 18:57 G | 11472816.10 | 11472816.29 | 11472816.52 | 0.0088 | 0.0048 |
| Uranus | 26699-07-04 16:33 G | 11472853.96 | 11472854.19 | 11472854.44 | 0.0137 | 0.0054 |
| Jupiter | 26700-01-01 01:26 G | 11473034.52 | 11473034.56 | 11473034.61 | 0.0533 | 0.0521 |
| Neptune | 26700-05-30 06:29 G | 11473183.60 | 11473183.77 | 11473183.99 | 0.0088 | 0.0060 |
| Uranus | 26700-07-09 09:50 G | 11473223.81 | 11473223.91 | 11473224.06 | 0.0137 | 0.0118 |
| Jupiter | 26701-02-05 22:33 G | 11473435.21 | 11473435.44 | 11473435.66 | 0.0519 | 0.0033 |
| Neptune | 26701-06-01 18:14 G | 11473551.10 | 11473551.26 | 11473551.45 | 0.0088 | 0.0063 |
| Jupiter | 26702-03-11 13:55 G | 11473833.99 | 11473834.08 | 11473834.17 | 0.0504 | 0.0465 |
| Neptune | 26702-06-04 01:12 G | 11473918.45 | 11473918.55 | 11473918.71 | 0.0088 | 0.0076 |
| Neptune | 26703-06-06 17:31 G | 11474286.15 | 11474286.23 | 11474286.37 | 0.0088 | 0.0079 |
| Mars | 26705-11-12 00:43 G | 11475175.35 | 11475175.53 | 11475175.72 | 0.1955 | 0.0191 |
| Saturn | 26706-07-07 01:55 G | 11475412.43 | 11475412.58 | 11475412.75 | 0.0289 | 0.0210 |
| Jupiter | 26706-07-12 01:26 G | 11475417.41 | 11475417.56 | 11475417.73 | 0.0498 | 0.0353 |
| Saturn | 26707-07-21 08:24 G | 11475791.74 | 11475791.85 | 11475791.98 | 0.0292 | 0.0255 |
| Jupiter | 26707-08-14 00:00 G | 11475815.27 | 11475815.50 | 11475815.74 | 0.0511 | 0.0060 |
| Jupiter | 26712-01-06 23:45 G | 11477422.38 | 11477422.49 | 11477422.61 | 0.0531 | 0.0453 |
| Jupiter | 26713-02-10 17:17 G | 11477822.99 | 11477823.22 | 11477823.46 | 0.0517 | 0.0083 |
| Jupiter | 26714-03-15 21:36 G | 11478221.35 | 11478221.40 | 11478221.45 | 0.0503 | 0.0490 |
| Jupiter | 26718-07-16 20:38 G | 11479805.18 | 11479805.36 | 11479805.54 | 0.0499 | 0.0309 |
| Jupiter | 26719-08-18 11:31 G | 11480202.77 | 11480202.98 | 11480203.20 | 0.0513 | 0.0168 |
| Saturn | 26721-01-12 04:05 G | 11480715.41 | 11480715.67 | 11480715.92 | 0.0270 | 0.0012 |
| Jupiter | 26724-01-12 05:02 G | 11481810.58 | 11481810.71 | 11481810.86 | 0.0530 | 0.0424 |
| Jupiter | 26725-02-15 06:14 G | 11482210.54 | 11482210.76 | 11482210.98 | 0.0515 | 0.0168 |
| Mars | 26729-05-15 12:43 G | 11483760.93 | 11483761.03 | 11483761.14 | 0.1583 | 0.1311 |
| Jupiter | 26730-07-20 22:48 G | 11484192.27 | 11484192.45 | 11484192.65 | 0.0501 | 0.0285 |
| Jupiter | 26731-08-23 11:17 G | 11484590.78 | 11484590.97 | 11484591.18 | 0.0515 | 0.0264 |

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| Jupiter | 26736-01-17 01:55 G | 11486198.41 | 11486198.58 | 11486198.76 | 0.0528 | 0.0348 |
| Saturn | 26736-07-14 02:24 G | 11486377.36 | 11486377.60 | 11486377.85 | 0.0291 | 0.0044 |
| Jupiter | 26737-02-20 09:50 G | 11486598.70 | 11486598.91 | 11486599.13 | 0.0513 | 0.0199 |
| Uranus | 26740-12-23 08:38 G | 11488000.77 | 11488000.86 | 11488000.98 | 0.0140 | 0.0127 |
| Uranus | 26741-12-28 09:21 G | 11488370.69 | 11488370.89 | 11488371.13 | 0.0141 | 0.0068 |
| Jupiter | 26742-07-25 18:29 G | 11488580.06 | 11488580.27 | 11488580.48 | 0.0503 | 0.0216 |
| Uranus | 26743-01-01 21:36 G | 11488740.14 | 11488740.40 | 11488740.65 | 0.0141 | 0.0019 |
| Jupiter | 26743-08-28 01:12 G | 11488978.36 | 11488978.55 | 11488978.75 | 0.0517 | 0.0299 |
| Uranus | 26744-01-06 23:31 G | 11489110.28 | 11489110.48 | 11489110.69 | 0.0141 | 0.0079 |
| Jupiter | 26748-01-22 12:57 G | 11490586.83 | 11490587.04 | 11490587.24 | 0.0526 | 0.0222 |
| Jupiter | 26749-02-24 21:50 G | 11490986.20 | 11490986.41 | 11490986.62 | 0.0511 | 0.0249 |
| Saturn | 26750-01-06 18:43 G | 11491302.09 | 11491302.28 | 11491302.47 | 0.0270 | 0.0161 |
| Saturn | 26751-01-19 02:38 G | 11491679.47 | 11491679.61 | 11491679.76 | 0.0268 | 0.0216 |
| Jupiter | 26754-07-30 03:36 G | 11492967.41 | 11492967.65 | 11492967.89 | 0.0505 | 0.0109 |
| Jupiter | 26755-09-02 02:53 G | 11493366.46 | 11493366.62 | 11493366.79 | 0.0520 | 0.0348 |
| Pluto | 26758-06-17 19:26 G | 11494386.07 | 11494386.31 | 11494386.58 | 0.0079 | 0.0024 |
| Jupiter | 26760-01-27 07:26 G | 11494974.58 | 11494974.81 | 11494975.05 | 0.0524 | 0.0143 |
| Jupiter | 26761-03-01 18:00 G | 11495374.09 | 11495374.25 | 11495374.41 | 0.0509 | 0.0357 |
| Neptune | 26764-10-21 05:02 G | 11496703.71 | 11496703.71 | 11496703.73 | 0.0090 | 0.0089 |
| Saturn | 26765-07-08 03:50 G | 11496963.47 | 11496963.66 | 11496963.86 | 0.0289 | 0.0171 |
| Neptune | 26765-10-23 14:38 G | 11497070.99 | 11497071.11 | 11497071.27 | 0.0090 | 0.0076 |
| Jupiter | 26766-08-03 20:38 G | 11497355.14 | 11497355.36 | 11497355.59 | 0.0506 | 0.0036 |
| Neptune | 26766-10-26 08:24 G | 11497438.72 | 11497438.85 | 11497439.02 | 0.0090 | 0.0073 |
| Jupiter | 26767-09-07 01:41 G | 11497754.46 | 11497754.57 | 11497754.70 | 0.0521 | 0.0453 |
| Neptune | 26767-10-28 15:36 G | 11497805.97 | 11497806.15 | 11497806.35 | 0.0090 | 0.0060 |
| Neptune | 26768-10-30 11:45 G | 11498173.80 | 11498173.99 | 11498174.21 | 0.0090 | 0.0056 |
| Neptune | 26769-11-01 17:45 G | 11498541.04 | 11498541.24 | 11498541.49 | 0.0090 | 0.0045 |
| Neptune | 26770-11-04 13:41 G | 11498908.83 | 11498909.07 | 11498909.31 | 0.0090 | 0.0038 |
| Neptune | 26771-11-06 22:19 G | 11499276.19 | 11499276.43 | 11499276.67 | 0.0090 | 0.0027 |
| Jupiter | 26772-02-01 03:07 G | 11499362.41 | 11499362.63 | 11499362.85 | 0.0522 | 0.0113 |

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| Neptune | 26772-11-08 13:55 G | 11499643.83 | 11499644.08 | 11499644.35 | 0.0090 | 0.0020 |
| Jupiter | 26773-03-06 04:33 G | 11499761.58 | 11499761.69 | 11499761.83 | 0.0507 | 0.0434 |
| Neptune | 26773-11-11 02:24 G | 11500011.36 | 11500011.60 | 11500011.85 | 0.0090 | 0.0010 |
| Neptune | 26774-11-13 12:57 G | 11500378.77 | 11500379.04 | 11500379.31 | 0.0090 | 0.0003 |
| Neptune | 26775-11-16 06:14 G | 11500746.51 | 11500746.76 | 11500747.01 | 0.0090 | 0.0007 |
| Neptune | 26776-11-17 13:12 G | 11501113.79 | 11501114.05 | 11501114.31 | 0.0089 | 0.0015 |
| Jupiter | 26777-07-07 02:38 G | 11501345.51 | 11501345.61 | 11501345.72 | 0.0496 | 0.0435 |
| Neptune | 26777-11-20 08:53 G | 11501481.63 | 11501481.87 | 11501482.13 | 0.0089 | 0.0025 |
| Jupiter | 26778-08-08 16:48 G | 11501742.96 | 11501743.20 | 11501743.44 | 0.0508 | 0.0008 |
| Neptune | 26778-11-22 14:38 G | 11501848.89 | 11501849.11 | 11501849.36 | 0.0089 | 0.0034 |
| Neptune | 26779-11-25 10:05 G | 11502216.70 | 11502216.92 | 11502217.17 | 0.0089 | 0.0042 |
| Saturn | 26780-01-14 00:14 G | 11502266.27 | 11502266.51 | 11502266.76 | 0.0269 | 0.0058 |
| Neptune | 26780-11-26 18:14 G | 11502584.07 | 11502584.26 | 11502584.48 | 0.0089 | 0.0050 |
| Uranus | 26781-06-26 23:02 G | 11502796.25 | 11502796.46 | 11502796.69 | 0.0138 | 0.0068 |
| Neptune | 26781-11-29 10:05 G | 11502951.74 | 11502951.92 | 11502952.15 | 0.0089 | 0.0058 |
| Uranus | 26782-07-01 19:41 G | 11503166.07 | 11503166.32 | 11503166.57 | 0.0137 | 0.0012 |
| Neptune | 26782-12-01 22:05 G | 11503319.28 | 11503319.42 | 11503319.61 | 0.0089 | 0.0068 |
| Jupiter | 26783-01-01 00:57 G | 11503349.52 | 11503349.54 | 11503349.56 | 0.0533 | 0.0530 |
| Uranus | 26783-07-06 01:26 G | 11503535.33 | 11503535.56 | 11503535.80 | 0.0137 | 0.0059 |
| Neptune | 26783-12-04 09:07 G | 11503686.76 | 11503686.88 | 11503687.05 | 0.0089 | 0.0075 |
| Jupiter | 26784-02-06 03:07 G | 11503750.39 | 11503750.63 | 11503750.87 | 0.0520 | 0.0035 |
| Uranus | 26784-07-09 20:09 G | 11503905.25 | 11503905.34 | 11503905.45 | 0.0137 | 0.0125 |
| Neptune | 26784-12-06 01:41 G | 11504054.51 | 11504054.57 | 11504054.66 | 0.0089 | 0.0085 |
| Jupiter | 26785-03-10 17:17 G | 11504149.13 | 11504149.22 | 11504149.31 | 0.0505 | 0.0463 |
| Jupiter | 26789-07-11 18:14 G | 11505733.10 | 11505733.26 | 11505733.43 | 0.0497 | 0.0348 |
| Jupiter | 26790-08-13 00:43 G | 11506130.30 | 11506130.53 | 11506130.76 | 0.0510 | 0.0055 |
| Jupiter | 26795-01-06 08:24 G | 11507737.73 | 11507737.85 | 11507737.97 | 0.0532 | 0.0460 |
| Saturn | 26795-07-16 03:36 G | 11507928.43 | 11507928.65 | 11507928.89 | 0.0291 | 0.0087 |
| Jupiter | 26796-02-10 19:26 G | 11508138.09 | 11508138.31 | 11508138.54 | 0.0518 | 0.0084 |
| Jupiter | 26797-03-15 13:26 G | 11508537.01 | 11508537.06 | 11508537.12 | 0.0503 | 0.0488 |

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| Jupiter | 26801-07-15 21:07 G | 11510120.21 | 11510120.38 | 11510120.57 | 0.0499 | 0.0311 |
| Jupiter | 26802-08-18 01:26 G | 11510518.34 | 11510518.56 | 11510518.78 | 0.0512 | 0.0170 |
| Jupiter | 26807-01-11 08:09 G | 11512125.71 | 11512125.84 | 11512125.98 | 0.0530 | 0.0433 |
| Jupiter | 26808-02-16 00:57 G | 11512526.32 | 11512526.54 | 11512526.76 | 0.0516 | 0.0162 |
| Saturn | 26809-01-08 00:29 G | 11512853.31 | 11512853.52 | 11512853.74 | 0.0270 | 0.0115 |
| Saturn | 26810-01-20 02:53 G | 11513230.56 | 11513230.62 | 11513230.71 | 0.0268 | 0.0256 |
| Jupiter | 26813-07-20 15:36 G | 11514507.97 | 11514508.15 | 11514508.34 | 0.0501 | 0.0286 |
| Jupiter | 26814-08-22 14:09 G | 11514905.89 | 11514906.09 | 11514906.30 | 0.0515 | 0.0258 |
| Jupiter | 26819-01-16 19:12 G | 11516514.13 | 11516514.30 | 11516514.47 | 0.0528 | 0.0344 |
| Jupiter | 26820-02-20 12:57 G | 11516913.82 | 11516914.04 | 11516914.26 | 0.0513 | 0.0192 |
| Saturn | 26824-07-08 23:02 G | 11518514.24 | 11518514.46 | 11518514.69 | 0.0290 | 0.0133 |
| Uranus | 26824-12-23 15:36 G | 11518682.10 | 11518682.15 | 11518682.24 | 0.0140 | 0.0134 |
| Jupiter | 26825-07-25 01:55 G | 11518895.36 | 11518895.58 | 11518895.81 | 0.0502 | 0.0208 |
| Uranus | 26825-12-28 17:02 G | 11519051.98 | 11519052.21 | 11519052.45 | 0.0141 | 0.0053 |
| Jupiter | 26826-08-27 15:36 G | 11519293.97 | 11519294.15 | 11519294.34 | 0.0517 | 0.0292 |
| Uranus | 26827-01-02 04:33 G | 11519421.44 | 11519421.69 | 11519421.95 | 0.0141 | 0.0006 |
| Uranus | 26828-01-07 06:29 G | 11519791.59 | 11519791.77 | 11519791.98 | 0.0141 | 0.0092 |
| Jupiter | 26831-01-21 08:09 G | 11520901.63 | 11520901.84 | 11520902.06 | 0.0526 | 0.0228 |
| Jupiter | 26832-02-25 06:14 G | 11521301.57 | 11521301.76 | 11521301.96 | 0.0512 | 0.0251 |
| Jupiter | 26837-07-29 17:17 G | 11523283.00 | 11523283.22 | 11523283.44 | 0.0504 | 0.0100 |
| Jupiter | 26838-09-01 12:14 G | 11523681.84 | 11523682.01 | 11523682.20 | 0.0518 | 0.0346 |
| Saturn | 26839-01-15 00:43 G | 11523817.31 | 11523817.53 | 11523817.75 | 0.0269 | 0.0100 |
| Jupiter | 26843-01-26 11:02 G | 11525289.75 | 11525289.96 | 11525290.17 | 0.0524 | 0.0155 |
| Jupiter | 26844-02-29 21:36 G | 11525689.24 | 11525689.40 | 11525689.58 | 0.0510 | 0.0356 |
| Neptune | 26846-04-21 00:00 G | 11526470.47 | 11526470.50 | 11526470.56 | 0.0088 | 0.0086 |
| Neptune | 26847-04-23 06:43 G | 11526837.77 | 11526837.78 | 11526837.86 | 0.0088 | 0.0087 |
| Neptune | 26848-04-24 23:02 G | 11527205.31 | 11527205.46 | 11527205.61 | 0.0088 | 0.0070 |
| Neptune | 26849-04-27 02:09 G | 11527572.47 | 11527572.59 | 11527572.77 | 0.0088 | 0.0072 |
| Jupiter | 26849-08-03 09:07 G | 11527670.64 | 11527670.88 | 11527671.12 | 0.0506 | 0.0041 |
| Neptune | 26850-04-29 19:41 G | 11527940.14 | 11527940.32 | 11527940.54 | 0.0088 | 0.0055 |

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| Jupiter | 26850-09-06 04:19 G | 11528069.58 | 11528069.68 | 11528069.80 | 0.0520 | 0.0454 |
| Neptune | 26851-05-01 23:17 G | 11528307.30 | 11528307.47 | 11528307.69 | 0.0088 | 0.0056 |
| Neptune | 26852-05-03 14:53 G | 11528674.90 | 11528675.12 | 11528675.38 | 0.0088 | 0.0039 |
| Neptune | 26853-05-05 22:05 G | 11529042.21 | 11529042.42 | 11529042.65 | 0.0088 | 0.0039 |
| Neptune | 26854-05-08 10:05 G | 11529409.66 | 11529409.92 | 11529410.18 | 0.0088 | 0.0022 |
| Saturn | 26854-07-17 06:00 G | 11529479.54 | 11529479.75 | 11529479.97 | 0.0291 | 0.0124 |
| Jupiter | 26855-01-31 13:12 G | 11529677.82 | 11529678.05 | 11529678.29 | 0.0523 | 0.0122 |
| Neptune | 26855-05-10 21:36 G | 11529777.17 | 11529777.40 | 11529777.66 | 0.0088 | 0.0023 |
| Mars | 26855-05-12 18:29 G | 11529779.11 | 11529779.27 | 11529779.43 | 0.1585 | 0.0669 |
| Jupiter | 26856-03-05 13:12 G | 11530076.94 | 11530077.05 | 11530077.17 | 0.0508 | 0.0434 |
| Neptune | 26856-05-12 04:33 G | 11530144.43 | 11530144.69 | 11530144.95 | 0.0088 | 0.0006 |
| Neptune | 26857-05-14 20:24 G | 11530512.10 | 11530512.35 | 11530512.61 | 0.0088 | 0.0007 |
| Neptune | 26858-05-17 00:14 G | 11530879.26 | 11530879.51 | 11530879.77 | 0.0088 | 0.0011 |
| Neptune | 26859-05-19 17:45 G | 11531246.98 | 11531247.24 | 11531247.50 | 0.0088 | 0.0011 |
| Neptune | 26860-05-20 21:50 G | 11531614.17 | 11531614.41 | 11531614.65 | 0.0088 | 0.0027 |
| Jupiter | 26860-07-06 18:43 G | 11531661.18 | 11531661.28 | 11531661.41 | 0.0495 | 0.0425 |
| Neptune | 26861-05-23 12:57 G | 11531981.79 | 11531982.04 | 11531982.30 | 0.0088 | 0.0027 |
| Jupiter | 26861-08-07 18:00 G | 11532058.02 | 11532058.25 | 11532058.48 | 0.0508 | 0.0010 |
| Neptune | 26862-05-25 20:38 G | 11532349.16 | 11532349.36 | 11532349.59 | 0.0088 | 0.0043 |
| Neptune | 26863-05-28 07:41 G | 11532716.59 | 11532716.82 | 11532717.06 | 0.0088 | 0.0043 |
| Neptune | 26864-05-29 20:09 G | 11533084.18 | 11533084.34 | 11533084.54 | 0.0088 | 0.0060 |
| Uranus | 26864-06-23 00:57 G | 11533108.48 | 11533108.54 | 11533108.61 | 0.0138 | 0.0134 |
| Neptune | 26865-06-01 02:24 G | 11533451.43 | 11533451.60 | 11533451.81 | 0.0088 | 0.0060 |
| Uranus | 26865-06-27 07:55 G | 11533477.63 | 11533477.83 | 11533478.05 | 0.0138 | 0.0080 |
| Jupiter | 26865-12-31 12:00 G | 11533664.96 | 11533665.00 | 11533665.04 | 0.0534 | 0.0525 |
| Neptune | 26866-06-03 18:43 G | 11533819.18 | 11533819.28 | 11533819.43 | 0.0088 | 0.0076 |
| Uranus | 26866-07-02 04:33 G | 11533847.44 | 11533847.69 | 11533847.95 | 0.0138 | 0.0002 |
| Jupiter | 26867-02-05 08:24 G | 11534065.62 | 11534065.85 | 11534066.08 | 0.0520 | 0.0036 |
| Neptune | 26867-06-05 22:48 G | 11534186.33 | 11534186.45 | 11534186.59 | 0.0088 | 0.0075 |
| Uranus | 26867-07-06 10:19 G | 11534216.70 | 11534216.93 | 11534217.16 | 0.0137 | 0.0058 |

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| Saturn | 26868-01-10 00:00 G | 11534404.26 | 11534404.50 | 11534404.75 | 0.0270 | 0.0072 |
| Jupiter | 26868-03-10 10:19 G | 11534464.83 | 11534464.93 | 11534465.04 | 0.0505 | 0.0450 |
| Uranus | 26868-07-10 05:02 G | 11534586.62 | 11534586.71 | 11534586.83 | 0.0137 | 0.0124 |
| Jupiter | 26872-07-10 20:53 G | 11536048.21 | 11536048.37 | 11536048.55 | 0.0497 | 0.0346 |
| Jupiter | 26873-08-12 18:00 G | 11536446.02 | 11536446.25 | 11536446.48 | 0.0510 | 0.0059 |
| Jupiter | 26878-01-05 12:43 G | 11538052.92 | 11538053.03 | 11538053.13 | 0.0532 | 0.0467 |
| Jupiter | 26879-02-10 13:55 G | 11538453.85 | 11538454.08 | 11538454.31 | 0.0518 | 0.0086 |
| Jupiter | 26880-03-14 17:31 G | 11538852.18 | 11538852.23 | 11538852.30 | 0.0504 | 0.0488 |
| Saturn | 26883-07-10 15:36 G | 11540064.93 | 11540065.15 | 11540065.39 | 0.0290 | 0.0100 |
| Jupiter | 26884-07-15 16:33 G | 11540436.02 | 11540436.19 | 11540436.37 | 0.0499 | 0.0314 |
| Jupiter | 26885-08-17 06:43 G | 11540833.56 | 11540833.78 | 11540834.01 | 0.0512 | 0.0176 |
| Jupiter | 26890-01-10 18:14 G | 11542441.14 | 11542441.26 | 11542441.39 | 0.0530 | 0.0440 |
| Jupiter | 26891-02-14 21:07 G | 11542841.16 | 11542841.38 | 11542841.61 | 0.0516 | 0.0155 |
| Jupiter | 26896-07-20 01:12 G | 11544823.35 | 11544823.55 | 11544823.75 | 0.0500 | 0.0281 |
| Saturn | 26897-01-03 17:45 G | 11544991.15 | 11544991.24 | 11544991.36 | 0.0272 | 0.0242 |
| Jupiter | 26897-08-22 06:14 G | 11545221.57 | 11545221.76 | 11545221.96 | 0.0514 | 0.0256 |
| Saturn | 26898-01-16 04:33 G | 11545368.49 | 11545368.69 | 11545368.90 | 0.0269 | 0.0139 |
| Jupiter | 26902-01-16 12:14 G | 11546828.84 | 11546829.01 | 11546829.19 | 0.0529 | 0.0351 |
| Jupiter | 26903-02-20 20:38 G | 11547229.15 | 11547229.36 | 11547229.57 | 0.0514 | 0.0183 |
| Jupiter | 26908-07-25 12:43 G | 11549210.82 | 11549211.03 | 11549211.24 | 0.0502 | 0.0200 |
| Uranus | 26908-12-25 00:14 G | 11549363.43 | 11549363.51 | 11549363.64 | 0.0140 | 0.0126 |
| Jupiter | 26909-08-27 21:50 G | 11549609.21 | 11549609.41 | 11549609.61 | 0.0516 | 0.0283 |
| Uranus | 26909-12-30 00:57 G | 11549733.32 | 11549733.54 | 11549733.78 | 0.0140 | 0.0063 |
| Uranus | 26911-01-03 12:43 G | 11550102.78 | 11550103.03 | 11550103.28 | 0.0141 | 0.0023 |
| Uranus | 26912-01-08 14:53 G | 11550472.93 | 11550473.12 | 11550473.35 | 0.0141 | 0.0082 |
| Saturn | 26913-07-19 04:19 G | 11551030.48 | 11551030.68 | 11551030.90 | 0.0291 | 0.0165 |
| Jupiter | 26914-01-21 18:57 G | 11551217.09 | 11551217.29 | 11551217.49 | 0.0527 | 0.0231 |
| Jupiter | 26915-02-25 14:53 G | 11551616.91 | 11551617.12 | 11551617.33 | 0.0512 | 0.0251 |
| Pluto | 26917-12-19 05:31 G | 11552644.47 | 11552644.73 | 11552644.99 | 0.0064 | 0.0002 |
| Jupiter | 26920-07-30 04:48 G | 11553598.46 | 11553598.70 | 11553598.94 | 0.0503 | 0.0096 |

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| Jupiter | 26921-09-01 15:50 G | 11553997.00 | 11553997.16 | 11553997.33 | 0.0518 | 0.0346 |
| Jupiter | 26926-01-26 22:33 G | 11555605.22 | 11555605.44 | 11555605.68 | 0.0525 | 0.0166 |
| Saturn | 26927-01-11 19:41 G | 11555955.07 | 11555955.32 | 11555955.57 | 0.0270 | 0.0030 |
| Jupiter | 26927-03-02 07:41 G | 11556004.67 | 11556004.82 | 11556004.99 | 0.0510 | 0.0360 |
| Neptune | 26928-10-21 10:48 G | 11556603.93 | 11556603.95 | 11556604.01 | 0.0090 | 0.0089 |
| Neptune | 26929-10-24 05:31 G | 11556971.70 | 11556971.73 | 11556971.81 | 0.0090 | 0.0088 |
| Neptune | 26930-10-26 12:14 G | 11557338.86 | 11557339.01 | 11557339.16 | 0.0090 | 0.0072 |
| Neptune | 26931-10-29 07:55 G | 11557706.70 | 11557706.83 | 11557707.01 | 0.0090 | 0.0072 |
| Jupiter | 26932-08-03 12:43 G | 11557985.80 | 11557986.03 | 11557986.26 | 0.0506 | 0.0042 |
| Neptune | 26932-10-30 14:24 G | 11558073.93 | 11558074.10 | 11558074.33 | 0.0090 | 0.0056 |
| Jupiter | 26933-09-06 19:41 G | 11558385.21 | 11558385.32 | 11558385.43 | 0.0520 | 0.0461 |
| Neptune | 26933-11-02 08:53 G | 11558441.67 | 11558441.87 | 11558442.09 | 0.0090 | 0.0054 |
| Mars | 26934-05-15 11:31 G | 11558635.84 | 11558635.98 | 11558636.13 | 0.1585 | 0.0945 |
| Neptune | 26934-11-04 18:14 G | 11558809.05 | 11558809.26 | 11558809.50 | 0.0090 | 0.0038 |
| Neptune | 26935-11-07 08:09 G | 11559176.62 | 11559176.84 | 11559177.11 | 0.0090 | 0.0037 |
| Neptune | 26936-11-08 23:02 G | 11559544.22 | 11559544.46 | 11559544.71 | 0.0090 | 0.0020 |
| Neptune | 26937-11-11 08:24 G | 11559911.61 | 11559911.85 | 11559912.13 | 0.0090 | 0.0020 |
| Jupiter | 26938-01-31 18:29 G | 11559993.05 | 11559993.27 | 11559993.49 | 0.0523 | 0.0127 |
| Neptune | 26938-11-14 03:21 G | 11560279.38 | 11560279.64 | 11560279.89 | 0.0090 | 0.0002 |
| Jupiter | 26939-03-07 05:17 G | 11560392.60 | 11560392.72 | 11560392.85 | 0.0508 | 0.0426 |
| Neptune | 26939-11-16 09:36 G | 11560646.64 | 11560646.90 | 11560647.17 | 0.0090 | 0.0002 |
| Neptune | 26940-11-18 05:31 G | 11561014.48 | 11561014.73 | 11561014.99 | 0.0090 | 0.0017 |
| Neptune | 26941-11-20 11:31 G | 11561381.74 | 11561381.98 | 11561382.24 | 0.0089 | 0.0017 |
| Saturn | 26942-07-12 14:38 G | 11561615.88 | 11561616.11 | 11561616.35 | 0.0290 | 0.0061 |
| Neptune | 26942-11-23 05:45 G | 11561749.51 | 11561749.74 | 11561750.00 | 0.0089 | 0.0035 |
| Jupiter | 26943-07-07 23:45 G | 11561976.37 | 11561976.49 | 11561976.62 | 0.0495 | 0.0418 |
| Neptune | 26943-11-25 14:53 G | 11562116.89 | 11562117.12 | 11562117.35 | 0.0089 | 0.0034 |
| Jupiter | 26944-08-08 13:41 G | 11562373.83 | 11562374.07 | 11562374.30 | 0.0508 | 0.0013 |
| Neptune | 26944-11-27 04:33 G | 11562484.49 | 11562484.69 | 11562484.93 | 0.0089 | 0.0052 |
| Neptune | 26945-11-29 18:29 G | 11562852.07 | 11562852.27 | 11562852.48 | 0.0089 | 0.0052 |

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| Neptune | 26946-12-02 04:48 G | 11563219.53 | 11563219.70 | 11563219.87 | 0.0089 | 0.0069 |
| Neptune | 26947-12-04 22:19 G | 11563587.29 | 11563587.43 | 11563587.61 | 0.0089 | 0.0069 |
| Neptune | 26948-12-06 05:02 G | 11563954.66 | 11563954.71 | 11563954.80 | 0.0089 | 0.0086 |
| Jupiter | 26948-12-31 10:05 G | 11563979.90 | 11563979.92 | 11563979.96 | 0.0533 | 0.0528 |
| Uranus | 26949-06-28 16:33 G | 11564158.98 | 11564159.19 | 11564159.42 | 0.0138 | 0.0064 |
| Neptune | 26949-12-09 00:43 G | 11564322.47 | 11564322.53 | 11564322.63 | 0.0089 | 0.0085 |
| Jupiter | 26950-02-05 18:57 G | 11564381.05 | 11564381.29 | 11564381.52 | 0.0521 | 0.0039 |
| Uranus | 26950-07-03 13:12 G | 11564528.80 | 11564529.05 | 11564529.31 | 0.0138 | 0.0009 |
| Jupiter | 26951-03-11 08:38 G | 11564779.75 | 11564779.86 | 11564779.97 | 0.0506 | 0.0444 |
| Uranus | 26951-07-07 18:57 G | 11564898.07 | 11564898.29 | 11564898.51 | 0.0137 | 0.0066 |
| Uranus | 26952-07-11 14:24 G | 11565268.02 | 11565268.10 | 11565268.19 | 0.0137 | 0.0128 |
| Jupiter | 26955-07-12 17:17 G | 11566364.07 | 11566364.22 | 11566364.39 | 0.0497 | 0.0347 |
| Saturn | 26956-01-06 21:36 G | 11566542.24 | 11566542.40 | 11566542.56 | 0.0272 | 0.0199 |
| Jupiter | 26956-08-12 23:45 G | 11566761.25 | 11566761.49 | 11566761.73 | 0.0509 | 0.0067 |
| Saturn | 26957-01-18 05:17 G | 11566919.53 | 11566919.72 | 11566919.90 | 0.0269 | 0.0178 |
| Jupiter | 26961-01-05 19:55 G | 11568368.23 | 11568368.33 | 11568368.44 | 0.0532 | 0.0476 |
| Jupiter | 26962-02-10 07:26 G | 11568768.58 | 11568768.81 | 11568769.05 | 0.0519 | 0.0080 |
| Jupiter | 26963-03-16 05:17 G | 11569167.68 | 11569167.72 | 11569167.78 | 0.0504 | 0.0489 |
| Jupiter | 26967-07-16 22:19 G | 11570751.25 | 11570751.43 | 11570751.62 | 0.0498 | 0.0318 |
| Jupiter | 26968-08-17 18:57 G | 11571149.08 | 11571149.29 | 11571149.50 | 0.0511 | 0.0180 |
| Saturn | 26971-07-07 01:12 G | 11572202.44 | 11572202.55 | 11572202.66 | 0.0289 | 0.0257 |
| Saturn | 26972-07-19 23:17 G | 11572581.30 | 11572581.47 | 11572581.66 | 0.0291 | 0.0205 |
| Jupiter | 26973-01-10 15:50 G | 11572756.03 | 11572756.16 | 11572756.29 | 0.0531 | 0.0444 |
| Jupiter | 26974-02-15 10:33 G | 11573156.72 | 11573156.94 | 11573157.16 | 0.0517 | 0.0144 |
| Jupiter | 26979-07-21 10:05 G | 11575138.74 | 11575138.92 | 11575139.11 | 0.0500 | 0.0286 |
| Jupiter | 26980-08-22 10:48 G | 11575536.74 | 11575536.95 | 11575537.16 | 0.0513 | 0.0248 |
| Jupiter | 26985-01-16 01:55 G | 11577144.42 | 11577144.58 | 11577144.75 | 0.0529 | 0.0348 |
| Saturn | 26986-01-12 19:26 G | 11577506.07 | 11577506.31 | 11577506.55 | 0.0270 | 0.0012 |
| Jupiter | 26986-02-20 06:00 G | 11577544.53 | 11577544.75 | 11577544.98 | 0.0515 | 0.0174 |
| Mars | 26989-11-11 16:33 G | 11578905.14 | 11578905.19 | 11578905.24 | 0.1952 | 0.1893 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 26991-07-26 00:43 G | 11579526.32 | 11579526.53 | 11579526.76 | 0.0501 | 0.0192 |
| Jupiter | 26992-08-27 04:19 G | 11579924.50 | 11579924.68 | 11579924.88 | 0.0516 | 0.0281 |
| Uranus | 26992-12-25 11:02 G | 11580044.87 | 11580044.96 | 11580045.08 | 0.0140 | 0.0127 |
| Uranus | 26993-12-30 11:45 G | 11580414.75 | 11580414.99 | 11580415.24 | 0.0140 | 0.0048 |
| Uranus | 26995-01-03 23:45 G | 11580784.25 | 11580784.49 | 11580784.75 | 0.0141 | 0.0012 |
| Uranus | 26996-01-09 01:55 G | 11581154.41 | 11581154.58 | 11581154.77 | 0.0141 | 0.0098 |
| Jupiter | 26997-01-21 04:48 G | 11581532.48 | 11581532.70 | 11581532.92 | 0.0527 | 0.0225 |
| Jupiter | 26998-02-24 23:31 G | 11581932.28 | 11581932.48 | 11581932.67 | 0.0512 | 0.0254 |

28TH MILLENNIUM CE

This is a list of transits of Moon in the 28th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Saturn | 27001-07-14 19:26 G | 11583167.08 | 11583167.31 | 11583167.55 | 0.0290 | 0.0019 | | |
| Jupiter | 27003-07-31 10:05 G | 11583913.70 | 11583913.92 | 11583914.15 | 0.0503 | 0.0094 | | |
| Jupiter | 27004-09-02 08:09 G | 11584312.67 | 11584312.84 | 11584313.02 | 0.0518 | 0.0352 | | |
| Pluto | 27006-06-20 20:38 G | 11584969.14 | 11584969.36 | 11584969.61 | 0.0080 | 0.0029 | | |
| Jupiter | 27009-01-26 20:38 G | 11585920.15 | 11585920.36 | 11585920.58 | 0.0525 | 0.0174 | | |
| Jupiter | 27010-03-02 15:50 G | 11586320.00 | 11586320.16 | 11586320.34 | 0.0510 | 0.0359 | | |
| Neptune | 27011-04-24 23:02 G | 11586738.46 | 11586738.46 | 11586738.49 | 0.0088 | 0.0088 | | |
| Neptune | 27012-04-26 02:09 G | 11587105.52 | 11587105.59 | 11587105.73 | 0.0088 | 0.0081 | | |
| Neptune | 27013-04-28 19:55 G | 11587473.21 | 11587473.33 | 11587473.50 | 0.0088 | 0.0072 | | |
| Neptune | 27014-05-01 00:29 G | 11587840.37 | 11587840.52 | 11587840.71 | 0.0088 | 0.0065 | | |
| Saturn | 27015-01-09 00:14 G | 11588093.31 | 11588093.51 | 11588093.71 | 0.0272 | 0.0154 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 27015-05-03 15:36 G | 11588207.96 | 11588208.15 | 11588208.37 | 0.0088 | 0.0055 |
| Jupiter | 27015-08-05 08:24 G | 11588301.62 | 11588301.85 | 11588302.08 | 0.0505 | 0.0046 |
| Saturn | 27016-01-21 01:26 G | 11588470.43 | 11588470.56 | 11588470.73 | 0.0269 | 0.0217 |
| Neptune | 27016-05-04 23:31 G | 11588575.29 | 11588575.48 | 11588575.71 | 0.0088 | 0.0048 |
| Jupiter | 27016-09-06 22:48 G | 11588700.35 | 11588700.45 | 11588700.55 | 0.0520 | 0.0466 |
| Neptune | 27017-05-07 09:36 G | 11588942.68 | 11588942.90 | 11588943.16 | 0.0088 | 0.0039 |
| Neptune | 27018-05-09 22:19 G | 11589310.21 | 11589310.43 | 11589310.67 | 0.0088 | 0.0032 |
| Neptune | 27019-05-12 03:50 G | 11589677.42 | 11589677.66 | 11589677.93 | 0.0088 | 0.0023 |
| Neptune | 27020-05-13 20:53 G | 11590045.12 | 11590045.37 | 11590045.62 | 0.0088 | 0.0015 |
| Jupiter | 27021-02-01 01:41 G | 11590308.34 | 11590308.57 | 11590308.79 | 0.0523 | 0.0134 |
| Neptune | 27021-05-16 00:14 G | 11590412.26 | 11590412.51 | 11590412.77 | 0.0088 | 0.0005 |
| Jupiter | 27022-03-07 00:43 G | 11590707.40 | 11590707.53 | 11590707.66 | 0.0509 | 0.0420 |
| Neptune | 27022-05-18 17:31 G | 11590779.97 | 11590780.23 | 11590780.50 | 0.0088 | 0.0003 |
| Neptune | 27023-05-20 22:19 G | 11591147.19 | 11591147.43 | 11591147.68 | 0.0088 | 0.0013 |
| Neptune | 27024-05-22 13:12 G | 11591514.79 | 11591515.05 | 11591515.31 | 0.0088 | 0.0018 |
| Neptune | 27025-05-24 22:05 G | 11591882.19 | 11591882.42 | 11591882.66 | 0.0088 | 0.0029 |
| Neptune | 27026-05-27 07:41 G | 11592249.57 | 11592249.82 | 11592250.06 | 0.0088 | 0.0035 |
| Jupiter | 27026-07-08 15:50 G | 11592292.05 | 11592292.16 | 11592292.28 | 0.0495 | 0.0420 |
| Neptune | 27027-05-29 20:53 G | 11592617.18 | 11592617.37 | 11592617.60 | 0.0088 | 0.0047 |
| Jupiter | 27027-08-09 13:41 G | 11592688.83 | 11592689.07 | 11592689.31 | 0.0507 | 0.0018 |
| Neptune | 27028-05-31 01:55 G | 11592984.40 | 11592984.58 | 11592984.81 | 0.0088 | 0.0053 |
| Neptune | 27029-06-02 19:26 G | 11593352.14 | 11593352.31 | 11593352.50 | 0.0088 | 0.0063 |
| Neptune | 27030-06-04 22:48 G | 11593719.31 | 11593719.45 | 11593719.63 | 0.0088 | 0.0068 |
| Saturn | 27030-07-08 22:19 G | 11593753.26 | 11593753.43 | 11593753.60 | 0.0289 | 0.0213 |
| Neptune | 27031-06-07 15:50 G | 11594087.07 | 11594087.16 | 11594087.29 | 0.0088 | 0.0079 |
| Saturn | 27031-07-22 23:17 G | 11594132.36 | 11594132.47 | 11594132.60 | 0.0291 | 0.0252 |
| Jupiter | 27032-01-01 19:55 G | 11594295.30 | 11594295.33 | 11594295.37 | 0.0534 | 0.0528 |
| Neptune | 27032-06-08 21:21 G | 11594454.34 | 11594454.39 | 11594454.48 | 0.0088 | 0.0084 |
| Uranus | 27032-06-25 18:57 G | 11594471.22 | 11594471.29 | 11594471.39 | 0.0138 | 0.0130 |
| Jupiter | 27033-02-05 16:48 G | 11594695.97 | 11594696.20 | 11594696.44 | 0.0522 | 0.0041 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 27033-06-30 03:07 G | 11594840.42 | 11594840.63 | 11594840.84 | 0.0138 | 0.0075 |
| Jupiter | 27034-03-12 00:14 G | 11595095.40 | 11595095.51 | 11595095.63 | 0.0507 | 0.0436 |
| Uranus | 27034-07-04 23:17 G | 11595210.22 | 11595210.47 | 11595210.73 | 0.0137 | 0.0006 |
| Uranus | 27035-07-09 05:02 G | 11595579.50 | 11595579.71 | 11595579.95 | 0.0137 | 0.0062 |
| Uranus | 27036-07-13 00:14 G | 11595949.46 | 11595949.51 | 11595949.61 | 0.0137 | 0.0131 |
| Jupiter | 27038-07-12 20:53 G | 11596679.20 | 11596679.37 | 11596679.54 | 0.0496 | 0.0351 |
| Jupiter | 27039-08-14 09:36 G | 11597076.68 | 11597076.90 | 11597077.13 | 0.0509 | 0.0070 |
| Jupiter | 27044-01-06 18:14 G | 11598683.16 | 11598683.26 | 11598683.36 | 0.0533 | 0.0480 |
| Saturn | 27045-01-15 00:57 G | 11599057.31 | 11599057.54 | 11599057.78 | 0.0270 | 0.0056 |
| Jupiter | 27045-02-10 22:19 G | 11599084.21 | 11599084.43 | 11599084.66 | 0.0519 | 0.0081 |
| Jupiter | 27046-03-16 09:50 G | 11599482.85 | 11599482.91 | 11599482.98 | 0.0505 | 0.0485 |
| Jupiter | 27050-07-17 07:12 G | 11601066.64 | 11601066.80 | 11601066.97 | 0.0498 | 0.0330 |
| Jupiter | 27051-08-19 00:00 G | 11601464.27 | 11601464.50 | 11601464.73 | 0.0511 | 0.0179 |
| Jupiter | 27056-01-12 06:00 G | 11603071.63 | 11603071.75 | 11603071.87 | 0.0531 | 0.0445 |
| Jupiter | 27057-02-15 17:17 G | 11603471.99 | 11603472.22 | 11603472.46 | 0.0517 | 0.0137 |
| Mars | 27060-05-13 05:17 G | 11604654.57 | 11604654.72 | 11604654.87 | 0.1587 | 0.1053 |
| Saturn | 27060-07-16 00:00 G | 11604718.25 | 11604718.50 | 11604718.75 | 0.0290 | 0.0031 |
| Jupiter | 27062-07-21 23:17 G | 11605454.27 | 11605454.47 | 11605454.67 | 0.0500 | 0.0284 |
| Jupiter | 27063-08-23 18:57 G | 11605852.10 | 11605852.29 | 11605852.50 | 0.0513 | 0.0246 |
| Jupiter | 27068-01-17 02:53 G | 11607459.44 | 11607459.62 | 11607459.80 | 0.0529 | 0.0344 |
| Jupiter | 27069-02-20 07:12 G | 11607859.58 | 11607859.80 | 11607860.01 | 0.0515 | 0.0169 |
| Saturn | 27074-01-09 22:33 G | 11609644.21 | 11609644.44 | 11609644.68 | 0.0272 | 0.0108 |
| Jupiter | 27074-07-26 05:45 G | 11609841.53 | 11609841.74 | 11609841.96 | 0.0501 | 0.0192 |
| Saturn | 27075-01-22 00:57 G | 11610021.49 | 11610021.54 | 11610021.61 | 0.0270 | 0.0260 |
| Jupiter | 27075-08-28 19:12 G | 11610240.10 | 11610240.30 | 11610240.50 | 0.0515 | 0.0272 |
| Uranus | 27076-12-26 21:50 G | 11610726.30 | 11610726.41 | 11610726.54 | 0.0140 | 0.0121 |
| Uranus | 27077-12-31 21:21 G | 11611096.16 | 11611096.39 | 11611096.64 | 0.0140 | 0.0056 |
| Uranus | 27079-01-05 10:19 G | 11611465.68 | 11611465.93 | 11611466.17 | 0.0141 | 0.0029 |
| Uranus | 27080-01-10 12:14 G | 11611835.82 | 11611836.01 | 11611836.22 | 0.0141 | 0.0088 |
| Jupiter | 27080-01-22 00:14 G | 11611847.31 | 11611847.51 | 11611847.71 | 0.0527 | 0.0232 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 27081-02-25 03:50 G | 11612247.45 | 11612247.66 | 11612247.87 | 0.0513 | 0.0251 |
| Jupiter | 27086-07-31 00:00 G | 11614229.27 | 11614229.50 | 11614229.73 | 0.0503 | 0.0100 |
| Jupiter | 27087-09-02 04:19 G | 11614627.52 | 11614627.68 | 11614627.86 | 0.0517 | 0.0347 |
| Saturn | 27089-07-10 03:21 G | 11615304.45 | 11615304.64 | 11615304.84 | 0.0289 | 0.0162 |
| Jupiter | 27092-01-27 06:00 G | 11616235.53 | 11616235.75 | 11616235.98 | 0.0526 | 0.0183 |
| Jupiter | 27093-03-01 15:21 G | 11616634.98 | 11616635.14 | 11616635.31 | 0.0511 | 0.0358 |
| Neptune | 27094-10-27 03:21 G | 11617239.52 | 11617239.64 | 11617239.77 | 0.0090 | 0.0078 |
| Neptune | 27095-10-29 10:19 G | 11617606.81 | 11617606.93 | 11617607.08 | 0.0090 | 0.0076 |
| Neptune | 27096-10-31 03:07 G | 11617974.46 | 11617974.63 | 11617974.85 | 0.0090 | 0.0061 |
| Neptune | 27097-11-02 14:24 G | 11618341.93 | 11618342.10 | 11618342.31 | 0.0090 | 0.0059 |
| Jupiter | 27098-08-04 05:17 G | 11618616.49 | 11618616.72 | 11618616.96 | 0.0504 | 0.0056 |
| Neptune | 27098-11-05 03:21 G | 11618709.42 | 11618709.64 | 11618709.89 | 0.0090 | 0.0044 |
| Jupiter | 27099-09-07 07:12 G | 11619015.71 | 11619015.80 | 11619015.91 | 0.0519 | 0.0462 |
| Neptune | 27099-11-07 19:12 G | 11619077.09 | 11619077.30 | 11619077.54 | 0.0090 | 0.0041 |
| Neptune | 27100-11-10 03:21 G | 11619444.40 | 11619444.64 | 11619444.91 | 0.0089 | 0.0026 |
| Neptune | 27101-11-12 22:33 G | 11619812.21 | 11619812.44 | 11619812.70 | 0.0089 | 0.0022 |
| Neptune | 27102-11-15 05:02 G | 11620179.46 | 11620179.71 | 11620179.97 | 0.0089 | 0.0007 |
| Neptune | 27103-11-18 01:12 G | 11620547.29 | 11620547.55 | 11620547.81 | 0.0089 | 0.0003 |
| Saturn | 27104-01-18 08:38 G | 11620608.65 | 11620608.86 | 11620609.09 | 0.0270 | 0.0105 |
| Jupiter | 27104-02-02 00:00 G | 11620623.28 | 11620623.50 | 11620623.73 | 0.0524 | 0.0139 |
| Neptune | 27104-11-19 07:41 G | 11620914.57 | 11620914.82 | 11620915.07 | 0.0089 | 0.0010 |
| Jupiter | 27105-03-07 16:19 G | 11621023.06 | 11621023.18 | 11621023.32 | 0.0509 | 0.0413 |
| Neptune | 27105-11-22 00:57 G | 11621282.29 | 11621282.54 | 11621282.82 | 0.0089 | 0.0016 |
| Neptune | 27106-11-24 11:45 G | 11621649.76 | 11621649.99 | 11621650.23 | 0.0089 | 0.0028 |
| Neptune | 27107-11-27 00:43 G | 11622017.30 | 11622017.53 | 11622017.79 | 0.0089 | 0.0034 |
| Neptune | 27108-11-28 15:36 G | 11622384.96 | 11622385.15 | 11622385.39 | 0.0089 | 0.0047 |
| Jupiter | 27109-07-08 18:14 G | 11622607.13 | 11622607.26 | 11622607.38 | 0.0495 | 0.0418 |
| Neptune | 27109-12-01 00:14 G | 11622752.30 | 11622752.51 | 11622752.73 | 0.0089 | 0.0052 |
| Jupiter | 27110-08-10 00:29 G | 11623004.29 | 11623004.52 | 11623004.74 | 0.0507 | 0.0025 |
| Neptune | 27110-12-03 18:43 G | 11623120.11 | 11623120.28 | 11623120.47 | 0.0089 | 0.0063 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 27111-12-06 00:14 G | 11623487.38 | 11623487.51 | 11623487.70 | 0.0089 | 0.0070 |
| Neptune | 27112-12-07 20:09 G | 11623855.25 | 11623855.34 | 11623855.48 | 0.0089 | 0.0080 |
| Neptune | 27113-12-10 02:38 G | 11624222.58 | 11624222.61 | 11624222.68 | 0.0089 | 0.0088 |
| Jupiter | 27115-01-01 18:14 G | 11624610.23 | 11624610.26 | 11624610.29 | 0.0534 | 0.0529 |
| Jupiter | 27116-02-07 06:29 G | 11625011.55 | 11625011.77 | 11625012.00 | 0.0522 | 0.0034 |
| Jupiter | 27117-03-12 01:55 G | 11625410.46 | 11625410.58 | 11625410.71 | 0.0507 | 0.0431 |
| Uranus | 27117-07-01 14:24 G | 11625521.89 | 11625522.10 | 11625522.34 | 0.0138 | 0.0058 |
| Uranus | 27118-07-06 10:05 G | 11625891.67 | 11625891.92 | 11625892.18 | 0.0137 | 0.0005 |
| Uranus | 27119-07-10 16:33 G | 11626260.98 | 11626261.19 | 11626261.40 | 0.0137 | 0.0073 |
| Saturn | 27119-07-19 02:38 G | 11626269.37 | 11626269.61 | 11626269.86 | 0.0290 | 0.0088 |
| Uranus | 27120-07-14 11:17 G | 11626630.94 | 11626630.97 | 11626631.04 | 0.0137 | 0.0134 |
| Jupiter | 27121-07-13 05:45 G | 11626994.60 | 11626994.74 | 11626994.90 | 0.0496 | 0.0360 |
| Jupiter | 27122-08-14 15:21 G | 11627391.90 | 11627392.14 | 11627392.38 | 0.0509 | 0.0071 |
| Jupiter | 27127-01-07 03:07 G | 11628998.55 | 11628998.63 | 11628998.72 | 0.0532 | 0.0491 |
| Jupiter | 27128-02-11 20:24 G | 11629399.11 | 11629399.35 | 11629399.59 | 0.0519 | 0.0076 |
| Jupiter | 27129-03-16 15:50 G | 11629798.11 | 11629798.16 | 11629798.22 | 0.0505 | 0.0487 |
| Saturn | 27133-01-11 23:02 G | 11631195.22 | 11631195.46 | 11631195.71 | 0.0272 | 0.0059 |
| Jupiter | 27133-07-17 18:57 G | 11631382.12 | 11631382.29 | 11631382.47 | 0.0498 | 0.0341 |
| Jupiter | 27134-08-19 07:41 G | 11631779.61 | 11631779.82 | 11631780.03 | 0.0511 | 0.0178 |
| Jupiter | 27139-01-12 00:57 G | 11633386.42 | 11633386.54 | 11633386.67 | 0.0531 | 0.0451 |
| Mars | 27139-05-17 09:36 G | 11633511.71 | 11633511.90 | 11633512.10 | 0.1586 | 0.0119 |
| Jupiter | 27140-02-16 15:07 G | 11633786.92 | 11633787.13 | 11633787.35 | 0.0517 | 0.0129 |
| Jupiter | 27145-07-21 22:48 G | 11635769.27 | 11635769.45 | 11635769.63 | 0.0499 | 0.0295 |
| Jupiter | 27146-08-24 01:55 G | 11636167.37 | 11636167.58 | 11636167.80 | 0.0512 | 0.0229 |
| Saturn | 27148-07-12 16:33 G | 11636855.97 | 11636856.19 | 11636856.41 | 0.0289 | 0.0102 |
| Jupiter | 27151-01-17 00:29 G | 11637774.36 | 11637774.52 | 11637774.69 | 0.0530 | 0.0351 |
| Jupiter | 27152-02-21 13:41 G | 11638174.84 | 11638175.07 | 11638175.30 | 0.0516 | 0.0160 |
| Jupiter | 27157-07-26 16:48 G | 11640156.98 | 11640157.20 | 11640157.42 | 0.0501 | 0.0195 |
| Jupiter | 27158-08-28 12:29 G | 11640554.82 | 11640555.02 | 11640555.22 | 0.0514 | 0.0259 |
| Uranus | 27160-12-28 08:09 G | 11641407.74 | 11641407.84 | 11641407.99 | 0.0140 | 0.0120 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 27162-01-02 07:41 G | 11641777.58 | 11641777.82 | 11641778.07 | 0.0140 | 0.0043 |
| Saturn | 27162-01-07 07:12 G | 11641782.67 | 11641782.80 | 11641782.95 | 0.0272 | 0.0220 |
| Uranus | 27163-01-06 21:36 G | 11642147.16 | 11642147.40 | 11642147.65 | 0.0141 | 0.0019 |
| Saturn | 27163-01-19 13:12 G | 11642159.85 | 11642160.05 | 11642160.27 | 0.0270 | 0.0153 |
| Jupiter | 27163-01-22 08:38 G | 11642162.65 | 11642162.86 | 11642163.08 | 0.0528 | 0.0237 |
| Uranus | 27164-01-11 22:48 G | 11642517.29 | 11642517.45 | 11642517.63 | 0.0141 | 0.0106 |
| Jupiter | 27164-02-26 03:36 G | 11642562.45 | 11642562.65 | 11642562.85 | 0.0514 | 0.0251 |
| Pluto | 27165-12-22 15:21 G | 11643227.95 | 11643228.14 | 11643228.37 | 0.0064 | 0.0038 |
| Pluto | 27166-12-23 21:50 G | 11643594.25 | 11643594.41 | 11643594.57 | 0.0065 | 0.0049 |
| Jupiter | 27169-07-30 20:24 G | 11644544.12 | 11644544.35 | 11644544.58 | 0.0502 | 0.0106 |
| Jupiter | 27170-09-02 14:24 G | 11644942.93 | 11644943.10 | 11644943.27 | 0.0517 | 0.0345 |
| Jupiter | 27175-01-27 03:36 G | 11646550.43 | 11646550.65 | 11646550.87 | 0.0526 | 0.0187 |
| Jupiter | 27176-03-02 04:48 G | 11646950.55 | 11646950.70 | 11646950.87 | 0.0511 | 0.0361 |
| Neptune | 27177-04-29 00:57 G | 11647373.42 | 11647373.54 | 11647373.70 | 0.0088 | 0.0073 |
| Neptune | 27178-05-01 14:38 G | 11647740.98 | 11647741.11 | 11647741.27 | 0.0088 | 0.0073 |
| Saturn | 27178-07-20 10:48 G | 11647820.75 | 11647820.95 | 11647821.17 | 0.0290 | 0.0151 |
| Neptune | 27179-05-03 23:45 G | 11648108.32 | 11648108.49 | 11648108.70 | 0.0088 | 0.0057 |
| Neptune | 27180-05-05 08:53 G | 11648475.69 | 11648475.87 | 11648476.09 | 0.0088 | 0.0057 |
| Neptune | 27181-05-07 23:31 G | 11648843.26 | 11648843.48 | 11648843.71 | 0.0088 | 0.0040 |
| Jupiter | 27181-08-04 16:48 G | 11648931.97 | 11648932.20 | 11648932.42 | 0.0504 | 0.0070 |
| Neptune | 27182-05-10 04:19 G | 11649210.46 | 11649210.68 | 11649210.93 | 0.0088 | 0.0040 |
| Jupiter | 27182-09-07 06:29 G | 11649330.66 | 11649330.77 | 11649330.89 | 0.0519 | 0.0455 |
| Neptune | 27183-05-12 21:36 G | 11649578.15 | 11649578.40 | 11649578.65 | 0.0088 | 0.0022 |
| Neptune | 27184-05-14 00:43 G | 11649945.30 | 11649945.53 | 11649945.79 | 0.0088 | 0.0023 |
| Neptune | 27185-05-16 17:45 G | 11650312.98 | 11650313.24 | 11650313.51 | 0.0088 | 0.0005 |
| Neptune | 27186-05-18 23:02 G | 11650680.21 | 11650680.46 | 11650680.71 | 0.0088 | 0.0006 |
| Jupiter | 27187-02-01 07:41 G | 11650938.60 | 11650938.82 | 11650939.04 | 0.0524 | 0.0147 |
| Neptune | 27187-05-21 11:45 G | 11651047.74 | 11651047.99 | 11651048.27 | 0.0088 | 0.0012 |
| Jupiter | 27188-03-06 10:19 G | 11651337.79 | 11651337.93 | 11651338.08 | 0.0509 | 0.0405 |
| Neptune | 27188-05-22 21:50 G | 11651415.17 | 11651415.41 | 11651415.66 | 0.0088 | 0.0012 |

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| Neptune | 27189-05-25 06:14 G | 11651782.51 | 11651782.76 | 11651783.01 | 0.0088 | 0.0029 |
| Neptune | 27190-05-27 21:21 G | 11652150.15 | 11652150.39 | 11652150.63 | 0.0088 | 0.0029 |
| Neptune | 27191-05-30 01:26 G | 11652517.36 | 11652517.56 | 11652517.81 | 0.0088 | 0.0047 |
| Saturn | 27192-01-14 08:24 G | 11652746.61 | 11652746.85 | 11652747.09 | 0.0272 | 0.0009 |
| Neptune | 27192-05-31 19:12 G | 11652885.10 | 11652885.30 | 11652885.54 | 0.0088 | 0.0046 |
| Jupiter | 27192-07-08 01:41 G | 11652922.46 | 11652922.57 | 11652922.69 | 0.0495 | 0.0421 |
| Neptune | 27193-06-02 23:17 G | 11653252.30 | 11653252.47 | 11653252.65 | 0.0088 | 0.0063 |
| Jupiter | 27193-08-09 04:19 G | 11653319.44 | 11653319.68 | 11653319.92 | 0.0506 | 0.0030 |
| Neptune | 27194-06-05 15:36 G | 11653619.98 | 11653620.15 | 11653620.35 | 0.0088 | 0.0063 |
| Jupiter | 27194-09-12 07:55 G | 11653718.81 | 11653718.83 | 11653718.85 | 0.0521 | 0.0518 |
| Neptune | 27195-06-07 21:50 G | 11653987.32 | 11653987.41 | 11653987.52 | 0.0088 | 0.0080 |
| Neptune | 27196-06-09 09:50 G | 11654354.83 | 11654354.91 | 11654355.05 | 0.0088 | 0.0080 |
| Jupiter | 27199-02-05 23:31 G | 11655326.24 | 11655326.48 | 11655326.72 | 0.0522 | 0.0040 |
| Jupiter | 27200-03-11 05:02 G | 11655725.59 | 11655725.71 | 11655725.83 | 0.0507 | 0.0427 |
| Uranus | 27200-06-27 17:45 G | 11655834.12 | 11655834.24 | 11655834.36 | 0.0138 | 0.0123 |
| Uranus | 27201-07-02 02:38 G | 11656203.41 | 11656203.61 | 11656203.84 | 0.0138 | 0.0068 |
| Uranus | 27202-07-06 21:50 G | 11656573.16 | 11656573.41 | 11656573.67 | 0.0137 | 0.0014 |
| Uranus | 27203-07-11 05:02 G | 11656942.51 | 11656942.71 | 11656942.93 | 0.0137 | 0.0069 |
| Jupiter | 27204-07-12 12:43 G | 11657309.88 | 11657310.03 | 11657310.20 | 0.0496 | 0.0370 |
| Jupiter | 27205-08-13 17:02 G | 11657706.99 | 11657707.21 | 11657707.43 | 0.0508 | 0.0061 |
| Saturn | 27207-07-15 06:57 G | 11658407.55 | 11658407.79 | 11658408.03 | 0.0289 | 0.0040 |
| Jupiter | 27210-01-05 18:43 G | 11659313.20 | 11659313.28 | 11659313.36 | 0.0533 | 0.0502 |
| Jupiter | 27211-02-10 21:07 G | 11659714.16 | 11659714.38 | 11659714.60 | 0.0520 | 0.0067 |
| Jupiter | 27212-03-15 18:14 G | 11660113.19 | 11660113.26 | 11660113.33 | 0.0506 | 0.0484 |
| Jupiter | 27216-07-16 16:19 G | 11661697.03 | 11661697.18 | 11661697.35 | 0.0497 | 0.0350 |
| Jupiter | 27217-08-18 10:48 G | 11662094.73 | 11662094.95 | 11662095.18 | 0.0510 | 0.0167 |
| Saturn | 27221-01-08 13:41 G | 11663333.88 | 11663334.07 | 11663334.28 | 0.0272 | 0.0168 |
| Jupiter | 27222-01-10 23:45 G | 11663701.38 | 11663701.49 | 11663701.60 | 0.0532 | 0.0465 |
| Saturn | 27222-01-20 17:02 G | 11663711.05 | 11663711.21 | 11663711.38 | 0.0270 | 0.0203 |
| Jupiter | 27223-02-15 21:07 G | 11664102.14 | 11664102.38 | 11664102.61 | 0.0518 | 0.0116 |

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| Jupiter | 27228-07-21 08:38 G | 11666084.67 | 11666084.86 | 11666085.05 | 0.0499 | 0.0297 |
| Jupiter | 27229-08-22 20:09 G | 11666482.14 | 11666482.34 | 11666482.56 | 0.0512 | 0.0218 |
| Jupiter | 27234-01-16 08:09 G | 11668089.66 | 11668089.84 | 11668090.02 | 0.0530 | 0.0350 |
| Jupiter | 27235-02-20 12:29 G | 11668489.80 | 11668490.02 | 11668490.24 | 0.0516 | 0.0155 |
| Saturn | 27236-07-08 02:24 G | 11668993.49 | 11668993.60 | 11668993.74 | 0.0288 | 0.0246 |
| Saturn | 27237-07-22 04:05 G | 11669372.52 | 11669372.67 | 11669372.83 | 0.0290 | 0.0218 |
| Jupiter | 27240-07-25 12:57 G | 11670471.83 | 11670472.04 | 11670472.26 | 0.0500 | 0.0198 |
| Jupiter | 27241-08-27 23:17 G | 11670870.27 | 11670870.47 | 11670870.67 | 0.0514 | 0.0251 |
| Uranus | 27244-12-28 17:31 G | 11672089.11 | 11672089.23 | 11672089.38 | 0.0140 | 0.0118 |
| Uranus | 27246-01-02 15:07 G | 11672458.89 | 11672459.13 | 11672459.38 | 0.0141 | 0.0049 |
| Jupiter | 27246-01-21 01:41 G | 11672477.37 | 11672477.57 | 11672477.78 | 0.0528 | 0.0248 |
| Uranus | 27247-01-07 06:00 G | 11672828.51 | 11672828.75 | 11672828.99 | 0.0141 | 0.0034 |
| Jupiter | 27247-02-25 10:33 G | 11672877.74 | 11672877.94 | 11672878.15 | 0.0514 | 0.0250 |
| Uranus | 27248-01-12 06:00 G | 11673198.57 | 11673198.75 | 11673198.96 | 0.0141 | 0.0094 |
| Saturn | 27251-01-15 21:21 G | 11674298.15 | 11674298.39 | 11674298.62 | 0.0272 | 0.0043 |
| Jupiter | 27252-07-30 07:12 G | 11674859.58 | 11674859.80 | 11674860.02 | 0.0502 | 0.0114 |
| Jupiter | 27253-09-01 11:45 G | 11675257.81 | 11675257.99 | 11675258.17 | 0.0516 | 0.0336 |
| Pluto | 27254-06-22 15:07 G | 11675552.13 | 11675552.13 | 11675552.15 | 0.0080 | 0.0080 |
| Pluto | 27255-06-25 01:26 G | 11675919.45 | 11675919.56 | 11675919.72 | 0.0079 | 0.0067 |
| Jupiter | 27258-01-26 07:55 G | 11676865.62 | 11676865.83 | 11676866.04 | 0.0526 | 0.0203 |
| Neptune | 27258-10-27 06:43 G | 11677139.78 | 11677139.78 | 11677139.81 | 0.0090 | 0.0089 |
| Jupiter | 27259-03-01 19:26 G | 11677265.14 | 11677265.31 | 11677265.49 | 0.0512 | 0.0350 |
| Neptune | 27259-10-29 22:05 G | 11677507.30 | 11677507.42 | 11677507.59 | 0.0090 | 0.0076 |
| Neptune | 27260-10-31 10:19 G | 11677874.81 | 11677874.93 | 11677875.10 | 0.0090 | 0.0073 |
| Neptune | 27261-11-02 21:07 G | 11678242.20 | 11678242.38 | 11678242.60 | 0.0090 | 0.0059 |
| Neptune | 27262-11-05 14:24 G | 11678609.91 | 11678610.10 | 11678610.31 | 0.0090 | 0.0055 |
| Neptune | 27263-11-07 21:21 G | 11678977.18 | 11678977.39 | 11678977.65 | 0.0090 | 0.0040 |
| Jupiter | 27264-08-03 15:07 G | 11679246.89 | 11679247.13 | 11679247.37 | 0.0504 | 0.0084 |
| Neptune | 27264-11-09 17:17 G | 11679345.00 | 11679345.22 | 11679345.47 | 0.0090 | 0.0037 |
| Jupiter | 27265-09-06 09:07 G | 11679645.77 | 11679645.88 | 11679646.00 | 0.0518 | 0.0444 |

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| Neptune | 27265-11-11 23:31 G | 11679712.24 | 11679712.48 | 11679712.74 | 0.0090 | 0.0021 |
| Saturn | 27266-07-16 19:41 G | 11679959.07 | 11679959.32 | 11679959.57 | 0.0289 | 0.0026 |
| Neptune | 27266-11-14 19:12 G | 11680080.05 | 11680080.30 | 11680080.57 | 0.0089 | 0.0019 |
| Neptune | 27267-11-17 03:21 G | 11680447.39 | 11680447.64 | 11680447.89 | 0.0089 | 0.0002 |
| Neptune | 27268-11-18 19:55 G | 11680815.06 | 11680815.33 | 11680815.60 | 0.0089 | 0.0000 |
| Neptune | 27269-11-21 07:55 G | 11681182.58 | 11681182.83 | 11681183.07 | 0.0089 | 0.0017 |
| Jupiter | 27270-01-30 23:17 G | 11681253.24 | 11681253.47 | 11681253.70 | 0.0525 | 0.0160 |
| Neptune | 27270-11-23 18:43 G | 11681550.03 | 11681550.28 | 11681550.56 | 0.0089 | 0.0020 |
| Jupiter | 27271-03-06 16:33 G | 11681653.05 | 11681653.19 | 11681653.33 | 0.0510 | 0.0396 |
| Neptune | 27271-11-26 11:17 G | 11681917.75 | 11681917.97 | 11681918.21 | 0.0089 | 0.0036 |
| Neptune | 27272-11-27 18:43 G | 11682285.05 | 11682285.28 | 11682285.52 | 0.0089 | 0.0037 |
| Neptune | 27273-11-30 13:55 G | 11682652.90 | 11682653.08 | 11682653.31 | 0.0089 | 0.0055 |
| Neptune | 27274-12-02 19:55 G | 11683020.14 | 11683020.33 | 11683020.55 | 0.0089 | 0.0055 |
| Jupiter | 27275-07-08 07:26 G | 11683237.69 | 11683237.81 | 11683237.94 | 0.0494 | 0.0418 |
| Neptune | 27275-12-05 15:07 G | 11683388.00 | 11683388.13 | 11683388.31 | 0.0089 | 0.0073 |
| Jupiter | 27276-08-08 04:19 G | 11683634.46 | 11683634.68 | 11683634.91 | 0.0505 | 0.0041 |
| Neptune | 27276-12-06 22:48 G | 11683755.32 | 11683755.45 | 11683755.61 | 0.0089 | 0.0073 |
| Jupiter | 27277-09-11 03:50 G | 11684033.59 | 11684033.66 | 11684033.73 | 0.0520 | 0.0496 |
| Saturn | 27280-01-10 20:09 G | 11684885.12 | 11684885.34 | 11684885.58 | 0.0272 | 0.0112 |
| Saturn | 27281-01-22 03:07 G | 11685262.57 | 11685262.63 | 11685262.72 | 0.0270 | 0.0256 |
| Jupiter | 27282-02-05 00:57 G | 11685641.32 | 11685641.54 | 11685641.77 | 0.0523 | 0.0048 |
| Jupiter | 27283-03-11 06:43 G | 11686040.65 | 11686040.78 | 11686040.92 | 0.0508 | 0.0417 |
| Uranus | 27284-06-28 05:02 G | 11686515.65 | 11686515.71 | 11686515.83 | 0.0138 | 0.0131 |
| Uranus | 27285-07-02 15:21 G | 11686884.93 | 11686885.14 | 11686885.39 | 0.0138 | 0.0050 |
| Uranus | 27286-07-07 09:36 G | 11687254.64 | 11687254.90 | 11687255.16 | 0.0137 | 0.0005 |
| Uranus | 27287-07-11 17:02 G | 11687624.03 | 11687624.21 | 11687624.43 | 0.0137 | 0.0083 |
| Jupiter | 27287-07-12 09:21 G | 11687624.74 | 11687624.89 | 11687625.04 | 0.0495 | 0.0375 |
| Jupiter | 27288-08-12 19:41 G | 11688022.08 | 11688022.32 | 11688022.56 | 0.0507 | 0.0058 |
| Jupiter | 27293-01-04 21:07 G | 11689628.34 | 11689628.38 | 11689628.43 | 0.0534 | 0.0520 |
| Jupiter | 27294-02-10 01:41 G | 11690029.33 | 11690029.57 | 11690029.81 | 0.0521 | 0.0061 |

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| Jupiter | 27295-03-15 19:55 G | 11690428.28 | 11690428.33 | 11690428.39 | 0.0506 | 0.0488 |
| Saturn | 27295-07-10 21:07 G | 11690545.20 | 11690545.38 | 11690545.57 | 0.0288 | 0.0178 |
| Saturn | 27296-07-24 00:29 G | 11690924.50 | 11690924.52 | 11690924.56 | 0.0291 | 0.0288 |
| Jupiter | 27299-07-17 02:09 G | 11692012.44 | 11692012.59 | 11692012.76 | 0.0497 | 0.0355 |
| Jupiter | 27300-08-18 06:57 G | 11692409.57 | 11692409.79 | 11692410.01 | 0.0510 | 0.0162 |
| Jupiter | 27305-01-11 03:21 G | 11694016.54 | 11694016.64 | 11694016.75 | 0.0532 | 0.0474 |
| Jupiter | 27306-02-15 16:05 G | 11694416.94 | 11694417.17 | 11694417.39 | 0.0518 | 0.0104 |
| Saturn | 27310-01-18 07:26 G | 11695849.58 | 11695849.81 | 11695850.05 | 0.0271 | 0.0098 |
| Jupiter | 27311-07-22 04:05 G | 11696399.49 | 11696399.67 | 11696399.86 | 0.0499 | 0.0304 |
| Jupiter | 27312-08-23 06:57 G | 11696797.58 | 11696797.79 | 11696798.00 | 0.0512 | 0.0204 |
| Jupiter | 27317-01-15 22:33 G | 11698404.28 | 11698404.44 | 11698404.61 | 0.0530 | 0.0366 |
| Jupiter | 27318-02-20 16:48 G | 11698804.97 | 11698805.20 | 11698805.42 | 0.0516 | 0.0143 |
| Jupiter | 27323-07-26 20:53 G | 11700787.16 | 11700787.37 | 11700787.58 | 0.0500 | 0.0201 |
| Jupiter | 27324-08-27 14:53 G | 11701184.91 | 11701185.12 | 11701185.33 | 0.0513 | 0.0238 |
| Saturn | 27325-07-19 07:41 G | 11701510.58 | 11701510.82 | 11701511.06 | 0.0290 | 0.0094 |
| Uranus | 27328-12-30 02:38 G | 11702770.48 | 11702770.61 | 11702770.76 | 0.0140 | 0.0114 |
| Jupiter | 27329-01-21 03:36 G | 11702792.45 | 11702792.65 | 11702792.86 | 0.0529 | 0.0262 |
| Uranus | 27330-01-03 23:02 G | 11703140.21 | 11703140.46 | 11703140.72 | 0.0141 | 0.0041 |
| Jupiter | 27330-02-25 01:55 G | 11703192.38 | 11703192.58 | 11703192.80 | 0.0515 | 0.0238 |
| Uranus | 27331-01-08 15:21 G | 11703509.90 | 11703510.14 | 11703510.39 | 0.0141 | 0.0024 |
| Uranus | 27332-01-13 14:24 G | 11703879.94 | 11703880.10 | 11703880.27 | 0.0141 | 0.0110 |
| Jupiter | 27335-07-31 04:19 G | 11705174.44 | 11705174.68 | 11705174.91 | 0.0501 | 0.0123 |
| Jupiter | 27336-09-01 13:26 G | 11705572.89 | 11705573.06 | 11705573.24 | 0.0515 | 0.0327 |
| Saturn | 27339-01-13 06:43 G | 11706436.55 | 11706436.78 | 11706437.03 | 0.0272 | 0.0055 |
| Jupiter | 27341-01-25 22:05 G | 11707180.20 | 11707180.42 | 11707180.64 | 0.0527 | 0.0219 |
| Neptune | 27341-04-29 12:43 G | 11707273.96 | 11707274.03 | 11707274.16 | 0.0088 | 0.0082 |
| Jupiter | 27342-03-02 02:24 G | 11707580.44 | 11707580.60 | 11707580.77 | 0.0513 | 0.0343 |
| Neptune | 27342-05-02 00:00 G | 11707641.39 | 11707641.50 | 11707641.63 | 0.0088 | 0.0076 |
| Neptune | 27343-05-04 07:41 G | 11708008.66 | 11708008.82 | 11708009.01 | 0.0088 | 0.0065 |
| Neptune | 27344-05-05 22:33 G | 11708376.28 | 11708376.44 | 11708376.65 | 0.0088 | 0.0059 |

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| Mars | 27344-05-16 07:26 G | 11708386.63 | 11708386.81 | 11708387.00 | 0.1589 | 0.0325 |
| Neptune | 27345-05-08 02:38 G | 11708743.42 | 11708743.61 | 11708743.85 | 0.0088 | 0.0048 |
| Neptune | 27346-05-10 20:09 G | 11709111.13 | 11709111.34 | 11709111.58 | 0.0088 | 0.0041 |
| Neptune | 27347-05-13 00:00 G | 11709478.27 | 11709478.50 | 11709478.74 | 0.0088 | 0.0031 |
| Jupiter | 27347-08-04 15:50 G | 11709561.94 | 11709562.16 | 11709562.38 | 0.0503 | 0.0092 |
| Neptune | 27348-05-14 16:05 G | 11709845.92 | 11709846.17 | 11709846.43 | 0.0088 | 0.0024 |
| Jupiter | 27348-09-06 05:17 G | 11709960.59 | 11709960.72 | 11709960.85 | 0.0517 | 0.0434 |
| Neptune | 27349-05-16 22:33 G | 11710213.20 | 11710213.44 | 11710213.69 | 0.0088 | 0.0014 |
| Neptune | 27350-05-19 10:48 G | 11710580.69 | 11710580.95 | 11710581.22 | 0.0088 | 0.0006 |
| Neptune | 27351-05-21 22:19 G | 11710948.18 | 11710948.43 | 11710948.68 | 0.0088 | 0.0004 |
| Neptune | 27352-05-23 05:17 G | 11711315.46 | 11711315.72 | 11711315.99 | 0.0088 | 0.0012 |
| Mars | 27352-11-17 01:26 G | 11711493.41 | 11711493.56 | 11711493.71 | 0.1951 | 0.1450 |
| Jupiter | 27353-01-31 03:21 G | 11711568.43 | 11711568.64 | 11711568.86 | 0.0525 | 0.0169 |
| Neptune | 27353-05-25 20:38 G | 11711683.13 | 11711683.36 | 11711683.62 | 0.0088 | 0.0022 |
| Jupiter | 27354-03-06 17:02 G | 11711968.06 | 11711968.21 | 11711968.38 | 0.0511 | 0.0385 |
| Neptune | 27354-05-28 00:29 G | 11712050.29 | 11712050.52 | 11712050.78 | 0.0088 | 0.0029 |
| Saturn | 27354-07-13 18:14 G | 11712097.04 | 11712097.26 | 11712097.48 | 0.0288 | 0.0109 |
| Neptune | 27355-05-30 18:14 G | 11712418.03 | 11712418.26 | 11712418.50 | 0.0088 | 0.0038 |
| Neptune | 27356-05-31 22:19 G | 11712785.22 | 11712785.43 | 11712785.64 | 0.0088 | 0.0047 |
| Neptune | 27357-06-03 13:41 G | 11713152.88 | 11713153.07 | 11713153.29 | 0.0088 | 0.0056 |
| Neptune | 27358-06-05 21:07 G | 11713520.23 | 11713520.38 | 11713520.56 | 0.0088 | 0.0065 |
| Jupiter | 27358-07-08 04:19 G | 11713552.57 | 11713552.68 | 11713552.81 | 0.0494 | 0.0422 |
| Neptune | 27359-06-08 08:38 G | 11713887.73 | 11713887.86 | 11713888.03 | 0.0088 | 0.0073 |
| Jupiter | 27359-08-09 07:41 G | 11713949.58 | 11713949.82 | 11713950.06 | 0.0505 | 0.0046 |
| Neptune | 27360-06-09 20:53 G | 11714255.31 | 11714255.37 | 11714255.49 | 0.0088 | 0.0082 |
| Jupiter | 27360-09-11 00:43 G | 11714348.46 | 11714348.53 | 11714348.61 | 0.0520 | 0.0488 |
| Jupiter | 27365-02-05 02:24 G | 11715956.36 | 11715956.60 | 11715956.84 | 0.0523 | 0.0056 |
| Jupiter | 27366-03-11 05:45 G | 11716355.61 | 11716355.74 | 11716355.88 | 0.0508 | 0.0408 |
| Saturn | 27368-01-08 08:53 G | 11717023.73 | 11717023.87 | 11717024.02 | 0.0273 | 0.0223 |
| Uranus | 27368-06-29 15:36 G | 11717197.02 | 11717197.15 | 11717197.30 | 0.0138 | 0.0117 |

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| Saturn | 27369-01-19 14:09 G | 11717400.88 | 11717401.09 | 11717401.31 | 0.0271 | 0.0150 |
| Uranus | 27369-07-04 03:36 G | 11717566.43 | 11717566.65 | 11717566.87 | 0.0138 | 0.0059 |
| Uranus | 27370-07-08 20:24 G | 11717936.10 | 11717936.35 | 11717936.62 | 0.0137 | 0.0023 |
| Jupiter | 27370-07-12 18:57 G | 11717940.14 | 11717940.29 | 11717940.44 | 0.0495 | 0.0381 |
| Uranus | 27371-07-13 05:45 G | 11718305.54 | 11718305.74 | 11718305.95 | 0.0137 | 0.0076 |
| Jupiter | 27371-08-13 17:02 G | 11718336.98 | 11718337.21 | 11718337.44 | 0.0507 | 0.0055 |
| Jupiter | 27372-09-16 05:17 G | 11718736.68 | 11718736.72 | 11718736.77 | 0.0522 | 0.0511 |
| Jupiter | 27376-01-05 20:38 G | 11719943.34 | 11719943.36 | 11719943.38 | 0.0533 | 0.0531 |
| Jupiter | 27377-02-09 19:26 G | 11720344.08 | 11720344.31 | 11720344.54 | 0.0521 | 0.0048 |
| Jupiter | 27378-03-16 00:00 G | 11720743.43 | 11720743.50 | 11720743.57 | 0.0506 | 0.0481 |
| Jupiter | 27382-07-16 20:38 G | 11722327.20 | 11722327.36 | 11722327.52 | 0.0497 | 0.0363 |
| Jupiter | 27383-08-18 14:09 G | 11722724.87 | 11722725.09 | 11722725.31 | 0.0509 | 0.0152 |
| Saturn | 27384-07-20 22:19 G | 11723062.24 | 11723062.43 | 11723062.63 | 0.0290 | 0.0162 |
| Jupiter | 27388-01-10 14:38 G | 11724331.03 | 11724331.11 | 11724331.20 | 0.0532 | 0.0490 |
| Jupiter | 27389-02-14 19:26 G | 11724732.07 | 11724732.31 | 11724732.54 | 0.0519 | 0.0085 |
| Jupiter | 27394-07-21 13:26 G | 11726714.88 | 11726715.06 | 11726715.24 | 0.0498 | 0.0303 |
| Jupiter | 27395-08-22 21:50 G | 11727112.20 | 11727112.41 | 11727112.63 | 0.0511 | 0.0195 |
| Saturn | 27398-01-14 21:36 G | 11727988.16 | 11727988.40 | 11727988.64 | 0.0272 | 0.0001 |
| Jupiter | 27400-01-16 00:00 G | 11728719.34 | 11728719.50 | 11728719.67 | 0.0531 | 0.0376 |
| Jupiter | 27401-02-20 08:24 G | 11729119.62 | 11729119.85 | 11729120.08 | 0.0518 | 0.0131 |
| Jupiter | 27406-07-26 17:45 G | 11731102.02 | 11731102.24 | 11731102.47 | 0.0499 | 0.0202 |
| Jupiter | 27407-08-28 19:12 G | 11731500.10 | 11731500.30 | 11731500.51 | 0.0513 | 0.0232 |
| Jupiter | 27412-01-21 20:38 G | 11733107.16 | 11733107.36 | 11733107.57 | 0.0530 | 0.0271 |
| Uranus | 27412-12-31 11:45 G | 11733451.87 | 11733451.99 | 11733452.14 | 0.0140 | 0.0116 |
| Jupiter | 27413-02-25 11:17 G | 11733507.77 | 11733507.97 | 11733508.17 | 0.0515 | 0.0236 |
| Saturn | 27413-07-16 10:19 G | 11733648.69 | 11733648.93 | 11733649.18 | 0.0289 | 0.0041 |
| Pluto | 27413-12-25 15:21 G | 11733811.09 | 11733811.14 | 11733811.27 | 0.0064 | 0.0061 |
| Uranus | 27414-01-05 06:00 G | 11733821.50 | 11733821.75 | 11733822.01 | 0.0140 | 0.0043 |
| Pluto | 27414-12-27 08:38 G | 11734177.63 | 11734177.86 | 11734178.12 | 0.0065 | 0.0027 |
| Uranus | 27415-01-09 23:31 G | 11734191.24 | 11734191.48 | 11734191.71 | 0.0141 | 0.0036 |

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| Uranus | 27416-01-14 20:24 G | 11734561.18 | 11734561.35 | 11734561.56 | 0.0141 | 0.0098 |
| Jupiter | 27418-07-31 06:57 G | 11735489.57 | 11735489.79 | 11735490.01 | 0.0501 | 0.0130 |
| Jupiter | 27419-09-02 11:02 G | 11735887.78 | 11735887.96 | 11735888.15 | 0.0515 | 0.0323 |
| Mars | 27423-05-20 09:36 G | 11737243.73 | 11737243.90 | 11737244.08 | 0.1588 | 0.0757 |
| Neptune | 27423-10-31 05:31 G | 11737407.65 | 11737407.73 | 11737407.86 | 0.0090 | 0.0081 |
| Jupiter | 27424-01-27 03:50 G | 11737495.47 | 11737495.66 | 11737495.87 | 0.0527 | 0.0236 |
| Neptune | 27424-11-01 15:07 G | 11737775.04 | 11737775.13 | 11737775.28 | 0.0090 | 0.0080 |
| Jupiter | 27425-03-02 00:29 G | 11737895.34 | 11737895.52 | 11737895.71 | 0.0513 | 0.0330 |
| Neptune | 27425-11-04 10:05 G | 11738142.75 | 11738142.92 | 11738143.11 | 0.0090 | 0.0062 |
| Neptune | 27426-11-06 16:33 G | 11738510.01 | 11738510.19 | 11738510.39 | 0.0090 | 0.0061 |
| Saturn | 27427-01-10 15:36 G | 11738574.96 | 11738575.15 | 11738575.37 | 0.0273 | 0.0167 |
| Neptune | 27427-11-09 12:29 G | 11738877.80 | 11738878.02 | 11738878.25 | 0.0090 | 0.0044 |
| Saturn | 27428-01-22 21:21 G | 11738952.24 | 11738952.39 | 11738952.56 | 0.0270 | 0.0205 |
| Neptune | 27428-11-10 18:43 G | 11739245.07 | 11739245.28 | 11739245.51 | 0.0090 | 0.0043 |
| Neptune | 27429-11-13 13:26 G | 11739612.81 | 11739613.06 | 11739613.32 | 0.0090 | 0.0026 |
| Jupiter | 27430-08-04 20:09 G | 11739877.10 | 11739877.34 | 11739877.58 | 0.0503 | 0.0102 |
| Neptune | 27430-11-15 21:50 G | 11739980.19 | 11739980.41 | 11739980.67 | 0.0090 | 0.0024 |
| Jupiter | 27431-09-07 05:45 G | 11740275.62 | 11740275.74 | 11740275.87 | 0.0517 | 0.0431 |
| Neptune | 27431-11-18 12:43 G | 11740347.77 | 11740348.03 | 11740348.30 | 0.0089 | 0.0007 |
| Neptune | 27432-11-20 02:24 G | 11740715.35 | 11740715.60 | 11740715.85 | 0.0089 | 0.0004 |
| Neptune | 27433-11-22 12:43 G | 11741082.77 | 11741083.03 | 11741083.30 | 0.0089 | 0.0012 |
| Neptune | 27434-11-25 06:43 G | 11741450.54 | 11741450.78 | 11741451.04 | 0.0089 | 0.0015 |
| Neptune | 27435-11-27 13:26 G | 11741817.82 | 11741818.06 | 11741818.31 | 0.0089 | 0.0031 |
| Jupiter | 27436-02-01 02:09 G | 11741883.36 | 11741883.59 | 11741883.82 | 0.0525 | 0.0177 |
| Neptune | 27436-11-29 09:21 G | 11742185.66 | 11742185.89 | 11742186.14 | 0.0089 | 0.0035 |
| Jupiter | 27437-03-06 16:19 G | 11742283.03 | 11742283.18 | 11742283.34 | 0.0511 | 0.0371 |
| Neptune | 27437-12-01 15:21 G | 11742552.94 | 11742553.14 | 11742553.36 | 0.0089 | 0.0050 |
| Neptune | 27438-12-04 09:50 G | 11742920.72 | 11742920.91 | 11742921.14 | 0.0089 | 0.0055 |
| Neptune | 27439-12-06 18:14 G | 11743288.11 | 11743288.26 | 11743288.43 | 0.0089 | 0.0068 |
| Neptune | 27440-12-08 08:53 G | 11743655.73 | 11743655.87 | 11743656.05 | 0.0089 | 0.0072 |

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| Jupiter | 27441-07-08 14:38 G | 11743868.00 | 11743868.11 | 11743868.23 | 0.0494 | 0.0425 |
| Neptune | 27441-12-10 21:07 G | 11744023.34 | 11744023.38 | 11744023.49 | 0.0089 | 0.0086 |
| Saturn | 27442-07-10 13:55 G | 11744234.95 | 11744235.08 | 11744235.23 | 0.0287 | 0.0235 |
| Jupiter | 27442-08-09 05:02 G | 11744264.48 | 11744264.71 | 11744264.93 | 0.0504 | 0.0054 |
| Saturn | 27443-07-24 16:19 G | 11744614.05 | 11744614.18 | 11744614.34 | 0.0290 | 0.0230 |
| Jupiter | 27443-09-12 05:31 G | 11744663.64 | 11744663.73 | 11744663.83 | 0.0519 | 0.0472 |
| Jupiter | 27448-02-05 18:57 G | 11746271.07 | 11746271.29 | 11746271.51 | 0.0524 | 0.0068 |
| Jupiter | 27449-03-11 10:19 G | 11746670.79 | 11746670.93 | 11746671.08 | 0.0510 | 0.0394 |
| Uranus | 27452-07-01 02:24 G | 11747878.48 | 11747878.60 | 11747878.73 | 0.0138 | 0.0122 |
| Uranus | 27453-07-05 15:07 G | 11748247.90 | 11748248.13 | 11748248.37 | 0.0138 | 0.0043 |
| Jupiter | 27453-07-12 16:05 G | 11748255.03 | 11748255.17 | 11748255.32 | 0.0495 | 0.0385 |
| Uranus | 27454-07-10 06:43 G | 11748617.52 | 11748617.78 | 11748618.05 | 0.0138 | 0.0012 |
| Jupiter | 27454-08-14 01:26 G | 11748652.33 | 11748652.56 | 11748652.79 | 0.0506 | 0.0056 |
| Uranus | 27455-07-14 17:02 G | 11748987.03 | 11748987.21 | 11748987.40 | 0.0137 | 0.0091 |
| Jupiter | 27455-09-16 18:29 G | 11749051.21 | 11749051.27 | 11749051.33 | 0.0521 | 0.0501 |
| Saturn | 27457-01-17 10:48 G | 11749539.71 | 11749539.95 | 11749540.19 | 0.0271 | 0.0056 |
| Jupiter | 27460-02-10 22:48 G | 11750659.21 | 11750659.45 | 11750659.68 | 0.0522 | 0.0037 |
| Jupiter | 27461-03-15 19:12 G | 11751058.22 | 11751058.30 | 11751058.38 | 0.0508 | 0.0474 |
| Jupiter | 27465-07-17 06:29 G | 11752642.63 | 11752642.77 | 11752642.93 | 0.0496 | 0.0371 |
| Jupiter | 27466-08-18 06:43 G | 11753039.55 | 11753039.78 | 11753040.01 | 0.0508 | 0.0145 |
| Jupiter | 27471-01-10 20:53 G | 11754646.30 | 11754646.37 | 11754646.47 | 0.0533 | 0.0495 |
| Jupiter | 27472-02-15 14:38 G | 11755046.88 | 11755047.11 | 11755047.34 | 0.0520 | 0.0075 |
| Saturn | 27472-07-17 19:41 G | 11755200.06 | 11755200.32 | 11755200.57 | 0.0289 | 0.0026 |
| Jupiter | 27477-07-21 11:31 G | 11757029.79 | 11757029.98 | 11757030.17 | 0.0497 | 0.0303 |
| Jupiter | 27478-08-23 05:31 G | 11757427.52 | 11757427.73 | 11757427.95 | 0.0510 | 0.0187 |
| Jupiter | 27483-01-15 19:26 G | 11759034.15 | 11759034.31 | 11759034.48 | 0.0531 | 0.0379 |
| Jupiter | 27484-02-20 18:29 G | 11759435.05 | 11759435.27 | 11759435.49 | 0.0518 | 0.0124 |
| Saturn | 27486-01-11 21:50 G | 11760126.20 | 11760126.41 | 11760126.64 | 0.0272 | 0.0115 |
| Saturn | 27487-01-24 07:41 G | 11760503.76 | 11760503.82 | 11760503.91 | 0.0270 | 0.0255 |
| Jupiter | 27489-07-25 23:02 G | 11761417.26 | 11761417.46 | 11761417.67 | 0.0499 | 0.0206 |

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| Jupiter | 27490-08-27 18:57 G | 11761815.07 | 11761815.29 | 11761815.51 | 0.0513 | 0.0224 |
| Jupiter | 27495-01-21 03:21 G | 11763422.45 | 11763422.64 | 11763422.84 | 0.0530 | 0.0281 |
| Jupiter | 27496-02-25 08:24 G | 11763822.63 | 11763822.85 | 11763823.07 | 0.0516 | 0.0227 |
| Uranus | 27496-12-31 23:31 G | 11764133.34 | 11764133.48 | 11764133.65 | 0.0140 | 0.0107 |
| Uranus | 27498-01-05 16:33 G | 11764502.94 | 11764503.19 | 11764503.45 | 0.0140 | 0.0037 |
| Uranus | 27499-01-10 11:31 G | 11764872.74 | 11764872.98 | 11764873.22 | 0.0141 | 0.0031 |
| Uranus | 27500-01-15 06:57 G | 11765242.67 | 11765242.79 | 11765242.97 | 0.0141 | 0.0116 |
| Saturn | 27501-07-13 03:50 G | 11765786.48 | 11765786.66 | 11765786.85 | 0.0288 | 0.0176 |
| Jupiter | 27501-07-31 12:14 G | 11765804.78 | 11765805.01 | 11765805.24 | 0.0501 | 0.0137 |
| Jupiter | 27502-09-02 12:14 G | 11766202.84 | 11766203.01 | 11766203.19 | 0.0514 | 0.0323 |
| Pluto | 27503-06-29 00:00 G | 11766502.27 | 11766502.50 | 11766502.73 | 0.0079 | 0.0033 |
| Neptune | 27506-05-03 04:48 G | 11767541.60 | 11767541.70 | 11767541.86 | 0.0088 | 0.0077 |
| Jupiter | 27507-01-26 21:07 G | 11767810.17 | 11767810.38 | 11767810.59 | 0.0528 | 0.0245 |
| Neptune | 27507-05-05 21:07 G | 11767909.27 | 11767909.38 | 11767909.53 | 0.0088 | 0.0076 |
| Jupiter | 27508-03-02 00:29 G | 11768210.34 | 11768210.52 | 11768210.69 | 0.0514 | 0.0323 |
| Neptune | 27508-05-07 00:57 G | 11768276.37 | 11768276.54 | 11768276.75 | 0.0088 | 0.0059 |
| Neptune | 27509-05-09 18:14 G | 11768644.09 | 11768644.26 | 11768644.47 | 0.0088 | 0.0059 |
| Neptune | 27510-05-11 22:33 G | 11769011.24 | 11769011.44 | 11769011.68 | 0.0088 | 0.0042 |
| Neptune | 27511-05-14 14:24 G | 11769378.87 | 11769379.10 | 11769379.34 | 0.0088 | 0.0041 |
| Neptune | 27512-05-15 22:05 G | 11769746.19 | 11769746.42 | 11769746.67 | 0.0088 | 0.0024 |
| Neptune | 27513-05-18 08:24 G | 11770113.61 | 11770113.85 | 11770114.12 | 0.0088 | 0.0023 |
| Jupiter | 27513-08-04 20:53 G | 11770192.15 | 11770192.37 | 11770192.59 | 0.0502 | 0.0111 |
| Neptune | 27514-05-20 20:53 G | 11770481.13 | 11770481.37 | 11770481.62 | 0.0088 | 0.0006 |
| Jupiter | 27514-09-07 11:17 G | 11770590.84 | 11770590.97 | 11770591.11 | 0.0516 | 0.0423 |
| Neptune | 27515-05-23 02:53 G | 11770848.35 | 11770848.62 | 11770848.88 | 0.0088 | 0.0005 |
| Saturn | 27516-01-20 16:48 G | 11771090.97 | 11771091.20 | 11771091.44 | 0.0271 | 0.0104 |
| Neptune | 27516-05-24 19:12 G | 11771216.05 | 11771216.30 | 11771216.56 | 0.0088 | 0.0013 |
| Neptune | 27517-05-26 22:33 G | 11771583.19 | 11771583.44 | 11771583.70 | 0.0088 | 0.0013 |
| Neptune | 27518-05-29 15:36 G | 11771950.93 | 11771951.15 | 11771951.42 | 0.0088 | 0.0031 |
| Jupiter | 27519-01-31 20:38 G | 11772198.16 | 11772198.36 | 11772198.58 | 0.0527 | 0.0188 |

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| Neptune | 27519-05-31 20:24 G | 11772318.13 | 11772318.35 | 11772318.60 | 0.0088 | 0.0031 |
| Jupiter | 27520-03-06 21:21 G | 11772598.23 | 11772598.39 | 11772598.57 | 0.0512 | 0.0357 |
| Neptune | 27520-06-02 11:31 G | 11772685.76 | 11772685.98 | 11772686.20 | 0.0088 | 0.0048 |
| Neptune | 27521-06-04 19:55 G | 11773053.14 | 11773053.33 | 11773053.55 | 0.0088 | 0.0049 |
| Neptune | 27522-06-07 05:17 G | 11773420.58 | 11773420.72 | 11773420.93 | 0.0088 | 0.0066 |
| Neptune | 27523-06-09 18:57 G | 11773788.15 | 11773788.29 | 11773788.48 | 0.0088 | 0.0066 |
| Neptune | 27524-06-11 00:43 G | 11774155.46 | 11774155.53 | 11774155.63 | 0.0088 | 0.0083 |
| Jupiter | 27524-07-08 12:29 G | 11774182.92 | 11774183.02 | 11774183.14 | 0.0493 | 0.0428 |
| Neptune | 27525-06-13 17:45 G | 11774523.18 | 11774523.24 | 11774523.33 | 0.0088 | 0.0083 |
| Jupiter | 27525-08-09 14:09 G | 11774579.86 | 11774580.09 | 11774580.33 | 0.0504 | 0.0057 |
| Jupiter | 27526-09-11 22:05 G | 11774978.32 | 11774978.42 | 11774978.52 | 0.0518 | 0.0468 |
| Jupiter | 27531-02-06 02:53 G | 11776586.39 | 11776586.62 | 11776586.86 | 0.0525 | 0.0065 |
| Saturn | 27531-07-21 03:36 G | 11776751.42 | 11776751.65 | 11776751.89 | 0.0289 | 0.0085 |
| Jupiter | 27532-03-11 09:07 G | 11776985.74 | 11776985.88 | 11776986.03 | 0.0510 | 0.0390 |
| Uranus | 27536-07-02 12:00 G | 11778559.86 | 11778560.00 | 11778560.17 | 0.0138 | 0.0112 |
| Jupiter | 27536-07-13 03:36 G | 11778570.52 | 11778570.65 | 11778570.79 | 0.0494 | 0.0397 |
| Uranus | 27537-07-07 02:53 G | 11778929.40 | 11778929.62 | 11778929.85 | 0.0138 | 0.0052 |
| Jupiter | 27537-08-13 20:38 G | 11778967.12 | 11778967.36 | 11778967.59 | 0.0506 | 0.0050 |
| Uranus | 27538-07-11 17:31 G | 11779298.97 | 11779299.23 | 11779299.49 | 0.0138 | 0.0029 |
| Jupiter | 27538-09-17 03:21 G | 11779366.58 | 11779366.64 | 11779366.71 | 0.0520 | 0.0495 |
| Uranus | 27539-07-16 05:02 G | 11779668.53 | 11779668.71 | 11779668.92 | 0.0137 | 0.0083 |
| Jupiter | 27543-02-10 20:38 G | 11780974.12 | 11780974.36 | 11780974.59 | 0.0522 | 0.0031 |
| Jupiter | 27544-03-16 08:24 G | 11781373.77 | 11781373.85 | 11781373.94 | 0.0508 | 0.0471 |
| Saturn | 27545-01-14 07:41 G | 11781677.60 | 11781677.82 | 11781678.06 | 0.0272 | 0.0067 |
| Jupiter | 27548-07-17 06:57 G | 11782957.64 | 11782957.79 | 11782957.95 | 0.0496 | 0.0376 |
| Mars | 27549-05-18 05:17 G | 11783262.59 | 11783262.72 | 11783262.86 | 0.1591 | 0.1097 |
| Jupiter | 27549-08-18 18:14 G | 11783355.05 | 11783355.26 | 11783355.48 | 0.0508 | 0.0139 |
| Jupiter | 27554-01-10 17:02 G | 11784961.14 | 11784961.21 | 11784961.30 | 0.0533 | 0.0498 |
| Jupiter | 27555-02-16 01:26 G | 11785362.33 | 11785362.56 | 11785362.79 | 0.0520 | 0.0066 |
| Saturn | 27560-07-14 12:29 G | 11787337.81 | 11787338.02 | 11787338.25 | 0.0288 | 0.0125 |

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| Jupiter | 27560-07-21 19:55 G | 11787345.15 | 11787345.33 | 11787345.51 | 0.0497 | 0.0304 |
| Jupiter | 27561-08-23 06:14 G | 11787742.53 | 11787742.76 | 11787742.99 | 0.0510 | 0.0176 |
| Jupiter | 27566-01-15 21:50 G | 11789349.25 | 11789349.41 | 11789349.57 | 0.0532 | 0.0381 |
| Jupiter | 27567-02-20 12:00 G | 11789749.77 | 11789750.00 | 11789750.24 | 0.0519 | 0.0118 |
| Jupiter | 27572-07-26 08:24 G | 11791732.63 | 11791732.85 | 11791733.07 | 0.0498 | 0.0203 |
| Jupiter | 27573-08-27 23:45 G | 11792130.29 | 11792130.49 | 11792130.70 | 0.0511 | 0.0221 |
| Saturn | 27574-01-09 12:57 G | 11792264.90 | 11792265.04 | 11792265.19 | 0.0273 | 0.0225 |
| Saturn | 27575-01-21 17:17 G | 11792642.02 | 11792642.22 | 11792642.44 | 0.0271 | 0.0147 |
| Jupiter | 27578-01-20 19:55 G | 11793737.13 | 11793737.33 | 11793737.53 | 0.0531 | 0.0287 |
| Jupiter | 27579-02-25 10:19 G | 11794137.73 | 11794137.93 | 11794138.13 | 0.0517 | 0.0228 |
| Uranus | 27581-01-02 11:31 G | 11794814.84 | 11794814.98 | 11794815.15 | 0.0140 | 0.0110 |
| Uranus | 27582-01-07 02:53 G | 11795184.37 | 11795184.62 | 11795184.88 | 0.0140 | 0.0033 |
| Uranus | 27583-01-11 23:02 G | 11795554.22 | 11795554.46 | 11795554.69 | 0.0141 | 0.0043 |
| Uranus | 27584-01-16 17:02 G | 11795924.06 | 11795924.21 | 11795924.40 | 0.0141 | 0.0107 |
| Jupiter | 27584-07-30 14:09 G | 11796119.87 | 11796120.09 | 11796120.31 | 0.0500 | 0.0145 |
| Jupiter | 27585-09-01 18:57 G | 11796518.11 | 11796518.29 | 11796518.48 | 0.0513 | 0.0321 |
| Neptune | 27588-11-02 03:36 G | 11797675.54 | 11797675.65 | 11797675.77 | 0.0090 | 0.0080 |
| Neptune | 27589-11-04 09:36 G | 11798042.76 | 11798042.90 | 11798043.06 | 0.0090 | 0.0073 |
| Jupiter | 27590-01-26 00:14 G | 11798125.32 | 11798125.51 | 11798125.71 | 0.0529 | 0.0253 |
| Saturn | 27590-07-22 11:45 G | 11798302.79 | 11798302.99 | 11798303.20 | 0.0290 | 0.0140 |
| Neptune | 27590-11-07 05:02 G | 11798410.54 | 11798410.71 | 11798410.92 | 0.0090 | 0.0062 |
| Jupiter | 27591-03-02 09:36 G | 11798525.72 | 11798525.90 | 11798526.09 | 0.0515 | 0.0320 |
| Neptune | 27591-11-09 12:00 G | 11798777.82 | 11798778.00 | 11798778.21 | 0.0090 | 0.0056 |
| Neptune | 27592-11-11 05:31 G | 11799145.51 | 11799145.73 | 11799145.98 | 0.0090 | 0.0043 |
| Neptune | 27593-11-13 16:05 G | 11799512.96 | 11799513.17 | 11799513.42 | 0.0090 | 0.0037 |
| Neptune | 27594-11-16 05:45 G | 11799880.49 | 11799880.74 | 11799881.00 | 0.0090 | 0.0023 |
| Neptune | 27595-11-18 21:07 G | 11800248.13 | 11800248.38 | 11800248.62 | 0.0090 | 0.0017 |
| Jupiter | 27596-08-04 08:09 G | 11800507.61 | 11800507.84 | 11800508.07 | 0.0502 | 0.0122 |
| Neptune | 27596-11-20 05:31 G | 11800615.47 | 11800615.73 | 11800616.00 | 0.0089 | 0.0004 |
| Jupiter | 27597-09-06 07:41 G | 11800905.69 | 11800905.82 | 11800905.95 | 0.0516 | 0.0419 |

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| Neptune | 27597-11-23 00:29 G | 11800983.26 | 11800983.52 | 11800983.77 | 0.0089 | 0.0002 |
| Neptune | 27598-11-25 06:14 G | 11801350.51 | 11801350.76 | 11801351.02 | 0.0089 | 0.0016 |
| Neptune | 27599-11-28 02:24 G | 11801718.35 | 11801718.60 | 11801718.86 | 0.0089 | 0.0021 |
| Neptune | 27600-11-29 08:53 G | 11802085.65 | 11802085.87 | 11802086.12 | 0.0089 | 0.0037 |
| Neptune | 27601-12-02 03:07 G | 11802453.39 | 11802453.63 | 11802453.87 | 0.0089 | 0.0040 |
| Jupiter | 27602-01-31 07:41 G | 11802513.60 | 11802513.82 | 11802514.05 | 0.0527 | 0.0187 |
| Neptune | 27602-12-04 12:43 G | 11802820.85 | 11802821.03 | 11802821.24 | 0.0089 | 0.0056 |
| Jupiter | 27603-03-06 22:48 G | 11802913.28 | 11802913.45 | 11802913.62 | 0.0512 | 0.0351 |
| Neptune | 27603-12-07 02:24 G | 11803188.43 | 11803188.60 | 11803188.83 | 0.0089 | 0.0059 |
| Saturn | 27604-01-16 17:17 G | 11803228.98 | 11803229.22 | 11803229.46 | 0.0272 | 0.0021 |
| Neptune | 27604-12-08 17:02 G | 11803556.09 | 11803556.21 | 11803556.37 | 0.0089 | 0.0075 |
| Neptune | 27605-12-11 02:09 G | 11803923.47 | 11803923.59 | 11803923.73 | 0.0089 | 0.0077 |
| Jupiter | 27607-07-09 02:24 G | 11804498.50 | 11804498.60 | 11804498.72 | 0.0493 | 0.0431 |
| Jupiter | 27608-08-08 13:12 G | 11804894.82 | 11804895.05 | 11804895.28 | 0.0504 | 0.0060 |
| Jupiter | 27609-09-11 12:00 G | 11805293.89 | 11805294.00 | 11805294.10 | 0.0518 | 0.0458 |
| Jupiter | 27614-02-05 01:55 G | 11806901.35 | 11806901.58 | 11806901.81 | 0.0525 | 0.0063 |
| Jupiter | 27615-03-11 23:17 G | 11807301.32 | 11807301.47 | 11807301.62 | 0.0510 | 0.0386 |
| Jupiter | 27619-07-13 07:26 G | 11808885.68 | 11808885.81 | 11808885.96 | 0.0494 | 0.0403 |
| Saturn | 27619-07-16 12:57 G | 11808888.79 | 11808889.04 | 11808889.28 | 0.0288 | 0.0075 |
| Uranus | 27620-07-03 00:57 G | 11809241.39 | 11809241.54 | 11809241.69 | 0.0138 | 0.0113 |
| Jupiter | 27620-08-13 11:31 G | 11809282.75 | 11809282.98 | 11809283.21 | 0.0505 | 0.0050 |
| Uranus | 27621-07-07 16:19 G | 11809610.95 | 11809611.18 | 11809611.42 | 0.0138 | 0.0036 |
| Jupiter | 27621-09-16 02:38 G | 11809681.53 | 11809681.61 | 11809681.69 | 0.0519 | 0.0487 |
| Uranus | 27622-07-12 05:02 G | 11809980.46 | 11809980.71 | 11809980.98 | 0.0138 | 0.0021 |
| Uranus | 27623-07-16 17:45 G | 11810350.09 | 11810350.24 | 11810350.42 | 0.0137 | 0.0101 |
| Jupiter | 27626-02-10 03:07 G | 11811289.41 | 11811289.63 | 11811289.86 | 0.0523 | 0.0026 |
| Jupiter | 27627-03-16 03:50 G | 11811688.58 | 11811688.66 | 11811688.76 | 0.0509 | 0.0470 |
| Mars | 27628-05-20 01:26 G | 11812119.40 | 11812119.56 | 11812119.73 | 0.1590 | 0.0557 |
| Jupiter | 27631-07-17 19:55 G | 11813273.19 | 11813273.33 | 11813273.48 | 0.0495 | 0.0379 |
| Jupiter | 27632-08-17 22:05 G | 11813670.18 | 11813670.42 | 11813670.65 | 0.0507 | 0.0134 |

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| Saturn | 27633-01-10 12:29 G | 11813815.83 | 11813816.02 | 11813816.21 | 0.0273 | 0.0181 |
| Saturn | 27634-01-22 20:53 G | 11814193.21 | 11814193.37 | 11814193.55 | 0.0270 | 0.0188 |
| Mars | 27636-11-17 22:48 G | 11815223.27 | 11815223.45 | 11815223.64 | 0.1948 | 0.0308 |
| Jupiter | 27637-01-09 20:38 G | 11815276.29 | 11815276.36 | 11815276.44 | 0.0534 | 0.0501 |
| Jupiter | 27638-02-14 19:12 G | 11815677.06 | 11815677.30 | 11815677.54 | 0.0521 | 0.0061 |
| Jupiter | 27643-07-22 05:31 G | 11817660.54 | 11817660.73 | 11817660.92 | 0.0496 | 0.0300 |
| Jupiter | 27644-08-22 12:57 G | 11818057.82 | 11818058.04 | 11818058.25 | 0.0509 | 0.0164 |
| Saturn | 27648-07-09 17:17 G | 11819475.17 | 11819475.22 | 11819475.30 | 0.0287 | 0.0275 |
| Jupiter | 27649-01-14 20:53 G | 11819664.21 | 11819664.37 | 11819664.54 | 0.0533 | 0.0381 |
| Saturn | 27649-07-23 18:14 G | 11819854.09 | 11819854.26 | 11819854.45 | 0.0290 | 0.0189 |
| Jupiter | 27650-02-19 21:36 G | 11820065.18 | 11820065.40 | 11820065.62 | 0.0519 | 0.0120 |
| Jupiter | 27655-07-26 11:45 G | 11822047.79 | 11822047.99 | 11822048.20 | 0.0498 | 0.0205 |
| Jupiter | 27656-08-27 08:24 G | 11822445.63 | 11822445.85 | 11822446.07 | 0.0511 | 0.0215 |
| Jupiter | 27661-01-20 05:02 G | 11824052.53 | 11824052.71 | 11824052.90 | 0.0531 | 0.0294 |
| Jupiter | 27662-02-24 21:50 G | 11824453.20 | 11824453.41 | 11824453.63 | 0.0517 | 0.0235 |
| Pluto | 27662-12-29 15:07 G | 11824760.89 | 11824761.13 | 11824761.39 | 0.0064 | 0.0004 |
| Saturn | 27663-01-17 19:55 G | 11824780.08 | 11824780.33 | 11824780.59 | 0.0271 | 0.0023 |
| Uranus | 27665-01-03 00:43 G | 11825496.37 | 11825496.53 | 11825496.73 | 0.0140 | 0.0097 |
| Uranus | 27666-01-07 15:21 G | 11825865.89 | 11825866.14 | 11825866.40 | 0.0140 | 0.0030 |
| Uranus | 27667-01-12 12:43 G | 11826235.81 | 11826236.03 | 11826236.28 | 0.0141 | 0.0042 |
| Jupiter | 27667-07-31 04:33 G | 11826435.47 | 11826435.69 | 11826435.91 | 0.0500 | 0.0154 |
| Uranus | 27668-01-17 06:14 G | 11826605.65 | 11826605.76 | 11826605.90 | 0.0141 | 0.0124 |
| Jupiter | 27668-08-31 20:24 G | 11826833.17 | 11826833.35 | 11826833.53 | 0.0513 | 0.0319 |
| Neptune | 27670-05-02 19:12 G | 11827442.26 | 11827442.30 | 11827442.41 | 0.0088 | 0.0084 |
| Neptune | 27671-05-04 22:48 G | 11827809.38 | 11827809.45 | 11827809.58 | 0.0088 | 0.0081 |
| Neptune | 27672-05-06 16:05 G | 11828177.02 | 11828177.17 | 11828177.35 | 0.0088 | 0.0067 |
| Jupiter | 27673-01-25 11:17 G | 11828440.76 | 11828440.97 | 11828441.18 | 0.0529 | 0.0258 |
| Neptune | 27673-05-08 20:53 G | 11828544.21 | 11828544.37 | 11828544.55 | 0.0088 | 0.0063 |
| Jupiter | 27674-03-01 12:00 G | 11828840.82 | 11828841.00 | 11828841.18 | 0.0515 | 0.0319 |
| Neptune | 27674-05-11 10:48 G | 11828911.74 | 11828911.95 | 11828912.18 | 0.0088 | 0.0049 |

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| Neptune | 27675-05-13 19:55 G | 11829279.11 | 11829279.33 | 11829279.54 | 0.0088 | 0.0044 |
| Neptune | 27676-05-15 04:48 G | 11829646.47 | 11829646.70 | 11829646.97 | 0.0088 | 0.0031 |
| Neptune | 27677-05-17 18:57 G | 11830014.07 | 11830014.29 | 11830014.55 | 0.0088 | 0.0027 |
| Neptune | 27678-05-20 00:29 G | 11830381.27 | 11830381.52 | 11830381.78 | 0.0088 | 0.0013 |
| Saturn | 27678-07-17 07:41 G | 11830439.58 | 11830439.82 | 11830440.07 | 0.0288 | 0.0029 |
| Neptune | 27679-05-22 17:45 G | 11830748.98 | 11830749.24 | 11830749.50 | 0.0088 | 0.0008 |
| Jupiter | 27679-08-04 11:02 G | 11830822.73 | 11830822.96 | 11830823.19 | 0.0501 | 0.0126 |
| Neptune | 27680-05-23 21:07 G | 11831116.12 | 11831116.38 | 11831116.63 | 0.0088 | 0.0006 |
| Jupiter | 27680-09-06 00:00 G | 11831221.37 | 11831221.50 | 11831221.64 | 0.0515 | 0.0416 |
| Neptune | 27681-05-26 13:55 G | 11831483.83 | 11831484.08 | 11831484.35 | 0.0088 | 0.0012 |
| Neptune | 27682-05-28 19:12 G | 11831851.06 | 11831851.30 | 11831851.55 | 0.0088 | 0.0024 |
| Neptune | 27683-05-31 07:55 G | 11832218.60 | 11832218.83 | 11832219.10 | 0.0088 | 0.0030 |
| Neptune | 27684-06-01 17:45 G | 11832586.03 | 11832586.24 | 11832586.47 | 0.0088 | 0.0042 |
| Jupiter | 27685-01-30 01:26 G | 11832828.35 | 11832828.56 | 11832828.78 | 0.0527 | 0.0191 |
| Neptune | 27685-06-04 02:09 G | 11832953.38 | 11832953.59 | 11832953.82 | 0.0088 | 0.0047 |
| Jupiter | 27686-03-06 09:21 G | 11833228.71 | 11833228.89 | 11833229.06 | 0.0513 | 0.0346 |
| Neptune | 27686-06-06 17:17 G | 11833321.04 | 11833321.22 | 11833321.40 | 0.0088 | 0.0060 |
| Neptune | 27687-06-08 21:36 G | 11833688.25 | 11833688.40 | 11833688.59 | 0.0088 | 0.0066 |
| Neptune | 27688-06-10 15:07 G | 11834056.03 | 11834056.13 | 11834056.26 | 0.0088 | 0.0078 |
| Neptune | 27689-06-12 18:29 G | 11834423.23 | 11834423.27 | 11834423.38 | 0.0088 | 0.0084 |
| Jupiter | 27690-07-08 11:02 G | 11834813.85 | 11834813.96 | 11834814.08 | 0.0493 | 0.0429 |
| Jupiter | 27691-08-09 07:55 G | 11835210.60 | 11835210.83 | 11835211.06 | 0.0503 | 0.0055 |
| Saturn | 27692-01-12 13:26 G | 11835366.86 | 11835367.06 | 11835367.28 | 0.0273 | 0.0139 |
| Jupiter | 27692-09-10 12:57 G | 11835608.94 | 11835609.04 | 11835609.17 | 0.0517 | 0.0449 |
| Saturn | 27693-01-24 02:38 G | 11835744.48 | 11835744.61 | 11835744.74 | 0.0270 | 0.0226 |
| Jupiter | 27697-02-04 09:07 G | 11837216.65 | 11837216.88 | 11837217.11 | 0.0526 | 0.0064 |
| Jupiter | 27698-03-10 19:12 G | 11837616.15 | 11837616.30 | 11837616.46 | 0.0511 | 0.0386 |
| Jupiter | 27702-07-13 19:55 G | 11839201.22 | 11839201.33 | 11839201.46 | 0.0494 | 0.0413 |
| Jupiter | 27703-08-14 14:24 G | 11839597.86 | 11839598.10 | 11839598.35 | 0.0504 | 0.0050 |
| Uranus | 27704-07-04 13:12 G | 11839922.89 | 11839923.05 | 11839923.24 | 0.0138 | 0.0104 |

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| Jupiter | 27704-09-16 11:45 G | 11839996.91 | 11839996.99 | 11839997.07 | 0.0519 | 0.0485 |
| Uranus | 27705-07-09 06:29 G | 11840292.54 | 11840292.77 | 11840293.01 | 0.0138 | 0.0041 |
| Uranus | 27706-07-13 18:14 G | 11840662.01 | 11840662.26 | 11840662.52 | 0.0138 | 0.0039 |
| Mars | 27707-05-23 18:57 G | 11840976.25 | 11840976.29 | 11840976.34 | 0.1589 | 0.1529 |
| Saturn | 27707-07-12 20:09 G | 11841026.20 | 11841026.34 | 11841026.49 | 0.0287 | 0.0229 |
| Uranus | 27707-07-18 08:24 G | 11841031.67 | 11841031.85 | 11841032.03 | 0.0137 | 0.0092 |
| Saturn | 27708-07-25 17:31 G | 11841405.09 | 11841405.23 | 11841405.38 | 0.0290 | 0.0235 |
| Jupiter | 27709-02-10 03:36 G | 11841604.42 | 11841604.65 | 11841604.89 | 0.0524 | 0.0023 |
| Jupiter | 27710-03-16 18:57 G | 11842004.23 | 11842004.29 | 11842004.36 | 0.0509 | 0.0482 |
| Jupiter | 27714-07-18 06:14 G | 11843588.61 | 11843588.76 | 11843588.92 | 0.0495 | 0.0378 |
| Jupiter | 27715-08-19 06:29 G | 11843985.56 | 11843985.77 | 11843985.99 | 0.0506 | 0.0126 |
| Jupiter | 27720-01-10 23:31 G | 11845591.40 | 11845591.48 | 11845591.56 | 0.0534 | 0.0499 |
| Jupiter | 27721-02-15 09:07 G | 11845992.66 | 11845992.88 | 11845993.10 | 0.0522 | 0.0055 |
| Saturn | 27722-01-19 16:48 G | 11846330.96 | 11846331.20 | 11846331.45 | 0.0271 | 0.0060 |
| Jupiter | 27726-07-22 11:31 G | 11847975.79 | 11847975.98 | 11847976.16 | 0.0496 | 0.0297 |
| Jupiter | 27727-08-24 00:43 G | 11848373.31 | 11848373.53 | 11848373.77 | 0.0509 | 0.0154 |
| Jupiter | 27732-01-16 08:38 G | 11849979.70 | 11849979.86 | 11849980.02 | 0.0533 | 0.0379 |
| Jupiter | 27733-02-20 08:38 G | 11850380.63 | 11850380.86 | 11850381.10 | 0.0520 | 0.0124 |
| Saturn | 27737-07-19 06:57 G | 11851990.56 | 11851990.79 | 11851991.03 | 0.0289 | 0.0017 |
| Jupiter | 27738-07-27 06:00 G | 11852363.53 | 11852363.75 | 11852363.96 | 0.0498 | 0.0198 |
| Jupiter | 27739-08-28 13:26 G | 11852760.86 | 11852761.06 | 11852761.27 | 0.0510 | 0.0216 |
| Jupiter | 27744-01-21 08:09 G | 11854367.64 | 11854367.84 | 11854368.04 | 0.0531 | 0.0300 |
| Jupiter | 27745-02-24 19:12 G | 11854768.11 | 11854768.30 | 11854768.51 | 0.0518 | 0.0236 |
| Uranus | 27749-01-04 11:45 G | 11856177.84 | 11856177.99 | 11856178.18 | 0.0140 | 0.0103 |
| Uranus | 27750-01-09 00:57 G | 11856547.29 | 11856547.54 | 11856547.80 | 0.0140 | 0.0023 |
| Jupiter | 27750-07-31 11:02 G | 11856750.73 | 11856750.96 | 11856751.18 | 0.0499 | 0.0155 |
| Uranus | 27751-01-13 23:31 G | 11856917.26 | 11856917.48 | 11856917.72 | 0.0141 | 0.0051 |
| Saturn | 27751-01-14 17:31 G | 11856918.02 | 11856918.23 | 11856918.46 | 0.0273 | 0.0102 |
| Pluto | 27751-07-01 13:12 G | 11857085.80 | 11857086.05 | 11857086.32 | 0.0079 | 0.0011 |
| Jupiter | 27751-09-02 15:21 G | 11857148.96 | 11857149.14 | 11857149.32 | 0.0512 | 0.0325 |

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| Uranus | 27752-01-18 15:07 G | 11857287.01 | 11857287.13 | 11857287.30 | 0.0141 | 0.0117 |
| Saturn | 27752-01-27 04:05 G | 11857295.63 | 11857295.67 | 11857295.72 | 0.0270 | 0.0264 |
| Neptune | 27752-11-02 01:55 G | 11857575.51 | 11857575.58 | 11857575.69 | 0.0090 | 0.0084 |
| Neptune | 27753-11-04 21:21 G | 11857943.32 | 11857943.39 | 11857943.51 | 0.0090 | 0.0084 |
| Neptune | 27754-11-07 06:14 G | 11858310.59 | 11858310.76 | 11858310.93 | 0.0090 | 0.0065 |
| Neptune | 27755-11-09 22:19 G | 11858678.25 | 11858678.43 | 11858678.63 | 0.0090 | 0.0064 |
| Jupiter | 27756-01-26 05:17 G | 11858755.53 | 11858755.72 | 11858755.92 | 0.0530 | 0.0270 |
| Neptune | 27756-11-11 10:19 G | 11859045.73 | 11859045.93 | 11859046.16 | 0.0090 | 0.0046 |
| Jupiter | 27757-03-01 22:05 G | 11859156.23 | 11859156.42 | 11859156.60 | 0.0516 | 0.0316 |
| Neptune | 27757-11-13 21:07 G | 11859413.17 | 11859413.38 | 11859413.64 | 0.0090 | 0.0045 |
| Neptune | 27758-11-16 13:55 G | 11859780.85 | 11859781.08 | 11859781.33 | 0.0090 | 0.0026 |
| Neptune | 27759-11-18 21:21 G | 11860148.15 | 11860148.39 | 11860148.66 | 0.0090 | 0.0026 |
| Neptune | 27760-11-20 17:17 G | 11860515.97 | 11860516.22 | 11860516.48 | 0.0090 | 0.0007 |
| Jupiter | 27761-07-04 13:55 G | 11860742.05 | 11860742.08 | 11860742.11 | 0.0491 | 0.0488 |
| Neptune | 27761-11-22 23:02 G | 11860883.21 | 11860883.46 | 11860883.73 | 0.0090 | 0.0006 |
| Jupiter | 27762-08-05 04:19 G | 11861138.46 | 11861138.68 | 11861138.90 | 0.0501 | 0.0130 |
| Neptune | 27762-11-25 18:43 G | 11861251.03 | 11861251.28 | 11861251.55 | 0.0090 | 0.0014 |
| Jupiter | 27763-09-07 00:00 G | 11861536.36 | 11861536.50 | 11861536.65 | 0.0514 | 0.0409 |
| Neptune | 27763-11-28 02:24 G | 11861618.36 | 11861618.60 | 11861618.86 | 0.0089 | 0.0015 |
| Neptune | 27764-11-29 18:57 G | 11861986.06 | 11861986.29 | 11861986.56 | 0.0089 | 0.0033 |
| Neptune | 27765-12-02 06:29 G | 11862353.55 | 11862353.77 | 11862354.01 | 0.0089 | 0.0035 |
| Saturn | 27766-07-13 14:38 G | 11862576.92 | 11862577.11 | 11862577.31 | 0.0287 | 0.0185 |
| Neptune | 27766-12-04 18:29 G | 11862721.05 | 11862721.27 | 11862721.49 | 0.0089 | 0.0052 |
| Saturn | 27767-07-27 09:36 G | 11862955.85 | 11862955.90 | 11862955.97 | 0.0290 | 0.0282 |
| Neptune | 27767-12-07 10:05 G | 11863088.74 | 11863088.92 | 11863089.14 | 0.0089 | 0.0055 |
| Jupiter | 27768-01-31 15:36 G | 11863143.93 | 11863144.15 | 11863144.37 | 0.0528 | 0.0190 |
| Neptune | 27768-12-08 18:00 G | 11863456.11 | 11863456.25 | 11863456.42 | 0.0089 | 0.0072 |
| Jupiter | 27769-03-06 11:02 G | 11863543.79 | 11863543.96 | 11863544.14 | 0.0514 | 0.0343 |
| Neptune | 27769-12-11 13:12 G | 11863823.92 | 11863824.05 | 11863824.21 | 0.0089 | 0.0074 |
| Jupiter | 27773-07-08 22:48 G | 11865129.35 | 11865129.45 | 11865129.56 | 0.0492 | 0.0434 |

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| Jupiter | 27774-08-09 11:17 G | 11865525.73 | 11865525.97 | 11865526.21 | 0.0502 | 0.0055 |
| Jupiter | 27775-09-12 00:14 G | 11865924.40 | 11865924.51 | 11865924.63 | 0.0516 | 0.0437 |
| Jupiter | 27780-02-05 12:43 G | 11867531.79 | 11867532.03 | 11867532.26 | 0.0526 | 0.0066 |
| Saturn | 27781-01-20 14:53 G | 11867881.89 | 11867882.12 | 11867882.35 | 0.0271 | 0.0098 |
| Jupiter | 27781-03-11 12:43 G | 11867931.89 | 11867932.03 | 11867932.18 | 0.0512 | 0.0391 |
| Jupiter | 27785-07-13 08:09 G | 11869516.71 | 11869516.84 | 11869516.97 | 0.0493 | 0.0412 |
| Jupiter | 27786-08-14 02:24 G | 11869913.38 | 11869913.60 | 11869913.83 | 0.0504 | 0.0056 |
| Jupiter | 27787-09-16 20:24 G | 11870312.26 | 11870312.35 | 11870312.44 | 0.0519 | 0.0481 |
| Uranus | 27788-07-05 03:21 G | 11870604.48 | 11870604.64 | 11870604.83 | 0.0138 | 0.0102 |
| Uranus | 27789-07-09 21:21 G | 11870974.15 | 11870974.39 | 11870974.64 | 0.0138 | 0.0026 |
| Uranus | 27790-07-14 07:26 G | 11871343.56 | 11871343.81 | 11871344.07 | 0.0138 | 0.0031 |
| Uranus | 27791-07-18 22:33 G | 11871713.31 | 11871713.44 | 11871713.59 | 0.0137 | 0.0112 |
| Jupiter | 27792-02-10 18:43 G | 11871920.05 | 11871920.28 | 11871920.50 | 0.0524 | 0.0015 |
| Jupiter | 27793-03-16 04:05 G | 11872319.61 | 11872319.67 | 11872319.74 | 0.0510 | 0.0487 |
| Saturn | 27796-07-20 07:55 G | 11873541.60 | 11873541.83 | 11873542.07 | 0.0289 | 0.0061 |
| Jupiter | 27797-07-17 14:53 G | 11873903.98 | 11873904.12 | 11873904.27 | 0.0495 | 0.0376 |
| Jupiter | 27798-08-18 21:36 G | 11874301.17 | 11874301.40 | 11874301.64 | 0.0506 | 0.0121 |
| Jupiter | 27803-01-11 05:45 G | 11875906.68 | 11875906.74 | 11875906.82 | 0.0534 | 0.0504 |
| Jupiter | 27804-02-16 12:29 G | 11876307.77 | 11876308.02 | 11876308.26 | 0.0522 | 0.0046 |
| Jupiter | 27809-07-23 07:55 G | 11878291.65 | 11878291.83 | 11878292.03 | 0.0496 | 0.0282 |
| Saturn | 27810-01-16 19:41 G | 11878469.08 | 11878469.32 | 11878469.56 | 0.0273 | 0.0064 |
| Jupiter | 27810-08-24 08:24 G | 11878688.63 | 11878688.85 | 11878689.07 | 0.0508 | 0.0152 |
| Jupiter | 27815-01-16 08:53 G | 11880294.71 | 11880294.87 | 11880295.04 | 0.0533 | 0.0382 |
| Jupiter | 27816-02-21 05:31 G | 11880695.51 | 11880695.73 | 11880695.96 | 0.0520 | 0.0121 |
| Jupiter | 27821-07-27 09:50 G | 11882678.70 | 11882678.91 | 11882679.13 | 0.0497 | 0.0198 |
| Jupiter | 27822-08-29 05:31 G | 11883076.53 | 11883076.73 | 11883076.95 | 0.0510 | 0.0215 |
| Saturn | 27825-07-15 07:41 G | 11884127.60 | 11884127.82 | 11884128.04 | 0.0287 | 0.0138 |
| Jupiter | 27827-01-21 09:21 G | 11884682.71 | 11884682.89 | 11884683.08 | 0.0532 | 0.0312 |
| Jupiter | 27828-02-26 11:17 G | 11885083.76 | 11885083.97 | 11885084.18 | 0.0519 | 0.0237 |
| Uranus | 27833-01-05 23:31 G | 11886859.29 | 11886859.48 | 11886859.67 | 0.0140 | 0.0088 |

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| Mars | 27833-05-21 04:33 G | 11886994.50 | 11886994.69 | 11886994.88 | 0.1593 | 0.0522 |
| Jupiter | 27833-08-01 03:07 G | 11887066.42 | 11887066.63 | 11887066.85 | 0.0499 | 0.0162 |
| Uranus | 27834-01-10 11:31 G | 11887228.73 | 11887228.98 | 11887229.24 | 0.0140 | 0.0024 |
| Jupiter | 27834-09-02 14:53 G | 11887463.95 | 11887464.12 | 11887464.31 | 0.0512 | 0.0324 |
| Uranus | 27835-01-15 11:17 G | 11887598.75 | 11887598.97 | 11887599.22 | 0.0141 | 0.0051 |
| Neptune | 27835-05-06 12:14 G | 11887709.94 | 11887710.01 | 11887710.14 | 0.0088 | 0.0081 |
| Uranus | 27836-01-20 02:24 G | 11887968.52 | 11887968.60 | 11887968.71 | 0.0141 | 0.0131 |
| Neptune | 27836-05-07 17:45 G | 11888077.16 | 11888077.24 | 11888077.38 | 0.0088 | 0.0079 |
| Neptune | 27837-05-10 06:57 G | 11888444.63 | 11888444.79 | 11888445.00 | 0.0088 | 0.0063 |
| Neptune | 27838-05-12 17:31 G | 11888812.07 | 11888812.23 | 11888812.43 | 0.0088 | 0.0060 |
| Saturn | 27839-01-11 04:05 G | 11889055.56 | 11889055.67 | 11889055.80 | 0.0274 | 0.0239 |
| Jupiter | 27839-01-26 22:19 G | 11889071.23 | 11889071.43 | 11889071.63 | 0.0530 | 0.0280 |
| Neptune | 27839-05-15 01:12 G | 11889179.35 | 11889179.55 | 11889179.80 | 0.0088 | 0.0045 |
| Saturn | 27840-01-23 18:14 G | 11889433.06 | 11889433.26 | 11889433.47 | 0.0271 | 0.0135 |
| Jupiter | 27840-03-02 01:55 G | 11889471.40 | 11889471.58 | 11889471.78 | 0.0516 | 0.0314 |
| Neptune | 27840-05-16 16:33 G | 11889546.97 | 11889547.19 | 11889547.41 | 0.0088 | 0.0042 |
| Neptune | 27841-05-18 20:24 G | 11889914.11 | 11889914.35 | 11889914.61 | 0.0088 | 0.0027 |
| Neptune | 27842-05-21 13:55 G | 11890281.84 | 11890282.08 | 11890282.33 | 0.0088 | 0.0024 |
| Neptune | 27843-05-23 17:31 G | 11890648.98 | 11890649.23 | 11890649.49 | 0.0088 | 0.0007 |
| Neptune | 27844-05-25 09:36 G | 11891016.64 | 11891016.90 | 11891017.17 | 0.0088 | 0.0005 |
| Jupiter | 27844-07-05 01:41 G | 11891057.54 | 11891057.57 | 11891057.61 | 0.0491 | 0.0483 |
| Neptune | 27845-05-27 16:05 G | 11891383.93 | 11891384.17 | 11891384.42 | 0.0088 | 0.0012 |
| Jupiter | 27845-08-05 09:07 G | 11891453.65 | 11891453.88 | 11891454.12 | 0.0500 | 0.0128 |
| Neptune | 27846-05-30 04:19 G | 11891751.42 | 11891751.68 | 11891751.95 | 0.0088 | 0.0014 |
| Jupiter | 27846-09-07 14:53 G | 11891851.98 | 11891852.12 | 11891852.26 | 0.0514 | 0.0405 |
| Neptune | 27847-06-01 15:36 G | 11892118.93 | 11892119.15 | 11892119.40 | 0.0088 | 0.0030 |
| Neptune | 27848-06-02 23:02 G | 11892486.21 | 11892486.46 | 11892486.70 | 0.0088 | 0.0032 |
| Neptune | 27849-06-05 14:24 G | 11892853.90 | 11892854.10 | 11892854.32 | 0.0088 | 0.0049 |
| Neptune | 27850-06-07 18:14 G | 11893221.06 | 11893221.26 | 11893221.48 | 0.0088 | 0.0051 |
| Jupiter | 27851-01-31 18:57 G | 11893459.07 | 11893459.29 | 11893459.51 | 0.0528 | 0.0189 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 27851-06-10 11:17 G | 11893588.83 | 11893588.97 | 11893589.15 | 0.0088 | 0.0068 |
| Jupiter | 27852-03-07 04:19 G | 11893859.51 | 11893859.68 | 11893859.85 | 0.0514 | 0.0336 |
| Neptune | 27852-06-11 15:07 G | 11893956.00 | 11893956.13 | 11893956.31 | 0.0088 | 0.0069 |
| Neptune | 27853-06-14 06:57 G | 11894323.75 | 11894323.79 | 11894323.87 | 0.0088 | 0.0085 |
| Neptune | 27854-06-16 14:09 G | 11894691.08 | 11894691.09 | 11894691.15 | 0.0088 | 0.0087 |
| Saturn | 27855-07-23 04:19 G | 11895092.45 | 11895092.68 | 11895092.92 | 0.0289 | 0.0104 |
| Jupiter | 27856-07-09 13:12 G | 11895444.94 | 11895445.05 | 11895445.17 | 0.0492 | 0.0430 |
| Jupiter | 27857-08-10 01:55 G | 11895841.35 | 11895841.58 | 11895841.80 | 0.0502 | 0.0042 |
| Jupiter | 27858-09-12 10:48 G | 11896239.83 | 11896239.95 | 11896240.09 | 0.0516 | 0.0431 |
| Jupiter | 27863-02-05 21:07 G | 11897847.15 | 11897847.38 | 11897847.60 | 0.0526 | 0.0070 |
| Jupiter | 27864-03-11 14:24 G | 11898246.95 | 11898247.10 | 11898247.26 | 0.0512 | 0.0389 |
| Jupiter | 27868-07-13 18:00 G | 11899832.14 | 11899832.25 | 11899832.37 | 0.0494 | 0.0418 |
| Saturn | 27869-01-17 15:07 G | 11900019.88 | 11900020.13 | 11900020.39 | 0.0273 | 0.0030 |
| Jupiter | 27869-08-14 18:57 G | 11900229.05 | 11900229.29 | 11900229.53 | 0.0504 | 0.0065 |
| Jupiter | 27870-09-17 06:14 G | 11900627.69 | 11900627.76 | 11900627.84 | 0.0518 | 0.0486 |
| Uranus | 27872-07-06 16:33 G | 11901286.00 | 11901286.19 | 11901286.38 | 0.0139 | 0.0094 |
| Uranus | 27873-07-11 11:31 G | 11901655.74 | 11901655.98 | 11901656.22 | 0.0138 | 0.0029 |
| Uranus | 27874-07-15 20:53 G | 11902025.13 | 11902025.37 | 11902025.62 | 0.0138 | 0.0050 |
| Jupiter | 27875-02-10 18:43 G | 11902235.03 | 11902235.28 | 11902235.52 | 0.0524 | 0.0005 |
| Uranus | 27875-07-20 13:12 G | 11902394.90 | 11902395.05 | 11902395.22 | 0.0137 | 0.0103 |
| Jupiter | 27876-03-16 06:29 G | 11902634.72 | 11902634.77 | 11902634.83 | 0.0510 | 0.0492 |
| Jupiter | 27880-07-18 08:38 G | 11904219.71 | 11904219.86 | 11904220.01 | 0.0495 | 0.0373 |
| Jupiter | 27881-08-19 01:12 G | 11904616.33 | 11904616.55 | 11904616.78 | 0.0505 | 0.0118 |
| Saturn | 27884-07-16 06:14 G | 11905678.54 | 11905678.76 | 11905678.99 | 0.0287 | 0.0097 |
| Jupiter | 27886-01-10 09:07 G | 11906221.81 | 11906221.88 | 11906221.96 | 0.0535 | 0.0505 |
| Jupiter | 27887-02-15 15:50 G | 11906622.93 | 11906623.16 | 11906623.38 | 0.0523 | 0.0035 |
| Jupiter | 27892-07-22 10:19 G | 11908606.74 | 11908606.93 | 11908607.13 | 0.0496 | 0.0278 |
| Jupiter | 27893-08-23 23:02 G | 11909004.24 | 11909004.46 | 11909004.69 | 0.0507 | 0.0146 |
| Saturn | 27898-01-12 08:24 G | 11910606.70 | 11910606.85 | 11910607.03 | 0.0274 | 0.0200 |
| Jupiter | 27898-01-15 13:41 G | 11910609.92 | 11910610.07 | 11910610.23 | 0.0533 | 0.0384 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 27899-01-24 22:48 G | 11910984.27 | 11910984.45 | 11910984.64 | 0.0271 | 0.0172 |
| Jupiter | 27899-02-20 23:17 G | 11911011.24 | 11911011.47 | 11911011.70 | 0.0521 | 0.0122 |
| Jupiter | 27904-07-28 02:24 G | 11912994.39 | 11912994.60 | 11912994.81 | 0.0497 | 0.0198 |
| Jupiter | 27905-08-29 07:12 G | 11913391.59 | 11913391.80 | 11913392.01 | 0.0510 | 0.0217 |
| Jupiter | 27910-01-22 02:09 G | 11914998.41 | 11914998.59 | 11914998.78 | 0.0532 | 0.0319 |
| Pluto | 27911-01-03 02:38 G | 11915344.34 | 11915344.61 | 11915344.88 | 0.0064 | 0.0003 |
| Jupiter | 27911-02-26 14:09 G | 11915398.88 | 11915399.09 | 11915399.30 | 0.0519 | 0.0237 |
| Mars | 27912-05-24 11:17 G | 11915851.86 | 11915851.97 | 11915852.08 | 0.1592 | 0.1313 |
| Saturn | 27914-07-24 23:02 G | 11916643.26 | 11916643.46 | 11916643.69 | 0.0289 | 0.0151 |
| Jupiter | 27916-08-01 09:50 G | 11917381.69 | 11917381.91 | 11917382.14 | 0.0499 | 0.0162 |
| Uranus | 27917-01-07 08:09 G | 11917540.68 | 11917540.84 | 11917541.03 | 0.0140 | 0.0098 |
| Jupiter | 27917-09-03 08:24 G | 11917779.68 | 11917779.85 | 11917780.02 | 0.0512 | 0.0336 |
| Neptune | 27917-11-05 21:07 G | 11917843.35 | 11917843.38 | 11917843.47 | 0.0090 | 0.0087 |
| Uranus | 27918-01-11 19:41 G | 11917910.06 | 11917910.32 | 11917910.57 | 0.0140 | 0.0016 |
| Neptune | 27918-11-08 11:31 G | 11918210.86 | 11918210.98 | 11918211.15 | 0.0090 | 0.0075 |
| Uranus | 27919-01-16 20:09 G | 11918280.11 | 11918280.34 | 11918280.57 | 0.0141 | 0.0055 |
| Neptune | 27919-11-11 01:55 G | 11918578.43 | 11918578.58 | 11918578.76 | 0.0090 | 0.0067 |
| Uranus | 27920-01-21 09:36 G | 11918649.79 | 11918649.90 | 11918650.04 | 0.0141 | 0.0124 |
| Neptune | 27920-11-12 12:14 G | 11918945.81 | 11918946.01 | 11918946.22 | 0.0090 | 0.0056 |
| Mars | 27920-11-20 03:07 G | 11918953.55 | 11918953.63 | 11918953.71 | 0.1943 | 0.1801 |
| Neptune | 27921-11-15 06:14 G | 11919313.57 | 11919313.76 | 11919314.00 | 0.0090 | 0.0048 |
| Jupiter | 27922-01-26 18:00 G | 11919386.05 | 11919386.25 | 11919386.45 | 0.0530 | 0.0285 |
| Neptune | 27922-11-17 13:12 G | 11919680.82 | 11919681.05 | 11919681.30 | 0.0090 | 0.0037 |
| Jupiter | 27923-03-03 12:00 G | 11919786.82 | 11919787.00 | 11919787.19 | 0.0516 | 0.0304 |
| Neptune | 27923-11-20 09:36 G | 11920048.65 | 11920048.90 | 11920049.15 | 0.0090 | 0.0026 |
| Neptune | 27924-11-21 15:36 G | 11920415.91 | 11920416.15 | 11920416.41 | 0.0090 | 0.0017 |
| Neptune | 27925-11-24 10:33 G | 11920783.67 | 11920783.94 | 11920784.20 | 0.0090 | 0.0005 |
| Neptune | 27926-11-26 18:57 G | 11921151.04 | 11921151.29 | 11921151.55 | 0.0090 | 0.0003 |
| Jupiter | 27927-07-06 16:19 G | 11921373.14 | 11921373.18 | 11921373.25 | 0.0492 | 0.0479 |
| Neptune | 27927-11-29 09:36 G | 11921518.65 | 11921518.90 | 11921519.18 | 0.0090 | 0.0015 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 27928-01-20 11:45 G | 11921570.74 | 11921570.99 | 11921571.24 | 0.0273 | 0.0007 |
| Jupiter | 27928-08-06 00:29 G | 11921769.31 | 11921769.52 | 11921769.74 | 0.0500 | 0.0128 |
| Neptune | 27928-11-30 23:02 G | 11921886.22 | 11921886.46 | 11921886.70 | 0.0089 | 0.0023 |
| Jupiter | 27929-09-08 01:12 G | 11922167.40 | 11922167.55 | 11922167.70 | 0.0513 | 0.0401 |
| Neptune | 27929-12-03 08:53 G | 11922253.65 | 11922253.87 | 11922254.14 | 0.0089 | 0.0036 |
| Neptune | 27930-12-06 02:53 G | 11922621.42 | 11922621.62 | 11922621.86 | 0.0089 | 0.0044 |
| Neptune | 27931-12-08 10:05 G | 11922988.73 | 11922988.92 | 11922989.14 | 0.0089 | 0.0056 |
| Neptune | 27932-12-10 06:00 G | 11923356.58 | 11923356.75 | 11923356.95 | 0.0089 | 0.0062 |
| Neptune | 27933-12-12 11:45 G | 11923723.88 | 11923723.99 | 11923724.15 | 0.0089 | 0.0075 |
| Jupiter | 27934-02-01 01:12 G | 11923774.34 | 11923774.55 | 11923774.76 | 0.0528 | 0.0194 |
| Neptune | 27934-12-15 06:43 G | 11924091.70 | 11924091.78 | 11924091.93 | 0.0089 | 0.0081 |
| Jupiter | 27935-03-08 02:38 G | 11924174.43 | 11924174.61 | 11924174.81 | 0.0515 | 0.0326 |
| Jupiter | 27939-07-10 18:57 G | 11925760.20 | 11925760.29 | 11925760.40 | 0.0492 | 0.0441 |
| Jupiter | 27940-08-10 13:12 G | 11926156.81 | 11926157.05 | 11926157.30 | 0.0502 | 0.0037 |
| Jupiter | 27941-09-12 16:05 G | 11926555.05 | 11926555.17 | 11926555.29 | 0.0515 | 0.0426 |
| Saturn | 27943-07-19 11:17 G | 11927229.73 | 11927229.97 | 11927230.20 | 0.0287 | 0.0048 |
| Jupiter | 27946-02-05 23:31 G | 11928162.24 | 11928162.48 | 11928162.72 | 0.0527 | 0.0073 |
| Jupiter | 27947-03-12 22:05 G | 11928562.27 | 11928562.42 | 11928562.56 | 0.0513 | 0.0391 |
| Jupiter | 27951-07-15 09:36 G | 11930147.79 | 11930147.90 | 11930148.02 | 0.0493 | 0.0427 |
| Jupiter | 27952-08-14 20:09 G | 11930544.11 | 11930544.34 | 11930544.57 | 0.0503 | 0.0062 |
| Jupiter | 27953-09-17 15:07 G | 11930943.05 | 11930943.13 | 11930943.22 | 0.0517 | 0.0482 |
| Uranus | 27956-07-08 05:17 G | 11931967.52 | 11931967.72 | 11931967.92 | 0.0139 | 0.0090 |
| Saturn | 27957-01-14 13:41 G | 11932157.87 | 11932158.07 | 11932158.27 | 0.0274 | 0.0157 |
| Uranus | 27957-07-13 00:57 G | 11932337.30 | 11932337.54 | 11932337.79 | 0.0138 | 0.0016 |
| Saturn | 27958-01-26 22:19 G | 11932535.28 | 11932535.43 | 11932535.60 | 0.0271 | 0.0213 |
| Jupiter | 27958-02-11 00:14 G | 11932550.29 | 11932550.51 | 11932550.74 | 0.0525 | 0.0010 |
| Uranus | 27958-07-17 08:53 G | 11932706.63 | 11932706.87 | 11932707.13 | 0.0138 | 0.0043 |
| Jupiter | 27959-03-17 20:38 G | 11932950.31 | 11932950.36 | 11932950.43 | 0.0511 | 0.0492 |
| Uranus | 27959-07-22 02:24 G | 11933076.50 | 11933076.60 | 11933076.72 | 0.0137 | 0.0123 |
| Jupiter | 27963-07-19 10:05 G | 11934534.77 | 11934534.92 | 11934535.08 | 0.0494 | 0.0372 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 27964-08-19 16:33 G | 11934931.96 | 11934932.19 | 11934932.42 | 0.0505 | 0.0114 |
| Jupiter | 27969-01-10 15:36 G | 11936537.09 | 11936537.15 | 11936537.24 | 0.0535 | 0.0503 |
| Jupiter | 27970-02-16 07:26 G | 11936938.58 | 11936938.81 | 11936939.05 | 0.0523 | 0.0032 |
| Saturn | 27972-07-12 05:31 G | 11937815.63 | 11937815.73 | 11937815.84 | 0.0286 | 0.0256 |
| Saturn | 27973-07-25 23:31 G | 11938194.31 | 11938194.48 | 11938194.66 | 0.0289 | 0.0200 |
| Jupiter | 27975-07-24 03:21 G | 11938922.45 | 11938922.64 | 11938922.83 | 0.0496 | 0.0273 |
| Jupiter | 27976-08-24 01:55 G | 11939319.36 | 11939319.58 | 11939319.81 | 0.0507 | 0.0146 |
| Jupiter | 27981-01-15 23:31 G | 11940925.32 | 11940925.48 | 11940925.64 | 0.0533 | 0.0383 |
| Jupiter | 27982-02-20 18:00 G | 11941326.02 | 11941326.25 | 11941326.48 | 0.0521 | 0.0114 |
| Saturn | 27987-01-21 15:50 G | 11943121.93 | 11943122.16 | 11943122.40 | 0.0273 | 0.0052 |
| Jupiter | 27987-07-28 08:53 G | 11943309.65 | 11943309.87 | 11943310.09 | 0.0497 | 0.0201 |
| Jupiter | 27988-08-29 00:14 G | 11943707.31 | 11943707.51 | 11943707.72 | 0.0509 | 0.0228 |
| Jupiter | 27993-01-20 18:14 G | 11945313.08 | 11945313.26 | 11945313.44 | 0.0532 | 0.0326 |
| Jupiter | 27994-02-25 21:07 G | 11945714.17 | 11945714.38 | 11945714.58 | 0.0519 | 0.0233 |
| Neptune | 27999-05-06 16:05 G | 11947610.16 | 11947610.17 | 11947610.22 | 0.0088 | 0.0087 |
| Pluto | 27999-07-04 22:19 G | 11947669.19 | 11947669.43 | 11947669.69 | 0.0079 | 0.0005 |
| Jupiter | 27999-08-01 20:09 G | 11947697.14 | 11947697.34 | 11947697.56 | 0.0498 | 0.0177 |
| Neptune | 28000-05-08 03:07 G | 11947977.59 | 11947977.63 | 11947977.72 | 0.0088 | 0.0085 |
| Jupiter | 28000-09-02 11:45 G | 11948094.81 | 11948094.99 | 11948095.18 | 0.0511 | 0.0331 |

29TH MILLENNIUM CE

This is a list of transits of Moon in the 29th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|------|-------------------------|---|-------|-----|-----|--------|-------|---|
|------|-------------------------|---|-------|-----|-----|--------|-------|---|

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 28001-01-07 19:55 G | 11948222.13 | 11948222.33 | 11948222.54 | 0.0140 | 0.0081 |
| Neptune | 28001-05-10 14:53 G | 11948344.98 | 11948345.12 | 11948345.29 | 0.0088 | 0.0069 |
| Uranus | 28002-01-12 06:43 G | 11948591.53 | 11948591.78 | 11948592.04 | 0.0140 | 0.0019 |
| Neptune | 28002-05-12 21:21 G | 11948712.23 | 11948712.39 | 11948712.57 | 0.0088 | 0.0067 |
| Saturn | 28002-07-20 17:17 G | 11948780.97 | 11948781.22 | 11948781.47 | 0.0288 | 0.0006 |
| Uranus | 28003-01-17 07:55 G | 11948961.62 | 11948961.83 | 11948962.07 | 0.0141 | 0.0059 |
| Neptune | 28003-05-15 12:57 G | 11949079.85 | 11949080.04 | 11949080.27 | 0.0088 | 0.0051 |
| Uranus | 28004-01-21 21:07 G | 11949331.32 | 11949331.38 | 11949331.46 | 0.0141 | 0.0136 |
| Neptune | 28004-05-16 16:33 G | 11949447.00 | 11949447.19 | 11949447.43 | 0.0088 | 0.0049 |
| Jupiter | 28005-01-26 02:53 G | 11949701.43 | 11949701.62 | 11949701.81 | 0.0531 | 0.0294 |
| Neptune | 28005-05-19 10:05 G | 11949814.69 | 11949814.92 | 11949815.18 | 0.0088 | 0.0032 |
| Jupiter | 28006-03-02 13:12 G | 11950101.86 | 11950102.05 | 11950102.26 | 0.0517 | 0.0292 |
| Neptune | 28006-05-21 14:24 G | 11950181.87 | 11950182.10 | 11950182.34 | 0.0088 | 0.0029 |
| Neptune | 28007-05-24 05:45 G | 11950549.48 | 11950549.74 | 11950550.01 | 0.0088 | 0.0013 |
| Neptune | 28008-05-25 13:41 G | 11950916.82 | 11950917.07 | 11950917.32 | 0.0088 | 0.0010 |
| Neptune | 28009-05-28 00:14 G | 11951284.24 | 11951284.51 | 11951284.77 | 0.0088 | 0.0006 |
| Neptune | 28010-05-30 12:29 G | 11951651.78 | 11951652.02 | 11951652.27 | 0.0088 | 0.0009 |
| Jupiter | 28010-07-05 20:09 G | 11951688.31 | 11951688.34 | 11951688.39 | 0.0491 | 0.0484 |
| Neptune | 28011-06-01 18:00 G | 11952019.01 | 11952019.25 | 11952019.51 | 0.0088 | 0.0026 |
| Jupiter | 28011-08-06 08:38 G | 11952084.63 | 11952084.86 | 11952085.10 | 0.0500 | 0.0132 |
| Neptune | 28012-06-03 10:33 G | 11952386.71 | 11952386.94 | 11952387.19 | 0.0088 | 0.0029 |
| Jupiter | 28012-09-07 03:36 G | 11952482.51 | 11952482.65 | 11952482.80 | 0.0513 | 0.0396 |
| Neptune | 28013-06-05 13:55 G | 11952753.88 | 11952754.08 | 11952754.32 | 0.0088 | 0.0045 |
| Neptune | 28014-06-08 07:12 G | 11953121.60 | 11953121.80 | 11953122.04 | 0.0088 | 0.0047 |
| Neptune | 28015-06-10 11:31 G | 11953488.83 | 11953488.98 | 11953489.18 | 0.0088 | 0.0063 |
| Saturn | 28016-01-16 16:05 G | 11953708.94 | 11953709.17 | 11953709.41 | 0.0274 | 0.0110 |
| Neptune | 28016-06-12 02:38 G | 11953856.45 | 11953856.61 | 11953856.80 | 0.0088 | 0.0066 |
| Saturn | 28017-01-27 21:36 G | 11954086.33 | 11954086.40 | 11954086.49 | 0.0271 | 0.0257 |
| Jupiter | 28017-01-31 02:53 G | 11954089.40 | 11954089.62 | 11954089.85 | 0.0529 | 0.0195 |
| Neptune | 28017-06-14 11:02 G | 11954223.90 | 11954223.96 | 11954224.07 | 0.0088 | 0.0082 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 28018-03-07 11:02 G | 11954489.79 | 11954489.96 | 11954490.14 | 0.0515 | 0.0321 |
| Neptune | 28018-06-16 20:24 G | 11954591.32 | 11954591.35 | 11954591.46 | 0.0088 | 0.0085 |
| Jupiter | 28022-07-10 09:07 G | 11956075.80 | 11956075.88 | 11956075.99 | 0.0492 | 0.0448 |
| Jupiter | 28023-08-10 14:09 G | 11956471.87 | 11956472.09 | 11956472.32 | 0.0501 | 0.0037 |
| Jupiter | 28024-09-12 01:26 G | 11956870.42 | 11956870.56 | 11956870.70 | 0.0515 | 0.0417 |
| Jupiter | 28029-02-05 05:31 G | 11958477.51 | 11958477.73 | 11958477.96 | 0.0527 | 0.0072 |
| Jupiter | 28030-03-12 09:36 G | 11958877.75 | 11958877.90 | 11958878.06 | 0.0513 | 0.0391 |
| Saturn | 28031-07-14 10:33 G | 11959366.77 | 11959366.94 | 11959367.11 | 0.0286 | 0.0201 |
| Saturn | 28032-07-27 09:07 G | 11959745.77 | 11959745.88 | 11959745.99 | 0.0289 | 0.0254 |
| Jupiter | 28034-07-14 11:02 G | 11960462.85 | 11960462.96 | 11960463.08 | 0.0493 | 0.0432 |
| Jupiter | 28035-08-15 11:45 G | 11960859.76 | 11960859.99 | 11960860.23 | 0.0503 | 0.0064 |
| Jupiter | 28036-09-16 16:48 G | 11961258.13 | 11961258.20 | 11961258.28 | 0.0517 | 0.0488 |
| Mars | 28038-05-21 17:02 G | 11961870.06 | 11961870.21 | 11961870.35 | 0.1597 | 0.0892 |
| Uranus | 28040-07-08 16:05 G | 11962648.99 | 11962649.17 | 11962649.39 | 0.0139 | 0.0087 |
| Jupiter | 28041-02-10 08:09 G | 11962865.60 | 11962865.84 | 11962866.08 | 0.0525 | 0.0019 |
| Uranus | 28041-07-13 13:12 G | 11963018.80 | 11963019.05 | 11963019.29 | 0.0138 | 0.0019 |
| Jupiter | 28042-03-16 16:48 G | 11963265.15 | 11963265.20 | 11963265.27 | 0.0511 | 0.0490 |
| Uranus | 28042-07-17 20:38 G | 11963388.14 | 11963388.36 | 11963388.61 | 0.0138 | 0.0059 |
| Uranus | 28043-07-22 15:07 G | 11963758.02 | 11963758.13 | 11963758.29 | 0.0137 | 0.0114 |
| Saturn | 28046-01-22 23:17 G | 11964673.25 | 11964673.47 | 11964673.70 | 0.0273 | 0.0097 |
| Jupiter | 28046-07-19 01:26 G | 11964850.42 | 11964850.56 | 11964850.72 | 0.0495 | 0.0374 |
| Jupiter | 28047-08-19 18:29 G | 11965247.04 | 11965247.27 | 11965247.50 | 0.0505 | 0.0109 |
| Jupiter | 28052-01-10 20:09 G | 11966852.27 | 11966852.34 | 11966852.43 | 0.0534 | 0.0501 |
| Jupiter | 28053-02-14 22:19 G | 11967253.20 | 11967253.43 | 11967253.67 | 0.0523 | 0.0024 |
| Jupiter | 28058-07-23 05:02 G | 11969237.52 | 11969237.71 | 11969237.91 | 0.0495 | 0.0280 |
| Jupiter | 28059-08-24 12:57 G | 11969634.82 | 11969635.04 | 11969635.26 | 0.0507 | 0.0136 |
| Saturn | 28061-07-21 21:21 G | 11970332.15 | 11970332.39 | 11970332.64 | 0.0288 | 0.0065 |
| Jupiter | 28064-01-15 14:53 G | 11971239.96 | 11971240.12 | 11971240.28 | 0.0534 | 0.0392 |
| Jupiter | 28065-02-20 03:36 G | 11971641.42 | 11971641.65 | 11971641.87 | 0.0522 | 0.0113 |
| Jupiter | 28070-07-27 16:33 G | 11973624.99 | 11973625.19 | 11973625.39 | 0.0497 | 0.0212 |

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| Jupiter | 28071-08-28 23:45 G | 11974022.28 | 11974022.49 | 11974022.71 | 0.0508 | 0.0222 |
| Saturn | 28075-01-17 17:31 G | 11975259.99 | 11975260.23 | 11975260.48 | 0.0274 | 0.0064 |
| Jupiter | 28076-01-21 03:21 G | 11975628.46 | 11975628.64 | 11975628.81 | 0.0532 | 0.0337 |
| Jupiter | 28077-02-24 21:21 G | 11976029.17 | 11976029.39 | 11976029.61 | 0.0520 | 0.0230 |
| Neptune | 28081-11-05 02:09 G | 11977743.55 | 11977743.59 | 11977743.64 | 0.0090 | 0.0088 |
| Jupiter | 28082-08-01 02:53 G | 11978012.40 | 11978012.62 | 11978012.85 | 0.0498 | 0.0187 |
| Neptune | 28082-11-07 18:00 G | 11978111.20 | 11978111.25 | 11978111.31 | 0.0090 | 0.0087 |
| Jupiter | 28083-09-02 14:53 G | 11978409.95 | 11978410.12 | 11978410.29 | 0.0510 | 0.0330 |
| Neptune | 28083-11-10 02:09 G | 11978478.43 | 11978478.59 | 11978478.76 | 0.0090 | 0.0069 |
| Neptune | 28084-11-11 21:07 G | 11978846.23 | 11978846.38 | 11978846.55 | 0.0090 | 0.0068 |
| Uranus | 28085-01-08 08:09 G | 11978903.66 | 11978903.84 | 11978904.05 | 0.0140 | 0.0090 |
| Neptune | 28085-11-14 03:21 G | 11979213.43 | 11979213.64 | 11979213.87 | 0.0090 | 0.0049 |
| Uranus | 28086-01-12 18:57 G | 11979273.04 | 11979273.29 | 11979273.55 | 0.0140 | 0.0006 |
| Neptune | 28086-11-16 23:17 G | 11979581.27 | 11979581.47 | 11979581.71 | 0.0090 | 0.0048 |
| Uranus | 28087-01-17 20:09 G | 11979643.13 | 11979643.34 | 11979643.58 | 0.0141 | 0.0063 |
| Neptune | 28087-11-19 06:14 G | 11979948.53 | 11979948.76 | 11979949.01 | 0.0090 | 0.0029 |
| Uranus | 28088-01-22 08:24 G | 11980012.78 | 11980012.85 | 11980012.94 | 0.0141 | 0.0134 |
| Jupiter | 28088-01-26 02:53 G | 11980016.43 | 11980016.62 | 11980016.83 | 0.0531 | 0.0296 |
| Neptune | 28088-11-21 00:14 G | 11980316.25 | 11980316.51 | 11980316.76 | 0.0090 | 0.0027 |
| Jupiter | 28089-03-01 20:38 G | 11980417.17 | 11980417.36 | 11980417.55 | 0.0518 | 0.0286 |
| Neptune | 28089-11-23 10:33 G | 11980683.70 | 11980683.94 | 11980684.20 | 0.0090 | 0.0009 |
| Saturn | 28090-07-16 00:43 G | 11980918.32 | 11980918.53 | 11980918.73 | 0.0286 | 0.0140 |
| Neptune | 28090-11-26 00:14 G | 11981051.24 | 11981051.51 | 11981051.78 | 0.0090 | 0.0007 |
| Neptune | 28091-11-28 15:21 G | 11981418.89 | 11981419.14 | 11981419.39 | 0.0090 | 0.0013 |
| Neptune | 28092-11-29 23:31 G | 11981786.23 | 11981786.48 | 11981786.75 | 0.0090 | 0.0015 |
| Jupiter | 28093-07-05 09:36 G | 11982003.86 | 11982003.90 | 11982003.94 | 0.0491 | 0.0482 |
| Neptune | 28093-12-02 18:14 G | 11982154.03 | 11982154.26 | 11982154.51 | 0.0090 | 0.0034 |
| Jupiter | 28094-08-05 09:50 G | 11982399.69 | 11982399.91 | 11982400.13 | 0.0500 | 0.0137 |
| Neptune | 28094-12-05 00:14 G | 11982521.29 | 11982521.51 | 11982521.77 | 0.0089 | 0.0035 |
| Jupiter | 28095-09-07 13:12 G | 11982797.89 | 11982798.05 | 11982798.21 | 0.0513 | 0.0387 |

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| Neptune | 28095-12-07 20:09 G | 11982889.15 | 11982889.34 | 11982889.56 | 0.0089 | 0.0054 |
| Neptune | 28096-12-09 02:38 G | 11983256.42 | 11983256.61 | 11983256.82 | 0.0089 | 0.0055 |
| Neptune | 28097-12-11 20:24 G | 11983624.22 | 11983624.35 | 11983624.52 | 0.0089 | 0.0074 |
| Neptune | 28098-12-14 06:29 G | 11983991.66 | 11983991.77 | 11983991.92 | 0.0089 | 0.0076 |
| Jupiter | 28100-01-31 04:48 G | 11984404.49 | 11984404.70 | 11984404.91 | 0.0529 | 0.0196 |
| Jupiter | 28101-03-07 14:24 G | 11984804.92 | 11984805.10 | 11984805.30 | 0.0515 | 0.0310 |
| Saturn | 28104-01-13 14:38 G | 11985847.00 | 11985847.11 | 11985847.24 | 0.0276 | 0.0236 |
| Saturn | 28105-01-25 06:00 G | 11986224.54 | 11986224.75 | 11986224.96 | 0.0273 | 0.0147 |
| Jupiter | 28105-07-10 08:24 G | 11986390.77 | 11986390.85 | 11986390.93 | 0.0492 | 0.0459 |
| Jupiter | 28106-08-11 04:33 G | 11986787.46 | 11986787.69 | 11986787.93 | 0.0502 | 0.0038 |
| Jupiter | 28107-09-13 02:09 G | 11987185.45 | 11987185.59 | 11987185.72 | 0.0515 | 0.0411 |
| Jupiter | 28112-02-06 08:09 G | 11988792.60 | 11988792.84 | 11988793.08 | 0.0527 | 0.0078 |
| Jupiter | 28113-03-12 02:24 G | 11989192.45 | 11989192.60 | 11989192.75 | 0.0513 | 0.0386 |
| Mars | 28117-05-24 11:02 G | 11990726.79 | 11990726.96 | 11990727.14 | 0.1595 | 0.0166 |
| Jupiter | 28117-07-14 22:19 G | 11990778.34 | 11990778.43 | 11990778.53 | 0.0493 | 0.0444 |
| Jupiter | 28118-08-15 07:41 G | 11991174.59 | 11991174.82 | 11991175.06 | 0.0503 | 0.0053 |
| Jupiter | 28119-09-18 01:12 G | 11991573.48 | 11991573.55 | 11991573.63 | 0.0516 | 0.0483 |
| Saturn | 28120-07-24 05:02 G | 11991883.50 | 11991883.71 | 11991883.94 | 0.0288 | 0.0129 |
| Jupiter | 28124-02-10 23:45 G | 11993180.26 | 11993180.49 | 11993180.72 | 0.0526 | 0.0026 |
| Uranus | 28124-07-10 04:33 G | 11993330.50 | 11993330.69 | 11993330.92 | 0.0139 | 0.0081 |
| Jupiter | 28125-03-17 02:24 G | 11993580.54 | 11993580.60 | 11993580.67 | 0.0512 | 0.0490 |
| Uranus | 28125-07-15 02:09 G | 11993700.34 | 11993700.59 | 11993700.84 | 0.0138 | 0.0009 |
| Uranus | 28126-07-19 09:07 G | 11994069.65 | 11994069.88 | 11994070.13 | 0.0138 | 0.0053 |
| Uranus | 28127-07-24 04:19 G | 11994439.63 | 11994439.68 | 11994439.76 | 0.0137 | 0.0133 |
| Jupiter | 28129-07-19 01:26 G | 11995165.41 | 11995165.56 | 11995165.72 | 0.0494 | 0.0376 |
| Jupiter | 28130-08-20 02:38 G | 11995562.39 | 11995562.61 | 11995562.83 | 0.0504 | 0.0091 |
| Saturn | 28134-01-20 00:29 G | 11996811.28 | 11996811.52 | 11996811.76 | 0.0274 | 0.0013 |
| Jupiter | 28135-01-10 10:48 G | 11997166.89 | 11997166.95 | 11997167.02 | 0.0535 | 0.0511 |
| Jupiter | 28136-02-16 07:41 G | 11997568.59 | 11997568.82 | 11997569.05 | 0.0524 | 0.0014 |
| Jupiter | 28141-07-23 11:17 G | 11999552.79 | 11999552.97 | 11999553.16 | 0.0495 | 0.0283 |

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| Jupiter | 28142-08-24 11:02 G | 11999949.72 | 11999949.96 | 11999950.19 | 0.0506 | 0.0127 |
| Jupiter | 28147-01-16 00:57 G | 12001555.39 | 12001555.54 | 12001555.70 | 0.0534 | 0.0397 |
| Jupiter | 28148-02-21 01:41 G | 12001956.34 | 12001956.57 | 12001956.81 | 0.0522 | 0.0114 |
| Saturn | 28149-07-18 17:02 G | 12002469.98 | 12002470.21 | 12002470.45 | 0.0286 | 0.0074 |
| Jupiter | 28153-07-27 22:19 G | 12003940.21 | 12003940.43 | 12003940.65 | 0.0496 | 0.0220 |
| Jupiter | 28154-08-29 03:50 G | 12004337.46 | 12004337.66 | 12004337.87 | 0.0508 | 0.0221 |
| Pluto | 28159-01-05 20:38 G | 12005928.11 | 12005928.36 | 12005928.61 | 0.0065 | 0.0000 |
| Jupiter | 28159-01-20 22:19 G | 12005943.25 | 12005943.43 | 12005943.61 | 0.0532 | 0.0345 |
| Jupiter | 28160-02-25 23:31 G | 12006344.28 | 12006344.48 | 12006344.69 | 0.0520 | 0.0224 |
| Saturn | 28163-01-15 00:00 G | 12007398.32 | 12007398.50 | 12007398.69 | 0.0276 | 0.0184 |
| Saturn | 28164-01-27 10:05 G | 12007775.74 | 12007775.92 | 12007776.09 | 0.0273 | 0.0197 |
| Neptune | 28164-05-08 11:45 G | 12007877.97 | 12007877.99 | 12007878.03 | 0.0088 | 0.0087 |
| Neptune | 28165-05-10 17:02 G | 12008245.13 | 12008245.21 | 12008245.33 | 0.0088 | 0.0081 |
| Jupiter | 28165-08-01 02:53 G | 12008327.41 | 12008327.62 | 12008327.83 | 0.0498 | 0.0199 |
| Neptune | 28166-05-13 10:05 G | 12008612.77 | 12008612.92 | 12008613.08 | 0.0088 | 0.0068 |
| Jupiter | 28166-09-02 22:33 G | 12008725.26 | 12008725.44 | 12008725.63 | 0.0510 | 0.0324 |
| Neptune | 28167-05-15 13:12 G | 12008979.88 | 12008980.05 | 12008980.24 | 0.0088 | 0.0062 |
| Neptune | 28168-05-17 06:29 G | 12009347.55 | 12009347.77 | 12009347.99 | 0.0088 | 0.0048 |
| Uranus | 28169-01-09 23:02 G | 12009585.25 | 12009585.46 | 12009585.69 | 0.0140 | 0.0070 |
| Neptune | 28169-05-19 11:02 G | 12009714.75 | 12009714.96 | 12009715.19 | 0.0088 | 0.0043 |
| Uranus | 28170-01-14 10:05 G | 12009954.67 | 12009954.92 | 12009955.17 | 0.0140 | 0.0009 |
| Neptune | 28170-05-22 00:29 G | 12010082.29 | 12010082.52 | 12010082.79 | 0.0088 | 0.0030 |
| Uranus | 28171-01-19 11:45 G | 12010324.78 | 12010324.99 | 12010325.22 | 0.0141 | 0.0071 |
| Jupiter | 28171-01-26 02:38 G | 12010331.43 | 12010331.61 | 12010331.79 | 0.0531 | 0.0308 |
| Neptune | 28171-05-24 09:21 G | 12010449.66 | 12010449.89 | 12010450.14 | 0.0088 | 0.0025 |
| Jupiter | 28172-03-01 19:41 G | 12010732.11 | 12010732.32 | 12010732.52 | 0.0518 | 0.0273 |
| Neptune | 28172-05-25 18:29 G | 12010817.01 | 12010817.27 | 12010817.54 | 0.0088 | 0.0011 |
| Neptune | 28173-05-28 08:53 G | 12011184.62 | 12011184.87 | 12011185.12 | 0.0088 | 0.0004 |
| Neptune | 28174-05-30 13:41 G | 12011551.81 | 12011552.07 | 12011552.33 | 0.0088 | 0.0010 |
| Neptune | 28175-06-02 06:57 G | 12011919.54 | 12011919.79 | 12011920.05 | 0.0088 | 0.0015 |

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| Neptune | 28176-06-03 10:19 G | 12012286.70 | 12012286.93 | 12012287.18 | 0.0088 | 0.0029 |
| Jupiter | 28176-07-05 05:17 G | 12012318.72 | 12012318.72 | 12012318.74 | 0.0491 | 0.0491 |
| Neptune | 28177-06-06 03:21 G | 12012654.40 | 12012654.64 | 12012654.89 | 0.0088 | 0.0033 |
| Jupiter | 28177-08-05 19:26 G | 12012715.09 | 12012715.31 | 12012715.54 | 0.0499 | 0.0147 |
| Neptune | 28178-06-08 08:53 G | 12013021.67 | 12013021.87 | 12013022.08 | 0.0088 | 0.0048 |
| Saturn | 28178-07-13 02:09 G | 12013056.50 | 12013056.59 | 12013056.70 | 0.0285 | 0.0256 |
| Jupiter | 28178-09-07 07:41 G | 12013112.67 | 12013112.82 | 12013112.98 | 0.0512 | 0.0372 |
| Neptune | 28179-06-10 21:36 G | 12013389.20 | 12013389.40 | 12013389.63 | 0.0088 | 0.0053 |
| Saturn | 28179-07-26 20:38 G | 12013435.20 | 12013435.36 | 12013435.55 | 0.0288 | 0.0194 |
| Neptune | 28180-06-12 07:12 G | 12013756.66 | 12013756.80 | 12013756.98 | 0.0088 | 0.0068 |
| Neptune | 28181-06-14 15:36 G | 12014124.01 | 12014124.15 | 12014124.31 | 0.0088 | 0.0072 |
| Neptune | 28182-06-17 06:43 G | 12014491.74 | 12014491.78 | 12014491.83 | 0.0088 | 0.0086 |
| Jupiter | 28183-01-31 03:36 G | 12014719.43 | 12014719.65 | 12014719.88 | 0.0530 | 0.0203 |
| Jupiter | 28184-03-06 09:21 G | 12015119.71 | 12015119.89 | 12015120.08 | 0.0516 | 0.0303 |
| Jupiter | 28188-07-09 19:12 G | 12016706.24 | 12016706.30 | 12016706.37 | 0.0492 | 0.0469 |
| Jupiter | 28189-08-09 22:19 G | 12017102.20 | 12017102.43 | 12017102.67 | 0.0501 | 0.0049 |
| Jupiter | 28190-09-12 07:12 G | 12017500.65 | 12017500.80 | 12017500.94 | 0.0514 | 0.0396 |
| Saturn | 28193-01-21 14:38 G | 12018362.87 | 12018363.11 | 12018363.34 | 0.0273 | 0.0041 |
| Jupiter | 28195-02-04 23:31 G | 12019107.25 | 12019107.48 | 12019107.71 | 0.0528 | 0.0089 |
| Jupiter | 28196-03-11 11:17 G | 12019507.82 | 12019507.97 | 12019508.13 | 0.0514 | 0.0386 |
| Jupiter | 28200-07-14 20:24 G | 12021093.26 | 12021093.35 | 12021093.46 | 0.0492 | 0.0445 |
| Jupiter | 28201-08-15 15:21 G | 12021489.92 | 12021490.14 | 12021490.37 | 0.0502 | 0.0044 |
| Jupiter | 28202-09-17 17:02 G | 12021888.12 | 12021888.21 | 12021888.30 | 0.0516 | 0.0472 |
| Jupiter | 28207-02-11 09:21 G | 12023495.66 | 12023495.89 | 12023496.12 | 0.0526 | 0.0035 |
| Jupiter | 28208-03-16 22:33 G | 12023895.38 | 12023895.44 | 12023895.52 | 0.0512 | 0.0488 |
| Uranus | 28208-07-11 18:29 G | 12024012.07 | 12024012.27 | 12024012.49 | 0.0139 | 0.0078 |
| Saturn | 28208-07-21 06:57 G | 12024021.54 | 12024021.79 | 12024022.04 | 0.0286 | 0.0008 |
| Uranus | 28209-07-16 16:19 G | 12024381.93 | 12024382.18 | 12024382.43 | 0.0138 | 0.0008 |
| Uranus | 28210-07-20 23:02 G | 12024751.26 | 12024751.46 | 12024751.70 | 0.0138 | 0.0069 |
| Uranus | 28211-07-25 19:26 G | 12025121.21 | 12025121.31 | 12025121.43 | 0.0137 | 0.0124 |

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| Jupiter | 28212-07-19 07:12 G | 12025480.66 | 12025480.80 | 12025480.95 | 0.0494 | 0.0378 |
| Jupiter | 28213-08-20 00:29 G | 12025877.28 | 12025877.52 | 12025877.76 | 0.0504 | 0.0080 |
| Jupiter | 28218-01-10 19:41 G | 12027482.27 | 12027482.32 | 12027482.38 | 0.0535 | 0.0517 |
| Jupiter | 28219-02-16 01:12 G | 12027883.31 | 12027883.55 | 12027883.79 | 0.0524 | 0.0005 |
| Saturn | 28222-01-17 05:45 G | 12028949.52 | 12028949.74 | 12028949.97 | 0.0275 | 0.0131 |
| Saturn | 28223-01-29 16:48 G | 12029327.10 | 12029327.20 | 12029327.29 | 0.0272 | 0.0250 |
| Jupiter | 28224-07-23 15:07 G | 12029867.94 | 12029868.13 | 12029868.33 | 0.0495 | 0.0284 |
| Jupiter | 28225-08-24 15:21 G | 12030264.92 | 12030265.14 | 12030265.36 | 0.0506 | 0.0119 |
| Jupiter | 28230-01-15 15:36 G | 12031870.00 | 12031870.15 | 12031870.30 | 0.0534 | 0.0408 |
| Jupiter | 28231-02-21 02:09 G | 12032271.37 | 12032271.59 | 12032271.81 | 0.0522 | 0.0108 |
| Jupiter | 28236-07-27 19:26 G | 12034255.12 | 12034255.31 | 12034255.52 | 0.0496 | 0.0232 |
| Saturn | 28237-07-15 18:57 G | 12034608.13 | 12034608.29 | 12034608.47 | 0.0285 | 0.0194 |
| Jupiter | 28237-08-29 06:14 G | 12034652.54 | 12034652.76 | 12034652.98 | 0.0508 | 0.0210 |
| Saturn | 28238-07-29 16:48 G | 12034987.11 | 12034987.20 | 12034987.31 | 0.0288 | 0.0260 |
| Jupiter | 28242-01-20 19:26 G | 12036258.15 | 12036258.31 | 12036258.47 | 0.0533 | 0.0364 |
| Jupiter | 28243-02-25 20:53 G | 12036659.15 | 12036659.37 | 12036659.59 | 0.0521 | 0.0213 |
| Pluto | 28247-07-08 17:45 G | 12038252.98 | 12038253.24 | 12038253.51 | 0.0079 | 0.0002 |
| Neptune | 28247-11-11 10:48 G | 12038378.84 | 12038378.95 | 12038379.10 | 0.0090 | 0.0078 |
| Jupiter | 28248-08-01 12:00 G | 12038642.79 | 12038643.00 | 12038643.22 | 0.0497 | 0.0208 |
| Neptune | 28248-11-12 16:48 G | 12038746.08 | 12038746.20 | 12038746.38 | 0.0090 | 0.0073 |
| Jupiter | 28249-09-02 16:05 G | 12039039.99 | 12039040.17 | 12039040.35 | 0.0509 | 0.0313 |
| Neptune | 28249-11-15 12:43 G | 12039113.84 | 12039114.03 | 12039114.24 | 0.0090 | 0.0058 |
| Neptune | 28250-11-17 21:21 G | 12039481.19 | 12039481.39 | 12039481.59 | 0.0090 | 0.0052 |
| Neptune | 28251-11-20 13:12 G | 12039848.83 | 12039849.05 | 12039849.31 | 0.0090 | 0.0039 |
| Uranus | 28252-01-07 12:57 G | 12039897.01 | 12039897.04 | 12039897.12 | 0.0139 | 0.0136 |
| Saturn | 28252-01-25 04:33 G | 12039914.46 | 12039914.69 | 12039914.92 | 0.0273 | 0.0095 |
| Neptune | 28252-11-22 01:26 G | 12040216.34 | 12040216.56 | 12040216.81 | 0.0090 | 0.0032 |
| Uranus | 28253-01-11 12:57 G | 12040266.84 | 12040267.04 | 12040267.26 | 0.0140 | 0.0078 |
| Neptune | 28253-11-24 12:57 G | 12040583.78 | 12040584.04 | 12040584.31 | 0.0090 | 0.0017 |
| Uranus | 28254-01-16 00:00 G | 12040636.25 | 12040636.50 | 12040636.76 | 0.0140 | 0.0008 |

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| Jupiter | 28254-01-25 22:33 G | 12040646.25 | 12040646.44 | 12040646.63 | 0.0532 | 0.0321 |
| Neptune | 28254-11-27 05:45 G | 12040951.50 | 12040951.74 | 12040952.00 | 0.0090 | 0.0009 |
| Uranus | 28255-01-21 01:12 G | 12041006.35 | 12041006.55 | 12041006.78 | 0.0141 | 0.0075 |
| Jupiter | 28255-03-02 15:07 G | 12041046.94 | 12041047.13 | 12041047.32 | 0.0519 | 0.0265 |
| Neptune | 28255-11-29 13:12 G | 12041318.79 | 12041319.05 | 12041319.32 | 0.0090 | 0.0004 |
| Neptune | 28256-12-01 09:07 G | 12041686.63 | 12041686.88 | 12041687.13 | 0.0090 | 0.0012 |
| Neptune | 28257-12-03 14:53 G | 12042053.88 | 12042054.12 | 12042054.38 | 0.0090 | 0.0024 |
| Neptune | 28258-12-06 10:33 G | 12042421.70 | 12042421.94 | 12042422.19 | 0.0090 | 0.0033 |
| Neptune | 28259-12-08 18:00 G | 12042789.05 | 12042789.25 | 12042789.48 | 0.0090 | 0.0045 |
| Jupiter | 28260-08-05 12:43 G | 12043029.80 | 12043030.03 | 12043030.25 | 0.0499 | 0.0154 |
| Neptune | 28260-12-10 10:33 G | 12043156.75 | 12043156.94 | 12043157.17 | 0.0090 | 0.0055 |
| Jupiter | 28261-09-07 13:12 G | 12043427.89 | 12043428.05 | 12043428.22 | 0.0511 | 0.0357 |
| Neptune | 28261-12-12 22:05 G | 12043524.27 | 12043524.42 | 12043524.61 | 0.0089 | 0.0066 |
| Neptune | 28262-12-15 09:36 G | 12043891.78 | 12043891.90 | 12043892.07 | 0.0089 | 0.0075 |
| Neptune | 28263-12-18 01:26 G | 12044259.51 | 12044259.56 | 12044259.67 | 0.0089 | 0.0085 |
| Jupiter | 28266-01-30 22:05 G | 12045034.22 | 12045034.42 | 12045034.64 | 0.0530 | 0.0213 |
| Jupiter | 28267-03-07 18:00 G | 12045435.06 | 12045435.25 | 12045435.45 | 0.0517 | 0.0295 |
| Saturn | 28267-07-23 19:41 G | 12045573.07 | 12045573.32 | 12045573.56 | 0.0287 | 0.0060 |
| Jupiter | 28271-07-10 17:02 G | 12047021.14 | 12047021.21 | 12047021.28 | 0.0491 | 0.0470 |
| Jupiter | 28272-08-10 06:57 G | 12047417.56 | 12047417.79 | 12047418.02 | 0.0500 | 0.0048 |
| Jupiter | 28273-09-12 00:00 G | 12047815.35 | 12047815.50 | 12047815.66 | 0.0513 | 0.0387 |
| Jupiter | 28278-02-05 07:26 G | 12049422.58 | 12049422.81 | 12049423.04 | 0.0528 | 0.0099 |
| Jupiter | 28279-03-12 04:05 G | 12049822.52 | 12049822.67 | 12049822.83 | 0.0514 | 0.0379 |
| Saturn | 28281-01-18 15:21 G | 12050500.90 | 12050501.14 | 12050501.37 | 0.0275 | 0.0075 |
| Jupiter | 28283-07-15 01:12 G | 12051408.47 | 12051408.55 | 12051408.64 | 0.0493 | 0.0453 |
| Mars | 28283-11-25 09:07 G | 12051541.77 | 12051541.88 | 12051541.99 | 0.1942 | 0.1697 |
| Jupiter | 28284-08-14 12:57 G | 12051804.80 | 12051805.04 | 12051805.28 | 0.0502 | 0.0034 |
| Jupiter | 28285-09-17 00:43 G | 12052203.44 | 12052203.53 | 12052203.63 | 0.0516 | 0.0469 |
| Jupiter | 28290-02-09 23:45 G | 12053810.25 | 12053810.49 | 12053810.72 | 0.0526 | 0.0049 |
| Jupiter | 28291-03-17 02:53 G | 12054210.55 | 12054210.62 | 12054210.70 | 0.0512 | 0.0481 |

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| Uranus | 28292-07-12 09:36 G | 12054693.69 | 12054693.90 | 12054694.13 | 0.0139 | 0.0068 |
| Uranus | 28293-07-17 07:41 G | 12055063.57 | 12055063.82 | 12055064.07 | 0.0138 | 0.0003 |
| Uranus | 28294-07-21 14:24 G | 12055432.88 | 12055433.10 | 12055433.32 | 0.0138 | 0.0065 |
| Jupiter | 28295-07-19 09:36 G | 12055795.76 | 12055795.90 | 12055796.07 | 0.0493 | 0.0377 |
| Saturn | 28296-07-17 13:55 G | 12056159.87 | 12056160.08 | 12056160.30 | 0.0285 | 0.0128 |
| Jupiter | 28296-08-19 02:53 G | 12056192.40 | 12056192.62 | 12056192.85 | 0.0504 | 0.0066 |
| Jupiter | 28301-01-10 03:07 G | 12057796.62 | 12057796.63 | 12057796.65 | 0.0535 | 0.0534 |
| Jupiter | 28302-02-16 00:29 G | 12058198.30 | 12058198.52 | 12058198.75 | 0.0525 | 0.0011 |
| Jupiter | 28307-07-24 14:24 G | 12060182.92 | 12060183.10 | 12060183.29 | 0.0494 | 0.0286 |
| Jupiter | 28308-08-24 16:48 G | 12060579.97 | 12060580.20 | 12060580.44 | 0.0505 | 0.0110 |
| Saturn | 28310-01-15 00:29 G | 12061088.40 | 12061088.52 | 12061088.66 | 0.0276 | 0.0231 |
| Saturn | 28311-01-27 13:26 G | 12061465.85 | 12061466.06 | 12061466.28 | 0.0273 | 0.0152 |
| Jupiter | 28313-01-15 13:26 G | 12062184.92 | 12062185.06 | 12062185.19 | 0.0535 | 0.0423 |
| Jupiter | 28314-02-20 22:05 G | 12062586.19 | 12062586.42 | 12062586.66 | 0.0523 | 0.0098 |
| Jupiter | 28319-07-29 04:19 G | 12064570.47 | 12064570.68 | 12064570.89 | 0.0495 | 0.0237 |
| Jupiter | 28320-08-29 01:12 G | 12064967.34 | 12064967.55 | 12064967.75 | 0.0507 | 0.0205 |
| Mars | 28322-05-26 02:53 G | 12065602.42 | 12065602.62 | 12065602.81 | 0.1600 | 0.0100 |
| Jupiter | 28325-01-20 17:02 G | 12066573.05 | 12066573.21 | 12066573.39 | 0.0534 | 0.0378 |
| Jupiter | 28326-02-25 19:41 G | 12066974.11 | 12066974.32 | 12066974.53 | 0.0521 | 0.0208 |
| Saturn | 28326-07-26 10:48 G | 12067124.74 | 12067124.95 | 12067125.17 | 0.0287 | 0.0129 |
| Neptune | 28330-05-14 09:07 G | 12068512.76 | 12068512.88 | 12068513.05 | 0.0088 | 0.0072 |
| Neptune | 28331-05-17 01:41 G | 12068880.43 | 12068880.57 | 12068880.74 | 0.0088 | 0.0071 |
| Jupiter | 28331-08-02 05:45 G | 12068957.53 | 12068957.74 | 12068957.95 | 0.0497 | 0.0212 |
| Neptune | 28332-05-18 07:12 G | 12069247.63 | 12069247.80 | 12069248.02 | 0.0088 | 0.0054 |
| Jupiter | 28332-09-02 22:48 G | 12069355.27 | 12069355.45 | 12069355.64 | 0.0509 | 0.0308 |
| Neptune | 28333-05-20 19:55 G | 12069615.14 | 12069615.33 | 12069615.56 | 0.0088 | 0.0052 |
| Neptune | 28334-05-23 06:43 G | 12069982.56 | 12069982.78 | 12069983.02 | 0.0088 | 0.0034 |
| Neptune | 28335-05-25 14:24 G | 12070349.86 | 12070350.10 | 12070350.35 | 0.0088 | 0.0032 |
| Neptune | 28336-05-27 05:17 G | 12070717.48 | 12070717.72 | 12070717.98 | 0.0088 | 0.0014 |
| Uranus | 28337-01-13 02:38 G | 12070948.38 | 12070948.61 | 12070948.86 | 0.0140 | 0.0058 |

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| Jupiter | 28337-01-25 19:26 G | 12070961.14 | 12070961.31 | 12070961.49 | 0.0532 | 0.0334 |
| Neptune | 28337-05-29 09:07 G | 12071084.63 | 12071084.88 | 12071085.14 | 0.0088 | 0.0013 |
| Uranus | 28338-01-17 14:09 G | 12071317.84 | 12071318.09 | 12071318.35 | 0.0140 | 0.0004 |
| Jupiter | 28338-03-02 22:05 G | 12071362.21 | 12071362.42 | 12071362.63 | 0.0519 | 0.0249 |
| Neptune | 28338-06-01 02:24 G | 12071452.35 | 12071452.60 | 12071452.86 | 0.0088 | 0.0006 |
| Uranus | 28339-01-22 15:21 G | 12071687.94 | 12071688.14 | 12071688.35 | 0.0141 | 0.0084 |
| Neptune | 28339-06-03 06:00 G | 12071819.50 | 12071819.75 | 12071820.00 | 0.0088 | 0.0007 |
| Saturn | 28340-01-22 05:02 G | 12072052.48 | 12072052.71 | 12072052.95 | 0.0274 | 0.0018 |
| Neptune | 28340-06-04 21:36 G | 12072187.16 | 12072187.40 | 12072187.66 | 0.0088 | 0.0026 |
| Neptune | 28341-06-07 04:05 G | 12072554.45 | 12072554.67 | 12072554.92 | 0.0088 | 0.0028 |
| Neptune | 28342-06-09 15:50 G | 12072921.95 | 12072922.16 | 12072922.41 | 0.0088 | 0.0046 |
| Neptune | 28343-06-12 04:05 G | 12073289.47 | 12073289.67 | 12073289.88 | 0.0088 | 0.0047 |
| Jupiter | 28343-08-06 21:50 G | 12073345.20 | 12073345.41 | 12073345.63 | 0.0499 | 0.0156 |
| Neptune | 28344-06-13 10:33 G | 12073656.79 | 12073656.94 | 12073657.14 | 0.0088 | 0.0065 |
| Jupiter | 28344-09-07 07:41 G | 12073742.65 | 12073742.82 | 12073742.99 | 0.0511 | 0.0348 |
| Neptune | 28345-06-16 02:24 G | 12074024.45 | 12074024.60 | 12074024.78 | 0.0088 | 0.0066 |
| Neptune | 28346-06-18 06:14 G | 12074391.70 | 12074391.76 | 12074391.84 | 0.0088 | 0.0084 |
| Neptune | 28347-06-20 23:02 G | 12074759.44 | 12074759.46 | 12074759.55 | 0.0088 | 0.0086 |
| Jupiter | 28349-01-31 04:05 G | 12075349.45 | 12075349.67 | 12075349.88 | 0.0530 | 0.0220 |
| Jupiter | 28350-03-07 09:50 G | 12075749.71 | 12075749.91 | 12075750.10 | 0.0517 | 0.0283 |
| Jupiter | 28354-07-10 22:19 G | 12077336.39 | 12077336.43 | 12077336.47 | 0.0491 | 0.0481 |
| Saturn | 28355-07-21 04:48 G | 12077711.46 | 12077711.70 | 12077711.94 | 0.0286 | 0.0065 |
| Jupiter | 28355-08-11 03:36 G | 12077732.41 | 12077732.65 | 12077732.89 | 0.0500 | 0.0052 |
| Jupiter | 28356-09-12 06:14 G | 12078130.61 | 12078130.76 | 12078130.92 | 0.0513 | 0.0379 |
| Jupiter | 28361-02-04 17:17 G | 12079736.99 | 12079737.22 | 12079737.45 | 0.0529 | 0.0112 |
| Jupiter | 28362-03-12 08:24 G | 12080137.70 | 12080137.85 | 12080138.01 | 0.0515 | 0.0376 |
| Jupiter | 28366-07-15 06:57 G | 12081723.70 | 12081723.79 | 12081723.89 | 0.0492 | 0.0452 |
| Jupiter | 28367-08-15 17:45 G | 12082120.01 | 12082120.24 | 12082120.46 | 0.0501 | 0.0028 |
| Jupiter | 28368-09-16 19:12 G | 12082518.20 | 12082518.30 | 12082518.42 | 0.0514 | 0.0458 |
| Saturn | 28369-01-16 11:17 G | 12082639.78 | 12082639.97 | 12082640.17 | 0.0275 | 0.0173 |

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| Saturn | 28370-01-28 20:24 G | 12083017.20 | 12083017.35 | 12083017.52 | 0.0272 | 0.0207 |
| Jupiter | 28373-02-10 00:14 G | 12084125.28 | 12084125.51 | 12084125.73 | 0.0527 | 0.0067 |
| Jupiter | 28374-03-16 21:36 G | 12084525.31 | 12084525.40 | 12084525.50 | 0.0514 | 0.0471 |
| Uranus | 28375-07-10 16:19 G | 12085006.11 | 12085006.18 | 12085006.29 | 0.0139 | 0.0130 |
| Uranus | 28376-07-14 00:57 G | 12085375.33 | 12085375.54 | 12085375.77 | 0.0139 | 0.0066 |
| Uranus | 28377-07-18 22:48 G | 12085745.20 | 12085745.45 | 12085745.71 | 0.0138 | 0.0006 |
| Jupiter | 28378-07-19 09:21 G | 12086110.75 | 12086110.89 | 12086111.04 | 0.0493 | 0.0377 |
| Uranus | 28378-07-23 05:31 G | 12086114.54 | 12086114.73 | 12086114.95 | 0.0138 | 0.0081 |
| Uranus | 28379-07-28 02:24 G | 12086484.58 | 12086484.60 | 12086484.62 | 0.0137 | 0.0137 |
| Jupiter | 28379-08-20 04:33 G | 12086507.45 | 12086507.69 | 12086507.94 | 0.0503 | 0.0059 |
| Saturn | 28384-07-14 09:07 G | 12088297.79 | 12088297.88 | 12088298.00 | 0.0284 | 0.0255 |
| Jupiter | 28385-02-14 23:17 G | 12088513.23 | 12088513.47 | 12088513.71 | 0.0526 | 0.0017 |
| Saturn | 28385-07-28 04:05 G | 12088676.50 | 12088676.67 | 12088676.84 | 0.0288 | 0.0193 |
| Jupiter | 28390-07-23 23:45 G | 12090498.30 | 12090498.49 | 12090498.69 | 0.0494 | 0.0286 |
| Jupiter | 28391-08-24 14:24 G | 12090894.88 | 12090895.10 | 12090895.32 | 0.0505 | 0.0105 |
| Jupiter | 28396-01-15 12:00 G | 12092499.87 | 12092500.00 | 12092500.15 | 0.0535 | 0.0429 |
| Jupiter | 28397-02-19 23:17 G | 12092901.25 | 12092901.47 | 12092901.69 | 0.0523 | 0.0092 |
| Saturn | 28399-01-23 19:55 G | 12093604.10 | 12093604.33 | 12093604.57 | 0.0274 | 0.0038 |
| Mars | 28401-05-28 03:36 G | 12094459.51 | 12094459.65 | 12094459.79 | 0.1597 | 0.1008 |
| Jupiter | 28402-07-27 23:17 G | 12094885.27 | 12094885.47 | 12094885.68 | 0.0495 | 0.0241 |
| Jupiter | 28403-08-29 10:05 G | 12095282.71 | 12095282.92 | 12095283.14 | 0.0507 | 0.0207 |
| Pluto | 28407-01-09 10:05 G | 12096511.67 | 12096511.92 | 12096512.19 | 0.0065 | 0.0013 |
| Jupiter | 28408-01-20 15:36 G | 12096888.00 | 12096888.15 | 12096888.30 | 0.0533 | 0.0390 |
| Jupiter | 28409-02-25 01:12 G | 12097289.34 | 12097289.55 | 12097289.78 | 0.0521 | 0.0199 |
| Neptune | 28412-11-13 00:57 G | 12098646.42 | 12098646.54 | 12098646.71 | 0.0090 | 0.0075 |
| Neptune | 28413-11-15 11:02 G | 12099013.81 | 12099013.96 | 12099014.11 | 0.0090 | 0.0071 |
| Saturn | 28414-07-22 12:00 G | 12099262.74 | 12099263.00 | 12099263.25 | 0.0286 | 0.0005 |
| Jupiter | 28414-08-01 16:48 G | 12099273.00 | 12099273.20 | 12099273.41 | 0.0497 | 0.0220 |
| Neptune | 28414-11-18 00:43 G | 12099381.32 | 12099381.53 | 12099381.75 | 0.0090 | 0.0054 |
| Jupiter | 28415-09-02 17:31 G | 12099670.05 | 12099670.23 | 12099670.43 | 0.0508 | 0.0301 |

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| Neptune | 28415-11-20 14:38 G | 12099748.93 | 12099749.11 | 12099749.34 | 0.0090 | 0.0051 |
| Neptune | 28416-11-22 00:29 G | 12100116.29 | 12100116.52 | 12100116.79 | 0.0090 | 0.0033 |
| Neptune | 28417-11-24 19:41 G | 12100484.08 | 12100484.32 | 12100484.56 | 0.0090 | 0.0029 |
| Neptune | 28418-11-27 02:24 G | 12100851.34 | 12100851.60 | 12100851.86 | 0.0090 | 0.0011 |
| Neptune | 28419-11-29 22:33 G | 12101219.19 | 12101219.44 | 12101219.70 | 0.0090 | 0.0009 |
| Uranus | 28420-01-09 16:05 G | 12101260.08 | 12101260.17 | 12101260.29 | 0.0139 | 0.0126 |
| Jupiter | 28420-01-25 18:57 G | 12101276.11 | 12101276.29 | 12101276.47 | 0.0532 | 0.0344 |
| Neptune | 28420-12-01 05:02 G | 12101586.46 | 12101586.71 | 12101586.97 | 0.0090 | 0.0011 |
| Uranus | 28421-01-13 14:24 G | 12101629.88 | 12101630.10 | 12101630.34 | 0.0140 | 0.0068 |
| Jupiter | 28421-03-01 11:31 G | 12101676.78 | 12101676.98 | 12101677.19 | 0.0520 | 0.0237 |
| Neptune | 28421-12-04 00:00 G | 12101954.24 | 12101954.50 | 12101954.76 | 0.0090 | 0.0013 |
| Uranus | 28422-01-18 02:24 G | 12101999.36 | 12101999.60 | 12101999.85 | 0.0140 | 0.0018 |
| Neptune | 28422-12-06 08:24 G | 12102321.63 | 12102321.85 | 12102322.10 | 0.0090 | 0.0033 |
| Uranus | 28423-01-23 02:38 G | 12102369.42 | 12102369.61 | 12102369.83 | 0.0141 | 0.0084 |
| Neptune | 28423-12-08 22:48 G | 12102689.22 | 12102689.45 | 12102689.71 | 0.0090 | 0.0035 |
| Neptune | 28424-12-10 12:14 G | 12103056.83 | 12103057.01 | 12103057.23 | 0.0090 | 0.0054 |
| Neptune | 28425-12-12 22:48 G | 12103424.25 | 12103424.45 | 12103424.66 | 0.0090 | 0.0055 |
| Jupiter | 28426-08-05 21:50 G | 12103660.19 | 12103660.41 | 12103660.65 | 0.0498 | 0.0154 |
| Neptune | 28426-12-15 16:05 G | 12103792.06 | 12103792.17 | 12103792.34 | 0.0089 | 0.0075 |
| Jupiter | 28427-09-07 16:33 G | 12104058.02 | 12104058.19 | 12104058.36 | 0.0510 | 0.0340 |
| Neptune | 28427-12-17 23:02 G | 12104159.34 | 12104159.46 | 12104159.62 | 0.0089 | 0.0076 |
| Saturn | 28428-01-18 17:02 G | 12104190.99 | 12104191.21 | 12104191.44 | 0.0275 | 0.0123 |
| Saturn | 28429-01-30 05:31 G | 12104568.68 | 12104568.73 | 12104568.81 | 0.0272 | 0.0260 |
| Jupiter | 28432-01-30 14:09 G | 12105663.88 | 12105664.09 | 12105664.29 | 0.0531 | 0.0234 |
| Jupiter | 28433-03-06 15:21 G | 12106064.94 | 12106065.14 | 12106065.33 | 0.0518 | 0.0277 |
| Jupiter | 28437-07-10 04:33 G | 12107651.67 | 12107651.69 | 12107651.72 | 0.0491 | 0.0488 |
| Jupiter | 28438-08-10 09:36 G | 12108047.68 | 12108047.90 | 12108048.13 | 0.0499 | 0.0051 |
| Jupiter | 28439-09-12 01:41 G | 12108445.41 | 12108445.57 | 12108445.74 | 0.0512 | 0.0372 |
| Saturn | 28443-07-16 23:02 G | 12109849.31 | 12109849.46 | 12109849.64 | 0.0285 | 0.0199 |
| Jupiter | 28444-02-05 00:43 G | 12110052.31 | 12110052.53 | 12110052.76 | 0.0530 | 0.0121 |

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| Saturn | 28444-07-29 18:14 G | 12110228.16 | 12110228.26 | 12110228.39 | 0.0288 | 0.0253 |
| Jupiter | 28445-03-11 06:43 G | 12110452.62 | 12110452.78 | 12110452.95 | 0.0516 | 0.0369 |
| Jupiter | 28449-07-14 07:41 G | 12112038.75 | 12112038.82 | 12112038.91 | 0.0492 | 0.0458 |
| Jupiter | 28450-08-14 21:07 G | 12112435.14 | 12112435.38 | 12112435.62 | 0.0501 | 0.0022 |
| Jupiter | 28451-09-16 21:21 G | 12112833.30 | 12112833.39 | 12112833.49 | 0.0514 | 0.0463 |
| Jupiter | 28456-02-10 00:43 G | 12114440.29 | 12114440.53 | 12114440.77 | 0.0528 | 0.0077 |
| Jupiter | 28457-03-16 04:48 G | 12114840.62 | 12114840.70 | 12114840.80 | 0.0514 | 0.0468 |
| Saturn | 28458-01-25 06:00 G | 12115155.52 | 12115155.75 | 12115155.99 | 0.0273 | 0.0090 |
| Uranus | 28459-07-11 06:14 G | 12115687.71 | 12115687.76 | 12115687.84 | 0.0139 | 0.0135 |
| Uranus | 28460-07-14 15:21 G | 12116056.92 | 12116057.14 | 12116057.38 | 0.0139 | 0.0055 |
| Jupiter | 28461-07-18 20:24 G | 12116426.20 | 12116426.35 | 12116426.50 | 0.0493 | 0.0374 |
| Uranus | 28461-07-19 13:12 G | 12116426.80 | 12116427.05 | 12116427.31 | 0.0138 | 0.0015 |
| Uranus | 28462-07-23 19:55 G | 12116796.14 | 12116796.33 | 12116796.56 | 0.0138 | 0.0079 |
| Jupiter | 28462-08-19 05:31 G | 12116822.51 | 12116822.73 | 12116822.96 | 0.0503 | 0.0051 |
| Jupiter | 28467-01-09 06:00 G | 12118426.75 | 12118426.75 | 12118426.77 | 0.0536 | 0.0535 |
| Jupiter | 28468-02-15 01:55 G | 12118828.36 | 12118828.58 | 12118828.81 | 0.0526 | 0.0023 |
| Jupiter | 28469-03-21 00:00 G | 12119228.44 | 12119228.50 | 12119228.55 | 0.0512 | 0.0497 |
| Jupiter | 28473-07-22 21:50 G | 12120813.22 | 12120813.41 | 12120813.60 | 0.0494 | 0.0289 |
| Saturn | 28473-07-23 15:36 G | 12120813.91 | 12120814.15 | 12120814.39 | 0.0287 | 0.0048 |
| Jupiter | 28474-08-24 01:12 G | 12121210.32 | 12121210.55 | 12121210.78 | 0.0504 | 0.0103 |
| Jupiter | 28479-01-14 06:43 G | 12122814.66 | 12122814.78 | 12122814.91 | 0.0535 | 0.0438 |
| Jupiter | 28480-02-19 23:45 G | 12123216.25 | 12123216.49 | 12123216.72 | 0.0524 | 0.0087 |
| Jupiter | 28485-07-27 15:07 G | 12125200.94 | 12125201.13 | 12125201.34 | 0.0495 | 0.0248 |
| Jupiter | 28486-08-28 08:24 G | 12125597.64 | 12125597.85 | 12125598.07 | 0.0506 | 0.0208 |
| Saturn | 28487-01-20 00:43 G | 12125742.30 | 12125742.53 | 12125742.76 | 0.0275 | 0.0074 |
| Jupiter | 28491-01-19 13:55 G | 12127202.93 | 12127203.08 | 12127203.25 | 0.0534 | 0.0397 |
| Jupiter | 28492-02-24 16:19 G | 12127603.96 | 12127604.18 | 12127604.39 | 0.0523 | 0.0192 |
| Neptune | 28494-05-13 20:38 G | 12128413.32 | 12128413.36 | 12128413.48 | 0.0088 | 0.0084 |
| Neptune | 28495-05-16 04:48 G | 12128780.57 | 12128780.70 | 12128780.83 | 0.0088 | 0.0074 |
| Pluto | 28495-07-11 17:17 G | 12128836.99 | 12128837.22 | 12128837.46 | 0.0079 | 0.0025 |

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| Neptune | 28496-05-17 15:21 G | 12129147.98 | 12129148.14 | 12129148.34 | 0.0088 | 0.0064 |
| Neptune | 28497-05-20 03:21 G | 12129515.45 | 12129515.64 | 12129515.85 | 0.0088 | 0.0054 |
| Jupiter | 28497-07-31 17:17 G | 12129588.01 | 12129588.22 | 12129588.44 | 0.0496 | 0.0225 |
| Neptune | 28498-05-22 09:07 G | 12129882.67 | 12129882.88 | 12129883.13 | 0.0088 | 0.0044 |
| Jupiter | 28498-09-02 04:05 G | 12129985.49 | 12129985.67 | 12129985.86 | 0.0507 | 0.0297 |
| Neptune | 28499-05-25 01:41 G | 12130250.34 | 12130250.57 | 12130250.81 | 0.0088 | 0.0034 |
| Neptune | 28500-05-27 05:02 G | 12130617.47 | 12130617.71 | 12130617.97 | 0.0088 | 0.0025 |
| Neptune | 28501-05-29 22:33 G | 12130985.18 | 12130985.44 | 12130985.69 | 0.0088 | 0.0014 |
| Neptune | 28502-06-01 02:38 G | 12131352.36 | 12131352.61 | 12131352.86 | 0.0088 | 0.0005 |
| Saturn | 28502-07-19 08:09 G | 12131400.64 | 12131400.84 | 12131401.06 | 0.0285 | 0.0147 |
| Jupiter | 28503-01-25 12:57 G | 12131590.88 | 12131591.04 | 12131591.22 | 0.0533 | 0.0352 |
| Neptune | 28503-06-03 17:31 G | 12131719.97 | 12131720.23 | 12131720.50 | 0.0088 | 0.0007 |
| Uranus | 28504-01-11 04:48 G | 12131941.64 | 12131941.70 | 12131941.77 | 0.0139 | 0.0134 |
| Jupiter | 28504-03-01 23:17 G | 12131992.27 | 12131992.47 | 12131992.68 | 0.0521 | 0.0228 |
| Neptune | 28504-06-05 01:41 G | 12132087.33 | 12132087.57 | 12132087.82 | 0.0088 | 0.0016 |
| Uranus | 28505-01-15 01:41 G | 12132311.33 | 12132311.57 | 12132311.82 | 0.0140 | 0.0049 |
| Neptune | 28505-06-07 11:17 G | 12132454.73 | 12132454.97 | 12132455.24 | 0.0088 | 0.0027 |
| Uranus | 28506-01-19 14:09 G | 12132680.85 | 12132681.09 | 12132681.35 | 0.0140 | 0.0011 |
| Neptune | 28506-06-10 00:00 G | 12132822.29 | 12132822.50 | 12132822.75 | 0.0088 | 0.0036 |
| Uranus | 28507-01-24 13:41 G | 12133050.89 | 12133051.07 | 12133051.27 | 0.0141 | 0.0094 |
| Neptune | 28507-06-12 05:45 G | 12133189.52 | 12133189.74 | 12133189.97 | 0.0088 | 0.0046 |
| Neptune | 28508-06-13 22:19 G | 12133557.25 | 12133557.43 | 12133557.64 | 0.0088 | 0.0055 |
| Neptune | 28509-06-16 01:41 G | 12133924.42 | 12133924.57 | 12133924.75 | 0.0088 | 0.0067 |
| Jupiter | 28509-08-06 05:45 G | 12133975.53 | 12133975.74 | 12133975.96 | 0.0497 | 0.0153 |
| Neptune | 28510-06-18 18:57 G | 12134292.17 | 12134292.29 | 12134292.44 | 0.0088 | 0.0075 |
| Jupiter | 28510-09-07 14:09 G | 12134372.92 | 12134373.09 | 12134373.28 | 0.0510 | 0.0334 |
| Neptune | 28511-06-20 23:31 G | 12134659.47 | 12134659.48 | 12134659.54 | 0.0088 | 0.0087 |
| Jupiter | 28515-01-31 02:38 G | 12135979.41 | 12135979.61 | 12135979.82 | 0.0532 | 0.0229 |
| Saturn | 28516-01-15 20:53 G | 12136329.28 | 12136329.37 | 12136329.49 | 0.0276 | 0.0251 |
| Jupiter | 28516-03-06 15:50 G | 12136379.96 | 12136380.16 | 12136380.37 | 0.0518 | 0.0272 |

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| Saturn | 28517-01-27 08:24 G | 12136706.64 | 12136706.85 | 12136707.08 | 0.0273 | 0.0137 |
| Jupiter | 28521-08-10 15:36 G | 12138362.91 | 12138363.15 | 12138363.40 | 0.0499 | 0.0052 |
| Jupiter | 28522-09-12 09:21 G | 12138760.74 | 12138760.89 | 12138761.04 | 0.0512 | 0.0371 |
| Jupiter | 28527-02-05 01:12 G | 12140367.32 | 12140367.55 | 12140367.79 | 0.0530 | 0.0124 |
| Mars | 28527-05-26 00:00 G | 12140477.40 | 12140477.50 | 12140477.60 | 0.1604 | 0.1311 |
| Jupiter | 28528-03-11 15:36 G | 12140768.00 | 12140768.15 | 12140768.31 | 0.0516 | 0.0373 |
| Jupiter | 28532-07-14 22:05 G | 12142354.34 | 12142354.42 | 12142354.50 | 0.0492 | 0.0458 |
| Saturn | 28532-07-25 21:50 G | 12142365.19 | 12142365.41 | 12142365.64 | 0.0287 | 0.0094 |
| Jupiter | 28533-08-15 01:41 G | 12142750.34 | 12142750.57 | 12142750.80 | 0.0500 | 0.0018 |
| Jupiter | 28534-09-17 06:29 G | 12143148.67 | 12143148.77 | 12143148.87 | 0.0513 | 0.0466 |
| Jupiter | 28539-02-09 23:31 G | 12144755.26 | 12144755.48 | 12144755.70 | 0.0528 | 0.0085 |
| Jupiter | 28540-03-16 06:43 G | 12145155.68 | 12145155.78 | 12145155.89 | 0.0515 | 0.0462 |
| Uranus | 28543-07-12 18:57 G | 12146369.18 | 12146369.29 | 12146369.45 | 0.0139 | 0.0119 |
| Uranus | 28544-07-16 05:02 G | 12146738.49 | 12146738.71 | 12146738.94 | 0.0139 | 0.0056 |
| Jupiter | 28544-07-18 23:31 G | 12146741.33 | 12146741.48 | 12146741.64 | 0.0493 | 0.0374 |
| Uranus | 28545-07-21 02:09 G | 12147108.34 | 12147108.59 | 12147108.85 | 0.0138 | 0.0018 |
| Jupiter | 28545-08-19 20:24 G | 12147138.12 | 12147138.35 | 12147138.59 | 0.0502 | 0.0044 |
| Saturn | 28546-01-22 10:19 G | 12147293.70 | 12147293.93 | 12147294.17 | 0.0274 | 0.0028 |
| Uranus | 28546-07-25 09:36 G | 12147477.72 | 12147477.90 | 12147478.10 | 0.0138 | 0.0092 |
| Jupiter | 28551-02-15 01:55 G | 12149143.34 | 12149143.58 | 12149143.82 | 0.0527 | 0.0030 |
| Jupiter | 28552-03-20 20:24 G | 12149543.30 | 12149543.35 | 12149543.42 | 0.0513 | 0.0494 |
| Jupiter | 28556-07-23 14:24 G | 12151128.92 | 12151129.10 | 12151129.28 | 0.0493 | 0.0291 |
| Jupiter | 28557-08-24 00:14 G | 12151525.29 | 12151525.51 | 12151525.75 | 0.0503 | 0.0101 |
| Saturn | 28561-07-20 08:09 G | 12152951.60 | 12152951.84 | 12152952.08 | 0.0286 | 0.0101 |
| Jupiter | 28562-01-14 11:45 G | 12153129.86 | 12153129.99 | 12153130.13 | 0.0536 | 0.0440 |
| Jupiter | 28563-02-19 22:33 G | 12153531.22 | 12153531.44 | 12153531.67 | 0.0525 | 0.0090 |
| Mars | 28567-11-25 21:50 G | 12155271.23 | 12155271.41 | 12155271.60 | 0.1936 | 0.0364 |
| Jupiter | 28568-07-27 16:48 G | 12155516.00 | 12155516.20 | 12155516.41 | 0.0494 | 0.0256 |
| Jupiter | 28569-08-28 20:53 G | 12155913.17 | 12155913.37 | 12155913.58 | 0.0505 | 0.0209 |
| Jupiter | 28574-01-19 14:09 G | 12157517.95 | 12157518.09 | 12157518.25 | 0.0535 | 0.0404 |

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| Saturn | 28575-01-16 21:36 G | 12157880.23 | 12157880.40 | 12157880.57 | 0.0275 | 0.0204 |
| Jupiter | 28575-02-25 07:55 G | 12157919.61 | 12157919.83 | 12157920.04 | 0.0523 | 0.0189 |
| Saturn | 28576-01-29 09:50 G | 12158257.74 | 12158257.91 | 12158258.10 | 0.0272 | 0.0182 |
| Neptune | 28576-11-13 01:26 G | 12158546.47 | 12158546.56 | 12158546.67 | 0.0090 | 0.0082 |
| Neptune | 28577-11-15 13:26 G | 12158913.96 | 12158914.06 | 12158914.21 | 0.0090 | 0.0079 |
| Neptune | 28578-11-18 05:31 G | 12159281.57 | 12159281.73 | 12159281.94 | 0.0090 | 0.0061 |
| Neptune | 28579-11-20 13:26 G | 12159648.88 | 12159649.06 | 12159649.28 | 0.0090 | 0.0058 |
| Jupiter | 28580-08-01 03:50 G | 12159903.47 | 12159903.66 | 12159903.87 | 0.0496 | 0.0231 |
| Neptune | 28580-11-22 09:07 G | 12160016.66 | 12160016.88 | 12160017.12 | 0.0090 | 0.0040 |
| Jupiter | 28581-09-02 05:45 G | 12160300.55 | 12160300.74 | 12160300.94 | 0.0507 | 0.0292 |
| Neptune | 28581-11-24 14:53 G | 12160383.90 | 12160384.12 | 12160384.37 | 0.0090 | 0.0037 |
| Neptune | 28582-11-27 11:02 G | 12160751.71 | 12160751.96 | 12160752.22 | 0.0090 | 0.0019 |
| Neptune | 28583-11-29 18:14 G | 12161119.01 | 12161119.26 | 12161119.51 | 0.0090 | 0.0014 |
| Neptune | 28584-12-01 11:45 G | 12161486.72 | 12161486.99 | 12161487.26 | 0.0090 | 0.0003 |
| Neptune | 28585-12-03 22:48 G | 12161854.20 | 12161854.45 | 12161854.70 | 0.0090 | 0.0009 |
| Jupiter | 28586-01-25 03:50 G | 12161906.49 | 12161906.66 | 12161906.83 | 0.0533 | 0.0348 |
| Neptune | 28586-12-06 11:45 G | 12162221.74 | 12162221.99 | 12162222.25 | 0.0090 | 0.0025 |
| Jupiter | 28587-03-02 00:14 G | 12162307.30 | 12162307.51 | 12162307.73 | 0.0521 | 0.0225 |
| Neptune | 28587-12-09 03:36 G | 12162589.41 | 12162589.65 | 12162589.88 | 0.0090 | 0.0030 |
| Uranus | 28588-01-11 18:00 G | 12162623.14 | 12162623.25 | 12162623.41 | 0.0139 | 0.0117 |
| Neptune | 28588-12-10 12:00 G | 12162956.77 | 12162957.00 | 12162957.23 | 0.0090 | 0.0046 |
| Uranus | 28589-01-15 14:09 G | 12162992.85 | 12162993.09 | 12162993.33 | 0.0139 | 0.0058 |
| Neptune | 28589-12-13 06:14 G | 12163324.58 | 12163324.76 | 12163324.99 | 0.0090 | 0.0053 |
| Uranus | 28590-01-20 03:21 G | 12163362.40 | 12163362.64 | 12163362.89 | 0.0140 | 0.0029 |
| Neptune | 28590-12-15 12:29 G | 12163691.87 | 12163692.02 | 12163692.20 | 0.0090 | 0.0068 |
| Uranus | 28591-01-25 01:41 G | 12163732.38 | 12163732.57 | 12163732.77 | 0.0140 | 0.0092 |
| Saturn | 28591-07-28 02:09 G | 12163916.39 | 12163916.59 | 12163916.81 | 0.0287 | 0.0136 |
| Neptune | 28591-12-18 07:55 G | 12164059.72 | 12164059.83 | 12164060.01 | 0.0090 | 0.0075 |
| Jupiter | 28592-08-05 16:05 G | 12164290.94 | 12164291.17 | 12164291.40 | 0.0497 | 0.0148 |
| Neptune | 28592-12-19 14:53 G | 12164427.09 | 12164427.12 | 12164427.18 | 0.0089 | 0.0088 |

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| Jupiter | 28593-09-07 01:55 G | 12164688.41 | 12164688.58 | 12164688.75 | 0.0509 | 0.0327 |
| Jupiter | 28598-01-29 20:09 G | 12166294.13 | 12166294.34 | 12166294.56 | 0.0532 | 0.0230 |
| Jupiter | 28599-03-06 21:07 G | 12166695.19 | 12166695.38 | 12166695.58 | 0.0519 | 0.0272 |
| Jupiter | 28604-08-11 00:57 G | 12168678.32 | 12168678.54 | 12168678.77 | 0.0499 | 0.0048 |
| Saturn | 28605-01-24 15:50 G | 12168844.91 | 12168845.16 | 12168845.40 | 0.0274 | 0.0017 |
| Jupiter | 28605-09-12 21:07 G | 12169076.22 | 12169076.38 | 12169076.55 | 0.0511 | 0.0369 |
| Mars | 28606-05-28 23:17 G | 12169334.29 | 12169334.47 | 12169334.65 | 0.1602 | 0.0536 |
| Jupiter | 28610-02-05 01:41 G | 12170682.36 | 12170682.57 | 12170682.79 | 0.0530 | 0.0131 |
| Jupiter | 28611-03-12 16:48 G | 12171083.04 | 12171083.20 | 12171083.37 | 0.0517 | 0.0375 |
| Jupiter | 28615-07-16 01:26 G | 12172669.49 | 12172669.56 | 12172669.65 | 0.0491 | 0.0461 |
| Jupiter | 28616-08-15 16:19 G | 12173065.95 | 12173066.18 | 12173066.42 | 0.0500 | 0.0011 |
| Jupiter | 28617-09-17 06:43 G | 12173463.70 | 12173463.78 | 12173463.88 | 0.0513 | 0.0466 |
| Saturn | 28620-07-22 03:21 G | 12174502.40 | 12174502.64 | 12174502.89 | 0.0286 | 0.0060 |
| Jupiter | 28622-02-10 06:00 G | 12175070.51 | 12175070.75 | 12175070.99 | 0.0529 | 0.0092 |
| Jupiter | 28623-03-17 10:33 G | 12175470.85 | 12175470.94 | 12175471.04 | 0.0515 | 0.0464 |
| Uranus | 28627-07-14 05:31 G | 12177050.65 | 12177050.73 | 12177050.86 | 0.0140 | 0.0127 |
| Jupiter | 28627-07-20 16:33 G | 12177057.05 | 12177057.19 | 12177057.35 | 0.0492 | 0.0370 |
| Uranus | 28628-07-17 16:48 G | 12177419.98 | 12177420.20 | 12177420.44 | 0.0139 | 0.0045 |
| Jupiter | 28628-08-19 20:53 G | 12177453.14 | 12177453.37 | 12177453.60 | 0.0501 | 0.0035 |
| Uranus | 28629-07-22 13:41 G | 12177789.82 | 12177790.07 | 12177790.33 | 0.0139 | 0.0023 |
| Uranus | 28630-07-26 21:50 G | 12178159.24 | 12178159.41 | 12178159.62 | 0.0138 | 0.0090 |
| Jupiter | 28633-01-09 11:45 G | 12179056.97 | 12179056.99 | 12179057.03 | 0.0537 | 0.0533 |
| Saturn | 28634-01-18 21:36 G | 12179431.21 | 12179431.40 | 12179431.60 | 0.0275 | 0.0163 |
| Jupiter | 28634-02-15 06:14 G | 12179458.54 | 12179458.76 | 12179458.99 | 0.0527 | 0.0030 |
| Saturn | 28635-01-31 14:53 G | 12179809.01 | 12179809.12 | 12179809.26 | 0.0272 | 0.0228 |
| Jupiter | 28635-03-22 14:24 G | 12179859.03 | 12179859.10 | 12179859.17 | 0.0513 | 0.0488 |
| Jupiter | 28639-07-24 18:00 G | 12181444.06 | 12181444.25 | 12181444.44 | 0.0493 | 0.0292 |
| Jupiter | 28640-08-24 16:19 G | 12181840.96 | 12181841.18 | 12181841.41 | 0.0503 | 0.0103 |
| Jupiter | 28645-01-14 15:36 G | 12183445.02 | 12183445.15 | 12183445.28 | 0.0536 | 0.0442 |
| Jupiter | 28646-02-20 15:21 G | 12183846.91 | 12183847.14 | 12183847.37 | 0.0525 | 0.0100 |

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| Saturn | 28649-07-16 09:07 G | 12185088.81 | 12185088.88 | 12185088.98 | 0.0284 | 0.0265 |
| Saturn | 28650-07-29 23:17 G | 12185467.29 | 12185467.47 | 12185467.68 | 0.0287 | 0.0175 |
| Jupiter | 28651-07-29 06:57 G | 12185831.61 | 12185831.79 | 12185831.99 | 0.0494 | 0.0266 |
| Jupiter | 28652-08-29 02:24 G | 12186228.38 | 12186228.60 | 12186228.82 | 0.0505 | 0.0210 |
| Pluto | 28654-01-11 18:43 G | 12186729.16 | 12186729.28 | 12186729.46 | 0.0064 | 0.0054 |
| Pluto | 28655-01-13 14:24 G | 12187095.87 | 12187096.10 | 12187096.33 | 0.0065 | 0.0028 |
| Jupiter | 28657-01-19 23:17 G | 12187833.33 | 12187833.47 | 12187833.62 | 0.0534 | 0.0413 |
| Jupiter | 28658-02-25 02:38 G | 12188234.39 | 12188234.61 | 12188234.83 | 0.0523 | 0.0185 |
| Neptune | 28659-05-17 10:19 G | 12188680.81 | 12188680.93 | 12188681.08 | 0.0088 | 0.0076 |
| Neptune | 28660-05-18 23:45 G | 12189048.39 | 12189048.49 | 12189048.64 | 0.0088 | 0.0075 |
| Neptune | 28661-05-21 05:17 G | 12189415.54 | 12189415.72 | 12189415.94 | 0.0088 | 0.0056 |
| Neptune | 28662-05-23 22:33 G | 12189783.25 | 12189783.44 | 12189783.64 | 0.0088 | 0.0055 |
| Neptune | 28663-05-26 01:26 G | 12190150.35 | 12190150.56 | 12190150.81 | 0.0088 | 0.0037 |
| Jupiter | 28663-08-02 18:29 G | 12190219.06 | 12190219.27 | 12190219.49 | 0.0496 | 0.0229 |
| Saturn | 28664-01-26 12:43 G | 12190395.78 | 12190396.03 | 12190396.28 | 0.0274 | 0.0060 |
| Neptune | 28664-05-27 18:43 G | 12190518.05 | 12190518.28 | 12190518.53 | 0.0088 | 0.0035 |
| Jupiter | 28664-09-02 21:21 G | 12190616.20 | 12190616.39 | 12190616.57 | 0.0507 | 0.0290 |
| Neptune | 28665-05-29 23:31 G | 12190885.24 | 12190885.48 | 12190885.74 | 0.0088 | 0.0016 |
| Neptune | 28666-06-01 12:57 G | 12191252.78 | 12191253.04 | 12191253.31 | 0.0088 | 0.0014 |
| Neptune | 28667-06-03 22:05 G | 12191620.17 | 12191620.42 | 12191620.67 | 0.0088 | 0.0005 |
| Neptune | 28668-06-05 06:29 G | 12191987.51 | 12191987.77 | 12191988.04 | 0.0088 | 0.0006 |
| Jupiter | 28669-01-24 20:09 G | 12192221.17 | 12192221.34 | 12192221.53 | 0.0533 | 0.0353 |
| Neptune | 28669-06-07 20:53 G | 12192355.13 | 12192355.37 | 12192355.61 | 0.0088 | 0.0025 |
| Jupiter | 28670-03-02 06:14 G | 12192622.56 | 12192622.76 | 12192622.96 | 0.0522 | 0.0221 |
| Neptune | 28670-06-10 01:41 G | 12192722.32 | 12192722.57 | 12192722.82 | 0.0088 | 0.0026 |
| Neptune | 28671-06-12 18:29 G | 12193090.06 | 12193090.27 | 12193090.50 | 0.0088 | 0.0046 |
| Uranus | 28672-01-13 09:36 G | 12193304.80 | 12193304.90 | 12193305.03 | 0.0139 | 0.0121 |
| Neptune | 28672-06-13 22:05 G | 12193457.21 | 12193457.42 | 12193457.64 | 0.0088 | 0.0047 |
| Uranus | 28673-01-17 03:50 G | 12193674.42 | 12193674.66 | 12193674.92 | 0.0139 | 0.0038 |
| Neptune | 28673-06-16 14:24 G | 12193824.95 | 12193825.10 | 12193825.30 | 0.0088 | 0.0066 |

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| Uranus | 28674-01-21 18:14 G | 12194044.02 | 12194044.26 | 12194044.51 | 0.0140 | 0.0022 |
| Neptune | 28674-06-18 20:24 G | 12194192.21 | 12194192.35 | 12194192.53 | 0.0088 | 0.0067 |
| Uranus | 28675-01-26 15:07 G | 12194413.99 | 12194414.13 | 12194414.33 | 0.0140 | 0.0107 |
| Neptune | 28675-06-21 09:07 G | 12194559.83 | 12194559.88 | 12194559.96 | 0.0088 | 0.0085 |
| Jupiter | 28675-08-07 00:14 G | 12194606.30 | 12194606.51 | 12194606.73 | 0.0497 | 0.0148 |
| Neptune | 28676-06-22 18:57 G | 12194927.28 | 12194927.29 | 12194927.35 | 0.0088 | 0.0087 |
| Jupiter | 28676-09-07 12:00 G | 12195003.81 | 12195004.00 | 12195004.19 | 0.0508 | 0.0313 |
| Saturn | 28679-07-24 01:12 G | 12196053.31 | 12196053.55 | 12196053.78 | 0.0286 | 0.0022 |
| Jupiter | 28681-01-30 05:17 G | 12196609.52 | 12196609.72 | 12196609.92 | 0.0532 | 0.0230 |
| Jupiter | 28682-03-07 04:05 G | 12197010.47 | 12197010.67 | 12197010.89 | 0.0520 | 0.0273 |
| Jupiter | 28687-08-11 15:50 G | 12198993.93 | 12198994.16 | 12198994.40 | 0.0498 | 0.0046 |
| Jupiter | 28688-09-11 23:02 G | 12199391.30 | 12199391.46 | 12199391.62 | 0.0510 | 0.0366 |
| Saturn | 28693-01-20 01:12 G | 12200982.34 | 12200982.55 | 12200982.77 | 0.0275 | 0.0119 |
| Jupiter | 28693-02-04 11:31 G | 12200997.75 | 12200997.98 | 12200998.22 | 0.0531 | 0.0134 |
| Saturn | 28694-02-01 18:57 G | 12201360.29 | 12201360.29 | 12201360.32 | 0.0272 | 0.0271 |
| Jupiter | 28694-03-12 00:43 G | 12201398.39 | 12201398.53 | 12201398.68 | 0.0518 | 0.0386 |
| Jupiter | 28698-07-15 19:41 G | 12202985.24 | 12202985.32 | 12202985.40 | 0.0491 | 0.0455 |
| Jupiter | 28699-08-15 19:26 G | 12203381.07 | 12203381.31 | 12203381.54 | 0.0500 | 0.0011 |
| Jupiter | 28700-09-17 23:31 G | 12203779.40 | 12203779.48 | 12203779.59 | 0.0513 | 0.0470 |
| Jupiter | 28705-02-10 12:29 G | 12205385.80 | 12205386.02 | 12205386.25 | 0.0529 | 0.0099 |
| Jupiter | 28706-03-18 04:19 G | 12205786.59 | 12205786.68 | 12205786.79 | 0.0516 | 0.0465 |
| Saturn | 28708-07-18 04:05 G | 12206639.54 | 12206639.67 | 12206639.83 | 0.0284 | 0.0228 |
| Saturn | 28709-07-31 15:07 G | 12207017.97 | 12207018.13 | 12207018.32 | 0.0287 | 0.0208 |
| Jupiter | 28710-07-20 23:17 G | 12207372.31 | 12207372.47 | 12207372.64 | 0.0492 | 0.0361 |
| Uranus | 28711-07-15 18:43 G | 12207732.13 | 12207732.28 | 12207732.45 | 0.0140 | 0.0109 |
| Jupiter | 28711-08-21 16:19 G | 12207768.96 | 12207769.18 | 12207769.41 | 0.0501 | 0.0034 |
| Uranus | 28712-07-19 06:29 G | 12208101.54 | 12208101.77 | 12208102.01 | 0.0139 | 0.0048 |
| Uranus | 28713-07-24 02:09 G | 12208471.34 | 12208471.59 | 12208471.85 | 0.0139 | 0.0028 |
| Uranus | 28714-07-28 11:02 G | 12208840.80 | 12208840.96 | 12208841.14 | 0.0138 | 0.0101 |
| Jupiter | 28717-02-15 16:19 G | 12209773.94 | 12209774.18 | 12209774.41 | 0.0527 | 0.0030 |

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| Jupiter | 28718-03-22 10:33 G | 12210173.87 | 12210173.94 | 12210174.01 | 0.0514 | 0.0489 |
| Jupiter | 28722-07-25 11:02 G | 12211759.79 | 12211759.96 | 12211760.15 | 0.0493 | 0.0296 |
| Saturn | 28723-01-28 07:26 G | 12211946.58 | 12211946.81 | 12211947.05 | 0.0274 | 0.0101 |
| Jupiter | 28723-08-26 00:57 G | 12212156.31 | 12212156.54 | 12212156.78 | 0.0503 | 0.0107 |
| Jupiter | 28728-01-15 23:02 G | 12213760.33 | 12213760.46 | 12213760.59 | 0.0535 | 0.0449 |
| Jupiter | 28729-02-20 08:53 G | 12214161.63 | 12214161.87 | 12214162.10 | 0.0526 | 0.0094 |
| Jupiter | 28734-07-29 20:24 G | 12216147.15 | 12216147.35 | 12216147.55 | 0.0494 | 0.0271 |
| Jupiter | 28735-08-30 15:50 G | 12216543.96 | 12216544.16 | 12216544.37 | 0.0504 | 0.0213 |
| Saturn | 28738-07-26 02:09 G | 12217604.36 | 12217604.59 | 12217604.83 | 0.0286 | 0.0015 |
| Jupiter | 28740-01-20 21:07 G | 12218148.23 | 12218148.38 | 12218148.52 | 0.0535 | 0.0423 |
| Jupiter | 28741-02-25 15:50 G | 12218549.95 | 12218550.16 | 12218550.38 | 0.0524 | 0.0181 |
| Neptune | 28741-11-16 19:26 G | 12218814.21 | 12218814.31 | 12218814.42 | 0.0090 | 0.0081 |
| Neptune | 28742-11-19 01:41 G | 12219181.45 | 12219181.57 | 12219181.75 | 0.0090 | 0.0074 |
| Pluto | 28743-07-16 19:41 G | 12219421.23 | 12219421.32 | 12219421.42 | 0.0079 | 0.0073 |
| Neptune | 28743-11-21 22:19 G | 12219549.25 | 12219549.43 | 12219549.63 | 0.0090 | 0.0060 |
| Neptune | 28744-11-23 04:19 G | 12219916.49 | 12219916.68 | 12219916.90 | 0.0090 | 0.0053 |
| Neptune | 28745-11-25 23:31 G | 12220284.26 | 12220284.48 | 12220284.74 | 0.0090 | 0.0038 |
| Jupiter | 28746-08-03 01:41 G | 12220534.37 | 12220534.57 | 12220534.78 | 0.0495 | 0.0232 |
| Neptune | 28746-11-28 08:09 G | 12220651.62 | 12220651.84 | 12220652.09 | 0.0090 | 0.0031 |
| Jupiter | 28747-09-04 06:43 G | 12220931.58 | 12220931.78 | 12220931.99 | 0.0506 | 0.0280 |
| Neptune | 28747-12-01 00:14 G | 12221019.25 | 12221019.51 | 12221019.78 | 0.0090 | 0.0015 |
| Neptune | 28748-12-02 13:12 G | 12221386.80 | 12221387.05 | 12221387.30 | 0.0090 | 0.0009 |
| Neptune | 28749-12-04 23:45 G | 12221754.23 | 12221754.49 | 12221754.76 | 0.0090 | 0.0007 |
| Neptune | 28750-12-07 17:02 G | 12222121.97 | 12222122.21 | 12222122.46 | 0.0090 | 0.0013 |
| Neptune | 28751-12-10 00:14 G | 12222489.28 | 12222489.51 | 12222489.77 | 0.0090 | 0.0030 |
| Saturn | 28752-01-23 04:05 G | 12222533.45 | 12222533.67 | 12222533.91 | 0.0275 | 0.0080 |
| Jupiter | 28752-01-26 09:50 G | 12222536.75 | 12222536.91 | 12222537.08 | 0.0534 | 0.0355 |
| Neptune | 28752-12-11 20:24 G | 12222857.12 | 12222857.35 | 12222857.60 | 0.0090 | 0.0035 |
| Jupiter | 28753-03-02 15:36 G | 12222937.93 | 12222938.15 | 12222938.37 | 0.0522 | 0.0213 |
| Neptune | 28753-12-14 02:09 G | 12223224.40 | 12223224.59 | 12223224.82 | 0.0090 | 0.0053 |

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| Neptune | 28754-12-16 21:36 G | 12223592.22 | 12223592.40 | 12223592.63 | 0.0090 | 0.0057 |
| Neptune | 28755-12-19 06:14 G | 12223959.62 | 12223959.76 | 12223959.90 | 0.0090 | 0.0074 |
| Uranus | 28756-01-15 01:41 G | 12223986.42 | 12223986.57 | 12223986.74 | 0.0139 | 0.0104 |
| Neptune | 28756-12-20 22:33 G | 12224327.31 | 12224327.44 | 12224327.58 | 0.0090 | 0.0077 |
| Uranus | 28757-01-18 18:57 G | 12224356.05 | 12224356.29 | 12224356.55 | 0.0139 | 0.0044 |
| Uranus | 28758-01-23 10:33 G | 12224725.70 | 12224725.94 | 12224726.17 | 0.0140 | 0.0042 |
| Jupiter | 28758-08-07 16:19 G | 12224921.96 | 12224922.18 | 12224922.41 | 0.0496 | 0.0138 |
| Uranus | 28759-01-28 06:29 G | 12225095.61 | 12225095.77 | 12225095.96 | 0.0140 | 0.0105 |
| Jupiter | 28759-09-08 17:02 G | 12225319.03 | 12225319.21 | 12225319.39 | 0.0508 | 0.0309 |
| Jupiter | 28764-01-31 15:07 G | 12226924.92 | 12226925.13 | 12226925.36 | 0.0532 | 0.0225 |
| Jupiter | 28765-03-07 12:57 G | 12227325.85 | 12227326.04 | 12227326.23 | 0.0520 | 0.0279 |
| Saturn | 28767-07-19 18:43 G | 12228190.11 | 12228190.28 | 12228190.47 | 0.0284 | 0.0196 |
| Saturn | 28768-08-01 09:36 G | 12228568.77 | 12228568.90 | 12228569.03 | 0.0287 | 0.0243 |
| Jupiter | 28770-08-11 21:36 G | 12229309.17 | 12229309.40 | 12229309.64 | 0.0498 | 0.0041 |
| Jupiter | 28771-09-13 18:57 G | 12229707.13 | 12229707.29 | 12229707.45 | 0.0510 | 0.0370 |
| Jupiter | 28776-02-05 12:29 G | 12231312.81 | 12231313.02 | 12231313.24 | 0.0531 | 0.0145 |
| Jupiter | 28777-03-12 11:17 G | 12231713.81 | 12231713.97 | 12231714.12 | 0.0518 | 0.0387 |
| Saturn | 28781-01-16 11:02 G | 12233119.89 | 12233119.96 | 12233120.06 | 0.0278 | 0.0261 |
| Jupiter | 28781-07-16 04:19 G | 12233300.58 | 12233300.68 | 12233300.77 | 0.0492 | 0.0448 |
| Saturn | 28782-01-29 06:57 G | 12233497.59 | 12233497.79 | 12233498.00 | 0.0274 | 0.0143 |
| Jupiter | 28782-08-16 17:02 G | 12233696.98 | 12233697.21 | 12233697.44 | 0.0500 | 0.0002 |
| Jupiter | 28783-09-18 05:31 G | 12234094.65 | 12234094.73 | 12234094.82 | 0.0512 | 0.0473 |
| Jupiter | 28788-02-10 20:09 G | 12235701.11 | 12235701.34 | 12235701.57 | 0.0529 | 0.0112 |
| Jupiter | 28789-03-16 23:02 G | 12236101.36 | 12236101.46 | 12236101.56 | 0.0516 | 0.0463 |
| Jupiter | 28793-07-20 13:55 G | 12237687.93 | 12237688.08 | 12237688.24 | 0.0492 | 0.0358 |
| Jupiter | 28794-08-20 21:50 G | 12238084.17 | 12238084.41 | 12238084.65 | 0.0501 | 0.0030 |
| Uranus | 28795-07-16 06:57 G | 12238413.66 | 12238413.79 | 12238413.94 | 0.0140 | 0.0117 |
| Uranus | 28796-07-19 19:55 G | 12238783.10 | 12238783.33 | 12238783.58 | 0.0139 | 0.0034 |
| Uranus | 28797-07-24 14:53 G | 12239152.87 | 12239153.12 | 12239153.38 | 0.0139 | 0.0032 |
| Saturn | 28797-07-27 00:29 G | 12239155.28 | 12239155.52 | 12239155.77 | 0.0286 | 0.0051 |

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| Uranus | 28798-07-29 00:57 G | 12239522.38 | 12239522.54 | 12239522.71 | 0.0138 | 0.0101 |
| Jupiter | 28800-02-15 15:07 G | 12240088.89 | 12240089.13 | 12240089.36 | 0.0528 | 0.0034 |
| Jupiter | 28801-03-22 02:38 G | 12240489.55 | 12240489.61 | 12240489.70 | 0.0514 | 0.0484 |
| Jupiter | 28805-07-24 23:17 G | 12242075.28 | 12242075.47 | 12242075.67 | 0.0493 | 0.0297 |
| Jupiter | 28806-08-25 12:57 G | 12242471.82 | 12242472.04 | 12242472.26 | 0.0502 | 0.0111 |
| Jupiter | 28811-01-14 22:48 G | 12244075.33 | 12244075.45 | 12244075.57 | 0.0536 | 0.0458 |
| Saturn | 28811-01-24 02:24 G | 12244084.35 | 12244084.60 | 12244084.85 | 0.0275 | 0.0037 |
| Mars | 28811-05-29 17:17 G | 12244210.05 | 12244210.22 | 12244210.39 | 0.1607 | 0.0491 |
| Jupiter | 28812-02-21 01:12 G | 12244477.33 | 12244477.55 | 12244477.77 | 0.0526 | 0.0095 |
| Jupiter | 28817-07-29 03:21 G | 12246462.45 | 12246462.64 | 12246462.83 | 0.0494 | 0.0275 |
| Jupiter | 28818-08-30 02:24 G | 12246859.38 | 12246859.60 | 12246859.82 | 0.0504 | 0.0218 |
| Jupiter | 28823-01-20 12:57 G | 12248463.91 | 12248464.04 | 12248464.17 | 0.0535 | 0.0433 |
| Neptune | 28823-05-17 20:53 G | 12248581.35 | 12248581.37 | 12248581.46 | 0.0088 | 0.0086 |
| Jupiter | 28824-02-26 00:14 G | 12248865.28 | 12248865.51 | 12248865.74 | 0.0524 | 0.0175 |
| Neptune | 28824-05-19 01:12 G | 12248948.47 | 12248948.55 | 12248948.68 | 0.0088 | 0.0080 |
| Neptune | 28825-05-21 18:57 G | 12249316.13 | 12249316.29 | 12249316.46 | 0.0088 | 0.0066 |
| Neptune | 28826-05-23 21:50 G | 12249683.26 | 12249683.41 | 12249683.63 | 0.0088 | 0.0060 |
| Saturn | 28826-07-20 17:02 G | 12249741.01 | 12249741.21 | 12249741.40 | 0.0284 | 0.0160 |
| Neptune | 28827-05-26 14:09 G | 12250050.89 | 12250051.09 | 12250051.34 | 0.0088 | 0.0046 |
| Saturn | 28827-08-03 11:17 G | 12250119.92 | 12250119.97 | 12250120.03 | 0.0287 | 0.0279 |
| Neptune | 28828-05-27 20:24 G | 12250418.14 | 12250418.35 | 12250418.59 | 0.0088 | 0.0038 |
| Neptune | 28829-05-30 08:53 G | 12250785.63 | 12250785.87 | 12250786.14 | 0.0088 | 0.0025 |
| Jupiter | 28829-08-02 19:41 G | 12250850.11 | 12250850.32 | 12250850.53 | 0.0495 | 0.0226 |
| Neptune | 28830-06-01 20:09 G | 12251153.11 | 12251153.34 | 12251153.59 | 0.0088 | 0.0018 |
| Jupiter | 28830-09-03 14:24 G | 12251246.91 | 12251247.10 | 12251247.29 | 0.0506 | 0.0280 |
| Neptune | 28831-06-04 03:21 G | 12251520.38 | 12251520.64 | 12251520.91 | 0.0088 | 0.0005 |
| Neptune | 28832-06-05 18:43 G | 12251888.03 | 12251888.28 | 12251888.53 | 0.0088 | 0.0004 |
| Neptune | 28833-06-07 22:05 G | 12252255.18 | 12252255.42 | 12252255.69 | 0.0088 | 0.0018 |
| Neptune | 28834-06-10 15:21 G | 12252622.90 | 12252623.14 | 12252623.40 | 0.0088 | 0.0026 |
| Jupiter | 28835-01-25 12:43 G | 12252851.85 | 12252852.03 | 12252852.21 | 0.0533 | 0.0357 |

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| Neptune | 28835-06-12 18:57 G | 12252990.07 | 12252990.29 | 12252990.53 | 0.0088 | 0.0038 |
| Jupiter | 28836-03-01 17:45 G | 12253253.04 | 12253253.24 | 12253253.45 | 0.0522 | 0.0203 |
| Neptune | 28836-06-14 10:05 G | 12253357.72 | 12253357.92 | 12253358.17 | 0.0088 | 0.0046 |
| Neptune | 28837-06-16 16:48 G | 12253725.04 | 12253725.20 | 12253725.41 | 0.0088 | 0.0058 |
| Neptune | 28838-06-19 04:19 G | 12254092.53 | 12254092.68 | 12254092.88 | 0.0088 | 0.0066 |
| Neptune | 28839-06-21 16:19 G | 12254460.10 | 12254460.18 | 12254460.32 | 0.0088 | 0.0079 |
| Uranus | 28840-01-15 17:02 G | 12254668.06 | 12254668.21 | 12254668.36 | 0.0139 | 0.0107 |
| Saturn | 28840-01-18 11:45 G | 12254670.84 | 12254670.99 | 12254671.13 | 0.0278 | 0.0219 |
| Neptune | 28840-06-22 23:31 G | 12254827.44 | 12254827.48 | 12254827.53 | 0.0088 | 0.0086 |
| Uranus | 28841-01-19 08:38 G | 12255037.60 | 12255037.86 | 12255038.12 | 0.0139 | 0.0025 |
| Saturn | 28841-01-30 09:50 G | 12255048.74 | 12255048.91 | 12255049.09 | 0.0274 | 0.0186 |
| Jupiter | 28841-08-06 23:02 G | 12255237.24 | 12255237.46 | 12255237.69 | 0.0497 | 0.0131 |
| Uranus | 28842-01-24 01:12 G | 12255407.32 | 12255407.55 | 12255407.79 | 0.0140 | 0.0035 |
| Jupiter | 28842-09-08 13:41 G | 12255634.89 | 12255635.07 | 12255635.26 | 0.0508 | 0.0305 |
| Uranus | 28843-01-28 20:09 G | 12255777.23 | 12255777.34 | 12255777.49 | 0.0140 | 0.0121 |
| Jupiter | 28847-01-30 14:53 G | 12257239.92 | 12257240.12 | 12257240.32 | 0.0532 | 0.0233 |
| Jupiter | 28848-03-06 20:24 G | 12257641.15 | 12257641.35 | 12257641.55 | 0.0520 | 0.0275 |
| Mars | 28851-11-27 12:29 G | 12259001.90 | 12259002.02 | 12259002.14 | 0.1930 | 0.1581 |
| Jupiter | 28853-08-11 15:21 G | 12259624.91 | 12259625.14 | 12259625.37 | 0.0498 | 0.0044 |
| Jupiter | 28854-09-12 19:41 G | 12260022.17 | 12260022.32 | 12260022.49 | 0.0509 | 0.0367 |
| Saturn | 28856-07-27 18:29 G | 12260706.03 | 12260706.27 | 12260706.51 | 0.0286 | 0.0086 |
| Jupiter | 28859-02-04 22:33 G | 12261628.22 | 12261628.44 | 12261628.67 | 0.0531 | 0.0157 |
| Jupiter | 28860-03-11 10:48 G | 12262028.80 | 12262028.95 | 12262029.11 | 0.0519 | 0.0384 |
| Jupiter | 28864-07-15 17:02 G | 12263616.11 | 12263616.21 | 12263616.30 | 0.0491 | 0.0444 |
| Jupiter | 28865-08-15 20:09 G | 12264012.10 | 12264012.34 | 12264012.58 | 0.0499 | 0.0010 |
| Jupiter | 28866-09-17 18:14 G | 12264410.18 | 12264410.26 | 12264410.34 | 0.0511 | 0.0476 |
| Saturn | 28870-01-24 21:50 G | 12265635.16 | 12265635.41 | 12265635.66 | 0.0275 | 0.0009 |
| Jupiter | 28871-02-09 20:24 G | 12266016.12 | 12266016.35 | 12266016.58 | 0.0530 | 0.0120 |
| Jupiter | 28872-03-16 16:48 G | 12266417.10 | 12266417.20 | 12266417.31 | 0.0517 | 0.0459 |
| Jupiter | 28876-07-20 01:26 G | 12268003.39 | 12268003.56 | 12268003.73 | 0.0492 | 0.0351 |

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| Jupiter | 28877-08-20 10:05 G | 12268399.69 | 12268399.92 | 12268400.14 | 0.0501 | 0.0031 |
| Uranus | 28879-07-16 21:07 G | 12269095.21 | 12269095.38 | 12269095.59 | 0.0140 | 0.0098 |
| Uranus | 28880-07-20 11:17 G | 12269464.74 | 12269464.97 | 12269465.21 | 0.0139 | 0.0038 |
| Uranus | 28881-07-25 04:48 G | 12269834.45 | 12269834.70 | 12269834.95 | 0.0139 | 0.0041 |
| Uranus | 28882-07-29 15:07 G | 12270204.01 | 12270204.13 | 12270204.30 | 0.0138 | 0.0112 |
| Jupiter | 28883-02-15 07:41 G | 12270404.59 | 12270404.82 | 12270405.05 | 0.0528 | 0.0030 |
| Jupiter | 28884-03-21 08:24 G | 12270804.77 | 12270804.85 | 12270804.95 | 0.0515 | 0.0475 |
| Saturn | 28885-07-21 21:36 G | 12271292.19 | 12271292.40 | 12271292.62 | 0.0284 | 0.0120 |
| Jupiter | 28888-07-24 06:14 G | 12272390.59 | 12272390.76 | 12272390.95 | 0.0493 | 0.0300 |
| Jupiter | 28889-08-25 00:57 G | 12272787.30 | 12272787.54 | 12272787.77 | 0.0502 | 0.0122 |
| Mars | 28890-05-31 11:17 G | 12273066.88 | 12273066.97 | 12273067.07 | 0.1605 | 0.1326 |
| Jupiter | 28894-01-14 11:02 G | 12274390.85 | 12274390.96 | 12274391.06 | 0.0535 | 0.0472 |
| Jupiter | 28895-02-20 00:57 G | 12274792.30 | 12274792.54 | 12274792.78 | 0.0526 | 0.0088 |
| Saturn | 28899-01-19 16:33 G | 12276222.01 | 12276222.19 | 12276222.38 | 0.0278 | 0.0173 |
| Saturn | 28900-02-01 11:02 G | 12276599.84 | 12276599.96 | 12276600.11 | 0.0274 | 0.0232 |
| Jupiter | 28900-07-29 20:53 G | 12276778.18 | 12276778.37 | 12276778.56 | 0.0494 | 0.0283 |
| Jupiter | 28901-08-30 10:19 G | 12277174.73 | 12277174.93 | 12277175.14 | 0.0504 | 0.0224 |
| Pluto | 28902-01-16 03:07 G | 12277313.40 | 12277313.63 | 12277313.88 | 0.0065 | 0.0022 |
| Pluto | 28903-01-17 08:53 G | 12277679.76 | 12277679.87 | 12277680.03 | 0.0065 | 0.0055 |
| Neptune | 28905-11-16 16:19 G | 12278714.13 | 12278714.18 | 12278714.28 | 0.0090 | 0.0086 |
| Jupiter | 28906-01-20 11:02 G | 12278778.83 | 12278778.96 | 12278779.10 | 0.0534 | 0.0440 |
| Neptune | 28906-11-19 12:14 G | 12279081.96 | 12279082.01 | 12279082.13 | 0.0090 | 0.0085 |
| Jupiter | 28907-02-26 00:00 G | 12279180.29 | 12279180.50 | 12279180.72 | 0.0524 | 0.0162 |
| Neptune | 28907-11-21 19:12 G | 12279449.15 | 12279449.30 | 12279449.50 | 0.0090 | 0.0065 |
| Neptune | 28908-11-23 13:12 G | 12279816.88 | 12279817.05 | 12279817.27 | 0.0090 | 0.0062 |
| Neptune | 28909-11-25 23:17 G | 12280184.25 | 12280184.47 | 12280184.69 | 0.0090 | 0.0042 |
| Neptune | 28910-11-28 12:29 G | 12280551.79 | 12280552.02 | 12280552.27 | 0.0090 | 0.0040 |
| Neptune | 28911-12-01 03:07 G | 12280919.40 | 12280919.63 | 12280919.89 | 0.0090 | 0.0021 |
| Jupiter | 28912-08-02 22:05 G | 12281165.22 | 12281165.42 | 12281165.63 | 0.0495 | 0.0230 |
| Neptune | 28912-12-02 12:29 G | 12281286.77 | 12281287.02 | 12281287.29 | 0.0090 | 0.0018 |

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| Jupiter | 28913-09-04 05:31 G | 12281562.54 | 12281562.73 | 12281562.94 | 0.0505 | 0.0272 |
| Neptune | 28913-12-05 07:26 G | 12281654.56 | 12281654.81 | 12281655.07 | 0.0090 | 0.0003 |
| Neptune | 28914-12-07 13:55 G | 12282021.82 | 12282022.08 | 12282022.34 | 0.0090 | 0.0005 |
| Saturn | 28915-07-30 18:14 G | 12282257.05 | 12282257.26 | 12282257.48 | 0.0286 | 0.0129 |
| Neptune | 28915-12-10 10:19 G | 12282389.68 | 12282389.93 | 12282390.18 | 0.0090 | 0.0025 |
| Neptune | 28916-12-11 16:48 G | 12282756.96 | 12282757.20 | 12282757.45 | 0.0090 | 0.0028 |
| Neptune | 28917-12-14 11:02 G | 12283124.75 | 12283124.96 | 12283125.20 | 0.0090 | 0.0047 |
| Jupiter | 28918-01-25 14:24 G | 12283166.94 | 12283167.10 | 12283167.27 | 0.0534 | 0.0365 |
| Neptune | 28918-12-16 20:24 G | 12283492.16 | 12283492.35 | 12283492.57 | 0.0090 | 0.0051 |
| Jupiter | 28919-03-03 03:36 G | 12283568.43 | 12283568.65 | 12283568.87 | 0.0523 | 0.0190 |
| Neptune | 28919-12-19 10:33 G | 12283859.79 | 12283859.94 | 12283860.13 | 0.0090 | 0.0069 |
| Neptune | 28920-12-21 00:00 G | 12284227.39 | 12284227.50 | 12284227.67 | 0.0090 | 0.0074 |
| Uranus | 28924-01-17 06:57 G | 12285349.62 | 12285349.79 | 12285349.98 | 0.0139 | 0.0093 |
| Jupiter | 28924-08-07 14:09 G | 12285552.87 | 12285553.09 | 12285553.31 | 0.0496 | 0.0127 |
| Uranus | 28925-01-20 22:05 G | 12285719.16 | 12285719.42 | 12285719.67 | 0.0139 | 0.0032 |
| Jupiter | 28925-09-08 11:31 G | 12285949.80 | 12285949.98 | 12285950.17 | 0.0507 | 0.0300 |
| Uranus | 28926-01-25 15:36 G | 12286088.94 | 12286089.15 | 12286089.39 | 0.0140 | 0.0055 |
| Uranus | 28927-01-30 09:21 G | 12286458.77 | 12286458.89 | 12286459.06 | 0.0140 | 0.0116 |
| Saturn | 28929-01-26 23:45 G | 12287186.25 | 12287186.49 | 12287186.73 | 0.0275 | 0.0059 |
| Jupiter | 28930-01-31 00:00 G | 12287555.29 | 12287555.50 | 12287555.72 | 0.0533 | 0.0233 |
| Jupiter | 28931-03-07 20:53 G | 12287956.17 | 12287956.37 | 12287956.57 | 0.0521 | 0.0270 |
| Jupiter | 28936-08-11 17:31 G | 12289939.99 | 12289940.23 | 12289940.47 | 0.0497 | 0.0047 |
| Jupiter | 28937-09-13 08:53 G | 12290337.72 | 12290337.87 | 12290338.03 | 0.0509 | 0.0373 |
| Jupiter | 28942-02-04 23:02 G | 12291943.24 | 12291943.46 | 12291943.69 | 0.0532 | 0.0163 |
| Jupiter | 28943-03-13 03:21 G | 12292344.49 | 12292344.64 | 12292344.79 | 0.0519 | 0.0387 |
| Saturn | 28944-07-24 02:53 G | 12292843.38 | 12292843.62 | 12292843.86 | 0.0284 | 0.0072 |
| Jupiter | 28947-07-17 04:05 G | 12293931.57 | 12293931.67 | 12293931.78 | 0.0491 | 0.0437 |
| Jupiter | 28948-08-16 08:38 G | 12294327.64 | 12294327.86 | 12294328.09 | 0.0499 | 0.0013 |
| Jupiter | 28949-09-17 23:45 G | 12294725.41 | 12294725.49 | 12294725.57 | 0.0511 | 0.0480 |
| Jupiter | 28954-02-10 07:12 G | 12296331.58 | 12296331.80 | 12296332.02 | 0.0529 | 0.0130 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 28955-03-17 13:55 G | 12296731.96 | 12296732.08 | 12296732.20 | 0.0517 | 0.0446 |
| Saturn | 28958-01-21 18:57 G | 12297773.07 | 12297773.29 | 12297773.52 | 0.0278 | 0.0122 |
| Jupiter | 28959-07-21 06:14 G | 12298318.61 | 12298318.76 | 12298318.92 | 0.0492 | 0.0357 |
| Jupiter | 28960-08-20 20:53 G | 12298715.12 | 12298715.37 | 12298715.61 | 0.0501 | 0.0028 |
| Uranus | 28963-07-18 09:36 G | 12299776.73 | 12299776.90 | 12299777.07 | 0.0140 | 0.0106 |
| Uranus | 28964-07-22 00:57 G | 12300146.30 | 12300146.54 | 12300146.79 | 0.0139 | 0.0022 |
| Uranus | 28965-07-26 17:17 G | 12300515.97 | 12300516.22 | 12300516.47 | 0.0139 | 0.0042 |
| Jupiter | 28966-02-15 02:09 G | 12300719.35 | 12300719.59 | 12300719.84 | 0.0528 | 0.0041 |
| Uranus | 28966-07-31 05:17 G | 12300885.60 | 12300885.72 | 12300885.87 | 0.0138 | 0.0114 |
| Jupiter | 28967-03-22 10:19 G | 12301119.84 | 12301119.93 | 12301120.02 | 0.0515 | 0.0466 |
| Jupiter | 28971-07-25 20:09 G | 12302706.16 | 12302706.34 | 12302706.52 | 0.0493 | 0.0311 |
| Jupiter | 28972-08-25 03:21 G | 12303102.42 | 12303102.64 | 12303102.87 | 0.0502 | 0.0121 |
| Saturn | 28973-07-18 12:29 G | 12303429.91 | 12303430.02 | 12303430.14 | 0.0282 | 0.0245 |
| Saturn | 28974-08-01 02:53 G | 12303808.44 | 12303808.62 | 12303808.81 | 0.0286 | 0.0181 |
| Jupiter | 28977-01-14 05:17 G | 12304705.62 | 12304705.72 | 12304705.83 | 0.0536 | 0.0478 |
| Jupiter | 28978-02-20 03:36 G | 12305107.43 | 12305107.65 | 12305107.87 | 0.0527 | 0.0084 |
| Jupiter | 28983-07-29 21:07 G | 12307093.19 | 12307093.38 | 12307093.57 | 0.0494 | 0.0291 |
| Jupiter | 28984-08-29 22:05 G | 12307490.21 | 12307490.42 | 12307490.63 | 0.0503 | 0.0219 |
| Saturn | 28988-01-29 08:53 G | 12308737.66 | 12308737.87 | 12308738.10 | 0.0275 | 0.0114 |
| Neptune | 28988-05-19 15:07 G | 12308849.06 | 12308849.13 | 12308849.26 | 0.0088 | 0.0081 |
| Jupiter | 28989-01-19 13:26 G | 12309093.94 | 12309094.06 | 12309094.18 | 0.0535 | 0.0452 |
| Neptune | 28989-05-21 19:26 G | 12309216.21 | 12309216.31 | 12309216.44 | 0.0088 | 0.0078 |
| Jupiter | 28990-02-25 08:38 G | 12309495.63 | 12309495.86 | 12309496.09 | 0.0525 | 0.0150 |
| Neptune | 28990-05-24 10:48 G | 12309583.78 | 12309583.95 | 12309584.17 | 0.0088 | 0.0060 |
| Pluto | 28990-07-18 01:26 G | 12309638.32 | 12309638.56 | 12309638.81 | 0.0079 | 0.0028 |
| Neptune | 28991-05-26 18:29 G | 12309951.09 | 12309951.27 | 12309951.47 | 0.0088 | 0.0057 |
| Neptune | 28992-05-28 05:02 G | 12310318.49 | 12310318.71 | 12310318.97 | 0.0088 | 0.0040 |
| Neptune | 28993-05-30 17:17 G | 12310686.01 | 12310686.22 | 12310686.46 | 0.0088 | 0.0037 |
| Neptune | 28994-06-01 23:17 G | 12311053.22 | 12311053.47 | 12311053.74 | 0.0088 | 0.0019 |
| Neptune | 28995-06-04 15:36 G | 12311420.91 | 12311421.15 | 12311421.41 | 0.0088 | 0.0016 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 28995-08-03 11:17 G | 12311480.77 | 12311480.97 | 12311481.17 | 0.0495 | 0.0230 |
| Neptune | 28996-06-05 19:26 G | 12311788.05 | 12311788.31 | 12311788.57 | 0.0088 | 0.0003 |
| Jupiter | 28996-09-03 02:24 G | 12311877.41 | 12311877.60 | 12311877.80 | 0.0505 | 0.0268 |
| Neptune | 28997-06-08 12:43 G | 12312155.77 | 12312156.03 | 12312156.29 | 0.0088 | 0.0006 |
| Neptune | 28998-06-10 16:33 G | 12312522.97 | 12312523.19 | 12312523.45 | 0.0088 | 0.0025 |
| Neptune | 28999-06-13 07:26 G | 12312890.57 | 12312890.81 | 12312891.07 | 0.0088 | 0.0027 |
| Neptune | 29000-06-15 15:36 G | 12313257.96 | 12313258.15 | 12313258.38 | 0.0088 | 0.0046 |

30TH MILLENNIUM CE

This is a list of transits of Moon in the 30th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 29001-01-25 22:48 G | | 12313482.28 | 12313482.45 | 12313482.63 | 0.0534 | 0.0360 | |
| Neptune | 29001-06-18 01:41 G | | 12313625.35 | 12313625.57 | 12313625.80 | 0.0088 | 0.0048 | |
| Jupiter | 29002-03-03 03:07 G | | 12313883.42 | 12313883.63 | 12313883.85 | 0.0523 | 0.0187 | |
| Neptune | 29002-06-20 14:09 G | | 12313992.95 | 12313993.09 | 12313993.27 | 0.0088 | 0.0067 | |
| Neptune | 29003-06-22 19:26 G | | 12314360.17 | 12314360.31 | 12314360.49 | 0.0088 | 0.0069 | |
| Saturn | 29003-07-27 08:09 G | | 12314394.58 | 12314394.84 | 12314395.09 | 0.0284 | 0.0018 | |
| Neptune | 29004-06-24 12:29 G | | 12314728.00 | 12314728.02 | 12314728.05 | 0.0088 | 0.0087 | |
| Jupiter | 29007-08-08 15:50 G | | 12315867.93 | 12315868.16 | 12315868.39 | 0.0496 | 0.0128 | |
| Uranus | 29008-01-18 18:43 G | | 12316031.12 | 12316031.28 | 12316031.48 | 0.0139 | 0.0097 | |
| Jupiter | 29008-09-09 01:26 G | | 12316265.38 | 12316265.56 | 12316265.74 | 0.0507 | 0.0297 | |
| Uranus | 29009-01-22 08:09 G | | 12316400.58 | 12316400.84 | 12316401.11 | 0.0139 | 0.0016 | |
| Uranus | 29010-01-27 03:21 G | | 12316770.41 | 12316770.64 | 12316770.88 | 0.0140 | 0.0045 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 29011-01-31 19:41 G | 12317140.25 | 12317140.32 | 12317140.43 | 0.0140 | 0.0132 |
| Jupiter | 29013-01-30 20:24 G | 12317870.15 | 12317870.35 | 12317870.56 | 0.0532 | 0.0240 |
| Jupiter | 29014-03-08 06:29 G | 12318271.57 | 12318271.77 | 12318271.97 | 0.0521 | 0.0265 |
| Mars | 29016-05-29 12:14 G | 12319084.86 | 12319085.01 | 12319085.16 | 0.1613 | 0.1049 |
| Saturn | 29017-01-23 19:55 G | 12319324.09 | 12319324.33 | 12319324.58 | 0.0277 | 0.0068 |
| Jupiter | 29019-08-13 04:19 G | 12320255.46 | 12320255.68 | 12320255.91 | 0.0498 | 0.0056 |
| Jupiter | 29020-09-13 12:57 G | 12320652.88 | 12320653.04 | 12320653.20 | 0.0509 | 0.0374 |
| Jupiter | 29025-02-05 06:00 G | 12322258.53 | 12322258.75 | 12322258.97 | 0.0531 | 0.0175 |
| Jupiter | 29026-03-12 19:26 G | 12322659.15 | 12322659.31 | 12322659.48 | 0.0519 | 0.0377 |
| Jupiter | 29030-07-17 05:02 G | 12324246.62 | 12324246.71 | 12324246.80 | 0.0491 | 0.0448 |
| Jupiter | 29031-08-17 14:09 G | 12324642.85 | 12324643.09 | 12324643.33 | 0.0499 | 0.0028 |
| Saturn | 29032-07-21 00:29 G | 12324981.36 | 12324981.52 | 12324981.70 | 0.0282 | 0.0192 |
| Jupiter | 29032-09-18 03:50 G | 12325040.58 | 12325040.66 | 12325040.73 | 0.0511 | 0.0478 |
| Saturn | 29033-08-03 15:50 G | 12325360.04 | 12325360.16 | 12325360.30 | 0.0286 | 0.0237 |
| Jupiter | 29037-02-09 23:31 G | 12326646.24 | 12326646.48 | 12326646.71 | 0.0530 | 0.0138 |
| Jupiter | 29038-03-17 18:29 G | 12327047.16 | 12327047.27 | 12327047.39 | 0.0518 | 0.0437 |
| Jupiter | 29042-07-21 18:29 G | 12328634.12 | 12328634.27 | 12328634.44 | 0.0492 | 0.0359 |
| Jupiter | 29043-08-21 20:38 G | 12329030.14 | 12329030.36 | 12329030.59 | 0.0500 | 0.0021 |
| Saturn | 29046-01-18 18:14 G | 12329911.17 | 12329911.26 | 12329911.38 | 0.0279 | 0.0247 |
| Saturn | 29047-01-31 18:29 G | 12330289.08 | 12330289.27 | 12330289.47 | 0.0275 | 0.0169 |
| Uranus | 29047-07-19 21:50 G | 12330458.22 | 12330458.41 | 12330458.63 | 0.0140 | 0.0088 |
| Uranus | 29048-07-23 14:24 G | 12330827.87 | 12330828.10 | 12330828.35 | 0.0139 | 0.0028 |
| Jupiter | 29049-02-15 05:17 G | 12331034.50 | 12331034.72 | 12331034.95 | 0.0529 | 0.0043 |
| Uranus | 29049-07-28 05:17 G | 12331197.48 | 12331197.72 | 12331197.97 | 0.0139 | 0.0053 |
| Jupiter | 29050-03-22 15:50 G | 12331435.06 | 12331435.16 | 12331435.28 | 0.0516 | 0.0456 |
| Uranus | 29050-08-01 18:29 G | 12331567.16 | 12331567.27 | 12331567.40 | 0.0138 | 0.0120 |
| Jupiter | 29054-07-25 18:00 G | 12333021.08 | 12333021.25 | 12333021.43 | 0.0492 | 0.0320 |
| Jupiter | 29055-08-26 13:26 G | 12333417.83 | 12333418.06 | 12333418.29 | 0.0501 | 0.0119 |
| Jupiter | 29060-01-15 10:33 G | 12335020.85 | 12335020.94 | 12335021.03 | 0.0536 | 0.0489 |
| Jupiter | 29061-02-20 10:19 G | 12335422.69 | 12335422.93 | 12335423.17 | 0.0527 | 0.0084 |

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| Saturn | 29062-07-28 16:19 G | 12335945.93 | 12335946.18 | 12335946.42 | 0.0284 | 0.0041 |
| Jupiter | 29066-07-30 08:53 G | 12337408.70 | 12337408.87 | 12337409.06 | 0.0493 | 0.0301 |
| Jupiter | 29067-08-30 18:57 G | 12337805.08 | 12337805.29 | 12337805.50 | 0.0503 | 0.0214 |
| Neptune | 29070-11-19 10:05 G | 12338981.89 | 12338981.92 | 12338982.00 | 0.0090 | 0.0088 |
| Neptune | 29071-11-22 02:24 G | 12339349.49 | 12339349.60 | 12339349.78 | 0.0090 | 0.0076 |
| Jupiter | 29072-01-20 17:31 G | 12339409.11 | 12339409.23 | 12339409.35 | 0.0535 | 0.0460 |
| Neptune | 29072-11-23 14:38 G | 12339716.96 | 12339717.11 | 12339717.30 | 0.0090 | 0.0066 |
| Jupiter | 29073-02-25 03:21 G | 12339810.42 | 12339810.64 | 12339810.86 | 0.0525 | 0.0142 |
| Neptune | 29073-11-26 02:53 G | 12340084.42 | 12340084.62 | 12340084.85 | 0.0090 | 0.0054 |
| Neptune | 29074-11-28 19:41 G | 12340452.11 | 12340452.32 | 12340452.55 | 0.0090 | 0.0043 |
| Neptune | 29075-12-01 02:53 G | 12340819.39 | 12340819.62 | 12340819.89 | 0.0090 | 0.0032 |
| Saturn | 29076-01-26 02:24 G | 12340875.36 | 12340875.60 | 12340875.85 | 0.0277 | 0.0013 |
| Neptune | 29076-12-02 22:48 G | 12341187.20 | 12341187.45 | 12341187.70 | 0.0090 | 0.0019 |
| Neptune | 29077-12-05 04:33 G | 12341554.45 | 12341554.69 | 12341554.96 | 0.0090 | 0.0009 |
| Jupiter | 29078-08-03 10:33 G | 12341795.74 | 12341795.94 | 12341796.16 | 0.0495 | 0.0236 |
| Neptune | 29078-12-08 00:29 G | 12341922.26 | 12341922.52 | 12341922.79 | 0.0090 | 0.0005 |
| Jupiter | 29079-09-04 15:21 G | 12342192.94 | 12342193.14 | 12342193.34 | 0.0505 | 0.0256 |
| Neptune | 29079-12-10 07:41 G | 12342289.58 | 12342289.82 | 12342290.08 | 0.0090 | 0.0013 |
| Neptune | 29080-12-12 00:43 G | 12342657.27 | 12342657.53 | 12342657.78 | 0.0090 | 0.0027 |
| Neptune | 29081-12-14 12:14 G | 12343024.78 | 12343025.01 | 12343025.23 | 0.0090 | 0.0036 |
| Neptune | 29082-12-17 00:43 G | 12343392.33 | 12343392.53 | 12343392.77 | 0.0090 | 0.0051 |
| Neptune | 29083-12-19 17:02 G | 12343760.02 | 12343760.21 | 12343760.40 | 0.0090 | 0.0059 |
| Jupiter | 29084-01-25 15:50 G | 12343797.01 | 12343797.16 | 12343797.33 | 0.0534 | 0.0369 |
| Neptune | 29084-12-21 00:57 G | 12344127.40 | 12344127.54 | 12344127.71 | 0.0090 | 0.0073 |
| Jupiter | 29085-03-02 08:38 G | 12344198.65 | 12344198.86 | 12344199.09 | 0.0523 | 0.0176 |
| Neptune | 29085-12-23 20:09 G | 12344495.24 | 12344495.34 | 12344495.47 | 0.0090 | 0.0080 |
| Jupiter | 29090-08-07 22:48 G | 12346183.23 | 12346183.45 | 12346183.66 | 0.0496 | 0.0137 |
| Saturn | 29091-07-23 17:02 G | 12346533.01 | 12346533.21 | 12346533.43 | 0.0283 | 0.0134 |
| Jupiter | 29091-09-08 22:48 G | 12346580.25 | 12346580.45 | 12346580.65 | 0.0507 | 0.0284 |
| Uranus | 29092-01-19 06:43 G | 12346712.60 | 12346712.78 | 12346712.99 | 0.0139 | 0.0087 |

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| Uranus | 29093-01-22 18:57 G | 12347082.04 | 12347082.29 | 12347082.56 | 0.0139 | 0.0023 |
| Uranus | 29094-01-27 15:36 G | 12347451.94 | 12347452.15 | 12347452.38 | 0.0140 | 0.0063 |
| Uranus | 29095-02-01 06:14 G | 12347821.66 | 12347821.76 | 12347821.91 | 0.0140 | 0.0124 |
| Mars | 29095-06-01 19:55 G | 12347942.13 | 12347942.33 | 12347942.53 | 0.1610 | 0.0177 |
| Jupiter | 29096-01-30 23:31 G | 12348185.28 | 12348185.48 | 12348185.69 | 0.0533 | 0.0248 |
| Jupiter | 29097-03-06 21:36 G | 12348586.20 | 12348586.40 | 12348586.61 | 0.0522 | 0.0258 |
| Jupiter | 29102-08-13 07:41 G | 12350570.58 | 12350570.82 | 12350571.06 | 0.0497 | 0.0067 |
| Jupiter | 29103-09-14 14:24 G | 12350967.95 | 12350968.10 | 12350968.25 | 0.0508 | 0.0370 |
| Saturn | 29105-01-21 07:41 G | 12351462.65 | 12351462.82 | 12351463.01 | 0.0278 | 0.0189 |
| Saturn | 29106-02-03 01:55 G | 12351840.44 | 12351840.58 | 12351840.72 | 0.0275 | 0.0225 |
| Jupiter | 29108-02-05 19:26 G | 12352573.09 | 12352573.31 | 12352573.54 | 0.0532 | 0.0183 |
| Jupiter | 29109-03-13 00:29 G | 12352974.37 | 12352974.52 | 12352974.67 | 0.0520 | 0.0376 |
| Jupiter | 29113-07-17 15:21 G | 12354562.06 | 12354562.14 | 12354562.25 | 0.0491 | 0.0446 |
| Jupiter | 29114-08-17 12:43 G | 12354957.80 | 12354958.03 | 12354958.25 | 0.0498 | 0.0040 |
| Jupiter | 29115-09-19 05:45 G | 12355355.65 | 12355355.74 | 12355355.84 | 0.0510 | 0.0469 |
| Jupiter | 29120-02-11 05:02 G | 12356961.49 | 12356961.71 | 12356961.93 | 0.0531 | 0.0145 |
| Jupiter | 29121-03-17 22:05 G | 12357362.29 | 12357362.42 | 12357362.56 | 0.0518 | 0.0428 |
| Saturn | 29121-07-31 07:55 G | 12357497.62 | 12357497.83 | 12357498.06 | 0.0285 | 0.0106 |
| Jupiter | 29125-07-21 15:21 G | 12358948.99 | 12358949.14 | 12358949.30 | 0.0492 | 0.0364 |
| Jupiter | 29126-08-22 06:00 G | 12359345.52 | 12359345.75 | 12359345.99 | 0.0500 | 0.0014 |
| Uranus | 29131-07-21 06:14 G | 12361139.59 | 12361139.76 | 12361139.96 | 0.0140 | 0.0099 |
| Jupiter | 29132-02-16 07:12 G | 12361349.56 | 12361349.80 | 12361350.05 | 0.0529 | 0.0046 |
| Uranus | 29132-07-25 00:57 G | 12361509.29 | 12361509.54 | 12361509.78 | 0.0139 | 0.0013 |
| Jupiter | 29133-03-22 12:43 G | 12361749.92 | 12361750.03 | 12361750.14 | 0.0516 | 0.0450 |
| Uranus | 29133-07-29 14:24 G | 12361878.86 | 12361879.10 | 12361879.35 | 0.0139 | 0.0048 |
| Uranus | 29134-08-03 05:17 G | 12362248.64 | 12362248.72 | 12362248.85 | 0.0138 | 0.0125 |
| Saturn | 29135-01-28 15:36 G | 12362426.92 | 12362427.15 | 12362427.39 | 0.0277 | 0.0046 |
| Jupiter | 29137-07-26 03:36 G | 12363336.48 | 12363336.65 | 12363336.81 | 0.0493 | 0.0335 |
| Jupiter | 29138-08-26 08:53 G | 12363732.64 | 12363732.87 | 12363733.10 | 0.0502 | 0.0109 |
| Jupiter | 29143-01-15 09:07 G | 12365335.80 | 12365335.88 | 12365335.97 | 0.0536 | 0.0498 |

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| Jupiter | 29144-02-21 02:24 G | 12365737.38 | 12365737.60 | 12365737.83 | 0.0527 | 0.0075 |
| Jupiter | 29145-03-27 11:17 G | 12366137.97 | 12366137.97 | 12366137.97 | 0.0514 | 0.0513 |
| Jupiter | 29149-07-30 05:31 G | 12367723.55 | 12367723.73 | 12367723.92 | 0.0493 | 0.0309 |
| Pluto | 29150-01-20 00:57 G | 12367897.29 | 12367897.54 | 12367897.80 | 0.0065 | 0.0012 |
| Saturn | 29150-07-26 06:43 G | 12368084.54 | 12368084.78 | 12368085.03 | 0.0283 | 0.0073 |
| Jupiter | 29150-08-31 03:36 G | 12368120.45 | 12368120.65 | 12368120.87 | 0.0503 | 0.0203 |
| Neptune | 29152-05-20 18:00 G | 12368749.25 | 12368749.25 | 12368749.28 | 0.0088 | 0.0088 |
| Neptune | 29153-05-23 08:38 G | 12369116.77 | 12369116.86 | 12369116.94 | 0.0088 | 0.0083 |
| Neptune | 29154-05-25 16:19 G | 12369484.04 | 12369484.18 | 12369484.36 | 0.0088 | 0.0068 |
| Jupiter | 29155-01-20 06:00 G | 12369723.66 | 12369723.75 | 12369723.86 | 0.0535 | 0.0475 |
| Neptune | 29155-05-28 01:55 G | 12369851.41 | 12369851.58 | 12369851.77 | 0.0088 | 0.0063 |
| Jupiter | 29156-02-26 06:29 G | 12370125.54 | 12370125.77 | 12370126.00 | 0.0526 | 0.0132 |
| Neptune | 29156-05-29 15:21 G | 12370218.95 | 12370219.14 | 12370219.38 | 0.0088 | 0.0047 |
| Neptune | 29157-05-31 20:38 G | 12370586.15 | 12370586.36 | 12370586.61 | 0.0088 | 0.0042 |
| Neptune | 29158-06-03 13:55 G | 12370953.84 | 12370954.08 | 12370954.34 | 0.0088 | 0.0025 |
| Neptune | 29159-06-05 17:31 G | 12371320.98 | 12371321.23 | 12371321.48 | 0.0088 | 0.0020 |
| Neptune | 29160-06-07 10:33 G | 12371688.68 | 12371688.94 | 12371689.20 | 0.0088 | 0.0004 |
| Neptune | 29161-06-09 15:50 G | 12372055.91 | 12372056.16 | 12372056.41 | 0.0088 | 0.0002 |
| Jupiter | 29161-08-03 17:45 G | 12372111.05 | 12372111.24 | 12372111.44 | 0.0494 | 0.0239 |
| Neptune | 29162-06-12 04:33 G | 12372423.44 | 12372423.69 | 12372423.97 | 0.0088 | 0.0018 |
| Jupiter | 29162-09-04 10:19 G | 12372507.72 | 12372507.93 | 12372508.14 | 0.0504 | 0.0241 |
| Neptune | 29163-06-14 13:55 G | 12372790.85 | 12372791.08 | 12372791.33 | 0.0088 | 0.0024 |
| Saturn | 29164-01-23 17:31 G | 12373014.01 | 12373014.23 | 12373014.46 | 0.0278 | 0.0125 |
| Neptune | 29164-06-15 22:19 G | 12373158.20 | 12373158.43 | 12373158.68 | 0.0088 | 0.0040 |
| Neptune | 29165-06-18 12:43 G | 12373525.83 | 12373526.03 | 12373526.26 | 0.0088 | 0.0045 |
| Neptune | 29166-06-20 17:02 G | 12373893.05 | 12373893.21 | 12373893.42 | 0.0088 | 0.0061 |
| Jupiter | 29167-01-25 16:48 G | 12374112.04 | 12374112.20 | 12374112.37 | 0.0535 | 0.0377 |
| Neptune | 29167-06-23 10:05 G | 12374260.78 | 12374260.92 | 12374261.12 | 0.0088 | 0.0066 |
| Jupiter | 29168-03-01 22:33 G | 12374513.22 | 12374513.44 | 12374513.67 | 0.0524 | 0.0168 |
| Neptune | 29168-06-24 13:26 G | 12374628.00 | 12374628.06 | 12374628.19 | 0.0088 | 0.0082 |

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| Neptune | 29169-06-27 06:29 G | 12374995.76 | 12374995.77 | 12374995.82 | 0.0088 | 0.0087 |
| Jupiter | 29173-08-08 00:14 G | 12376498.28 | 12376498.51 | 12376498.74 | 0.0495 | 0.0139 |
| Jupiter | 29174-09-09 00:14 G | 12376895.33 | 12376895.51 | 12376895.71 | 0.0506 | 0.0276 |
| Uranus | 29176-01-20 19:12 G | 12377394.12 | 12377394.30 | 12377394.51 | 0.0139 | 0.0087 |
| Uranus | 29177-01-24 06:14 G | 12377763.50 | 12377763.76 | 12377764.02 | 0.0139 | 0.0008 |
| Uranus | 29178-01-29 03:36 G | 12378133.43 | 12378133.65 | 12378133.88 | 0.0140 | 0.0054 |
| Jupiter | 29179-01-30 14:53 G | 12378499.91 | 12378500.12 | 12378500.33 | 0.0534 | 0.0258 |
| Saturn | 29179-07-20 16:48 G | 12378671.10 | 12378671.20 | 12378671.30 | 0.0282 | 0.0255 |
| Jupiter | 29180-03-07 04:19 G | 12378901.48 | 12378901.68 | 12378901.87 | 0.0522 | 0.0262 |
| Saturn | 29180-08-02 05:17 G | 12379049.54 | 12379049.72 | 12379049.92 | 0.0285 | 0.0172 |
| Jupiter | 29185-08-12 06:29 G | 12380885.54 | 12380885.77 | 12380885.99 | 0.0496 | 0.0076 |
| Jupiter | 29186-09-13 16:19 G | 12381283.01 | 12381283.18 | 12381283.35 | 0.0508 | 0.0363 |
| Jupiter | 29191-02-05 01:41 G | 12382888.37 | 12382888.57 | 12382888.79 | 0.0532 | 0.0198 |
| Jupiter | 29192-03-11 23:31 G | 12383289.32 | 12383289.48 | 12383289.66 | 0.0520 | 0.0368 |
| Saturn | 29194-01-30 07:55 G | 12383978.62 | 12383978.83 | 12383979.06 | 0.0276 | 0.0109 |
| Jupiter | 29196-07-16 09:36 G | 12384876.82 | 12384876.90 | 12384877.00 | 0.0491 | 0.0450 |
| Jupiter | 29197-08-16 20:53 G | 12385273.13 | 12385273.37 | 12385273.60 | 0.0498 | 0.0054 |
| Jupiter | 29198-09-18 03:50 G | 12385670.57 | 12385670.66 | 12385670.75 | 0.0510 | 0.0464 |
| Jupiter | 29203-02-10 02:09 G | 12387276.35 | 12387276.59 | 12387276.82 | 0.0530 | 0.0156 |
| Jupiter | 29204-03-16 17:02 G | 12387677.09 | 12387677.21 | 12387677.35 | 0.0518 | 0.0422 |
| Jupiter | 29208-07-20 23:45 G | 12389264.34 | 12389264.49 | 12389264.64 | 0.0492 | 0.0371 |
| Saturn | 29209-07-27 17:45 G | 12389635.99 | 12389636.24 | 12389636.49 | 0.0283 | 0.0013 |
| Jupiter | 29209-08-20 23:31 G | 12389660.25 | 12389660.48 | 12389660.71 | 0.0499 | 0.0003 |
| Jupiter | 29210-09-23 00:57 G | 12390058.52 | 12390058.54 | 12390058.57 | 0.0511 | 0.0507 |
| Jupiter | 29215-02-14 20:38 G | 12391664.14 | 12391664.36 | 12391664.59 | 0.0529 | 0.0057 |
| Uranus | 29215-07-21 16:05 G | 12391820.96 | 12391821.17 | 12391821.38 | 0.0140 | 0.0082 |
| Jupiter | 29216-03-21 14:53 G | 12392065.00 | 12392065.12 | 12392065.25 | 0.0517 | 0.0440 |
| Uranus | 29216-07-25 11:17 G | 12392190.74 | 12392190.97 | 12392191.22 | 0.0139 | 0.0024 |
| Uranus | 29217-07-29 23:17 G | 12392560.25 | 12392560.47 | 12392560.73 | 0.0139 | 0.0061 |
| Uranus | 29218-08-03 16:05 G | 12392930.09 | 12392930.17 | 12392930.29 | 0.0138 | 0.0125 |

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| Jupiter | 29220-07-25 02:09 G | 12393651.42 | 12393651.59 | 12393651.77 | 0.0492 | 0.0338 |
| Jupiter | 29221-08-25 18:00 G | 12394048.03 | 12394048.25 | 12394048.48 | 0.0501 | 0.0106 |
| Saturn | 29223-01-25 02:09 G | 12394565.35 | 12394565.59 | 12394565.83 | 0.0278 | 0.0062 |
| Jupiter | 29226-01-13 21:50 G | 12395650.36 | 12395650.41 | 12395650.48 | 0.0536 | 0.0516 |
| Jupiter | 29227-02-20 04:05 G | 12396052.43 | 12396052.67 | 12396052.90 | 0.0528 | 0.0064 |
| Jupiter | 29228-03-26 03:21 G | 12396452.62 | 12396452.64 | 12396452.66 | 0.0515 | 0.0512 |
| Jupiter | 29232-07-29 12:00 G | 12398038.83 | 12398039.00 | 12398039.18 | 0.0493 | 0.0315 |
| Jupiter | 29233-08-29 21:36 G | 12398435.19 | 12398435.40 | 12398435.63 | 0.0502 | 0.0193 |
| Neptune | 29235-11-22 07:26 G | 12399249.78 | 12399249.81 | 12399249.87 | 0.0090 | 0.0088 |
| Neptune | 29236-11-23 17:02 G | 12399617.07 | 12399617.21 | 12399617.41 | 0.0090 | 0.0069 |
| Neptune | 29237-11-26 11:17 G | 12399984.81 | 12399984.97 | 12399985.15 | 0.0090 | 0.0066 |
| Jupiter | 29238-01-19 09:36 G | 12400038.81 | 12400038.90 | 12400039.01 | 0.0536 | 0.0487 |
| Saturn | 29238-07-22 12:29 G | 12400222.85 | 12400223.02 | 12400223.20 | 0.0282 | 0.0193 |
| Pluto | 29238-07-22 18:43 G | 12400223.13 | 12400223.28 | 12400223.49 | 0.0079 | 0.0055 * |
| Neptune | 29238-11-28 18:14 G | 12400352.04 | 12400352.26 | 12400352.49 | 0.0090 | 0.0045 |
| Jupiter | 29239-02-24 22:33 G | 12400440.21 | 12400440.44 | 12400440.67 | 0.0526 | 0.0124 |
| Saturn | 29239-08-05 00:00 G | 12400601.38 | 12400601.50 | 12400601.65 | 0.0286 | 0.0236 |
| Neptune | 29239-12-01 14:09 G | 12400719.88 | 12400720.09 | 12400720.33 | 0.0090 | 0.0043 |
| Neptune | 29240-12-02 20:24 G | 12401087.11 | 12401087.35 | 12401087.61 | 0.0090 | 0.0022 |
| Neptune | 29241-12-05 15:36 G | 12401454.90 | 12401455.15 | 12401455.41 | 0.0090 | 0.0020 |
| Neptune | 29242-12-08 00:29 G | 12401822.27 | 12401822.52 | 12401822.77 | 0.0090 | 0.0001 |
| Neptune | 29243-12-10 15:50 G | 12402189.90 | 12402190.16 | 12402190.43 | 0.0090 | 0.0004 |
| Jupiter | 29244-08-02 18:57 G | 12402426.08 | 12402426.29 | 12402426.50 | 0.0494 | 0.0239 |
| Neptune | 29244-12-12 04:33 G | 12402557.46 | 12402557.69 | 12402557.94 | 0.0090 | 0.0025 |
| Jupiter | 29245-09-03 13:26 G | 12402822.86 | 12402823.06 | 12402823.26 | 0.0504 | 0.0230 |
| Neptune | 29245-12-14 14:53 G | 12402924.88 | 12402925.12 | 12402925.39 | 0.0090 | 0.0028 |
| Neptune | 29246-12-17 08:24 G | 12403292.64 | 12403292.85 | 12403293.07 | 0.0090 | 0.0048 |
| Neptune | 29247-12-19 15:21 G | 12403659.94 | 12403660.14 | 12403660.37 | 0.0090 | 0.0050 |
| Neptune | 29248-12-21 11:17 G | 12404027.83 | 12404027.97 | 12404028.15 | 0.0090 | 0.0071 |
| Neptune | 29249-12-23 17:45 G | 12404395.10 | 12404395.24 | 12404395.40 | 0.0090 | 0.0073 |

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| Jupiter | 29250-01-24 09:21 G | 12404426.73 | 12404426.89 | 12404427.05 | 0.0535 | 0.0389 |
| Jupiter | 29251-03-02 05:31 G | 12404828.52 | 12404828.73 | 12404828.95 | 0.0524 | 0.0158 |
| Saturn | 29252-01-19 22:05 G | 12405152.31 | 12405152.42 | 12405152.53 | 0.0279 | 0.0247 |
| Saturn | 29253-01-31 20:24 G | 12405530.16 | 12405530.35 | 12405530.56 | 0.0276 | 0.0169 |
| Jupiter | 29256-08-06 23:02 G | 12406813.24 | 12406813.46 | 12406813.67 | 0.0495 | 0.0143 |
| Jupiter | 29257-09-08 02:38 G | 12407210.40 | 12407210.61 | 12407210.81 | 0.0506 | 0.0265 |
| Uranus | 29260-01-21 09:21 G | 12408075.70 | 12408075.89 | 12408076.11 | 0.0139 | 0.0078 |
| Uranus | 29261-01-24 19:55 G | 12408445.08 | 12408445.33 | 12408445.60 | 0.0139 | 0.0012 |
| Uranus | 29262-01-29 18:29 G | 12408815.06 | 12408815.27 | 12408815.49 | 0.0140 | 0.0073 |
| Jupiter | 29262-01-29 20:24 G | 12408815.16 | 12408815.35 | 12408815.55 | 0.0533 | 0.0269 * |
| Uranus | 29263-02-03 07:12 G | 12409184.72 | 12409184.80 | 12409184.89 | 0.0140 | 0.0132 |
| Jupiter | 29263-03-07 00:29 G | 12409216.31 | 12409216.52 | 12409216.73 | 0.0522 | 0.0254 |
| Saturn | 29268-07-29 06:43 G | 12411187.54 | 12411187.78 | 12411188.02 | 0.0284 | 0.0049 |
| Jupiter | 29268-08-11 14:09 G | 12411200.86 | 12411201.09 | 12411201.33 | 0.0496 | 0.0085 |
| Jupiter | 29269-09-12 13:26 G | 12411597.90 | 12411598.06 | 12411598.22 | 0.0507 | 0.0357 |
| Jupiter | 29274-02-03 14:53 G | 12413202.90 | 12413203.12 | 12413203.35 | 0.0532 | 0.0211 |
| Jupiter | 29275-03-11 17:45 G | 12413604.08 | 12413604.24 | 12413604.41 | 0.0521 | 0.0362 |
| Jupiter | 29279-07-16 21:50 G | 12415192.32 | 12415192.41 | 12415192.52 | 0.0491 | 0.0444 |
| Jupiter | 29280-08-15 16:48 G | 12415587.97 | 12415588.20 | 12415588.43 | 0.0497 | 0.0057 |
| Jupiter | 29281-09-17 09:36 G | 12415985.81 | 12415985.90 | 12415986.01 | 0.0509 | 0.0457 |
| Saturn | 29282-01-26 16:05 G | 12416116.93 | 12416117.17 | 12416117.41 | 0.0277 | 0.0005 |
| Jupiter | 29286-02-08 16:33 G | 12417590.98 | 12417591.19 | 12417591.41 | 0.0531 | 0.0171 |
| Jupiter | 29287-03-16 18:29 G | 12417992.13 | 12417992.27 | 12417992.42 | 0.0519 | 0.0411 |
| Jupiter | 29291-07-20 22:19 G | 12419579.28 | 12419579.43 | 12419579.59 | 0.0491 | 0.0372 |
| Jupiter | 29292-08-20 08:53 G | 12419975.64 | 12419975.87 | 12419976.10 | 0.0499 | 0.0002 |
| Jupiter | 29293-09-21 16:05 G | 12420373.12 | 12420373.17 | 12420373.23 | 0.0511 | 0.0497 |
| Saturn | 29297-07-24 04:05 G | 12421774.46 | 12421774.67 | 12421774.89 | 0.0283 | 0.0131 |
| Jupiter | 29298-02-14 01:41 G | 12421979.33 | 12421979.57 | 12421979.80 | 0.0530 | 0.0063 |
| Jupiter | 29299-03-21 09:50 G | 12422379.79 | 12422379.91 | 12422380.04 | 0.0517 | 0.0435 |
| Uranus | 29299-07-22 00:00 G | 12422502.33 | 12422502.50 | 12422502.72 | 0.0140 | 0.0094 |

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| Mars | 29300-06-01 23:02 G | 12422817.29 | 12422817.46 | 12422817.63 | 0.1616 | 0.0277 |
| Uranus | 29300-07-26 21:36 G | 12422872.16 | 12422872.40 | 12422872.65 | 0.0139 | 0.0007 |
| Uranus | 29301-07-31 08:38 G | 12423241.63 | 12423241.86 | 12423242.11 | 0.0139 | 0.0053 |
| Uranus | 29302-08-05 03:07 G | 12423611.57 | 12423611.63 | 12423611.71 | 0.0138 | 0.0132 |
| Jupiter | 29303-07-26 08:38 G | 12423966.71 | 12423966.86 | 12423967.03 | 0.0492 | 0.0347 |
| Jupiter | 29304-08-25 12:57 G | 12424362.80 | 12424363.04 | 12424363.27 | 0.0500 | 0.0101 |
| Jupiter | 29309-01-14 03:21 G | 12425965.61 | 12425965.64 | 12425965.69 | 0.0537 | 0.0529 |
| Jupiter | 29310-02-19 22:19 G | 12426367.19 | 12426367.43 | 12426367.66 | 0.0528 | 0.0056 |
| Saturn | 29311-01-22 10:19 G | 12426703.76 | 12426703.93 | 12426704.13 | 0.0279 | 0.0188 |
| Jupiter | 29311-03-27 12:29 G | 12426768.01 | 12426768.02 | 12426768.04 | 0.0515 | 0.0513 |
| Saturn | 29312-02-04 03:36 G | 12427081.52 | 12427081.65 | 12427081.79 | 0.0275 | 0.0229 |
| Jupiter | 29315-07-30 12:57 G | 12428353.86 | 12428354.04 | 12428354.23 | 0.0493 | 0.0317 |
| Jupiter | 29316-08-30 03:07 G | 12428750.42 | 12428750.63 | 12428750.84 | 0.0502 | 0.0187 |
| Neptune | 29317-05-23 15:36 G | 12429017.13 | 12429017.15 | 12429017.22 | 0.0088 | 0.0086 |
| Neptune | 29318-05-25 23:31 G | 12429384.40 | 12429384.48 | 12429384.62 | 0.0088 | 0.0080 |
| Neptune | 29319-05-28 14:53 G | 12429751.96 | 12429752.12 | 12429752.30 | 0.0088 | 0.0064 |
| Neptune | 29320-05-29 18:29 G | 12430119.10 | 12430119.27 | 12430119.49 | 0.0088 | 0.0058 |
| Jupiter | 29321-01-19 02:24 G | 12430353.52 | 12430353.60 | 12430353.69 | 0.0536 | 0.0495 |
| Neptune | 29321-06-01 12:00 G | 12430486.79 | 12430487.00 | 12430487.24 | 0.0088 | 0.0042 |
| Jupiter | 29322-02-25 05:45 G | 12430755.52 | 12430755.74 | 12430755.96 | 0.0526 | 0.0109 |
| Neptune | 29322-06-03 15:21 G | 12430853.93 | 12430854.14 | 12430854.39 | 0.0088 | 0.0037 |
| Neptune | 29323-06-06 07:41 G | 12431221.57 | 12431221.82 | 12431222.09 | 0.0088 | 0.0021 |
| Neptune | 29324-06-07 13:55 G | 12431588.84 | 12431589.08 | 12431589.34 | 0.0088 | 0.0016 |
| Neptune | 29325-06-10 02:24 G | 12431956.34 | 12431956.60 | 12431956.87 | 0.0088 | 0.0002 |
| Neptune | 29326-06-12 13:41 G | 12432323.83 | 12432324.07 | 12432324.33 | 0.0088 | 0.0008 |
| Neptune | 29327-06-14 20:53 G | 12432691.13 | 12432691.37 | 12432691.64 | 0.0088 | 0.0024 |
| Saturn | 29327-08-01 21:36 G | 12432739.19 | 12432739.40 | 12432739.62 | 0.0284 | 0.0109 |
| Jupiter | 29327-08-03 19:26 G | 12432741.12 | 12432741.31 | 12432741.51 | 0.0494 | 0.0239 |
| Neptune | 29328-06-16 12:29 G | 12433058.79 | 12433059.02 | 12433059.27 | 0.0088 | 0.0029 |
| Jupiter | 29328-09-03 15:36 G | 12433137.94 | 12433138.15 | 12433138.38 | 0.0503 | 0.0220 |

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| Neptune | 29329-06-18 16:19 G | 12433425.96 | 12433426.18 | 12433426.41 | 0.0088 | 0.0045 |
| Neptune | 29330-06-21 09:21 G | 12433793.69 | 12433793.89 | 12433794.12 | 0.0088 | 0.0050 |
| Neptune | 29331-06-23 12:43 G | 12434160.90 | 12434161.03 | 12434161.22 | 0.0088 | 0.0068 |
| Neptune | 29332-06-25 04:19 G | 12434528.55 | 12434528.68 | 12434528.86 | 0.0088 | 0.0072 |
| Jupiter | 29333-01-24 09:21 G | 12434741.75 | 12434741.89 | 12434742.05 | 0.0535 | 0.0400 |
| Jupiter | 29334-03-01 20:24 G | 12435143.12 | 12435143.35 | 12435143.58 | 0.0525 | 0.0146 |
| Jupiter | 29339-08-08 10:33 G | 12437128.71 | 12437128.94 | 12437129.17 | 0.0495 | 0.0139 |
| Jupiter | 29340-09-08 02:38 G | 12437525.42 | 12437525.61 | 12437525.81 | 0.0505 | 0.0263 |
| Saturn | 29341-01-29 07:41 G | 12437668.59 | 12437668.82 | 12437669.05 | 0.0277 | 0.0060 |
| Uranus | 29344-01-22 23:02 G | 12438757.26 | 12438757.46 | 12438757.68 | 0.0139 | 0.0075 |
| Uranus | 29345-01-26 08:53 G | 12439126.61 | 12439126.87 | 12439127.13 | 0.0139 | 0.0002 |
| Jupiter | 29345-01-29 07:26 G | 12439129.60 | 12439129.81 | 12439130.01 | 0.0534 | 0.0280 |
| Uranus | 29346-01-31 07:55 G | 12439496.61 | 12439496.83 | 12439497.05 | 0.0140 | 0.0065 |
| Jupiter | 29346-03-06 20:09 G | 12439531.14 | 12439531.34 | 12439531.54 | 0.0524 | 0.0248 |
| Jupiter | 29351-08-12 10:33 G | 12441515.72 | 12441515.94 | 12441516.17 | 0.0496 | 0.0089 |
| Jupiter | 29352-09-12 19:41 G | 12441913.15 | 12441913.32 | 12441913.49 | 0.0506 | 0.0355 |
| Saturn | 29356-07-26 11:45 G | 12443325.75 | 12443325.99 | 12443326.24 | 0.0283 | 0.0076 |
| Jupiter | 29357-02-03 13:55 G | 12443517.87 | 12443518.08 | 12443518.28 | 0.0533 | 0.0227 |
| Jupiter | 29358-03-11 23:02 G | 12443919.29 | 12443919.46 | 12443919.64 | 0.0522 | 0.0356 |
| Jupiter | 29362-07-16 20:53 G | 12445507.27 | 12445507.37 | 12445507.47 | 0.0490 | 0.0443 |
| Jupiter | 29363-08-17 03:21 G | 12445903.41 | 12445903.64 | 12445903.87 | 0.0497 | 0.0062 |
| Jupiter | 29364-09-17 03:21 G | 12446300.54 | 12446300.64 | 12446300.75 | 0.0508 | 0.0452 |
| Jupiter | 29369-02-09 00:00 G | 12447906.28 | 12447906.50 | 12447906.73 | 0.0532 | 0.0181 |
| Saturn | 29370-01-23 18:29 G | 12448255.05 | 12448255.27 | 12448255.50 | 0.0278 | 0.0127 |
| Jupiter | 29370-03-16 16:19 G | 12448307.04 | 12448307.18 | 12448307.33 | 0.0519 | 0.0402 |
| Jupiter | 29374-07-21 05:17 G | 12449894.59 | 12449894.72 | 12449894.87 | 0.0491 | 0.0379 |
| Jupiter | 29375-08-21 05:31 G | 12450290.49 | 12450290.73 | 12450290.97 | 0.0498 | 0.0006 |
| Jupiter | 29376-09-22 02:09 G | 12450688.53 | 12450688.59 | 12450688.65 | 0.0511 | 0.0490 |
| Mars | 29379-06-04 19:26 G | 12451674.15 | 12451674.31 | 12451674.47 | 0.1613 | 0.0843 |
| Jupiter | 29381-02-13 20:38 G | 12452294.13 | 12452294.36 | 12452294.59 | 0.0530 | 0.0071 |

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| Jupiter | 29382-03-21 19:41 G | 12452695.20 | 12452695.32 | 12452695.45 | 0.0517 | 0.0427 |
| Uranus | 29383-07-23 12:00 G | 12453183.80 | 12453184.00 | 12453184.23 | 0.0140 | 0.0077 |
| Uranus | 29384-07-27 09:50 G | 12453553.67 | 12453553.91 | 12453554.16 | 0.0139 | 0.0017 |
| Saturn | 29385-07-20 21:21 G | 12453912.33 | 12453912.39 | 12453912.48 | 0.0281 | 0.0265 |
| Uranus | 29385-07-31 19:41 G | 12453923.11 | 12453923.32 | 12453923.56 | 0.0139 | 0.0069 |
| Jupiter | 29386-07-25 12:14 G | 12454281.85 | 12454282.01 | 12454282.18 | 0.0492 | 0.0351 |
| Saturn | 29386-08-03 09:36 G | 12454290.71 | 12454290.90 | 12454291.10 | 0.0285 | 0.0161 |
| Uranus | 29386-08-05 14:53 G | 12454293.06 | 12454293.12 | 12454293.22 | 0.0138 | 0.0131 |
| Jupiter | 29387-08-25 21:07 G | 12454678.17 | 12454678.38 | 12454678.61 | 0.0500 | 0.0107 |
| Jupiter | 29392-01-13 14:53 G | 12456280.12 | 12456280.12 | 12456280.12 | 0.0536 | 0.0536 |
| Jupiter | 29393-02-19 00:43 G | 12456682.30 | 12456682.53 | 12456682.76 | 0.0529 | 0.0046 |
| Jupiter | 29394-03-26 04:05 G | 12457082.64 | 12457082.67 | 12457082.73 | 0.0516 | 0.0505 |
| Pluto | 29397-01-21 20:09 G | 12458115.11 | 12458115.34 | 12458115.61 | 0.0065 | 0.0024 |
| Pluto | 29398-01-23 15:21 G | 12458482.04 | 12458482.14 | 12458482.30 | 0.0065 | 0.0056 |
| Jupiter | 29398-07-29 18:57 G | 12458669.13 | 12458669.29 | 12458669.47 | 0.0493 | 0.0321 |
| Jupiter | 29399-08-30 09:21 G | 12459065.66 | 12459065.89 | 12459066.11 | 0.0501 | 0.0184 |
| Saturn | 29400-01-31 18:57 G | 12459220.07 | 12459220.29 | 12459220.52 | 0.0276 | 0.0114 |
| Neptune | 29400-11-25 04:48 G | 12459517.59 | 12459517.70 | 12459517.84 | 0.0090 | 0.0077 |
| Neptune | 29401-11-27 11:02 G | 12459884.82 | 12459884.96 | 12459885.14 | 0.0090 | 0.0070 |
| Neptune | 29402-11-30 07:12 G | 12460252.61 | 12460252.80 | 12460253.03 | 0.0090 | 0.0055 |
| Neptune | 29403-12-02 14:24 G | 12460619.89 | 12460620.10 | 12460620.32 | 0.0090 | 0.0047 |
| Jupiter | 29404-01-20 03:07 G | 12460668.55 | 12460668.63 | 12460668.71 | 0.0536 | 0.0504 |
| Neptune | 29404-12-04 08:09 G | 12460987.61 | 12460987.84 | 12460988.10 | 0.0090 | 0.0033 |
| Jupiter | 29405-02-24 19:41 G | 12461070.08 | 12461070.32 | 12461070.56 | 0.0527 | 0.0097 |
| Neptune | 29405-12-06 18:14 G | 12461355.02 | 12461355.26 | 12461355.51 | 0.0090 | 0.0023 |
| Neptune | 29406-12-09 07:41 G | 12461722.55 | 12461722.82 | 12461723.08 | 0.0090 | 0.0008 |
| Neptune | 29407-12-11 22:05 G | 12462090.18 | 12462090.42 | 12462090.68 | 0.0090 | 0.0003 |
| Neptune | 29408-12-13 07:12 G | 12462457.55 | 12462457.80 | 12462458.07 | 0.0090 | 0.0016 |
| Neptune | 29409-12-16 02:09 G | 12462825.35 | 12462825.59 | 12462825.84 | 0.0090 | 0.0025 |
| Jupiter | 29410-08-04 07:41 G | 12463056.61 | 12463056.82 | 12463057.03 | 0.0493 | 0.0234 |

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| Neptune | 29410-12-18 08:24 G | 12463192.62 | 12463192.85 | 12463193.09 | 0.0090 | 0.0038 |
| Jupiter | 29411-09-04 17:17 G | 12463453.02 | 12463453.22 | 12463453.43 | 0.0503 | 0.0215 |
| Neptune | 29411-12-21 04:05 G | 12463560.48 | 12463560.67 | 12463560.91 | 0.0090 | 0.0050 |
| Neptune | 29412-12-22 10:48 G | 12463927.78 | 12463927.95 | 12463928.15 | 0.0090 | 0.0062 |
| Neptune | 29413-12-25 05:02 G | 12464295.59 | 12464295.71 | 12464295.89 | 0.0090 | 0.0074 |
| Neptune | 29414-12-27 14:53 G | 12464663.04 | 12464663.12 | 12464663.21 | 0.0090 | 0.0084 |
| Saturn | 29415-07-29 15:07 G | 12464876.88 | 12464877.13 | 12464877.38 | 0.0283 | 0.0028 |
| Jupiter | 29416-01-25 02:09 G | 12465056.44 | 12465056.59 | 12465056.74 | 0.0536 | 0.0407 |
| Jupiter | 29417-03-02 00:00 G | 12465458.29 | 12465458.50 | 12465458.72 | 0.0526 | 0.0141 |
| Jupiter | 29422-08-08 08:09 G | 12467443.62 | 12467443.84 | 12467444.06 | 0.0494 | 0.0142 |
| Jupiter | 29423-09-09 10:48 G | 12467840.75 | 12467840.95 | 12467841.16 | 0.0504 | 0.0259 |
| Uranus | 29427-01-19 12:57 G | 12469069.01 | 12469069.04 | 12469069.12 | 0.0138 | 0.0136 |
| Uranus | 29428-01-24 12:00 G | 12469438.80 | 12469439.00 | 12469439.24 | 0.0139 | 0.0069 |
| Jupiter | 29428-01-30 13:12 G | 12469444.86 | 12469445.05 | 12469445.24 | 0.0535 | 0.0286 |
| Saturn | 29429-01-26 00:57 G | 12469806.31 | 12469806.54 | 12469806.78 | 0.0278 | 0.0073 |
| Uranus | 29429-01-27 21:50 G | 12469808.16 | 12469808.41 | 12469808.67 | 0.0139 | 0.0002 |
| Jupiter | 29429-03-07 03:50 G | 12469846.45 | 12469846.66 | 12469846.88 | 0.0524 | 0.0246 |
| Uranus | 29430-02-01 21:21 G | 12470178.21 | 12470178.39 | 12470178.61 | 0.0140 | 0.0084 |
| Jupiter | 29434-08-12 23:31 G | 12471831.25 | 12471831.48 | 12471831.70 | 0.0495 | 0.0093 |
| Jupiter | 29435-09-13 17:17 G | 12472228.06 | 12472228.22 | 12472228.39 | 0.0506 | 0.0358 |
| Jupiter | 29440-02-04 21:21 G | 12473833.17 | 12473833.39 | 12473833.61 | 0.0533 | 0.0235 |
| Jupiter | 29441-03-11 22:19 G | 12474234.26 | 12474234.43 | 12474234.60 | 0.0522 | 0.0354 |
| Saturn | 29444-07-23 05:02 G | 12475463.57 | 12475463.71 | 12475463.86 | 0.0281 | 0.0223 |
| Jupiter | 29445-07-17 06:57 G | 12475822.71 | 12475822.79 | 12475822.89 | 0.0490 | 0.0445 |
| Saturn | 29445-08-05 13:26 G | 12475841.89 | 12475842.06 | 12475842.23 | 0.0285 | 0.0208 |
| Jupiter | 29446-08-17 03:21 G | 12476218.41 | 12476218.64 | 12476218.88 | 0.0497 | 0.0065 |
| Jupiter | 29447-09-18 16:33 G | 12476616.10 | 12476616.19 | 12476616.30 | 0.0508 | 0.0453 |
| Jupiter | 29452-02-09 14:09 G | 12478220.87 | 12478221.09 | 12478221.30 | 0.0532 | 0.0190 |
| Jupiter | 29453-03-16 22:05 G | 12478622.27 | 12478622.42 | 12478622.58 | 0.0520 | 0.0391 |
| Jupiter | 29457-07-21 14:38 G | 12480209.96 | 12480210.11 | 12480210.27 | 0.0491 | 0.0381 |

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| Saturn | 29458-01-21 02:53 G | 12480393.53 | 12480393.62 | 12480393.73 | 0.0280 | 0.0254 |
| Jupiter | 29458-08-21 19:12 G | 12480606.07 | 12480606.30 | 12480606.52 | 0.0498 | 0.0008 |
| Saturn | 29459-02-02 23:17 G | 12480771.27 | 12480771.47 | 12480771.68 | 0.0276 | 0.0166 |
| Jupiter | 29459-09-23 03:07 G | 12481003.56 | 12481003.63 | 12481003.70 | 0.0510 | 0.0486 |
| Jupiter | 29464-02-14 23:45 G | 12482609.26 | 12482609.49 | 12482609.72 | 0.0531 | 0.0076 |
| Jupiter | 29465-03-21 12:00 G | 12483009.87 | 12483010.00 | 12483010.14 | 0.0519 | 0.0422 |
| Uranus | 29467-07-24 22:48 G | 12483865.25 | 12483865.45 | 12483865.65 | 0.0140 | 0.0085 |
| Uranus | 29468-07-28 21:36 G | 12484235.15 | 12484235.40 | 12484235.65 | 0.0139 | 0.0002 |
| Jupiter | 29469-07-25 19:26 G | 12484597.16 | 12484597.31 | 12484597.46 | 0.0491 | 0.0364 |
| Uranus | 29469-08-02 06:57 G | 12484604.55 | 12484604.79 | 12484605.02 | 0.0139 | 0.0059 |
| Jupiter | 29470-08-26 03:50 G | 12484993.42 | 12484993.66 | 12484993.89 | 0.0499 | 0.0108 |
| Saturn | 29474-07-30 19:12 G | 12486428.07 | 12486428.30 | 12486428.54 | 0.0284 | 0.0016 |
| Jupiter | 29476-02-19 20:53 G | 12486997.14 | 12486997.37 | 12486997.61 | 0.0530 | 0.0041 |
| Jupiter | 29477-03-26 14:53 G | 12487398.09 | 12487398.12 | 12487398.16 | 0.0517 | 0.0510 |
| Jupiter | 29481-07-30 07:55 G | 12488984.66 | 12488984.83 | 12488985.02 | 0.0492 | 0.0323 |
| Neptune | 29482-05-26 13:55 G | 12489285.08 | 12489285.08 | 12489285.09 | 0.0088 | 0.0088 |
| Jupiter | 29482-08-30 12:29 G | 12489380.82 | 12489381.02 | 12489381.24 | 0.0501 | 0.0181 |
| Neptune | 29483-05-28 17:17 G | 12489652.08 | 12489652.22 | 12489652.40 | 0.0088 | 0.0069 |
| Neptune | 29484-05-30 11:17 G | 12490019.80 | 12490019.97 | 12490020.14 | 0.0088 | 0.0066 |
| Neptune | 29485-06-01 14:38 G | 12490386.92 | 12490387.11 | 12490387.34 | 0.0088 | 0.0048 |
| Pluto | 29485-07-25 07:55 G | 12490440.60 | 12490440.83 | 12490441.09 | 0.0079 | 0.0017 |
| Neptune | 29486-06-04 06:29 G | 12490754.55 | 12490754.77 | 12490755.01 | 0.0088 | 0.0044 |
| Jupiter | 29487-01-19 00:00 G | 12490983.44 | 12490983.50 | 12490983.59 | 0.0537 | 0.0508 |
| Neptune | 29487-06-06 14:09 G | 12491121.85 | 12491122.09 | 12491122.33 | 0.0088 | 0.0025 |
| Saturn | 29488-01-28 10:05 G | 12491357.69 | 12491357.92 | 12491358.16 | 0.0277 | 0.0019 |
| Jupiter | 29488-02-25 05:17 G | 12491385.50 | 12491385.72 | 12491385.94 | 0.0528 | 0.0088 |
| Neptune | 29488-06-08 00:29 G | 12491489.28 | 12491489.52 | 12491489.80 | 0.0088 | 0.0022 |
| Neptune | 29489-06-10 12:57 G | 12491856.79 | 12491857.04 | 12491857.29 | 0.0088 | 0.0003 |
| Neptune | 29490-06-12 18:57 G | 12492224.02 | 12492224.29 | 12492224.55 | 0.0088 | 0.0001 |
| Neptune | 29491-06-15 11:17 G | 12492591.72 | 12492591.97 | 12492592.22 | 0.0088 | 0.0019 |

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| Neptune | 29492-06-16 14:38 G | 12492958.88 | 12492959.11 | 12492959.37 | 0.0088 | 0.0023 |
| Neptune | 29493-06-19 07:55 G | 12493326.61 | 12493326.83 | 12493327.07 | 0.0088 | 0.0042 |
| Jupiter | 29493-08-03 07:12 G | 12493371.60 | 12493371.80 | 12493372.01 | 0.0493 | 0.0236 |
| Neptune | 29494-06-21 12:14 G | 12493693.82 | 12493694.01 | 12493694.25 | 0.0088 | 0.0046 |
| Jupiter | 29494-09-04 04:48 G | 12493768.48 | 12493768.70 | 12493768.92 | 0.0502 | 0.0207 |
| Neptune | 29495-06-24 03:36 G | 12494061.47 | 12494061.65 | 12494061.84 | 0.0088 | 0.0063 |
| Neptune | 29496-06-25 11:45 G | 12494428.84 | 12494428.99 | 12494429.16 | 0.0088 | 0.0067 |
| Neptune | 29497-06-27 21:07 G | 12494796.34 | 12494796.38 | 12494796.49 | 0.0088 | 0.0085 |
| Mars | 29498-12-03 13:26 G | 12495319.87 | 12495320.06 | 12495320.26 | 0.1921 | 0.0389 |
| Jupiter | 29499-01-24 12:29 G | 12495371.88 | 12495372.02 | 12495372.17 | 0.0536 | 0.0400 |
| Jupiter | 29500-03-02 08:09 G | 12495773.61 | 12495773.84 | 12495774.08 | 0.0526 | 0.0138 |
| Saturn | 29503-07-26 03:21 G | 12497014.45 | 12497014.64 | 12497014.84 | 0.0282 | 0.0183 |
| Saturn | 29504-08-07 09:36 G | 12497392.78 | 12497392.90 | 12497393.02 | 0.0285 | 0.0249 |
| Mars | 29505-06-03 07:12 G | 12497692.71 | 12497692.80 | 12497692.88 | 0.1622 | 0.1457 |
| Jupiter | 29505-08-09 00:57 G | 12497759.32 | 12497759.54 | 12497759.76 | 0.0494 | 0.0142 |
| Jupiter | 29506-09-09 12:57 G | 12498155.84 | 12498156.04 | 12498156.24 | 0.0504 | 0.0260 |
| Jupiter | 29511-01-30 13:26 G | 12499759.86 | 12499760.06 | 12499760.27 | 0.0534 | 0.0290 |
| Uranus | 29512-01-25 23:31 G | 12500120.26 | 12500120.48 | 12500120.71 | 0.0139 | 0.0065 |
| Jupiter | 29512-03-06 23:02 G | 12500161.26 | 12500161.46 | 12500161.66 | 0.0524 | 0.0244 |
| Uranus | 29513-01-29 08:38 G | 12500489.61 | 12500489.86 | 12500490.11 | 0.0139 | 0.0010 |
| Uranus | 29514-02-03 08:09 G | 12500859.64 | 12500859.84 | 12500860.06 | 0.0140 | 0.0074 |
| Saturn | 29517-01-23 03:50 G | 12501944.49 | 12501944.66 | 12501944.84 | 0.0280 | 0.0200 |
| Jupiter | 29517-08-13 04:48 G | 12502146.46 | 12502146.70 | 12502146.93 | 0.0495 | 0.0098 |
| Saturn | 29518-02-04 22:48 G | 12502322.30 | 12502322.45 | 12502322.61 | 0.0276 | 0.0217 |
| Jupiter | 29518-09-14 11:02 G | 12502543.81 | 12502543.96 | 12502544.12 | 0.0506 | 0.0368 |
| Jupiter | 29523-02-04 12:57 G | 12504147.84 | 12504148.04 | 12504148.24 | 0.0533 | 0.0242 |
| Jupiter | 29524-03-12 04:19 G | 12504549.51 | 12504549.68 | 12504549.86 | 0.0523 | 0.0350 |
| Jupiter | 29528-07-17 17:31 G | 12506138.13 | 12506138.23 | 12506138.33 | 0.0490 | 0.0442 |
| Jupiter | 29529-08-17 17:31 G | 12506534.00 | 12506534.23 | 12506534.45 | 0.0496 | 0.0073 |
| Jupiter | 29530-09-18 17:45 G | 12506931.13 | 12506931.24 | 12506931.35 | 0.0507 | 0.0447 |

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| Saturn | 29533-08-01 23:31 G | 12507979.25 | 12507979.48 | 12507979.72 | 0.0284 | 0.0057 |
| Jupiter | 29535-02-10 00:43 G | 12508536.31 | 12508536.53 | 12508536.74 | 0.0533 | 0.0194 |
| Jupiter | 29536-03-16 21:07 G | 12508937.23 | 12508937.38 | 12508937.54 | 0.0521 | 0.0386 |
| Jupiter | 29540-07-21 22:05 G | 12510525.29 | 12510525.42 | 12510525.56 | 0.0491 | 0.0390 |
| Jupiter | 29541-08-22 02:24 G | 12510921.36 | 12510921.60 | 12510921.84 | 0.0497 | 0.0008 |
| Jupiter | 29542-09-23 12:43 G | 12511318.96 | 12511319.03 | 12511319.10 | 0.0509 | 0.0481 |
| Saturn | 29547-01-30 18:00 G | 12512909.02 | 12512909.25 | 12512909.50 | 0.0277 | 0.0034 |
| Jupiter | 29547-02-15 00:29 G | 12512924.29 | 12512924.52 | 12512924.76 | 0.0531 | 0.0073 |
| Jupiter | 29548-03-22 03:07 G | 12513325.50 | 12513325.63 | 12513325.76 | 0.0519 | 0.0424 |
| Uranus | 29551-07-26 10:33 G | 12514546.73 | 12514546.94 | 12514547.17 | 0.0140 | 0.0070 |
| Jupiter | 29552-07-26 09:36 G | 12514912.76 | 12514912.90 | 12514913.07 | 0.0491 | 0.0373 |
| Uranus | 29552-07-30 09:36 G | 12514916.65 | 12514916.90 | 12514917.15 | 0.0139 | 0.0010 |
| Uranus | 29553-08-03 18:00 G | 12515286.05 | 12515286.25 | 12515286.47 | 0.0139 | 0.0077 |
| Jupiter | 29553-08-26 10:05 G | 12515308.70 | 12515308.92 | 12515309.14 | 0.0499 | 0.0109 |
| Uranus | 29554-08-08 14:53 G | 12515656.10 | 12515656.12 | 12515656.17 | 0.0138 | 0.0137 |
| Jupiter | 29559-02-20 09:36 G | 12517312.68 | 12517312.90 | 12517313.13 | 0.0530 | 0.0041 |
| Jupiter | 29560-03-26 22:05 G | 12517713.41 | 12517713.42 | 12517713.45 | 0.0517 | 0.0514 |
| Saturn | 29562-07-26 19:55 G | 12518565.12 | 12518565.33 | 12518565.55 | 0.0282 | 0.0147 |
| Jupiter | 29564-07-30 11:17 G | 12519299.80 | 12519299.97 | 12519300.15 | 0.0492 | 0.0324 |
| Jupiter | 29565-08-31 04:05 G | 12519696.45 | 12519696.67 | 12519696.90 | 0.0501 | 0.0177 |
| Neptune | 29565-11-28 00:00 G | 12519785.37 | 12519785.50 | 12519785.68 | 0.0090 | 0.0072 |
| Neptune | 29566-11-30 07:26 G | 12520152.67 | 12520152.81 | 12520152.99 | 0.0090 | 0.0068 |
| Neptune | 29567-12-03 00:29 G | 12520520.30 | 12520520.52 | 12520520.75 | 0.0090 | 0.0048 |
| Neptune | 29568-12-04 12:14 G | 12520887.81 | 12520888.01 | 12520888.24 | 0.0090 | 0.0044 |
| Neptune | 29569-12-07 00:43 G | 12521255.28 | 12521255.53 | 12521255.79 | 0.0090 | 0.0024 |
| Jupiter | 29570-01-19 07:41 G | 12521298.77 | 12521298.82 | 12521298.89 | 0.0536 | 0.0514 |
| Neptune | 29570-12-09 17:17 G | 12521622.98 | 12521623.22 | 12521623.47 | 0.0090 | 0.0020 |
| Jupiter | 29571-02-25 06:14 G | 12521700.52 | 12521700.76 | 12521701.00 | 0.0528 | 0.0081 |
| Neptune | 29571-12-12 01:12 G | 12521990.28 | 12521990.55 | 12521990.81 | 0.0090 | 0.0001 |
| Neptune | 29572-12-13 20:38 G | 12522358.10 | 12522358.36 | 12522358.61 | 0.0090 | 0.0004 |

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| Neptune | 29573-12-16 02:09 G | 12522725.36 | 12522725.59 | 12522725.86 | 0.0090 | 0.0025 |
| Neptune | 29574-12-18 22:05 G | 12523093.18 | 12523093.42 | 12523093.67 | 0.0090 | 0.0028 |
| Neptune | 29575-12-21 05:02 G | 12523460.51 | 12523460.71 | 12523460.93 | 0.0090 | 0.0049 |
| Saturn | 29576-01-25 01:41 G | 12523495.37 | 12523495.57 | 12523495.78 | 0.0279 | 0.0149 |
| Jupiter | 29576-08-04 04:33 G | 12523687.49 | 12523687.69 | 12523687.90 | 0.0493 | 0.0230 |
| Neptune | 29576-12-22 21:50 G | 12523828.21 | 12523828.41 | 12523828.65 | 0.0090 | 0.0052 |
| Saturn | 29577-02-06 00:57 G | 12523873.50 | 12523873.54 | 12523873.62 | 0.0276 | 0.0266 |
| Jupiter | 29577-09-04 11:17 G | 12524083.76 | 12524083.97 | 12524084.18 | 0.0502 | 0.0202 |
| Neptune | 29577-12-25 09:07 G | 12524195.74 | 12524195.88 | 12524196.03 | 0.0090 | 0.0072 |
| Neptune | 29578-12-27 21:36 G | 12524563.28 | 12524563.40 | 12524563.57 | 0.0090 | 0.0075 |
| Jupiter | 29582-01-24 11:17 G | 12525686.82 | 12525686.97 | 12525687.14 | 0.0535 | 0.0399 |
| Jupiter | 29583-03-02 04:05 G | 12526088.45 | 12526088.67 | 12526088.89 | 0.0526 | 0.0134 |
| Mars | 29584-06-05 12:43 G | 12526549.85 | 12526550.03 | 12526550.21 | 0.1619 | 0.0584 |
| Jupiter | 29588-08-08 06:00 G | 12528074.52 | 12528074.75 | 12528074.98 | 0.0494 | 0.0146 |
| Jupiter | 29589-09-09 05:45 G | 12528471.55 | 12528471.74 | 12528471.94 | 0.0503 | 0.0262 |
| Saturn | 29592-08-02 21:21 G | 12529530.16 | 12529530.39 | 12529530.63 | 0.0284 | 0.0096 |
| Jupiter | 29594-01-29 13:26 G | 12530074.87 | 12530075.06 | 12530075.25 | 0.0535 | 0.0296 |
| Uranus | 29595-01-21 09:36 G | 12530431.83 | 12530431.90 | 12530432.02 | 0.0138 | 0.0129 |
| Jupiter | 29595-03-07 12:00 G | 12530476.79 | 12530477.00 | 12530477.20 | 0.0525 | 0.0251 |
| Uranus | 29596-01-26 08:24 G | 12530801.63 | 12530801.85 | 12530802.09 | 0.0139 | 0.0064 |
| Uranus | 29597-01-29 17:45 G | 12531170.99 | 12531171.24 | 12531171.50 | 0.0139 | 0.0007 |
| Uranus | 29598-02-03 17:31 G | 12531541.05 | 12531541.23 | 12531541.44 | 0.0140 | 0.0089 |
| Jupiter | 29600-08-12 18:43 G | 12532462.06 | 12532462.28 | 12532462.50 | 0.0495 | 0.0110 |
| Jupiter | 29601-09-13 12:43 G | 12532858.87 | 12532859.03 | 12532859.20 | 0.0505 | 0.0364 |
| Saturn | 29606-01-31 18:00 G | 12534460.01 | 12534460.25 | 12534460.50 | 0.0277 | 0.0082 |
| Jupiter | 29606-02-04 03:50 G | 12534463.45 | 12534463.66 | 12534463.87 | 0.0534 | 0.0249 |
| Jupiter | 29607-03-12 07:26 G | 12534864.64 | 12534864.81 | 12534864.99 | 0.0523 | 0.0350 |
| Jupiter | 29611-07-18 01:26 G | 12536453.47 | 12536453.56 | 12536453.66 | 0.0490 | 0.0440 |
| Jupiter | 29612-08-17 02:38 G | 12536849.37 | 12536849.61 | 12536849.85 | 0.0496 | 0.0076 |
| Jupiter | 29613-09-18 06:57 G | 12537246.69 | 12537246.79 | 12537246.90 | 0.0507 | 0.0447 |

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| Jupiter | 29618-02-09 03:21 G | 12538851.42 | 12538851.64 | 12538851.86 | 0.0533 | 0.0192 |
| Jupiter | 29619-03-17 13:41 G | 12539252.92 | 12539253.07 | 12539253.23 | 0.0521 | 0.0385 |
| Saturn | 29621-07-27 16:33 G | 12540115.98 | 12540116.19 | 12540116.41 | 0.0282 | 0.0110 |
| Jupiter | 29623-07-22 15:36 G | 12540841.02 | 12540841.15 | 12540841.30 | 0.0491 | 0.0394 |
| Jupiter | 29624-08-21 12:14 G | 12541236.78 | 12541237.01 | 12541237.23 | 0.0497 | 0.0012 |
| Jupiter | 29625-09-23 00:29 G | 12541634.44 | 12541634.52 | 12541634.62 | 0.0509 | 0.0472 |
| Jupiter | 29630-02-14 08:38 G | 12543239.63 | 12543239.86 | 12543240.08 | 0.0531 | 0.0071 |
| Jupiter | 29631-03-22 03:07 G | 12543640.50 | 12543640.63 | 12543640.78 | 0.0519 | 0.0422 |
| Saturn | 29635-01-26 03:07 G | 12545046.41 | 12545046.63 | 12545046.86 | 0.0279 | 0.0104 |
| Jupiter | 29635-07-26 16:19 G | 12545228.03 | 12545228.18 | 12545228.33 | 0.0492 | 0.0377 |
| Uranus | 29635-07-26 19:41 G | 12545228.11 | 12545228.32 | 12545228.53 | 0.0140 | 0.0078 * |
| Uranus | 29636-07-30 18:57 G | 12545598.04 | 12545598.29 | 12545598.55 | 0.0139 | 0.0007 |
| Jupiter | 29636-08-26 05:17 G | 12545624.49 | 12545624.72 | 12545624.96 | 0.0499 | 0.0115 |
| Uranus | 29637-08-04 03:21 G | 12545967.42 | 12545967.64 | 12545967.87 | 0.0139 | 0.0065 |
| Jupiter | 29642-02-19 08:53 G | 12547627.63 | 12547627.87 | 12547628.12 | 0.0530 | 0.0034 |
| Pluto | 29644-01-25 18:29 G | 12548333.19 | 12548333.27 | 12548333.41 | 0.0065 | 0.0059 |
| Pluto | 29645-01-26 12:57 G | 12548699.84 | 12548700.04 | 12548700.29 | 0.0065 | 0.0031 |
| Neptune | 29647-05-29 10:33 G | 12549552.86 | 12549552.94 | 12549553.05 | 0.0088 | 0.0081 |
| Jupiter | 29647-07-31 07:41 G | 12549615.66 | 12549615.82 | 12549616.00 | 0.0492 | 0.0325 |
| Neptune | 29648-05-30 15:21 G | 12549919.99 | 12549920.14 | 12549920.30 | 0.0088 | 0.0068 |
| Jupiter | 29648-08-30 08:53 G | 12550011.66 | 12550011.87 | 12550012.09 | 0.0500 | 0.0169 |
| Neptune | 29649-06-02 05:17 G | 12550287.54 | 12550287.72 | 12550287.94 | 0.0088 | 0.0059 |
| Neptune | 29650-06-04 13:55 G | 12550654.88 | 12550655.08 | 12550655.30 | 0.0088 | 0.0045 |
| Neptune | 29651-06-06 23:17 G | 12551022.24 | 12551022.47 | 12551022.72 | 0.0088 | 0.0036 |
| Saturn | 29651-08-04 12:29 G | 12551080.81 | 12551081.02 | 12551081.25 | 0.0284 | 0.0138 |
| Neptune | 29652-06-08 13:12 G | 12551389.82 | 12551390.05 | 12551390.30 | 0.0088 | 0.0023 |
| Jupiter | 29653-01-18 09:50 G | 12551613.85 | 12551613.91 | 12551613.97 | 0.0536 | 0.0517 |
| Neptune | 29653-06-10 18:29 G | 12551757.02 | 12551757.27 | 12551757.53 | 0.0088 | 0.0014 |
| Jupiter | 29654-02-24 10:19 G | 12552015.70 | 12552015.93 | 12552016.15 | 0.0529 | 0.0074 |
| Neptune | 29654-06-13 11:31 G | 12552124.73 | 12552124.98 | 12552125.24 | 0.0088 | 0.0001 |

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| Neptune | 29655-06-15 14:53 G | 12552491.87 | 12552492.12 | 12552492.38 | 0.0088 | 0.0009 |
| Neptune | 29656-06-17 07:41 G | 12552859.58 | 12552859.82 | 12552860.09 | 0.0088 | 0.0024 |
| Neptune | 29657-06-19 12:57 G | 12553226.82 | 12553227.04 | 12553227.29 | 0.0088 | 0.0032 |
| Neptune | 29658-06-22 02:24 G | 12553594.39 | 12553594.60 | 12553594.85 | 0.0088 | 0.0046 |
| Neptune | 29659-06-24 11:31 G | 12553961.81 | 12553961.98 | 12553962.20 | 0.0088 | 0.0054 |
| Jupiter | 29659-08-04 09:07 G | 12554002.68 | 12554002.88 | 12554003.10 | 0.0493 | 0.0229 |
| Neptune | 29660-06-25 20:38 G | 12554329.20 | 12554329.36 | 12554329.53 | 0.0088 | 0.0067 |
| Jupiter | 29660-09-04 03:36 G | 12554399.44 | 12554399.65 | 12554399.86 | 0.0501 | 0.0194 |
| Neptune | 29661-06-28 10:48 G | 12554696.84 | 12554696.95 | 12554697.09 | 0.0088 | 0.0076 |
| Jupiter | 29665-01-23 16:19 G | 12556002.04 | 12556002.18 | 12556002.33 | 0.0536 | 0.0402 |
| Saturn | 29665-02-01 13:12 G | 12556010.83 | 12556011.05 | 12556011.28 | 0.0277 | 0.0129 |
| Jupiter | 29666-03-01 20:09 G | 12556404.11 | 12556404.34 | 12556404.57 | 0.0527 | 0.0136 |
| Jupiter | 29671-08-08 20:53 G | 12558390.15 | 12558390.37 | 12558390.58 | 0.0494 | 0.0149 |
| Jupiter | 29672-09-08 09:36 G | 12558786.70 | 12558786.90 | 12558787.10 | 0.0503 | 0.0262 |
| Jupiter | 29677-01-29 06:14 G | 12560390.57 | 12560390.76 | 12560390.96 | 0.0535 | 0.0295 |
| Jupiter | 29678-03-06 15:50 G | 12560791.95 | 12560792.16 | 12560792.36 | 0.0525 | 0.0258 |
| Uranus | 29679-01-21 19:26 G | 12561113.29 | 12561113.31 | 12561113.37 | 0.0138 | 0.0136 |
| Uranus | 29680-01-26 17:17 G | 12561483.00 | 12561483.22 | 12561483.47 | 0.0139 | 0.0058 |
| Saturn | 29680-07-28 16:48 G | 12561666.98 | 12561667.20 | 12561667.44 | 0.0282 | 0.0070 |
| Uranus | 29681-01-30 02:38 G | 12561852.37 | 12561852.61 | 12561852.87 | 0.0139 | 0.0013 |
| Uranus | 29682-02-04 01:41 G | 12562222.37 | 12562222.57 | 12562222.79 | 0.0140 | 0.0080 |
| Jupiter | 29683-08-13 06:57 G | 12562777.56 | 12562777.79 | 12562778.03 | 0.0495 | 0.0116 |
| Jupiter | 29684-09-13 05:31 G | 12563174.59 | 12563174.73 | 12563174.89 | 0.0505 | 0.0373 |
| Jupiter | 29689-02-03 01:12 G | 12564778.35 | 12564778.55 | 12564778.76 | 0.0534 | 0.0260 |
| Jupiter | 29690-03-11 17:45 G | 12565180.07 | 12565180.24 | 12565180.41 | 0.0523 | 0.0347 |
| Saturn | 29694-01-27 06:00 G | 12566597.52 | 12566597.75 | 12566597.99 | 0.0279 | 0.0058 |
| Jupiter | 29694-07-17 20:38 G | 12566769.26 | 12566769.36 | 12566769.47 | 0.0491 | 0.0436 |
| Jupiter | 29695-08-17 14:53 G | 12567164.90 | 12567165.12 | 12567165.35 | 0.0496 | 0.0077 |
| Jupiter | 29696-09-17 21:21 G | 12567562.27 | 12567562.39 | 12567562.50 | 0.0507 | 0.0441 |
| Jupiter | 29701-02-09 11:02 G | 12569166.75 | 12569166.96 | 12569167.17 | 0.0532 | 0.0198 |

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| Jupiter | 29702-03-17 11:45 G | 12569567.83 | 12569567.99 | 12569568.16 | 0.0521 | 0.0378 |
| Jupiter | 29706-07-22 20:38 G | 12571156.23 | 12571156.36 | 12571156.50 | 0.0491 | 0.0400 |
| Jupiter | 29707-08-23 05:17 G | 12571552.49 | 12571552.72 | 12571552.96 | 0.0497 | 0.0016 |
| Jupiter | 29708-09-23 06:57 G | 12571949.71 | 12571949.79 | 12571949.89 | 0.0508 | 0.0463 |
| Saturn | 29709-07-24 03:21 G | 12572253.54 | 12572253.64 | 12572253.75 | 0.0280 | 0.0251 |
| Saturn | 29710-08-06 07:26 G | 12572631.64 | 12572631.81 | 12572632.01 | 0.0284 | 0.0179 |
| Jupiter | 29713-02-14 11:31 G | 12573554.75 | 12573554.98 | 12573555.23 | 0.0532 | 0.0074 |
| Jupiter | 29714-03-22 11:02 G | 12573955.84 | 12573955.96 | 12573956.09 | 0.0520 | 0.0427 |
| Jupiter | 29718-07-27 12:00 G | 12575543.86 | 12575544.00 | 12575544.14 | 0.0491 | 0.0381 |
| Uranus | 29719-07-28 04:05 G | 12575909.47 | 12575909.67 | 12575909.91 | 0.0140 | 0.0068 |
| Jupiter | 29719-08-27 08:53 G | 12575939.64 | 12575939.87 | 12575940.10 | 0.0498 | 0.0114 |
| Uranus | 29720-08-01 03:36 G | 12576279.39 | 12576279.65 | 12576279.90 | 0.0139 | 0.0005 |
| Uranus | 29721-08-05 11:31 G | 12576648.79 | 12576648.98 | 12576649.20 | 0.0139 | 0.0082 |
| Saturn | 29723-01-22 10:05 G | 12577183.81 | 12577183.92 | 12577184.03 | 0.0281 | 0.0250 |
| Saturn | 29724-02-04 12:14 G | 12577561.82 | 12577562.01 | 12577562.20 | 0.0277 | 0.0172 |
| Jupiter | 29725-02-19 16:48 G | 12577942.97 | 12577943.20 | 12577943.42 | 0.0530 | 0.0028 |
| Neptune | 29729-11-28 04:05 G | 12579685.56 | 12579685.67 | 12579685.79 | 0.0090 | 0.0079 |
| Jupiter | 29730-07-31 12:29 G | 12579930.84 | 12579931.02 | 12579931.20 | 0.0492 | 0.0321 |
| Neptune | 29730-11-30 19:26 G | 12580053.16 | 12580053.31 | 12580053.46 | 0.0090 | 0.0073 |
| Jupiter | 29731-09-01 02:09 G | 12580327.38 | 12580327.59 | 12580327.81 | 0.0500 | 0.0161 |
| Neptune | 29731-12-03 08:24 G | 12580420.66 | 12580420.85 | 12580421.05 | 0.0090 | 0.0055 |
| Pluto | 29732-07-28 01:55 G | 12580658.43 | 12580658.58 | 12580658.78 | 0.0080 | 0.0057 |
| Neptune | 29732-12-04 18:14 G | 12580788.05 | 12580788.26 | 12580788.49 | 0.0090 | 0.0050 |
| Neptune | 29733-12-07 11:45 G | 12581155.77 | 12581155.99 | 12581156.24 | 0.0090 | 0.0032 |
| Neptune | 29734-12-09 18:43 G | 12581523.04 | 12581523.28 | 12581523.54 | 0.0090 | 0.0026 |
| Neptune | 29735-12-12 15:07 G | 12581890.87 | 12581891.13 | 12581891.39 | 0.0090 | 0.0007 |
| Jupiter | 29736-01-19 18:57 G | 12581929.24 | 12581929.29 | 12581929.34 | 0.0536 | 0.0521 |
| Neptune | 29736-12-13 21:21 G | 12582258.13 | 12582258.39 | 12582258.64 | 0.0090 | 0.0001 |
| Jupiter | 29737-02-25 02:24 G | 12582331.37 | 12582331.60 | 12582331.84 | 0.0529 | 0.0066 |
| Neptune | 29737-12-16 16:05 G | 12582625.93 | 12582626.17 | 12582626.44 | 0.0090 | 0.0018 |

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| Neptune | 29738-12-19 00:43 G | 12582993.30 | 12582993.53 | 12582993.78 | 0.0090 | 0.0025 |
| Saturn | 29739-07-31 15:21 G | 12583217.90 | 12583218.14 | 12583218.39 | 0.0282 | 0.0030 |
| Neptune | 29739-12-21 16:19 G | 12583360.96 | 12583361.18 | 12583361.44 | 0.0090 | 0.0041 |
| Neptune | 29740-12-23 04:48 G | 12583728.51 | 12583728.70 | 12583728.93 | 0.0090 | 0.0049 |
| Neptune | 29741-12-25 15:21 G | 12584095.98 | 12584096.14 | 12584096.35 | 0.0090 | 0.0065 |
| Jupiter | 29742-08-05 01:26 G | 12584318.36 | 12584318.56 | 12584318.76 | 0.0493 | 0.0220 |
| Neptune | 29742-12-28 08:09 G | 12584463.72 | 12584463.84 | 12584464.01 | 0.0090 | 0.0074 |
| Jupiter | 29743-09-05 10:05 G | 12584714.70 | 12584714.92 | 12584715.14 | 0.0501 | 0.0193 |
| Neptune | 29743-12-30 15:21 G | 12584831.13 | 12584831.14 | 12584831.20 | 0.0090 | 0.0089 |
| Jupiter | 29748-01-25 04:05 G | 12586317.52 | 12586317.67 | 12586317.83 | 0.0535 | 0.0404 |
| Jupiter | 29749-03-01 17:31 G | 12586719.00 | 12586719.23 | 12586719.45 | 0.0527 | 0.0131 |
| Saturn | 29753-01-29 04:48 G | 12588148.45 | 12588148.70 | 12588148.95 | 0.0280 | 0.0015 |
| Jupiter | 29754-08-09 10:19 G | 12588705.70 | 12588705.93 | 12588706.17 | 0.0494 | 0.0152 |
| Jupiter | 29755-09-10 04:05 G | 12589102.48 | 12589102.67 | 12589102.86 | 0.0503 | 0.0270 |
| Jupiter | 29760-01-30 01:55 G | 12590705.39 | 12590705.58 | 12590705.77 | 0.0534 | 0.0307 |
| Jupiter | 29761-03-07 00:14 G | 12591107.32 | 12591107.51 | 12591107.72 | 0.0525 | 0.0255 |
| Uranus | 29763-01-23 06:14 G | 12591794.65 | 12591794.76 | 12591794.88 | 0.0138 | 0.0121 |
| Uranus | 29764-01-28 02:53 G | 12592164.39 | 12592164.62 | 12592164.86 | 0.0139 | 0.0060 |
| Uranus | 29765-01-31 12:57 G | 12592533.79 | 12592534.04 | 12592534.29 | 0.0139 | 0.0014 |
| Uranus | 29766-02-05 11:31 G | 12592903.80 | 12592903.98 | 12592904.19 | 0.0140 | 0.0093 |
| Jupiter | 29766-08-13 15:50 G | 12593092.94 | 12593093.16 | 12593093.38 | 0.0495 | 0.0125 |
| Jupiter | 29767-09-14 15:21 G | 12593489.98 | 12593490.14 | 12593490.31 | 0.0504 | 0.0371 |
| Saturn | 29768-07-24 23:45 G | 12593804.33 | 12593804.49 | 12593804.65 | 0.0280 | 0.0211 |
| Saturn | 29769-08-07 09:07 G | 12594182.75 | 12594182.88 | 12594183.03 | 0.0284 | 0.0224 |
| Jupiter | 29772-02-04 12:14 G | 12595093.81 | 12595094.01 | 12595094.20 | 0.0534 | 0.0276 |
| Jupiter | 29773-03-11 19:26 G | 12595495.13 | 12595495.31 | 12595495.50 | 0.0524 | 0.0339 |
| Jupiter | 29777-07-18 00:43 G | 12597084.43 | 12597084.53 | 12597084.64 | 0.0491 | 0.0437 |
| Jupiter | 29778-08-18 06:14 G | 12597480.53 | 12597480.76 | 12597481.00 | 0.0496 | 0.0079 |
| Jupiter | 29779-09-19 01:26 G | 12597877.46 | 12597877.56 | 12597877.68 | 0.0506 | 0.0435 |
| Saturn | 29782-01-23 09:21 G | 12598734.73 | 12598734.89 | 12598735.06 | 0.0281 | 0.0205 |

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| Mars | 29782-12-05 10:05 G | 12599050.74 | 12599050.92 | 12599051.10 | 0.1914 | 0.0579 |
| Saturn | 29783-02-05 16:05 G | 12599113.03 | 12599113.17 | 12599113.32 | 0.0277 | 0.0216 |
| Jupiter | 29784-02-09 14:24 G | 12599481.88 | 12599482.10 | 12599482.33 | 0.0533 | 0.0201 |
| Jupiter | 29785-03-16 22:19 G | 12599883.28 | 12599883.43 | 12599883.59 | 0.0522 | 0.0371 |
| Mars | 29789-06-05 03:36 G | 12601424.49 | 12601424.65 | 12601424.80 | 0.1626 | 0.0899 |
| Jupiter | 29789-07-22 14:53 G | 12601472.00 | 12601472.12 | 12601472.26 | 0.0491 | 0.0406 |
| Jupiter | 29790-08-22 08:24 G | 12601867.62 | 12601867.85 | 12601868.08 | 0.0497 | 0.0019 |
| Jupiter | 29791-09-23 22:19 G | 12602265.33 | 12602265.43 | 12602265.54 | 0.0508 | 0.0455 |
| Jupiter | 29796-02-14 21:36 G | 12603870.18 | 12603870.40 | 12603870.63 | 0.0532 | 0.0072 |
| Jupiter | 29797-03-22 02:09 G | 12604271.46 | 12604271.59 | 12604271.73 | 0.0520 | 0.0429 |
| Saturn | 29798-08-01 11:02 G | 12604768.71 | 12604768.96 | 12604769.22 | 0.0282 | 0.0018 |
| Jupiter | 29801-07-27 17:02 G | 12605859.06 | 12605859.21 | 12605859.36 | 0.0491 | 0.0380 |
| Jupiter | 29802-08-28 03:21 G | 12606255.42 | 12606255.64 | 12606255.86 | 0.0498 | 0.0117 |
| Uranus | 29803-07-29 11:02 G | 12606590.76 | 12606590.96 | 12606591.18 | 0.0140 | 0.0075 |
| Uranus | 29804-08-02 10:05 G | 12606960.67 | 12606960.92 | 12606961.18 | 0.0139 | 0.0009 |
| Uranus | 29805-08-06 18:43 G | 12607330.07 | 12607330.28 | 12607330.51 | 0.0139 | 0.0068 |
| Jupiter | 29808-02-21 02:09 G | 12608258.35 | 12608258.59 | 12608258.83 | 0.0530 | 0.0017 |
| Saturn | 29812-01-31 23:31 G | 12609699.23 | 12609699.48 | 12609699.74 | 0.0280 | 0.0031 |
| Neptune | 29812-06-01 04:05 G | 12609820.54 | 12609820.67 | 12609820.85 | 0.0088 | 0.0071 |
| Neptune | 29813-06-03 14:53 G | 12610187.97 | 12610188.12 | 12610188.28 | 0.0088 | 0.0068 |
| Jupiter | 29813-08-01 03:36 G | 12610246.48 | 12610246.65 | 12610246.83 | 0.0492 | 0.0317 |
| Neptune | 29814-06-05 23:31 G | 12610555.26 | 12610555.48 | 12610555.70 | 0.0088 | 0.0048 |
| Jupiter | 29814-09-01 09:07 G | 12610642.65 | 12610642.88 | 12610643.11 | 0.0500 | 0.0156 |
| Neptune | 29815-06-08 13:55 G | 12610922.88 | 12610923.08 | 12610923.31 | 0.0088 | 0.0046 |
| Neptune | 29816-06-09 18:00 G | 12611290.02 | 12611290.25 | 12611290.52 | 0.0088 | 0.0026 |
| Neptune | 29817-06-12 11:31 G | 12611657.74 | 12611657.98 | 12611658.23 | 0.0088 | 0.0023 |
| Neptune | 29818-06-14 15:07 G | 12612024.88 | 12612025.13 | 12612025.39 | 0.0088 | 0.0003 |
| Jupiter | 29819-01-20 02:38 G | 12612244.58 | 12612244.61 | 12612244.66 | 0.0536 | 0.0527 |
| Neptune | 29819-06-17 07:12 G | 12612392.54 | 12612392.80 | 12612393.07 | 0.0088 | 0.0002 |
| Jupiter | 29820-02-25 20:53 G | 12612646.14 | 12612646.37 | 12612646.60 | 0.0528 | 0.0052 |

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| Neptune | 29820-06-18 12:57 G | 12612759.81 | 12612760.04 | 12612760.30 | 0.0088 | 0.0021 |
| Neptune | 29821-06-21 01:41 G | 12613127.32 | 12613127.57 | 12613127.84 | 0.0088 | 0.0023 |
| Neptune | 29822-06-23 12:43 G | 12613494.82 | 12613495.03 | 12613495.26 | 0.0088 | 0.0043 |
| Neptune | 29823-06-25 20:24 G | 12613862.14 | 12613862.35 | 12613862.59 | 0.0088 | 0.0046 |
| Neptune | 29824-06-27 11:31 G | 12614229.84 | 12614229.98 | 12614230.17 | 0.0088 | 0.0067 |
| Neptune | 29825-06-29 15:36 G | 12614597.02 | 12614597.15 | 12614597.34 | 0.0088 | 0.0069 |
| Jupiter | 29825-08-05 11:45 G | 12614633.78 | 12614633.99 | 12614634.22 | 0.0493 | 0.0218 |
| Jupiter | 29826-09-06 00:00 G | 12615030.29 | 12615030.50 | 12615030.71 | 0.0501 | 0.0189 |
| Saturn | 29827-07-28 04:33 G | 12615355.50 | 12615355.69 | 12615355.88 | 0.0280 | 0.0164 |
| Saturn | 29828-08-09 13:12 G | 12615734.00 | 12615734.05 | 12615734.14 | 0.0284 | 0.0271 |
| Jupiter | 29831-01-24 23:45 G | 12616632.34 | 12616632.49 | 12616632.63 | 0.0535 | 0.0413 |
| Jupiter | 29832-03-02 05:02 G | 12617034.49 | 12617034.71 | 12617034.93 | 0.0527 | 0.0127 |
| Jupiter | 29837-08-09 17:02 G | 12619021.00 | 12619021.21 | 12619021.42 | 0.0494 | 0.0156 |
| Jupiter | 29838-09-10 10:48 G | 12619417.75 | 12619417.95 | 12619418.15 | 0.0502 | 0.0271 |
| Saturn | 29841-01-25 14:24 G | 12620285.92 | 12620286.10 | 12620286.31 | 0.0281 | 0.0156 |
| Saturn | 29842-02-07 19:12 G | 12620664.23 | 12620664.30 | 12620664.38 | 0.0277 | 0.0262 |
| Jupiter | 29843-01-30 12:57 G | 12621020.86 | 12621021.04 | 12621021.23 | 0.0535 | 0.0319 |
| Jupiter | 29844-03-07 02:09 G | 12621422.38 | 12621422.59 | 12621422.80 | 0.0526 | 0.0250 |
| Uranus | 29847-01-24 17:45 G | 12622476.18 | 12622476.24 | 12622476.35 | 0.0138 | 0.0131 |
| Uranus | 29848-01-29 13:41 G | 12622845.84 | 12622846.07 | 12622846.33 | 0.0139 | 0.0050 |
| Uranus | 29849-02-02 00:29 G | 12623215.28 | 12623215.52 | 12623215.78 | 0.0139 | 0.0020 |
| Jupiter | 29849-08-14 06:00 G | 12623408.52 | 12623408.75 | 12623408.98 | 0.0494 | 0.0130 |
| Uranus | 29850-02-06 22:19 G | 12623585.24 | 12623585.43 | 12623585.64 | 0.0139 | 0.0088 |
| Jupiter | 29850-09-14 19:55 G | 12623805.18 | 12623805.33 | 12623805.48 | 0.0504 | 0.0376 |
| Jupiter | 29855-02-04 15:21 G | 12625408.94 | 12625409.14 | 12625409.35 | 0.0534 | 0.0283 |
| Jupiter | 29856-03-12 06:29 G | 12625810.60 | 12625810.77 | 12625810.95 | 0.0524 | 0.0334 |
| Saturn | 29857-08-03 10:05 G | 12626319.69 | 12626319.92 | 12626320.16 | 0.0282 | 0.0068 |
| Jupiter | 29860-07-18 18:14 G | 12627400.17 | 12627400.26 | 12627400.36 | 0.0490 | 0.0440 |
| Jupiter | 29861-08-18 09:21 G | 12627795.67 | 12627795.89 | 12627796.12 | 0.0496 | 0.0078 |
| Jupiter | 29862-09-19 17:45 G | 12628193.12 | 12628193.24 | 12628193.37 | 0.0506 | 0.0430 |

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| Jupiter | 29867-02-09 20:53 G | 12629797.17 | 12629797.37 | 12629797.58 | 0.0533 | 0.0209 |
| Jupiter | 29868-03-17 05:02 G | 12630198.54 | 12630198.71 | 12630198.89 | 0.0522 | 0.0355 |
| Mars | 29868-06-08 08:38 G | 12630281.72 | 12630281.86 | 12630282.00 | 0.1623 | 0.1135 |
| Saturn | 29871-02-01 22:33 G | 12631250.20 | 12631250.44 | 12631250.67 | 0.0280 | 0.0080 |
| Jupiter | 29872-07-22 17:17 G | 12631787.11 | 12631787.22 | 12631787.36 | 0.0491 | 0.0414 |
| Jupiter | 29873-08-23 01:55 G | 12632183.35 | 12632183.58 | 12632183.81 | 0.0497 | 0.0025 |
| Jupiter | 29874-09-24 01:55 G | 12632580.47 | 12632580.58 | 12632580.68 | 0.0508 | 0.0454 |
| Jupiter | 29879-02-15 01:55 G | 12634185.34 | 12634185.58 | 12634185.82 | 0.0531 | 0.0078 |
| Jupiter | 29880-03-21 19:41 G | 12634586.19 | 12634586.32 | 12634586.46 | 0.0520 | 0.0421 |
| Jupiter | 29884-07-27 04:33 G | 12636174.56 | 12636174.69 | 12636174.83 | 0.0492 | 0.0392 |
| Jupiter | 29885-08-27 05:45 G | 12636570.50 | 12636570.74 | 12636570.97 | 0.0498 | 0.0110 |
| Saturn | 29886-07-29 11:45 G | 12636906.77 | 12636906.99 | 12636907.22 | 0.0280 | 0.0112 |
| Uranus | 29887-07-29 20:53 G | 12637272.17 | 12637272.37 | 12637272.60 | 0.0140 | 0.0067 |
| Uranus | 29888-08-02 19:12 G | 12637642.04 | 12637642.30 | 12637642.55 | 0.0139 | 0.0002 |
| Uranus | 29889-08-07 03:50 G | 12638011.48 | 12638011.66 | 12638011.87 | 0.0139 | 0.0085 |
| Jupiter | 29891-02-19 21:07 G | 12638573.15 | 12638573.38 | 12638573.61 | 0.0531 | 0.0008 |
| Pluto | 29892-01-30 14:24 G | 12638917.85 | 12638918.10 | 12638918.36 | 0.0065 | 0.0008 |
| Neptune | 29894-12-01 04:33 G | 12639953.55 | 12639953.69 | 12639953.82 | 0.0090 | 0.0075 |
| Neptune | 29895-12-03 12:57 G | 12640320.89 | 12640321.04 | 12640321.24 | 0.0090 | 0.0068 |
| Jupiter | 29896-07-31 12:43 G | 12640561.85 | 12640562.03 | 12640562.22 | 0.0492 | 0.0312 |
| Neptune | 29896-12-05 08:24 G | 12640688.64 | 12640688.85 | 12640689.06 | 0.0090 | 0.0051 |
| Jupiter | 29897-08-31 19:55 G | 12640958.12 | 12640958.33 | 12640958.55 | 0.0499 | 0.0149 |
| Neptune | 29897-12-07 14:24 G | 12641055.88 | 12641056.10 | 12641056.33 | 0.0090 | 0.0044 |
| Neptune | 29898-12-10 10:19 G | 12641423.70 | 12641423.93 | 12641424.20 | 0.0090 | 0.0026 |
| Neptune | 29899-12-12 17:31 G | 12641790.98 | 12641791.23 | 12641791.47 | 0.0090 | 0.0019 |
| Saturn | 29900-01-27 20:24 G | 12641837.12 | 12641837.35 | 12641837.58 | 0.0281 | 0.0103 |
| Neptune | 29900-12-15 11:45 G | 12642158.72 | 12642158.99 | 12642159.26 | 0.0090 | 0.0000 |
| Neptune | 29901-12-17 21:07 G | 12642526.14 | 12642526.38 | 12642526.64 | 0.0090 | 0.0006 |
| Neptune | 29902-12-20 11:02 G | 12642893.71 | 12642893.96 | 12642894.23 | 0.0090 | 0.0024 |
| Jupiter | 29903-02-26 08:09 G | 12642961.61 | 12642961.84 | 12642962.07 | 0.0529 | 0.0041 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 29903-12-23 01:12 G | 12643261.32 | 12643261.55 | 12643261.79 | 0.0090 | 0.0030 |
| Neptune | 29904-12-24 10:33 G | 12643628.74 | 12643628.94 | 12643629.18 | 0.0090 | 0.0050 |
| Neptune | 29905-12-27 05:02 G | 12643996.53 | 12643996.71 | 12643996.93 | 0.0090 | 0.0055 |
| Neptune | 29906-12-29 11:17 G | 12644363.85 | 12644363.97 | 12644364.14 | 0.0090 | 0.0075 |
| Neptune | 29908-01-01 07:41 G | 12644731.71 | 12644731.82 | 12644731.96 | 0.0090 | 0.0078 |
| Jupiter | 29908-08-05 16:05 G | 12644948.97 | 12644949.17 | 12644949.38 | 0.0493 | 0.0220 |
| Jupiter | 29909-09-06 04:48 G | 12645345.48 | 12645345.70 | 12645345.93 | 0.0501 | 0.0185 |
| Jupiter | 29914-01-25 12:14 G | 12646947.87 | 12646948.01 | 12646948.16 | 0.0536 | 0.0410 |
| Jupiter | 29915-03-03 05:31 G | 12647349.50 | 12647349.73 | 12647349.97 | 0.0528 | 0.0124 |
| Saturn | 29916-08-05 19:26 G | 12647871.10 | 12647871.31 | 12647871.53 | 0.0282 | 0.0127 |
| Jupiter | 29920-08-10 06:14 G | 12649336.54 | 12649336.76 | 12649336.99 | 0.0493 | 0.0162 |
| Jupiter | 29921-09-10 15:36 G | 12649732.96 | 12649733.15 | 12649733.34 | 0.0502 | 0.0278 |
| Jupiter | 29926-01-30 12:00 G | 12651335.82 | 12651336.00 | 12651336.19 | 0.0535 | 0.0329 |
| Jupiter | 29927-03-08 08:24 G | 12651737.65 | 12651737.85 | 12651738.05 | 0.0526 | 0.0245 |
| Saturn | 29930-02-04 05:31 G | 12652801.52 | 12652801.73 | 12652801.94 | 0.0279 | 0.0129 |
| Uranus | 29931-01-26 05:17 G | 12653157.59 | 12653157.72 | 12653157.87 | 0.0138 | 0.0114 |
| Uranus | 29932-01-31 00:00 G | 12653527.26 | 12653527.50 | 12653527.74 | 0.0139 | 0.0053 |
| Jupiter | 29932-08-14 06:43 G | 12653723.56 | 12653723.78 | 12653724.01 | 0.0495 | 0.0140 |
| Uranus | 29933-02-03 11:45 G | 12653896.75 | 12653896.99 | 12653897.24 | 0.0139 | 0.0024 |
| Jupiter | 29933-09-15 10:48 G | 12654120.80 | 12654120.95 | 12654121.11 | 0.0504 | 0.0377 |
| Uranus | 29934-02-08 08:53 G | 12654266.71 | 12654266.87 | 12654267.07 | 0.0140 | 0.0100 |
| Jupiter | 29938-02-04 19:12 G | 12655724.11 | 12655724.30 | 12655724.49 | 0.0534 | 0.0296 |
| Jupiter | 29939-03-13 07:55 G | 12656125.65 | 12656125.83 | 12656126.03 | 0.0524 | 0.0318 |
| Jupiter | 29943-07-19 17:31 G | 12657715.14 | 12657715.23 | 12657715.33 | 0.0491 | 0.0449 |
| Jupiter | 29944-08-18 22:33 G | 12658111.22 | 12658111.44 | 12658111.67 | 0.0496 | 0.0081 |
| Saturn | 29945-07-31 16:05 G | 12658457.92 | 12658458.17 | 12658458.42 | 0.0280 | 0.0054 |
| Jupiter | 29945-09-19 15:07 G | 12658508.01 | 12658508.13 | 12658508.26 | 0.0506 | 0.0425 |
| Jupiter | 29950-02-09 20:38 G | 12660112.14 | 12660112.36 | 12660112.58 | 0.0533 | 0.0215 |
| Jupiter | 29951-03-18 00:14 G | 12660513.35 | 12660513.51 | 12660513.69 | 0.0523 | 0.0347 |
| Jupiter | 29955-07-24 04:33 G | 12662102.59 | 12662102.69 | 12662102.80 | 0.0491 | 0.0427 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 29956-08-23 01:41 G | 12662498.33 | 12662498.57 | 12662498.81 | 0.0497 | 0.0023 |
| Jupiter | 29957-09-24 12:14 G | 12662895.91 | 12662896.01 | 12662896.12 | 0.0507 | 0.0448 |
| Saturn | 29959-01-29 23:02 G | 12663388.21 | 12663388.46 | 12663388.71 | 0.0281 | 0.0050 |
| Jupiter | 29962-02-14 20:24 G | 12664500.12 | 12664500.35 | 12664500.57 | 0.0532 | 0.0085 |
| Jupiter | 29963-03-23 07:12 G | 12664901.66 | 12664901.80 | 12664901.94 | 0.0521 | 0.0417 |
| Jupiter | 29967-07-28 11:17 G | 12666489.83 | 12666489.97 | 12666490.11 | 0.0491 | 0.0396 |
| Jupiter | 29968-08-27 14:24 G | 12666885.88 | 12666886.10 | 12666886.32 | 0.0498 | 0.0104 |
| Uranus | 29971-07-31 06:43 G | 12667953.57 | 12667953.78 | 12667954.00 | 0.0140 | 0.0068 |
| Uranus | 29972-08-04 03:36 G | 12668323.39 | 12668323.65 | 12668323.91 | 0.0139 | 0.0012 |
| Uranus | 29973-08-08 13:26 G | 12668692.86 | 12668693.06 | 12668693.28 | 0.0139 | 0.0073 |
| Jupiter | 29974-02-20 08:38 G | 12668888.63 | 12668888.86 | 12668889.09 | 0.0531 | 0.0007 |
| Saturn | 29974-07-26 03:50 G | 12669044.54 | 12669044.66 | 12669044.78 | 0.0279 | 0.0241 |
| Saturn | 29975-08-08 09:50 G | 12669422.74 | 12669422.91 | 12669423.10 | 0.0282 | 0.0190 |
| Neptune | 29976-06-01 15:07 G | 12669721.07 | 12669721.13 | 12669721.25 | 0.0088 | 0.0082 |
| Neptune | 29977-06-03 22:19 G | 12670088.31 | 12670088.43 | 12670088.61 | 0.0088 | 0.0072 |
| Neptune | 29978-06-06 14:38 G | 12670455.93 | 12670456.11 | 12670456.31 | 0.0088 | 0.0059 |
| Neptune | 29979-06-08 18:29 G | 12670823.07 | 12670823.27 | 12670823.50 | 0.0088 | 0.0048 |
| Jupiter | 29979-08-01 15:21 G | 12670876.97 | 12670877.14 | 12670877.31 | 0.0492 | 0.0316 |
| Neptune | 29980-06-10 12:29 G | 12671190.78 | 12671191.02 | 12671191.26 | 0.0088 | 0.0035 |
| Pluto | 29980-08-02 05:31 G | 12671243.56 | 12671243.73 | 12671243.94 | 0.0079 | 0.0055 |
| Jupiter | 29980-09-01 00:00 G | 12671273.27 | 12671273.50 | 12671273.74 | 0.0499 | 0.0140 |
| Neptune | 29981-06-12 16:19 G | 12671557.94 | 12671558.18 | 12671558.43 | 0.0088 | 0.0024 |
| Neptune | 29982-06-15 07:55 G | 12671925.58 | 12671925.83 | 12671926.10 | 0.0088 | 0.0013 |
| Neptune | 29983-06-17 15:21 G | 12672292.89 | 12672293.14 | 12672293.39 | 0.0088 | 0.0001 |
| Neptune | 29984-06-19 02:24 G | 12672660.34 | 12672660.60 | 12672660.87 | 0.0088 | 0.0011 |
| Neptune | 29985-06-21 14:09 G | 12673027.86 | 12673028.09 | 12673028.34 | 0.0088 | 0.0023 |
| Jupiter | 29986-02-25 03:50 G | 12673276.42 | 12673276.66 | 12673276.90 | 0.0529 | 0.0032 |
| Neptune | 29986-06-23 20:09 G | 12673395.11 | 12673395.34 | 12673395.60 | 0.0088 | 0.0035 |
| Neptune | 29987-06-26 12:00 G | 12673762.81 | 12673763.00 | 12673763.24 | 0.0088 | 0.0047 |
| Saturn | 29988-01-24 06:43 G | 12673974.67 | 12673974.78 | 12673974.90 | 0.0283 | 0.0246 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 29988-06-27 16:05 G | 12674129.99 | 12674130.17 | 12674130.37 | 0.0088 | 0.0057 |
| Saturn | 29989-02-05 16:19 G | 12674353.01 | 12674353.18 | 12674353.38 | 0.0279 | 0.0182 |
| Neptune | 29989-06-30 09:21 G | 12674497.75 | 12674497.89 | 12674498.07 | 0.0088 | 0.0069 |
| Neptune | 29990-07-02 13:55 G | 12674864.98 | 12674865.08 | 12674865.19 | 0.0088 | 0.0079 |
| Jupiter | 29991-08-06 02:24 G | 12675264.39 | 12675264.60 | 12675264.81 | 0.0493 | 0.0224 |
| Jupiter | 29992-09-05 08:24 G | 12675660.64 | 12675660.85 | 12675661.07 | 0.0501 | 0.0180 |
| Mars | 29994-06-06 17:17 G | 12676300.11 | 12676300.22 | 12676300.34 | 0.1633 | 0.1291 |
| Jupiter | 29997-01-24 06:14 G | 12677262.61 | 12677262.76 | 12677262.91 | 0.0535 | 0.0415 |
| Jupiter | 29998-03-02 08:53 G | 12677664.65 | 12677664.87 | 12677665.09 | 0.0527 | 0.0117 |

31ST MILLENNIUM CE

This is a list of transits of Moon in the 31st millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 30003-08-10 03:21 G | | 12679651.43 | 12679651.64 | 12679651.86 | 0.0494 | 0.0173 | |
| Saturn | 30004-08-01 23:17 G | | 12680009.22 | 12680009.47 | 12680009.72 | 0.0281 | 0.0009 | |
| Jupiter | 30004-09-10 00:57 G | | 12680048.35 | 12680048.54 | 12680048.74 | 0.0502 | 0.0275 | |
| Jupiter | 30009-01-29 11:45 G | | 12681650.81 | 12681650.99 | 12681651.16 | 0.0535 | 0.0342 | |
| Jupiter | 30010-03-07 06:14 G | | 12682052.55 | 12682052.76 | 12682052.98 | 0.0526 | 0.0238 | |
| Uranus | 30015-01-26 16:33 G | | 12683839.09 | 12683839.19 | 12683839.31 | 0.0138 | 0.0124 | |
| Jupiter | 30015-08-14 18:57 G | | 12684039.07 | 12684039.29 | 12684039.51 | 0.0494 | 0.0151 | |
| Uranus | 30016-01-31 09:50 G | | 12684208.66 | 12684208.91 | 12684209.16 | 0.0139 | 0.0041 | |
| Jupiter | 30016-09-14 05:31 G | | 12684435.57 | 12684435.73 | 12684435.88 | 0.0503 | 0.0370 | |
| Uranus | 30017-02-03 23:02 G | | 12684578.23 | 12684578.46 | 12684578.71 | 0.0139 | 0.0025 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 30018-01-31 04:48 G | 12684939.45 | 12684939.70 | 12684939.95 | 0.0281 | 0.0006 |
| Uranus | 30018-02-08 18:57 G | 12684948.12 | 12684948.29 | 12684948.49 | 0.0140 | 0.0098 |
| Jupiter | 30021-02-03 14:38 G | 12686038.91 | 12686039.11 | 12686039.31 | 0.0534 | 0.0304 |
| Jupiter | 30022-03-12 02:53 G | 12686440.44 | 12686440.62 | 12686440.80 | 0.0525 | 0.0311 |
| Jupiter | 30026-07-19 02:38 G | 12688030.53 | 12688030.61 | 12688030.69 | 0.0490 | 0.0459 |
| Jupiter | 30027-08-18 20:09 G | 12688426.10 | 12688426.34 | 12688426.57 | 0.0495 | 0.0086 |
| Jupiter | 30028-09-19 00:14 G | 12688823.39 | 12688823.51 | 12688823.65 | 0.0505 | 0.0417 |
| Jupiter | 30033-02-08 17:45 G | 12690427.04 | 12690427.24 | 12690427.45 | 0.0534 | 0.0221 |
| Saturn | 30033-07-27 20:09 G | 12690596.16 | 12690596.34 | 12690596.52 | 0.0279 | 0.0180 |
| Jupiter | 30034-03-17 10:48 G | 12690828.78 | 12690828.95 | 12690829.13 | 0.0523 | 0.0339 |
| Saturn | 30034-08-09 22:48 G | 12690974.35 | 12690974.45 | 12690974.57 | 0.0283 | 0.0253 |
| Jupiter | 30038-07-23 09:21 G | 12692417.78 | 12692417.89 | 12692418.00 | 0.0491 | 0.0437 |
| Jupiter | 30039-08-23 09:36 G | 12692813.67 | 12692813.90 | 12692814.12 | 0.0496 | 0.0019 |
| Jupiter | 30040-09-23 08:53 G | 12693210.76 | 12693210.87 | 12693210.99 | 0.0507 | 0.0441 |
| Jupiter | 30045-02-14 05:17 G | 12694815.49 | 12694815.72 | 12694815.95 | 0.0532 | 0.0088 |
| Jupiter | 30046-03-22 00:14 G | 12695216.37 | 12695216.51 | 12695216.66 | 0.0521 | 0.0407 |
| Saturn | 30047-01-25 20:53 G | 12695526.19 | 12695526.37 | 12695526.56 | 0.0282 | 0.0185 |
| Saturn | 30048-02-08 00:43 G | 12695904.41 | 12695904.53 | 12695904.68 | 0.0279 | 0.0236 |
| Jupiter | 30050-07-27 10:05 G | 12696804.80 | 12696804.92 | 12696805.05 | 0.0491 | 0.0408 |
| Jupiter | 30051-08-27 16:05 G | 12697200.93 | 12697201.17 | 12697201.41 | 0.0498 | 0.0094 |
| Uranus | 30054-07-27 04:19 G | 12698265.62 | 12698265.68 | 12698265.77 | 0.0140 | 0.0133 |
| Uranus | 30055-07-31 18:29 G | 12698635.06 | 12698635.27 | 12698635.49 | 0.0140 | 0.0062 |
| Uranus | 30056-08-04 14:09 G | 12699004.83 | 12699005.09 | 12699005.35 | 0.0139 | 0.0006 |
| Jupiter | 30057-02-18 23:45 G | 12699203.25 | 12699203.49 | 12699203.72 | 0.0531 | 0.0016 |
| Uranus | 30057-08-09 00:43 G | 12699374.35 | 12699374.53 | 12699374.73 | 0.0139 | 0.0090 |
| Neptune | 30058-12-01 09:36 G | 12699853.80 | 12699853.90 | 12699854.03 | 0.0090 | 0.0080 |
| Neptune | 30059-12-04 04:33 G | 12700221.59 | 12700221.69 | 12700221.85 | 0.0090 | 0.0077 |
| Neptune | 30060-12-05 10:19 G | 12700588.75 | 12700588.93 | 12700589.16 | 0.0090 | 0.0056 |
| Neptune | 30061-12-08 06:29 G | 12700956.56 | 12700956.77 | 12700956.99 | 0.0090 | 0.0051 |
| Jupiter | 30062-07-31 22:48 G | 12701192.28 | 12701192.45 | 12701192.64 | 0.0492 | 0.0322 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 30062-12-10 13:26 G | 12701323.83 | 12701324.06 | 12701324.30 | 0.0090 | 0.0031 |
| Saturn | 30063-08-04 12:29 G | 12701560.80 | 12701561.02 | 12701561.26 | 0.0281 | 0.0069 |
| Jupiter | 30063-09-01 00:14 G | 12701588.30 | 12701588.51 | 12701588.73 | 0.0499 | 0.0125 |
| Neptune | 30063-12-13 06:00 G | 12701691.51 | 12701691.75 | 12701692.02 | 0.0090 | 0.0027 |
| Neptune | 30064-12-14 17:31 G | 12702058.98 | 12702059.23 | 12702059.48 | 0.0090 | 0.0007 |
| Neptune | 30065-12-17 06:14 G | 12702426.50 | 12702426.76 | 12702427.03 | 0.0090 | 0.0002 |
| Neptune | 30066-12-19 22:19 G | 12702794.19 | 12702794.43 | 12702794.68 | 0.0090 | 0.0019 |
| Neptune | 30067-12-22 06:14 G | 12703161.52 | 12703161.76 | 12703162.03 | 0.0090 | 0.0025 |
| Neptune | 30068-12-24 01:26 G | 12703529.35 | 12703529.56 | 12703529.79 | 0.0090 | 0.0044 |
| Jupiter | 30069-02-24 04:05 G | 12703591.44 | 12703591.67 | 12703591.90 | 0.0530 | 0.0022 |
| Neptune | 30069-12-26 07:41 G | 12703896.61 | 12703896.82 | 12703897.04 | 0.0090 | 0.0049 |
| Neptune | 30070-12-29 03:21 G | 12704264.49 | 12704264.64 | 12704264.83 | 0.0090 | 0.0068 |
| Neptune | 30071-12-31 09:50 G | 12704631.79 | 12704631.91 | 12704632.07 | 0.0090 | 0.0075 |
| Mars | 30073-06-08 16:48 G | 12705157.02 | 12705157.20 | 12705157.37 | 0.1630 | 0.0089 |
| Jupiter | 30074-08-05 00:14 G | 12705579.30 | 12705579.51 | 12705579.71 | 0.0492 | 0.0230 |
| Jupiter | 30075-09-05 16:19 G | 12705975.95 | 12705976.18 | 12705976.40 | 0.0500 | 0.0171 |
| Saturn | 30077-02-01 18:29 G | 12706491.04 | 12706491.27 | 12706491.50 | 0.0280 | 0.0064 |
| Jupiter | 30080-01-24 04:33 G | 12707577.56 | 12707577.69 | 12707577.83 | 0.0536 | 0.0426 |
| Jupiter | 30081-03-01 03:07 G | 12707979.40 | 12707979.63 | 12707979.87 | 0.0529 | 0.0111 |
| Jupiter | 30086-08-09 13:41 G | 12709966.86 | 12709967.07 | 12709967.28 | 0.0493 | 0.0186 |
| Jupiter | 30087-09-09 18:14 G | 12710363.07 | 12710363.26 | 12710363.46 | 0.0501 | 0.0266 |
| Jupiter | 30092-01-29 07:41 G | 12711965.64 | 12711965.82 | 12711966.01 | 0.0535 | 0.0350 |
| Saturn | 30092-07-29 11:31 G | 12712147.76 | 12712147.98 | 12712148.21 | 0.0279 | 0.0118 |
| Jupiter | 30093-03-06 03:21 G | 12712367.45 | 12712367.64 | 12712367.85 | 0.0527 | 0.0237 |
| Jupiter | 30098-08-13 15:07 G | 12714353.91 | 12714354.13 | 12714354.36 | 0.0494 | 0.0159 |
| Uranus | 30099-01-27 01:12 G | 12714520.41 | 12714520.55 | 12714520.72 | 0.0138 | 0.0108 |
| Jupiter | 30099-09-14 14:24 G | 12714750.94 | 12714751.10 | 12714751.26 | 0.0503 | 0.0363 |
| Uranus | 30100-01-31 17:02 G | 12714889.96 | 12714890.21 | 12714890.46 | 0.0139 | 0.0049 |
| Uranus | 30101-02-05 08:09 G | 12715259.60 | 12715259.84 | 12715260.08 | 0.0139 | 0.0031 |
| Uranus | 30102-02-10 02:38 G | 12715629.45 | 12715629.61 | 12715629.80 | 0.0140 | 0.0104 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 30104-02-04 13:26 G | 12716353.89 | 12716354.06 | 12716354.25 | 0.0534 | 0.0318 |
| Jupiter | 30105-03-12 10:19 G | 12716755.74 | 12716755.93 | 12716756.13 | 0.0525 | 0.0300 |
| Saturn | 30106-01-28 09:07 G | 12717077.66 | 12717077.88 | 12717078.11 | 0.0282 | 0.0124 |
| Jupiter | 30109-07-19 03:07 G | 12718345.57 | 12718345.63 | 12718345.72 | 0.0491 | 0.0466 |
| Jupiter | 30110-08-19 01:55 G | 12718741.36 | 12718741.58 | 12718741.80 | 0.0495 | 0.0093 |
| Jupiter | 30111-09-19 19:55 G | 12719138.19 | 12719138.33 | 12719138.47 | 0.0505 | 0.0405 |
| Jupiter | 30116-02-09 22:48 G | 12720742.24 | 12720742.45 | 12720742.67 | 0.0533 | 0.0223 |
| Jupiter | 30117-03-17 00:43 G | 12721143.35 | 12721143.53 | 12721143.71 | 0.0523 | 0.0332 |
| Jupiter | 30121-07-23 06:57 G | 12722732.70 | 12722732.79 | 12722732.88 | 0.0491 | 0.0449 |
| Saturn | 30122-08-07 06:43 G | 12723112.57 | 12723112.78 | 12723112.99 | 0.0281 | 0.0133 |
| Jupiter | 30122-08-23 08:53 G | 12723128.63 | 12723128.87 | 12723129.12 | 0.0496 | 0.0012 |
| Jupiter | 30123-09-24 12:43 G | 12723525.92 | 12723526.03 | 12723526.15 | 0.0506 | 0.0431 |
| Jupiter | 30128-02-14 13:55 G | 12725129.85 | 12725130.08 | 12725130.31 | 0.0532 | 0.0101 |
| Jupiter | 30129-03-22 02:24 G | 12725531.46 | 12725531.60 | 12725531.75 | 0.0522 | 0.0406 |
| Jupiter | 30133-07-27 20:24 G | 12727120.22 | 12727120.35 | 12727120.48 | 0.0491 | 0.0409 |
| Jupiter | 30134-08-27 17:31 G | 12727516.01 | 12727516.23 | 12727516.45 | 0.0497 | 0.0085 |
| Jupiter | 30135-09-29 02:38 G | 12727913.60 | 12727913.61 | 12727913.61 | 0.0508 | 0.0507 |
| Saturn | 30136-02-05 12:14 G | 12728042.80 | 12728043.01 | 12728043.22 | 0.0280 | 0.0126 |
| Uranus | 30138-07-28 12:43 G | 12728947.01 | 12728947.03 | 12728947.11 | 0.0140 | 0.0138 |
| Pluto | 30139-02-02 18:00 G | 12729136.00 | 12729136.25 | 12729136.51 | 0.0065 | 0.0005 |
| Uranus | 30139-08-02 04:05 G | 12729316.46 | 12729316.67 | 12729316.91 | 0.0140 | 0.0061 |
| Jupiter | 30140-02-19 23:17 G | 12729518.25 | 12729518.47 | 12729518.70 | 0.0532 | 0.0027 |
| Uranus | 30140-08-05 22:19 G | 12729686.17 | 12729686.43 | 12729686.69 | 0.0139 | 0.0017 |
| Jupiter | 30141-03-26 19:55 G | 12729919.31 | 12729919.33 | 12729919.37 | 0.0520 | 0.0516 |
| Neptune | 30141-06-04 15:36 G | 12729989.02 | 12729989.15 | 12729989.31 | 0.0088 | 0.0073 |
| Uranus | 30141-08-10 10:33 G | 12730055.75 | 12730055.94 | 12730056.15 | 0.0139 | 0.0080 |
| Neptune | 30142-06-06 18:57 G | 12730356.16 | 12730356.29 | 12730356.47 | 0.0088 | 0.0070 |
| Neptune | 30143-06-09 12:57 G | 12730723.83 | 12730724.04 | 12730724.26 | 0.0088 | 0.0049 |
| Neptune | 30144-06-10 17:17 G | 12731091.03 | 12731091.22 | 12731091.46 | 0.0088 | 0.0047 |
| Neptune | 30145-06-13 08:38 G | 12731458.60 | 12731458.86 | 12731459.11 | 0.0088 | 0.0026 |

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| Jupiter | 30145-07-31 19:41 G | 12731507.15 | 12731507.32 | 12731507.49 | 0.0491 | 0.0327 |
| Neptune | 30146-06-15 16:33 G | 12731825.96 | 12731826.19 | 12731826.44 | 0.0088 | 0.0023 |
| Jupiter | 30146-09-01 06:29 G | 12731903.54 | 12731903.77 | 12731904.00 | 0.0498 | 0.0110 |
| Neptune | 30147-06-18 02:24 G | 12732193.34 | 12732193.60 | 12732193.87 | 0.0088 | 0.0003 |
| Neptune | 30148-06-19 16:05 G | 12732560.92 | 12732561.17 | 12732561.42 | 0.0088 | 0.0002 |
| Neptune | 30149-06-21 21:21 G | 12732928.15 | 12732928.39 | 12732928.66 | 0.0088 | 0.0022 |
| Neptune | 30150-06-24 14:09 G | 12733295.86 | 12733296.09 | 12733296.35 | 0.0088 | 0.0025 |
| Neptune | 30151-06-26 17:45 G | 12733663.03 | 12733663.24 | 12733663.47 | 0.0088 | 0.0045 |
| Saturn | 30151-08-01 22:33 G | 12733699.20 | 12733699.44 | 12733699.69 | 0.0280 | 0.0051 |
| Jupiter | 30152-02-24 23:02 G | 12733906.22 | 12733906.46 | 12733906.71 | 0.0530 | 0.0016 |
| Neptune | 30152-06-28 10:48 G | 12734030.75 | 12734030.95 | 12734031.19 | 0.0088 | 0.0048 |
| Neptune | 30153-06-30 15:36 G | 12734398.02 | 12734398.15 | 12734398.32 | 0.0088 | 0.0069 |
| Neptune | 30154-07-03 05:31 G | 12734765.60 | 12734765.73 | 12734765.91 | 0.0088 | 0.0072 |
| Jupiter | 30157-08-05 09:21 G | 12735894.69 | 12735894.89 | 12735895.10 | 0.0492 | 0.0234 |
| Jupiter | 30158-09-05 09:36 G | 12736290.68 | 12736290.90 | 12736291.12 | 0.0500 | 0.0163 |
| Jupiter | 30163-01-24 00:43 G | 12737892.40 | 12737892.53 | 12737892.68 | 0.0536 | 0.0434 |
| Jupiter | 30164-03-01 02:09 G | 12738294.38 | 12738294.59 | 12738294.82 | 0.0529 | 0.0108 |
| Saturn | 30165-01-29 19:55 G | 12738629.09 | 12738629.33 | 12738629.58 | 0.0281 | 0.0060 |
| Jupiter | 30169-08-09 08:09 G | 12740281.62 | 12740281.84 | 12740282.06 | 0.0493 | 0.0195 |
| Jupiter | 30170-09-10 03:07 G | 12740678.44 | 12740678.63 | 12740678.83 | 0.0501 | 0.0260 |
| Jupiter | 30175-01-29 06:57 G | 12742280.63 | 12742280.79 | 12742280.96 | 0.0535 | 0.0363 |
| Jupiter | 30176-03-06 07:55 G | 12742682.62 | 12742682.83 | 12742683.05 | 0.0527 | 0.0231 |
| Saturn | 30180-07-26 20:24 G | 12744286.22 | 12744286.35 | 12744286.48 | 0.0278 | 0.0231 |
| Saturn | 30181-08-09 00:29 G | 12744664.35 | 12744664.52 | 12744664.70 | 0.0282 | 0.0197 |
| Jupiter | 30181-08-13 20:53 G | 12744669.16 | 12744669.37 | 12744669.59 | 0.0494 | 0.0168 |
| Jupiter | 30182-09-14 08:09 G | 12745065.67 | 12745065.84 | 12745066.01 | 0.0503 | 0.0353 |
| Uranus | 30183-01-28 09:50 G | 12745201.80 | 12745201.91 | 12745202.04 | 0.0138 | 0.0120 |
| Uranus | 30184-02-01 23:31 G | 12745571.24 | 12745571.48 | 12745571.75 | 0.0139 | 0.0037 |
| Uranus | 30185-02-05 16:33 G | 12745940.95 | 12745941.19 | 12745941.43 | 0.0139 | 0.0027 |
| Uranus | 30186-02-10 09:07 G | 12746310.73 | 12746310.88 | 12746311.08 | 0.0140 | 0.0104 |

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| Jupiter | 30187-02-03 09:50 G | 12746668.73 | 12746668.91 | 12746669.10 | 0.0535 | 0.0332 |
| Jupiter | 30188-03-10 20:09 G | 12747070.15 | 12747070.34 | 12747070.54 | 0.0526 | 0.0295 |
| Jupiter | 30192-07-18 05:31 G | 12748660.67 | 12748660.73 | 12748660.79 | 0.0491 | 0.0471 |
| Jupiter | 30193-08-18 03:50 G | 12749056.43 | 12749056.66 | 12749056.90 | 0.0495 | 0.0094 |
| Saturn | 30194-01-24 20:09 G | 12749216.22 | 12749216.34 | 12749216.47 | 0.0283 | 0.0239 |
| Jupiter | 30194-09-19 01:26 G | 12749453.42 | 12749453.56 | 12749453.70 | 0.0504 | 0.0392 |
| Saturn | 30195-02-07 04:19 G | 12749594.50 | 12749594.68 | 12749594.87 | 0.0279 | 0.0188 |
| Jupiter | 30199-02-08 06:00 G | 12751056.55 | 12751056.75 | 12751056.97 | 0.0534 | 0.0240 |
| Jupiter | 30200-03-17 02:38 G | 12751458.44 | 12751458.61 | 12751458.80 | 0.0524 | 0.0325 |
| Jupiter | 30204-07-23 17:02 G | 12753048.12 | 12753048.21 | 12753048.30 | 0.0491 | 0.0454 |
| Jupiter | 30205-08-23 10:19 G | 12753443.71 | 12753443.93 | 12753444.16 | 0.0495 | 0.0011 |
| Jupiter | 30206-09-24 11:31 G | 12753840.85 | 12753840.98 | 12753841.12 | 0.0506 | 0.0420 |
| Saturn | 30210-08-04 10:05 G | 12755250.67 | 12755250.92 | 12755251.16 | 0.0280 | 0.0014 |
| Jupiter | 30211-02-14 18:43 G | 12755445.06 | 12755445.28 | 12755445.51 | 0.0533 | 0.0111 |
| Jupiter | 30212-03-21 21:50 G | 12755846.27 | 12755846.41 | 12755846.57 | 0.0523 | 0.0404 |
| Jupiter | 30216-07-27 16:19 G | 12757435.07 | 12757435.18 | 12757435.31 | 0.0491 | 0.0415 |
| Jupiter | 30217-08-27 23:17 G | 12757831.24 | 12757831.47 | 12757831.71 | 0.0497 | 0.0076 |
| Jupiter | 30218-09-28 23:31 G | 12758228.46 | 12758228.48 | 12758228.51 | 0.0508 | 0.0504 |
| Uranus | 30222-07-29 20:38 G | 12759628.28 | 12759628.36 | 12759628.49 | 0.0140 | 0.0128 |
| Jupiter | 30223-02-19 19:12 G | 12759833.06 | 12759833.30 | 12759833.54 | 0.0532 | 0.0037 |
| Uranus | 30223-08-03 13:55 G | 12759997.87 | 12759998.08 | 12759998.31 | 0.0140 | 0.0060 |
| Neptune | 30223-12-05 07:41 G | 12760121.71 | 12760121.82 | 12760121.96 | 0.0090 | 0.0078 |
| Saturn | 30224-02-02 09:21 G | 12760180.65 | 12760180.89 | 12760181.13 | 0.0281 | 0.0003 |
| Jupiter | 30224-03-26 22:19 G | 12760234.41 | 12760234.43 | 12760234.46 | 0.0520 | 0.0515 |
| Uranus | 30224-08-07 06:43 G | 12760367.52 | 12760367.78 | 12760368.04 | 0.0139 | 0.0012 |
| Neptune | 30224-12-07 02:38 G | 12760489.46 | 12760489.61 | 12760489.81 | 0.0090 | 0.0068 |
| Uranus | 30225-08-11 19:55 G | 12760737.17 | 12760737.33 | 12760737.53 | 0.0139 | 0.0094 |
| Neptune | 30225-12-09 11:31 G | 12760856.78 | 12760856.98 | 12760857.18 | 0.0090 | 0.0053 |
| Neptune | 30226-12-12 02:53 G | 12761224.41 | 12761224.62 | 12761224.87 | 0.0090 | 0.0044 |
| Pluto | 30227-08-06 13:12 G | 12761461.86 | 12761462.05 | 12761462.28 | 0.0079 | 0.0050 |

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| Neptune | 30227-12-14 15:36 G | 12761591.92 | 12761592.15 | 12761592.39 | 0.0090 | 0.0028 |
| Jupiter | 30228-08-01 03:50 G | 12761822.49 | 12761822.66 | 12761822.84 | 0.0491 | 0.0324 |
| Neptune | 30228-12-16 02:09 G | 12761959.34 | 12761959.59 | 12761959.86 | 0.0090 | 0.0017 |
| Jupiter | 30229-09-01 00:29 G | 12762218.30 | 12762218.52 | 12762218.75 | 0.0498 | 0.0104 |
| Neptune | 30229-12-18 19:12 G | 12762327.05 | 12762327.30 | 12762327.55 | 0.0090 | 0.0001 |
| Neptune | 30230-12-21 02:24 G | 12762694.34 | 12762694.60 | 12762694.86 | 0.0090 | 0.0008 |
| Neptune | 30231-12-23 21:50 G | 12763062.18 | 12763062.41 | 12763062.67 | 0.0090 | 0.0025 |
| Neptune | 30232-12-25 03:50 G | 12763429.44 | 12763429.66 | 12763429.92 | 0.0090 | 0.0033 |
| Neptune | 30233-12-27 23:45 G | 12763797.28 | 12763797.49 | 12763797.72 | 0.0090 | 0.0050 |
| Neptune | 30234-12-30 07:26 G | 12764164.64 | 12764164.81 | 12764165.02 | 0.0090 | 0.0058 |
| Jupiter | 30235-02-24 23:31 G | 12764221.25 | 12764221.48 | 12764221.70 | 0.0530 | 0.0006 |
| Neptune | 30236-01-02 00:00 G | 12764532.38 | 12764532.50 | 12764532.66 | 0.0090 | 0.0076 |
| Neptune | 30237-01-03 12:00 G | 12764899.92 | 12764900.00 | 12764900.11 | 0.0090 | 0.0083 |
| Saturn | 30239-07-30 10:19 G | 12765837.74 | 12765837.93 | 12765838.12 | 0.0279 | 0.0171 |
| Jupiter | 30240-08-05 05:17 G | 12766209.51 | 12766209.72 | 12766209.93 | 0.0492 | 0.0238 |
| Saturn | 30240-08-11 10:33 G | 12766215.86 | 12766215.94 | 12766216.05 | 0.0282 | 0.0260 |
| Jupiter | 30241-09-05 19:12 G | 12766606.08 | 12766606.30 | 12766606.53 | 0.0499 | 0.0158 |
| Jupiter | 30246-01-23 19:12 G | 12768207.18 | 12768207.30 | 12768207.42 | 0.0536 | 0.0448 |
| Jupiter | 30247-03-02 00:00 G | 12768609.26 | 12768609.50 | 12768609.73 | 0.0529 | 0.0098 |
| Jupiter | 30252-08-09 18:29 G | 12770597.07 | 12770597.27 | 12770597.48 | 0.0493 | 0.0202 |
| Saturn | 30253-01-27 12:00 G | 12770767.82 | 12770768.00 | 12770768.20 | 0.0283 | 0.0176 |
| Jupiter | 30253-09-09 23:45 G | 12770993.29 | 12770993.49 | 12770993.70 | 0.0501 | 0.0257 |
| Saturn | 30254-02-09 14:53 G | 12771146.00 | 12771146.12 | 12771146.24 | 0.0279 | 0.0245 |
| Jupiter | 30258-01-29 00:29 G | 12772595.36 | 12772595.52 | 12772595.70 | 0.0535 | 0.0377 |
| Jupiter | 30259-03-06 17:45 G | 12772997.04 | 12772997.24 | 12772997.46 | 0.0528 | 0.0220 |
| Jupiter | 30264-08-13 23:02 G | 12774984.24 | 12774984.46 | 12774984.69 | 0.0493 | 0.0171 |
| Jupiter | 30265-09-14 14:24 G | 12775380.95 | 12775381.10 | 12775381.27 | 0.0502 | 0.0348 |
| Uranus | 30267-01-29 17:31 G | 12775883.08 | 12775883.23 | 12775883.40 | 0.0138 | 0.0105 |
| Uranus | 30268-02-03 05:45 G | 12776252.50 | 12776252.74 | 12776253.00 | 0.0139 | 0.0048 |
| Uranus | 30269-02-07 00:14 G | 12776622.28 | 12776622.51 | 12776622.76 | 0.0139 | 0.0036 |

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| Saturn | 30269-08-06 00:43 G | 12776802.30 | 12776802.53 | 12776802.76 | 0.0281 | 0.0075 |
| Jupiter | 30270-02-03 00:00 G | 12776983.33 | 12776983.50 | 12776983.68 | 0.0535 | 0.0346 |
| Uranus | 30270-02-11 15:36 G | 12776991.99 | 12776992.15 | 12776992.34 | 0.0139 | 0.0104 |
| Jupiter | 30271-03-12 03:36 G | 12777385.46 | 12777385.65 | 12777385.85 | 0.0526 | 0.0286 |
| Jupiter | 30275-07-19 15:21 G | 12778976.08 | 12778976.14 | 12778976.20 | 0.0490 | 0.0474 |
| Jupiter | 30276-08-18 06:00 G | 12779371.53 | 12779371.75 | 12779371.98 | 0.0494 | 0.0095 |
| Jupiter | 30277-09-19 00:57 G | 12779768.39 | 12779768.54 | 12779768.71 | 0.0504 | 0.0380 |
| Mars | 30278-06-09 10:05 G | 12780031.75 | 12780031.92 | 12780032.09 | 0.1638 | 0.0821 |
| Jupiter | 30282-02-08 15:36 G | 12781371.95 | 12781372.15 | 12781372.36 | 0.0534 | 0.0246 |
| Saturn | 30283-02-04 02:38 G | 12781732.38 | 12781732.61 | 12781732.85 | 0.0280 | 0.0062 |
| Jupiter | 30283-03-16 23:45 G | 12781773.30 | 12781773.49 | 12781773.69 | 0.0524 | 0.0316 |
| Jupiter | 30287-07-23 12:43 G | 12783362.95 | 12783363.03 | 12783363.11 | 0.0490 | 0.0458 |
| Jupiter | 30288-08-22 17:02 G | 12783758.97 | 12783759.21 | 12783759.45 | 0.0495 | 0.0012 |
| Jupiter | 30289-09-23 11:45 G | 12784155.87 | 12784155.99 | 12784156.12 | 0.0506 | 0.0417 |
| Jupiter | 30294-02-13 13:55 G | 12785759.85 | 12785760.08 | 12785760.31 | 0.0533 | 0.0118 |
| Jupiter | 30295-03-22 01:26 G | 12786161.43 | 12786161.56 | 12786161.71 | 0.0523 | 0.0406 |
| Saturn | 30298-07-31 16:05 G | 12787388.95 | 12787389.17 | 12787389.41 | 0.0279 | 0.0116 |
| Jupiter | 30299-07-28 03:21 G | 12787750.52 | 12787750.64 | 12787750.76 | 0.0491 | 0.0414 |
| Jupiter | 30300-08-27 20:24 G | 12788146.12 | 12788146.35 | 12788146.58 | 0.0497 | 0.0072 |
| Jupiter | 30301-09-29 06:57 G | 12788543.77 | 12788543.79 | 12788543.83 | 0.0507 | 0.0502 |
| Neptune | 30305-06-05 20:38 G | 12789889.27 | 12789889.36 | 12789889.46 | 0.0088 | 0.0081 |
| Jupiter | 30306-02-19 15:36 G | 12790147.93 | 12790148.15 | 12790148.38 | 0.0532 | 0.0052 |
| Neptune | 30306-06-08 13:12 G | 12790256.93 | 12790257.05 | 12790257.22 | 0.0088 | 0.0074 |
| Uranus | 30306-07-31 02:24 G | 12790309.55 | 12790309.60 | 12790309.67 | 0.0140 | 0.0137 |
| Jupiter | 30307-03-27 20:09 G | 12790549.29 | 12790549.34 | 12790549.39 | 0.0521 | 0.0508 |
| Neptune | 30307-06-10 18:29 G | 12790624.10 | 12790624.27 | 12790624.47 | 0.0088 | 0.0059 |
| Uranus | 30307-08-04 20:53 G | 12790679.16 | 12790679.37 | 12790679.61 | 0.0140 | 0.0056 |
| Neptune | 30308-06-12 08:38 G | 12790991.65 | 12790991.86 | 12790992.08 | 0.0088 | 0.0050 |
| Uranus | 30308-08-08 12:00 G | 12791048.74 | 12791049.00 | 12791049.26 | 0.0139 | 0.0017 |
| Neptune | 30309-06-14 18:29 G | 12791359.05 | 12791359.27 | 12791359.51 | 0.0088 | 0.0035 |

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| Uranus | 30309-08-13 03:50 G | 12791418.47 | 12791418.66 | 12791418.85 | 0.0139 | 0.0084 |
| Neptune | 30310-06-17 03:21 G | 12791726.40 | 12791726.64 | 12791726.91 | 0.0088 | 0.0026 |
| Neptune | 30311-06-19 18:00 G | 12792094.01 | 12792094.25 | 12792094.51 | 0.0088 | 0.0011 |
| Jupiter | 30311-08-02 05:17 G | 12792137.54 | 12792137.72 | 12792137.90 | 0.0491 | 0.0320 |
| Saturn | 30312-01-30 20:09 G | 12792319.12 | 12792319.34 | 12792319.58 | 0.0282 | 0.0119 |
| Neptune | 30312-06-20 22:48 G | 12792461.19 | 12792461.45 | 12792461.71 | 0.0088 | 0.0002 |
| Jupiter | 30312-09-01 15:07 G | 12792533.90 | 12792534.13 | 12792534.36 | 0.0498 | 0.0100 |
| Neptune | 30313-06-23 15:50 G | 12792828.91 | 12792829.16 | 12792829.42 | 0.0088 | 0.0013 |
| Neptune | 30314-06-25 19:12 G | 12793196.06 | 12793196.30 | 12793196.55 | 0.0088 | 0.0022 |
| Neptune | 30315-06-28 11:31 G | 12793563.76 | 12793563.98 | 12793564.24 | 0.0088 | 0.0037 |
| Neptune | 30316-06-29 17:02 G | 12793931.02 | 12793931.21 | 12793931.44 | 0.0088 | 0.0047 |
| Neptune | 30317-07-02 06:00 G | 12794298.58 | 12794298.75 | 12794298.96 | 0.0088 | 0.0061 |
| Jupiter | 30318-02-24 19:26 G | 12794536.07 | 12794536.31 | 12794536.55 | 0.0531 | 0.0011 |
| Neptune | 30318-07-04 16:19 G | 12794666.06 | 12794666.18 | 12794666.35 | 0.0088 | 0.0071 |
| Neptune | 30319-07-07 00:29 G | 12795033.47 | 12795033.52 | 12795033.63 | 0.0088 | 0.0084 |
| Jupiter | 30323-08-06 16:33 G | 12796525.00 | 12796525.19 | 12796525.39 | 0.0492 | 0.0243 |
| Jupiter | 30324-09-05 16:19 G | 12796920.96 | 12796921.18 | 12796921.41 | 0.0499 | 0.0155 |
| Saturn | 30328-08-08 12:57 G | 12798353.83 | 12798354.04 | 12798354.25 | 0.0281 | 0.0133 |
| Jupiter | 30329-01-23 17:02 G | 12798522.09 | 12798522.21 | 12798522.34 | 0.0536 | 0.0453 |
| Jupiter | 30330-03-01 17:31 G | 12798924.01 | 12798924.23 | 12798924.46 | 0.0530 | 0.0089 |
| Jupiter | 30335-08-10 21:21 G | 12800912.17 | 12800912.39 | 12800912.61 | 0.0492 | 0.0206 |
| Jupiter | 30336-09-10 08:09 G | 12801308.65 | 12801308.84 | 12801309.03 | 0.0500 | 0.0261 |
| Jupiter | 30341-01-28 21:07 G | 12802910.23 | 12802910.38 | 12802910.54 | 0.0536 | 0.0391 |
| Saturn | 30342-02-06 16:48 G | 12803283.99 | 12803284.20 | 12803284.43 | 0.0280 | 0.0117 |
| Jupiter | 30342-03-07 05:45 G | 12803312.53 | 12803312.74 | 12803312.95 | 0.0528 | 0.0216 |
| Jupiter | 30347-08-15 02:53 G | 12805299.41 | 12805299.62 | 12805299.83 | 0.0493 | 0.0175 |
| Jupiter | 30348-09-14 16:33 G | 12805696.02 | 12805696.19 | 12805696.37 | 0.0502 | 0.0343 |
| Uranus | 30351-01-31 03:21 G | 12806564.52 | 12806564.64 | 12806564.79 | 0.0138 | 0.0117 |
| Uranus | 30352-02-04 14:38 G | 12806933.86 | 12806934.11 | 12806934.37 | 0.0139 | 0.0031 |
| Jupiter | 30353-02-03 11:31 G | 12807298.81 | 12807298.98 | 12807299.16 | 0.0535 | 0.0352 |

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| Uranus | 30353-02-08 10:33 G | 12807303.70 | 12807303.94 | 12807304.18 | 0.0139 | 0.0029 |
| Uranus | 30354-02-13 00:00 G | 12807673.35 | 12807673.50 | 12807673.68 | 0.0139 | 0.0110 |
| Jupiter | 30354-03-12 00:57 G | 12807700.34 | 12807700.54 | 12807700.75 | 0.0527 | 0.0276 |
| Mars | 30357-06-12 21:36 G | 12808889.22 | 12808889.40 | 12808889.58 | 0.1634 | 0.0648 |
| Saturn | 30357-08-02 17:02 G | 12808939.97 | 12808940.21 | 12808940.46 | 0.0279 | 0.0064 |
| Jupiter | 30358-07-19 13:55 G | 12809291.04 | 12809291.08 | 12809291.13 | 0.0490 | 0.0478 |
| Jupiter | 30359-08-19 16:05 G | 12809686.94 | 12809687.17 | 12809687.41 | 0.0494 | 0.0087 |
| Jupiter | 30360-09-19 05:17 G | 12810083.57 | 12810083.72 | 12810083.87 | 0.0503 | 0.0379 |
| Jupiter | 30365-02-08 04:05 G | 12811686.46 | 12811686.67 | 12811686.88 | 0.0534 | 0.0259 |
| Jupiter | 30366-03-17 00:00 G | 12812088.32 | 12812088.50 | 12812088.68 | 0.0525 | 0.0309 |
| Jupiter | 30370-07-24 05:02 G | 12813678.65 | 12813678.71 | 12813678.78 | 0.0491 | 0.0468 |
| Saturn | 30371-02-01 02:24 G | 12813870.36 | 12813870.60 | 12813870.84 | 0.0282 | 0.0064 |
| Jupiter | 30371-08-23 19:41 G | 12814074.09 | 12814074.32 | 12814074.55 | 0.0495 | 0.0014 |
| Jupiter | 30372-09-23 23:31 G | 12814471.35 | 12814471.48 | 12814471.62 | 0.0505 | 0.0415 |
| Jupiter | 30377-02-13 12:43 G | 12816074.81 | 12816075.03 | 12816075.25 | 0.0533 | 0.0129 |
| Jupiter | 30378-03-21 23:02 G | 12816476.31 | 12816476.46 | 12816476.62 | 0.0524 | 0.0398 |
| Jupiter | 30382-07-28 05:45 G | 12818065.62 | 12818065.74 | 12818065.87 | 0.0491 | 0.0415 |
| Jupiter | 30383-08-28 11:45 G | 12818461.76 | 12818461.99 | 12818462.22 | 0.0496 | 0.0067 |
| Jupiter | 30384-09-28 05:17 G | 12818858.71 | 12818858.72 | 12818858.74 | 0.0506 | 0.0504 |
| Pluto | 30386-02-06 01:55 G | 12819354.33 | 12819354.58 | 12819354.83 | 0.0065 | 0.0002 |
| Saturn | 30386-07-28 16:48 G | 12819527.09 | 12819527.20 | 12819527.31 | 0.0278 | 0.0247 |
| Saturn | 30387-08-10 16:48 G | 12819905.02 | 12819905.20 | 12819905.40 | 0.0282 | 0.0182 |
| Neptune | 30387-12-05 23:17 G | 12820022.39 | 12820022.47 | 12820022.61 | 0.0090 | 0.0082 |
| Neptune | 30388-12-07 08:38 G | 12820389.76 | 12820389.86 | 12820390.00 | 0.0090 | 0.0079 |
| Jupiter | 30389-02-18 17:02 G | 12820462.97 | 12820463.21 | 12820463.45 | 0.0533 | 0.0066 |
| Neptune | 30389-12-09 22:33 G | 12820757.26 | 12820757.44 | 12820757.67 | 0.0090 | 0.0057 |
| Jupiter | 30390-03-26 19:55 G | 12820864.29 | 12820864.33 | 12820864.38 | 0.0522 | 0.0508 |
| Uranus | 30390-07-31 08:38 G | 12820990.76 | 12820990.86 | 12820991.00 | 0.0140 | 0.0125 |
| Neptune | 30390-12-12 12:29 G | 12821124.84 | 12821125.02 | 12821125.24 | 0.0090 | 0.0053 |
| Uranus | 30391-08-05 05:17 G | 12821360.50 | 12821360.72 | 12821360.95 | 0.0140 | 0.0060 |

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| Neptune | 30391-12-14 22:19 G | 12821492.19 | 12821492.43 | 12821492.69 | 0.0090 | 0.0031 |
| Uranus | 30392-08-08 18:57 G | 12821730.03 | 12821730.29 | 12821730.55 | 0.0139 | 0.0017 |
| Neptune | 30392-12-16 16:48 G | 12821859.96 | 12821860.20 | 12821860.44 | 0.0090 | 0.0027 |
| Uranus | 30393-08-13 12:00 G | 12822099.83 | 12822100.00 | 12822100.19 | 0.0139 | 0.0094 |
| Neptune | 30393-12-18 23:17 G | 12822227.21 | 12822227.47 | 12822227.74 | 0.0090 | 0.0005 |
| Jupiter | 30394-08-01 17:02 G | 12822453.05 | 12822453.21 | 12822453.39 | 0.0491 | 0.0320 |
| Neptune | 30394-12-21 19:12 G | 12822595.04 | 12822595.30 | 12822595.56 | 0.0090 | 0.0002 |
| Jupiter | 30395-09-01 13:26 G | 12822848.83 | 12822849.06 | 12822849.29 | 0.0497 | 0.0097 |
| Neptune | 30395-12-24 01:26 G | 12822962.32 | 12822962.56 | 12822962.81 | 0.0090 | 0.0021 |
| Neptune | 30396-12-25 20:09 G | 12823330.10 | 12823330.34 | 12823330.60 | 0.0090 | 0.0025 |
| Neptune | 30397-12-28 04:48 G | 12823697.50 | 12823697.70 | 12823697.93 | 0.0090 | 0.0047 |
| Neptune | 30398-12-30 19:55 G | 12824065.11 | 12824065.33 | 12824065.55 | 0.0090 | 0.0051 |
| Neptune | 30400-01-02 08:53 G | 12824432.74 | 12824432.87 | 12824433.03 | 0.0090 | 0.0072 |
| Saturn | 30400-01-26 16:19 G | 12824457.09 | 12824457.18 | 12824457.29 | 0.0283 | 0.0257 |
| Neptune | 30401-01-03 19:26 G | 12824800.18 | 12824800.31 | 12824800.46 | 0.0090 | 0.0076 |
| Saturn | 30401-02-07 22:33 G | 12824835.24 | 12824835.44 | 12824835.65 | 0.0279 | 0.0166 |
| Jupiter | 30401-02-23 19:26 G | 12824851.09 | 12824851.31 | 12824851.54 | 0.0532 | 0.0020 |
| Jupiter | 30406-08-05 20:53 G | 12826840.16 | 12826840.37 | 12826840.58 | 0.0492 | 0.0245 |
| Jupiter | 30407-09-06 03:50 G | 12827236.45 | 12827236.66 | 12827236.88 | 0.0499 | 0.0160 |
| Jupiter | 30412-01-23 18:57 G | 12828837.18 | 12828837.29 | 12828837.42 | 0.0536 | 0.0455 |
| Jupiter | 30413-03-01 07:12 G | 12829239.57 | 12829239.80 | 12829240.03 | 0.0530 | 0.0090 |
| Saturn | 30416-08-03 18:43 G | 12830491.05 | 12830491.28 | 12830491.52 | 0.0280 | 0.0019 |
| Jupiter | 30418-08-10 05:02 G | 12831227.50 | 12831227.71 | 12831227.91 | 0.0492 | 0.0215 |
| Jupiter | 30419-09-10 14:24 G | 12831623.90 | 12831624.10 | 12831624.30 | 0.0500 | 0.0267 |
| Jupiter | 30424-01-29 03:36 G | 12833225.50 | 12833225.65 | 12833225.81 | 0.0535 | 0.0400 |
| Jupiter | 30425-03-05 20:53 G | 12833627.16 | 12833627.37 | 12833627.59 | 0.0529 | 0.0208 |
| Mars | 30429-12-11 14:09 G | 12835368.95 | 12835369.09 | 12835369.24 | 0.1902 | 0.1360 |
| Saturn | 30430-02-02 09:07 G | 12835421.64 | 12835421.88 | 12835422.12 | 0.0282 | 0.0014 |
| Jupiter | 30430-08-14 18:29 G | 12835615.05 | 12835615.27 | 12835615.49 | 0.0493 | 0.0177 |
| Jupiter | 30431-09-15 02:09 G | 12836011.43 | 12836011.59 | 12836011.76 | 0.0501 | 0.0346 |

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| Uranus | 30435-01-31 13:26 G | 12837245.90 | 12837246.06 | 12837246.25 | 0.0138 | 0.0100 |
| Jupiter | 30436-02-03 00:14 G | 12837613.34 | 12837613.51 | 12837613.69 | 0.0535 | 0.0360 |
| Uranus | 30436-02-04 23:31 G | 12837615.25 | 12837615.48 | 12837615.74 | 0.0139 | 0.0043 |
| Uranus | 30437-02-08 20:53 G | 12837985.14 | 12837985.37 | 12837985.61 | 0.0139 | 0.0043 |
| Jupiter | 30437-03-11 02:53 G | 12838015.43 | 12838015.62 | 12838015.82 | 0.0527 | 0.0264 |
| Uranus | 30438-02-13 09:21 G | 12838354.74 | 12838354.89 | 12838355.07 | 0.0139 | 0.0108 |
| Jupiter | 30442-08-18 19:41 G | 12840002.09 | 12840002.32 | 12840002.55 | 0.0494 | 0.0087 |
| Jupiter | 30443-09-19 17:17 G | 12840399.06 | 12840399.22 | 12840399.38 | 0.0503 | 0.0370 |
| Saturn | 30445-07-29 16:19 G | 12841078.02 | 12841078.18 | 12841078.36 | 0.0278 | 0.0201 |
| Saturn | 30446-08-11 12:29 G | 12841455.89 | 12841456.02 | 12841456.18 | 0.0282 | 0.0229 |
| Jupiter | 30448-02-08 11:31 G | 12842001.79 | 12842001.98 | 12842002.18 | 0.0535 | 0.0261 |
| Jupiter | 30449-03-16 03:50 G | 12842403.46 | 12842403.66 | 12842403.86 | 0.0526 | 0.0301 |
| Jupiter | 30453-07-23 08:38 G | 12843993.80 | 12843993.86 | 12843993.92 | 0.0491 | 0.0474 |
| Jupiter | 30454-08-23 11:45 G | 12844389.76 | 12844389.99 | 12844390.22 | 0.0495 | 0.0012 |
| Jupiter | 30455-09-23 23:31 G | 12844786.36 | 12844786.48 | 12844786.62 | 0.0504 | 0.0414 |
| Saturn | 30459-01-27 19:55 G | 12846008.17 | 12846008.33 | 12846008.51 | 0.0283 | 0.0207 |
| Saturn | 30460-02-09 22:48 G | 12846386.29 | 12846386.45 | 12846386.62 | 0.0279 | 0.0211 |
| Jupiter | 30460-02-13 17:45 G | 12846390.01 | 12846390.24 | 12846390.48 | 0.0534 | 0.0130 |
| Jupiter | 30461-03-21 04:33 G | 12846791.55 | 12846791.69 | 12846791.84 | 0.0524 | 0.0402 |
| Jupiter | 30465-07-27 18:43 G | 12848381.17 | 12848381.28 | 12848381.40 | 0.0491 | 0.0414 |
| Jupiter | 30466-08-27 12:14 G | 12848776.77 | 12848777.01 | 12848777.24 | 0.0496 | 0.0065 |
| Neptune | 30470-06-07 20:38 G | 12850157.27 | 12850157.36 | 12850157.52 | 0.0088 | 0.0076 |
| Neptune | 30471-06-10 09:50 G | 12850524.76 | 12850524.91 | 12850525.08 | 0.0088 | 0.0070 |
| Jupiter | 30472-02-18 21:21 G | 12850778.17 | 12850778.39 | 12850778.62 | 0.0533 | 0.0071 |
| Neptune | 30472-06-11 20:24 G | 12850892.16 | 12850892.35 | 12850892.57 | 0.0088 | 0.0051 |
| Jupiter | 30473-03-26 10:48 G | 12851179.91 | 12851179.95 | 12851180.00 | 0.0522 | 0.0510 |
| Neptune | 30473-06-14 03:36 G | 12851259.44 | 12851259.65 | 12851259.89 | 0.0088 | 0.0046 |
| Neptune | 30474-06-16 19:12 G | 12851627.07 | 12851627.30 | 12851627.55 | 0.0088 | 0.0027 |
| Uranus | 30474-07-31 16:19 G | 12851672.13 | 12851672.18 | 12851672.26 | 0.0140 | 0.0135 |
| Pluto | 30474-08-09 01:55 G | 12851680.38 | 12851680.58 | 12851680.80 | 0.0079 | 0.0047 |

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| Neptune | 30475-06-18 23:45 G | 12851994.24 | 12851994.49 | 12851994.75 | 0.0088 | 0.0022 |
| Uranus | 30475-08-05 13:55 G | 12852041.86 | 12852042.08 | 12852042.32 | 0.0140 | 0.0051 |
| Saturn | 30475-08-05 21:21 G | 12852042.15 | 12852042.39 | 12852042.63 | 0.0280 | 0.0027 * |
| Neptune | 30476-06-20 17:17 G | 12852361.97 | 12852362.22 | 12852362.49 | 0.0088 | 0.0003 |
| Uranus | 30476-08-09 01:55 G | 12852411.33 | 12852411.58 | 12852411.85 | 0.0139 | 0.0018 |
| Neptune | 30477-06-22 21:21 G | 12852729.14 | 12852729.39 | 12852729.64 | 0.0088 | 0.0002 |
| Jupiter | 30477-08-01 01:12 G | 12852768.37 | 12852768.55 | 12852768.74 | 0.0491 | 0.0317 |
| Uranus | 30477-08-13 21:07 G | 12852781.20 | 12852781.38 | 12852781.57 | 0.0139 | 0.0089 |
| Neptune | 30478-06-25 13:26 G | 12853096.81 | 12853097.06 | 12853097.32 | 0.0088 | 0.0023 |
| Jupiter | 30478-09-01 05:02 G | 12853164.49 | 12853164.71 | 12853164.94 | 0.0497 | 0.0094 |
| Neptune | 30479-06-27 20:24 G | 12853464.12 | 12853464.35 | 12853464.59 | 0.0088 | 0.0027 |
| Neptune | 30480-06-29 07:55 G | 12853831.63 | 12853831.83 | 12853832.08 | 0.0088 | 0.0047 |
| Neptune | 30481-07-01 19:26 G | 12854199.11 | 12854199.31 | 12854199.52 | 0.0088 | 0.0051 |
| Neptune | 30482-07-04 01:26 G | 12854566.44 | 12854566.56 | 12854566.75 | 0.0088 | 0.0071 |
| Neptune | 30483-07-06 17:31 G | 12854934.12 | 12854934.23 | 12854934.38 | 0.0088 | 0.0075 |
| Jupiter | 30484-02-24 03:21 G | 12855166.40 | 12855166.64 | 12855166.87 | 0.0531 | 0.0026 |
| Saturn | 30489-02-03 15:21 G | 12856972.91 | 12856973.14 | 12856973.38 | 0.0282 | 0.0032 |
| Jupiter | 30489-08-05 08:53 G | 12857155.68 | 12857155.87 | 12857156.06 | 0.0492 | 0.0252 |
| Jupiter | 30490-09-05 15:07 G | 12857551.90 | 12857552.13 | 12857552.36 | 0.0498 | 0.0166 |
| Jupiter | 30495-01-23 01:12 G | 12859152.44 | 12859152.55 | 12859152.68 | 0.0536 | 0.0459 |
| Jupiter | 30496-02-28 22:19 G | 12859554.20 | 12859554.43 | 12859554.66 | 0.0530 | 0.0083 |
| Jupiter | 30501-08-10 20:53 G | 12861543.16 | 12861543.37 | 12861543.59 | 0.0492 | 0.0229 |
| Jupiter | 30502-09-10 23:45 G | 12861939.31 | 12861939.49 | 12861939.68 | 0.0499 | 0.0270 |
| Saturn | 30504-07-31 08:38 G | 12862628.66 | 12862628.86 | 12862629.08 | 0.0278 | 0.0155 |
| Saturn | 30505-08-13 08:24 G | 12863006.79 | 12863006.85 | 12863006.91 | 0.0282 | 0.0272 |
| Jupiter | 30507-01-28 22:33 G | 12863540.29 | 12863540.44 | 12863540.59 | 0.0536 | 0.0405 |
| Jupiter | 30508-03-06 07:26 G | 12863942.61 | 12863942.81 | 12863943.03 | 0.0529 | 0.0207 |
| Jupiter | 30513-08-14 22:05 G | 12865930.21 | 12865930.42 | 12865930.64 | 0.0493 | 0.0181 |
| Jupiter | 30514-09-15 14:53 G | 12866326.95 | 12866327.12 | 12866327.30 | 0.0501 | 0.0339 |
| Saturn | 30518-01-29 16:19 G | 12867558.99 | 12867559.18 | 12867559.39 | 0.0283 | 0.0164 |

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| Uranus | 30519-02-02 00:29 G | 12867927.37 | 12867927.52 | 12867927.67 | 0.0138 | 0.0109 |
| Jupiter | 30519-02-03 13:41 G | 12867928.91 | 12867929.07 | 12867929.24 | 0.0536 | 0.0366 |
| Saturn | 30519-02-11 23:17 G | 12867937.38 | 12867937.47 | 12867937.57 | 0.0279 | 0.0255 |
| Uranus | 30520-02-06 09:50 G | 12868296.66 | 12868296.91 | 12868297.17 | 0.0139 | 0.0025 |
| Jupiter | 30520-03-11 10:33 G | 12868330.73 | 12868330.94 | 12868331.15 | 0.0528 | 0.0256 |
| Uranus | 30521-02-10 07:55 G | 12868666.59 | 12868666.83 | 12868667.08 | 0.0139 | 0.0034 |
| Uranus | 30522-02-14 18:57 G | 12869036.17 | 12869036.29 | 12869036.44 | 0.0139 | 0.0119 |
| Jupiter | 30525-08-19 13:12 G | 12870317.82 | 12870318.05 | 12870318.28 | 0.0494 | 0.0084 |
| Jupiter | 30526-09-19 20:09 G | 12870714.20 | 12870714.34 | 12870714.51 | 0.0502 | 0.0368 |
| Jupiter | 30531-02-08 18:29 G | 12872317.06 | 12872317.27 | 12872317.49 | 0.0535 | 0.0251 |
| Jupiter | 30532-03-16 12:14 G | 12872718.82 | 12872719.01 | 12872719.19 | 0.0526 | 0.0304 |
| Saturn | 30534-08-07 18:43 G | 12873593.04 | 12873593.28 | 12873593.52 | 0.0280 | 0.0068 |
| Jupiter | 30536-07-24 00:00 G | 12874309.46 | 12874309.50 | 12874309.55 | 0.0491 | 0.0480 |
| Jupiter | 30537-08-23 16:05 G | 12874704.93 | 12874705.17 | 12874705.41 | 0.0495 | 0.0012 |
| Jupiter | 30538-09-24 18:29 G | 12875102.15 | 12875102.27 | 12875102.40 | 0.0504 | 0.0421 |
| Jupiter | 30543-02-13 18:57 G | 12876705.07 | 12876705.29 | 12876705.51 | 0.0534 | 0.0137 |
| Jupiter | 30544-03-21 12:43 G | 12877106.88 | 12877107.03 | 12877107.18 | 0.0524 | 0.0403 |
| Saturn | 30548-02-06 16:05 G | 12878523.93 | 12878524.17 | 12878524.41 | 0.0282 | 0.0073 |
| Jupiter | 30548-07-28 06:14 G | 12878696.63 | 12878696.76 | 12878696.89 | 0.0491 | 0.0413 |
| Jupiter | 30549-08-28 08:09 G | 12879092.61 | 12879092.84 | 12879093.06 | 0.0496 | 0.0055 |
| Neptune | 30552-12-07 19:41 G | 12880290.22 | 12880290.32 | 12880290.45 | 0.0090 | 0.0081 |
| Neptune | 30553-12-10 11:17 G | 12880657.82 | 12880657.97 | 12880658.15 | 0.0090 | 0.0067 |
| Neptune | 30554-12-12 19:55 G | 12881025.12 | 12881025.33 | 12881025.53 | 0.0090 | 0.0055 |
| Jupiter | 30555-02-19 04:19 G | 12881093.44 | 12881093.68 | 12881093.91 | 0.0533 | 0.0080 |
| Neptune | 30555-12-15 14:38 G | 12881392.89 | 12881393.11 | 12881393.34 | 0.0090 | 0.0042 |
| Jupiter | 30556-03-26 04:33 G | 12881494.65 | 12881494.69 | 12881494.75 | 0.0523 | 0.0508 |
| Neptune | 30556-12-16 20:24 G | 12881760.12 | 12881760.35 | 12881760.61 | 0.0090 | 0.0030 |
| Neptune | 30557-12-19 16:19 G | 12882127.93 | 12882128.18 | 12882128.44 | 0.0090 | 0.0017 |
| Uranus | 30558-08-02 02:24 G | 12882353.47 | 12882353.60 | 12882353.75 | 0.0140 | 0.0119 |
| Neptune | 30558-12-21 23:02 G | 12882495.20 | 12882495.46 | 12882495.71 | 0.0090 | 0.0002 |

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| Uranus | 30559-08-07 00:57 G | 12882723.32 | 12882723.54 | 12882723.78 | 0.0140 | 0.0057 |
| Neptune | 30559-12-24 16:19 G | 12882862.92 | 12882863.18 | 12882863.45 | 0.0090 | 0.0010 |
| Jupiter | 30560-08-01 12:43 G | 12883083.87 | 12883084.03 | 12883084.21 | 0.0491 | 0.0320 |
| Uranus | 30560-08-10 12:00 G | 12883092.75 | 12883093.00 | 12883093.26 | 0.0139 | 0.0024 |
| Neptune | 30560-12-26 02:24 G | 12883230.37 | 12883230.60 | 12883230.85 | 0.0090 | 0.0025 |
| Uranus | 30561-08-15 08:09 G | 12883462.67 | 12883462.84 | 12883463.02 | 0.0139 | 0.0097 |
| Jupiter | 30561-09-01 15:21 G | 12883479.91 | 12883480.14 | 12883480.39 | 0.0497 | 0.0086 |
| Neptune | 30561-12-28 15:50 G | 12883597.93 | 12883598.16 | 12883598.42 | 0.0090 | 0.0036 |
| Mars | 30562-06-12 12:57 G | 12883763.86 | 12883764.04 | 12883764.22 | 0.1642 | 0.0163 |
| Neptune | 30562-12-31 06:43 G | 12883965.59 | 12883965.78 | 12883966.00 | 0.0090 | 0.0051 |
| Saturn | 30563-08-02 03:07 G | 12884179.42 | 12884179.63 | 12884179.86 | 0.0278 | 0.0113 |
| Neptune | 30564-01-02 15:21 G | 12884332.98 | 12884333.14 | 12884333.36 | 0.0090 | 0.0062 |
| Neptune | 30565-01-04 10:05 G | 12884700.82 | 12884700.92 | 12884701.08 | 0.0090 | 0.0078 |
| Neptune | 30566-01-06 16:05 G | 12885068.15 | 12885068.17 | 12885068.26 | 0.0090 | 0.0088 |
| Jupiter | 30567-02-24 00:57 G | 12885481.31 | 12885481.54 | 12885481.77 | 0.0532 | 0.0031 |
| Jupiter | 30572-08-06 00:57 G | 12887471.34 | 12887471.54 | 12887471.75 | 0.0492 | 0.0259 |
| Jupiter | 30573-09-06 00:00 G | 12887867.29 | 12887867.50 | 12887867.71 | 0.0498 | 0.0168 |
| Saturn | 30577-01-30 16:05 G | 12889109.96 | 12889110.17 | 12889110.39 | 0.0283 | 0.0124 |
| Jupiter | 30578-01-23 00:00 G | 12889467.40 | 12889467.50 | 12889467.62 | 0.0536 | 0.0465 |
| Jupiter | 30579-03-01 13:41 G | 12889869.85 | 12889870.07 | 12889870.30 | 0.0531 | 0.0093 |
| Jupiter | 30584-08-10 01:12 G | 12891858.35 | 12891858.55 | 12891858.75 | 0.0492 | 0.0235 |
| Jupiter | 30585-09-10 13:55 G | 12892254.89 | 12892255.08 | 12892255.29 | 0.0499 | 0.0273 |
| Jupiter | 30590-01-28 16:19 G | 12893856.04 | 12893856.18 | 12893856.33 | 0.0536 | 0.0414 |
| Jupiter | 30591-03-06 15:50 G | 12894257.94 | 12894258.16 | 12894258.39 | 0.0529 | 0.0206 |
| Saturn | 30593-08-08 09:21 G | 12895143.66 | 12895143.89 | 12895144.12 | 0.0280 | 0.0109 |
| Jupiter | 30596-08-14 18:14 G | 12896246.05 | 12896246.26 | 12896246.48 | 0.0493 | 0.0179 |
| Jupiter | 30597-09-14 21:21 G | 12896642.23 | 12896642.39 | 12896642.57 | 0.0501 | 0.0339 |
| Jupiter | 30602-02-03 15:36 G | 12898243.99 | 12898244.15 | 12898244.34 | 0.0535 | 0.0372 |
| Uranus | 30603-02-03 09:21 G | 12898608.72 | 12898608.89 | 12898609.09 | 0.0138 | 0.0096 |
| Jupiter | 30603-03-12 13:55 G | 12898645.88 | 12898646.08 | 12898646.28 | 0.0527 | 0.0251 |

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| Uranus | 30604-02-07 18:14 G | 12898978.02 | 12898978.26 | 12898978.51 | 0.0139 | 0.0037 |
| Uranus | 30605-02-11 17:02 G | 12899347.98 | 12899348.21 | 12899348.45 | 0.0139 | 0.0050 |
| Uranus | 30606-02-16 03:07 G | 12899717.50 | 12899717.63 | 12899717.81 | 0.0140 | 0.0113 |
| Saturn | 30607-02-08 08:53 G | 12900074.64 | 12900074.87 | 12900075.11 | 0.0282 | 0.0108 |
| Jupiter | 30608-08-19 20:09 G | 12900633.11 | 12900633.34 | 12900633.58 | 0.0494 | 0.0084 |
| Jupiter | 30609-09-20 18:29 G | 12901030.11 | 12901030.27 | 12901030.43 | 0.0502 | 0.0359 |
| Jupiter | 30614-02-08 20:38 G | 12902632.16 | 12902632.36 | 12902632.56 | 0.0534 | 0.0256 |
| Jupiter | 30615-03-17 18:29 G | 12903034.07 | 12903034.27 | 12903034.47 | 0.0526 | 0.0297 |
| Jupiter | 30619-07-25 11:17 G | 12904624.94 | 12904624.97 | 12904625.01 | 0.0491 | 0.0485 |
| Jupiter | 30620-08-24 10:05 G | 12905020.70 | 12905020.92 | 12905021.15 | 0.0495 | 0.0012 |
| Jupiter | 30621-09-24 23:45 G | 12905417.36 | 12905417.49 | 12905417.62 | 0.0504 | 0.0418 |
| Saturn | 30622-08-04 03:07 G | 12905730.40 | 12905730.63 | 12905730.86 | 0.0278 | 0.0073 |
| Jupiter | 30626-02-14 05:02 G | 12907020.48 | 12907020.71 | 12907020.94 | 0.0534 | 0.0140 |
| Jupiter | 30627-03-22 12:57 G | 12907421.90 | 12907422.04 | 12907422.19 | 0.0525 | 0.0408 |
| Jupiter | 30631-07-29 17:17 G | 12909012.11 | 12909012.22 | 12909012.35 | 0.0491 | 0.0411 |
| Jupiter | 30632-08-28 17:31 G | 12909407.99 | 12909408.23 | 12909408.47 | 0.0495 | 0.0043 |
| Pluto | 30633-02-09 12:29 G | 12909572.78 | 12909573.02 | 12909573.28 | 0.0065 | 0.0009 |
| Neptune | 30634-06-09 09:50 G | 12910057.84 | 12910057.91 | 12910058.03 | 0.0088 | 0.0082 |
| Neptune | 30635-06-11 22:19 G | 12910425.32 | 12910425.43 | 12910425.56 | 0.0088 | 0.0076 |
| Saturn | 30636-02-02 19:26 G | 12910661.09 | 12910661.31 | 12910661.54 | 0.0283 | 0.0086 |
| Neptune | 30636-06-13 04:48 G | 12910792.52 | 12910792.70 | 12910792.92 | 0.0088 | 0.0058 |
| Neptune | 30637-06-15 21:07 G | 12911160.20 | 12911160.38 | 12911160.60 | 0.0088 | 0.0053 |
| Jupiter | 30638-02-19 05:02 G | 12911408.48 | 12911408.71 | 12911408.94 | 0.0533 | 0.0086 |
| Neptune | 30638-06-18 00:57 G | 12911527.32 | 12911527.54 | 12911527.79 | 0.0088 | 0.0034 |
| Jupiter | 30639-03-27 22:33 G | 12911810.40 | 12911810.44 | 12911810.49 | 0.0523 | 0.0510 |
| Neptune | 30639-06-20 18:43 G | 12911895.04 | 12911895.28 | 12911895.53 | 0.0088 | 0.0027 |
| Neptune | 30640-06-21 23:02 G | 12912262.21 | 12912262.46 | 12912262.72 | 0.0088 | 0.0009 |
| Mars | 30641-06-15 13:12 G | 12912620.94 | 12912621.05 | 12912621.17 | 0.1639 | 0.1297 |
| Neptune | 30641-06-24 14:24 G | 12912629.83 | 12912630.10 | 12912630.37 | 0.0088 | 0.0002 |
| Neptune | 30642-06-26 21:50 G | 12912997.17 | 12912997.41 | 12912997.66 | 0.0088 | 0.0016 |

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| Uranus | 30642-08-03 12:43 G | 12913034.94 | 12913035.03 | 12913035.13 | 0.0140 | 0.0130 |
| Neptune | 30643-06-29 08:09 G | 12913364.60 | 12913364.84 | 12913365.12 | 0.0088 | 0.0023 |
| Jupiter | 30643-08-03 05:02 G | 12913399.53 | 12913399.71 | 12913399.90 | 0.0491 | 0.0313 |
| Uranus | 30643-08-08 11:31 G | 12913404.76 | 12913404.98 | 12913405.23 | 0.0140 | 0.0044 |
| Neptune | 30644-06-30 21:07 G | 12913732.17 | 12913732.38 | 12913732.61 | 0.0088 | 0.0040 |
| Uranus | 30644-08-11 21:36 G | 12913774.15 | 12913774.40 | 12913774.66 | 0.0139 | 0.0023 |
| Jupiter | 30644-09-02 00:43 G | 12913795.31 | 12913795.53 | 12913795.75 | 0.0496 | 0.0083 |
| Neptune | 30645-07-03 03:21 G | 12914099.43 | 12914099.64 | 12914099.87 | 0.0088 | 0.0047 |
| Uranus | 30645-08-16 18:29 G | 12914144.11 | 12914144.27 | 12914144.46 | 0.0139 | 0.0097 |
| Neptune | 30646-07-05 20:09 G | 12914467.18 | 12914467.34 | 12914467.52 | 0.0088 | 0.0065 |
| Neptune | 30647-07-07 23:31 G | 12914834.35 | 12914834.48 | 12914834.64 | 0.0088 | 0.0072 |
| Jupiter | 30650-02-24 19:12 G | 12915797.07 | 12915797.30 | 12915797.52 | 0.0532 | 0.0031 |
| Saturn | 30651-07-29 07:41 G | 12916316.76 | 12916316.82 | 12916316.91 | 0.0276 | 0.0264 |
| Saturn | 30652-08-10 01:55 G | 12916694.38 | 12916694.58 | 12916694.79 | 0.0280 | 0.0150 |
| Jupiter | 30655-08-07 06:43 G | 12917786.59 | 12917786.78 | 12917786.98 | 0.0492 | 0.0264 |
| Jupiter | 30656-09-06 17:02 G | 12918182.99 | 12918183.21 | 12918183.43 | 0.0498 | 0.0173 |
| Jupiter | 30661-01-23 16:19 G | 12919783.08 | 12919783.18 | 12919783.30 | 0.0535 | 0.0473 |
| Jupiter | 30662-03-01 15:36 G | 12920184.91 | 12920185.15 | 12920185.39 | 0.0530 | 0.0090 |
| Saturn | 30666-02-09 04:19 G | 12921625.48 | 12921625.68 | 12921625.89 | 0.0282 | 0.0144 |
| Jupiter | 30667-08-11 22:05 G | 12922174.22 | 12922174.42 | 12922174.62 | 0.0493 | 0.0243 |
| Jupiter | 30668-09-10 22:33 G | 12922570.25 | 12922570.44 | 12922570.63 | 0.0499 | 0.0275 |
| Jupiter | 30673-01-28 15:36 G | 12924171.01 | 12924171.15 | 12924171.30 | 0.0535 | 0.0426 |
| Jupiter | 30674-03-06 18:29 G | 12924573.06 | 12924573.27 | 12924573.48 | 0.0529 | 0.0199 |
| Jupiter | 30679-08-15 23:17 G | 12926561.25 | 12926561.47 | 12926561.69 | 0.0493 | 0.0183 |
| Jupiter | 30680-09-15 16:33 G | 12926958.01 | 12926958.19 | 12926958.36 | 0.0500 | 0.0326 |
| Saturn | 30681-08-05 02:09 G | 12927281.34 | 12927281.59 | 12927281.83 | 0.0278 | 0.0031 |
| Jupiter | 30685-02-02 20:53 G | 12928559.22 | 12928559.37 | 12928559.54 | 0.0535 | 0.0381 |
| Jupiter | 30686-03-11 23:17 G | 12928961.26 | 12928961.47 | 12928961.69 | 0.0528 | 0.0240 |
| Uranus | 30687-02-03 17:17 G | 12929290.05 | 12929290.22 | 12929290.39 | 0.0138 | 0.0105 |
| Uranus | 30688-02-08 01:41 G | 12929659.32 | 12929659.57 | 12929659.83 | 0.0139 | 0.0021 |

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| Uranus | 30689-02-12 00:57 G | 12930029.30 | 12930029.54 | 12930029.78 | 0.0139 | 0.0038 |
| Uranus | 30690-02-16 10:19 G | 12930398.84 | 12930398.93 | 12930399.07 | 0.0140 | 0.0125 |
| Jupiter | 30691-08-20 12:57 G | 12930948.82 | 12930949.04 | 12930949.26 | 0.0494 | 0.0079 |
| Jupiter | 30692-09-19 21:21 G | 12931345.23 | 12931345.39 | 12931345.57 | 0.0502 | 0.0352 |
| Saturn | 30695-02-03 19:26 G | 12932212.06 | 12932212.31 | 12932212.55 | 0.0283 | 0.0047 |
| Jupiter | 30697-02-08 06:57 G | 12932947.59 | 12932947.79 | 12932948.01 | 0.0535 | 0.0256 |
| Jupiter | 30698-03-16 21:07 G | 12933349.19 | 12933349.38 | 12933349.57 | 0.0527 | 0.0297 |
| Jupiter | 30702-07-25 21:07 G | 12934940.37 | 12934940.38 | 12934940.40 | 0.0491 | 0.0488 |
| Jupiter | 30703-08-25 19:12 G | 12935336.06 | 12935336.30 | 12935336.54 | 0.0494 | 0.0004 |
| Jupiter | 30704-09-25 13:55 G | 12935732.97 | 12935733.08 | 12935733.21 | 0.0503 | 0.0424 |
| Jupiter | 30709-02-14 08:38 G | 12937335.64 | 12937335.86 | 12937336.09 | 0.0534 | 0.0144 |
| Jupiter | 30710-03-23 07:26 G | 12937737.67 | 12937737.81 | 12937737.95 | 0.0525 | 0.0419 |
| Saturn | 30710-07-31 03:50 G | 12937867.52 | 12937867.66 | 12937867.81 | 0.0276 | 0.0222 |
| Saturn | 30711-08-13 03:21 G | 12938245.47 | 12938245.64 | 12938245.81 | 0.0280 | 0.0189 |
| Mars | 30713-12-14 10:48 G | 12939099.77 | 12939099.95 | 12939100.12 | 0.1895 | 0.0617 |
| Jupiter | 30714-07-30 10:05 G | 12939327.79 | 12939327.92 | 12939328.07 | 0.0491 | 0.0400 |
| Jupiter | 30715-08-30 03:36 G | 12939723.43 | 12939723.65 | 12939723.88 | 0.0495 | 0.0039 |
| Neptune | 30716-12-09 07:55 G | 12940190.77 | 12940190.83 | 12940190.95 | 0.0090 | 0.0084 |
| Neptune | 30717-12-11 14:53 G | 12940558.04 | 12940558.12 | 12940558.28 | 0.0090 | 0.0080 |
| Neptune | 30718-12-14 11:17 G | 12940925.79 | 12940925.97 | 12940926.18 | 0.0090 | 0.0058 |
| Neptune | 30719-12-16 17:17 G | 12941293.03 | 12941293.22 | 12941293.44 | 0.0090 | 0.0054 |
| Pluto | 30720-08-11 10:05 G | 12941531.85 | 12941531.92 | 12941532.06 | 0.0080 | 0.0073 |
| Neptune | 30720-12-18 13:12 G | 12941660.81 | 12941661.05 | 12941661.30 | 0.0090 | 0.0031 |
| Jupiter | 30721-02-19 19:26 G | 12941724.08 | 12941724.31 | 12941724.53 | 0.0533 | 0.0103 |
| Neptune | 30721-12-20 20:53 G | 12942028.14 | 12942028.37 | 12942028.62 | 0.0090 | 0.0027 |
| Jupiter | 30722-03-27 21:36 G | 12942125.35 | 12942125.40 | 12942125.48 | 0.0523 | 0.0502 |
| Neptune | 30722-12-23 13:41 G | 12942395.80 | 12942396.07 | 12942396.34 | 0.0090 | 0.0004 |
| Neptune | 30723-12-26 01:12 G | 12942763.30 | 12942763.55 | 12942763.80 | 0.0090 | 0.0002 |
| Saturn | 30724-01-29 14:24 G | 12942797.99 | 12942798.10 | 12942798.22 | 0.0286 | 0.0249 |
| Neptune | 30724-12-27 12:43 G | 12943130.78 | 12943131.03 | 12943131.30 | 0.0090 | 0.0022 |

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| Saturn | 30725-02-11 06:43 G | 12943176.61 | 12943176.78 | 12943176.97 | 0.0282 | 0.0184 |
| Neptune | 30725-12-30 04:19 G | 12943498.46 | 12943498.68 | 12943498.94 | 0.0090 | 0.0027 |
| Jupiter | 30726-08-03 09:21 G | 12943714.72 | 12943714.89 | 12943715.07 | 0.0492 | 0.0316 |
| Uranus | 30726-08-04 22:33 G | 12943716.30 | 12943716.44 | 12943716.61 | 0.0140 | 0.0112 |
| Neptune | 30727-01-01 12:00 G | 12943865.80 | 12943866.00 | 12943866.24 | 0.0090 | 0.0049 |
| Uranus | 30727-08-09 22:19 G | 12944086.21 | 12944086.43 | 12944086.68 | 0.0140 | 0.0052 |
| Jupiter | 30727-09-03 18:14 G | 12944111.02 | 12944111.26 | 12944111.50 | 0.0497 | 0.0079 |
| Neptune | 30728-01-04 07:41 G | 12944233.62 | 12944233.82 | 12944234.03 | 0.0090 | 0.0053 |
| Uranus | 30728-08-13 07:55 G | 12944455.58 | 12944455.83 | 12944456.08 | 0.0139 | 0.0031 |
| Neptune | 30729-01-05 13:12 G | 12944600.94 | 12944601.05 | 12944601.21 | 0.0090 | 0.0076 |
| Uranus | 30729-08-18 05:17 G | 12944825.57 | 12944825.72 | 12944825.90 | 0.0139 | 0.0102 |
| Neptune | 30730-01-08 09:07 G | 12944968.78 | 12944968.88 | 12944969.02 | 0.0090 | 0.0079 |
| Jupiter | 30733-02-24 17:17 G | 12946111.98 | 12946112.22 | 12946112.46 | 0.0532 | 0.0039 |
| Jupiter | 30738-08-08 00:57 G | 12948102.35 | 12948102.54 | 12948102.73 | 0.0492 | 0.0274 |
| Jupiter | 30739-09-07 21:36 G | 12948498.19 | 12948498.40 | 12948498.62 | 0.0498 | 0.0172 |
| Saturn | 30740-08-06 21:36 G | 12948832.14 | 12948832.40 | 12948832.65 | 0.0278 | 0.0011 |
| Jupiter | 30744-01-24 12:57 G | 12950097.94 | 12950098.04 | 12950098.15 | 0.0535 | 0.0480 |
| Jupiter | 30745-03-01 21:07 G | 12950500.16 | 12950500.38 | 12950500.61 | 0.0531 | 0.0088 |
| Jupiter | 30750-08-12 02:09 G | 12952489.39 | 12952489.59 | 12952489.80 | 0.0492 | 0.0244 |
| Jupiter | 30751-09-12 14:53 G | 12952885.94 | 12952886.12 | 12952886.32 | 0.0499 | 0.0275 |
| Saturn | 30754-02-05 15:36 G | 12953762.89 | 12953763.15 | 12953763.40 | 0.0283 | 0.0006 |
| Jupiter | 30756-01-29 22:19 G | 12954486.31 | 12954486.43 | 12954486.56 | 0.0536 | 0.0444 |
| Jupiter | 30757-03-07 03:50 G | 12954888.43 | 12954888.66 | 12954888.88 | 0.0530 | 0.0192 |
| Jupiter | 30762-08-16 14:24 G | 12956876.89 | 12956877.10 | 12956877.31 | 0.0493 | 0.0178 |
| Jupiter | 30763-09-16 18:43 G | 12957273.10 | 12957273.28 | 12957273.46 | 0.0500 | 0.0319 |
| Mars | 30767-06-13 18:29 G | 12958639.19 | 12958639.27 | 12958639.36 | 0.1651 | 0.1492 |
| Jupiter | 30768-02-04 08:09 G | 12958874.68 | 12958874.84 | 12958875.01 | 0.0535 | 0.0384 |
| Jupiter | 30769-03-12 02:53 G | 12959276.42 | 12959276.62 | 12959276.83 | 0.0528 | 0.0233 |
| Saturn | 30769-08-01 07:55 G | 12959418.66 | 12959418.83 | 12959419.02 | 0.0276 | 0.0177 |
| Saturn | 30770-08-14 07:55 G | 12959796.71 | 12959796.83 | 12959796.97 | 0.0280 | 0.0234 |

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| Uranus | 30771-02-04 23:45 G | 12959971.31 | 12959971.49 | 12959971.68 | 0.0138 | 0.0095 |
| Uranus | 30772-02-09 07:55 G | 12960340.59 | 12960340.83 | 12960341.08 | 0.0139 | 0.0034 |
| Uranus | 30773-02-13 06:43 G | 12960710.56 | 12960710.78 | 12960711.03 | 0.0139 | 0.0053 |
| Uranus | 30774-02-17 16:19 G | 12961080.04 | 12961080.18 | 12961080.33 | 0.0140 | 0.0113 |
| Jupiter | 30774-08-20 22:05 G | 12961264.18 | 12961264.42 | 12961264.66 | 0.0494 | 0.0072 |
| Jupiter | 30775-09-21 12:43 G | 12961660.87 | 12961661.03 | 12961661.19 | 0.0502 | 0.0352 |
| Jupiter | 30780-02-09 08:24 G | 12963262.65 | 12963262.85 | 12963263.05 | 0.0534 | 0.0265 |
| Jupiter | 30781-03-17 09:36 G | 12963664.71 | 12963664.90 | 12963665.09 | 0.0526 | 0.0292 |
| Saturn | 30783-01-30 18:29 G | 12964349.12 | 12964349.27 | 12964349.44 | 0.0286 | 0.0207 |
| Saturn | 30784-02-13 10:33 G | 12964727.79 | 12964727.94 | 12964728.08 | 0.0282 | 0.0225 |
| Jupiter | 30786-08-25 03:50 G | 12965651.43 | 12965651.66 | 12965651.89 | 0.0495 | 0.0004 |
| Jupiter | 30787-09-26 00:00 G | 12966048.37 | 12966048.50 | 12966048.63 | 0.0504 | 0.0423 |
| Jupiter | 30792-02-14 19:41 G | 12967651.10 | 12967651.32 | 12967651.54 | 0.0533 | 0.0156 |
| Jupiter | 30793-03-22 02:24 G | 12968052.46 | 12968052.60 | 12968052.76 | 0.0525 | 0.0407 |
| Jupiter | 30797-07-29 11:17 G | 12969642.84 | 12969642.97 | 12969643.10 | 0.0491 | 0.0404 |
| Jupiter | 30798-08-29 17:45 G | 12970039.00 | 12970039.24 | 12970039.47 | 0.0496 | 0.0028 |
| Neptune | 30799-06-12 06:00 G | 12970325.66 | 12970325.75 | 12970325.90 | 0.0088 | 0.0078 |
| Saturn | 30799-08-08 20:09 G | 12970383.10 | 12970383.34 | 12970383.59 | 0.0278 | 0.0059 |
| Neptune | 30800-06-13 23:17 G | 12970693.33 | 12970693.47 | 12970693.62 | 0.0088 | 0.0071 |
| Neptune | 30801-06-16 02:38 G | 12971060.42 | 12971060.61 | 12971060.83 | 0.0088 | 0.0053 |
| Neptune | 30802-06-18 19:55 G | 12971428.12 | 12971428.33 | 12971428.56 | 0.0088 | 0.0046 |
| Neptune | 30803-06-21 00:57 G | 12971795.30 | 12971795.54 | 12971795.78 | 0.0088 | 0.0027 |
| Jupiter | 30804-02-19 15:07 G | 12972038.89 | 12972039.13 | 12972039.36 | 0.0533 | 0.0116 |
| Neptune | 30804-06-22 14:53 G | 12972162.87 | 12972163.12 | 12972163.39 | 0.0088 | 0.0021 |
| Jupiter | 30805-03-27 05:17 G | 12972440.67 | 12972440.72 | 12972440.80 | 0.0524 | 0.0498 |
| Neptune | 30805-06-25 00:14 G | 12972530.26 | 12972530.51 | 12972530.76 | 0.0088 | 0.0003 |
| Neptune | 30806-06-27 10:05 G | 12972897.65 | 12972897.92 | 12972898.18 | 0.0088 | 0.0004 |
| Neptune | 30807-06-29 23:31 G | 12973265.25 | 12973265.48 | 12973265.74 | 0.0088 | 0.0023 |
| Neptune | 30808-07-01 04:33 G | 12973632.46 | 12973632.69 | 12973632.95 | 0.0088 | 0.0030 |
| Neptune | 30809-07-03 21:36 G | 12974000.21 | 12974000.40 | 12974000.63 | 0.0088 | 0.0049 |

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| Jupiter | 30809-08-03 02:53 G | 12974030.45 | 12974030.62 | 12974030.80 | 0.0491 | 0.0318 |
| Neptune | 30810-07-06 01:41 G | 12974367.37 | 12974367.57 | 12974367.77 | 0.0088 | 0.0054 |
| Uranus | 30810-08-05 06:57 G | 12974397.69 | 12974397.79 | 12974397.92 | 0.0140 | 0.0125 |
| Jupiter | 30810-09-02 20:24 G | 12974426.13 | 12974426.35 | 12974426.58 | 0.0496 | 0.0077 |
| Neptune | 30811-07-08 18:14 G | 12974735.13 | 12974735.26 | 12974735.41 | 0.0088 | 0.0073 |
| Uranus | 30811-08-10 06:43 G | 12974767.55 | 12974767.78 | 12974768.04 | 0.0140 | 0.0038 |
| Neptune | 30812-07-09 22:48 G | 12975102.37 | 12975102.45 | 12975102.59 | 0.0088 | 0.0079 |
| Uranus | 30812-08-13 15:36 G | 12975136.91 | 12975137.15 | 12975137.41 | 0.0139 | 0.0027 |
| Saturn | 30813-02-06 14:53 G | 12975313.87 | 12975314.12 | 12975314.36 | 0.0283 | 0.0039 |
| Uranus | 30813-08-18 13:41 G | 12975506.92 | 12975507.07 | 12975507.25 | 0.0139 | 0.0104 |
| Jupiter | 30816-02-24 23:17 G | 12976427.24 | 12976427.47 | 12976427.69 | 0.0532 | 0.0044 |
| Jupiter | 30817-04-01 06:00 G | 12976828.75 | 12976828.75 | 12976828.78 | 0.0522 | 0.0521 |
| Jupiter | 30821-08-07 02:53 G | 12978417.43 | 12978417.62 | 12978417.82 | 0.0492 | 0.0277 |
| Jupiter | 30822-09-07 12:14 G | 12978813.80 | 12978814.01 | 12978814.23 | 0.0497 | 0.0179 |
| Jupiter | 30827-01-23 22:48 G | 12980413.37 | 12980413.45 | 12980413.54 | 0.0536 | 0.0492 |
| Jupiter | 30828-03-01 05:45 G | 12980815.50 | 12980815.74 | 12980815.98 | 0.0531 | 0.0086 |
| Saturn | 30828-08-02 16:33 G | 12980969.97 | 12980970.19 | 12980970.41 | 0.0276 | 0.0124 |
| Jupiter | 30833-08-11 15:50 G | 12982804.97 | 12982805.16 | 12982805.36 | 0.0492 | 0.0250 |
| Jupiter | 30834-09-11 17:02 G | 12983201.01 | 12983201.21 | 12983201.41 | 0.0499 | 0.0273 |
| Jupiter | 30839-01-29 06:00 G | 12984801.64 | 12984801.75 | 12984801.89 | 0.0535 | 0.0458 |
| Jupiter | 30840-03-06 03:36 G | 12985203.44 | 12985203.65 | 12985203.87 | 0.0529 | 0.0181 |
| Saturn | 30842-02-01 00:57 G | 12985900.34 | 12985900.54 | 12985900.75 | 0.0286 | 0.0159 |
| Saturn | 30843-02-14 11:31 G | 12986278.92 | 12986278.98 | 12986279.04 | 0.0282 | 0.0273 |
| Jupiter | 30845-08-15 20:24 G | 12987192.13 | 12987192.35 | 12987192.58 | 0.0493 | 0.0177 |
| Mars | 30846-06-16 01:55 G | 12987496.41 | 12987496.58 | 12987496.75 | 0.1647 | 0.0635 |
| Jupiter | 30846-09-16 08:24 G | 12987588.68 | 12987588.85 | 12987589.03 | 0.0500 | 0.0313 |
| Jupiter | 30851-02-03 06:43 G | 12989189.63 | 12989189.78 | 12989189.93 | 0.0535 | 0.0396 |
| Jupiter | 30852-03-11 11:31 G | 12989591.77 | 12989591.98 | 12989592.19 | 0.0528 | 0.0215 |
| Uranus | 30855-02-05 05:45 G | 12990652.58 | 12990652.74 | 12990652.93 | 0.0138 | 0.0101 |
| Uranus | 30856-02-09 14:53 G | 12991021.88 | 12991022.12 | 12991022.37 | 0.0139 | 0.0021 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 30857-02-13 13:26 G | 12991391.82 | 12991392.06 | 12991392.32 | 0.0139 | 0.0039 |
| Jupiter | 30857-08-20 02:53 G | 12991579.39 | 12991579.62 | 12991579.84 | 0.0494 | 0.0075 |
| Uranus | 30858-02-17 22:48 G | 12991761.37 | 12991761.45 | 12991761.57 | 0.0140 | 0.0128 |
| Saturn | 30858-08-10 03:50 G | 12991934.44 | 12991934.66 | 12991934.88 | 0.0278 | 0.0110 |
| Jupiter | 30858-09-20 17:17 G | 12991976.05 | 12991976.22 | 12991976.40 | 0.0502 | 0.0343 |
| Jupiter | 30863-02-08 14:38 G | 12993577.91 | 12993578.11 | 12993578.31 | 0.0534 | 0.0269 |
| Jupiter | 30864-03-16 03:36 G | 12993979.45 | 12993979.65 | 12993979.85 | 0.0527 | 0.0283 |
| Jupiter | 30869-08-24 16:19 G | 12995966.94 | 12995967.18 | 12995967.41 | 0.0494 | 0.0011 |
| Jupiter | 30870-09-25 03:50 G | 12996363.55 | 12996363.66 | 12996363.78 | 0.0503 | 0.0428 |
| Saturn | 30872-02-08 22:33 G | 12996865.22 | 12996865.44 | 12996865.67 | 0.0283 | 0.0092 |
| Jupiter | 30875-02-13 12:14 G | 12997965.79 | 12997966.01 | 12997966.24 | 0.0534 | 0.0168 |
| Jupiter | 30876-03-21 10:05 G | 12998367.78 | 12998367.92 | 12998368.06 | 0.0526 | 0.0406 |
| Pluto | 30879-02-11 22:05 G | 12999425.26 | 12999425.42 | 12999425.58 | 0.0065 | 0.0051 |
| Pluto | 30880-02-13 04:05 G | 12999791.46 | 12999791.67 | 12999791.92 | 0.0065 | 0.0030 |
| Jupiter | 30880-07-29 02:24 G | 12999958.48 | 12999958.60 | 12999958.74 | 0.0491 | 0.0404 |
| Jupiter | 30881-08-28 17:17 G | 13000353.99 | 13000354.22 | 13000354.45 | 0.0495 | 0.0022 |
| Neptune | 30881-12-11 08:24 G | 13000458.79 | 13000458.85 | 13000458.96 | 0.0090 | 0.0085 |
| Neptune | 30882-12-13 14:53 G | 13000825.96 | 13000826.12 | 13000826.30 | 0.0090 | 0.0067 |
| Neptune | 30883-12-16 09:36 G | 13001193.71 | 13001193.90 | 13001194.12 | 0.0090 | 0.0057 |
| Neptune | 30884-12-17 18:14 G | 13001561.05 | 13001561.26 | 13001561.50 | 0.0090 | 0.0041 |
| Neptune | 30885-12-20 08:53 G | 13001928.64 | 13001928.87 | 13001929.14 | 0.0090 | 0.0031 |
| Neptune | 30886-12-22 22:19 G | 13002296.19 | 13002296.43 | 13002296.68 | 0.0090 | 0.0015 |
| Jupiter | 30887-02-18 23:17 G | 13002354.25 | 13002354.47 | 13002354.69 | 0.0533 | 0.0128 |
| Saturn | 30887-08-05 00:00 G | 13002521.26 | 13002521.50 | 13002521.75 | 0.0276 | 0.0069 |
| Neptune | 30887-12-25 08:53 G | 13002663.60 | 13002663.87 | 13002664.13 | 0.0090 | 0.0004 |
| Jupiter | 30888-03-26 10:48 G | 13002755.87 | 13002755.95 | 13002756.04 | 0.0524 | 0.0487 |
| Neptune | 30888-12-27 02:09 G | 13003031.35 | 13003031.59 | 13003031.85 | 0.0090 | 0.0013 |
| Neptune | 30889-12-29 08:53 G | 13003398.63 | 13003398.87 | 13003399.14 | 0.0090 | 0.0025 |
| Neptune | 30891-01-01 04:48 G | 13003766.48 | 13003766.70 | 13003766.95 | 0.0090 | 0.0040 |
| Neptune | 30892-01-03 10:33 G | 13004133.75 | 13004133.94 | 13004134.17 | 0.0090 | 0.0052 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 30892-08-02 02:53 G | 13004345.45 | 13004345.62 | 13004345.81 | 0.0491 | 0.0323 |
| Neptune | 30893-01-05 05:45 G | 13004501.58 | 13004501.74 | 13004501.94 | 0.0090 | 0.0065 |
| Jupiter | 30893-09-02 09:50 G | 13004741.68 | 13004741.91 | 13004742.14 | 0.0496 | 0.0077 |
| Neptune | 30894-01-07 14:09 G | 13004868.97 | 13004869.09 | 13004869.22 | 0.0090 | 0.0078 |
| Uranus | 30894-08-05 13:55 G | 13005078.94 | 13005079.08 | 13005079.25 | 0.0140 | 0.0110 |
| Uranus | 30895-08-10 13:55 G | 13005448.85 | 13005449.08 | 13005449.33 | 0.0140 | 0.0050 |
| Uranus | 30896-08-13 23:02 G | 13005818.22 | 13005818.46 | 13005818.71 | 0.0139 | 0.0036 |
| Uranus | 30897-08-18 21:36 G | 13006188.24 | 13006188.40 | 13006188.57 | 0.0139 | 0.0103 |
| Jupiter | 30899-02-24 03:21 G | 13006742.40 | 13006742.64 | 13006742.88 | 0.0532 | 0.0053 |
| Jupiter | 30900-04-01 04:48 G | 13007143.66 | 13007143.70 | 13007143.75 | 0.0522 | 0.0509 |
| Saturn | 30901-02-03 05:17 G | 13007451.49 | 13007451.72 | 13007451.96 | 0.0285 | 0.0109 |
| Jupiter | 30904-08-07 12:29 G | 13008732.84 | 13008733.02 | 13008733.21 | 0.0492 | 0.0291 |
| Jupiter | 30905-09-07 11:45 G | 13009128.77 | 13009128.99 | 13009129.21 | 0.0498 | 0.0177 |
| Jupiter | 30910-01-24 00:57 G | 13010728.46 | 13010728.54 | 13010728.64 | 0.0535 | 0.0497 |
| Jupiter | 30911-03-02 02:38 G | 13011130.38 | 13011130.61 | 13011130.83 | 0.0531 | 0.0079 |
| Saturn | 30916-07-30 20:38 G | 13013108.25 | 13013108.36 | 13013108.49 | 0.0274 | 0.0236 |
| Jupiter | 30916-08-11 18:29 G | 13013120.07 | 13013120.27 | 13013120.48 | 0.0492 | 0.0259 |
| Saturn | 30917-08-12 18:00 G | 13013486.06 | 13013486.25 | 13013486.44 | 0.0278 | 0.0167 |
| Jupiter | 30917-09-12 02:24 G | 13013516.41 | 13013516.60 | 13013516.80 | 0.0499 | 0.0267 |
| Jupiter | 30922-01-28 23:02 G | 13015116.36 | 13015116.46 | 13015116.57 | 0.0535 | 0.0468 |
| Jupiter | 30923-03-07 08:09 G | 13015518.62 | 13015518.84 | 13015519.06 | 0.0530 | 0.0168 |
| Jupiter | 30928-08-16 00:43 G | 13017507.33 | 13017507.53 | 13017507.75 | 0.0493 | 0.0178 |
| Jupiter | 30929-09-16 10:33 G | 13017903.75 | 13017903.94 | 13017904.13 | 0.0500 | 0.0304 |
| Saturn | 30931-02-11 11:17 G | 13018416.77 | 13018416.97 | 13018417.18 | 0.0283 | 0.0145 |
| Jupiter | 30934-02-03 09:07 G | 13019504.73 | 13019504.88 | 13019505.04 | 0.0535 | 0.0403 |
| Jupiter | 30935-03-12 02:53 G | 13019906.40 | 13019906.62 | 13019906.84 | 0.0529 | 0.0206 |
| Uranus | 30939-02-06 14:24 G | 13021333.92 | 13021334.10 | 13021334.31 | 0.0138 | 0.0093 |
| Uranus | 30940-02-10 23:45 G | 13021703.25 | 13021703.49 | 13021703.74 | 0.0139 | 0.0030 |
| Jupiter | 30940-08-20 12:29 G | 13021894.79 | 13021895.02 | 13021895.26 | 0.0493 | 0.0078 |
| Uranus | 30941-02-14 21:36 G | 13022073.17 | 13022073.40 | 13022073.64 | 0.0139 | 0.0056 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 30941-09-20 19:26 G | 13022291.15 | 13022291.31 | 13022291.47 | 0.0501 | 0.0340 |
| Uranus | 30942-02-19 07:26 G | 13022442.68 | 13022442.81 | 13022442.96 | 0.0139 | 0.0116 |
| Jupiter | 30946-02-08 08:09 G | 13023892.64 | 13023892.84 | 13023893.04 | 0.0535 | 0.0275 |
| Saturn | 30946-08-07 07:12 G | 13024072.54 | 13024072.80 | 13024073.05 | 0.0277 | 0.0013 |
| Jupiter | 30947-03-17 12:14 G | 13024294.82 | 13024295.01 | 13024295.20 | 0.0527 | 0.0282 |
| Jupiter | 30952-08-24 14:09 G | 13026281.86 | 13026282.09 | 13026282.32 | 0.0494 | 0.0015 |
| Jupiter | 30953-09-25 12:00 G | 13026678.88 | 13026679.00 | 13026679.13 | 0.0503 | 0.0430 |
| Jupiter | 30958-02-13 20:24 G | 13028281.14 | 13028281.35 | 13028281.57 | 0.0534 | 0.0181 |
| Jupiter | 30959-03-22 09:50 G | 13028682.76 | 13028682.91 | 13028683.08 | 0.0525 | 0.0398 |
| Saturn | 30960-02-05 11:45 G | 13029002.74 | 13029002.99 | 13029003.24 | 0.0285 | 0.0054 |
| Neptune | 30963-06-13 00:00 G | 13030226.44 | 13030226.50 | 13030226.60 | 0.0088 | 0.0083 |
| Jupiter | 30963-07-29 21:36 G | 13030273.28 | 13030273.40 | 13030273.53 | 0.0491 | 0.0412 |
| Neptune | 30964-06-14 03:21 G | 13030593.56 | 13030593.64 | 13030593.79 | 0.0088 | 0.0079 |
| Jupiter | 30964-08-29 03:36 G | 13030669.42 | 13030669.65 | 13030669.89 | 0.0495 | 0.0011 |
| Neptune | 30965-06-16 20:53 G | 13030961.19 | 13030961.37 | 13030961.58 | 0.0088 | 0.0058 |
| Neptune | 30966-06-19 02:24 G | 13031328.43 | 13031328.60 | 13031328.83 | 0.0088 | 0.0054 |
| Neptune | 30967-06-21 15:50 G | 13031695.93 | 13031696.16 | 13031696.42 | 0.0088 | 0.0034 |
| Pluto | 30967-08-15 10:05 G | 13031750.69 | 13031750.92 | 13031751.17 | 0.0079 | 0.0034 |
| Neptune | 30968-06-23 02:09 G | 13032063.36 | 13032063.59 | 13032063.83 | 0.0088 | 0.0028 |
| Neptune | 30969-06-25 10:05 G | 13032430.66 | 13032430.92 | 13032431.19 | 0.0088 | 0.0008 |
| Jupiter | 30970-02-18 21:36 G | 13032669.17 | 13032669.40 | 13032669.64 | 0.0533 | 0.0138 |
| Neptune | 30970-06-28 00:57 G | 13032798.29 | 13032798.54 | 13032798.79 | 0.0088 | 0.0002 |
| Jupiter | 30971-03-27 06:43 G | 13033070.70 | 13033070.78 | 13033070.88 | 0.0524 | 0.0477 |
| Neptune | 30971-06-30 05:31 G | 13033165.48 | 13033165.73 | 13033165.98 | 0.0088 | 0.0018 |
| Neptune | 30972-07-01 22:48 G | 13033533.21 | 13033533.45 | 13033533.71 | 0.0088 | 0.0023 |
| Neptune | 30973-07-04 02:24 G | 13033900.39 | 13033900.60 | 13033900.84 | 0.0088 | 0.0043 |
| Neptune | 30974-07-06 19:26 G | 13034268.09 | 13034268.31 | 13034268.53 | 0.0088 | 0.0048 |
| Neptune | 30975-07-09 01:41 G | 13034635.42 | 13034635.57 | 13034635.73 | 0.0088 | 0.0068 |
| Saturn | 30975-08-02 12:43 G | 13034659.86 | 13034660.03 | 13034660.22 | 0.0275 | 0.0180 |
| Jupiter | 30975-08-03 09:50 G | 13034660.75 | 13034660.91 | 13034661.08 | 0.0492 | 0.0335 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 30976-07-10 14:09 G | 13035002.97 | 13035003.09 | 13035003.25 | 0.0088 | 0.0074 |
| Saturn | 30976-08-14 07:55 G | 13035037.70 | 13035037.83 | 13035037.99 | 0.0279 | 0.0226 |
| Jupiter | 30976-09-02 05:45 G | 13035056.51 | 13035056.74 | 13035056.98 | 0.0496 | 0.0071 |
| Uranus | 30978-08-06 22:05 G | 13035760.32 | 13035760.42 | 13035760.56 | 0.0140 | 0.0123 |
| Uranus | 30979-08-11 21:36 G | 13036130.15 | 13036130.40 | 13036130.65 | 0.0140 | 0.0034 |
| Uranus | 30980-08-15 06:43 G | 13036499.54 | 13036499.78 | 13036500.03 | 0.0139 | 0.0027 |
| Uranus | 30981-08-20 04:33 G | 13036869.55 | 13036869.69 | 13036869.87 | 0.0139 | 0.0108 |
| Jupiter | 30982-02-23 19:55 G | 13037057.10 | 13037057.33 | 13037057.55 | 0.0532 | 0.0063 |
| Jupiter | 30983-04-01 08:38 G | 13037458.79 | 13037458.86 | 13037458.93 | 0.0522 | 0.0498 |
| Jupiter | 30987-08-07 16:05 G | 13039047.99 | 13039048.17 | 13039048.37 | 0.0492 | 0.0302 |
| Jupiter | 30988-09-06 20:38 G | 13039444.15 | 13039444.36 | 13039444.57 | 0.0497 | 0.0176 |
| Saturn | 30989-01-30 08:24 G | 13039589.74 | 13039589.85 | 13039589.99 | 0.0287 | 0.0243 |
| Saturn | 30990-02-12 23:31 G | 13039968.31 | 13039968.48 | 13039968.66 | 0.0283 | 0.0201 |
| Jupiter | 30993-01-22 16:05 G | 13041043.11 | 13041043.17 | 13041043.24 | 0.0535 | 0.0510 |
| Jupiter | 30994-03-01 03:36 G | 13041445.41 | 13041445.65 | 13041445.88 | 0.0531 | 0.0074 |
| Mars | 30997-12-14 22:33 G | 13042830.23 | 13042830.44 | 13042830.66 | 0.1886 | 0.0304 |
| Jupiter | 30999-08-11 20:53 G | 13043435.18 | 13043435.37 | 13043435.56 | 0.0492 | 0.0269 |
| Jupiter | 31000-09-12 01:55 G | 13043831.37 | 13043831.58 | 13043831.78 | 0.0498 | 0.0257 |

32ND MILLENNIUM CE

This is a list of transits of Moon in the 32nd millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| | TRANSIT | | | | | | | |
| | TIME | | | | | | | |
| Jupiter | 31005-01-29 02:09 G | 13045431.49 | 13045431.59 | 13045431.70 | 0.0536 | 0.0478 | | |

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| Saturn | 31005-08-09 20:53 G | 13045624.13 | 13045624.37 | 13045624.61 | 0.0277 | 0.0048 |
| Jupiter | 31006-03-07 00:14 G | 13045833.29 | 13045833.51 | 13045833.74 | 0.0530 | 0.0161 |
| Jupiter | 31011-08-17 08:38 G | 13047822.64 | 13047822.86 | 13047823.09 | 0.0492 | 0.0182 |
| Jupiter | 31012-09-16 12:00 G | 13048218.83 | 13048219.00 | 13048219.19 | 0.0499 | 0.0295 |
| Jupiter | 31017-02-03 02:53 G | 13049819.48 | 13049819.62 | 13049819.77 | 0.0535 | 0.0411 |
| Jupiter | 31018-03-12 10:33 G | 13050221.74 | 13050221.94 | 13050222.16 | 0.0529 | 0.0198 |
| Saturn | 31019-02-08 01:41 G | 13050554.33 | 13050554.57 | 13050554.81 | 0.0284 | 0.0007 |
| Uranus | 31023-02-07 22:48 G | 13052015.27 | 13052015.45 | 13052015.65 | 0.0138 | 0.0094 |
| Jupiter | 31023-08-21 07:12 G | 13052209.57 | 13052209.80 | 13052210.03 | 0.0493 | 0.0087 |
| Uranus | 31024-02-12 09:36 G | 13052384.66 | 13052384.90 | 13052385.15 | 0.0139 | 0.0017 |
| Jupiter | 31024-09-21 01:12 G | 13052606.38 | 13052606.55 | 13052606.74 | 0.0501 | 0.0331 |
| Uranus | 31025-02-16 06:43 G | 13052754.55 | 13052754.78 | 13052755.04 | 0.0139 | 0.0045 |
| Uranus | 31026-02-20 17:31 G | 13053124.18 | 13053124.23 | 13053124.32 | 0.0139 | 0.0134 |
| Jupiter | 31029-02-08 14:24 G | 13054207.91 | 13054208.10 | 13054208.29 | 0.0535 | 0.0278 |
| Jupiter | 31030-03-17 07:12 G | 13054609.59 | 13054609.80 | 13054610.01 | 0.0527 | 0.0273 |
| Saturn | 31034-08-05 03:07 G | 13056211.41 | 13056211.63 | 13056211.85 | 0.0275 | 0.0120 |
| Jupiter | 31035-08-25 22:33 G | 13056597.21 | 13056597.44 | 13056597.67 | 0.0494 | 0.0028 |
| Jupiter | 31036-09-25 06:14 G | 13056993.64 | 13056993.76 | 13056993.88 | 0.0502 | 0.0423 |
| Jupiter | 31041-02-13 09:36 G | 13058595.67 | 13058595.90 | 13058596.12 | 0.0534 | 0.0190 |
| Jupiter | 31042-03-22 03:36 G | 13058997.50 | 13058997.65 | 13058997.79 | 0.0526 | 0.0395 |
| Neptune | 31045-12-12 12:00 G | 13060358.95 | 13060359.00 | 13060359.08 | 0.0090 | 0.0086 |
| Jupiter | 31046-07-30 07:41 G | 13060588.70 | 13060588.82 | 13060588.94 | 0.0491 | 0.0415 |
| Neptune | 31046-12-15 05:17 G | 13060726.63 | 13060726.72 | 13060726.87 | 0.0090 | 0.0080 |
| Jupiter | 31047-08-30 00:43 G | 13060984.29 | 13060984.53 | 13060984.77 | 0.0495 | 0.0003 |
| Neptune | 31047-12-17 15:21 G | 13061093.97 | 13061094.14 | 13061094.34 | 0.0090 | 0.0060 |
| Saturn | 31048-02-02 23:31 G | 13061141.29 | 13061141.48 | 13061141.68 | 0.0286 | 0.0176 |
| Neptune | 31048-12-19 04:48 G | 13061461.51 | 13061461.70 | 13061461.94 | 0.0090 | 0.0054 |
| Saturn | 31049-02-15 09:07 G | 13061519.80 | 13061519.88 | 13061519.98 | 0.0282 | 0.0261 |
| Neptune | 31049-12-21 19:55 G | 13061829.11 | 13061829.33 | 13061829.58 | 0.0090 | 0.0033 |
| Neptune | 31050-12-24 05:02 G | 13062196.47 | 13062196.71 | 13062196.98 | 0.0090 | 0.0027 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Mars | 31051-06-16 10:05 G | 13062370.76 | 13062370.92 | 13062371.07 | 0.1656 | 0.0948 |
| Neptune | 31051-12-26 23:45 G | 13062564.24 | 13062564.49 | 13062564.75 | 0.0090 | 0.0004 |
| Neptune | 31052-12-28 06:00 G | 13062931.50 | 13062931.75 | 13062932.01 | 0.0090 | 0.0002 |
| Jupiter | 31053-02-18 13:12 G | 13062983.84 | 13062984.05 | 13062984.27 | 0.0534 | 0.0151 |
| Neptune | 31053-12-31 01:41 G | 13063299.34 | 13063299.57 | 13063299.84 | 0.0090 | 0.0024 |
| Jupiter | 31054-03-27 07:41 G | 13063385.72 | 13063385.82 | 13063385.93 | 0.0525 | 0.0468 |
| Neptune | 31055-01-02 08:24 G | 13063666.61 | 13063666.85 | 13063667.09 | 0.0090 | 0.0028 |
| Neptune | 31056-01-05 01:55 G | 13064034.38 | 13064034.58 | 13064034.82 | 0.0090 | 0.0051 |
| Neptune | 31057-01-06 11:17 G | 13064401.79 | 13064401.97 | 13064402.18 | 0.0090 | 0.0056 |
| Neptune | 31058-01-09 01:26 G | 13064769.45 | 13064769.56 | 13064769.71 | 0.0090 | 0.0078 |
| Jupiter | 31058-08-03 12:00 G | 13064975.83 | 13064976.00 | 13064976.18 | 0.0491 | 0.0341 |
| Neptune | 31059-01-11 15:36 G | 13065137.08 | 13065137.15 | 13065137.27 | 0.0090 | 0.0083 |
| Jupiter | 31059-09-03 13:12 G | 13065371.82 | 13065372.05 | 13065372.27 | 0.0495 | 0.0065 |
| Uranus | 31062-08-08 07:41 G | 13066441.68 | 13066441.82 | 13066442.00 | 0.0140 | 0.0108 |
| Uranus | 31063-08-13 06:29 G | 13066811.53 | 13066811.77 | 13066812.02 | 0.0140 | 0.0046 |
| Saturn | 31064-08-11 15:36 G | 13067175.94 | 13067176.15 | 13067176.37 | 0.0278 | 0.0110 |
| Uranus | 31064-08-16 16:19 G | 13067180.95 | 13067181.18 | 13067181.43 | 0.0139 | 0.0042 |
| Jupiter | 31065-02-23 21:50 G | 13067372.17 | 13067372.41 | 13067372.64 | 0.0533 | 0.0068 |
| Uranus | 31065-08-21 13:55 G | 13067550.94 | 13067551.08 | 13067551.27 | 0.0139 | 0.0106 |
| Jupiter | 31066-04-01 00:43 G | 13067773.47 | 13067773.53 | 13067773.61 | 0.0523 | 0.0497 |
| Jupiter | 31070-08-07 17:02 G | 13069363.04 | 13069363.21 | 13069363.38 | 0.0491 | 0.0316 |
| Jupiter | 31071-09-07 18:43 G | 13069759.05 | 13069759.28 | 13069759.51 | 0.0497 | 0.0168 |
| Jupiter | 31076-01-23 19:41 G | 13071358.27 | 13071358.32 | 13071358.39 | 0.0536 | 0.0517 |
| Jupiter | 31077-02-28 20:38 G | 13071760.13 | 13071760.36 | 13071760.59 | 0.0532 | 0.0067 |
| Saturn | 31078-02-09 21:07 G | 13072106.15 | 13072106.38 | 13072106.61 | 0.0284 | 0.0071 |
| Jupiter | 31082-08-12 01:41 G | 13073750.37 | 13073750.57 | 13073750.77 | 0.0492 | 0.0276 |
| Jupiter | 31083-09-12 02:38 G | 13074146.42 | 13074146.61 | 13074146.80 | 0.0498 | 0.0249 |
| Jupiter | 31088-01-28 19:12 G | 13075746.22 | 13075746.30 | 13075746.40 | 0.0535 | 0.0488 |
| Jupiter | 31089-03-06 06:29 G | 13076148.56 | 13076148.77 | 13076148.99 | 0.0530 | 0.0152 |
| Saturn | 31093-08-06 13:26 G | 13077762.82 | 13077763.06 | 13077763.31 | 0.0276 | 0.0063 |

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| Jupiter | 31094-08-16 02:53 G | 13078137.41 | 13078137.62 | 13078137.84 | 0.0493 | 0.0191 |
| Jupiter | 31095-09-16 16:19 G | 13078533.98 | 13078534.18 | 13078534.38 | 0.0499 | 0.0278 |
| Jupiter | 31100-02-03 01:55 G | 13080134.44 | 13080134.58 | 13080134.72 | 0.0535 | 0.0420 |
| Jupiter | 31101-03-11 21:50 G | 13080536.19 | 13080536.41 | 13080536.64 | 0.0529 | 0.0189 |
| Jupiter | 31106-08-21 18:43 G | 13082525.05 | 13082525.28 | 13082525.51 | 0.0493 | 0.0088 |
| Saturn | 31107-02-05 11:45 G | 13082692.76 | 13082692.99 | 13082693.23 | 0.0286 | 0.0111 |
| Uranus | 31107-02-09 08:24 G | 13082696.66 | 13082696.85 | 13082697.06 | 0.0138 | 0.0089 |
| Jupiter | 31107-09-21 21:07 G | 13082921.21 | 13082921.38 | 13082921.56 | 0.0500 | 0.0326 |
| Uranus | 31108-02-13 20:09 G | 13083066.10 | 13083066.34 | 13083066.59 | 0.0139 | 0.0022 |
| Uranus | 31109-02-17 16:19 G | 13083435.95 | 13083436.18 | 13083436.42 | 0.0139 | 0.0061 |
| Uranus | 31110-02-22 03:50 G | 13083805.56 | 13083805.66 | 13083805.80 | 0.0139 | 0.0122 |
| Jupiter | 31112-02-08 23:31 G | 13084522.28 | 13084522.48 | 13084522.68 | 0.0535 | 0.0292 |
| Jupiter | 31113-03-17 00:43 G | 13084924.34 | 13084924.53 | 13084924.72 | 0.0528 | 0.0269 |
| Jupiter | 31118-08-25 18:29 G | 13086912.04 | 13086912.27 | 13086912.51 | 0.0493 | 0.0040 |
| Jupiter | 31119-09-26 14:24 G | 13087308.97 | 13087309.10 | 13087309.23 | 0.0501 | 0.0417 |
| Saturn | 31122-08-02 12:29 G | 13088349.90 | 13088350.02 | 13088350.15 | 0.0274 | 0.0230 |
| Saturn | 31123-08-15 08:38 G | 13088727.68 | 13088727.86 | 13088728.06 | 0.0278 | 0.0171 |
| Jupiter | 31124-02-14 07:12 G | 13088910.59 | 13088910.80 | 13088911.00 | 0.0535 | 0.0204 |
| Jupiter | 31125-03-22 06:00 G | 13089312.60 | 13089312.75 | 13089312.91 | 0.0527 | 0.0393 |
| Pluto | 31126-02-16 16:05 G | 13089643.96 | 13089644.17 | 13089644.42 | 0.0065 | 0.0028 |
| Pluto | 31127-02-17 22:19 G | 13090010.40 | 13090010.43 | 13090010.52 | 0.0065 | 0.0064 |
| Neptune | 31128-06-15 20:53 G | 13090494.29 | 13090494.37 | 13090494.51 | 0.0088 | 0.0080 |
| Neptune | 31129-06-18 03:36 G | 13090861.53 | 13090861.65 | 13090861.82 | 0.0088 | 0.0071 |
| Jupiter | 31129-07-30 08:09 G | 13090903.72 | 13090903.84 | 13090903.98 | 0.0491 | 0.0414 |
| Mars | 31130-06-19 20:38 G | 13091228.21 | 13091228.36 | 13091228.52 | 0.1652 | 0.1089 |
| Neptune | 31130-06-20 15:50 G | 13091228.96 | 13091229.16 | 13091229.38 | 0.0088 | 0.0055 |
| Jupiter | 31130-08-30 07:26 G | 13091299.58 | 13091299.81 | 13091300.04 | 0.0494 | 0.0010 |
| Neptune | 31131-06-23 03:36 G | 13091596.44 | 13091596.65 | 13091596.86 | 0.0088 | 0.0045 |
| Neptune | 31132-06-24 10:48 G | 13091963.71 | 13091963.95 | 13091964.21 | 0.0088 | 0.0029 |
| Neptune | 31133-06-27 02:38 G | 13092331.37 | 13092331.61 | 13092331.87 | 0.0088 | 0.0019 |

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| Neptune | 31134-06-29 06:43 G | 13092698.52 | 13092698.78 | 13092699.04 | 0.0088 | 0.0003 |
| Neptune | 31135-07-02 00:14 G | 13093066.25 | 13093066.51 | 13093066.77 | 0.0088 | 0.0006 |
| Jupiter | 31136-02-19 16:05 G | 13093298.94 | 13093299.17 | 13093299.40 | 0.0534 | 0.0163 |
| Neptune | 31136-07-03 03:50 G | 13093433.43 | 13093433.66 | 13093433.92 | 0.0088 | 0.0023 |
| Saturn | 31137-02-12 15:21 G | 13093657.93 | 13093658.14 | 13093658.36 | 0.0283 | 0.0136 |
| Jupiter | 31137-03-27 01:26 G | 13093700.46 | 13093700.56 | 13093700.67 | 0.0525 | 0.0465 |
| Neptune | 31137-07-05 19:55 G | 13093801.08 | 13093801.33 | 13093801.58 | 0.0088 | 0.0031 |
| Neptune | 31138-07-08 02:24 G | 13094168.41 | 13094168.60 | 13094168.82 | 0.0088 | 0.0049 |
| Neptune | 31139-07-10 13:26 G | 13094535.88 | 13094536.06 | 13094536.28 | 0.0088 | 0.0058 |
| Neptune | 31140-07-12 01:41 G | 13094903.46 | 13094903.57 | 13094903.72 | 0.0088 | 0.0075 |
| Neptune | 31141-07-14 08:53 G | 13095270.78 | 13095270.87 | 13095270.96 | 0.0088 | 0.0082 |
| Jupiter | 31141-08-03 11:02 G | 13095290.81 | 13095290.96 | 13095291.12 | 0.0491 | 0.0351 |
| Jupiter | 31142-09-03 10:19 G | 13095686.69 | 13095686.93 | 13095687.17 | 0.0495 | 0.0058 |
| Uranus | 31146-08-09 19:41 G | 13097123.20 | 13097123.32 | 13097123.48 | 0.0140 | 0.0116 |
| Uranus | 31147-08-14 17:17 G | 13097492.97 | 13097493.22 | 13097493.48 | 0.0140 | 0.0028 |
| Jupiter | 31148-02-24 14:38 G | 13097686.88 | 13097687.11 | 13097687.34 | 0.0533 | 0.0074 |
| Uranus | 31148-08-18 03:50 G | 13097862.42 | 13097862.66 | 13097862.90 | 0.0139 | 0.0032 |
| Jupiter | 31149-04-01 08:09 G | 13098088.77 | 13098088.84 | 13098088.92 | 0.0523 | 0.0490 |
| Uranus | 31149-08-23 00:29 G | 13098232.38 | 13098232.52 | 13098232.67 | 0.0139 | 0.0115 |
| Saturn | 31152-08-08 21:50 G | 13099314.16 | 13099314.41 | 13099314.66 | 0.0276 | 0.0005 |
| Jupiter | 31153-08-07 22:48 G | 13099678.27 | 13099678.45 | 13099678.63 | 0.0492 | 0.0323 |
| Jupiter | 31154-09-07 20:38 G | 13100074.15 | 13100074.36 | 13100074.57 | 0.0497 | 0.0165 |
| Jupiter | 31159-01-23 06:43 G | 13101672.76 | 13101672.78 | 13101672.81 | 0.0535 | 0.0531 |
| Jupiter | 31160-02-29 20:24 G | 13102075.12 | 13102075.35 | 13102075.58 | 0.0532 | 0.0057 |
| Jupiter | 31165-08-12 00:43 G | 13104065.35 | 13104065.53 | 13104065.72 | 0.0492 | 0.0282 |
| Saturn | 31166-02-07 01:26 G | 13104244.32 | 13104244.56 | 13104244.81 | 0.0285 | 0.0047 |
| Jupiter | 31166-09-12 10:05 G | 13104461.71 | 13104461.92 | 13104462.13 | 0.0497 | 0.0241 |
| Jupiter | 31171-01-28 17:02 G | 13106061.14 | 13106061.21 | 13106061.29 | 0.0535 | 0.0505 |
| Jupiter | 31172-03-05 15:21 G | 13106462.91 | 13106463.14 | 13106463.38 | 0.0531 | 0.0142 |
| Jupiter | 31177-08-16 14:38 G | 13108452.90 | 13108453.11 | 13108453.33 | 0.0492 | 0.0190 |

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| Jupiter | 31178-09-16 12:29 G | 13108848.83 | 13108849.02 | 13108849.21 | 0.0498 | 0.0269 |
| Saturn | 31181-08-04 03:50 G | 13109901.48 | 13109901.66 | 13109901.85 | 0.0275 | 0.0173 |
| Saturn | 31182-08-16 20:09 G | 13110279.21 | 13110279.34 | 13110279.49 | 0.0279 | 0.0230 |
| Jupiter | 31183-02-02 14:53 G | 13110448.98 | 13110449.12 | 13110449.26 | 0.0535 | 0.0433 |
| Jupiter | 31184-03-10 22:48 G | 13110851.24 | 13110851.45 | 13110851.66 | 0.0530 | 0.0179 |
| Jupiter | 31189-08-20 14:38 G | 13112839.87 | 13112840.11 | 13112840.34 | 0.0493 | 0.0094 |
| Jupiter | 31190-09-21 06:00 G | 13113236.57 | 13113236.75 | 13113236.93 | 0.0500 | 0.0318 |
| Uranus | 31191-02-09 15:36 G | 13113377.95 | 13113378.15 | 13113378.36 | 0.0138 | 0.0087 |
| Uranus | 31192-02-14 05:17 G | 13113747.48 | 13113747.72 | 13113747.97 | 0.0139 | 0.0013 |
| Uranus | 31193-02-18 00:29 G | 13114117.28 | 13114117.52 | 13114117.77 | 0.0139 | 0.0051 |
| Uranus | 31194-02-22 14:09 G | 13114487.07 | 13114487.09 | 13114487.11 | 0.0140 | 0.0139 |
| Saturn | 31195-02-01 15:36 G | 13114831.03 | 13114831.15 | 13114831.28 | 0.0286 | 0.0245 |
| Jupiter | 31195-02-08 02:53 G | 13114837.44 | 13114837.62 | 13114837.81 | 0.0535 | 0.0302 |
| Saturn | 31196-02-15 04:19 G | 13115209.50 | 13115209.68 | 13115209.86 | 0.0282 | 0.0199 |
| Jupiter | 31196-03-16 04:33 G | 13115239.49 | 13115239.69 | 13115239.90 | 0.0528 | 0.0267 |
| Jupiter | 31201-08-25 01:26 G | 13117227.34 | 13117227.56 | 13117227.79 | 0.0493 | 0.0049 |
| Jupiter | 31202-09-25 07:41 G | 13117623.69 | 13117623.82 | 13117623.96 | 0.0501 | 0.0410 |
| Jupiter | 31207-02-13 08:53 G | 13119225.65 | 13119225.87 | 13119226.09 | 0.0535 | 0.0213 |
| Jupiter | 31208-03-21 00:29 G | 13119627.38 | 13119627.52 | 13119627.68 | 0.0527 | 0.0390 |
| Neptune | 31210-12-15 13:12 G | 13120627.02 | 13120627.05 | 13120627.12 | 0.0090 | 0.0088 |
| Saturn | 31211-08-11 07:55 G | 13120865.60 | 13120865.83 | 13120866.07 | 0.0277 | 0.0048 |
| Neptune | 31211-12-18 00:29 G | 13120994.38 | 13120994.52 | 13120994.73 | 0.0090 | 0.0068 |
| Jupiter | 31212-07-29 09:36 G | 13121218.79 | 13121218.90 | 13121219.02 | 0.0491 | 0.0415 |
| Neptune | 31212-12-19 16:33 G | 13121362.02 | 13121362.19 | 13121362.39 | 0.0090 | 0.0060 |
| Jupiter | 31213-08-29 06:57 G | 13121614.54 | 13121614.79 | 13121615.03 | 0.0494 | 0.0018 |
| Neptune | 31213-12-22 00:14 G | 13121729.29 | 13121729.51 | 13121729.76 | 0.0090 | 0.0040 |
| Pluto | 31214-08-19 16:05 G | 13121969.94 | 13121970.17 | 13121970.42 | 0.0079 | 0.0033 |
| Neptune | 31214-12-24 19:41 G | 13122097.09 | 13122097.32 | 13122097.57 | 0.0090 | 0.0032 |
| Neptune | 31215-12-27 01:41 G | 13122464.32 | 13122464.57 | 13122464.83 | 0.0090 | 0.0013 |
| Neptune | 31216-12-28 21:36 G | 13122832.14 | 13122832.40 | 13122832.66 | 0.0090 | 0.0004 |

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| Neptune | 31217-12-31 04:48 G | 13123199.46 | 13123199.70 | 13123199.96 | 0.0090 | 0.0014 |
| Neptune | 31219-01-02 22:05 G | 13123567.18 | 13123567.42 | 13123567.69 | 0.0090 | 0.0025 |
| Jupiter | 31219-02-18 04:05 G | 13123613.46 | 13123613.67 | 13123613.89 | 0.0534 | 0.0179 |
| Neptune | 31220-01-05 08:53 G | 13123934.67 | 13123934.87 | 13123935.10 | 0.0090 | 0.0043 |
| Jupiter | 31220-03-26 03:36 G | 13124015.54 | 13124015.65 | 13124015.76 | 0.0526 | 0.0458 |
| Neptune | 31221-01-06 21:36 G | 13124302.19 | 13124302.40 | 13124302.62 | 0.0090 | 0.0052 |
| Neptune | 31222-01-09 12:57 G | 13124669.89 | 13124670.04 | 13124670.20 | 0.0090 | 0.0069 |
| Neptune | 31223-01-11 20:24 G | 13125037.25 | 13125037.35 | 13125037.50 | 0.0090 | 0.0079 |
| Jupiter | 31224-08-02 22:05 G | 13125606.26 | 13125606.42 | 13125606.59 | 0.0491 | 0.0354 |
| Saturn | 31225-02-08 17:45 G | 13125796.01 | 13125796.24 | 13125796.48 | 0.0285 | 0.0017 |
| Jupiter | 31225-09-02 17:45 G | 13126002.01 | 13126002.24 | 13126002.46 | 0.0495 | 0.0060 |
| Uranus | 31230-08-10 07:41 G | 13127804.66 | 13127804.82 | 13127805.00 | 0.0140 | 0.0100 |
| Jupiter | 31231-02-23 14:09 G | 13128001.86 | 13128002.09 | 13128002.32 | 0.0533 | 0.0087 |
| Uranus | 31231-08-15 04:05 G | 13128174.42 | 13128174.67 | 13128174.92 | 0.0140 | 0.0038 |
| Jupiter | 31232-03-30 19:12 G | 13128403.22 | 13128403.30 | 13128403.40 | 0.0524 | 0.0484 |
| Uranus | 31232-08-18 15:36 G | 13128543.93 | 13128544.15 | 13128544.39 | 0.0139 | 0.0050 |
| Uranus | 31233-08-23 11:31 G | 13128913.85 | 13128913.98 | 13128914.15 | 0.0139 | 0.0112 |
| Jupiter | 31236-08-06 22:48 G | 13129993.28 | 13129993.45 | 13129993.62 | 0.0491 | 0.0330 |
| Jupiter | 31237-09-07 04:05 G | 13130389.44 | 13130389.67 | 13130389.90 | 0.0496 | 0.0166 |
| Saturn | 31240-08-05 10:19 G | 13131452.71 | 13131452.93 | 13131453.16 | 0.0275 | 0.0122 |
| Jupiter | 31243-02-28 10:48 G | 13132389.72 | 13132389.95 | 13132390.19 | 0.0533 | 0.0043 |
| Jupiter | 31248-08-11 12:43 G | 13134380.84 | 13134381.03 | 13134381.22 | 0.0492 | 0.0284 |
| Jupiter | 31249-09-11 07:12 G | 13134776.60 | 13134776.80 | 13134777.00 | 0.0497 | 0.0235 |
| Jupiter | 31254-01-27 10:05 G | 13136375.86 | 13136375.92 | 13136375.98 | 0.0536 | 0.0517 |
| Saturn | 31254-02-03 03:21 G | 13136382.44 | 13136382.64 | 13136382.83 | 0.0286 | 0.0183 |
| Saturn | 31255-02-16 12:57 G | 13136760.95 | 13136761.04 | 13136761.16 | 0.0282 | 0.0257 |
| Jupiter | 31255-03-05 22:19 G | 13136778.22 | 13136778.43 | 13136778.65 | 0.0532 | 0.0131 |
| Jupiter | 31260-08-15 11:02 G | 13138767.74 | 13138767.96 | 13138768.18 | 0.0492 | 0.0190 |
| Jupiter | 31261-09-15 22:48 G | 13139164.25 | 13139164.45 | 13139164.65 | 0.0498 | 0.0263 |
| Jupiter | 31266-02-01 22:33 G | 13140764.32 | 13140764.44 | 13140764.57 | 0.0536 | 0.0438 |

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| Jupiter | 31267-03-11 02:09 G | 13141166.36 | 13141166.59 | 13141166.83 | 0.0530 | 0.0169 |
| Saturn | 31270-08-12 18:43 G | 13142417.05 | 13142417.28 | 13142417.50 | 0.0277 | 0.0095 |
| Jupiter | 31272-08-20 00:43 G | 13143155.31 | 13143155.53 | 13143155.75 | 0.0493 | 0.0096 |
| Jupiter | 31273-09-20 02:53 G | 13143551.44 | 13143551.62 | 13143551.80 | 0.0500 | 0.0316 |
| Uranus | 31275-02-09 22:48 G | 13144059.27 | 13144059.45 | 13144059.68 | 0.0138 | 0.0089 |
| Uranus | 31276-02-14 14:09 G | 13144428.85 | 13144429.09 | 13144429.34 | 0.0139 | 0.0016 |
| Uranus | 31277-02-18 07:12 G | 13144798.58 | 13144798.80 | 13144799.05 | 0.0139 | 0.0064 |
| Jupiter | 31278-02-06 21:36 G | 13145152.20 | 13145152.40 | 13145152.60 | 0.0535 | 0.0313 |
| Uranus | 31278-02-22 22:05 G | 13145168.33 | 13145168.42 | 13145168.53 | 0.0140 | 0.0127 |
| Jupiter | 31279-03-15 18:57 G | 13145554.10 | 13145554.29 | 13145554.49 | 0.0529 | 0.0257 |
| Mars | 31281-12-15 23:31 G | 13146560.38 | 13146560.48 | 13146560.58 | 0.1876 | 0.1607 |
| Saturn | 31284-02-11 09:21 G | 13147347.66 | 13147347.89 | 13147348.12 | 0.0284 | 0.0073 |
| Jupiter | 31284-08-24 06:57 G | 13147542.55 | 13147542.79 | 13147543.03 | 0.0493 | 0.0053 |
| Jupiter | 31285-09-24 21:36 G | 13147939.29 | 13147939.40 | 13147939.53 | 0.0501 | 0.0419 |
| Jupiter | 31290-02-11 23:02 G | 13149540.26 | 13149540.46 | 13149540.66 | 0.0534 | 0.0231 |
| Jupiter | 31291-03-21 02:38 G | 13149942.46 | 13149942.61 | 13149942.78 | 0.0528 | 0.0381 |
| Neptune | 31292-06-15 04:33 G | 13150394.64 | 13150394.69 | 13150394.75 | 0.0088 | 0.0085 |
| Neptune | 31293-06-17 14:53 G | 13150762.05 | 13150762.12 | 13150762.26 | 0.0088 | 0.0081 |
| Neptune | 31294-06-20 04:33 G | 13151129.51 | 13151129.69 | 13151129.88 | 0.0088 | 0.0059 |
| Neptune | 31295-06-22 10:19 G | 13151496.75 | 13151496.93 | 13151497.16 | 0.0088 | 0.0055 |
| Jupiter | 31295-07-29 22:05 G | 13151534.30 | 13151534.42 | 13151534.55 | 0.0491 | 0.0414 |
| Neptune | 31296-06-24 03:21 G | 13151864.41 | 13151864.64 | 13151864.88 | 0.0088 | 0.0033 |
| Jupiter | 31296-08-28 15:21 G | 13151929.91 | 13151930.14 | 13151930.36 | 0.0494 | 0.0020 |
| Neptune | 31297-06-26 06:57 G | 13152231.56 | 13152231.79 | 13152232.04 | 0.0088 | 0.0029 |
| Jupiter | 31297-09-29 04:33 G | 13152326.69 | 13152326.69 | 13152326.71 | 0.0502 | 0.0501 |
| Neptune | 31298-06-29 00:29 G | 13152599.26 | 13152599.52 | 13152599.78 | 0.0088 | 0.0007 |
| Neptune | 31299-07-01 04:48 G | 13152966.45 | 13152966.70 | 13152966.96 | 0.0088 | 0.0003 |
| Saturn | 31299-08-07 09:50 G | 13153003.67 | 13153003.91 | 13153004.15 | 0.0275 | 0.0078 |
| Neptune | 31300-07-03 19:41 G | 13153334.06 | 13153334.32 | 13153334.58 | 0.0088 | 0.0019 |
| Neptune | 31301-07-06 04:05 G | 13153701.43 | 13153701.67 | 13153701.91 | 0.0088 | 0.0024 |

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| Jupiter | 31302-02-18 09:50 G | 13153928.70 | 13153928.91 | 13153929.13 | 0.0534 | 0.0194 |
| Neptune | 31302-07-08 14:09 G | 13154068.87 | 13154069.09 | 13154069.32 | 0.0088 | 0.0045 |
| Jupiter | 31303-03-26 21:07 G | 13154330.27 | 13154330.38 | 13154330.51 | 0.0526 | 0.0452 |
| Neptune | 31303-07-11 03:21 G | 13154436.45 | 13154436.64 | 13154436.86 | 0.0088 | 0.0050 |
| Neptune | 31304-07-12 08:38 G | 13154803.73 | 13154803.86 | 13154804.03 | 0.0088 | 0.0071 |
| Neptune | 31305-07-15 01:12 G | 13155171.46 | 13155171.55 | 13155171.71 | 0.0088 | 0.0076 |
| Jupiter | 31307-08-03 22:48 G | 13155921.30 | 13155921.45 | 13155921.61 | 0.0491 | 0.0359 |
| Jupiter | 31308-09-03 01:55 G | 13156317.34 | 13156317.58 | 13156317.82 | 0.0495 | 0.0063 |
| Saturn | 31313-02-05 09:21 G | 13157933.67 | 13157933.89 | 13157934.12 | 0.0286 | 0.0128 |
| Jupiter | 31314-02-23 09:36 G | 13158316.67 | 13158316.90 | 13158317.13 | 0.0534 | 0.0096 |
| Uranus | 31314-08-11 19:41 G | 13158486.18 | 13158486.32 | 13158486.49 | 0.0140 | 0.0108 |
| Jupiter | 31315-04-01 06:00 G | 13158718.66 | 13158718.75 | 13158718.84 | 0.0525 | 0.0478 |
| Uranus | 31315-08-16 14:38 G | 13158855.85 | 13158856.11 | 13158856.37 | 0.0140 | 0.0021 |
| Uranus | 31316-08-20 03:21 G | 13159225.41 | 13159225.64 | 13159225.88 | 0.0139 | 0.0040 |
| Uranus | 31317-08-24 21:50 G | 13159595.31 | 13159595.41 | 13159595.54 | 0.0139 | 0.0124 |
| Jupiter | 31319-08-08 11:45 G | 13160308.82 | 13160308.99 | 13160309.16 | 0.0491 | 0.0337 |
| Jupiter | 31320-09-07 03:36 G | 13160704.43 | 13160704.65 | 13160704.86 | 0.0496 | 0.0168 |
| Jupiter | 31326-02-28 22:05 G | 13162705.19 | 13162705.42 | 13162705.65 | 0.0533 | 0.0042 |
| Saturn | 31328-08-02 05:02 G | 13163590.65 | 13163590.71 | 13163590.80 | 0.0274 | 0.0259 |
| Saturn | 31329-08-14 21:21 G | 13163968.18 | 13163968.39 | 13163968.62 | 0.0277 | 0.0137 |
| Jupiter | 31331-08-12 12:43 G | 13164695.84 | 13164696.03 | 13164696.23 | 0.0492 | 0.0284 |
| Jupiter | 31332-09-11 21:36 G | 13165092.20 | 13165092.40 | 13165092.61 | 0.0497 | 0.0233 |
| Mars | 31335-06-19 18:57 G | 13166103.12 | 13166103.29 | 13166103.47 | 0.1661 | 0.0124 |
| Jupiter | 31337-01-27 15:36 G | 13166691.14 | 13166691.15 | 13166691.18 | 0.0535 | 0.0531 |
| Jupiter | 31338-03-05 18:43 G | 13167093.05 | 13167093.28 | 13167093.52 | 0.0531 | 0.0114 |
| Saturn | 31343-02-13 17:17 G | 13168898.99 | 13168899.22 | 13168899.44 | 0.0284 | 0.0127 |
| Jupiter | 31343-08-17 02:53 G | 13169083.41 | 13169083.62 | 13169083.83 | 0.0492 | 0.0184 |
| Jupiter | 31344-09-16 01:26 G | 13169479.37 | 13169479.56 | 13169479.77 | 0.0498 | 0.0263 |
| Jupiter | 31349-02-01 16:19 G | 13171079.06 | 13171079.18 | 13171079.32 | 0.0535 | 0.0447 |
| Jupiter | 31350-03-10 18:43 G | 13171481.07 | 13171481.28 | 13171481.50 | 0.0530 | 0.0156 |

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| Jupiter | 31355-08-21 07:26 G | 13173470.58 | 13173470.81 | 13173471.05 | 0.0493 | 0.0100 |
| Jupiter | 31356-09-20 17:45 G | 13173867.07 | 13173867.24 | 13173867.41 | 0.0499 | 0.0319 |
| Saturn | 31358-08-09 10:48 G | 13174554.71 | 13174554.95 | 13174555.18 | 0.0276 | 0.0037 |
| Uranus | 31359-02-11 04:05 G | 13174740.48 | 13174740.67 | 13174740.90 | 0.0138 | 0.0084 |
| Uranus | 31360-02-15 21:36 G | 13175110.15 | 13175110.40 | 13175110.64 | 0.0139 | 0.0013 |
| Jupiter | 31361-02-06 20:24 G | 13175467.17 | 13175467.35 | 13175467.53 | 0.0535 | 0.0322 |
| Uranus | 31361-02-19 13:12 G | 13175479.82 | 13175480.05 | 13175480.31 | 0.0139 | 0.0055 |
| Jupiter | 31362-03-16 04:05 G | 13175869.47 | 13175869.67 | 13175869.88 | 0.0529 | 0.0252 |
| Jupiter | 31367-08-25 15:50 G | 13177857.94 | 13177858.16 | 13177858.39 | 0.0493 | 0.0061 |
| Jupiter | 31368-09-25 00:29 G | 13178254.40 | 13178254.52 | 13178254.66 | 0.0500 | 0.0421 |
| Saturn | 31372-02-07 17:17 G | 13179484.99 | 13179485.22 | 13179485.45 | 0.0285 | 0.0073 |
| Jupiter | 31373-02-12 09:21 G | 13179855.68 | 13179855.89 | 13179856.10 | 0.0535 | 0.0242 |
| Pluto | 31373-02-19 13:55 G | 13179862.85 | 13179863.08 | 13179863.34 | 0.0065 | 0.0017 |
| Jupiter | 31374-03-21 01:55 G | 13180257.42 | 13180257.58 | 13180257.74 | 0.0528 | 0.0378 |
| Neptune | 31374-12-15 20:24 G | 13180527.35 | 13180527.35 | 13180527.39 | 0.0090 | 0.0089 |
| Neptune | 31375-12-18 13:26 G | 13180894.99 | 13180895.06 | 13180895.20 | 0.0090 | 0.0081 |
| Neptune | 31376-12-19 21:07 G | 13181262.19 | 13181262.38 | 13181262.57 | 0.0090 | 0.0061 |
| Neptune | 31377-12-22 16:19 G | 13181629.99 | 13181630.18 | 13181630.41 | 0.0090 | 0.0054 |
| Jupiter | 31378-07-29 23:45 G | 13181849.37 | 13181849.49 | 13181849.61 | 0.0491 | 0.0419 |
| Neptune | 31378-12-24 22:19 G | 13181997.21 | 13181997.43 | 13181997.68 | 0.0090 | 0.0034 |
| Jupiter | 31379-08-30 01:12 G | 13182245.31 | 13182245.55 | 13182245.79 | 0.0494 | 0.0023 |
| Neptune | 31379-12-27 17:17 G | 13182364.98 | 13182365.22 | 13182365.49 | 0.0090 | 0.0027 |
| Neptune | 31380-12-29 01:26 G | 13182732.32 | 13182732.56 | 13182732.82 | 0.0090 | 0.0006 |
| Neptune | 31381-12-31 17:02 G | 13183099.95 | 13183100.21 | 13183100.48 | 0.0090 | 0.0003 |
| Neptune | 31383-01-03 04:48 G | 13183467.47 | 13183467.70 | 13183467.96 | 0.0090 | 0.0024 |
| Neptune | 31384-01-05 15:50 G | 13183834.93 | 13183835.16 | 13183835.43 | 0.0090 | 0.0031 |
| Neptune | 31385-01-07 09:21 G | 13184202.69 | 13184202.89 | 13184203.10 | 0.0090 | 0.0051 |
| Jupiter | 31385-02-17 09:07 G | 13184243.67 | 13184243.88 | 13184244.10 | 0.0535 | 0.0198 |
| Neptune | 31386-01-09 16:19 G | 13184570.01 | 13184570.18 | 13184570.41 | 0.0090 | 0.0058 |
| Jupiter | 31386-03-26 11:17 G | 13184645.85 | 13184645.97 | 13184646.09 | 0.0526 | 0.0443 |

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| Neptune | 31387-01-12 11:45 G | 13184937.91 | 13184937.99 | 13184938.14 | 0.0090 | 0.0080 |
| Saturn | 31387-08-04 05:02 G | 13185141.57 | 13185141.71 | 13185141.87 | 0.0274 | 0.0217 |
| Neptune | 31388-01-14 18:14 G | 13185305.19 | 13185305.26 | 13185305.35 | 0.0090 | 0.0085 |
| Saturn | 31388-08-15 16:05 G | 13185518.97 | 13185519.17 | 13185519.37 | 0.0277 | 0.0172 |
| Jupiter | 31390-08-03 15:07 G | 13186236.98 | 13186237.13 | 13186237.29 | 0.0491 | 0.0365 |
| Jupiter | 31391-09-03 05:45 G | 13186632.51 | 13186632.74 | 13186632.96 | 0.0495 | 0.0069 |
| Jupiter | 31397-02-22 17:31 G | 13188632.01 | 13188632.23 | 13188632.46 | 0.0533 | 0.0103 |
| Jupiter | 31398-03-31 04:05 G | 13189033.57 | 13189033.67 | 13189033.78 | 0.0525 | 0.0468 |
| Uranus | 31398-08-12 05:31 G | 13189167.55 | 13189167.73 | 13189167.91 | 0.0140 | 0.0096 |
| Uranus | 31399-08-16 23:02 G | 13189537.21 | 13189537.46 | 13189537.72 | 0.0140 | 0.0031 |
| Uranus | 31400-08-21 13:26 G | 13189906.85 | 13189907.06 | 13189907.30 | 0.0139 | 0.0056 |
| Saturn | 31401-02-02 02:09 G | 13190071.52 | 13190071.59 | 13190071.67 | 0.0288 | 0.0275 |
| Uranus | 31401-08-26 07:12 G | 13190276.68 | 13190276.80 | 13190276.96 | 0.0139 | 0.0117 |
| Saturn | 31402-02-15 15:50 G | 13190449.97 | 13190450.16 | 13190450.37 | 0.0284 | 0.0178 |
| Jupiter | 31402-08-08 16:05 G | 13190624.01 | 13190624.17 | 13190624.34 | 0.0492 | 0.0346 |
| Jupiter | 31403-09-08 23:31 G | 13191020.27 | 13191020.48 | 13191020.70 | 0.0496 | 0.0173 |
| Jupiter | 31409-02-28 17:17 G | 13193019.98 | 13193020.22 | 13193020.47 | 0.0533 | 0.0032 |
| Jupiter | 31414-08-13 05:17 G | 13195011.54 | 13195011.72 | 13195011.91 | 0.0492 | 0.0286 |
| Jupiter | 31415-09-13 00:57 G | 13195407.34 | 13195407.54 | 13195407.75 | 0.0497 | 0.0229 |
| Saturn | 31417-08-11 12:43 G | 13196105.79 | 13196106.03 | 13196106.26 | 0.0276 | 0.0002 |
| Jupiter | 31421-03-05 20:24 G | 13197408.13 | 13197408.35 | 13197408.57 | 0.0532 | 0.0103 |
| Jupiter | 31426-08-17 10:33 G | 13199398.71 | 13199398.94 | 13199399.16 | 0.0492 | 0.0183 |
| Jupiter | 31427-09-17 17:02 G | 13199795.02 | 13199795.21 | 13199795.41 | 0.0498 | 0.0258 |
| Saturn | 31431-02-10 00:29 G | 13201036.29 | 13201036.52 | 13201036.76 | 0.0285 | 0.0023 |
| Jupiter | 31432-02-02 21:50 G | 13201394.29 | 13201394.41 | 13201394.53 | 0.0536 | 0.0450 |
| Jupiter | 31433-03-11 08:09 G | 13201796.62 | 13201796.84 | 13201797.07 | 0.0531 | 0.0150 |
| Jupiter | 31438-08-21 17:31 G | 13203786.01 | 13203786.23 | 13203786.45 | 0.0492 | 0.0105 |
| Jupiter | 31439-09-21 22:48 G | 13204182.27 | 13204182.45 | 13204182.64 | 0.0499 | 0.0322 |
| Uranus | 31443-02-12 12:43 G | 13205421.84 | 13205422.03 | 13205422.25 | 0.0138 | 0.0087 |
| Jupiter | 31444-02-08 10:05 G | 13205782.73 | 13205782.92 | 13205783.11 | 0.0535 | 0.0316 |

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| Uranus | 31444-02-17 06:57 G | 13205791.55 | 13205791.79 | 13205792.04 | 0.0138 | 0.0012 |
| Uranus | 31445-02-20 20:38 G | 13206161.14 | 13206161.36 | 13206161.60 | 0.0139 | 0.0065 |
| Jupiter | 31445-03-16 06:00 G | 13206184.55 | 13206184.75 | 13206184.96 | 0.0530 | 0.0254 |
| Uranus | 31446-02-25 14:24 G | 13206531.03 | 13206531.10 | 13206531.20 | 0.0139 | 0.0131 |
| Saturn | 31446-08-05 21:36 G | 13206692.22 | 13206692.40 | 13206692.60 | 0.0274 | 0.0182 |
| Saturn | 31447-08-18 10:19 G | 13207069.78 | 13207069.93 | 13207070.10 | 0.0278 | 0.0208 |
| Jupiter | 31450-08-26 05:45 G | 13208173.50 | 13208173.74 | 13208173.98 | 0.0493 | 0.0070 |
| Jupiter | 31451-09-26 11:45 G | 13208569.89 | 13208569.99 | 13208570.11 | 0.0500 | 0.0433 |
| Jupiter | 31456-02-13 06:00 G | 13210170.55 | 13210170.75 | 13210170.96 | 0.0534 | 0.0252 |
| Jupiter | 31457-03-21 11:31 G | 13210572.82 | 13210572.98 | 13210573.14 | 0.0528 | 0.0375 |
| Neptune | 31457-06-19 03:21 G | 13210662.60 | 13210662.64 | 13210662.74 | 0.0088 | 0.0084 |
| Neptune | 31458-06-21 09:07 G | 13211029.73 | 13211029.88 | 13211030.04 | 0.0088 | 0.0070 |
| Neptune | 31459-06-24 02:24 G | 13211397.42 | 13211397.60 | 13211397.81 | 0.0088 | 0.0058 |
| Saturn | 31460-02-03 22:33 G | 13211622.29 | 13211622.44 | 13211622.59 | 0.0288 | 0.0229 |
| Neptune | 31460-06-25 06:14 G | 13211764.55 | 13211764.76 | 13211764.99 | 0.0088 | 0.0045 |
| Pluto | 31460-08-21 16:19 G | 13211821.99 | 13211822.18 | 13211822.39 | 0.0079 | 0.0049 |
| Saturn | 31461-02-16 15:07 G | 13212000.99 | 13212001.13 | 13212001.28 | 0.0284 | 0.0226 |
| Neptune | 31461-06-27 23:31 G | 13212132.24 | 13212132.48 | 13212132.73 | 0.0088 | 0.0031 |
| Jupiter | 31461-07-30 18:29 G | 13212165.16 | 13212165.27 | 13212165.40 | 0.0492 | 0.0423 |
| Neptune | 31462-06-30 05:02 G | 13212499.47 | 13212499.71 | 13212499.96 | 0.0088 | 0.0019 |
| Jupiter | 31462-08-30 09:21 G | 13212560.66 | 13212560.89 | 13212561.12 | 0.0494 | 0.0027 |
| Neptune | 31463-07-02 19:12 G | 13212867.03 | 13212867.30 | 13212867.57 | 0.0088 | 0.0004 |
| Neptune | 31464-07-04 04:33 G | 13213234.45 | 13213234.69 | 13213234.94 | 0.0088 | 0.0008 |
| Neptune | 31465-07-06 12:43 G | 13213601.79 | 13213602.03 | 13213602.30 | 0.0088 | 0.0022 |
| Neptune | 31466-07-09 03:07 G | 13213969.41 | 13213969.63 | 13213969.87 | 0.0088 | 0.0034 |
| Neptune | 31467-07-11 07:55 G | 13214336.62 | 13214336.83 | 13214337.05 | 0.0088 | 0.0048 |
| Jupiter | 31468-02-18 18:14 G | 13214559.05 | 13214559.26 | 13214559.48 | 0.0534 | 0.0208 |
| Neptune | 31468-07-13 00:57 G | 13214704.38 | 13214704.54 | 13214704.75 | 0.0088 | 0.0061 |
| Jupiter | 31469-03-26 08:24 G | 13214960.71 | 13214960.85 | 13214960.99 | 0.0527 | 0.0430 |
| Neptune | 31469-07-15 04:19 G | 13215071.58 | 13215071.68 | 13215071.83 | 0.0088 | 0.0076 |

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| Neptune | 31470-07-17 21:36 G | 13215439.36 | 13215439.40 | 13215439.46 | 0.0088 | 0.0086 |
| Jupiter | 31473-08-03 19:55 G | 13216552.19 | 13216552.33 | 13216552.49 | 0.0492 | 0.0379 |
| Jupiter | 31474-09-04 01:41 G | 13216948.34 | 13216948.57 | 13216948.80 | 0.0495 | 0.0071 |
| Saturn | 31476-08-12 11:31 G | 13217656.74 | 13217656.98 | 13217657.23 | 0.0276 | 0.0038 |
| Jupiter | 31480-02-23 17:02 G | 13218946.97 | 13218947.21 | 13218947.45 | 0.0534 | 0.0104 |
| Jupiter | 31481-03-31 10:19 G | 13219348.83 | 13219348.93 | 13219349.03 | 0.0525 | 0.0467 |
| Uranus | 31482-08-13 14:53 G | 13219848.96 | 13219849.12 | 13219849.29 | 0.0140 | 0.0102 |
| Uranus | 31483-08-18 06:57 G | 13220218.53 | 13220218.79 | 13220219.05 | 0.0140 | 0.0017 |
| Uranus | 31484-08-21 22:48 G | 13220588.23 | 13220588.45 | 13220588.69 | 0.0139 | 0.0045 |
| Jupiter | 31485-08-08 09:21 G | 13220939.73 | 13220939.89 | 13220940.04 | 0.0492 | 0.0356 |
| Uranus | 31485-08-26 15:07 G | 13220958.05 | 13220958.13 | 13220958.23 | 0.0139 | 0.0130 |
| Jupiter | 31486-09-08 02:53 G | 13221335.40 | 13221335.62 | 13221335.84 | 0.0495 | 0.0169 |
| Saturn | 31490-02-11 01:41 G | 13222587.32 | 13222587.57 | 13222587.82 | 0.0285 | 0.0022 |
| Jupiter | 31492-02-29 00:43 G | 13223335.31 | 13223335.53 | 13223335.76 | 0.0533 | 0.0032 |
| Jupiter | 31497-08-12 13:55 G | 13225326.89 | 13225327.08 | 13225327.29 | 0.0492 | 0.0285 |
| Jupiter | 31498-09-12 17:45 G | 13225723.04 | 13225723.24 | 13225723.45 | 0.0496 | 0.0222 |
| Jupiter | 31504-03-06 12:14 G | 13227723.77 | 13227724.01 | 13227724.24 | 0.0532 | 0.0097 |
| Saturn | 31505-08-07 14:24 G | 13228242.90 | 13228243.10 | 13228243.31 | 0.0274 | 0.0148 |
| Saturn | 31506-08-20 08:53 G | 13228620.77 | 13228620.87 | 13228621.00 | 0.0278 | 0.0244 |
| Jupiter | 31509-08-17 22:48 G | 13229714.24 | 13229714.45 | 13229714.66 | 0.0492 | 0.0182 |
| Jupiter | 31510-09-18 01:55 G | 13230110.37 | 13230110.58 | 13230110.79 | 0.0498 | 0.0253 |
| Jupiter | 31515-02-03 08:53 G | 13231709.74 | 13231709.87 | 13231710.00 | 0.0535 | 0.0447 |
| Jupiter | 31516-03-11 06:00 G | 13232111.53 | 13232111.75 | 13232111.98 | 0.0531 | 0.0142 |
| Saturn | 31519-02-05 18:43 G | 13233173.11 | 13233173.28 | 13233173.47 | 0.0288 | 0.0189 |
| Saturn | 31520-02-19 16:33 G | 13233552.13 | 13233552.19 | 13233552.26 | 0.0284 | 0.0272 |
| Jupiter | 31521-08-22 10:05 G | 13234101.68 | 13234101.92 | 13234102.15 | 0.0493 | 0.0112 |
| Jupiter | 31522-09-22 13:41 G | 13234497.91 | 13234498.07 | 13234498.25 | 0.0499 | 0.0332 |
| Jupiter | 31527-02-08 07:12 G | 13236097.62 | 13236097.80 | 13236097.99 | 0.0534 | 0.0324 |
| Uranus | 31527-02-13 21:21 G | 13236103.19 | 13236103.39 | 13236103.62 | 0.0138 | 0.0076 |
| Uranus | 31528-02-18 17:31 G | 13236472.98 | 13236473.23 | 13236473.47 | 0.0138 | 0.0010 |

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| Jupiter | 31528-03-16 15:36 G | 13236499.95 | 13236500.15 | 13236500.36 | 0.0529 | 0.0253 |
| Uranus | 31529-02-22 06:00 G | 13236842.53 | 13236842.75 | 13236843.00 | 0.0139 | 0.0062 |
| Jupiter | 31533-08-26 12:43 G | 13238488.81 | 13238489.03 | 13238489.26 | 0.0493 | 0.0084 |
| Jupiter | 31534-09-27 04:05 G | 13238885.55 | 13238885.67 | 13238885.79 | 0.0500 | 0.0432 |
| Saturn | 31535-08-15 03:50 G | 13239207.41 | 13239207.66 | 13239207.91 | 0.0275 | 0.0070 |
| Jupiter | 31539-02-13 18:43 G | 13240486.08 | 13240486.28 | 13240486.48 | 0.0535 | 0.0261 |
| Jupiter | 31540-03-21 12:57 G | 13240887.87 | 13240888.04 | 13240888.22 | 0.0529 | 0.0372 |
| Mars | 31540-06-19 11:45 G | 13240977.87 | 13240977.99 | 13240978.11 | 0.1671 | 0.1341 |
| Neptune | 31540-12-21 11:31 G | 13241162.84 | 13241162.98 | 13241163.17 | 0.0090 | 0.0069 |
| Neptune | 31541-12-23 17:45 G | 13241530.08 | 13241530.24 | 13241530.44 | 0.0090 | 0.0063 |
| Neptune | 31542-12-26 11:31 G | 13241897.77 | 13241897.98 | 13241898.24 | 0.0090 | 0.0041 |
| Neptune | 31543-12-28 21:07 G | 13242265.16 | 13242265.38 | 13242265.62 | 0.0090 | 0.0034 |
| Jupiter | 31544-07-31 00:43 G | 13242480.42 | 13242480.53 | 13242480.65 | 0.0492 | 0.0425 |
| Neptune | 31544-12-30 11:45 G | 13242632.72 | 13242632.99 | 13242633.25 | 0.0090 | 0.0012 |
| Jupiter | 31545-08-31 04:48 G | 13242876.47 | 13242876.70 | 13242876.94 | 0.0494 | 0.0030 |
| Neptune | 31546-01-02 01:41 G | 13243000.32 | 13243000.57 | 13243000.82 | 0.0090 | 0.0005 |
| Jupiter | 31546-10-01 09:36 G | 13243272.90 | 13243272.90 | 13243272.92 | 0.0501 | 0.0500 |
| Neptune | 31547-01-04 11:17 G | 13243367.71 | 13243367.97 | 13243368.23 | 0.0090 | 0.0016 |
| Neptune | 31548-01-07 05:02 G | 13243735.48 | 13243735.71 | 13243735.97 | 0.0090 | 0.0023 |
| Neptune | 31549-01-08 11:31 G | 13244102.77 | 13244102.98 | 13244103.21 | 0.0090 | 0.0045 |
| Saturn | 31549-02-12 20:24 G | 13244138.11 | 13244138.35 | 13244138.60 | 0.0285 | 0.0067 |
| Neptune | 31550-01-11 07:12 G | 13244470.62 | 13244470.80 | 13244471.03 | 0.0090 | 0.0053 |
| Neptune | 31551-01-13 13:26 G | 13244837.93 | 13244838.06 | 13244838.23 | 0.0090 | 0.0073 |
| Jupiter | 31551-02-18 19:26 G | 13244874.09 | 13244874.31 | 13244874.53 | 0.0535 | 0.0212 |
| Neptune | 31552-01-16 07:41 G | 13245205.74 | 13245205.82 | 13245205.97 | 0.0090 | 0.0081 |
| Jupiter | 31552-03-26 18:57 G | 13245276.16 | 13245276.29 | 13245276.42 | 0.0527 | 0.0427 |
| Jupiter | 31556-08-04 13:12 G | 13246867.92 | 13246868.05 | 13246868.19 | 0.0491 | 0.0392 |
| Jupiter | 31557-09-04 05:02 G | 13247263.48 | 13247263.71 | 13247263.95 | 0.0494 | 0.0071 |
| Jupiter | 31563-02-24 05:31 G | 13249262.51 | 13249262.73 | 13249262.95 | 0.0534 | 0.0095 |
| Jupiter | 31564-04-01 01:26 G | 13249664.45 | 13249664.56 | 13249664.67 | 0.0526 | 0.0465 |

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| Saturn | 31564-08-08 13:26 G | 13249793.86 | 13249794.06 | 13249794.29 | 0.0274 | 0.0117 |
| Saturn | 31565-08-21 08:09 G | 13250171.84 | 13250171.84 | 13250171.85 | 0.0277 | 0.0277 |
| Uranus | 31566-08-15 00:57 G | 13250530.36 | 13250530.54 | 13250530.73 | 0.0140 | 0.0093 |
| Uranus | 31567-08-19 15:50 G | 13250899.91 | 13250900.16 | 13250900.42 | 0.0140 | 0.0026 |
| Jupiter | 31568-08-08 19:41 G | 13251255.17 | 13251255.32 | 13251255.50 | 0.0492 | 0.0359 |
| Uranus | 31568-08-23 09:36 G | 13251269.69 | 13251269.90 | 13251270.13 | 0.0139 | 0.0062 |
| Uranus | 31569-08-28 00:43 G | 13251639.42 | 13251639.53 | 13251639.67 | 0.0139 | 0.0121 |
| Jupiter | 31569-09-08 21:50 G | 13251651.20 | 13251651.41 | 13251651.63 | 0.0495 | 0.0170 |
| Jupiter | 31575-03-01 12:00 G | 13253650.76 | 13253651.00 | 13253651.24 | 0.0533 | 0.0029 |
| Saturn | 31578-02-06 19:12 G | 13254724.10 | 13254724.30 | 13254724.51 | 0.0288 | 0.0146 |
| Jupiter | 31580-08-13 02:09 G | 13255642.41 | 13255642.59 | 13255642.78 | 0.0492 | 0.0288 |
| Jupiter | 31581-09-13 05:02 G | 13256038.49 | 13256038.71 | 13256038.93 | 0.0497 | 0.0210 |
| Jupiter | 31587-03-06 09:07 G | 13258038.65 | 13258038.88 | 13258039.11 | 0.0532 | 0.0089 |
| Jupiter | 31592-08-17 14:09 G | 13260029.87 | 13260030.09 | 13260030.31 | 0.0492 | 0.0181 |
| Jupiter | 31593-09-17 14:38 G | 13260425.91 | 13260426.11 | 13260426.30 | 0.0497 | 0.0247 |
| Saturn | 31594-08-15 19:26 G | 13260758.09 | 13260758.31 | 13260758.54 | 0.0275 | 0.0102 |
| Jupiter | 31598-02-02 07:26 G | 13262024.70 | 13262024.81 | 13262024.94 | 0.0535 | 0.0453 |
| Jupiter | 31599-03-11 19:12 G | 13262427.08 | 13262427.30 | 13262427.52 | 0.0531 | 0.0138 |
| Jupiter | 31604-08-21 16:48 G | 13264416.98 | 13264417.20 | 13264417.42 | 0.0493 | 0.0119 |
| Jupiter | 31605-09-22 04:33 G | 13264813.51 | 13264813.69 | 13264813.87 | 0.0498 | 0.0331 |
| Saturn | 31608-02-14 13:55 G | 13265688.86 | 13265689.08 | 13265689.31 | 0.0286 | 0.0111 |
| Jupiter | 31610-02-07 21:21 G | 13266413.21 | 13266413.39 | 13266413.58 | 0.0535 | 0.0329 |
| Uranus | 31611-02-14 09:21 G | 13266784.69 | 13266784.89 | 13266785.11 | 0.0138 | 0.0081 |
| Jupiter | 31611-03-16 18:29 G | 13266815.07 | 13266815.27 | 13266815.49 | 0.0530 | 0.0257 |
| Uranus | 31612-02-19 06:00 G | 13267154.50 | 13267154.75 | 13267155.00 | 0.0138 | 0.0003 |
| Uranus | 31613-02-22 16:48 G | 13267523.99 | 13267524.20 | 13267524.44 | 0.0139 | 0.0071 |
| Uranus | 31614-02-27 13:12 G | 13267894.04 | 13267894.05 | 13267894.09 | 0.0139 | 0.0139 |
| Jupiter | 31616-08-26 07:41 G | 13268804.59 | 13268804.82 | 13268805.05 | 0.0493 | 0.0092 |
| Jupiter | 31617-09-26 08:38 G | 13269200.76 | 13269200.86 | 13269200.98 | 0.0500 | 0.0435 |
| Pluto | 31619-02-23 02:09 G | 13269715.37 | 13269715.59 | 13269715.86 | 0.0065 | 0.0025 |

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| Mars | 31619-06-23 00:14 G | 13269835.33 | 13269835.51 | 13269835.69 | 0.1666 | 0.0688 |
| Pluto | 31620-02-24 12:57 G | 13270081.95 | 13270082.04 | 13270082.18 | 0.0065 | 0.0058 |
| Neptune | 31621-06-19 07:55 G | 13270562.81 | 13270562.83 | 13270562.88 | 0.0088 | 0.0087 |
| Jupiter | 31622-02-12 22:19 G | 13270801.23 | 13270801.43 | 13270801.64 | 0.0535 | 0.0268 |
| Neptune | 31622-06-22 01:41 G | 13270930.50 | 13270930.57 | 13270930.66 | 0.0088 | 0.0083 |
| Jupiter | 31623-03-22 02:09 G | 13271203.43 | 13271203.59 | 13271203.75 | 0.0529 | 0.0375 |
| Neptune | 31623-06-24 05:31 G | 13271297.56 | 13271297.73 | 13271297.92 | 0.0088 | 0.0061 |
| Saturn | 31623-08-10 14:09 G | 13271344.86 | 13271345.09 | 13271345.32 | 0.0274 | 0.0082 |
| Neptune | 31624-06-25 22:05 G | 13271665.22 | 13271665.42 | 13271665.62 | 0.0088 | 0.0056 |
| Neptune | 31625-06-28 04:19 G | 13272032.45 | 13272032.68 | 13272032.91 | 0.0088 | 0.0034 |
| Neptune | 31626-06-30 16:48 G | 13272399.95 | 13272400.20 | 13272400.45 | 0.0088 | 0.0029 |
| Neptune | 31627-07-03 03:50 G | 13272767.42 | 13272767.66 | 13272767.91 | 0.0088 | 0.0008 |
| Jupiter | 31627-07-31 17:45 G | 13272796.14 | 13272796.24 | 13272796.35 | 0.0492 | 0.0430 |
| Neptune | 31628-07-04 11:45 G | 13273134.72 | 13273134.99 | 13273135.25 | 0.0088 | 0.0003 |
| Jupiter | 31628-08-30 09:50 G | 13273191.67 | 13273191.91 | 13273192.14 | 0.0494 | 0.0031 |
| Neptune | 31629-07-07 03:07 G | 13273502.40 | 13273502.63 | 13273502.89 | 0.0088 | 0.0020 |
| Jupiter | 31629-10-01 05:02 G | 13273588.68 | 13273588.71 | 13273588.76 | 0.0501 | 0.0493 |
| Neptune | 31630-07-09 07:26 G | 13273869.57 | 13273869.81 | 13273870.07 | 0.0088 | 0.0024 |
| Neptune | 31631-07-12 00:43 G | 13274237.33 | 13274237.53 | 13274237.76 | 0.0088 | 0.0047 |
| Neptune | 31632-07-13 04:33 G | 13274604.50 | 13274604.69 | 13274604.91 | 0.0088 | 0.0051 |
| Neptune | 31633-07-15 20:09 G | 13274972.22 | 13274972.34 | 13274972.51 | 0.0088 | 0.0073 |
| Jupiter | 31634-02-18 06:57 G | 13275189.59 | 13275189.79 | 13275190.00 | 0.0534 | 0.0222 |
| Neptune | 31634-07-18 03:21 G | 13275339.53 | 13275339.64 | 13275339.76 | 0.0088 | 0.0077 |
| Jupiter | 31635-03-27 03:36 G | 13275591.50 | 13275591.65 | 13275591.80 | 0.0527 | 0.0415 |
| Saturn | 31637-02-07 19:26 G | 13276275.08 | 13276275.31 | 13276275.54 | 0.0288 | 0.0102 |
| Jupiter | 31639-08-04 22:05 G | 13277183.28 | 13277183.42 | 13277183.56 | 0.0492 | 0.0401 |
| Jupiter | 31640-09-04 00:14 G | 13277579.29 | 13277579.51 | 13277579.73 | 0.0495 | 0.0073 |
| Jupiter | 31646-02-23 13:26 G | 13279577.82 | 13279578.06 | 13279578.29 | 0.0533 | 0.0097 |
| Jupiter | 31647-03-31 22:48 G | 13279979.35 | 13279979.45 | 13279979.57 | 0.0525 | 0.0461 |
| Uranus | 31650-08-15 13:41 G | 13281211.90 | 13281212.07 | 13281212.27 | 0.0140 | 0.0094 |

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| Jupiter | 31651-08-09 05:31 G | 13281570.59 | 13281570.73 | 13281570.88 | 0.0492 | 0.0369 |
| Uranus | 31651-08-20 03:21 G | 13281581.38 | 13281581.64 | 13281581.90 | 0.0140 | 0.0011 |
| Saturn | 31652-08-04 05:45 G | 13281931.65 | 13281931.74 | 13281931.85 | 0.0271 | 0.0246 |
| Uranus | 31652-08-23 22:19 G | 13281951.20 | 13281951.43 | 13281951.66 | 0.0139 | 0.0052 |
| Jupiter | 31652-09-08 06:29 G | 13281966.54 | 13281966.77 | 13281967.00 | 0.0495 | 0.0161 |
| Saturn | 31653-08-16 18:43 G | 13282309.09 | 13282309.28 | 13282309.50 | 0.0275 | 0.0140 |
| Uranus | 31653-08-28 11:31 G | 13282320.97 | 13282320.98 | 13282321.02 | 0.0139 | 0.0138 |
| Jupiter | 31658-02-28 10:19 G | 13283965.70 | 13283965.93 | 13283966.16 | 0.0533 | 0.0023 |
| Jupiter | 31663-08-13 18:00 G | 13285958.06 | 13285958.25 | 13285958.45 | 0.0492 | 0.0279 |
| Jupiter | 31664-09-12 15:21 G | 13286353.94 | 13286354.14 | 13286354.35 | 0.0496 | 0.0200 |
| Saturn | 31667-02-15 14:38 G | 13287239.92 | 13287240.11 | 13287240.31 | 0.0286 | 0.0159 |
| Jupiter | 31670-03-05 22:48 G | 13288354.22 | 13288354.45 | 13288354.68 | 0.0532 | 0.0079 |
| Jupiter | 31675-08-17 19:12 G | 13290345.09 | 13290345.30 | 13290345.52 | 0.0492 | 0.0181 |
| Jupiter | 31676-09-17 04:05 G | 13290741.47 | 13290741.67 | 13290741.89 | 0.0497 | 0.0241 |
| Jupiter | 31681-02-02 00:00 G | 13292340.39 | 13292340.50 | 13292340.63 | 0.0535 | 0.0453 |
| Jupiter | 31682-03-10 22:48 G | 13292742.22 | 13292742.45 | 13292742.68 | 0.0531 | 0.0136 |
| Saturn | 31682-08-11 11:02 G | 13292895.71 | 13292895.96 | 13292896.21 | 0.0274 | 0.0044 |
| Jupiter | 31687-08-22 11:31 G | 13294732.75 | 13294732.98 | 13294733.20 | 0.0493 | 0.0127 |
| Jupiter | 31688-09-21 09:50 G | 13295128.74 | 13295128.91 | 13295129.08 | 0.0498 | 0.0333 |
| Jupiter | 31693-02-06 23:17 G | 13296728.29 | 13296728.47 | 13296728.65 | 0.0534 | 0.0338 |
| Jupiter | 31694-03-16 04:19 G | 13297130.49 | 13297130.68 | 13297130.88 | 0.0529 | 0.0258 |
| Uranus | 31695-02-14 19:26 G | 13297466.09 | 13297466.31 | 13297466.54 | 0.0138 | 0.0067 |
| Saturn | 31696-02-09 13:55 G | 13297825.83 | 13297826.08 | 13297826.33 | 0.0288 | 0.0052 |
| Uranus | 31696-02-19 17:02 G | 13297835.96 | 13297836.21 | 13297836.46 | 0.0139 | 0.0003 |
| Uranus | 31697-02-23 03:21 G | 13298205.43 | 13298205.64 | 13298205.88 | 0.0139 | 0.0072 |
| Jupiter | 31699-08-26 10:33 G | 13299119.71 | 13299119.94 | 13299120.18 | 0.0494 | 0.0098 |
| Jupiter | 31700-09-27 04:05 G | 13299516.56 | 13299516.67 | 13299516.78 | 0.0500 | 0.0435 |
| Neptune | 31704-12-21 13:26 G | 13301062.98 | 13301063.06 | 13301063.18 | 0.0090 | 0.0082 |
| Jupiter | 31705-02-13 08:53 G | 13301116.68 | 13301116.87 | 13301117.06 | 0.0534 | 0.0287 |
| Neptune | 31705-12-24 06:29 G | 13301430.61 | 13301430.77 | 13301430.98 | 0.0090 | 0.0065 |

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| Jupiter | 31706-03-22 06:43 G | 13301518.61 | 13301518.78 | 13301518.96 | 0.0528 | 0.0365 |
| Neptune | 31706-12-26 17:02 G | 13301798.04 | 13301798.21 | 13301798.44 | 0.0090 | 0.0054 |
| Pluto | 31707-08-27 03:36 G | 13302041.44 | 13302041.65 | 13302041.90 | 0.0079 | 0.0037 |
| Neptune | 31707-12-29 05:31 G | 13302165.51 | 13302165.73 | 13302166.00 | 0.0090 | 0.0037 |
| Neptune | 31708-12-30 20:53 G | 13302533.14 | 13302533.37 | 13302533.62 | 0.0090 | 0.0026 |
| Neptune | 31710-01-02 05:02 G | 13302900.45 | 13302900.71 | 13302900.97 | 0.0090 | 0.0008 |
| Jupiter | 31710-08-01 00:29 G | 13303111.41 | 13303111.52 | 13303111.63 | 0.0492 | 0.0435 |
| Neptune | 31711-01-04 23:45 G | 13303268.24 | 13303268.49 | 13303268.75 | 0.0090 | 0.0004 |
| Saturn | 31711-08-07 08:09 G | 13303482.70 | 13303482.84 | 13303483.00 | 0.0272 | 0.0206 |
| Jupiter | 31711-09-01 01:26 G | 13303507.34 | 13303507.56 | 13303507.79 | 0.0494 | 0.0032 |
| Neptune | 31712-01-07 05:31 G | 13303635.49 | 13303635.73 | 13303635.99 | 0.0090 | 0.0023 |
| Saturn | 31712-08-18 23:31 G | 13303860.31 | 13303860.48 | 13303860.67 | 0.0275 | 0.0180 |
| Jupiter | 31712-10-01 08:09 G | 13303903.79 | 13303903.84 | 13303903.91 | 0.0501 | 0.0482 |
| Neptune | 31713-01-09 01:26 G | 13304003.33 | 13304003.56 | 13304003.81 | 0.0090 | 0.0032 |
| Neptune | 31714-01-11 07:55 G | 13304370.64 | 13304370.83 | 13304371.06 | 0.0090 | 0.0052 |
| Neptune | 31715-01-14 01:41 G | 13304738.40 | 13304738.57 | 13304738.79 | 0.0090 | 0.0060 |
| Neptune | 31716-01-16 12:14 G | 13305105.92 | 13305106.01 | 13305106.15 | 0.0090 | 0.0080 |
| Neptune | 31717-01-18 01:26 G | 13305473.53 | 13305473.56 | 13305473.63 | 0.0089 | 0.0088 |
| Jupiter | 31717-02-18 10:48 G | 13305504.73 | 13305504.95 | 13305505.17 | 0.0534 | 0.0230 |
| Jupiter | 31718-03-27 02:53 G | 13305906.48 | 13305906.62 | 13305906.76 | 0.0527 | 0.0409 |
| Jupiter | 31722-08-05 08:09 G | 13307498.72 | 13307498.84 | 13307498.96 | 0.0492 | 0.0409 |
| Jupiter | 31723-09-05 07:12 G | 13307894.57 | 13307894.80 | 13307895.05 | 0.0494 | 0.0078 |
| Saturn | 31725-02-03 18:00 G | 13308412.16 | 13308412.25 | 13308412.36 | 0.0290 | 0.0263 |
| Saturn | 31726-02-17 19:55 G | 13308791.17 | 13308791.33 | 13308791.49 | 0.0286 | 0.0210 |
| Jupiter | 31729-02-23 11:31 G | 13309892.76 | 13309892.98 | 13309893.20 | 0.0534 | 0.0105 |
| Jupiter | 31730-04-01 12:00 G | 13310294.89 | 13310295.00 | 13310295.12 | 0.0526 | 0.0459 |
| Jupiter | 31734-08-09 19:41 G | 13311886.17 | 13311886.32 | 13311886.48 | 0.0492 | 0.0369 |
| Uranus | 31734-08-17 03:36 G | 13311893.47 | 13311893.65 | 13311893.86 | 0.0140 | 0.0085 |
| Uranus | 31735-08-21 16:19 G | 13312262.93 | 13312263.18 | 13312263.45 | 0.0140 | 0.0016 |
| Jupiter | 31735-09-09 14:53 G | 13312281.90 | 13312282.12 | 13312282.33 | 0.0495 | 0.0157 |

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| Uranus | 31736-08-25 12:43 G | 13312632.82 | 13312633.03 | 13312633.24 | 0.0139 | 0.0071 |
| Uranus | 31737-08-30 00:57 G | 13313002.47 | 13313002.54 | 13313002.64 | 0.0139 | 0.0130 |
| Jupiter | 31741-03-01 01:12 G | 13314281.31 | 13314281.55 | 13314281.78 | 0.0533 | 0.0018 |
| Saturn | 31741-08-13 08:53 G | 13314446.62 | 13314446.87 | 13314447.12 | 0.0274 | 0.0002 |
| Jupiter | 31746-08-13 21:36 G | 13316273.21 | 13316273.40 | 13316273.59 | 0.0492 | 0.0277 |
| Jupiter | 31747-09-14 04:48 G | 13316669.48 | 13316669.70 | 13316669.92 | 0.0496 | 0.0192 |
| Jupiter | 31753-03-05 22:48 G | 13318669.21 | 13318669.45 | 13318669.68 | 0.0532 | 0.0064 |
| Saturn | 31755-02-11 11:45 G | 13319376.75 | 13319376.99 | 13319377.24 | 0.0288 | 0.0004 |
| Jupiter | 31758-08-18 10:05 G | 13320660.71 | 13320660.92 | 13320661.14 | 0.0493 | 0.0184 |
| Jupiter | 31759-09-18 07:26 G | 13321056.62 | 13321056.81 | 13321057.02 | 0.0498 | 0.0238 |
| Jupiter | 31764-02-02 22:33 G | 13322655.32 | 13322655.44 | 13322655.55 | 0.0534 | 0.0461 |
| Jupiter | 31765-03-11 06:00 G | 13323057.53 | 13323057.75 | 13323057.97 | 0.0531 | 0.0128 |
| Saturn | 31770-08-08 15:50 G | 13325033.97 | 13325034.16 | 13325034.36 | 0.0272 | 0.0161 |
| Jupiter | 31770-08-22 11:02 G | 13325047.74 | 13325047.96 | 13325048.19 | 0.0493 | 0.0134 |
| Saturn | 31771-08-21 02:53 G | 13325411.49 | 13325411.62 | 13325411.78 | 0.0276 | 0.0227 |
| Jupiter | 31771-09-23 00:43 G | 13325444.36 | 13325444.53 | 13325444.70 | 0.0498 | 0.0335 |
| Jupiter | 31776-02-08 05:17 G | 13327043.55 | 13327043.72 | 13327043.89 | 0.0534 | 0.0350 |
| Jupiter | 31777-03-16 05:31 G | 13327445.52 | 13327445.73 | 13327445.94 | 0.0530 | 0.0251 |
| Uranus | 31778-02-11 22:33 G | 13327778.40 | 13327778.44 | 13327778.52 | 0.0138 | 0.0134 |
| Uranus | 31779-02-16 06:43 G | 13328147.57 | 13328147.78 | 13328148.00 | 0.0138 | 0.0075 |
| Uranus | 31780-02-21 04:48 G | 13328517.45 | 13328517.70 | 13328517.95 | 0.0139 | 0.0006 |
| Uranus | 31781-02-24 13:55 G | 13328886.87 | 13328887.08 | 13328887.30 | 0.0139 | 0.0077 |
| Jupiter | 31782-08-27 01:41 G | 13329435.35 | 13329435.57 | 13329435.79 | 0.0493 | 0.0102 |
| Jupiter | 31783-09-27 04:05 G | 13329831.57 | 13329831.67 | 13329831.80 | 0.0499 | 0.0433 |
| Saturn | 31784-02-06 00:57 G | 13329963.38 | 13329963.54 | 13329963.72 | 0.0290 | 0.0209 |
| Saturn | 31785-02-18 22:05 G | 13330342.34 | 13330342.42 | 13330342.53 | 0.0286 | 0.0264 |
| Neptune | 31787-06-24 18:43 G | 13331198.14 | 13331198.28 | 13331198.45 | 0.0088 | 0.0071 |
| Jupiter | 31788-02-13 08:09 G | 13331431.64 | 13331431.84 | 13331432.04 | 0.0534 | 0.0301 |
| Neptune | 31788-06-26 02:38 G | 13331565.44 | 13331565.61 | 13331565.80 | 0.0088 | 0.0061 |
| Jupiter | 31789-03-21 05:31 G | 13331833.57 | 13331833.73 | 13331833.90 | 0.0529 | 0.0359 |

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| Neptune | 31789-06-28 13:55 G | 13331932.86 | 13331933.08 | 13331933.32 | 0.0088 | 0.0045 |
| Neptune | 31790-07-01 02:24 G | 13332300.39 | 13332300.60 | 13332300.85 | 0.0088 | 0.0035 |
| Neptune | 31791-07-03 08:53 G | 13332667.62 | 13332667.87 | 13332668.14 | 0.0088 | 0.0018 |
| Neptune | 31792-07-05 01:26 G | 13333035.31 | 13333035.56 | 13333035.81 | 0.0088 | 0.0007 |
| Neptune | 31793-07-07 05:02 G | 13333402.46 | 13333402.71 | 13333402.97 | 0.0088 | 0.0010 |
| Jupiter | 31793-07-31 08:09 G | 13333426.75 | 13333426.84 | 13333426.94 | 0.0492 | 0.0443 |
| Neptune | 31794-07-09 22:48 G | 13333770.20 | 13333770.45 | 13333770.70 | 0.0088 | 0.0021 |
| Jupiter | 31794-08-31 06:00 G | 13333822.51 | 13333822.75 | 13333823.00 | 0.0493 | 0.0029 |
| Neptune | 31795-07-12 02:53 G | 13334137.40 | 13334137.62 | 13334137.86 | 0.0088 | 0.0036 |
| Jupiter | 31795-10-01 19:26 G | 13334219.24 | 13334219.31 | 13334219.38 | 0.0501 | 0.0475 |
| Neptune | 31796-07-13 17:17 G | 13334505.02 | 13334505.22 | 13334505.47 | 0.0088 | 0.0048 |
| Neptune | 31797-07-16 01:55 G | 13334872.42 | 13334872.58 | 13334872.77 | 0.0088 | 0.0063 |
| Neptune | 31798-07-18 12:00 G | 13335239.89 | 13335240.00 | 13335240.17 | 0.0088 | 0.0075 |
| Jupiter | 31800-02-18 11:31 G | 13335819.78 | 13335819.98 | 13335820.18 | 0.0534 | 0.0240 |
| Saturn | 31800-08-15 15:21 G | 13335997.91 | 13335998.14 | 13335998.38 | 0.0274 | 0.0050 |
| Jupiter | 31801-03-27 15:36 G | 13336222.00 | 13336222.15 | 13336222.31 | 0.0528 | 0.0395 |
| Jupiter | 31805-08-05 19:55 G | 13337814.21 | 13337814.33 | 13337814.46 | 0.0492 | 0.0418 |
| Jupiter | 31806-09-05 14:09 G | 13338209.87 | 13338210.09 | 13338210.31 | 0.0494 | 0.0080 |
| Jupiter | 31807-10-07 05:02 G | 13338606.71 | 13338606.71 | 13338606.72 | 0.0502 | 0.0502 |
| Jupiter | 31812-02-25 00:14 G | 13340208.28 | 13340208.51 | 13340208.74 | 0.0533 | 0.0109 |
| Jupiter | 31813-04-01 08:53 G | 13340609.75 | 13340609.87 | 13340610.00 | 0.0526 | 0.0450 |
| Saturn | 31814-02-13 19:12 G | 13340928.07 | 13340928.30 | 13340928.54 | 0.0288 | 0.0056 |
| Jupiter | 31817-08-09 18:00 G | 13342201.11 | 13342201.25 | 13342201.40 | 0.0492 | 0.0377 |
| Uranus | 31818-08-18 18:29 G | 13342575.08 | 13342575.27 | 13342575.48 | 0.0140 | 0.0081 |
| Jupiter | 31818-09-10 00:57 G | 13342597.31 | 13342597.54 | 13342597.77 | 0.0496 | 0.0150 |
| Uranus | 31819-08-23 06:00 G | 13342944.49 | 13342944.75 | 13342945.01 | 0.0140 | 0.0002 |
| Uranus | 31820-08-27 02:38 G | 13343314.40 | 13343314.61 | 13343314.84 | 0.0139 | 0.0063 |
| Jupiter | 31824-02-29 20:24 G | 13344596.12 | 13344596.35 | 13344596.59 | 0.0532 | 0.0011 |
| Mars | 31824-06-22 06:14 G | 13344709.61 | 13344709.76 | 13344709.91 | 0.1677 | 0.0910 |
| Saturn | 31829-08-10 23:17 G | 13346585.25 | 13346585.47 | 13346585.70 | 0.0272 | 0.0111 |

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| Jupiter | 31829-08-14 09:07 G | 13346588.70 | 13346588.88 | 13346589.08 | 0.0492 | 0.0278 |
| Jupiter | 31830-09-14 04:05 G | 13346984.46 | 13346984.67 | 13346984.88 | 0.0496 | 0.0186 |
| Jupiter | 31836-03-06 02:09 G | 13348984.37 | 13348984.59 | 13348984.82 | 0.0532 | 0.0049 |
| Jupiter | 31841-08-18 10:33 G | 13350975.72 | 13350975.94 | 13350976.16 | 0.0492 | 0.0186 |
| Jupiter | 31842-09-18 20:53 G | 13351372.17 | 13351372.37 | 13351372.57 | 0.0497 | 0.0236 |
| Saturn | 31843-02-08 07:41 G | 13351514.62 | 13351514.82 | 13351515.05 | 0.0290 | 0.0151 |
| Jupiter | 31847-02-03 01:55 G | 13352970.48 | 13352970.58 | 13352970.69 | 0.0534 | 0.0469 |
| Jupiter | 31848-03-11 03:07 G | 13353372.39 | 13353372.63 | 13353372.87 | 0.0531 | 0.0118 |
| Jupiter | 31853-08-22 23:31 G | 13355363.27 | 13355363.48 | 13355363.70 | 0.0492 | 0.0143 |
| Jupiter | 31854-09-22 22:05 G | 13355759.25 | 13355759.42 | 13355759.60 | 0.0498 | 0.0335 |
| Jupiter | 31859-02-08 03:50 G | 13357358.49 | 13357358.66 | 13357358.85 | 0.0535 | 0.0359 |
| Saturn | 31859-08-18 05:17 G | 13357549.50 | 13357549.72 | 13357549.94 | 0.0274 | 0.0106 |
| Jupiter | 31860-03-16 06:14 G | 13357760.56 | 13357760.76 | 13357760.96 | 0.0530 | 0.0247 |
| Uranus | 31863-02-17 14:53 G | 13358828.90 | 13358829.12 | 13358829.36 | 0.0138 | 0.0061 |
| Uranus | 31864-02-22 13:12 G | 13359198.80 | 13359199.05 | 13359199.30 | 0.0139 | 0.0002 |
| Pluto | 31865-02-25 12:57 G | 13359567.91 | 13359568.04 | 13359568.18 | 0.0065 | 0.0055 |
| Uranus | 31865-02-25 22:05 G | 13359568.22 | 13359568.42 | 13359568.64 | 0.0139 | 0.0079 |
| Jupiter | 31865-08-27 03:50 G | 13359750.43 | 13359750.66 | 13359750.90 | 0.0493 | 0.0108 |
| Pluto | 31866-02-27 08:38 G | 13359934.65 | 13359934.86 | 13359935.12 | 0.0065 | 0.0031 |
| Jupiter | 31866-09-27 14:09 G | 13360146.98 | 13360147.09 | 13360147.21 | 0.0499 | 0.0431 |
| Neptune | 31869-12-24 11:17 G | 13361330.84 | 13361330.97 | 13361331.14 | 0.0090 | 0.0071 |
| Neptune | 31870-12-26 22:33 G | 13361698.27 | 13361698.44 | 13361698.63 | 0.0090 | 0.0065 |
| Jupiter | 31871-02-13 09:50 G | 13361746.73 | 13361746.91 | 13361747.09 | 0.0534 | 0.0316 |
| Neptune | 31871-12-29 15:36 G | 13362065.94 | 13362066.15 | 13362066.38 | 0.0090 | 0.0042 |
| Jupiter | 31872-03-21 14:38 G | 13362148.94 | 13362149.11 | 13362149.29 | 0.0529 | 0.0346 |
| Neptune | 31872-12-30 22:33 G | 13362433.22 | 13362433.44 | 13362433.70 | 0.0090 | 0.0037 |
| Saturn | 31873-02-15 08:53 G | 13362479.65 | 13362479.87 | 13362480.09 | 0.0287 | 0.0116 |
| Neptune | 31874-01-02 18:29 G | 13362801.02 | 13362801.27 | 13362801.53 | 0.0090 | 0.0013 |
| Neptune | 31875-01-05 00:29 G | 13363168.27 | 13363168.52 | 13363168.78 | 0.0090 | 0.0007 |
| Neptune | 31876-01-07 19:41 G | 13363536.07 | 13363536.32 | 13363536.59 | 0.0090 | 0.0017 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 31876-07-31 14:09 G | 13363742.00 | 13363742.09 | 13363742.18 | 0.0492 | 0.0452 |
| Neptune | 31877-01-09 03:07 G | 13363903.40 | 13363903.63 | 13363903.89 | 0.0090 | 0.0023 |
| Jupiter | 31877-08-31 08:53 G | 13364137.64 | 13364137.87 | 13364138.09 | 0.0494 | 0.0031 |
| Neptune | 31878-01-11 19:12 G | 13364271.08 | 13364271.30 | 13364271.54 | 0.0090 | 0.0045 |
| Jupiter | 31878-10-01 20:38 G | 13364534.28 | 13364534.36 | 13364534.45 | 0.0501 | 0.0466 |
| Neptune | 31879-01-14 06:43 G | 13364638.58 | 13364638.78 | 13364638.99 | 0.0090 | 0.0052 |
| Neptune | 31880-01-16 17:31 G | 13365006.12 | 13365006.23 | 13365006.41 | 0.0090 | 0.0075 |
| Neptune | 31881-01-18 10:33 G | 13365373.85 | 13365373.94 | 13365374.06 | 0.0090 | 0.0081 |
| Jupiter | 31883-02-18 19:41 G | 13366135.11 | 13366135.32 | 13366135.53 | 0.0534 | 0.0247 |
| Jupiter | 31884-03-26 08:09 G | 13366536.69 | 13366536.84 | 13366537.01 | 0.0527 | 0.0382 |
| Jupiter | 31888-08-04 15:21 G | 13368129.04 | 13368129.14 | 13368129.26 | 0.0492 | 0.0433 |
| Saturn | 31888-08-12 05:31 G | 13368136.48 | 13368136.73 | 13368136.98 | 0.0272 | 0.0059 |
| Jupiter | 31889-09-04 21:07 G | 13368525.14 | 13368525.38 | 13368525.61 | 0.0494 | 0.0078 |
| Jupiter | 31890-10-06 08:24 G | 13368921.84 | 13368921.85 | 13368921.88 | 0.0502 | 0.0500 |
| Jupiter | 31895-02-23 12:14 G | 13370522.78 | 13370523.01 | 13370523.24 | 0.0533 | 0.0121 |
| Jupiter | 31896-03-31 12:29 G | 13370924.90 | 13370925.02 | 13370925.14 | 0.0526 | 0.0445 |
| Jupiter | 31900-08-10 07:26 G | 13372516.67 | 13372516.81 | 13372516.96 | 0.0492 | 0.0379 |
| Jupiter | 31901-09-10 00:00 G | 13372912.29 | 13372912.50 | 13372912.73 | 0.0495 | 0.0148 |
| Saturn | 31902-02-10 15:36 G | 13373065.92 | 13373066.15 | 13373066.40 | 0.0289 | 0.0086 |
| Uranus | 31902-08-20 07:41 G | 13373256.62 | 13373256.82 | 13373257.04 | 0.0140 | 0.0075 |
| Mars | 31903-06-26 12:29 G | 13373566.88 | 13373567.02 | 13373567.15 | 0.1673 | 0.1205 |
| Uranus | 31903-08-24 18:43 G | 13373626.03 | 13373626.28 | 13373626.54 | 0.0140 | 0.0004 |
| Uranus | 31904-08-28 16:33 G | 13373996.00 | 13373996.19 | 13373996.40 | 0.0139 | 0.0081 |
| Jupiter | 31907-03-01 21:50 G | 13374911.18 | 13374911.41 | 13374911.63 | 0.0533 | 0.0014 |
| Jupiter | 31912-08-14 07:12 G | 13376903.62 | 13376903.80 | 13376904.00 | 0.0492 | 0.0284 |
| Jupiter | 31913-09-14 14:38 G | 13377299.89 | 13377300.11 | 13377300.33 | 0.0496 | 0.0175 |
| Saturn | 31917-08-08 08:53 G | 13378723.75 | 13378723.87 | 13378724.01 | 0.0271 | 0.0222 |
| Saturn | 31918-08-20 20:24 G | 13379101.16 | 13379101.35 | 13379101.55 | 0.0275 | 0.0164 |
| Jupiter | 31919-03-06 22:48 G | 13379299.21 | 13379299.45 | 13379299.70 | 0.0533 | 0.0037 |
| Jupiter | 31924-08-18 20:24 G | 13381291.14 | 13381291.35 | 13381291.56 | 0.0492 | 0.0195 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 31925-09-18 16:33 G | 13381686.98 | 13381687.19 | 13381687.40 | 0.0497 | 0.0231 |
| Jupiter | 31930-02-02 23:17 G | 13383285.36 | 13383285.47 | 13383285.59 | 0.0534 | 0.0470 |
| Jupiter | 31931-03-12 04:19 G | 13383687.46 | 13383687.68 | 13383687.90 | 0.0531 | 0.0111 |
| Saturn | 31932-02-18 23:45 G | 13384031.30 | 13384031.49 | 13384031.69 | 0.0287 | 0.0178 |
| Jupiter | 31936-08-22 21:07 G | 13385678.15 | 13385678.38 | 13385678.61 | 0.0493 | 0.0155 |
| Jupiter | 31937-09-23 05:31 G | 13386074.57 | 13386074.73 | 13386074.90 | 0.0498 | 0.0336 |
| Jupiter | 31942-02-08 04:33 G | 13387673.53 | 13387673.69 | 13387673.86 | 0.0534 | 0.0369 |
| Jupiter | 31943-03-17 10:48 G | 13388075.74 | 13388075.95 | 13388076.16 | 0.0530 | 0.0243 |
| Uranus | 31946-02-14 17:17 G | 13389141.16 | 13389141.22 | 13389141.34 | 0.0138 | 0.0129 |
| Uranus | 31947-02-19 00:43 G | 13389510.33 | 13389510.53 | 13389510.76 | 0.0138 | 0.0071 |
| Saturn | 31947-08-15 15:21 G | 13389687.89 | 13389688.14 | 13389688.38 | 0.0273 | 0.0006 |
| Uranus | 31948-02-23 23:02 G | 13389880.21 | 13389880.46 | 13389880.72 | 0.0139 | 0.0013 |
| Jupiter | 31948-08-27 04:48 G | 13390065.48 | 13390065.70 | 13390065.92 | 0.0493 | 0.0119 |
| Uranus | 31949-02-27 07:12 G | 13390249.60 | 13390249.80 | 13390250.02 | 0.0139 | 0.0080 |
| Jupiter | 31949-09-27 12:14 G | 13390461.89 | 13390462.01 | 13390462.15 | 0.0499 | 0.0422 |
| Neptune | 31951-06-26 01:26 G | 13391098.51 | 13391098.56 | 13391098.62 | 0.0088 | 0.0085 |
| Neptune | 31952-06-27 10:05 G | 13391465.77 | 13391465.92 | 13391466.13 | 0.0088 | 0.0065 |
| Neptune | 31953-06-29 23:45 G | 13391833.33 | 13391833.49 | 13391833.71 | 0.0088 | 0.0059 |
| Pluto | 31953-08-29 21:50 G | 13391894.17 | 13391894.41 | 13391894.66 | 0.0079 | 0.0011 |
| Jupiter | 31954-02-13 07:55 G | 13392061.64 | 13392061.83 | 13392062.02 | 0.0534 | 0.0326 |
| Neptune | 31954-07-02 05:31 G | 13392200.50 | 13392200.73 | 13392200.98 | 0.0088 | 0.0037 |
| Jupiter | 31955-03-22 01:26 G | 13392463.39 | 13392463.56 | 13392463.75 | 0.0529 | 0.0337 |
| Neptune | 31955-07-04 22:33 G | 13392568.21 | 13392568.44 | 13392568.69 | 0.0088 | 0.0031 |
| Neptune | 31956-07-06 02:24 G | 13392935.35 | 13392935.60 | 13392935.86 | 0.0088 | 0.0009 |
| Neptune | 31957-07-08 19:41 G | 13393303.06 | 13393303.32 | 13393303.58 | 0.0088 | 0.0004 |
| Neptune | 31958-07-11 01:12 G | 13393670.30 | 13393670.55 | 13393670.79 | 0.0088 | 0.0018 |
| Neptune | 31959-07-13 14:53 G | 13394037.88 | 13394038.12 | 13394038.39 | 0.0088 | 0.0024 |
| Jupiter | 31959-08-01 12:57 G | 13394056.96 | 13394057.04 | 13394057.11 | 0.0492 | 0.0463 |
| Neptune | 31960-07-15 00:29 G | 13394405.32 | 13394405.52 | 13394405.74 | 0.0088 | 0.0046 |
| Jupiter | 31960-08-31 17:17 G | 13394452.98 | 13394453.22 | 13394453.46 | 0.0494 | 0.0031 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 31961-02-12 06:29 G | 13394617.52 | 13394617.77 | 13394618.01 | 0.0289 | 0.0019 |
| Neptune | 31961-07-17 08:53 G | 13394772.67 | 13394772.87 | 13394773.10 | 0.0088 | 0.0052 |
| Jupiter | 31961-10-02 00:14 G | 13394849.42 | 13394849.51 | 13394849.59 | 0.0500 | 0.0461 |
| Neptune | 31962-07-19 22:48 G | 13395140.35 | 13395140.45 | 13395140.62 | 0.0088 | 0.0074 |
| Neptune | 31963-07-22 03:21 G | 13395507.56 | 13395507.64 | 13395507.79 | 0.0088 | 0.0079 |
| Jupiter | 31966-02-18 04:19 G | 13396449.48 | 13396449.68 | 13396449.89 | 0.0534 | 0.0261 |
| Jupiter | 31967-03-27 09:50 G | 13396851.75 | 13396851.91 | 13396852.07 | 0.0528 | 0.0373 |
| Jupiter | 31971-08-06 03:21 G | 13398444.55 | 13398444.64 | 13398444.74 | 0.0492 | 0.0445 |
| Jupiter | 31972-09-04 18:14 G | 13398840.03 | 13398840.26 | 13398840.49 | 0.0494 | 0.0070 |
| Jupiter | 31973-10-06 11:45 G | 13399236.95 | 13399236.99 | 13399237.04 | 0.0501 | 0.0490 |
| Saturn | 31976-08-10 01:41 G | 13400275.38 | 13400275.57 | 13400275.76 | 0.0272 | 0.0166 |
| Saturn | 31977-08-22 08:53 G | 13400652.73 | 13400652.87 | 13400653.02 | 0.0275 | 0.0224 |
| Jupiter | 31978-02-23 16:05 G | 13400837.95 | 13400838.17 | 13400838.39 | 0.0534 | 0.0126 |
| Jupiter | 31979-04-01 06:29 G | 13401239.64 | 13401239.77 | 13401239.91 | 0.0527 | 0.0437 |
| Jupiter | 31983-08-10 03:07 G | 13402831.49 | 13402831.63 | 13402831.78 | 0.0492 | 0.0387 |
| Jupiter | 31984-09-09 09:07 G | 13403227.65 | 13403227.88 | 13403228.10 | 0.0495 | 0.0137 |
| Uranus | 31986-08-20 19:12 G | 13403938.09 | 13403938.30 | 13403938.52 | 0.0140 | 0.0071 |
| Uranus | 31987-08-25 05:45 G | 13404307.48 | 13404307.74 | 13404307.99 | 0.0140 | 0.0007 |
| Uranus | 31988-08-29 03:50 G | 13404677.46 | 13404677.66 | 13404677.89 | 0.0140 | 0.0073 |
| Saturn | 31990-02-06 15:36 G | 13405204.01 | 13405204.15 | 13405204.31 | 0.0290 | 0.0230 |
| Jupiter | 31990-02-28 17:45 G | 13405226.00 | 13405226.24 | 13405226.48 | 0.0533 | 0.0020 |
| Saturn | 31991-02-20 12:29 G | 13405582.90 | 13405583.02 | 13405583.15 | 0.0286 | 0.0245 |
| Jupiter | 31995-08-14 13:12 G | 13407218.87 | 13407219.05 | 13407219.23 | 0.0492 | 0.0291 |
| Jupiter | 31996-09-13 07:41 G | 13407614.59 | 13407614.82 | 13407615.04 | 0.0496 | 0.0165 |

33RD MILLENNIUM CE

This is a list of transits of Moon in the 33rd millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 32002-03-05 23:17 | G | 13409614.25 | 13409614.47 | 13409614.70 | 0.0532 | 0.0027 | |
| Saturn | 32006-08-17 07:12 | G | 13411239.57 | 13411239.80 | 13411240.04 | 0.0273 | 0.0055 | |
| Jupiter | 32007-08-18 16:48 | G | 13411605.98 | 13411606.20 | 13411606.42 | 0.0492 | 0.0205 | |
| Jupiter | 32008-09-17 22:48 | G | 13412002.25 | 13412002.45 | 13412002.65 | 0.0497 | 0.0229 | |
| Jupiter | 32013-02-01 17:31 | G | 13413600.14 | 13413600.23 | 13413600.33 | 0.0534 | 0.0481 | |
| Jupiter | 32014-03-10 23:45 | G | 13414002.25 | 13414002.49 | 13414002.73 | 0.0532 | 0.0101 | |
| Jupiter | 32019-08-23 01:41 | G | 13415993.35 | 13415993.57 | 13415993.78 | 0.0493 | 0.0169 | |
| Saturn | 32020-02-15 03:21 | G | 13416169.41 | 13416169.64 | 13416169.88 | 0.0288 | 0.0054 | |
| Jupiter | 32020-09-22 05:17 | G | 13416389.54 | 13416389.72 | 13416389.90 | 0.0498 | 0.0332 | |
| Jupiter | 32025-02-06 22:05 | G | 13417988.25 | 13417988.42 | 13417988.59 | 0.0534 | 0.0379 | |
| Jupiter | 32026-03-15 19:41 | G | 13418390.12 | 13418390.32 | 13418390.53 | 0.0531 | 0.0234 | |
| Uranus | 32031-02-19 10:19 | G | 13420191.71 | 13420191.93 | 13420192.17 | 0.0138 | 0.0054 | |
| Jupiter | 32031-08-27 12:00 | G | 13420380.77 | 13420381.00 | 13420381.23 | 0.0493 | 0.0128 | |
| Uranus | 32032-02-24 08:09 | G | 13420561.58 | 13420561.84 | 13420562.10 | 0.0138 | 0.0007 | |
| Jupiter | 32032-09-26 14:53 | G | 13420777.00 | 13420777.12 | 13420777.24 | 0.0498 | 0.0416 | |
| Uranus | 32033-02-27 16:19 | G | 13420931.00 | 13420931.18 | 13420931.39 | 0.0139 | 0.0087 | |
| Neptune | 32033-12-24 15:07 | G | 13421231.03 | 13421231.13 | 13421231.23 | 0.0090 | 0.0083 | |
| Neptune | 32034-12-27 09:07 | G | 13421598.73 | 13421598.88 | 13421599.04 | 0.0090 | 0.0070 | |
| Saturn | 32035-08-12 12:29 | G | 13421826.80 | 13421827.02 | 13421827.26 | 0.0272 | 0.0107 | |
| Neptune | 32035-12-29 15:07 | G | 13421965.94 | 13421966.13 | 13421966.35 | 0.0090 | 0.0054 | |
| Neptune | 32036-12-31 11:02 | G | 13422333.74 | 13422333.96 | 13422334.20 | 0.0090 | 0.0040 | |
| Jupiter | 32037-02-11 20:38 | G | 13422376.19 | 13422376.36 | 13422376.54 | 0.0535 | 0.0340 | |
| Neptune | 32038-01-02 17:17 | G | 13422700.98 | 13422701.22 | 13422701.47 | 0.0090 | 0.0025 | |
| Jupiter | 32038-03-21 06:14 | G | 13422778.59 | 13422778.76 | 13422778.95 | 0.0530 | 0.0328 | |
| Neptune | 32039-01-05 11:45 | G | 13423068.73 | 13423068.99 | 13423069.26 | 0.0090 | 0.0011 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 32040-01-07 20:24 G | 13423436.11 | 13423436.35 | 13423436.61 | 0.0090 | 0.0004 |
| Neptune | 32041-01-09 10:48 G | 13423803.71 | 13423803.95 | 13423804.23 | 0.0090 | 0.0020 |
| Neptune | 32042-01-12 00:29 G | 13424171.31 | 13424171.52 | 13424171.77 | 0.0090 | 0.0034 |
| Jupiter | 32042-07-31 22:48 G | 13424372.40 | 13424372.45 | 13424372.51 | 0.0492 | 0.0476 |
| Neptune | 32043-01-14 10:19 G | 13424538.73 | 13424538.93 | 13424539.17 | 0.0090 | 0.0050 |
| Jupiter | 32043-08-31 12:57 G | 13424767.82 | 13424768.04 | 13424768.27 | 0.0493 | 0.0041 |
| Neptune | 32044-01-17 04:19 G | 13424906.51 | 13424906.68 | 13424906.87 | 0.0090 | 0.0062 |
| Jupiter | 32044-10-01 02:38 G | 13425164.50 | 13425164.61 | 13425164.71 | 0.0500 | 0.0446 |
| Neptune | 32045-01-18 10:33 G | 13425273.83 | 13425273.94 | 13425274.08 | 0.0090 | 0.0078 |
| Neptune | 32046-01-21 06:43 G | 13425641.78 | 13425641.78 | 13425641.79 | 0.0090 | 0.0089 |
| Saturn | 32049-02-08 06:43 G | 13426755.57 | 13426755.78 | 13426756.00 | 0.0289 | 0.0155 |
| Jupiter | 32049-02-17 10:48 G | 13426764.76 | 13426764.95 | 13426765.16 | 0.0534 | 0.0268 |
| Jupiter | 32050-03-26 04:05 G | 13427166.50 | 13427166.67 | 13427166.84 | 0.0528 | 0.0366 |
| Jupiter | 32054-08-04 19:55 G | 13428759.24 | 13428759.33 | 13428759.42 | 0.0492 | 0.0452 |
| Jupiter | 32055-09-05 00:57 G | 13429155.31 | 13429155.54 | 13429155.78 | 0.0494 | 0.0065 |
| Jupiter | 32056-10-05 06:14 G | 13429551.71 | 13429551.76 | 13429551.82 | 0.0501 | 0.0486 |
| Jupiter | 32061-02-22 09:50 G | 13431152.67 | 13431152.91 | 13431153.14 | 0.0534 | 0.0130 |
| Jupiter | 32062-03-31 08:38 G | 13431554.75 | 13431554.86 | 13431554.99 | 0.0527 | 0.0439 |
| Saturn | 32064-08-06 11:17 G | 13432413.95 | 13432413.97 | 13432414.00 | 0.0270 | 0.0269 |
| Saturn | 32065-08-19 00:14 G | 13432791.29 | 13432791.51 | 13432791.73 | 0.0274 | 0.0112 |
| Jupiter | 32066-08-09 09:21 G | 13433146.76 | 13433146.89 | 13433147.03 | 0.0492 | 0.0394 |
| Jupiter | 32067-09-09 02:24 G | 13433542.37 | 13433542.60 | 13433542.83 | 0.0495 | 0.0127 |
| Uranus | 32069-08-16 04:05 G | 13434249.67 | 13434249.67 | 13434249.72 | 0.0141 | 0.0141 |
| Uranus | 32070-08-21 05:17 G | 13434619.52 | 13434619.72 | 13434619.95 | 0.0141 | 0.0070 |
| Uranus | 32071-08-25 15:50 G | 13434988.90 | 13434989.16 | 13434989.41 | 0.0140 | 0.0005 |
| Uranus | 32072-08-29 14:53 G | 13435358.94 | 13435359.12 | 13435359.33 | 0.0140 | 0.0089 |
| Jupiter | 32073-02-27 12:14 G | 13435540.79 | 13435541.01 | 13435541.24 | 0.0533 | 0.0034 |
| Jupiter | 32078-08-13 13:55 G | 13437533.89 | 13437534.08 | 13437534.28 | 0.0492 | 0.0293 |
| Saturn | 32079-02-17 00:00 G | 13437721.29 | 13437721.50 | 13437721.72 | 0.0288 | 0.0126 |
| Jupiter | 32079-09-13 18:00 G | 13437930.04 | 13437930.25 | 13437930.47 | 0.0495 | 0.0156 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 32085-03-04 14:53 G | 13439928.88 | 13439929.12 | 13439929.37 | 0.0533 | 0.0014 |
| Jupiter | 32090-08-17 21:36 G | 13441921.20 | 13441921.40 | 13441921.60 | 0.0492 | 0.0216 |
| Jupiter | 32091-09-17 21:50 G | 13442317.20 | 13442317.41 | 13442317.63 | 0.0496 | 0.0221 |
| Saturn | 32094-08-13 20:38 G | 13443378.11 | 13443378.36 | 13443378.61 | 0.0272 | 0.0052 |
| Jupiter | 32096-02-01 12:43 G | 13443914.94 | 13443915.03 | 13443915.13 | 0.0534 | 0.0490 |
| Jupiter | 32097-03-09 14:24 G | 13444316.88 | 13444317.10 | 13444317.33 | 0.0532 | 0.0092 |
| Jupiter | 32102-08-23 07:41 G | 13446308.60 | 13446308.82 | 13446309.04 | 0.0492 | 0.0181 |
| Jupiter | 32103-09-23 07:41 G | 13446704.66 | 13446704.82 | 13446705.00 | 0.0497 | 0.0328 |
| Jupiter | 32108-02-07 15:50 G | 13448303.01 | 13448303.16 | 13448303.32 | 0.0535 | 0.0393 |
| Saturn | 32108-02-11 22:05 G | 13448307.18 | 13448307.42 | 13448307.66 | 0.0289 | 0.0083 |
| Mars | 32108-06-25 15:21 G | 13448441.96 | 13448442.14 | 13448442.33 | 0.1683 | 0.0269 |
| Jupiter | 32109-03-16 03:36 G | 13448705.44 | 13448705.65 | 13448705.86 | 0.0531 | 0.0233 |
| Pluto | 32112-03-01 21:07 G | 13449787.12 | 13449787.38 | 13449787.65 | 0.0065 | 0.0007 |
| Uranus | 32114-02-16 16:19 G | 13450504.06 | 13450504.18 | 13450504.30 | 0.0137 | 0.0120 |
| Jupiter | 32114-08-27 06:43 G | 13450695.56 | 13450695.78 | 13450696.00 | 0.0493 | 0.0137 |
| Uranus | 32115-02-20 23:45 G | 13450873.28 | 13450873.49 | 13450873.73 | 0.0138 | 0.0063 |
| Jupiter | 32115-09-27 16:48 G | 13451092.07 | 13451092.20 | 13451092.34 | 0.0498 | 0.0406 |
| Uranus | 32116-02-25 21:21 G | 13451243.14 | 13451243.39 | 13451243.65 | 0.0138 | 0.0023 |
| Neptune | 32116-06-27 21:50 G | 13451366.28 | 13451366.41 | 13451366.55 | 0.0088 | 0.0073 |
| Uranus | 32117-03-01 05:45 G | 13451612.56 | 13451612.74 | 13451612.95 | 0.0139 | 0.0088 |
| Neptune | 32117-06-30 01:55 G | 13451733.43 | 13451733.58 | 13451733.78 | 0.0088 | 0.0066 |
| Neptune | 32118-07-02 19:41 G | 13452101.11 | 13452101.32 | 13452101.55 | 0.0088 | 0.0046 |
| Neptune | 32119-07-04 23:17 G | 13452468.26 | 13452468.47 | 13452468.72 | 0.0088 | 0.0039 |
| Jupiter | 32120-02-13 04:05 G | 13452691.50 | 13452691.67 | 13452691.85 | 0.0535 | 0.0352 |
| Neptune | 32120-07-06 16:05 G | 13452835.92 | 13452836.17 | 13452836.43 | 0.0088 | 0.0019 |
| Jupiter | 32121-03-20 23:45 G | 13453093.30 | 13453093.49 | 13453093.68 | 0.0530 | 0.0322 |
| Neptune | 32121-07-08 22:05 G | 13453203.18 | 13453203.42 | 13453203.67 | 0.0088 | 0.0010 |
| Neptune | 32122-07-11 10:05 G | 13453570.67 | 13453570.92 | 13453571.20 | 0.0088 | 0.0010 |
| Neptune | 32123-07-13 21:07 G | 13453938.15 | 13453938.38 | 13453938.64 | 0.0088 | 0.0019 |
| Saturn | 32123-08-10 00:29 G | 13453965.39 | 13453965.52 | 13453965.67 | 0.0271 | 0.0218 |

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| Neptune | 32124-07-15 04:33 G | 13454305.48 | 13454305.69 | 13454305.96 | 0.0088 | 0.0038 |
| Saturn | 32124-08-21 10:19 G | 13454342.73 | 13454342.93 | 13454343.13 | 0.0274 | 0.0168 |
| Neptune | 32125-07-17 20:38 G | 13454673.16 | 13454673.36 | 13454673.59 | 0.0088 | 0.0046 |
| Jupiter | 32125-07-31 16:48 G | 13454687.16 | 13454687.20 | 13454687.26 | 0.0492 | 0.0481 |
| Neptune | 32126-07-20 01:12 G | 13455040.37 | 13455040.55 | 13455040.72 | 0.0088 | 0.0064 |
| Jupiter | 32126-08-31 21:50 G | 13455083.17 | 13455083.41 | 13455083.64 | 0.0493 | 0.0043 |
| Neptune | 32127-07-22 18:00 G | 13455408.14 | 13455408.25 | 13455408.42 | 0.0088 | 0.0074 |
| Jupiter | 32127-10-01 23:17 G | 13455479.36 | 13455479.47 | 13455479.58 | 0.0500 | 0.0439 |
| Jupiter | 32132-02-17 21:07 G | 13457079.18 | 13457079.38 | 13457079.59 | 0.0534 | 0.0282 |
| Jupiter | 32133-03-26 01:41 G | 13457481.41 | 13457481.57 | 13457481.74 | 0.0529 | 0.0359 |
| Saturn | 32137-02-05 14:38 G | 13458894.11 | 13458894.11 | 13458894.12 | 0.0291 | 0.0291 |
| Jupiter | 32137-08-05 07:26 G | 13459074.73 | 13459074.81 | 13459074.88 | 0.0492 | 0.0462 |
| Saturn | 32138-02-19 14:24 G | 13459272.93 | 13459273.10 | 13459273.30 | 0.0287 | 0.0194 |
| Jupiter | 32138-09-04 23:45 G | 13459470.25 | 13459470.49 | 13459470.72 | 0.0494 | 0.0061 |
| Jupiter | 32139-10-06 18:14 G | 13459867.21 | 13459867.26 | 13459867.33 | 0.0501 | 0.0482 |
| Jupiter | 32144-02-23 05:17 G | 13461467.50 | 13461467.72 | 13461467.94 | 0.0534 | 0.0146 |
| Jupiter | 32145-03-31 01:12 G | 13461869.42 | 13461869.55 | 13461869.70 | 0.0528 | 0.0431 |
| Jupiter | 32149-08-09 11:17 G | 13463461.83 | 13463461.97 | 13463462.11 | 0.0492 | 0.0396 |
| Jupiter | 32150-09-09 13:12 G | 13463857.83 | 13463858.05 | 13463858.28 | 0.0494 | 0.0114 |
| Saturn | 32153-08-16 05:31 G | 13464929.49 | 13464929.73 | 13464929.97 | 0.0273 | 0.0002 |
| Uranus | 32154-08-22 17:31 G | 13465301.01 | 13465301.23 | 13465301.47 | 0.0141 | 0.0063 |
| Uranus | 32155-08-27 03:50 G | 13465670.41 | 13465670.66 | 13465670.91 | 0.0140 | 0.0014 |
| Jupiter | 32156-02-28 07:26 G | 13465855.57 | 13465855.81 | 13465856.05 | 0.0534 | 0.0047 |
| Uranus | 32156-08-31 03:07 G | 13466040.43 | 13466040.63 | 13466040.84 | 0.0140 | 0.0081 |
| Jupiter | 32161-08-13 18:57 G | 13467849.11 | 13467849.29 | 13467849.47 | 0.0492 | 0.0295 |
| Jupiter | 32162-09-13 17:02 G | 13468244.98 | 13468245.21 | 13468245.44 | 0.0495 | 0.0146 |
| Saturn | 32167-02-13 15:36 G | 13469858.91 | 13469859.15 | 13469859.39 | 0.0288 | 0.0017 |
| Jupiter | 32168-03-04 11:45 G | 13470243.77 | 13470243.99 | 13470244.22 | 0.0533 | 0.0007 |
| Jupiter | 32173-08-18 03:21 G | 13472236.43 | 13472236.64 | 13472236.86 | 0.0492 | 0.0221 |
| Jupiter | 32174-09-18 01:26 G | 13472632.36 | 13472632.56 | 13472632.76 | 0.0496 | 0.0219 |

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| Jupiter | 32179-02-01 11:31 G | 13474229.90 | 13474229.98 | 13474230.06 | 0.0534 | 0.0501 |
| Jupiter | 32180-03-09 23:31 G | 13474632.25 | 13474632.48 | 13474632.71 | 0.0532 | 0.0091 |
| Saturn | 32182-08-11 07:55 G | 13475516.65 | 13475516.83 | 13475517.04 | 0.0271 | 0.0170 |
| Saturn | 32183-08-23 13:12 G | 13475893.91 | 13475894.05 | 13475894.21 | 0.0275 | 0.0221 |
| Jupiter | 32185-08-22 05:17 G | 13476623.51 | 13476623.72 | 13476623.94 | 0.0492 | 0.0187 |
| Jupiter | 32186-09-22 12:43 G | 13477019.86 | 13477020.03 | 13477020.22 | 0.0497 | 0.0328 |
| Jupiter | 32191-02-06 18:14 G | 13478618.11 | 13478618.26 | 13478618.41 | 0.0534 | 0.0407 |
| Jupiter | 32192-03-14 14:24 G | 13479019.89 | 13479020.10 | 13479020.32 | 0.0531 | 0.0218 |
| Saturn | 32196-02-08 02:24 G | 13480445.45 | 13480445.60 | 13480445.77 | 0.0291 | 0.0225 |
| Saturn | 32197-02-20 22:48 G | 13480824.36 | 13480824.45 | 13480824.58 | 0.0287 | 0.0258 |
| Jupiter | 32197-08-26 21:21 G | 13481011.16 | 13481011.39 | 13481011.61 | 0.0493 | 0.0141 |
| Uranus | 32198-02-17 04:05 G | 13481185.59 | 13481185.67 | 13481185.77 | 0.0137 | 0.0129 |
| Jupiter | 32198-09-26 19:41 G | 13481407.19 | 13481407.32 | 13481407.45 | 0.0498 | 0.0403 |
| Neptune | 32198-12-27 06:57 G | 13481498.66 | 13481498.79 | 13481498.95 | 0.0090 | 0.0074 |
| Uranus | 32199-02-21 12:43 G | 13481554.79 | 13481555.03 | 13481555.27 | 0.0138 | 0.0043 |
| Pluto | 32199-09-01 16:33 G | 13481747.00 | 13481747.19 | 13481747.43 | 0.0079 | 0.0046 |
| Neptune | 32199-12-30 02:09 G | 13481866.45 | 13481866.59 | 13481866.79 | 0.0090 | 0.0069 |
| Uranus | 32200-02-26 09:21 G | 13481924.63 | 13481924.89 | 13481925.15 | 0.0138 | 0.0016 |
| Neptune | 32201-01-01 09:50 G | 13482233.69 | 13482233.91 | 13482234.13 | 0.0090 | 0.0045 |
| Uranus | 32201-03-02 18:14 G | 13482294.10 | 13482294.26 | 13482294.46 | 0.0139 | 0.0099 |
| Neptune | 32202-01-04 03:21 G | 13482601.41 | 13482601.64 | 13482601.88 | 0.0090 | 0.0039 |
| Neptune | 32203-01-06 13:55 G | 13482968.84 | 13482969.08 | 13482969.33 | 0.0090 | 0.0016 |
| Jupiter | 32203-02-12 14:09 G | 13483005.93 | 13483006.09 | 13483006.27 | 0.0534 | 0.0371 |
| Neptune | 32204-01-09 02:53 G | 13483336.36 | 13483336.62 | 13483336.89 | 0.0090 | 0.0009 |
| Jupiter | 32204-03-20 22:33 G | 13483408.26 | 13483408.44 | 13483408.63 | 0.0530 | 0.0311 |
| Neptune | 32205-01-10 17:31 G | 13483704.00 | 13483704.23 | 13483704.49 | 0.0090 | 0.0016 |
| Neptune | 32206-01-13 02:09 G | 13484071.33 | 13484071.59 | 13484071.84 | 0.0090 | 0.0021 |
| Neptune | 32207-01-15 20:53 G | 13484439.15 | 13484439.37 | 13484439.59 | 0.0090 | 0.0045 |
| Neptune | 32208-01-18 02:09 G | 13484806.40 | 13484806.59 | 13484806.83 | 0.0090 | 0.0051 |
| Neptune | 32209-01-19 22:05 G | 13485174.30 | 13485174.42 | 13485174.59 | 0.0090 | 0.0075 |

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| Jupiter | 32209-08-31 21:36 G | 13485398.16 | 13485398.40 | 13485398.63 | 0.0493 | 0.0046 |
| Neptune | 32210-01-22 04:33 G | 13485541.61 | 13485541.69 | 13485541.83 | 0.0090 | 0.0081 |
| Jupiter | 32210-10-02 11:45 G | 13485794.88 | 13485794.99 | 13485795.11 | 0.0499 | 0.0427 |
| Saturn | 32212-08-18 14:38 G | 13486480.88 | 13486481.11 | 13486481.34 | 0.0273 | 0.0050 |
| Mars | 32212-12-26 03:36 G | 13486610.46 | 13486610.65 | 13486610.84 | 0.1855 | 0.0742 |
| Jupiter | 32215-02-18 00:00 G | 13487394.32 | 13487394.50 | 13487394.69 | 0.0534 | 0.0293 |
| Jupiter | 32216-03-25 22:48 G | 13487796.27 | 13487796.45 | 13487796.64 | 0.0530 | 0.0347 |
| Jupiter | 32220-08-05 09:50 G | 13489389.84 | 13489389.91 | 13489389.99 | 0.0492 | 0.0465 |
| Jupiter | 32221-09-05 11:17 G | 13489785.74 | 13489785.97 | 13489786.19 | 0.0493 | 0.0057 |
| Jupiter | 32222-10-06 13:55 G | 13490182.02 | 13490182.08 | 13490182.15 | 0.0500 | 0.0476 |
| Saturn | 32226-02-16 08:09 G | 13491410.60 | 13491410.84 | 13491411.07 | 0.0288 | 0.0049 |
| Jupiter | 32227-02-23 04:05 G | 13491782.44 | 13491782.67 | 13491782.90 | 0.0534 | 0.0155 |
| Jupiter | 32228-03-31 01:41 G | 13492184.45 | 13492184.57 | 13492184.70 | 0.0528 | 0.0432 |
| Jupiter | 32232-08-09 16:48 G | 13493777.07 | 13493777.20 | 13493777.34 | 0.0492 | 0.0397 |
| Jupiter | 32233-09-09 13:26 G | 13494172.83 | 13494173.06 | 13494173.30 | 0.0494 | 0.0106 |
| Uranus | 32237-08-19 06:43 G | 13495612.68 | 13495612.78 | 13495612.88 | 0.0141 | 0.0130 |
| Uranus | 32238-08-24 07:26 G | 13495982.58 | 13495982.81 | 13495983.04 | 0.0141 | 0.0060 |
| Jupiter | 32239-02-28 09:50 G | 13496170.68 | 13496170.91 | 13496171.13 | 0.0534 | 0.0058 |
| Uranus | 32239-08-28 17:31 G | 13496351.98 | 13496352.23 | 13496352.48 | 0.0140 | 0.0016 |
| Uranus | 32240-09-01 16:48 G | 13496722.03 | 13496722.20 | 13496722.39 | 0.0140 | 0.0098 |
| Saturn | 32241-08-13 06:29 G | 13497067.55 | 13497067.77 | 13497068.00 | 0.0271 | 0.0128 |
| Saturn | 32242-08-25 13:55 G | 13497445.04 | 13497445.08 | 13497445.15 | 0.0275 | 0.0267 |
| Jupiter | 32244-08-14 03:50 G | 13498164.47 | 13498164.66 | 13498164.86 | 0.0492 | 0.0291 |
| Jupiter | 32245-09-14 00:43 G | 13498560.31 | 13498560.53 | 13498560.74 | 0.0495 | 0.0144 |
| Jupiter | 32251-03-05 15:21 G | 13500558.91 | 13500559.14 | 13500559.38 | 0.0533 | 0.0020 |
| Saturn | 32255-02-10 07:55 G | 13501996.62 | 13501996.83 | 13501997.04 | 0.0291 | 0.0160 |
| Jupiter | 32256-08-18 06:14 G | 13502551.56 | 13502551.76 | 13502551.97 | 0.0492 | 0.0228 |
| Jupiter | 32257-09-18 12:29 G | 13502947.80 | 13502948.02 | 13502948.24 | 0.0496 | 0.0223 |
| Jupiter | 32262-02-01 13:55 G | 13504545.01 | 13504545.08 | 13504545.15 | 0.0534 | 0.0509 |
| Jupiter | 32263-03-10 11:02 G | 13504946.73 | 13504946.96 | 13504947.19 | 0.0532 | 0.0074 |

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| Jupiter | 32268-08-22 21:36 G | 13506939.19 | 13506939.40 | 13506939.61 | 0.0492 | 0.0197 |
| Jupiter | 32269-09-22 16:48 G | 13507335.04 | 13507335.20 | 13507335.37 | 0.0496 | 0.0330 |
| Saturn | 32271-08-20 19:26 G | 13508032.08 | 13508032.31 | 13508032.54 | 0.0273 | 0.0094 |
| Jupiter | 32274-02-06 10:05 G | 13508932.78 | 13508932.92 | 13508933.06 | 0.0534 | 0.0422 |
| Jupiter | 32275-03-15 21:36 G | 13509335.19 | 13509335.40 | 13509335.61 | 0.0532 | 0.0211 |
| Neptune | 32280-06-27 21:50 G | 13511266.41 | 13511266.41 | 13511266.46 | 0.0088 | 0.0088 |
| Jupiter | 32280-08-26 21:50 G | 13511326.19 | 13511326.41 | 13511326.64 | 0.0492 | 0.0144 |
| Neptune | 32281-06-30 15:07 G | 13511634.00 | 13511634.13 | 13511634.32 | 0.0088 | 0.0069 |
| Jupiter | 32281-09-27 08:53 G | 13511722.73 | 13511722.87 | 13511723.01 | 0.0497 | 0.0396 |
| Uranus | 32282-02-18 17:45 G | 13511867.09 | 13511867.24 | 13511867.41 | 0.0137 | 0.0110 |
| Neptune | 32282-07-02 19:26 G | 13512001.15 | 13512001.31 | 13512001.51 | 0.0088 | 0.0061 |
| Uranus | 32283-02-23 03:07 G | 13512236.41 | 13512236.63 | 13512236.87 | 0.0138 | 0.0052 |
| Neptune | 32283-07-05 11:02 G | 13512368.74 | 13512368.96 | 13512369.21 | 0.0088 | 0.0041 |
| Uranus | 32284-02-27 23:31 G | 13512606.24 | 13512606.48 | 13512606.74 | 0.0138 | 0.0035 |
| Neptune | 32284-07-06 18:29 G | 13512736.06 | 13512736.27 | 13512736.52 | 0.0088 | 0.0033 |
| Saturn | 32285-02-17 17:31 G | 13512962.00 | 13512962.23 | 13512962.46 | 0.0288 | 0.0107 |
| Uranus | 32285-03-03 09:21 G | 13512975.73 | 13512975.89 | 13512976.08 | 0.0139 | 0.0099 |
| Neptune | 32285-07-09 06:00 G | 13513103.49 | 13513103.75 | 13513104.02 | 0.0088 | 0.0013 |
| Jupiter | 32286-02-11 23:17 G | 13513321.32 | 13513321.47 | 13513321.63 | 0.0535 | 0.0386 |
| Neptune | 32286-07-11 18:43 G | 13513471.03 | 13513471.28 | 13513471.53 | 0.0088 | 0.0004 |
| Jupiter | 32287-03-20 23:45 G | 13513723.30 | 13513723.49 | 13513723.70 | 0.0531 | 0.0299 |
| Neptune | 32287-07-14 00:29 G | 13513838.27 | 13513838.52 | 13513838.79 | 0.0088 | 0.0016 |
| Neptune | 32288-07-15 16:48 G | 13514205.97 | 13514206.20 | 13514206.46 | 0.0088 | 0.0024 |
| Neptune | 32289-07-17 20:09 G | 13514573.14 | 13514573.34 | 13514573.58 | 0.0088 | 0.0044 |
| Neptune | 32290-07-20 13:55 G | 13514940.88 | 13514941.08 | 13514941.30 | 0.0088 | 0.0051 |
| Neptune | 32291-07-22 18:29 G | 13515308.13 | 13515308.27 | 13515308.41 | 0.0088 | 0.0072 |
| Neptune | 32292-07-24 09:07 G | 13515675.78 | 13515675.88 | 13515676.00 | 0.0088 | 0.0079 |
| Jupiter | 32292-08-31 10:33 G | 13515713.71 | 13515713.94 | 13515714.16 | 0.0493 | 0.0039 |
| Jupiter | 32293-10-01 09:36 G | 13516109.79 | 13516109.90 | 13516110.03 | 0.0499 | 0.0426 |
| Jupiter | 32298-02-17 02:09 G | 13517709.40 | 13517709.59 | 13517709.80 | 0.0535 | 0.0297 |

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| Jupiter | 32299-03-26 04:05 G | 13518111.50 | 13518111.67 | 13518111.84 | 0.0530 | 0.0340 |
| Saturn | 32300-08-15 03:07 G | 13518618.40 | 13518618.63 | 13518618.86 | 0.0271 | 0.0089 |
| Jupiter | 32303-08-06 18:43 G | 13519705.22 | 13519705.28 | 13519705.34 | 0.0492 | 0.0474 |
| Jupiter | 32304-09-05 15:36 G | 13520100.91 | 13520101.15 | 13520101.39 | 0.0493 | 0.0057 |
| Jupiter | 32305-10-07 05:17 G | 13520497.67 | 13520497.72 | 13520497.78 | 0.0500 | 0.0482 |
| Jupiter | 32310-02-23 05:17 G | 13522097.51 | 13522097.72 | 13522097.94 | 0.0534 | 0.0166 |
| Jupiter | 32311-04-01 07:26 G | 13522499.67 | 13522499.81 | 13522499.95 | 0.0528 | 0.0424 |
| Saturn | 32314-02-12 12:43 G | 13523547.80 | 13523548.03 | 13523548.25 | 0.0291 | 0.0102 |
| Jupiter | 32315-08-11 05:45 G | 13524092.60 | 13524092.74 | 13524092.88 | 0.0493 | 0.0395 |
| Jupiter | 32316-09-10 02:24 G | 13524488.38 | 13524488.60 | 13524488.82 | 0.0494 | 0.0100 |
| Uranus | 32321-08-20 21:36 G | 13526294.35 | 13526294.40 | 13526294.49 | 0.0141 | 0.0135 |
| Jupiter | 32322-02-28 13:26 G | 13526485.82 | 13526486.06 | 13526486.29 | 0.0533 | 0.0076 |
| Uranus | 32322-08-25 22:33 G | 13526664.20 | 13526664.44 | 13526664.68 | 0.0141 | 0.0049 |
| Uranus | 32323-08-30 09:07 G | 13527033.64 | 13527033.88 | 13527034.13 | 0.0140 | 0.0025 |
| Uranus | 32324-09-03 07:55 G | 13527403.67 | 13527403.83 | 13527404.04 | 0.0140 | 0.0095 |
| Jupiter | 32327-08-15 08:09 G | 13528479.66 | 13528479.84 | 13528480.02 | 0.0492 | 0.0297 |
| Jupiter | 32328-09-14 12:43 G | 13528875.80 | 13528876.03 | 13528876.27 | 0.0495 | 0.0138 |
| Saturn | 32329-08-10 10:48 G | 13529205.88 | 13529205.95 | 13529206.06 | 0.0270 | 0.0250 |
| Saturn | 32330-08-22 14:38 G | 13529582.89 | 13529583.11 | 13529583.33 | 0.0273 | 0.0136 |
| Jupiter | 32334-03-05 09:50 G | 13530873.67 | 13530873.91 | 13530874.14 | 0.0533 | 0.0032 |
| Jupiter | 32339-08-20 00:00 G | 13532867.29 | 13532867.50 | 13532867.70 | 0.0492 | 0.0233 |
| Jupiter | 32340-09-18 17:02 G | 13533263.01 | 13533263.21 | 13533263.41 | 0.0495 | 0.0227 |
| Saturn | 32344-02-20 17:31 G | 13534513.02 | 13534513.23 | 13534513.44 | 0.0288 | 0.0164 |
| Jupiter | 32345-02-01 10:48 G | 13534859.90 | 13534859.95 | 13534860.01 | 0.0534 | 0.0515 |
| Jupiter | 32346-03-11 00:14 G | 13535262.28 | 13535262.51 | 13535262.73 | 0.0533 | 0.0072 |
| Jupiter | 32351-08-23 23:17 G | 13537254.26 | 13537254.47 | 13537254.69 | 0.0492 | 0.0204 |
| Jupiter | 32352-09-23 07:55 G | 13537650.66 | 13537650.83 | 13537651.01 | 0.0496 | 0.0334 |
| Jupiter | 32357-02-07 00:57 G | 13539248.41 | 13539248.54 | 13539248.68 | 0.0534 | 0.0435 |
| Pluto | 32358-03-05 19:55 G | 13539640.08 | 13539640.33 | 13539640.58 | 0.0065 | 0.0004 |
| Jupiter | 32358-03-16 01:26 G | 13539650.34 | 13539650.56 | 13539650.79 | 0.0532 | 0.0209 |

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| Saturn | 32359-08-17 03:50 G | 13540169.43 | 13540169.66 | 13540169.90 | 0.0271 | 0.0048 |
| Neptune | 32362-12-28 17:17 G | 13541399.18 | 13541399.22 | 13541399.31 | 0.0090 | 0.0087 |
| Jupiter | 32363-08-28 14:09 G | 13541641.88 | 13541642.09 | 13541642.31 | 0.0492 | 0.0141 |
| Neptune | 32363-12-31 00:57 G | 13541766.44 | 13541766.54 | 13541766.70 | 0.0090 | 0.0077 |
| Jupiter | 32364-09-27 11:31 G | 13542037.84 | 13542037.98 | 13542038.12 | 0.0497 | 0.0396 |
| Neptune | 32365-01-01 16:48 G | 13542134.01 | 13542134.20 | 13542134.42 | 0.0090 | 0.0057 |
| Neptune | 32366-01-04 04:33 G | 13542501.50 | 13542501.69 | 13542501.93 | 0.0090 | 0.0046 |
| Uranus | 32366-02-20 04:48 G | 13542548.59 | 13542548.70 | 13542548.85 | 0.0137 | 0.0118 |
| Neptune | 32367-01-06 15:50 G | 13542868.92 | 13542869.16 | 13542869.43 | 0.0090 | 0.0027 |
| Uranus | 32367-02-24 15:36 G | 13542917.91 | 13542918.15 | 13542918.39 | 0.0138 | 0.0033 |
| Neptune | 32368-01-09 08:53 G | 13543236.63 | 13543236.87 | 13543237.13 | 0.0090 | 0.0016 |
| Uranus | 32368-02-29 10:33 G | 13543287.69 | 13543287.94 | 13543288.20 | 0.0138 | 0.0027 |
| Neptune | 32369-01-10 16:48 G | 13543603.93 | 13543604.20 | 13543604.46 | 0.0090 | 0.0003 |
| Jupiter | 32369-02-11 23:31 G | 13543636.32 | 13543636.48 | 13543636.64 | 0.0534 | 0.0396 |
| Uranus | 32369-03-04 21:07 G | 13543657.25 | 13543657.38 | 13543657.55 | 0.0139 | 0.0111 |
| Neptune | 32370-01-13 12:29 G | 13543971.77 | 13543972.02 | 13543972.28 | 0.0090 | 0.0015 |
| Jupiter | 32370-03-21 02:53 G | 13544038.43 | 13544038.62 | 13544038.81 | 0.0531 | 0.0284 |
| Neptune | 32371-01-15 18:00 G | 13544339.03 | 13544339.25 | 13544339.50 | 0.0090 | 0.0033 |
| Neptune | 32372-01-18 13:26 G | 13544706.86 | 13544707.06 | 13544707.30 | 0.0090 | 0.0047 |
| Neptune | 32373-01-19 21:21 G | 13545074.22 | 13545074.39 | 13545074.57 | 0.0090 | 0.0063 |
| Saturn | 32373-02-13 18:29 G | 13545099.04 | 13545099.27 | 13545099.51 | 0.0291 | 0.0049 |
| Neptune | 32374-01-22 12:57 G | 13545441.93 | 13545442.04 | 13545442.20 | 0.0090 | 0.0077 |
| Jupiter | 32375-09-01 19:12 G | 13546029.06 | 13546029.30 | 13546029.54 | 0.0493 | 0.0036 |
| Jupiter | 32376-10-02 06:29 G | 13546425.66 | 13546425.77 | 13546425.89 | 0.0499 | 0.0424 |
| Jupiter | 32381-02-17 06:14 G | 13548024.58 | 13548024.76 | 13548024.94 | 0.0534 | 0.0306 |
| Jupiter | 32382-03-26 09:21 G | 13548426.70 | 13548426.89 | 13548427.08 | 0.0529 | 0.0324 |
| Jupiter | 32386-08-06 08:38 G | 13550020.82 | 13550020.86 | 13550020.90 | 0.0493 | 0.0484 |
| Jupiter | 32387-09-06 05:02 G | 13550416.48 | 13550416.71 | 13550416.93 | 0.0494 | 0.0051 |
| Saturn | 32388-08-11 03:50 G | 13550756.52 | 13550756.66 | 13550756.83 | 0.0270 | 0.0212 |
| Jupiter | 32388-10-06 12:14 G | 13550812.96 | 13550813.01 | 13550813.08 | 0.0500 | 0.0482 |

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| Saturn | 32389-08-23 06:14 G | 13551133.58 | 13551133.76 | 13551133.95 | 0.0273 | 0.0177 |
| Mars | 32392-06-28 07:12 G | 13552173.60 | 13552173.80 | 13552174.00 | 0.1689 | 0.0171 |
| Jupiter | 32393-02-22 12:14 G | 13552412.78 | 13552413.01 | 13552413.23 | 0.0534 | 0.0167 |
| Jupiter | 32394-03-31 04:48 G | 13552814.57 | 13552814.70 | 13552814.84 | 0.0529 | 0.0419 |
| Jupiter | 32398-08-10 11:17 G | 13554407.85 | 13554407.97 | 13554408.11 | 0.0493 | 0.0398 |
| Jupiter | 32399-09-10 15:21 G | 13554803.91 | 13554804.14 | 13554804.38 | 0.0494 | 0.0091 |
| Saturn | 32402-02-07 12:14 G | 13555684.93 | 13555685.01 | 13555685.12 | 0.0292 | 0.0269 |
| Saturn | 32403-02-21 14:38 G | 13556063.96 | 13556064.11 | 13556064.28 | 0.0288 | 0.0216 |
| Jupiter | 32405-02-27 12:29 G | 13556800.79 | 13556801.02 | 13556801.25 | 0.0534 | 0.0085 |
| Uranus | 32405-08-21 13:26 G | 13556975.93 | 13556976.06 | 13556976.21 | 0.0141 | 0.0116 |
| Uranus | 32406-08-26 13:12 G | 13557345.82 | 13557346.05 | 13557346.30 | 0.0141 | 0.0048 |
| Uranus | 32407-08-31 00:14 G | 13557715.26 | 13557715.51 | 13557715.75 | 0.0140 | 0.0031 |
| Uranus | 32408-09-03 23:02 G | 13558085.32 | 13558085.46 | 13558085.63 | 0.0140 | 0.0111 |
| Jupiter | 32410-08-15 02:53 G | 13558795.43 | 13558795.62 | 13558795.81 | 0.0492 | 0.0297 |
| Jupiter | 32411-09-14 18:29 G | 13559191.06 | 13559191.27 | 13559191.49 | 0.0494 | 0.0136 |
| Jupiter | 32417-03-05 03:36 G | 13561189.42 | 13561189.65 | 13561189.88 | 0.0534 | 0.0036 |
| Saturn | 32418-08-18 02:53 G | 13561720.37 | 13561720.62 | 13561720.86 | 0.0271 | 0.0010 |
| Jupiter | 32422-08-19 04:05 G | 13563182.47 | 13563182.67 | 13563182.88 | 0.0492 | 0.0241 |
| Jupiter | 32423-09-19 11:45 G | 13563578.79 | 13563578.99 | 13563579.20 | 0.0495 | 0.0236 |
| Jupiter | 32428-02-02 02:38 G | 13565175.57 | 13565175.61 | 13565175.67 | 0.0533 | 0.0517 |
| Jupiter | 32429-03-10 00:14 G | 13565577.27 | 13565577.51 | 13565577.75 | 0.0532 | 0.0064 |
| Saturn | 32432-02-15 19:41 G | 13566650.07 | 13566650.32 | 13566650.56 | 0.0291 | 0.0004 |
| Jupiter | 32434-08-23 17:31 G | 13567570.03 | 13567570.23 | 13567570.43 | 0.0493 | 0.0217 |
| Jupiter | 32435-09-23 14:38 G | 13567965.94 | 13567966.11 | 13567966.28 | 0.0497 | 0.0334 |
| Jupiter | 32440-02-07 01:12 G | 13569563.42 | 13569563.55 | 13569563.69 | 0.0533 | 0.0443 |
| Jupiter | 32441-03-15 06:00 G | 13569965.55 | 13569965.75 | 13569965.96 | 0.0531 | 0.0203 |
| Neptune | 32445-06-30 16:05 G | 13571534.07 | 13571534.17 | 13571534.31 | 0.0088 | 0.0077 |
| Pluto | 32445-09-04 08:38 G | 13571599.72 | 13571599.86 | 13571600.03 | 0.0079 | 0.0064 |
| Neptune | 32446-07-03 06:57 G | 13571901.64 | 13571901.79 | 13571901.96 | 0.0088 | 0.0070 |
| Jupiter | 32446-08-27 23:17 G | 13571957.24 | 13571957.47 | 13571957.71 | 0.0493 | 0.0143 |

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| Neptune | 32447-07-05 15:36 G | 13572268.97 | 13572269.15 | 13572269.38 | 0.0088 | 0.0049 |
| Saturn | 32447-08-12 19:26 G | 13572307.14 | 13572307.31 | 13572307.51 | 0.0269 | 0.0177 |
| Jupiter | 32447-09-28 07:26 G | 13572353.67 | 13572353.81 | 13572353.96 | 0.0497 | 0.0389 |
| Neptune | 32448-07-07 01:12 G | 13572636.33 | 13572636.55 | 13572636.80 | 0.0088 | 0.0042 |
| Saturn | 32448-08-24 03:36 G | 13572684.52 | 13572684.65 | 13572684.81 | 0.0273 | 0.0219 |
| Neptune | 32449-07-09 14:38 G | 13573003.88 | 13573004.11 | 13573004.37 | 0.0088 | 0.0021 |
| Uranus | 32450-02-20 16:19 G | 13573230.02 | 13573230.18 | 13573230.38 | 0.0137 | 0.0102 |
| Neptune | 32450-07-11 20:09 G | 13573371.08 | 13573371.34 | 13573371.60 | 0.0088 | 0.0014 |
| Uranus | 32451-02-25 04:19 G | 13573599.45 | 13573599.68 | 13573599.92 | 0.0138 | 0.0042 |
| Neptune | 32451-07-14 13:12 G | 13573738.80 | 13573739.05 | 13573739.31 | 0.0088 | 0.0008 |
| Jupiter | 32452-02-12 07:12 G | 13573951.66 | 13573951.80 | 13573951.94 | 0.0534 | 0.0407 |
| Uranus | 32452-02-29 22:19 G | 13573969.20 | 13573969.43 | 13573969.70 | 0.0138 | 0.0045 |
| Neptune | 32452-07-15 16:33 G | 13574105.94 | 13574106.19 | 13574106.45 | 0.0088 | 0.0015 |
| Uranus | 32453-03-05 10:19 G | 13574338.79 | 13574338.93 | 13574339.10 | 0.0139 | 0.0107 |
| Jupiter | 32453-03-20 12:00 G | 13574353.79 | 13574354.00 | 13574354.21 | 0.0531 | 0.0272 |
| Neptune | 32453-07-18 09:36 G | 13574473.67 | 13574473.90 | 13574474.14 | 0.0088 | 0.0037 |
| Neptune | 32454-07-20 14:53 G | 13574840.91 | 13574841.12 | 13574841.35 | 0.0088 | 0.0044 |
| Neptune | 32455-07-23 04:19 G | 13575208.53 | 13575208.68 | 13575208.89 | 0.0088 | 0.0065 |
| Neptune | 32456-07-24 14:09 G | 13575575.97 | 13575576.09 | 13575576.25 | 0.0088 | 0.0072 |
| Jupiter | 32458-09-01 08:38 G | 13576344.63 | 13576344.86 | 13576345.08 | 0.0493 | 0.0035 |
| Jupiter | 32459-10-02 12:57 G | 13576740.92 | 13576741.04 | 13576741.18 | 0.0498 | 0.0418 |
| Saturn | 32461-02-08 09:36 G | 13577235.75 | 13577235.90 | 13577236.06 | 0.0292 | 0.0224 |
| Saturn | 32462-02-22 16:33 G | 13577615.09 | 13577615.19 | 13577615.28 | 0.0288 | 0.0262 |
| Jupiter | 32464-02-17 14:24 G | 13578339.91 | 13578340.10 | 13578340.30 | 0.0534 | 0.0303 |
| Jupiter | 32465-03-25 11:02 G | 13578741.78 | 13578741.96 | 13578742.15 | 0.0530 | 0.0322 |
| Jupiter | 32469-08-05 14:53 G | 13580336.11 | 13580336.12 | 13580336.14 | 0.0493 | 0.0491 |
| Jupiter | 32470-09-05 18:43 G | 13580732.04 | 13580732.28 | 13580732.52 | 0.0493 | 0.0045 |
| Jupiter | 32471-10-07 00:00 G | 13581128.47 | 13581128.50 | 13581128.54 | 0.0499 | 0.0492 |
| Jupiter | 32476-02-22 16:33 G | 13582727.97 | 13582728.19 | 13582728.41 | 0.0534 | 0.0167 |
| Jupiter | 32477-03-31 00:14 G | 13583130.38 | 13583130.51 | 13583130.65 | 0.0529 | 0.0427 |

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| Saturn | 32477-08-18 19:55 G | 13583271.08 | 13583271.33 | 13583271.58 | 0.0271 | 0.0031 |
| Jupiter | 32481-08-10 07:26 G | 13584723.68 | 13584723.81 | 13584723.96 | 0.0492 | 0.0396 |
| Jupiter | 32482-09-09 23:17 G | 13585119.25 | 13585119.47 | 13585119.70 | 0.0494 | 0.0082 |
| Jupiter | 32488-02-28 05:02 G | 13587116.48 | 13587116.71 | 13587116.93 | 0.0533 | 0.0098 |
| Uranus | 32489-08-22 03:07 G | 13587657.53 | 13587657.63 | 13587657.77 | 0.0141 | 0.0124 |
| Uranus | 32490-08-27 02:53 G | 13588027.37 | 13588027.62 | 13588027.88 | 0.0141 | 0.0036 |
| Saturn | 32491-02-16 12:14 G | 13588200.76 | 13588201.01 | 13588201.26 | 0.0291 | 0.0042 |
| Uranus | 32491-08-31 14:53 G | 13588396.88 | 13588397.12 | 13588397.36 | 0.0140 | 0.0037 |
| Uranus | 32492-09-04 13:26 G | 13588766.91 | 13588767.06 | 13588767.23 | 0.0140 | 0.0108 |
| Jupiter | 32493-08-14 06:29 G | 13589110.59 | 13589110.77 | 13589110.96 | 0.0493 | 0.0306 |
| Jupiter | 32494-09-14 15:07 G | 13589506.91 | 13589507.13 | 13589507.36 | 0.0495 | 0.0133 |
| Mars | 32496-12-27 06:00 G | 13590341.58 | 13590341.75 | 13590341.93 | 0.1845 | 0.0396 |
| Jupiter | 32500-03-05 02:24 G | 13591504.36 | 13591504.60 | 13591504.84 | 0.0533 | 0.0044 |
| Jupiter | 32505-08-19 21:21 G | 13593498.20 | 13593498.39 | 13593498.59 | 0.0493 | 0.0260 |
| Saturn | 32506-08-14 16:33 G | 13593857.99 | 13593858.19 | 13593858.40 | 0.0269 | 0.0138 |
| Jupiter | 32506-09-19 17:17 G | 13593894.01 | 13593894.22 | 13593894.42 | 0.0496 | 0.0234 |
| Saturn | 32507-08-27 03:07 G | 13594235.58 | 13594235.63 | 13594235.72 | 0.0273 | 0.0261 |
| Jupiter | 32511-02-02 01:55 G | 13595490.53 | 13595490.58 | 13595490.63 | 0.0533 | 0.0520 |
| Jupiter | 32512-03-10 08:53 G | 13595892.64 | 13595892.87 | 13595893.09 | 0.0532 | 0.0068 |
| Jupiter | 32517-08-24 03:36 G | 13597885.44 | 13597885.65 | 13597885.88 | 0.0493 | 0.0223 |
| Jupiter | 32518-09-24 09:21 G | 13598281.73 | 13598281.89 | 13598282.07 | 0.0496 | 0.0335 |
| Saturn | 32520-02-11 10:05 G | 13598786.75 | 13598786.92 | 13598787.12 | 0.0292 | 0.0182 |
| Jupiter | 32523-02-07 11:02 G | 13599878.85 | 13599878.96 | 13599879.08 | 0.0534 | 0.0456 |
| Jupiter | 32524-03-15 16:05 G | 13600280.95 | 13600281.17 | 13600281.40 | 0.0532 | 0.0203 |
| Neptune | 32527-12-31 06:29 G | 13601666.67 | 13601666.77 | 13601666.91 | 0.0090 | 0.0080 |
| Neptune | 32529-01-01 20:38 G | 13602034.23 | 13602034.36 | 13602034.52 | 0.0090 | 0.0072 |
| Jupiter | 32529-08-28 11:45 G | 13602272.78 | 13602272.99 | 13602273.21 | 0.0493 | 0.0143 |
| Neptune | 32530-01-04 06:00 G | 13602401.54 | 13602401.75 | 13602401.98 | 0.0090 | 0.0050 |
| Jupiter | 32530-09-28 13:55 G | 13602668.93 | 13602669.08 | 13602669.24 | 0.0497 | 0.0379 |
| Neptune | 32531-01-06 23:45 G | 13602769.28 | 13602769.49 | 13602769.73 | 0.0090 | 0.0043 |

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| Neptune | 32532-01-09 06:14 G | 13603136.52 | 13603136.76 | 13603137.02 | 0.0090 | 0.0020 |
| Neptune | 32533-01-11 02:09 G | 13603504.34 | 13603504.59 | 13603504.85 | 0.0090 | 0.0013 |
| Neptune | 32534-01-13 08:24 G | 13603871.60 | 13603871.85 | 13603872.11 | 0.0090 | 0.0012 |
| Uranus | 32534-02-22 02:53 G | 13603911.46 | 13603911.62 | 13603911.79 | 0.0137 | 0.0107 |
| Neptune | 32535-01-16 02:53 G | 13604239.36 | 13604239.62 | 13604239.88 | 0.0090 | 0.0019 |
| Jupiter | 32535-02-12 17:45 G | 13604267.10 | 13604267.24 | 13604267.40 | 0.0534 | 0.0414 |
| Uranus | 32535-02-26 15:36 G | 13604280.91 | 13604281.15 | 13604281.40 | 0.0138 | 0.0025 |
| Neptune | 32536-01-18 11:31 G | 13604606.78 | 13604606.98 | 13604607.22 | 0.0090 | 0.0043 |
| Uranus | 32536-03-02 07:55 G | 13604650.59 | 13604650.83 | 13604651.10 | 0.0138 | 0.0035 |
| Jupiter | 32536-03-20 17:02 G | 13604669.01 | 13604669.21 | 13604669.41 | 0.0531 | 0.0270 |
| Saturn | 32536-08-20 12:00 G | 13604821.76 | 13604822.00 | 13604822.24 | 0.0271 | 0.0073 |
| Neptune | 32537-01-20 02:24 G | 13604974.39 | 13604974.60 | 13604974.84 | 0.0090 | 0.0049 |
| Uranus | 32537-03-06 20:53 G | 13605020.26 | 13605020.37 | 13605020.50 | 0.0139 | 0.0120 |
| Neptune | 32538-01-22 15:50 G | 13605342.04 | 13605342.16 | 13605342.33 | 0.0090 | 0.0073 |
| Neptune | 32539-01-25 02:09 G | 13605709.48 | 13605709.59 | 13605709.72 | 0.0090 | 0.0079 |
| Jupiter | 32541-09-01 23:31 G | 13606660.24 | 13606660.48 | 13606660.73 | 0.0493 | 0.0033 |
| Jupiter | 32542-10-03 02:38 G | 13607056.49 | 13607056.61 | 13607056.74 | 0.0498 | 0.0415 |
| Jupiter | 32547-02-17 19:26 G | 13608655.13 | 13608655.31 | 13608655.50 | 0.0534 | 0.0305 |
| Jupiter | 32548-03-26 02:38 G | 13609057.42 | 13609057.61 | 13609057.80 | 0.0530 | 0.0314 |
| Saturn | 32550-02-18 05:17 G | 13609751.49 | 13609751.72 | 13609751.97 | 0.0291 | 0.0086 |
| Jupiter | 32553-09-06 01:55 G | 13611047.35 | 13611047.58 | 13611047.81 | 0.0494 | 0.0036 |
| Jupiter | 32554-10-07 17:17 G | 13611444.19 | 13611444.22 | 13611444.25 | 0.0500 | 0.0495 |
| Jupiter | 32559-02-23 07:41 G | 13613043.61 | 13613043.82 | 13613044.05 | 0.0533 | 0.0173 |
| Jupiter | 32560-03-30 22:05 G | 13613445.28 | 13613445.42 | 13613445.57 | 0.0528 | 0.0423 |
| Jupiter | 32564-08-10 09:50 G | 13615038.78 | 13615038.91 | 13615039.05 | 0.0493 | 0.0401 |
| Saturn | 32565-08-15 18:14 G | 13615409.04 | 13615409.26 | 13615409.48 | 0.0269 | 0.0098 |
| Jupiter | 32565-09-10 18:00 G | 13615435.02 | 13615435.25 | 13615435.48 | 0.0494 | 0.0067 |
| Jupiter | 32571-02-28 02:24 G | 13617431.37 | 13617431.60 | 13617431.84 | 0.0533 | 0.0103 |
| Uranus | 32573-08-23 14:53 G | 13618338.97 | 13618339.12 | 13618339.29 | 0.0141 | 0.0107 |
| Uranus | 32574-08-28 13:12 G | 13618708.81 | 13618709.05 | 13618709.31 | 0.0141 | 0.0039 |

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| Uranus | 32575-09-02 01:55 G | 13619078.36 | 13619078.58 | 13619078.83 | 0.0140 | 0.0043 |
| Jupiter | 32576-08-15 01:12 G | 13619426.37 | 13619426.55 | 13619426.72 | 0.0493 | 0.0309 |
| Uranus | 32576-09-06 00:14 G | 13619448.39 | 13619448.51 | 13619448.65 | 0.0140 | 0.0120 |
| Jupiter | 32577-09-14 19:55 G | 13619822.10 | 13619822.33 | 13619822.56 | 0.0495 | 0.0130 |
| Saturn | 32579-02-12 10:33 G | 13620337.73 | 13620337.94 | 13620338.16 | 0.0293 | 0.0136 |
| Jupiter | 32583-03-05 12:29 G | 13621819.80 | 13621820.02 | 13621820.25 | 0.0533 | 0.0051 |
| Jupiter | 32588-08-19 06:57 G | 13623813.59 | 13623813.79 | 13623814.00 | 0.0492 | 0.0269 |
| Jupiter | 32589-09-19 10:48 G | 13624209.75 | 13624209.95 | 13624210.15 | 0.0495 | 0.0237 |
| Jupiter | 32594-02-01 15:50 G | 13625806.13 | 13625806.16 | 13625806.19 | 0.0533 | 0.0528 |
| Jupiter | 32595-03-10 19:55 G | 13626208.09 | 13626208.33 | 13626208.57 | 0.0533 | 0.0075 |
| Saturn | 32595-08-22 10:19 G | 13626372.72 | 13626372.93 | 13626373.15 | 0.0271 | 0.0116 |
| Mars | 32597-06-27 18:00 G | 13627048.12 | 13627048.25 | 13627048.38 | 0.1701 | 0.1109 |
| Jupiter | 32600-08-24 15:36 G | 13628200.95 | 13628201.15 | 13628201.35 | 0.0493 | 0.0229 |
| Jupiter | 32601-09-24 17:02 G | 13628597.03 | 13628597.21 | 13628597.39 | 0.0496 | 0.0328 |
| Pluto | 32604-03-09 00:00 G | 13629493.26 | 13629493.50 | 13629493.76 | 0.0065 | 0.0014 |
| Pluto | 32605-03-10 06:29 G | 13629859.77 | 13629859.77 | 13629859.82 | 0.0066 | 0.0065 |
| Jupiter | 32606-02-07 21:07 G | 13630194.27 | 13630194.38 | 13630194.50 | 0.0533 | 0.0469 |
| Jupiter | 32607-03-16 19:26 G | 13630596.10 | 13630596.31 | 13630596.52 | 0.0531 | 0.0198 |
| Saturn | 32609-02-20 04:48 G | 13631302.50 | 13631302.70 | 13631302.92 | 0.0291 | 0.0128 |
| Neptune | 32610-07-04 10:48 G | 13631801.85 | 13631801.95 | 13631802.11 | 0.0088 | 0.0075 |
| Neptune | 32611-07-06 19:12 G | 13632169.15 | 13632169.30 | 13632169.52 | 0.0088 | 0.0063 |
| Neptune | 32612-07-08 10:48 G | 13632536.76 | 13632536.95 | 13632537.18 | 0.0088 | 0.0047 |
| Jupiter | 32612-08-29 00:29 G | 13632588.29 | 13632588.52 | 13632588.75 | 0.0493 | 0.0143 |
| Neptune | 32613-07-10 15:21 G | 13632903.92 | 13632904.14 | 13632904.40 | 0.0088 | 0.0035 |
| Jupiter | 32613-09-29 02:53 G | 13632984.48 | 13632984.62 | 13632984.78 | 0.0498 | 0.0368 |
| Neptune | 32614-07-13 09:07 G | 13633271.63 | 13633271.88 | 13633272.14 | 0.0088 | 0.0017 |
| Neptune | 32615-07-15 12:43 G | 13633638.78 | 13633639.03 | 13633639.29 | 0.0088 | 0.0006 |
| Neptune | 32616-07-17 05:02 G | 13634006.46 | 13634006.71 | 13634006.98 | 0.0088 | 0.0013 |
| Neptune | 32617-07-19 11:02 G | 13634373.73 | 13634373.96 | 13634374.21 | 0.0088 | 0.0023 |
| Jupiter | 32618-02-12 22:33 G | 13634582.31 | 13634582.44 | 13634582.58 | 0.0533 | 0.0424 |

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| Uranus | 32618-02-23 16:05 G | 13634592.98 | 13634593.17 | 13634593.37 | 0.0137 | 0.0092 |
| Neptune | 32618-07-21 22:48 G | 13634741.23 | 13634741.45 | 13634741.71 | 0.0088 | 0.0041 |
| Uranus | 32619-02-28 06:14 G | 13634962.53 | 13634962.76 | 13634963.00 | 0.0138 | 0.0032 |
| Jupiter | 32619-03-22 06:00 G | 13634984.55 | 13634984.75 | 13634984.95 | 0.0530 | 0.0258 |
| Neptune | 32619-07-24 09:50 G | 13635108.73 | 13635108.91 | 13635109.13 | 0.0088 | 0.0052 |
| Uranus | 32620-03-03 21:21 G | 13635332.16 | 13635332.39 | 13635332.65 | 0.0138 | 0.0054 |
| Neptune | 32620-07-25 17:31 G | 13635476.07 | 13635476.23 | 13635476.39 | 0.0088 | 0.0069 |
| Uranus | 32621-03-08 11:02 G | 13635701.85 | 13635701.96 | 13635702.12 | 0.0139 | 0.0116 |
| Neptune | 32621-07-28 08:38 G | 13635843.79 | 13635843.86 | 13635843.99 | 0.0088 | 0.0081 |
| Saturn | 32624-08-17 18:14 G | 13636960.02 | 13636960.26 | 13636960.51 | 0.0269 | 0.0055 |
| Jupiter | 32624-09-02 04:05 G | 13636975.44 | 13636975.67 | 13636975.90 | 0.0493 | 0.0035 |
| Jupiter | 32625-10-03 16:48 G | 13637372.06 | 13637372.20 | 13637372.34 | 0.0498 | 0.0406 |
| Jupiter | 32630-02-18 06:43 G | 13638970.59 | 13638970.78 | 13638970.98 | 0.0533 | 0.0306 |
| Jupiter | 32631-03-26 23:31 G | 13639372.29 | 13639372.48 | 13639372.68 | 0.0530 | 0.0310 |
| Jupiter | 32636-09-06 20:09 G | 13641363.11 | 13641363.34 | 13641363.58 | 0.0494 | 0.0028 |
| Jupiter | 32637-10-07 21:21 G | 13641759.38 | 13641759.39 | 13641759.42 | 0.0499 | 0.0497 |
| Saturn | 32638-02-14 08:09 G | 13641888.60 | 13641888.84 | 13641889.08 | 0.0293 | 0.0090 |
| Jupiter | 32642-02-23 03:36 G | 13643358.42 | 13643358.65 | 13643358.87 | 0.0534 | 0.0181 |
| Jupiter | 32643-04-01 07:55 G | 13643760.70 | 13643760.83 | 13643760.96 | 0.0529 | 0.0432 |
| Jupiter | 32647-08-12 02:53 G | 13645354.49 | 13645354.62 | 13645354.76 | 0.0493 | 0.0395 |
| Jupiter | 32648-09-10 20:53 G | 13645750.13 | 13645750.37 | 13645750.60 | 0.0494 | 0.0061 |
| Saturn | 32653-08-12 10:05 G | 13647546.80 | 13647546.92 | 13647547.05 | 0.0268 | 0.0226 |
| Jupiter | 32654-02-28 15:50 G | 13647746.94 | 13647747.16 | 13647747.38 | 0.0534 | 0.0117 |
| Saturn | 32654-08-24 16:05 G | 13647923.99 | 13647924.17 | 13647924.37 | 0.0271 | 0.0166 |
| Uranus | 32657-08-25 02:09 G | 13649020.47 | 13649020.59 | 13649020.75 | 0.0141 | 0.0117 |
| Uranus | 32658-08-30 00:14 G | 13649390.25 | 13649390.51 | 13649390.77 | 0.0141 | 0.0026 |
| Jupiter | 32659-08-16 09:36 G | 13649741.71 | 13649741.90 | 13649742.08 | 0.0493 | 0.0312 |
| Uranus | 32659-09-03 14:38 G | 13649759.88 | 13649760.11 | 13649760.35 | 0.0140 | 0.0045 |
| Uranus | 32660-09-07 11:45 G | 13650129.88 | 13650129.99 | 13650130.15 | 0.0140 | 0.0118 |
| Jupiter | 32660-09-15 12:29 G | 13650137.80 | 13650138.02 | 13650138.24 | 0.0495 | 0.0132 |

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| Jupiter | 32666-03-05 20:53 G | 13652135.12 | 13652135.37 | 13652135.61 | 0.0533 | 0.0059 |
| Saturn | 32668-02-22 09:07 G | 13652853.70 | 13652853.88 | 13652854.08 | 0.0291 | 0.0173 |
| Jupiter | 32671-08-20 13:41 G | 13654128.89 | 13654129.07 | 13654129.26 | 0.0493 | 0.0281 |
| Jupiter | 32672-09-19 15:50 G | 13654524.94 | 13654525.16 | 13654525.37 | 0.0496 | 0.0235 |
| Mars | 32676-06-30 19:41 G | 13655905.15 | 13655905.32 | 13655905.50 | 0.1696 | 0.0538 |
| Jupiter | 32677-02-01 22:19 G | 13656121.43 | 13656121.43 | 13656121.45 | 0.0532 | 0.0532 |
| Jupiter | 32678-03-10 21:07 G | 13656523.15 | 13656523.38 | 13656523.60 | 0.0532 | 0.0071 |
| Saturn | 32683-08-19 16:05 G | 13658510.91 | 13658511.17 | 13658511.42 | 0.0269 | 0.0007 |
| Jupiter | 32683-08-25 01:41 G | 13658516.36 | 13658516.57 | 13658516.78 | 0.0493 | 0.0235 |
| Jupiter | 32684-09-24 02:09 G | 13658912.42 | 13658912.59 | 13658912.76 | 0.0496 | 0.0323 |
| Jupiter | 32689-02-06 20:38 G | 13660509.28 | 13660509.36 | 13660509.45 | 0.0533 | 0.0487 |
| Jupiter | 32690-03-16 04:19 G | 13660911.47 | 13660911.68 | 13660911.91 | 0.0532 | 0.0192 |
| Pluto | 32691-09-08 10:48 G | 13661452.89 | 13661452.95 | 13661453.06 | 0.0079 | 0.0075 |
| Pluto | 32692-09-09 15:21 G | 13661820.03 | 13661820.14 | 13661820.27 | 0.0079 | 0.0070 |
| Neptune | 32693-01-01 18:57 G | 13661934.21 | 13661934.29 | 13661934.40 | 0.0090 | 0.0083 |
| Neptune | 32694-01-04 13:41 G | 13662301.91 | 13662302.07 | 13662302.28 | 0.0090 | 0.0061 |
| Neptune | 32695-01-06 19:55 G | 13662669.13 | 13662669.33 | 13662669.55 | 0.0090 | 0.0052 |
| Jupiter | 32695-08-29 05:17 G | 13662903.50 | 13662903.72 | 13662903.94 | 0.0493 | 0.0139 |
| Neptune | 32696-01-09 15:36 G | 13663036.91 | 13663037.15 | 13663037.41 | 0.0090 | 0.0030 |
| Jupiter | 32696-09-28 15:21 G | 13663299.97 | 13663300.14 | 13663300.31 | 0.0497 | 0.0355 |
| Neptune | 32697-01-10 22:19 G | 13663404.20 | 13663404.43 | 13663404.69 | 0.0090 | 0.0021 |
| Saturn | 32697-02-15 05:45 G | 13663439.50 | 13663439.74 | 13663439.99 | 0.0293 | 0.0041 |
| Neptune | 32698-01-13 16:05 G | 13663771.91 | 13663772.17 | 13663772.44 | 0.0090 | 0.0002 |
| Neptune | 32699-01-16 02:53 G | 13664139.38 | 13664139.62 | 13664139.87 | 0.0090 | 0.0011 |
| Neptune | 32700-01-18 15:21 G | 13664506.91 | 13664507.14 | 13664507.41 | 0.0090 | 0.0032 |
| Neptune | 32701-01-21 06:43 G | 13664874.57 | 13664874.78 | 13664875.01 | 0.0090 | 0.0042 |
| Jupiter | 32701-02-13 06:14 G | 13664897.63 | 13664897.76 | 13664897.90 | 0.0533 | 0.0435 |
| Neptune | 32702-01-23 14:53 G | 13665241.95 | 13665242.12 | 13665242.32 | 0.0090 | 0.0063 |
| Uranus | 32702-02-25 05:45 G | 13665274.56 | 13665274.74 | 13665274.94 | 0.0137 | 0.0094 |
| Jupiter | 32702-03-22 00:29 G | 13665299.32 | 13665299.52 | 13665299.73 | 0.0531 | 0.0249 |

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| Neptune | 32703-01-26 09:36 G | 13665609.78 | 13665609.90 | 13665610.07 | 0.0090 | 0.0074 |
| Uranus | 32703-03-01 20:53 G | 13665644.13 | 13665644.37 | 13665644.62 | 0.0137 | 0.0013 |
| Uranus | 32704-03-05 10:33 G | 13666013.70 | 13666013.94 | 13666014.20 | 0.0138 | 0.0047 |
| Uranus | 32705-03-10 01:12 G | 13666383.50 | 13666383.55 | 13666383.63 | 0.0138 | 0.0133 |
| Jupiter | 32707-09-03 20:09 G | 13667291.11 | 13667291.34 | 13667291.57 | 0.0493 | 0.0034 |
| Jupiter | 32708-10-03 18:14 G | 13667687.13 | 13667687.26 | 13667687.40 | 0.0498 | 0.0403 |
| Saturn | 32712-08-14 18:57 G | 13669098.11 | 13669098.29 | 13669098.47 | 0.0268 | 0.0175 |
| Jupiter | 32713-02-18 03:50 G | 13669285.47 | 13669285.66 | 13669285.85 | 0.0534 | 0.0316 |
| Saturn | 32713-08-26 23:17 G | 13669475.33 | 13669475.47 | 13669475.62 | 0.0271 | 0.0217 |
| Jupiter | 32714-03-27 11:17 G | 13669687.79 | 13669687.97 | 13669688.15 | 0.0530 | 0.0308 |
| Jupiter | 32719-09-07 21:07 G | 13671678.15 | 13671678.38 | 13671678.62 | 0.0493 | 0.0023 |
| Jupiter | 32720-10-08 12:29 G | 13672075.01 | 13672075.02 | 13672075.03 | 0.0499 | 0.0498 |
| Jupiter | 32725-02-23 17:17 G | 13673674.01 | 13673674.22 | 13673674.44 | 0.0533 | 0.0191 |
| Saturn | 32726-02-10 05:02 G | 13674025.63 | 13674025.71 | 13674025.81 | 0.0294 | 0.0271 |
| Jupiter | 32726-04-01 12:43 G | 13674075.90 | 13674076.03 | 13674076.18 | 0.0529 | 0.0428 |
| Saturn | 32727-02-24 14:09 G | 13674404.93 | 13674405.09 | 13674405.24 | 0.0290 | 0.0223 |
| Jupiter | 32730-08-12 05:02 G | 13675669.57 | 13675669.71 | 13675669.86 | 0.0493 | 0.0395 |
| Jupiter | 32731-09-12 09:21 G | 13676065.66 | 13676065.89 | 13676066.11 | 0.0494 | 0.0054 |
| Jupiter | 32737-02-28 18:57 G | 13678062.05 | 13678062.29 | 13678062.53 | 0.0533 | 0.0133 |
| Uranus | 32741-08-26 15:21 G | 13679701.97 | 13679702.14 | 13679702.33 | 0.0141 | 0.0098 |
| Jupiter | 32742-08-16 12:43 G | 13680056.86 | 13680057.03 | 13680057.20 | 0.0493 | 0.0322 |
| Saturn | 32742-08-21 19:41 G | 13680062.08 | 13680062.32 | 13680062.56 | 0.0270 | 0.0049 |
| Uranus | 32742-08-31 11:45 G | 13680071.74 | 13680071.99 | 13680072.25 | 0.0141 | 0.0031 |
| Uranus | 32743-09-05 02:53 G | 13680441.40 | 13680441.62 | 13680441.86 | 0.0140 | 0.0053 |
| Jupiter | 32743-09-16 13:55 G | 13680452.85 | 13680453.08 | 13680453.32 | 0.0495 | 0.0129 |
| Uranus | 32744-09-08 23:17 G | 13680811.38 | 13680811.47 | 13680811.59 | 0.0140 | 0.0128 |
| Jupiter | 32749-03-05 17:17 G | 13682449.99 | 13682450.22 | 13682450.44 | 0.0533 | 0.0070 |
| Jupiter | 32754-08-21 01:26 G | 13684444.37 | 13684444.56 | 13684444.76 | 0.0493 | 0.0287 |
| Jupiter | 32755-09-21 00:14 G | 13684840.32 | 13684840.51 | 13684840.71 | 0.0495 | 0.0241 |
| Saturn | 32756-02-18 13:12 G | 13684990.81 | 13684991.05 | 13684991.29 | 0.0292 | 0.0012 |

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| Jupiter | 32761-03-11 02:09 G | 13686838.36 | 13686838.59 | 13686838.83 | 0.0533 | 0.0062 |
| Jupiter | 32766-08-25 03:50 G | 13688831.47 | 13688831.66 | 13688831.86 | 0.0493 | 0.0240 |
| Jupiter | 32767-09-25 11:17 G | 13689227.79 | 13689227.97 | 13689228.16 | 0.0496 | 0.0315 |
| Saturn | 32771-08-17 04:33 G | 13690649.48 | 13690649.69 | 13690649.92 | 0.0268 | 0.0123 |
| Jupiter | 32772-02-08 04:19 G | 13690824.60 | 13690824.68 | 13690824.75 | 0.0533 | 0.0502 |
| Jupiter | 32773-03-15 23:45 G | 13691226.28 | 13691226.49 | 13691226.72 | 0.0532 | 0.0182 |
| Neptune | 32774-07-04 14:24 G | 13691702.03 | 13691702.10 | 13691702.24 | 0.0088 | 0.0081 |
| Neptune | 32775-07-07 07:12 G | 13692069.67 | 13692069.80 | 13692069.92 | 0.0088 | 0.0075 |
| Neptune | 32776-07-08 10:33 G | 13692436.75 | 13692436.94 | 13692437.17 | 0.0088 | 0.0052 |
| Neptune | 32777-07-11 04:19 G | 13692804.48 | 13692804.68 | 13692804.92 | 0.0088 | 0.0046 |
| Neptune | 32778-07-13 08:24 G | 13693171.62 | 13693171.85 | 13693172.11 | 0.0088 | 0.0023 |
| Jupiter | 32778-08-29 18:43 G | 13693219.05 | 13693219.28 | 13693219.50 | 0.0493 | 0.0135 |
| Neptune | 32779-07-16 00:00 G | 13693539.25 | 13693539.50 | 13693539.77 | 0.0088 | 0.0017 |
| Jupiter | 32779-09-29 15:07 G | 13693614.97 | 13693615.13 | 13693615.29 | 0.0497 | 0.0351 |
| Neptune | 32780-07-17 07:41 G | 13693906.57 | 13693906.82 | 13693907.07 | 0.0088 | 0.0006 |
| Mars | 32780-12-30 10:33 G | 13694072.74 | 13694072.94 | 13694073.15 | 0.1836 | 0.0175 |
| Neptune | 32781-07-19 18:43 G | 13694274.02 | 13694274.28 | 13694274.55 | 0.0088 | 0.0012 |
| Neptune | 32782-07-22 07:12 G | 13694641.58 | 13694641.80 | 13694642.04 | 0.0088 | 0.0036 |
| Neptune | 32783-07-24 12:43 G | 13695008.82 | 13695009.03 | 13695009.29 | 0.0088 | 0.0042 |
| Jupiter | 32784-02-13 03:21 G | 13695212.52 | 13695212.64 | 13695212.77 | 0.0533 | 0.0445 |
| Neptune | 32784-07-26 05:02 G | 13695376.56 | 13695376.71 | 13695376.90 | 0.0088 | 0.0065 |
| Saturn | 32785-02-11 11:45 G | 13695576.84 | 13695576.99 | 13695577.18 | 0.0294 | 0.0216 |
| Jupiter | 32785-03-21 11:17 G | 13695614.77 | 13695614.97 | 13695615.18 | 0.0531 | 0.0232 |
| Neptune | 32785-07-28 08:38 G | 13695743.72 | 13695743.86 | 13695744.03 | 0.0088 | 0.0070 |
| Saturn | 32786-02-25 17:02 G | 13695956.14 | 13695956.21 | 13695956.30 | 0.0290 | 0.0274 |
| Uranus | 32786-02-25 20:38 G | 13695956.17 | 13695956.36 | 13695956.60 | 0.0137 | 0.0081 * |
| Uranus | 32787-03-02 13:26 G | 13696325.82 | 13696326.06 | 13696326.30 | 0.0138 | 0.0018 |
| Uranus | 32788-03-06 01:55 G | 13696695.37 | 13696695.58 | 13696695.83 | 0.0138 | 0.0068 |
| Uranus | 32789-03-10 18:00 G | 13697065.17 | 13697065.25 | 13697065.35 | 0.0138 | 0.0129 |
| Jupiter | 32790-09-02 16:05 G | 13697605.93 | 13697606.17 | 13697606.40 | 0.0493 | 0.0041 |

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| Jupiter | 32791-10-04 05:45 G | 13698002.61 | 13698002.74 | 13698002.88 | 0.0498 | 0.0398 |
| Jupiter | 32796-02-18 15:21 G | 13699600.96 | 13699601.14 | 13699601.32 | 0.0533 | 0.0320 |
| Jupiter | 32797-03-26 11:02 G | 13700002.76 | 13700002.96 | 13700003.16 | 0.0530 | 0.0298 |
| Saturn | 32801-08-23 07:41 G | 13701613.61 | 13701613.82 | 13701614.05 | 0.0270 | 0.0104 |
| Jupiter | 32802-09-07 06:29 G | 13701993.54 | 13701993.77 | 13701994.00 | 0.0494 | 0.0012 |
| Jupiter | 32803-10-08 08:53 G | 13702389.85 | 13702389.87 | 13702389.89 | 0.0499 | 0.0496 |
| Jupiter | 32808-02-23 10:19 G | 13703988.71 | 13703988.93 | 13703989.16 | 0.0533 | 0.0204 |
| Jupiter | 32809-03-31 08:38 G | 13704390.73 | 13704390.86 | 13704391.00 | 0.0529 | 0.0422 |
| Jupiter | 32813-08-11 10:48 G | 13705984.82 | 13705984.95 | 13705985.09 | 0.0493 | 0.0398 |
| Jupiter | 32814-09-11 11:31 G | 13706380.74 | 13706380.98 | 13706381.22 | 0.0494 | 0.0050 |
| Saturn | 32815-02-20 04:48 G | 13706542.47 | 13706542.70 | 13706542.93 | 0.0292 | 0.0071 |
| Jupiter | 32820-02-28 12:57 G | 13708376.83 | 13708377.04 | 13708377.26 | 0.0533 | 0.0151 |
| Jupiter | 32821-04-05 14:09 G | 13708779.07 | 13708779.09 | 13708779.12 | 0.0528 | 0.0525 |
| Jupiter | 32825-08-15 22:33 G | 13710372.26 | 13710372.44 | 13710372.62 | 0.0493 | 0.0328 |
| Uranus | 32825-08-27 07:12 G | 13710383.64 | 13710383.80 | 13710383.97 | 0.0141 | 0.0105 |
| Uranus | 32826-09-01 02:38 G | 13710753.35 | 13710753.61 | 13710753.87 | 0.0141 | 0.0014 |
| Jupiter | 32826-09-15 19:55 G | 13710768.11 | 13710768.33 | 13710768.54 | 0.0494 | 0.0131 |
| Uranus | 32827-09-05 19:12 G | 13711123.08 | 13711123.30 | 13711123.53 | 0.0140 | 0.0055 |
| Uranus | 32828-09-09 14:53 G | 13711493.03 | 13711493.12 | 13711493.22 | 0.0140 | 0.0130 |
| Saturn | 32830-08-18 12:29 G | 13712200.78 | 13712201.02 | 13712201.27 | 0.0269 | 0.0067 |
| Jupiter | 32832-03-04 22:05 G | 13712765.19 | 13712765.42 | 13712765.66 | 0.0533 | 0.0082 |
| Jupiter | 32837-08-20 00:29 G | 13714759.35 | 13714759.52 | 13714759.71 | 0.0493 | 0.0299 |
| Jupiter | 32838-09-20 06:57 G | 13715155.58 | 13715155.79 | 13715156.00 | 0.0495 | 0.0241 |
| Saturn | 32844-02-13 21:50 G | 13717128.20 | 13717128.41 | 13717128.63 | 0.0293 | 0.0154 |
| Jupiter | 32844-03-09 21:36 G | 13717153.17 | 13717153.40 | 13717153.63 | 0.0533 | 0.0053 |
| Jupiter | 32849-08-24 11:45 G | 13719146.79 | 13719146.99 | 13719147.19 | 0.0493 | 0.0246 |
| Pluto | 32850-03-12 00:14 G | 13719346.25 | 13719346.51 | 13719346.78 | 0.0065 | 0.0015 |
| Jupiter | 32850-09-24 07:12 G | 13719542.63 | 13719542.80 | 13719542.98 | 0.0496 | 0.0311 |
| Jupiter | 32855-02-06 23:17 G | 13721139.41 | 13721139.47 | 13721139.54 | 0.0533 | 0.0511 |
| Jupiter | 32856-03-15 08:09 G | 13721541.62 | 13721541.84 | 13721542.06 | 0.0532 | 0.0171 |

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| Neptune | 32857-01-02 04:05 G | 13721834.65 | 13721834.67 | 13721834.75 | 0.0090 | 0.0088 |
| Neptune | 32858-01-04 10:19 G | 13722201.81 | 13722201.93 | 13722202.07 | 0.0090 | 0.0076 |
| Neptune | 32859-01-07 05:17 G | 13722569.53 | 13722569.72 | 13722569.94 | 0.0090 | 0.0056 |
| Saturn | 32859-08-13 16:19 G | 13722788.07 | 13722788.18 | 13722788.30 | 0.0267 | 0.0232 |
| Neptune | 32860-01-09 13:26 G | 13722936.85 | 13722937.06 | 13722937.28 | 0.0090 | 0.0045 |
| Saturn | 32860-08-24 22:19 G | 13723165.25 | 13723165.43 | 13723165.63 | 0.0270 | 0.0162 |
| Neptune | 32861-01-11 04:48 G | 13723304.44 | 13723304.70 | 13723304.95 | 0.0090 | 0.0025 |
| Jupiter | 32861-08-28 12:14 G | 13723533.78 | 13723534.01 | 13723534.23 | 0.0493 | 0.0142 |
| Neptune | 32862-01-13 16:33 G | 13723671.95 | 13723672.19 | 13723672.44 | 0.0090 | 0.0015 |
| Jupiter | 32862-09-28 23:45 G | 13723930.32 | 13723930.49 | 13723930.66 | 0.0497 | 0.0343 |
| Neptune | 32863-01-16 03:21 G | 13724039.38 | 13724039.64 | 13724039.91 | 0.0090 | 0.0007 |
| Neptune | 32864-01-18 20:38 G | 13724407.11 | 13724407.36 | 13724407.61 | 0.0090 | 0.0017 |
| Neptune | 32865-01-20 03:21 G | 13724774.42 | 13724774.64 | 13724774.90 | 0.0090 | 0.0039 |
| Neptune | 32866-01-22 23:31 G | 13725142.27 | 13725142.48 | 13725142.71 | 0.0090 | 0.0048 |
| Neptune | 32867-01-25 05:17 G | 13725509.59 | 13725509.72 | 13725509.91 | 0.0090 | 0.0070 |
| Jupiter | 32867-02-12 06:14 G | 13725527.65 | 13725527.76 | 13725527.88 | 0.0533 | 0.0457 |
| Neptune | 32868-01-28 00:57 G | 13725877.43 | 13725877.54 | 13725877.69 | 0.0090 | 0.0078 |
| Jupiter | 32868-03-20 01:55 G | 13725929.36 | 13725929.58 | 13725929.81 | 0.0531 | 0.0217 |
| Uranus | 32870-02-26 11:17 G | 13726637.77 | 13726637.97 | 13726638.20 | 0.0137 | 0.0080 |
| Uranus | 32871-03-03 04:33 G | 13727007.44 | 13727007.69 | 13727007.93 | 0.0138 | 0.0003 |
| Uranus | 32872-03-06 15:36 G | 13727376.93 | 13727377.15 | 13727377.40 | 0.0138 | 0.0061 |
| Jupiter | 32873-09-02 03:21 G | 13727921.42 | 13727921.64 | 13727921.87 | 0.0493 | 0.0046 |
| Saturn | 32874-02-21 21:07 G | 13728094.17 | 13728094.38 | 13728094.60 | 0.0292 | 0.0136 |
| Jupiter | 32874-10-03 02:24 G | 13728317.46 | 13728317.60 | 13728317.74 | 0.0498 | 0.0397 |
| Jupiter | 32879-02-17 02:09 G | 13729915.41 | 13729915.59 | 13729915.78 | 0.0533 | 0.0332 |
| Jupiter | 32880-03-25 04:33 G | 13730317.51 | 13730317.69 | 13730317.88 | 0.0530 | 0.0289 |
| Mars | 32881-06-30 19:55 G | 13730780.14 | 13730780.33 | 13730780.51 | 0.1708 | 0.0458 |
| Jupiter | 32885-09-06 06:29 G | 13732308.53 | 13732308.77 | 13732309.01 | 0.0493 | 0.0006 |
| Saturn | 32889-08-19 20:53 G | 13733752.12 | 13733752.37 | 13733752.62 | 0.0269 | 0.0008 |
| Jupiter | 32891-02-22 07:55 G | 13734303.62 | 13734303.83 | 13734304.03 | 0.0534 | 0.0218 |

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| Jupiter | 32892-03-30 10:48 G | 13734705.81 | 13734705.95 | 13734706.10 | 0.0530 | 0.0415 |
| Jupiter | 32896-08-10 17:45 G | 13736300.10 | 13736300.24 | 13736300.38 | 0.0493 | 0.0401 |
| Jupiter | 32897-09-10 15:07 G | 13736695.90 | 13736696.13 | 13736696.35 | 0.0494 | 0.0042 |
| Saturn | 32903-02-16 14:53 G | 13738679.89 | 13738680.12 | 13738680.35 | 0.0293 | 0.0082 |
| Jupiter | 32903-02-28 17:31 G | 13738692.01 | 13738692.23 | 13738692.46 | 0.0534 | 0.0164 |
| Jupiter | 32904-04-05 08:53 G | 13739093.83 | 13739093.87 | 13739093.92 | 0.0528 | 0.0516 |
| Jupiter | 32908-08-15 16:33 G | 13740687.03 | 13740687.19 | 13740687.36 | 0.0493 | 0.0341 |
| Uranus | 32909-08-28 22:33 G | 13741065.25 | 13741065.44 | 13741065.65 | 0.0141 | 0.0085 |
| Jupiter | 32909-09-15 22:19 G | 13741083.20 | 13741083.43 | 13741083.67 | 0.0494 | 0.0128 |
| Uranus | 32910-09-02 16:33 G | 13741434.94 | 13741435.19 | 13741435.46 | 0.0141 | 0.0019 |
| Uranus | 32911-09-07 10:05 G | 13741804.71 | 13741804.92 | 13741805.14 | 0.0140 | 0.0067 |
| Jupiter | 32915-03-05 15:50 G | 13743079.93 | 13743080.16 | 13743080.38 | 0.0533 | 0.0090 |
| Saturn | 32918-08-16 07:55 G | 13744339.66 | 13744339.83 | 13744340.02 | 0.0268 | 0.0176 |
| Saturn | 32919-08-28 10:19 G | 13744716.78 | 13744716.93 | 13744717.07 | 0.0271 | 0.0219 |
| Jupiter | 32920-08-20 06:57 G | 13745074.61 | 13745074.79 | 13745074.97 | 0.0493 | 0.0314 |
| Jupiter | 32921-09-20 01:26 G | 13745470.37 | 13745470.56 | 13745470.77 | 0.0495 | 0.0236 |
| Jupiter | 32927-03-10 21:50 G | 13747468.18 | 13747468.41 | 13747468.64 | 0.0533 | 0.0044 |
| Saturn | 32932-02-11 05:17 G | 13749266.68 | 13749266.72 | 13749266.78 | 0.0295 | 0.0288 |
| Jupiter | 32932-08-24 08:38 G | 13749461.66 | 13749461.86 | 13749462.07 | 0.0493 | 0.0253 |
| Saturn | 32933-02-24 12:14 G | 13749645.84 | 13749646.01 | 13749646.20 | 0.0291 | 0.0205 |
| Jupiter | 32933-09-24 18:14 G | 13749858.08 | 13749858.26 | 13749858.45 | 0.0496 | 0.0304 |
| Pluto | 32937-09-11 20:38 G | 13751306.28 | 13751306.36 | 13751306.51 | 0.0079 | 0.0071 |
| Jupiter | 32938-02-06 22:33 G | 13751454.41 | 13751454.44 | 13751454.48 | 0.0532 | 0.0525 |
| Pluto | 32938-09-13 17:31 G | 13751673.18 | 13751673.23 | 13751673.31 | 0.0079 | 0.0076 |
| Jupiter | 32939-03-15 17:45 G | 13751856.02 | 13751856.24 | 13751856.48 | 0.0532 | 0.0156 |
| Neptune | 32939-07-07 06:00 G | 13751969.66 | 13751969.75 | 13751969.87 | 0.0088 | 0.0080 |
| Neptune | 32940-07-08 23:17 G | 13752337.31 | 13752337.47 | 13752337.66 | 0.0088 | 0.0065 |
| Neptune | 32941-07-11 04:33 G | 13752704.50 | 13752704.69 | 13752704.91 | 0.0088 | 0.0051 |
| Neptune | 32942-07-13 18:57 G | 13753072.07 | 13753072.29 | 13753072.56 | 0.0088 | 0.0037 |
| Neptune | 32943-07-16 04:19 G | 13753439.44 | 13753439.68 | 13753439.93 | 0.0088 | 0.0022 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 32944-07-17 13:41 G | 13753806.81 | 13753807.07 | 13753807.34 | 0.0088 | 0.0006 |
| Jupiter | 32944-08-28 22:19 G | 13753849.22 | 13753849.43 | 13753849.65 | 0.0493 | 0.0148 |
| Neptune | 32945-07-20 03:21 G | 13754174.40 | 13754174.64 | 13754174.90 | 0.0088 | 0.0009 |
| Jupiter | 32945-09-28 18:29 G | 13754245.10 | 13754245.27 | 13754245.45 | 0.0496 | 0.0335 |
| Neptune | 32946-07-22 08:09 G | 13754541.60 | 13754541.84 | 13754542.11 | 0.0088 | 0.0024 |
| Neptune | 32947-07-25 01:26 G | 13754909.34 | 13754909.56 | 13754909.80 | 0.0088 | 0.0038 |
| Neptune | 32948-07-26 04:48 G | 13755276.51 | 13755276.70 | 13755276.92 | 0.0088 | 0.0052 |
| Saturn | 32948-08-22 09:50 G | 13755303.68 | 13755303.91 | 13755304.15 | 0.0270 | 0.0052 |
| Neptune | 32949-07-28 21:36 G | 13755644.25 | 13755644.40 | 13755644.59 | 0.0088 | 0.0067 |
| Jupiter | 32950-02-11 17:45 G | 13755842.13 | 13755842.24 | 13755842.36 | 0.0533 | 0.0469 |
| Neptune | 32950-07-31 03:07 G | 13756011.55 | 13756011.63 | 13756011.74 | 0.0088 | 0.0081 |
| Jupiter | 32951-03-21 00:00 G | 13756244.29 | 13756244.50 | 13756244.70 | 0.0532 | 0.0205 |
| Uranus | 32954-02-28 00:43 G | 13757319.32 | 13757319.53 | 13757319.77 | 0.0137 | 0.0068 |
| Uranus | 32955-03-04 18:57 G | 13757689.05 | 13757689.29 | 13757689.54 | 0.0138 | 0.0006 |
| Uranus | 32956-03-08 05:31 G | 13758058.52 | 13758058.73 | 13758058.95 | 0.0138 | 0.0080 |
| Jupiter | 32956-09-02 01:12 G | 13758236.31 | 13758236.55 | 13758236.79 | 0.0493 | 0.0056 |
| Jupiter | 32957-10-03 09:07 G | 13758632.75 | 13758632.88 | 13758633.03 | 0.0497 | 0.0395 |
| Mars | 32960-07-04 03:07 G | 13759637.51 | 13759637.63 | 13759637.75 | 0.1703 | 0.1280 |
| Jupiter | 32962-02-17 03:36 G | 13760230.48 | 13760230.65 | 13760230.83 | 0.0534 | 0.0338 |
| Saturn | 32962-02-18 13:12 G | 13760231.82 | 13760232.05 | 13760232.29 | 0.0292 | 0.0010 |
| Jupiter | 32963-03-26 06:57 G | 13760632.59 | 13760632.79 | 13760633.00 | 0.0531 | 0.0280 |
| Jupiter | 32968-09-06 07:12 G | 13762623.57 | 13762623.80 | 13762624.02 | 0.0493 | 0.0014 |
| Jupiter | 32969-10-07 12:14 G | 13763019.99 | 13763020.01 | 13763020.03 | 0.0498 | 0.0495 |
| Jupiter | 32974-02-22 09:50 G | 13764618.69 | 13764618.91 | 13764619.13 | 0.0534 | 0.0225 |
| Jupiter | 32975-03-31 04:33 G | 13765020.55 | 13765020.69 | 13765020.84 | 0.0530 | 0.0413 |
| Saturn | 32977-08-17 19:26 G | 13765891.09 | 13765891.31 | 13765891.54 | 0.0268 | 0.0117 |
| Jupiter | 32979-08-11 11:31 G | 13766614.87 | 13766614.98 | 13766615.11 | 0.0493 | 0.0413 |
| Jupiter | 32980-09-10 17:31 G | 13767010.99 | 13767011.23 | 13767011.47 | 0.0494 | 0.0031 |
| Jupiter | 32986-02-27 04:19 G | 13769006.46 | 13769006.68 | 13769006.89 | 0.0533 | 0.0177 |
| Jupiter | 32987-04-05 08:38 G | 13769408.80 | 13769408.86 | 13769408.93 | 0.0529 | 0.0506 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 32991-02-12 22:05 G | 13770818.26 | 13770818.42 | 13770818.60 | 0.0294 | 0.0214 |
| Jupiter | 32991-08-16 03:07 G | 13771002.47 | 13771002.63 | 13771002.80 | 0.0493 | 0.0355 |
| Saturn | 32992-02-27 03:36 G | 13771197.57 | 13771197.65 | 13771197.72 | 0.0290 | 0.0276 |
| Jupiter | 32992-09-14 21:21 G | 13771398.17 | 13771398.39 | 13771398.61 | 0.0494 | 0.0123 |
| Uranus | 32993-08-29 14:38 G | 13771746.93 | 13771747.11 | 13771747.31 | 0.0141 | 0.0092 |
| Uranus | 32994-09-03 07:55 G | 13772116.57 | 13772116.83 | 13772117.09 | 0.0141 | 0.0001 |
| Uranus | 32995-09-08 02:24 G | 13772486.40 | 13772486.60 | 13772486.83 | 0.0141 | 0.0069 |
| Jupiter | 32998-03-04 13:26 G | 13773394.83 | 13773395.06 | 13773395.29 | 0.0533 | 0.0105 |

34TH MILLENNIUM CE

This is a list of transits of Moon in the 34th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 33003-08-21 04:05 G | | 13775389.49 | 13775389.67 | 13775389.84 | 0.0493 | 0.0326 | |
| Jupiter | 33004-09-20 11:45 G | | 13775785.79 | 13775785.99 | 13775786.21 | 0.0495 | 0.0230 | |
| Saturn | 33007-08-26 01:55 G | | 13776855.37 | 13776855.58 | 13776855.80 | 0.0270 | 0.0113 | |
| Jupiter | 33010-03-10 09:50 G | | 13777782.67 | 13777782.91 | 13777783.14 | 0.0533 | 0.0034 | |
| Jupiter | 33015-08-25 17:31 G | | 13779777.04 | 13779777.23 | 13779777.43 | 0.0493 | 0.0260 | |
| Jupiter | 33016-09-24 12:00 G | | 13780172.81 | 13780173.00 | 13780173.19 | 0.0495 | 0.0295 | |
| Saturn | 33021-02-21 13:12 G | | 13781783.82 | 13781784.05 | 13781784.29 | 0.0292 | 0.0068 | |
| Neptune | 33022-01-05 18:00 G | | 13782102.24 | 13782102.25 | 13782102.33 | 0.0090 | 0.0089 | |
| Jupiter | 33022-03-15 20:24 G | | 13782171.13 | 13782171.35 | 13782171.56 | 0.0533 | 0.0146 | |
| Neptune | 33023-01-08 03:50 G | | 13782469.50 | 13782469.66 | 13782469.85 | 0.0090 | 0.0065 | |
| Neptune | 33024-01-10 17:31 G | | 13782837.05 | 13782837.23 | 13782837.46 | 0.0090 | 0.0058 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 33025-01-12 07:55 G | 13783204.62 | 13783204.83 | 13783205.08 | 0.0090 | 0.0034 |
| Neptune | 33026-01-14 17:31 G | 13783571.98 | 13783572.23 | 13783572.49 | 0.0090 | 0.0026 |
| Neptune | 33027-01-17 11:45 G | 13783939.74 | 13783939.99 | 13783940.24 | 0.0090 | 0.0001 |
| Jupiter | 33027-08-29 17:45 G | 13784164.01 | 13784164.24 | 13784164.47 | 0.0493 | 0.0156 |
| Neptune | 33028-01-19 17:45 G | 13784306.98 | 13784307.24 | 13784307.50 | 0.0090 | 0.0006 |
| Jupiter | 33028-09-29 00:43 G | 13784560.36 | 13784560.53 | 13784560.70 | 0.0496 | 0.0323 |
| Neptune | 33029-01-21 13:12 G | 13784674.82 | 13784675.05 | 13784675.31 | 0.0090 | 0.0030 |
| Neptune | 33030-01-23 19:26 G | 13785042.09 | 13785042.31 | 13785042.55 | 0.0090 | 0.0038 |
| Neptune | 33031-01-26 13:41 G | 13785409.90 | 13785410.07 | 13785410.28 | 0.0090 | 0.0061 |
| Neptune | 33032-01-28 22:48 G | 13785777.31 | 13785777.45 | 13785777.62 | 0.0090 | 0.0070 |
| Jupiter | 33033-02-11 22:19 G | 13786157.34 | 13786157.43 | 13786157.53 | 0.0533 | 0.0476 |
| Jupiter | 33034-03-21 00:29 G | 13786559.30 | 13786559.52 | 13786559.75 | 0.0532 | 0.0196 |
| Saturn | 33036-08-20 01:12 G | 13787442.30 | 13787442.55 | 13787442.80 | 0.0269 | 0.0058 |
| Uranus | 33038-03-01 12:43 G | 13788000.82 | 13788001.03 | 13788001.27 | 0.0137 | 0.0068 |
| Uranus | 33039-03-06 07:26 G | 13788370.56 | 13788370.81 | 13788371.06 | 0.0137 | 0.0012 |
| Jupiter | 33039-09-03 03:21 G | 13788551.42 | 13788551.64 | 13788551.87 | 0.0493 | 0.0067 |
| Uranus | 33040-03-09 16:19 G | 13788739.97 | 13788740.18 | 13788740.41 | 0.0138 | 0.0072 |
| Jupiter | 33040-10-03 06:00 G | 13788947.60 | 13788947.75 | 13788947.90 | 0.0497 | 0.0389 |
| Jupiter | 33045-02-16 21:36 G | 13790545.22 | 13790545.40 | 13790545.59 | 0.0533 | 0.0349 |
| Jupiter | 33046-03-25 19:12 G | 13790947.11 | 13790947.30 | 13790947.50 | 0.0531 | 0.0270 |
| Saturn | 33050-02-15 13:26 G | 13792369.85 | 13792370.06 | 13792370.29 | 0.0294 | 0.0142 |
| Jupiter | 33051-09-07 14:24 G | 13792938.86 | 13792939.10 | 13792939.34 | 0.0493 | 0.0029 |
| Jupiter | 33057-02-21 20:38 G | 13794933.16 | 13794933.36 | 13794933.56 | 0.0533 | 0.0243 |
| Jupiter | 33058-03-31 02:53 G | 13795335.47 | 13795335.62 | 13795335.77 | 0.0530 | 0.0406 |
| Jupiter | 33062-08-11 23:02 G | 13796930.34 | 13796930.46 | 13796930.58 | 0.0494 | 0.0419 |
| Jupiter | 33063-09-11 16:48 G | 13797325.98 | 13797326.20 | 13797326.43 | 0.0493 | 0.0021 |
| Mars | 33064-12-31 18:29 G | 13797803.08 | 13797803.27 | 13797803.46 | 0.1826 | 0.0588 |
| Saturn | 33065-08-15 10:19 G | 13798029.81 | 13798029.93 | 13798030.07 | 0.0267 | 0.0221 |
| Saturn | 33066-08-27 14:09 G | 13798406.91 | 13798407.09 | 13798407.29 | 0.0271 | 0.0172 |
| Jupiter | 33069-02-27 05:31 G | 13799321.51 | 13799321.73 | 13799321.95 | 0.0534 | 0.0194 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 33070-04-04 22:05 G | 13799723.34 | 13799723.42 | 13799723.50 | 0.0529 | 0.0497 |
| Jupiter | 33074-08-15 23:45 G | 13801317.34 | 13801317.49 | 13801317.65 | 0.0493 | 0.0366 |
| Jupiter | 33075-09-16 07:12 G | 13801713.57 | 13801713.80 | 13801714.03 | 0.0494 | 0.0118 |
| Uranus | 33077-08-31 03:07 G | 13802428.42 | 13802428.63 | 13802428.84 | 0.0142 | 0.0073 |
| Uranus | 33078-09-04 18:57 G | 13802798.03 | 13802798.29 | 13802798.55 | 0.0141 | 0.0008 |
| Uranus | 33079-09-09 14:38 G | 13803167.92 | 13803168.11 | 13803168.32 | 0.0141 | 0.0080 |
| Saturn | 33080-02-24 07:12 G | 13803335.58 | 13803335.80 | 13803336.02 | 0.0291 | 0.0137 |
| Jupiter | 33081-03-04 04:48 G | 13803709.47 | 13803709.70 | 13803709.94 | 0.0534 | 0.0114 |
| Jupiter | 33086-08-20 12:00 G | 13805704.84 | 13805705.00 | 13805705.17 | 0.0493 | 0.0338 |
| Jupiter | 33087-09-20 05:31 G | 13806100.52 | 13806100.73 | 13806100.94 | 0.0494 | 0.0222 |
| Jupiter | 33093-03-09 15:50 G | 13808097.94 | 13808098.16 | 13808098.39 | 0.0533 | 0.0031 |
| Saturn | 33095-08-22 06:29 G | 13808993.53 | 13808993.77 | 13808994.02 | 0.0269 | 0.0005 |
| Pluto | 33096-03-14 22:19 G | 13809199.19 | 13809199.43 | 13809199.69 | 0.0065 | 0.0018 |
| Jupiter | 33098-08-24 15:07 G | 13810091.94 | 13810092.13 | 13810092.34 | 0.0493 | 0.0266 |
| Jupiter | 33099-09-24 21:07 G | 13810488.20 | 13810488.38 | 13810488.57 | 0.0495 | 0.0284 |
| Neptune | 33103-07-08 18:57 G | 13811870.25 | 13811870.29 | 13811870.39 | 0.0088 | 0.0085 |
| Neptune | 33104-07-10 00:57 G | 13812237.45 | 13812237.54 | 13812237.66 | 0.0088 | 0.0079 |
| Jupiter | 33105-03-15 13:26 G | 13812485.83 | 13812486.06 | 13812486.30 | 0.0532 | 0.0130 |
| Neptune | 33105-07-12 13:41 G | 13812604.89 | 13812605.07 | 13812605.30 | 0.0088 | 0.0056 |
| Neptune | 33106-07-15 00:29 G | 13812972.31 | 13812972.52 | 13812972.72 | 0.0088 | 0.0049 |
| Neptune | 33107-07-17 08:24 G | 13813339.61 | 13813339.85 | 13813340.12 | 0.0088 | 0.0026 |
| Neptune | 33108-07-19 00:00 G | 13813707.26 | 13813707.50 | 13813707.75 | 0.0088 | 0.0020 |
| Saturn | 33109-02-18 07:26 G | 13813921.58 | 13813921.81 | 13813922.04 | 0.0294 | 0.0073 |
| Neptune | 33109-07-21 04:33 G | 13814074.43 | 13814074.69 | 13814074.96 | 0.0088 | 0.0004 |
| Neptune | 33110-07-23 22:05 G | 13814442.17 | 13814442.42 | 13814442.68 | 0.0088 | 0.0010 |
| Jupiter | 33110-08-30 01:41 G | 13814479.36 | 13814479.57 | 13814479.79 | 0.0493 | 0.0160 |
| Neptune | 33111-07-26 01:41 G | 13814809.35 | 13814809.57 | 13814809.82 | 0.0088 | 0.0034 |
| Jupiter | 33111-09-30 03:07 G | 13814875.45 | 13814875.63 | 13814875.82 | 0.0496 | 0.0314 |
| Neptune | 33112-07-27 18:00 G | 13815177.03 | 13815177.25 | 13815177.50 | 0.0088 | 0.0040 |
| Neptune | 33113-07-30 00:00 G | 13815544.35 | 13815544.50 | 13815544.69 | 0.0088 | 0.0064 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 33114-08-01 11:31 G | 13815911.85 | 13815911.98 | 13815912.17 | 0.0088 | 0.0070 |
| Jupiter | 33116-02-12 14:38 G | 13816472.02 | 13816472.11 | 13816472.20 | 0.0533 | 0.0490 |
| Jupiter | 33117-03-20 14:09 G | 13816873.88 | 13816874.09 | 13816874.30 | 0.0532 | 0.0181 |
| Uranus | 33121-02-26 18:29 G | 13818313.21 | 13818313.27 | 13818313.34 | 0.0136 | 0.0131 |
| Uranus | 33122-03-03 00:43 G | 13818682.30 | 13818682.53 | 13818682.77 | 0.0137 | 0.0059 |
| Jupiter | 33122-09-03 11:45 G | 13818866.76 | 13818866.99 | 13818867.23 | 0.0493 | 0.0078 |
| Uranus | 33123-03-07 20:09 G | 13819052.09 | 13819052.34 | 13819052.59 | 0.0137 | 0.0006 |
| Jupiter | 33123-10-04 13:26 G | 13819262.93 | 13819263.06 | 13819263.20 | 0.0497 | 0.0389 |
| Uranus | 33124-03-11 04:19 G | 13819421.49 | 13819421.68 | 13819421.88 | 0.0138 | 0.0090 |
| Saturn | 33124-08-17 19:26 G | 13819581.13 | 13819581.31 | 13819581.51 | 0.0267 | 0.0170 |
| Saturn | 33125-08-29 17:45 G | 13819958.11 | 13819958.24 | 13819958.39 | 0.0271 | 0.0225 |
| Jupiter | 33128-02-17 15:07 G | 13820859.97 | 13820860.13 | 13820860.29 | 0.0533 | 0.0365 |
| Jupiter | 33129-03-25 22:33 G | 13821262.24 | 13821262.44 | 13821262.65 | 0.0531 | 0.0263 |
| Jupiter | 33134-09-07 14:09 G | 13823253.87 | 13823254.09 | 13823254.32 | 0.0493 | 0.0040 |
| Jupiter | 33135-10-08 23:17 G | 13823650.44 | 13823650.47 | 13823650.50 | 0.0498 | 0.0492 |
| Saturn | 33138-02-12 10:33 G | 13824507.93 | 13824507.94 | 13824507.97 | 0.0295 | 0.0294 |
| Saturn | 33139-02-26 17:31 G | 13824887.06 | 13824887.23 | 13824887.42 | 0.0291 | 0.0201 |
| Jupiter | 33140-02-23 01:55 G | 13825248.37 | 13825248.58 | 13825248.79 | 0.0534 | 0.0255 |
| Jupiter | 33141-03-30 20:53 G | 13825650.23 | 13825650.37 | 13825650.53 | 0.0531 | 0.0402 |
| Jupiter | 33145-08-11 19:55 G | 13827245.22 | 13827245.33 | 13827245.46 | 0.0493 | 0.0425 |
| Jupiter | 33146-09-12 03:21 G | 13827641.40 | 13827641.64 | 13827641.87 | 0.0493 | 0.0014 |
| Jupiter | 33152-02-28 00:57 G | 13829636.33 | 13829636.54 | 13829636.76 | 0.0534 | 0.0207 |
| Jupiter | 33153-04-05 07:41 G | 13830038.75 | 13830038.82 | 13830038.91 | 0.0530 | 0.0495 |
| Saturn | 33154-08-24 13:55 G | 13830544.85 | 13830545.08 | 13830545.31 | 0.0269 | 0.0046 |
| Jupiter | 33157-08-16 10:48 G | 13831632.81 | 13831632.95 | 13831633.10 | 0.0493 | 0.0378 |
| Jupiter | 33158-09-16 04:19 G | 13832028.46 | 13832028.68 | 13832028.91 | 0.0494 | 0.0114 |
| Uranus | 33161-09-01 14:09 G | 13833109.90 | 13833110.09 | 13833110.30 | 0.0142 | 0.0084 |
| Uranus | 33162-09-06 05:17 G | 13833479.46 | 13833479.72 | 13833479.98 | 0.0141 | 0.0009 |
| Uranus | 33163-09-11 02:38 G | 13833849.41 | 13833849.61 | 13833849.82 | 0.0141 | 0.0076 |
| Jupiter | 33164-03-04 08:24 G | 13834024.64 | 13834024.85 | 13834025.08 | 0.0533 | 0.0128 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 33165-04-10 01:41 G | 13834426.55 | 13834426.57 | 13834426.60 | 0.0528 | 0.0525 |
| Mars | 33165-07-04 01:12 G | 13834511.35 | 13834511.55 | 13834511.75 | 0.1715 | 0.0210 |
| Saturn | 33168-02-20 23:17 G | 13835473.23 | 13835473.47 | 13835473.71 | 0.0293 | 0.0011 |
| Jupiter | 33169-08-20 14:24 G | 13836019.93 | 13836020.10 | 13836020.28 | 0.0493 | 0.0345 |
| Jupiter | 33170-09-20 20:38 G | 13836416.16 | 13836416.36 | 13836416.57 | 0.0495 | 0.0221 |
| Jupiter | 33176-03-09 08:09 G | 13838412.60 | 13838412.84 | 13838413.09 | 0.0533 | 0.0015 |
| Jupiter | 33181-08-25 00:57 G | 13840407.35 | 13840407.54 | 13840407.73 | 0.0493 | 0.0270 |
| Jupiter | 33182-09-25 00:57 G | 13840803.34 | 13840803.54 | 13840803.74 | 0.0495 | 0.0270 |
| Saturn | 33183-08-19 20:24 G | 13841132.14 | 13841132.35 | 13841132.59 | 0.0268 | 0.0122 |
| Pluto | 33183-09-15 21:36 G | 13841159.30 | 13841159.40 | 13841159.57 | 0.0079 | 0.0068 |
| Neptune | 33187-01-08 07:41 G | 13842369.71 | 13842369.82 | 13842369.95 | 0.0090 | 0.0079 |
| Neptune | 33188-01-10 23:02 G | 13842737.30 | 13842737.46 | 13842737.65 | 0.0090 | 0.0063 |
| Jupiter | 33188-03-14 11:17 G | 13842800.75 | 13842800.97 | 13842801.19 | 0.0533 | 0.0118 |
| Neptune | 33189-01-12 06:29 G | 13843104.57 | 13843104.77 | 13843105.02 | 0.0090 | 0.0048 |
| Neptune | 33190-01-15 01:55 G | 13843472.35 | 13843472.58 | 13843472.83 | 0.0090 | 0.0031 |
| Neptune | 33191-01-17 07:41 G | 13843839.58 | 13843839.82 | 13843840.08 | 0.0090 | 0.0017 |
| Neptune | 33192-01-20 03:36 G | 13844207.39 | 13844207.65 | 13844207.91 | 0.0090 | 0.0001 |
| Neptune | 33193-01-21 10:19 G | 13844574.69 | 13844574.93 | 13844575.19 | 0.0090 | 0.0015 |
| Jupiter | 33193-08-29 11:17 G | 13844794.75 | 13844794.97 | 13844795.20 | 0.0493 | 0.0157 |
| Neptune | 33194-01-24 03:50 G | 13844942.41 | 13844942.66 | 13844942.91 | 0.0090 | 0.0034 |
| Jupiter | 33194-09-29 11:17 G | 13845190.79 | 13845190.97 | 13845191.14 | 0.0496 | 0.0309 |
| Neptune | 33195-01-26 14:09 G | 13845309.90 | 13845310.09 | 13845310.32 | 0.0090 | 0.0048 |
| Neptune | 33196-01-29 02:53 G | 13845677.45 | 13845677.62 | 13845677.81 | 0.0090 | 0.0066 |
| Neptune | 33197-01-30 18:29 G | 13846045.15 | 13846045.27 | 13846045.39 | 0.0090 | 0.0078 |
| Saturn | 33197-02-13 16:48 G | 13846059.05 | 13846059.20 | 13846059.36 | 0.0295 | 0.0235 |
| Saturn | 33198-02-28 01:55 G | 13846438.47 | 13846438.58 | 13846438.68 | 0.0291 | 0.0259 |
| Jupiter | 33199-02-11 14:24 G | 13846787.04 | 13846787.10 | 13846787.17 | 0.0533 | 0.0505 |
| Jupiter | 33200-03-19 21:50 G | 13847189.19 | 13847189.41 | 13847189.64 | 0.0532 | 0.0165 |
| Uranus | 33205-02-27 08:53 G | 13848994.79 | 13848994.87 | 13848994.96 | 0.0136 | 0.0128 |
| Jupiter | 33205-09-02 12:43 G | 13849181.81 | 13849182.03 | 13849182.26 | 0.0493 | 0.0084 |

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| Uranus | 33206-03-03 14:24 G | 13849363.87 | 13849364.10 | 13849364.34 | 0.0137 | 0.0056 |
| Jupiter | 33206-10-03 19:41 G | 13849578.17 | 13849578.32 | 13849578.47 | 0.0496 | 0.0385 |
| Uranus | 33207-03-08 09:50 G | 13849733.66 | 13849733.91 | 13849734.16 | 0.0137 | 0.0022 |
| Uranus | 33208-03-11 17:02 G | 13850103.02 | 13850103.21 | 13850103.43 | 0.0138 | 0.0083 |
| Jupiter | 33211-02-17 00:29 G | 13851175.36 | 13851175.52 | 13851175.70 | 0.0533 | 0.0369 |
| Jupiter | 33212-03-24 20:38 G | 13851577.16 | 13851577.36 | 13851577.57 | 0.0532 | 0.0260 |
| Saturn | 33213-08-25 18:43 G | 13852096.05 | 13852096.28 | 13852096.50 | 0.0269 | 0.0094 |
| Jupiter | 33217-09-07 04:48 G | 13853569.46 | 13853569.70 | 13853569.93 | 0.0493 | 0.0047 |
| Jupiter | 33218-10-08 02:53 G | 13853965.62 | 13853965.62 | 13853965.62 | 0.0497 | 0.0497 |
| Jupiter | 33223-02-21 20:38 G | 13855563.16 | 13855563.36 | 13855563.56 | 0.0533 | 0.0273 |
| Jupiter | 33224-03-30 03:36 G | 13855965.50 | 13855965.65 | 13855965.81 | 0.0530 | 0.0393 |
| Saturn | 33227-02-22 08:24 G | 13857024.61 | 13857024.85 | 13857025.09 | 0.0293 | 0.0048 |
| Jupiter | 33228-08-11 09:50 G | 13857560.81 | 13857560.91 | 13857561.02 | 0.0494 | 0.0435 |
| Jupiter | 33229-09-11 05:45 G | 13857956.51 | 13857956.74 | 13857956.97 | 0.0494 | 0.0009 |
| Jupiter | 33235-02-27 07:12 G | 13859951.60 | 13859951.80 | 13859952.01 | 0.0533 | 0.0229 |
| Jupiter | 33236-04-04 00:57 G | 13860353.44 | 13860353.54 | 13860353.64 | 0.0529 | 0.0479 |
| Jupiter | 33240-08-15 14:53 G | 13861947.98 | 13861948.12 | 13861948.28 | 0.0494 | 0.0389 |
| Jupiter | 33241-09-15 21:21 G | 13862344.17 | 13862344.39 | 13862344.61 | 0.0494 | 0.0118 |
| Saturn | 33242-08-20 15:36 G | 13862682.92 | 13862683.15 | 13862683.40 | 0.0267 | 0.0075 |
| Uranus | 33245-09-01 23:45 G | 13863791.27 | 13863791.49 | 13863791.71 | 0.0142 | 0.0067 |
| Uranus | 33246-09-06 13:12 G | 13864160.79 | 13864161.05 | 13864161.32 | 0.0141 | 0.0003 |
| Jupiter | 33247-03-04 05:02 G | 13864339.48 | 13864339.71 | 13864339.95 | 0.0533 | 0.0138 |
| Uranus | 33247-09-11 11:31 G | 13864530.81 | 13864530.98 | 13864531.19 | 0.0141 | 0.0088 |
| Jupiter | 33248-04-09 04:05 G | 13864741.63 | 13864741.67 | 13864741.71 | 0.0529 | 0.0517 |
| Jupiter | 33252-08-20 01:55 G | 13866335.43 | 13866335.58 | 13866335.74 | 0.0493 | 0.0353 |
| Jupiter | 33253-09-20 01:26 G | 13866731.34 | 13866731.56 | 13866731.78 | 0.0494 | 0.0216 |
| Saturn | 33256-02-15 21:07 G | 13867610.20 | 13867610.38 | 13867610.58 | 0.0295 | 0.0180 |
| Jupiter | 33259-03-09 12:43 G | 13868727.81 | 13868728.03 | 13868728.26 | 0.0533 | 0.0007 |
| Jupiter | 33264-08-24 12:00 G | 13870722.80 | 13870723.00 | 13870723.21 | 0.0493 | 0.0265 |
| Jupiter | 33265-09-24 10:33 G | 13871118.75 | 13871118.94 | 13871119.13 | 0.0495 | 0.0264 |

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| Neptune | 33268-07-09 10:05 G | 13872137.87 | 13872137.92 | 13872137.99 | 0.0088 | 0.0085 |
| Neptune | 33269-07-11 21:36 G | 13872505.26 | 13872505.40 | 13872505.58 | 0.0088 | 0.0067 |
| Neptune | 33270-07-14 04:33 G | 13872872.51 | 13872872.69 | 13872872.91 | 0.0088 | 0.0056 |
| Jupiter | 33271-03-14 22:48 G | 13873116.21 | 13873116.45 | 13873116.68 | 0.0533 | 0.0105 |
| Neptune | 33271-07-16 20:38 G | 13873240.15 | 13873240.36 | 13873240.61 | 0.0088 | 0.0038 |
| Saturn | 33271-08-15 18:43 G | 13873270.20 | 13873270.28 | 13873270.37 | 0.0266 | 0.0249 |
| Neptune | 33272-07-18 00:29 G | 13873607.29 | 13873607.52 | 13873607.78 | 0.0088 | 0.0027 |
| Saturn | 33272-08-26 16:05 G | 13873646.96 | 13873647.17 | 13873647.39 | 0.0269 | 0.0136 |
| Neptune | 33273-07-20 18:29 G | 13873975.01 | 13873975.27 | 13873975.53 | 0.0088 | 0.0008 |
| Neptune | 33274-07-22 22:19 G | 13874342.18 | 13874342.43 | 13874342.69 | 0.0088 | 0.0005 |
| Neptune | 33275-07-25 13:55 G | 13874709.83 | 13874710.08 | 13874710.34 | 0.0088 | 0.0023 |
| Neptune | 33276-07-26 21:21 G | 13875077.18 | 13875077.39 | 13875077.63 | 0.0088 | 0.0036 |
| Jupiter | 33276-08-28 15:36 G | 13875109.94 | 13875110.15 | 13875110.37 | 0.0493 | 0.0157 |
| Neptune | 33277-07-29 08:24 G | 13875444.66 | 13875444.85 | 13875445.08 | 0.0088 | 0.0053 |
| Jupiter | 33277-09-28 21:50 G | 13875506.22 | 13875506.41 | 13875506.60 | 0.0496 | 0.0305 |
| Neptune | 33278-07-31 21:07 G | 13875812.23 | 13875812.38 | 13875812.57 | 0.0088 | 0.0065 |
| Neptune | 33279-08-03 03:21 G | 13876179.57 | 13876179.64 | 13876179.75 | 0.0088 | 0.0082 |
| Jupiter | 33282-02-11 00:00 G | 13877102.44 | 13877102.50 | 13877102.57 | 0.0532 | 0.0513 |
| Jupiter | 33283-03-19 18:14 G | 13877504.03 | 13877504.26 | 13877504.48 | 0.0532 | 0.0149 |
| Saturn | 33286-02-23 07:12 G | 13878575.57 | 13878575.80 | 13878576.05 | 0.0293 | 0.0096 |
| Jupiter | 33288-09-02 06:43 G | 13879497.55 | 13879497.78 | 13879498.02 | 0.0493 | 0.0092 |
| Uranus | 33289-02-27 22:19 G | 13879676.33 | 13879676.43 | 13879676.58 | 0.0136 | 0.0119 |
| Jupiter | 33289-10-03 04:33 G | 13879893.56 | 13879893.69 | 13879893.83 | 0.0497 | 0.0393 |
| Uranus | 33290-03-04 04:05 G | 13880045.44 | 13880045.67 | 13880045.92 | 0.0137 | 0.0048 |
| Uranus | 33291-03-09 00:29 G | 13880415.27 | 13880415.52 | 13880415.77 | 0.0137 | 0.0019 |
| Uranus | 33292-03-12 07:26 G | 13880784.66 | 13880784.81 | 13880785.00 | 0.0138 | 0.0103 |
| Jupiter | 33294-02-15 22:05 G | 13881490.26 | 13881490.42 | 13881490.58 | 0.0532 | 0.0381 |
| Jupiter | 33295-03-25 04:48 G | 13881892.50 | 13881892.70 | 13881892.90 | 0.0531 | 0.0251 |
| Jupiter | 33300-09-07 08:09 G | 13883884.61 | 13883884.84 | 13883885.08 | 0.0493 | 0.0055 |
| Saturn | 33301-08-22 12:57 G | 13884233.81 | 13884234.04 | 13884234.28 | 0.0267 | 0.0031 |

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| Jupiter | 33306-02-22 06:57 G | 13885878.60 | 13885878.79 | 13885878.99 | 0.0533 | 0.0289 |
| Jupiter | 33307-03-31 01:41 G | 13886280.40 | 13886280.57 | 13886280.74 | 0.0531 | 0.0383 |
| Jupiter | 33311-08-12 17:17 G | 13887876.12 | 13887876.22 | 13887876.34 | 0.0494 | 0.0438 |
| Jupiter | 33312-09-11 23:45 G | 13888272.26 | 13888272.49 | 13888272.71 | 0.0493 | 0.0014 |
| Saturn | 33315-02-18 02:24 G | 13889161.39 | 13889161.60 | 13889161.81 | 0.0295 | 0.0134 |
| Jupiter | 33318-02-27 06:57 G | 13890266.58 | 13890266.79 | 13890267.01 | 0.0533 | 0.0239 |
| Jupiter | 33319-04-05 09:21 G | 13890668.80 | 13890668.89 | 13890669.00 | 0.0530 | 0.0471 |
| Jupiter | 33323-08-17 03:50 G | 13892263.54 | 13892263.66 | 13892263.79 | 0.0494 | 0.0403 |
| Jupiter | 33324-09-16 03:21 G | 13892659.41 | 13892659.64 | 13892659.87 | 0.0494 | 0.0122 |
| Uranus | 33329-09-03 12:00 G | 13894472.80 | 13894473.00 | 13894473.22 | 0.0142 | 0.0077 |
| Jupiter | 33330-03-04 16:19 G | 13894654.97 | 13894655.18 | 13894655.40 | 0.0534 | 0.0140 |
| Saturn | 33330-08-17 13:55 G | 13894820.92 | 13894821.08 | 13894821.24 | 0.0266 | 0.0205 |
| Uranus | 33330-09-08 01:12 G | 13894842.30 | 13894842.55 | 13894842.81 | 0.0141 | 0.0017 |
| Jupiter | 33331-04-10 18:00 G | 13895057.19 | 13895057.25 | 13895057.32 | 0.0529 | 0.0507 |
| Saturn | 33331-08-29 06:43 G | 13895197.61 | 13895197.78 | 13895197.98 | 0.0269 | 0.0180 |
| Uranus | 33331-09-13 00:43 G | 13895212.34 | 13895212.53 | 13895212.74 | 0.0141 | 0.0082 |
| Jupiter | 33335-08-21 15:50 G | 13896651.00 | 13896651.16 | 13896651.33 | 0.0493 | 0.0358 |
| Jupiter | 33336-09-20 14:09 G | 13897046.89 | 13897047.09 | 13897047.30 | 0.0494 | 0.0216 |
| Jupiter | 33342-03-09 22:19 G | 13899043.18 | 13899043.43 | 13899043.67 | 0.0533 | 0.0009 |
| Pluto | 33342-03-19 08:09 G | 13899052.60 | 13899052.84 | 13899053.10 | 0.0065 | 0.0013 |
| Saturn | 33345-02-25 01:55 G | 13900126.37 | 13900126.58 | 13900126.81 | 0.0293 | 0.0137 |
| Jupiter | 33347-08-25 17:17 G | 13901038.04 | 13901038.22 | 13901038.42 | 0.0494 | 0.0269 |
| Jupiter | 33348-09-25 01:12 G | 13901434.35 | 13901434.55 | 13901434.76 | 0.0495 | 0.0254 |
| Mars | 33349-01-03 05:45 G | 13901534.57 | 13901534.74 | 13901534.91 | 0.1818 | 0.0456 |
| Neptune | 33352-01-10 21:50 G | 13902637.27 | 13902637.41 | 13902637.60 | 0.0090 | 0.0069 |
| Neptune | 33353-01-12 18:00 G | 13903005.07 | 13903005.25 | 13903005.44 | 0.0090 | 0.0062 |
| Neptune | 33354-01-14 23:45 G | 13903372.27 | 13903372.49 | 13903372.74 | 0.0090 | 0.0037 |
| Jupiter | 33354-03-14 20:38 G | 13903431.13 | 13903431.36 | 13903431.58 | 0.0532 | 0.0090 |
| Neptune | 33355-01-17 18:57 G | 13903740.05 | 13903740.29 | 13903740.55 | 0.0090 | 0.0030 |
| Neptune | 33356-01-20 03:07 G | 13904107.38 | 13904107.63 | 13904107.88 | 0.0090 | 0.0004 |

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| Neptune | 33357-01-21 18:29 G | 13904475.00 | 13904475.27 | 13904475.54 | 0.0090 | 0.0003 |
| Neptune | 33358-01-24 06:14 G | 13904842.53 | 13904842.76 | 13904843.00 | 0.0090 | 0.0028 |
| Neptune | 33359-01-26 16:48 G | 13905209.97 | 13905210.20 | 13905210.46 | 0.0090 | 0.0035 |
| Jupiter | 33359-08-30 10:19 G | 13905425.71 | 13905425.93 | 13905426.15 | 0.0493 | 0.0160 |
| Neptune | 33360-01-29 09:50 G | 13905577.73 | 13905577.91 | 13905578.11 | 0.0090 | 0.0060 |
| Saturn | 33360-08-23 13:12 G | 13905784.81 | 13905785.05 | 13905785.29 | 0.0267 | 0.0012 |
| Jupiter | 33360-09-29 06:43 G | 13905821.61 | 13905821.78 | 13905821.96 | 0.0496 | 0.0302 |
| Neptune | 33361-01-30 16:48 G | 13905945.05 | 13905945.20 | 13905945.40 | 0.0090 | 0.0067 |
| Jupiter | 33365-02-10 23:45 G | 13907417.45 | 13907417.49 | 13907417.54 | 0.0532 | 0.0520 |
| Jupiter | 33366-03-20 06:57 G | 13907819.56 | 13907819.79 | 13907820.01 | 0.0532 | 0.0139 |
| Jupiter | 33371-09-03 12:00 G | 13909812.77 | 13909813.00 | 13909813.23 | 0.0493 | 0.0096 |
| Jupiter | 33372-10-03 22:48 G | 13910209.32 | 13910209.45 | 13910209.59 | 0.0496 | 0.0402 |
| Uranus | 33373-03-01 13:26 G | 13910357.95 | 13910358.06 | 13910358.21 | 0.0136 | 0.0117 |
| Saturn | 33374-02-19 03:21 G | 13910712.41 | 13910712.64 | 13910712.87 | 0.0295 | 0.0093 |
| Uranus | 33374-03-05 18:57 G | 13910727.06 | 13910727.29 | 13910727.55 | 0.0137 | 0.0043 |
| Uranus | 33375-03-10 15:36 G | 13911096.90 | 13911097.15 | 13911097.39 | 0.0137 | 0.0035 |
| Uranus | 33376-03-13 22:05 G | 13911466.26 | 13911466.42 | 13911466.62 | 0.0138 | 0.0097 |
| Jupiter | 33377-02-16 11:02 G | 13911805.81 | 13911805.96 | 13911806.13 | 0.0533 | 0.0381 |
| Jupiter | 33378-03-25 06:00 G | 13912207.53 | 13912207.75 | 13912207.96 | 0.0532 | 0.0246 |
| Jupiter | 33383-09-08 02:53 G | 13914200.39 | 13914200.62 | 13914200.85 | 0.0493 | 0.0063 |
| Jupiter | 33389-02-21 11:17 G | 13916193.77 | 13916193.97 | 13916194.17 | 0.0533 | 0.0298 |
| Saturn | 33389-08-18 03:36 G | 13916371.46 | 13916371.65 | 13916371.85 | 0.0266 | 0.0164 |
| Jupiter | 33390-03-30 15:36 G | 13916596.01 | 13916596.15 | 13916596.31 | 0.0531 | 0.0388 |
| Saturn | 33390-08-30 00:29 G | 13916748.39 | 13916748.52 | 13916748.67 | 0.0269 | 0.0218 |
| Jupiter | 33394-08-12 07:12 G | 13918191.71 | 13918191.80 | 13918191.90 | 0.0494 | 0.0449 |
| Jupiter | 33395-09-12 08:24 G | 13918587.61 | 13918587.85 | 13918588.09 | 0.0493 | 0.0015 |
| Jupiter | 33401-02-27 19:55 G | 13920582.14 | 13920582.33 | 13920582.53 | 0.0533 | 0.0252 |
| Jupiter | 33402-04-05 19:26 G | 13920984.19 | 13920984.31 | 13920984.44 | 0.0530 | 0.0451 |
| Saturn | 33404-02-28 00:00 G | 13921677.31 | 13921677.50 | 13921677.69 | 0.0293 | 0.0176 |
| Jupiter | 33406-08-17 16:33 G | 13922579.06 | 13922579.19 | 13922579.32 | 0.0494 | 0.0420 |

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| Jupiter | 33407-09-17 17:17 G | 13922975.00 | 13922975.22 | 13922975.44 | 0.0494 | 0.0125 |
| Jupiter | 33413-03-05 01:12 G | 13924970.32 | 13924970.55 | 13924970.79 | 0.0533 | 0.0142 |
| Uranus | 33413-09-05 00:43 G | 13925154.31 | 13925154.53 | 13925154.77 | 0.0142 | 0.0058 |
| Jupiter | 33414-04-10 15:50 G | 13925372.10 | 13925372.16 | 13925372.24 | 0.0528 | 0.0498 |
| Uranus | 33414-09-09 12:57 G | 13925523.79 | 13925524.04 | 13925524.30 | 0.0141 | 0.0007 |
| Uranus | 33415-09-14 12:57 G | 13925893.88 | 13925894.04 | 13925894.23 | 0.0141 | 0.0098 |
| Jupiter | 33418-08-21 20:38 G | 13926966.22 | 13926966.36 | 13926966.52 | 0.0494 | 0.0370 |
| Saturn | 33419-08-26 08:24 G | 13927335.61 | 13927335.85 | 13927336.10 | 0.0267 | 0.0050 |
| Jupiter | 33419-09-22 04:48 G | 13927362.49 | 13927362.70 | 13927362.92 | 0.0495 | 0.0209 |
| Jupiter | 33425-03-09 22:48 G | 13929358.22 | 13929358.45 | 13929358.68 | 0.0533 | 0.0004 |
| Pluto | 33429-09-19 02:53 G | 13931012.45 | 13931012.62 | 13931012.81 | 0.0079 | 0.0056 |
| Jupiter | 33430-08-26 14:24 G | 13931353.91 | 13931354.10 | 13931354.30 | 0.0494 | 0.0264 |
| Jupiter | 33431-09-26 10:05 G | 13931749.72 | 13931749.92 | 13931750.11 | 0.0495 | 0.0248 |
| Saturn | 33433-02-20 20:24 G | 13932263.10 | 13932263.35 | 13932263.60 | 0.0295 | 0.0057 |
| Neptune | 33433-07-13 00:29 G | 13932405.44 | 13932405.52 | 13932405.63 | 0.0088 | 0.0081 |
| Neptune | 33434-07-15 17:17 G | 13932773.06 | 13932773.22 | 13932773.43 | 0.0088 | 0.0060 |
| Neptune | 33435-07-17 21:07 G | 13933140.19 | 13933140.38 | 13933140.60 | 0.0088 | 0.0052 |
| Neptune | 33436-07-19 14:38 G | 13933507.88 | 13933508.11 | 13933508.37 | 0.0088 | 0.0029 |
| Jupiter | 33437-03-15 11:17 G | 13933746.74 | 13933746.97 | 13933747.20 | 0.0533 | 0.0079 |
| Neptune | 33437-07-21 19:41 G | 13933875.08 | 13933875.32 | 13933875.57 | 0.0088 | 0.0021 |
| Neptune | 33438-07-24 10:33 G | 13934242.67 | 13934242.94 | 13934243.21 | 0.0088 | 0.0002 |
| Neptune | 33439-07-26 19:26 G | 13934610.07 | 13934610.31 | 13934610.56 | 0.0088 | 0.0010 |
| Neptune | 33440-07-28 04:33 G | 13934977.45 | 13934977.69 | 13934977.95 | 0.0088 | 0.0032 |
| Neptune | 33441-07-30 18:00 G | 13935345.05 | 13935345.25 | 13935345.50 | 0.0088 | 0.0040 |
| Neptune | 33442-08-01 23:45 G | 13935712.31 | 13935712.49 | 13935712.68 | 0.0088 | 0.0062 |
| Jupiter | 33442-08-30 15:36 G | 13935740.93 | 13935741.15 | 13935741.38 | 0.0493 | 0.0165 |
| Neptune | 33443-08-04 16:33 G | 13936080.06 | 13936080.19 | 13936080.37 | 0.0088 | 0.0070 |
| Jupiter | 33443-10-01 01:12 G | 13936137.36 | 13936137.55 | 13936137.73 | 0.0495 | 0.0301 |
| Jupiter | 33448-02-12 16:48 G | 13937733.16 | 13937733.20 | 13937733.26 | 0.0532 | 0.0516 |
| Saturn | 33448-08-19 22:19 G | 13937922.23 | 13937922.43 | 13937922.66 | 0.0266 | 0.0127 |

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| Jupiter | 33449-03-20 11:02 G | 13938134.73 | 13938134.96 | 13938135.20 | 0.0532 | 0.0136 |
| Mars | 33449-07-06 22:33 G | 13938243.26 | 13938243.44 | 13938243.61 | 0.1722 | 0.0316 |
| Saturn | 33449-09-01 00:14 G | 13938299.45 | 13938299.51 | 13938299.60 | 0.0269 | 0.0255 |
| Jupiter | 33454-09-04 07:26 G | 13940128.59 | 13940128.81 | 13940129.03 | 0.0493 | 0.0109 |
| Jupiter | 33455-10-05 04:19 G | 13940524.55 | 13940524.68 | 13940524.82 | 0.0496 | 0.0406 |
| Uranus | 33457-03-03 02:38 G | 13941039.47 | 13941039.61 | 13941039.79 | 0.0137 | 0.0106 |
| Uranus | 33458-03-07 08:24 G | 13941408.61 | 13941408.85 | 13941409.10 | 0.0137 | 0.0037 |
| Uranus | 33459-03-12 05:02 G | 13941778.47 | 13941778.71 | 13941778.97 | 0.0137 | 0.0032 |
| Jupiter | 33460-02-17 16:05 G | 13942121.02 | 13942121.17 | 13942121.34 | 0.0532 | 0.0385 |
| Uranus | 33460-03-15 12:14 G | 13942147.88 | 13942148.01 | 13942148.16 | 0.0138 | 0.0115 |
| Jupiter | 33461-03-25 19:26 G | 13942523.11 | 13942523.31 | 13942523.51 | 0.0531 | 0.0248 |
| Saturn | 33463-02-28 23:17 G | 13943228.32 | 13943228.47 | 13943228.65 | 0.0293 | 0.0211 |
| Jupiter | 33466-09-08 10:33 G | 13944515.70 | 13944515.94 | 13944516.18 | 0.0494 | 0.0074 |
| Jupiter | 33472-02-23 01:12 G | 13946509.37 | 13946509.55 | 13946509.73 | 0.0532 | 0.0311 |
| Jupiter | 33473-03-30 23:31 G | 13946911.32 | 13946911.48 | 13946911.65 | 0.0530 | 0.0382 |
| Jupiter | 33477-08-12 18:57 G | 13948507.21 | 13948507.29 | 13948507.38 | 0.0495 | 0.0461 |
| Saturn | 33478-08-26 23:02 G | 13948886.22 | 13948886.46 | 13948886.70 | 0.0267 | 0.0086 |
| Jupiter | 33478-09-12 20:38 G | 13948903.13 | 13948903.36 | 13948903.58 | 0.0494 | 0.0015 |
| Jupiter | 33484-02-28 02:09 G | 13950897.38 | 13950897.59 | 13950897.80 | 0.0533 | 0.0258 |
| Jupiter | 33485-04-04 19:55 G | 13951299.22 | 13951299.33 | 13951299.46 | 0.0530 | 0.0447 |
| Jupiter | 33489-08-17 00:00 G | 13952894.39 | 13952894.50 | 13952894.61 | 0.0494 | 0.0431 |
| Jupiter | 33490-09-17 08:38 G | 13953290.63 | 13953290.86 | 13953291.10 | 0.0494 | 0.0128 |
| Saturn | 33492-02-22 11:45 G | 13953813.74 | 13953813.99 | 13953814.24 | 0.0295 | 0.0022 |
| Jupiter | 33496-03-04 02:53 G | 13955285.40 | 13955285.62 | 13955285.84 | 0.0533 | 0.0141 |
| Uranus | 33496-08-31 12:29 G | 13955465.95 | 13955466.02 | 13955466.10 | 0.0142 | 0.0135 |
| Jupiter | 33497-04-10 07:41 G | 13955687.75 | 13955687.82 | 13955687.91 | 0.0529 | 0.0495 |
| Uranus | 33497-09-05 14:53 G | 13955835.91 | 13955836.12 | 13955836.36 | 0.0142 | 0.0066 |
| Uranus | 33498-09-10 03:07 G | 13956205.38 | 13956205.63 | 13956205.89 | 0.0141 | 0.0028 |
| Uranus | 33499-09-15 03:50 G | 13956575.48 | 13956575.66 | 13956575.86 | 0.0141 | 0.0092 |
| Jupiter | 33501-08-22 17:31 G | 13957282.08 | 13957282.23 | 13957282.38 | 0.0494 | 0.0372 |

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| Jupiter | 33502-09-22 12:29 G | 13957677.81 | 13957678.02 | 13957678.23 | 0.0494 | 0.0203 |
| Saturn | 33507-08-22 23:02 G | 13959473.24 | 13959473.46 | 13959473.69 | 0.0266 | 0.0088 |
| Jupiter | 33508-03-10 16:19 G | 13959673.95 | 13959674.18 | 13959674.42 | 0.0533 | 0.0009 |
| Jupiter | 33513-08-26 19:12 G | 13961669.11 | 13961669.30 | 13961669.50 | 0.0493 | 0.0267 |
| Jupiter | 33514-09-27 05:02 G | 13962065.50 | 13962065.71 | 13962065.91 | 0.0495 | 0.0236 |
| Neptune | 33516-01-12 09:36 G | 13962537.83 | 13962537.90 | 13962538.02 | 0.0090 | 0.0083 |
| Neptune | 33517-01-13 16:05 G | 13962905.02 | 13962905.17 | 13962905.34 | 0.0090 | 0.0069 |
| Neptune | 33518-01-16 10:05 G | 13963272.71 | 13963272.92 | 13963273.15 | 0.0090 | 0.0050 |
| Neptune | 33519-01-18 19:12 G | 13963640.08 | 13963640.30 | 13963640.54 | 0.0090 | 0.0036 |
| Neptune | 33520-01-21 09:36 G | 13964007.65 | 13964007.90 | 13964008.17 | 0.0090 | 0.0018 |
| Jupiter | 33520-03-15 14:38 G | 13964061.87 | 13964062.11 | 13964062.34 | 0.0532 | 0.0071 |
| Neptune | 33521-01-23 00:00 G | 13964375.25 | 13964375.50 | 13964375.75 | 0.0090 | 0.0003 |
| Saturn | 33521-02-16 04:33 G | 13964399.59 | 13964399.69 | 13964399.80 | 0.0297 | 0.0267 |
| Neptune | 33522-01-25 09:07 G | 13964742.63 | 13964742.88 | 13964743.15 | 0.0090 | 0.0015 |
| Saturn | 33522-03-02 19:12 G | 13964779.17 | 13964779.30 | 13964779.44 | 0.0293 | 0.0248 |
| Neptune | 33523-01-28 03:21 G | 13965110.40 | 13965110.64 | 13965110.88 | 0.0090 | 0.0030 |
| Neptune | 33524-01-30 09:07 G | 13965477.68 | 13965477.88 | 13965478.12 | 0.0090 | 0.0048 |
| Neptune | 33525-02-01 05:02 G | 13965845.55 | 13965845.71 | 13965845.90 | 0.0090 | 0.0064 |
| Jupiter | 33525-08-31 07:26 G | 13966056.60 | 13966056.81 | 13966057.03 | 0.0494 | 0.0173 |
| Neptune | 33526-02-03 10:48 G | 13966212.86 | 13966212.95 | 13966213.09 | 0.0090 | 0.0080 |
| Jupiter | 33526-10-01 05:31 G | 13966452.55 | 13966452.73 | 13966452.92 | 0.0496 | 0.0298 |
| Jupiter | 33531-02-12 21:21 G | 13968048.33 | 13968048.39 | 13968048.45 | 0.0531 | 0.0514 |
| Jupiter | 33532-03-21 00:00 G | 13968450.28 | 13968450.50 | 13968450.72 | 0.0532 | 0.0130 |
| Saturn | 33536-08-17 02:53 G | 13970060.55 | 13970060.62 | 13970060.72 | 0.0264 | 0.0248 |
| Saturn | 33537-08-28 18:43 G | 13970437.06 | 13970437.28 | 13970437.49 | 0.0267 | 0.0125 |
| Jupiter | 33537-09-04 13:26 G | 13970443.83 | 13970444.06 | 13970444.30 | 0.0494 | 0.0124 |
| Jupiter | 33538-10-05 22:19 G | 13970840.31 | 13970840.43 | 13970840.56 | 0.0497 | 0.0409 |
| Uranus | 33541-03-04 15:36 G | 13971720.99 | 13971721.15 | 13971721.31 | 0.0136 | 0.0107 |
| Uranus | 33542-03-08 21:21 G | 13972090.15 | 13972090.39 | 13972090.64 | 0.0137 | 0.0032 |
| Jupiter | 33543-02-18 02:38 G | 13972436.46 | 13972436.61 | 13972436.77 | 0.0532 | 0.0390 |

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| Uranus | 33543-03-13 17:45 G | 13972460.00 | 13972460.24 | 13972460.49 | 0.0137 | 0.0044 |
| Uranus | 33544-03-17 00:29 G | 13972829.38 | 13972829.52 | 13972829.70 | 0.0138 | 0.0108 |
| Jupiter | 33544-03-26 00:14 G | 13972838.30 | 13972838.51 | 13972838.73 | 0.0531 | 0.0252 |
| Jupiter | 33549-09-08 23:31 G | 13974831.26 | 13974831.48 | 13974831.70 | 0.0494 | 0.0078 |
| Saturn | 33551-02-24 11:17 G | 13975364.73 | 13975364.97 | 13975365.21 | 0.0295 | 0.0020 |
| Jupiter | 33555-02-23 04:19 G | 13976824.49 | 13976824.68 | 13976824.88 | 0.0532 | 0.0320 |
| Jupiter | 33556-03-31 00:29 G | 13977226.37 | 13977226.52 | 13977226.69 | 0.0531 | 0.0382 |
| Jupiter | 33560-08-13 01:41 G | 13978822.51 | 13978822.57 | 13978822.64 | 0.0495 | 0.0470 |
| Jupiter | 33561-09-13 11:02 G | 13979218.71 | 13979218.96 | 13979219.20 | 0.0494 | 0.0018 |
| Saturn | 33566-08-24 00:43 G | 13981024.29 | 13981024.53 | 13981024.77 | 0.0266 | 0.0045 |
| Jupiter | 33567-02-28 07:12 G | 13981212.61 | 13981212.80 | 13981213.00 | 0.0533 | 0.0268 |
| Jupiter | 33568-04-05 13:26 G | 13981614.93 | 13981615.06 | 13981615.19 | 0.0530 | 0.0441 |
| Jupiter | 33572-08-17 19:12 G | 13983210.20 | 13983210.30 | 13983210.41 | 0.0494 | 0.0440 |
| Jupiter | 33573-09-17 15:07 G | 13983605.91 | 13983606.13 | 13983606.35 | 0.0494 | 0.0127 |
| Jupiter | 33579-03-05 20:09 G | 13985601.12 | 13985601.34 | 13985601.57 | 0.0533 | 0.0137 |
| Saturn | 33580-02-18 00:29 G | 13985950.35 | 13985950.52 | 13985950.69 | 0.0297 | 0.0222 |
| Jupiter | 33580-04-10 08:38 G | 13986002.78 | 13986002.86 | 13986002.96 | 0.0529 | 0.0490 |
| Uranus | 33580-09-02 00:00 G | 13986147.46 | 13986147.50 | 13986147.58 | 0.0142 | 0.0138 |
| Saturn | 33581-03-03 12:29 G | 13986330.00 | 13986330.02 | 13986330.06 | 0.0293 | 0.0290 |
| Uranus | 33581-09-07 03:21 G | 13986517.40 | 13986517.64 | 13986517.88 | 0.0142 | 0.0048 |
| Uranus | 33582-09-11 14:53 G | 13986886.87 | 13986887.12 | 13986887.38 | 0.0141 | 0.0017 |
| Uranus | 33583-09-16 15:36 G | 13987257.01 | 13987257.15 | 13987257.33 | 0.0141 | 0.0109 |
| Jupiter | 33584-08-21 16:48 G | 13987597.05 | 13987597.20 | 13987597.35 | 0.0494 | 0.0379 |
| Jupiter | 33585-09-22 04:05 G | 13987993.46 | 13987993.67 | 13987993.89 | 0.0495 | 0.0191 |
| Pluto | 33588-03-22 13:26 G | 13988905.81 | 13988906.06 | 13988906.34 | 0.0065 | 0.0011 |
| Jupiter | 33591-03-10 17:02 G | 13989988.97 | 13989989.21 | 13989989.44 | 0.0532 | 0.0012 |
| Saturn | 33595-08-18 23:45 G | 13991611.34 | 13991611.49 | 13991611.65 | 0.0264 | 0.0205 |
| Jupiter | 33596-08-26 08:24 G | 13991984.67 | 13991984.85 | 13991985.04 | 0.0494 | 0.0269 |
| Saturn | 33596-08-29 21:50 G | 13991988.23 | 13991988.41 | 13991988.60 | 0.0267 | 0.0166 |
| Jupiter | 33597-09-26 06:29 G | 13992380.57 | 13992380.77 | 13992380.98 | 0.0495 | 0.0227 |

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| Neptune | 33598-07-15 18:57 G | 13992673.16 | 13992673.29 | 13992673.47 | 0.0088 | 0.0069 |
| Neptune | 33599-07-18 12:14 G | 13993040.84 | 13993041.01 | 13993041.22 | 0.0088 | 0.0059 |
| Neptune | 33600-07-19 18:00 G | 13993408.03 | 13993408.25 | 13993408.48 | 0.0088 | 0.0038 |
| Neptune | 33601-07-22 06:57 G | 13993775.55 | 13993775.79 | 13993776.06 | 0.0088 | 0.0029 |
| Neptune | 33602-07-24 17:31 G | 13994142.98 | 13994143.23 | 13994143.48 | 0.0088 | 0.0008 |
| Jupiter | 33603-03-16 00:00 G | 13994377.27 | 13994377.50 | 13994377.72 | 0.0532 | 0.0061 |
| Neptune | 33603-07-27 01:55 G | 13994510.31 | 13994510.58 | 13994510.84 | 0.0088 | 0.0002 |
| Neptune | 33604-07-28 16:33 G | 13994877.97 | 13994878.19 | 13994878.45 | 0.0088 | 0.0024 |
| Neptune | 33605-07-30 21:36 G | 13995245.16 | 13995245.40 | 13995245.64 | 0.0088 | 0.0033 |
| Neptune | 33606-08-02 14:53 G | 13995612.93 | 13995613.12 | 13995613.34 | 0.0088 | 0.0054 |
| Neptune | 33607-08-04 18:29 G | 13995980.12 | 13995980.27 | 13995980.46 | 0.0088 | 0.0064 |
| Neptune | 33608-08-06 11:17 G | 13996347.90 | 13996347.97 | 13996348.06 | 0.0088 | 0.0083 |
| Jupiter | 33608-08-30 15:21 G | 13996371.91 | 13996372.14 | 13996372.37 | 0.0494 | 0.0176 |
| Jupiter | 33609-09-30 22:33 G | 13996768.27 | 13996768.44 | 13996768.63 | 0.0496 | 0.0302 |
| Saturn | 33610-02-25 16:33 G | 13996915.96 | 13996916.19 | 13996916.42 | 0.0295 | 0.0068 |
| Jupiter | 33614-02-12 05:02 G | 13998363.68 | 13998363.71 | 13998363.76 | 0.0531 | 0.0520 |
| Jupiter | 33615-03-21 01:12 G | 13998765.31 | 13998765.55 | 13998765.79 | 0.0532 | 0.0123 |
| Jupiter | 33620-09-04 00:00 G | 14000759.29 | 14000759.50 | 14000759.72 | 0.0493 | 0.0136 |
| Jupiter | 33621-10-05 02:53 G | 14001155.49 | 14001155.62 | 14001155.76 | 0.0496 | 0.0405 |
| Uranus | 33625-03-05 01:12 G | 14002402.39 | 14002402.55 | 14002402.75 | 0.0136 | 0.0097 |
| Saturn | 33625-08-25 00:43 G | 14002575.27 | 14002575.53 | 14002575.78 | 0.0266 | 0.0003 |
| Jupiter | 33626-02-17 06:00 G | 14002751.59 | 14002751.75 | 14002751.91 | 0.0532 | 0.0397 |
| Uranus | 33626-03-09 07:41 G | 14002771.59 | 14002771.82 | 14002772.08 | 0.0137 | 0.0030 |
| Uranus | 33627-03-14 03:50 G | 14003141.42 | 14003141.66 | 14003141.91 | 0.0137 | 0.0041 |
| Jupiter | 33627-03-26 03:50 G | 14003153.47 | 14003153.66 | 14003153.86 | 0.0532 | 0.0255 |
| Uranus | 33628-03-17 10:48 G | 14003510.86 | 14003510.95 | 14003511.09 | 0.0138 | 0.0123 |
| Jupiter | 33632-09-08 11:45 G | 14005146.76 | 14005146.99 | 14005147.23 | 0.0494 | 0.0084 |
| Mars | 33633-01-05 12:57 G | 14005265.84 | 14005266.04 | 14005266.24 | 0.1809 | 0.0351 |
| Jupiter | 33633-10-09 14:09 G | 14005543.08 | 14005543.09 | 14005543.12 | 0.0497 | 0.0494 |
| Jupiter | 33638-02-22 11:17 G | 14007139.80 | 14007139.97 | 14007140.15 | 0.0532 | 0.0337 |

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| Saturn | 33639-02-18 23:17 G | 14007501.28 | 14007501.47 | 14007501.68 | 0.0297 | 0.0174 |
| Jupiter | 33639-03-31 15:21 G | 14007541.98 | 14007542.14 | 14007542.31 | 0.0530 | 0.0377 |
| Jupiter | 33643-08-13 13:55 G | 14009138.03 | 14009138.08 | 14009138.14 | 0.0495 | 0.0480 |
| Jupiter | 33644-09-12 12:00 G | 14009533.77 | 14009534.00 | 14009534.23 | 0.0494 | 0.0012 |
| Jupiter | 33650-02-27 21:07 G | 14011528.19 | 14011528.38 | 14011528.59 | 0.0532 | 0.0274 |
| Jupiter | 33651-04-05 10:33 G | 14011929.81 | 14011929.94 | 14011930.07 | 0.0529 | 0.0434 |
| Saturn | 33654-08-20 06:14 G | 14013162.57 | 14013162.76 | 14013162.95 | 0.0265 | 0.0159 |
| Jupiter | 33655-08-17 15:21 G | 14013525.05 | 14013525.14 | 14013525.25 | 0.0495 | 0.0447 |
| Saturn | 33655-09-01 05:02 G | 14013539.58 | 14013539.71 | 14013539.87 | 0.0267 | 0.0214 |
| Jupiter | 33656-09-17 03:36 G | 14013921.43 | 14013921.65 | 14013921.88 | 0.0494 | 0.0125 |
| Jupiter | 33662-03-04 13:26 G | 14015915.84 | 14015916.06 | 14015916.29 | 0.0532 | 0.0148 |
| Jupiter | 33663-04-10 16:05 G | 14016318.09 | 14016318.17 | 14016318.26 | 0.0529 | 0.0488 |
| Uranus | 33664-09-02 10:33 G | 14016828.85 | 14016828.94 | 14016829.05 | 0.0142 | 0.0130 |
| Uranus | 33665-09-07 13:12 G | 14017198.82 | 14017199.05 | 14017199.29 | 0.0142 | 0.0057 |
| Uranus | 33666-09-12 01:12 G | 14017568.31 | 14017568.55 | 14017568.80 | 0.0141 | 0.0036 |
| Jupiter | 33667-08-22 08:09 G | 14017912.70 | 14017912.84 | 14017912.99 | 0.0494 | 0.0377 |
| Uranus | 33667-09-17 02:53 G | 14017938.44 | 14017938.62 | 14017938.80 | 0.0141 | 0.0099 |
| Jupiter | 33668-09-21 06:14 G | 14018308.54 | 14018308.76 | 14018308.97 | 0.0495 | 0.0184 |
| Saturn | 33669-02-26 21:36 G | 14018467.18 | 14018467.40 | 14018467.63 | 0.0295 | 0.0121 |
| Jupiter | 33674-03-09 23:17 G | 14020304.24 | 14020304.47 | 14020304.70 | 0.0532 | 0.0018 |
| Pluto | 33675-09-22 14:09 G | 14020865.90 | 14020866.09 | 14020866.30 | 0.0079 | 0.0049 |
| Jupiter | 33679-08-26 14:09 G | 14022299.89 | 14022300.09 | 14022300.30 | 0.0494 | 0.0266 |
| Jupiter | 33680-09-25 20:38 G | 14022696.16 | 14022696.36 | 14022696.56 | 0.0495 | 0.0220 |
| Neptune | 33681-01-13 03:36 G | 14022805.49 | 14022805.65 | 14022805.80 | 0.0090 | 0.0072 |
| Neptune | 33682-01-15 13:26 G | 14023172.92 | 14023173.06 | 14023173.26 | 0.0090 | 0.0065 |
| Neptune | 33683-01-18 02:24 G | 14023540.36 | 14023540.60 | 14023540.84 | 0.0090 | 0.0040 |
| Neptune | 33684-01-20 17:17 G | 14023908.00 | 14023908.22 | 14023908.47 | 0.0090 | 0.0033 |
| Saturn | 33684-08-26 02:24 G | 14024126.36 | 14024126.60 | 14024126.85 | 0.0266 | 0.0050 |
| Neptune | 33685-01-22 01:26 G | 14024275.30 | 14024275.56 | 14024275.82 | 0.0090 | 0.0007 |
| Neptune | 33686-01-24 20:24 G | 14024643.10 | 14024643.35 | 14024643.61 | 0.0090 | 0.0002 |

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| Jupiter | 33686-03-15 00:14 G | 14024692.26 | 14024692.51 | 14024692.75 | 0.0533 | 0.0046 |
| Neptune | 33687-01-27 02:09 G | 14025010.36 | 14025010.59 | 14025010.85 | 0.0090 | 0.0027 |
| Neptune | 33688-01-29 21:50 G | 14025378.18 | 14025378.41 | 14025378.67 | 0.0090 | 0.0034 |
| Neptune | 33689-01-31 04:19 G | 14025745.52 | 14025745.68 | 14025745.89 | 0.0090 | 0.0060 |
| Neptune | 33690-02-02 22:19 G | 14026113.25 | 14026113.43 | 14026113.61 | 0.0090 | 0.0066 |
| Jupiter | 33691-08-30 22:33 G | 14026687.23 | 14026687.44 | 14026687.65 | 0.0494 | 0.0184 |
| Jupiter | 33692-09-30 00:57 G | 14027083.35 | 14027083.54 | 14027083.74 | 0.0495 | 0.0297 |
| Jupiter | 33697-02-11 07:55 G | 14028678.80 | 14028678.83 | 14028678.87 | 0.0531 | 0.0524 |
| Saturn | 33698-02-20 07:26 G | 14029052.60 | 14029052.81 | 14029053.04 | 0.0296 | 0.0117 |
| Jupiter | 33698-03-20 05:17 G | 14029080.50 | 14029080.72 | 14029080.94 | 0.0532 | 0.0116 |
| Jupiter | 33703-09-05 06:14 G | 14031074.54 | 14031074.76 | 14031075.00 | 0.0494 | 0.0146 |
| Jupiter | 33704-10-05 09:07 G | 14031470.75 | 14031470.88 | 14031471.01 | 0.0497 | 0.0408 |
| Jupiter | 33709-02-17 11:45 G | 14033066.85 | 14033066.99 | 14033067.14 | 0.0532 | 0.0407 |
| Uranus | 33709-03-06 12:14 G | 14033083.84 | 14033084.01 | 14033084.19 | 0.0136 | 0.0101 |
| Uranus | 33710-03-10 19:41 G | 14033453.08 | 14033453.32 | 14033453.57 | 0.0137 | 0.0023 |
| Jupiter | 33710-03-26 14:24 G | 14033468.90 | 14033469.10 | 14033469.31 | 0.0531 | 0.0252 |
| Uranus | 33711-03-15 14:38 G | 14033822.88 | 14033823.11 | 14033823.36 | 0.0137 | 0.0050 |
| Uranus | 33712-03-18 22:05 G | 14034192.30 | 14034192.42 | 14034192.57 | 0.0138 | 0.0116 |
| Saturn | 33713-08-22 17:02 G | 14034714.00 | 14034714.21 | 14034714.44 | 0.0265 | 0.0108 |
| Saturn | 33714-09-03 12:00 G | 14035090.96 | 14035091.00 | 14035091.05 | 0.0268 | 0.0262 |
| Jupiter | 33715-09-09 09:36 G | 14035461.68 | 14035461.90 | 14035462.13 | 0.0494 | 0.0091 |
| Jupiter | 33716-10-09 21:07 G | 14035858.33 | 14035858.38 | 14035858.44 | 0.0497 | 0.0484 |
| Jupiter | 33721-02-22 15:36 G | 14037454.97 | 14037455.15 | 14037455.32 | 0.0532 | 0.0355 |
| Jupiter | 33722-03-31 06:00 G | 14037856.58 | 14037856.75 | 14037856.91 | 0.0531 | 0.0368 |
| Jupiter | 33726-08-13 12:57 G | 14039453.00 | 14039453.04 | 14039453.09 | 0.0495 | 0.0485 |
| Jupiter | 33727-09-14 01:55 G | 14039849.35 | 14039849.58 | 14039849.82 | 0.0494 | 0.0019 |
| Saturn | 33728-03-01 04:05 G | 14040018.49 | 14040018.67 | 14040018.89 | 0.0295 | 0.0183 |
| Jupiter | 33733-02-27 09:50 G | 14041842.72 | 14041842.91 | 14041843.11 | 0.0532 | 0.0290 |
| Mars | 33733-07-09 22:19 G | 14041975.26 | 14041975.43 | 14041975.60 | 0.1729 | 0.0849 |
| Jupiter | 33734-04-05 14:38 G | 14042244.98 | 14042245.11 | 14042245.26 | 0.0530 | 0.0422 |

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| Jupiter | 33738-08-18 05:02 G | 14043840.64 | 14043840.71 | 14043840.81 | 0.0495 | 0.0457 |
| Jupiter | 33739-09-18 02:38 G | 14044236.39 | 14044236.61 | 14044236.85 | 0.0494 | 0.0121 |
| Saturn | 33743-08-29 12:57 G | 14045677.82 | 14045678.04 | 14045678.26 | 0.0267 | 0.0103 |
| Jupiter | 33745-03-04 21:07 G | 14046231.16 | 14046231.38 | 14046231.60 | 0.0533 | 0.0158 |
| Jupiter | 33746-04-10 14:24 G | 14046633.01 | 14046633.10 | 14046633.21 | 0.0529 | 0.0480 |
| Uranus | 33748-09-03 17:31 G | 14047510.16 | 14047510.23 | 14047510.33 | 0.0142 | 0.0133 |
| Uranus | 33749-09-08 20:09 G | 14047880.10 | 14047880.34 | 14047880.59 | 0.0142 | 0.0045 |
| Jupiter | 33750-08-22 10:33 G | 14048227.79 | 14048227.94 | 14048228.10 | 0.0494 | 0.0376 |
| Uranus | 33750-09-13 08:38 G | 14048249.62 | 14048249.86 | 14048250.11 | 0.0141 | 0.0022 |
| Uranus | 33751-09-18 09:50 G | 14048619.78 | 14048619.91 | 14048620.07 | 0.0141 | 0.0114 |
| Jupiter | 33751-09-22 17:02 G | 14048624.00 | 14048624.21 | 14048624.43 | 0.0494 | 0.0175 |
| Saturn | 33757-02-23 00:14 G | 14050604.28 | 14050604.51 | 14050604.75 | 0.0296 | 0.0053 |
| Jupiter | 33757-03-09 22:05 G | 14050619.18 | 14050619.42 | 14050619.67 | 0.0533 | 0.0032 |
| Neptune | 33762-07-16 08:53 G | 14052573.80 | 14052573.87 | 14052573.97 | 0.0088 | 0.0083 |
| Jupiter | 33762-08-26 15:07 G | 14052614.95 | 14052615.13 | 14052615.33 | 0.0494 | 0.0271 |
| Neptune | 33763-07-18 15:50 G | 14052941.00 | 14052941.16 | 14052941.35 | 0.0088 | 0.0063 |
| Jupiter | 33763-09-26 17:31 G | 14053011.02 | 14053011.23 | 14053011.45 | 0.0495 | 0.0214 |
| Neptune | 33764-07-20 04:19 G | 14053308.48 | 14053308.68 | 14053308.91 | 0.0088 | 0.0053 |
| Neptune | 33765-07-22 16:19 G | 14053675.96 | 14053676.18 | 14053676.43 | 0.0088 | 0.0033 |
| Neptune | 33766-07-24 23:31 G | 14054043.23 | 14054043.48 | 14054043.75 | 0.0088 | 0.0022 |
| Neptune | 33767-07-27 15:36 G | 14054410.90 | 14054411.15 | 14054411.40 | 0.0088 | 0.0000 |
| Neptune | 33768-07-28 19:26 G | 14054778.06 | 14054778.31 | 14054778.57 | 0.0088 | 0.0010 |
| Jupiter | 33769-03-15 02:53 G | 14055007.40 | 14055007.62 | 14055007.85 | 0.0532 | 0.0030 |
| Neptune | 33769-07-31 12:43 G | 14055145.81 | 14055146.03 | 14055146.29 | 0.0088 | 0.0032 |
| Neptune | 33770-08-02 17:02 G | 14055512.99 | 14055513.21 | 14055513.44 | 0.0088 | 0.0040 |
| Neptune | 33771-08-05 08:09 G | 14055880.68 | 14055880.84 | 14055881.05 | 0.0088 | 0.0062 |
| Neptune | 33772-08-06 15:50 G | 14056248.03 | 14056248.16 | 14056248.32 | 0.0088 | 0.0071 |
| Saturn | 33772-08-24 01:55 G | 14056265.33 | 14056265.58 | 14056265.83 | 0.0265 | 0.0056 |
| Jupiter | 33774-08-31 02:24 G | 14057002.38 | 14057002.60 | 14057002.82 | 0.0494 | 0.0192 |
| Jupiter | 33775-10-01 04:19 G | 14057398.51 | 14057398.68 | 14057398.87 | 0.0496 | 0.0299 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 33781-03-20 06:00 G | 14059395.52 | 14059395.75 | 14059395.99 | 0.0532 | 0.0102 |
| Saturn | 33786-02-16 23:45 G | 14061190.41 | 14061190.49 | 14061190.60 | 0.0298 | 0.0276 |
| Jupiter | 33786-09-04 06:43 G | 14061389.57 | 14061389.78 | 14061390.00 | 0.0494 | 0.0154 |
| Saturn | 33787-03-03 15:21 G | 14061570.01 | 14061570.14 | 14061570.28 | 0.0294 | 0.0247 |
| Jupiter | 33787-10-05 16:19 G | 14061786.05 | 14061786.18 | 14061786.32 | 0.0496 | 0.0410 |
| Jupiter | 33792-02-17 09:36 G | 14063381.76 | 14063381.90 | 14063382.05 | 0.0531 | 0.0420 |
| Uranus | 33793-03-06 22:48 G | 14063765.27 | 14063765.45 | 14063765.67 | 0.0136 | 0.0088 |
| Jupiter | 33793-03-25 00:43 G | 14063783.33 | 14063783.53 | 14063783.74 | 0.0531 | 0.0235 |
| Uranus | 33794-03-11 07:12 G | 14064134.56 | 14064134.80 | 14064135.05 | 0.0137 | 0.0023 |
| Uranus | 33795-03-16 00:57 G | 14064504.31 | 14064504.54 | 14064504.80 | 0.0137 | 0.0051 |
| Uranus | 33796-03-19 09:21 G | 14064873.83 | 14064873.89 | 14064873.99 | 0.0138 | 0.0130 |
| Jupiter | 33798-09-08 21:36 G | 14065777.17 | 14065777.40 | 14065777.63 | 0.0494 | 0.0096 |
| Jupiter | 33799-10-09 19:12 G | 14066173.25 | 14066173.30 | 14066173.36 | 0.0497 | 0.0480 |
| Saturn | 33801-08-20 05:45 G | 14066852.62 | 14066852.74 | 14066852.90 | 0.0264 | 0.0214 |
| Saturn | 33802-09-01 04:48 G | 14067229.52 | 14067229.70 | 14067229.91 | 0.0267 | 0.0158 |
| Jupiter | 33804-02-23 05:17 G | 14067769.55 | 14067769.72 | 14067769.88 | 0.0532 | 0.0372 |
| Jupiter | 33805-03-31 11:31 G | 14068171.82 | 14068171.98 | 14068172.16 | 0.0531 | 0.0356 |
| Jupiter | 33810-09-13 22:05 G | 14070164.18 | 14070164.42 | 14070164.66 | 0.0494 | 0.0014 |
| Saturn | 33816-02-26 20:53 G | 14072156.12 | 14072156.37 | 14072156.61 | 0.0295 | 0.0020 |
| Jupiter | 33816-02-28 18:29 G | 14072158.09 | 14072158.27 | 14072158.46 | 0.0533 | 0.0301 |
| Jupiter | 33817-04-05 11:31 G | 14072559.83 | 14072559.98 | 14072560.14 | 0.0530 | 0.0405 |
| Jupiter | 33821-08-18 01:12 G | 14074155.47 | 14074155.55 | 14074155.63 | 0.0495 | 0.0466 |
| Jupiter | 33822-09-18 08:38 G | 14074551.65 | 14074551.86 | 14074552.09 | 0.0494 | 0.0114 |
| Jupiter | 33828-03-04 16:19 G | 14076545.95 | 14076546.18 | 14076546.41 | 0.0533 | 0.0166 |
| Jupiter | 33829-04-10 15:21 G | 14076948.05 | 14076948.14 | 14076948.24 | 0.0529 | 0.0477 |
| Saturn | 33831-08-27 08:53 G | 14077816.62 | 14077816.87 | 14077817.13 | 0.0266 | 0.0003 |
| Uranus | 33832-09-05 02:09 G | 14078191.51 | 14078191.59 | 14078191.71 | 0.0142 | 0.0129 |
| Jupiter | 33833-08-22 09:50 G | 14078542.77 | 14078542.91 | 14078543.05 | 0.0494 | 0.0385 |
| Uranus | 33833-09-10 03:36 G | 14078561.42 | 14078561.65 | 14078561.90 | 0.0142 | 0.0053 |
| Pluto | 33834-03-26 15:50 G | 14078758.90 | 14078759.16 | 14078759.43 | 0.0065 | 0.0002 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 33834-09-14 17:02 G | 14078930.97 | 14078931.21 | 14078931.45 | 0.0141 | 0.0038 |
| Jupiter | 33834-09-22 12:14 G | 14078938.79 | 14078939.01 | 14078939.24 | 0.0494 | 0.0167 |
| Uranus | 33835-09-19 17:45 G | 14079301.08 | 14079301.24 | 14079301.43 | 0.0141 | 0.0102 |
| Jupiter | 33840-03-09 18:00 G | 14080934.03 | 14080934.25 | 14080934.47 | 0.0532 | 0.0047 |
| Neptune | 33845-01-14 08:53 G | 14082705.81 | 14082705.87 | 14082705.98 | 0.0090 | 0.0084 |
| Saturn | 33845-02-19 17:17 G | 14082742.05 | 14082742.22 | 14082742.41 | 0.0297 | 0.0201 |
| Jupiter | 33845-08-26 22:05 G | 14082930.23 | 14082930.42 | 14082930.63 | 0.0494 | 0.0275 |
| Neptune | 33846-01-16 19:41 G | 14083073.18 | 14083073.32 | 14083073.49 | 0.0090 | 0.0073 |
| Jupiter | 33846-09-27 00:00 G | 14083326.30 | 14083326.50 | 14083326.70 | 0.0495 | 0.0209 |
| Neptune | 33847-01-19 12:43 G | 14083440.83 | 14083441.03 | 14083441.24 | 0.0090 | 0.0051 |
| Neptune | 33848-01-21 19:26 G | 14083808.09 | 14083808.31 | 14083808.56 | 0.0090 | 0.0040 |
| Neptune | 33849-01-23 15:21 G | 14084175.89 | 14084176.14 | 14084176.40 | 0.0090 | 0.0017 |
| Neptune | 33850-01-25 21:07 G | 14084543.13 | 14084543.38 | 14084543.64 | 0.0090 | 0.0006 |
| Neptune | 33851-01-28 16:33 G | 14084910.94 | 14084911.19 | 14084911.46 | 0.0090 | 0.0015 |
| Neptune | 33852-01-31 00:14 G | 14085278.28 | 14085278.51 | 14085278.76 | 0.0090 | 0.0028 |
| Jupiter | 33852-03-14 21:50 G | 14085322.17 | 14085322.41 | 14085322.66 | 0.0532 | 0.0015 |
| Neptune | 33853-02-01 15:50 G | 14085645.95 | 14085646.16 | 14085646.41 | 0.0090 | 0.0048 |
| Neptune | 33854-02-04 03:36 G | 14086013.48 | 14086013.65 | 14086013.84 | 0.0090 | 0.0062 |
| Neptune | 33855-02-06 14:53 G | 14086381.02 | 14086381.12 | 14086381.24 | 0.0090 | 0.0081 |
| Jupiter | 33857-08-31 01:26 G | 14087317.36 | 14087317.56 | 14087317.77 | 0.0494 | 0.0203 |
| Jupiter | 33858-10-01 09:21 G | 14087713.70 | 14087713.89 | 14087714.09 | 0.0495 | 0.0297 |
| Saturn | 33860-08-21 21:36 G | 14088404.21 | 14088404.40 | 14088404.59 | 0.0265 | 0.0157 |
| Saturn | 33861-09-02 19:12 G | 14088781.16 | 14088781.30 | 14088781.45 | 0.0267 | 0.0215 |
| Jupiter | 33864-03-19 18:43 G | 14089710.06 | 14089710.28 | 14089710.51 | 0.0532 | 0.0086 |
| Jupiter | 33869-09-04 15:50 G | 14091704.94 | 14091705.16 | 14091705.38 | 0.0494 | 0.0168 |
| Jupiter | 33870-10-05 12:14 G | 14092100.89 | 14092101.01 | 14092101.14 | 0.0496 | 0.0407 |
| Jupiter | 33875-02-17 01:41 G | 14093696.44 | 14093696.57 | 14093696.70 | 0.0532 | 0.0434 |
| Saturn | 33875-02-28 13:55 G | 14093707.84 | 14093708.08 | 14093708.32 | 0.0295 | 0.0097 |
| Jupiter | 33876-03-25 08:09 G | 14094098.63 | 14094098.84 | 14094099.05 | 0.0532 | 0.0229 |
| Uranus | 33877-03-08 11:02 G | 14094446.78 | 14094446.96 | 14094447.16 | 0.0136 | 0.0093 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 33878-03-12 20:38 G | 14094816.11 | 14094816.36 | 14094816.60 | 0.0137 | 0.0013 |
| Uranus | 33879-03-17 13:26 G | 14095185.84 | 14095186.06 | 14095186.31 | 0.0137 | 0.0058 |
| Uranus | 33880-03-20 22:48 G | 14095555.36 | 14095555.45 | 14095555.55 | 0.0138 | 0.0126 |
| Jupiter | 33881-09-08 13:12 G | 14096091.82 | 14096092.05 | 14096092.28 | 0.0493 | 0.0105 |
| Jupiter | 33882-10-10 00:57 G | 14096488.48 | 14096488.54 | 14096488.62 | 0.0497 | 0.0473 |
| Jupiter | 33887-02-22 13:12 G | 14098084.89 | 14098085.05 | 14098085.21 | 0.0532 | 0.0384 |
| Jupiter | 33888-03-30 05:17 G | 14098486.54 | 14098486.72 | 14098486.90 | 0.0531 | 0.0344 |
| Saturn | 33890-08-28 18:29 G | 14099368.03 | 14099368.27 | 14099368.51 | 0.0266 | 0.0055 |
| Jupiter | 33893-09-13 03:36 G | 14100479.42 | 14100479.65 | 14100479.88 | 0.0494 | 0.0009 |
| Jupiter | 33899-02-27 04:48 G | 14102472.51 | 14102472.70 | 14102472.89 | 0.0532 | 0.0317 |
| Jupiter | 33900-04-05 06:29 G | 14102874.62 | 14102874.77 | 14102874.92 | 0.0530 | 0.0392 |
| Saturn | 33904-02-23 17:45 G | 14104294.03 | 14104294.24 | 14104294.46 | 0.0297 | 0.0120 |
| Jupiter | 33904-08-18 04:19 G | 14104470.64 | 14104470.68 | 14104470.73 | 0.0495 | 0.0483 |
| Jupiter | 33905-09-18 07:55 G | 14104866.60 | 14104866.83 | 14104867.07 | 0.0494 | 0.0105 |
| Jupiter | 33911-03-05 10:48 G | 14106860.75 | 14106860.95 | 14106861.17 | 0.0532 | 0.0183 |
| Jupiter | 33912-04-10 07:55 G | 14107262.72 | 14107262.83 | 14107262.95 | 0.0530 | 0.0461 |
| Jupiter | 33916-08-22 16:19 G | 14108858.03 | 14108858.18 | 14108858.32 | 0.0495 | 0.0392 |
| Uranus | 33916-09-06 12:29 G | 14108872.91 | 14108873.02 | 14108873.13 | 0.0142 | 0.0126 |
| Mars | 33917-01-08 03:21 G | 14108996.45 | 14108996.64 | 14108996.82 | 0.1799 | 0.0572 |
| Uranus | 33917-09-11 12:57 G | 14109242.79 | 14109243.04 | 14109243.29 | 0.0142 | 0.0042 |
| Jupiter | 33917-09-22 18:00 G | 14109254.04 | 14109254.25 | 14109254.47 | 0.0494 | 0.0154 |
| Uranus | 33918-09-16 03:07 G | 14109612.39 | 14109612.63 | 14109612.87 | 0.0141 | 0.0027 |
| Saturn | 33919-08-25 12:00 G | 14109955.77 | 14109956.00 | 14109956.23 | 0.0265 | 0.0098 |
| Uranus | 33919-09-21 02:53 G | 14109982.50 | 14109982.62 | 14109982.78 | 0.0141 | 0.0119 |
| Pluto | 33921-09-27 02:09 G | 14110719.35 | 14110719.59 | 14110719.85 | 0.0079 | 0.0024 |
| Jupiter | 33923-03-10 12:57 G | 14111248.80 | 14111249.04 | 14111249.28 | 0.0533 | 0.0063 |
| Neptune | 33927-07-20 01:41 G | 14112841.45 | 14112841.57 | 14112841.76 | 0.0088 | 0.0071 |
| Neptune | 33928-07-21 14:53 G | 14113208.97 | 14113209.12 | 14113209.31 | 0.0088 | 0.0063 |
| Jupiter | 33928-08-26 19:26 G | 14113245.13 | 14113245.31 | 14113245.50 | 0.0494 | 0.0286 |
| Neptune | 33929-07-23 21:07 G | 14113576.17 | 14113576.38 | 14113576.64 | 0.0088 | 0.0039 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 33929-09-27 02:53 G | 14113641.40 | 14113641.62 | 14113641.84 | 0.0494 | 0.0198 |
| Neptune | 33930-07-26 14:24 G | 14113943.87 | 14113944.10 | 14113944.35 | 0.0088 | 0.0031 |
| Neptune | 33931-07-28 18:14 G | 14114311.01 | 14114311.26 | 14114311.52 | 0.0088 | 0.0008 |
| Neptune | 33932-07-30 12:00 G | 14114678.73 | 14114679.00 | 14114679.26 | 0.0088 | 0.0001 |
| Neptune | 33933-08-01 16:19 G | 14115045.95 | 14115046.18 | 14115046.44 | 0.0088 | 0.0024 |
| Saturn | 33934-03-03 06:57 G | 14115259.60 | 14115259.79 | 14115260.00 | 0.0294 | 0.0176 |
| Neptune | 33934-08-04 07:26 G | 14115413.57 | 14115413.81 | 14115414.07 | 0.0088 | 0.0032 |
| Jupiter | 33935-03-15 14:24 G | 14115636.87 | 14115637.10 | 14115637.33 | 0.0533 | 0.0004 |
| Neptune | 33935-08-06 16:05 G | 14115780.98 | 14115781.17 | 14115781.37 | 0.0088 | 0.0055 |
| Neptune | 33936-08-08 01:26 G | 14116148.40 | 14116148.56 | 14116148.77 | 0.0088 | 0.0064 |
| Neptune | 33937-08-10 14:53 G | 14116516.09 | 14116516.12 | 14116516.18 | 0.0088 | 0.0086 |
| Jupiter | 33940-08-31 07:26 G | 14117632.60 | 14117632.81 | 14117633.03 | 0.0494 | 0.0217 |
| Jupiter | 33941-10-01 03:21 G | 14118028.46 | 14118028.64 | 14118028.83 | 0.0495 | 0.0292 |
| Jupiter | 33947-03-21 01:55 G | 14120025.35 | 14120025.58 | 14120025.81 | 0.0532 | 0.0079 |
| Saturn | 33948-08-19 10:33 G | 14120542.91 | 14120542.94 | 14120543.01 | 0.0264 | 0.0259 |
| Saturn | 33949-08-31 07:26 G | 14120919.60 | 14120919.81 | 14120920.04 | 0.0267 | 0.0111 |
| Jupiter | 33952-09-04 08:24 G | 14122019.63 | 14122019.85 | 14122020.07 | 0.0494 | 0.0182 |
| Jupiter | 33953-10-05 19:12 G | 14122416.17 | 14122416.30 | 14122416.44 | 0.0496 | 0.0402 |
| Jupiter | 33958-02-17 03:36 G | 14124011.53 | 14124011.65 | 14124011.78 | 0.0531 | 0.0450 |
| Jupiter | 33959-03-25 17:31 G | 14124413.01 | 14124413.23 | 14124413.45 | 0.0532 | 0.0212 |
| Uranus | 33961-03-09 21:50 G | 14125128.20 | 14125128.41 | 14125128.64 | 0.0136 | 0.0078 |
| Uranus | 33962-03-14 08:24 G | 14125497.60 | 14125497.85 | 14125498.10 | 0.0137 | 0.0015 |
| Saturn | 33963-02-25 17:31 G | 14125845.99 | 14125846.23 | 14125846.47 | 0.0296 | 0.0041 |
| Uranus | 33963-03-19 00:00 G | 14125867.27 | 14125867.50 | 14125867.75 | 0.0137 | 0.0061 |
| Jupiter | 33964-09-08 23:45 G | 14126407.26 | 14126407.49 | 14126407.71 | 0.0494 | 0.0112 |
| Jupiter | 33965-10-09 21:36 G | 14126803.34 | 14126803.40 | 14126803.49 | 0.0496 | 0.0469 |
| Jupiter | 33970-02-21 20:53 G | 14128399.22 | 14128399.37 | 14128399.53 | 0.0532 | 0.0398 |
| Jupiter | 33971-03-30 23:45 G | 14128801.32 | 14128801.49 | 14128801.67 | 0.0531 | 0.0329 |
| Jupiter | 33976-09-13 02:53 G | 14130794.38 | 14130794.62 | 14130794.86 | 0.0494 | 0.0006 |
| Jupiter | 33977-10-14 13:12 G | 14131191.04 | 14131191.05 | 14131191.06 | 0.0497 | 0.0496 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 33978-08-26 19:12 G | 14131507.05 | 14131507.30 | 14131507.55 | 0.0265 | 0.0044 |
| Jupiter | 33982-02-27 04:05 G | 14132787.50 | 14132787.67 | 14132787.85 | 0.0532 | 0.0332 |
| Jupiter | 33983-04-05 01:12 G | 14133189.38 | 14133189.55 | 14133189.72 | 0.0531 | 0.0377 |
| Jupiter | 33987-08-18 09:50 G | 14134785.90 | 14134785.91 | 14134785.94 | 0.0495 | 0.0493 |
| Jupiter | 33988-09-17 12:57 G | 14135181.82 | 14135182.04 | 14135182.26 | 0.0494 | 0.0094 |
| Saturn | 33992-02-19 10:19 G | 14136431.83 | 14136431.93 | 14136432.03 | 0.0297 | 0.0272 |
| Saturn | 33993-03-05 03:07 G | 14136811.51 | 14136811.63 | 14136811.75 | 0.0294 | 0.0253 |
| Jupiter | 33994-03-04 07:26 G | 14137175.58 | 14137175.81 | 14137176.03 | 0.0533 | 0.0189 |
| Jupiter | 33995-04-10 03:36 G | 14137577.55 | 14137577.65 | 14137577.77 | 0.0530 | 0.0457 |
| Jupiter | 33999-08-22 12:29 G | 14139172.89 | 14139173.02 | 14139173.14 | 0.0494 | 0.0406 |
| Uranus | 34000-09-07 00:29 G | 14139554.42 | 14139554.52 | 14139554.65 | 0.0142 | 0.0124 |
| Jupiter | 34000-09-21 19:26 G | 14139569.08 | 14139569.31 | 14139569.55 | 0.0494 | 0.0137 |

35TH MILLENNIUM CE

This is a list of transits of Moon in the 35th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|-------------|-------------|-------------|--------|--------|-------|---|
| Uranus | 34001-09-11 23:31 G | 14139924.24 | 14139924.48 | 14139924.73 | 0.0142 | 0.0045 | | |
| Uranus | 34002-09-16 14:38 G | 14140293.88 | 14140294.11 | 14140294.35 | 0.0141 | 0.0044 | | |
| Uranus | 34003-09-21 13:26 G | 14140663.91 | 14140664.06 | 14140664.24 | 0.0141 | 0.0108 | | |
| Jupiter | 34006-03-09 09:21 G | 14141563.67 | 14141563.89 | 14141564.12 | 0.0533 | 0.0073 | | |
| Saturn | 34007-08-21 21:21 G | 14142094.24 | 14142094.39 | 14142094.54 | 0.0264 | 0.0207 | | |
| Saturn | 34008-09-01 19:41 G | 14142471.14 | 14142471.32 | 14142471.52 | 0.0267 | 0.0164 | | |
| Neptune | 34010-01-17 09:07 G | 14142973.76 | 14142973.88 | 14142974.02 | 0.0090 | 0.0076 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 34011-01-19 14:38 G | 14143340.96 | 14143341.11 | 14143341.31 | 0.0090 | 0.0066 |
| Jupiter | 34011-08-27 03:07 G | 14143560.45 | 14143560.63 | 14143560.82 | 0.0494 | 0.0293 |
| Neptune | 34012-01-22 10:33 G | 14143708.72 | 14143708.94 | 14143709.18 | 0.0090 | 0.0042 |
| Jupiter | 34012-09-25 23:31 G | 14143956.27 | 14143956.48 | 14143956.69 | 0.0494 | 0.0189 |
| Neptune | 34013-01-23 16:19 G | 14144075.95 | 14144076.18 | 14144076.43 | 0.0090 | 0.0033 |
| Neptune | 34014-01-26 10:48 G | 14144443.69 | 14144443.95 | 14144444.21 | 0.0090 | 0.0009 |
| Neptune | 34015-01-28 19:26 G | 14144811.06 | 14144811.31 | 14144811.56 | 0.0090 | 0.0001 |
| Neptune | 34016-01-31 09:50 G | 14145178.66 | 14145178.91 | 14145179.17 | 0.0090 | 0.0025 |
| Neptune | 34017-02-01 23:31 G | 14145546.26 | 14145546.48 | 14145546.71 | 0.0090 | 0.0035 |
| Mars | 34017-07-11 22:48 G | 14145706.27 | 14145706.45 | 14145706.63 | 0.1738 | 0.0761 |
| Neptune | 34018-02-04 09:36 G | 14145913.71 | 14145913.90 | 14145914.11 | 0.0090 | 0.0059 |
| Jupiter | 34018-03-14 15:36 G | 14145951.91 | 14145952.15 | 14145952.39 | 0.0532 | 0.0020 |
| Neptune | 34019-02-07 03:07 G | 14146281.48 | 14146281.63 | 14146281.81 | 0.0090 | 0.0068 |
| Saturn | 34022-02-27 12:29 G | 14147397.77 | 14147398.02 | 14147398.27 | 0.0296 | 0.0035 |
| Jupiter | 34023-08-31 04:33 G | 14147947.48 | 14147947.69 | 14147947.90 | 0.0494 | 0.0233 |
| Jupiter | 34024-09-30 16:05 G | 14148343.98 | 14148344.17 | 14148344.36 | 0.0495 | 0.0288 |
| Jupiter | 34030-03-19 10:19 G | 14150339.70 | 14150339.93 | 14150340.16 | 0.0532 | 0.0060 |
| Jupiter | 34035-09-04 19:55 G | 14152335.12 | 14152335.33 | 14152335.54 | 0.0494 | 0.0198 |
| Jupiter | 34036-10-04 16:48 G | 14152731.06 | 14152731.20 | 14152731.34 | 0.0495 | 0.0394 |
| Saturn | 34037-08-27 21:50 G | 14153058.16 | 14153058.41 | 14153058.66 | 0.0266 | 0.0008 |
| Jupiter | 34041-02-15 14:38 G | 14154326.00 | 14154326.11 | 14154326.22 | 0.0531 | 0.0466 |
| Jupiter | 34042-03-24 18:43 G | 14154728.07 | 14154728.28 | 14154728.49 | 0.0532 | 0.0206 |
| Uranus | 34045-03-10 08:24 G | 14155809.65 | 14155809.85 | 14155810.06 | 0.0136 | 0.0086 |
| Uranus | 34046-03-14 20:24 G | 14156179.11 | 14156179.35 | 14156179.60 | 0.0137 | 0.0004 |
| Uranus | 34047-03-19 11:02 G | 14156548.73 | 14156548.96 | 14156549.20 | 0.0137 | 0.0065 |
| Jupiter | 34047-09-08 23:02 G | 14156722.23 | 14156722.46 | 14156722.70 | 0.0494 | 0.0120 |
| Uranus | 34048-03-22 22:33 G | 14156918.41 | 14156918.44 | 14156918.48 | 0.0138 | 0.0136 |
| Jupiter | 34048-10-09 07:55 G | 14157118.75 | 14157118.83 | 14157118.93 | 0.0496 | 0.0456 |
| Saturn | 34051-02-21 03:50 G | 14157983.49 | 14157983.66 | 14157983.85 | 0.0297 | 0.0198 |
| Jupiter | 34053-02-21 01:26 G | 14158714.42 | 14158714.56 | 14158714.70 | 0.0532 | 0.0417 |

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| Jupiter | 34054-03-29 21:36 G | 14159116.21 | 14159116.40 | 14159116.60 | 0.0532 | 0.0318 |
| Jupiter | 34059-09-13 08:09 G | 14161109.62 | 14161109.84 | 14161110.07 | 0.0493 | 0.0008 |
| Jupiter | 34060-10-13 09:36 G | 14161505.86 | 14161505.90 | 14161505.96 | 0.0497 | 0.0485 |
| Jupiter | 34065-02-26 02:38 G | 14163102.43 | 14163102.61 | 14163102.80 | 0.0532 | 0.0340 |
| Jupiter | 34066-04-04 01:26 G | 14163504.40 | 14163504.56 | 14163504.72 | 0.0531 | 0.0372 |
| Saturn | 34066-08-23 06:14 G | 14163645.58 | 14163645.76 | 14163645.96 | 0.0264 | 0.0158 |
| Saturn | 34067-09-04 00:29 G | 14164022.37 | 14164022.52 | 14164022.68 | 0.0267 | 0.0211 |
| Jupiter | 34071-09-17 17:17 G | 14165496.99 | 14165497.22 | 14165497.46 | 0.0494 | 0.0083 |
| Jupiter | 34077-03-03 02:53 G | 14167490.41 | 14167490.62 | 14167490.83 | 0.0532 | 0.0206 |
| Jupiter | 34078-04-09 05:17 G | 14167892.59 | 14167892.72 | 14167892.84 | 0.0530 | 0.0445 |
| Pluto | 34080-03-28 23:31 G | 14168612.24 | 14168612.48 | 14168612.73 | 0.0066 | 0.0011 |
| Saturn | 34081-02-28 22:48 G | 14168949.22 | 14168949.45 | 14168949.69 | 0.0296 | 0.0106 |
| Jupiter | 34082-08-21 23:31 G | 14169488.35 | 14169488.48 | 14169488.61 | 0.0495 | 0.0411 |
| Jupiter | 34083-09-21 22:05 G | 14169884.20 | 14169884.42 | 14169884.64 | 0.0494 | 0.0123 |
| Uranus | 34084-09-07 12:43 G | 14170235.91 | 14170236.03 | 14170236.18 | 0.0142 | 0.0117 |
| Uranus | 34085-09-12 10:48 G | 14170605.70 | 14170605.95 | 14170606.21 | 0.0142 | 0.0036 |
| Uranus | 34086-09-17 02:53 G | 14170975.39 | 14170975.62 | 14170975.86 | 0.0141 | 0.0036 |
| Uranus | 34087-09-22 00:43 G | 14171345.42 | 14171345.53 | 14171345.65 | 0.0141 | 0.0126 |
| Jupiter | 34089-03-08 10:33 G | 14171878.70 | 14171878.94 | 14171879.17 | 0.0532 | 0.0091 |
| Neptune | 34091-07-19 14:24 G | 14172742.04 | 14172742.10 | 14172742.18 | 0.0088 | 0.0084 |
| Neptune | 34092-07-20 19:55 G | 14173109.18 | 14173109.33 | 14173109.53 | 0.0088 | 0.0066 |
| Neptune | 34093-07-23 13:41 G | 14173476.88 | 14173477.07 | 14173477.29 | 0.0088 | 0.0053 |
| Neptune | 34094-07-25 17:17 G | 14173844.01 | 14173844.22 | 14173844.48 | 0.0088 | 0.0035 |
| Jupiter | 34094-08-26 01:55 G | 14173875.40 | 14173875.58 | 14173875.77 | 0.0495 | 0.0304 |
| Neptune | 34095-07-28 11:17 G | 14174211.72 | 14174211.97 | 14174212.23 | 0.0088 | 0.0022 |
| Jupiter | 34095-09-26 13:41 G | 14174271.85 | 14174272.07 | 14174272.29 | 0.0494 | 0.0180 |
| Neptune | 34096-07-29 16:48 G | 14174578.95 | 14174579.20 | 14174579.45 | 0.0088 | 0.0002 |
| Saturn | 34096-08-29 02:24 G | 14174609.36 | 14174609.60 | 14174609.83 | 0.0266 | 0.0054 |
| Neptune | 34097-08-01 06:14 G | 14174946.50 | 14174946.76 | 14174947.03 | 0.0088 | 0.0011 |
| Neptune | 34098-08-03 16:05 G | 14175313.93 | 14175314.17 | 14175314.40 | 0.0088 | 0.0030 |

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| Neptune | 34099-08-06 00:57 G | 14175681.31 | 14175681.54 | 14175681.77 | 0.0088 | 0.0042 |
| Neptune | 34100-08-08 15:07 G | 14176048.98 | 14176049.13 | 14176049.34 | 0.0088 | 0.0062 |
| Jupiter | 34101-03-14 05:17 G | 14176266.49 | 14176266.72 | 14176266.95 | 0.0532 | 0.0035 |
| Neptune | 34101-08-10 20:24 G | 14176416.22 | 14176416.35 | 14176416.51 | 0.0088 | 0.0073 |
| Jupiter | 34106-08-31 17:31 G | 14178263.04 | 14178263.23 | 14178263.43 | 0.0494 | 0.0248 |
| Jupiter | 34107-10-01 14:09 G | 14178658.90 | 14178659.09 | 14178659.28 | 0.0495 | 0.0281 |
| Saturn | 34110-02-23 21:36 G | 14179535.19 | 14179535.40 | 14179535.62 | 0.0297 | 0.0128 |
| Jupiter | 34113-03-19 17:31 G | 14180655.00 | 14180655.23 | 14180655.45 | 0.0533 | 0.0055 |
| Jupiter | 34118-09-04 20:09 G | 14182650.13 | 14182650.34 | 14182650.57 | 0.0494 | 0.0207 |
| Jupiter | 34119-10-06 04:19 G | 14183046.54 | 14183046.68 | 14183046.82 | 0.0495 | 0.0389 |
| Jupiter | 34124-02-17 01:26 G | 14184641.47 | 14184641.56 | 14184641.66 | 0.0531 | 0.0482 |
| Jupiter | 34125-03-24 19:26 G | 14185043.09 | 14185043.31 | 14185043.54 | 0.0532 | 0.0201 |
| Saturn | 34125-08-25 08:38 G | 14185196.63 | 14185196.86 | 14185197.09 | 0.0264 | 0.0112 |
| Saturn | 34126-09-05 21:36 G | 14185573.32 | 14185573.40 | 14185573.49 | 0.0267 | 0.0251 |
| Uranus | 34129-03-11 16:19 G | 14186490.97 | 14186491.18 | 14186491.42 | 0.0137 | 0.0071 |
| Uranus | 34130-03-16 05:45 G | 14186860.49 | 14186860.74 | 14186860.98 | 0.0137 | 0.0010 |
| Jupiter | 34130-09-09 07:41 G | 14187037.61 | 14187037.82 | 14187038.04 | 0.0494 | 0.0124 |
| Uranus | 34131-03-20 18:14 G | 14187230.05 | 14187230.26 | 14187230.50 | 0.0137 | 0.0070 |
| Jupiter | 34131-10-10 08:53 G | 14187433.77 | 14187433.87 | 14187433.98 | 0.0496 | 0.0444 |
| Jupiter | 34136-02-21 22:48 G | 14189029.31 | 14189029.45 | 14189029.58 | 0.0531 | 0.0437 |
| Jupiter | 34137-03-29 20:24 G | 14189431.18 | 14189431.35 | 14189431.54 | 0.0531 | 0.0305 |
| Saturn | 34140-03-03 05:02 G | 14190500.52 | 14190500.71 | 14190500.92 | 0.0296 | 0.0170 |
| Jupiter | 34142-09-13 17:02 G | 14191424.96 | 14191425.21 | 14191425.45 | 0.0494 | 0.0011 |
| Jupiter | 34143-10-14 21:50 G | 14191821.36 | 14191821.41 | 14191821.47 | 0.0497 | 0.0480 |
| Jupiter | 34148-02-27 02:09 G | 14193417.43 | 14193417.59 | 14193417.76 | 0.0531 | 0.0357 |
| Jupiter | 34149-04-04 02:38 G | 14193819.44 | 14193819.61 | 14193819.80 | 0.0531 | 0.0352 |
| Jupiter | 34154-09-17 21:50 G | 14195812.19 | 14195812.41 | 14195812.64 | 0.0494 | 0.0072 |
| Saturn | 34155-09-01 07:12 G | 14196160.58 | 14196160.80 | 14196161.03 | 0.0265 | 0.0095 |
| Jupiter | 34160-03-03 07:12 G | 14197805.58 | 14197805.80 | 14197806.02 | 0.0532 | 0.0215 |
| Jupiter | 34161-04-08 22:33 G | 14198207.31 | 14198207.44 | 14198207.57 | 0.0530 | 0.0440 |

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| Jupiter | 34165-08-22 00:57 G | 14199803.42 | 14199803.54 | 14199803.67 | 0.0495 | 0.0412 |
| Jupiter | 34166-09-22 13:26 G | 14200199.83 | 14200200.06 | 14200200.29 | 0.0494 | 0.0113 |
| Pluto | 34167-09-30 06:29 G | 14200572.51 | 14200572.77 | 14200573.04 | 0.0079 | 0.0006 |
| Uranus | 34168-09-09 00:00 G | 14200917.38 | 14200917.50 | 14200917.65 | 0.0142 | 0.0118 |
| Saturn | 34169-02-25 07:26 G | 14201086.58 | 14201086.81 | 14201087.06 | 0.0297 | 0.0066 |
| Uranus | 34169-09-13 20:09 G | 14201287.09 | 14201287.34 | 14201287.60 | 0.0142 | 0.0036 |
| Uranus | 34170-09-18 13:26 G | 14201656.84 | 14201657.06 | 14201657.30 | 0.0141 | 0.0050 |
| Uranus | 34171-09-23 09:36 G | 14202026.78 | 14202026.90 | 14202027.08 | 0.0141 | 0.0116 |
| Jupiter | 34172-03-08 05:31 G | 14202193.50 | 14202193.73 | 14202193.96 | 0.0533 | 0.0104 |
| Neptune | 34174-01-17 11:45 G | 14202873.91 | 14202873.99 | 14202874.09 | 0.0090 | 0.0084 |
| Neptune | 34175-01-20 06:43 G | 14203241.67 | 14203241.78 | 14203241.95 | 0.0090 | 0.0076 |
| Neptune | 34176-01-22 13:12 G | 14203608.87 | 14203609.05 | 14203609.28 | 0.0090 | 0.0052 |
| Neptune | 34177-01-24 06:43 G | 14203976.57 | 14203976.78 | 14203977.04 | 0.0090 | 0.0042 |
| Jupiter | 34177-08-26 16:33 G | 14204191.02 | 14204191.19 | 14204191.37 | 0.0494 | 0.0310 |
| Neptune | 34178-01-26 17:02 G | 14204343.97 | 14204344.21 | 14204344.46 | 0.0090 | 0.0018 |
| Jupiter | 34178-09-26 12:57 G | 14204586.83 | 14204587.04 | 14204587.27 | 0.0494 | 0.0174 |
| Neptune | 34179-01-29 06:00 G | 14204711.49 | 14204711.75 | 14204712.02 | 0.0090 | 0.0007 |
| Neptune | 34180-01-31 20:09 G | 14205079.11 | 14205079.34 | 14205079.60 | 0.0090 | 0.0017 |
| Neptune | 34181-02-02 04:33 G | 14205446.45 | 14205446.69 | 14205446.95 | 0.0090 | 0.0027 |
| Neptune | 34182-02-04 23:02 G | 14205814.26 | 14205814.46 | 14205814.68 | 0.0090 | 0.0050 |
| Neptune | 34183-02-07 05:02 G | 14206181.54 | 14206181.71 | 14206181.92 | 0.0090 | 0.0061 |
| Neptune | 34184-02-10 00:43 G | 14206549.46 | 14206549.53 | 14206549.65 | 0.0090 | 0.0084 |
| Jupiter | 34184-03-13 18:29 G | 14206582.05 | 14206582.27 | 14206582.50 | 0.0533 | 0.0052 |
| Saturn | 34184-08-26 03:36 G | 14206747.40 | 14206747.65 | 14206747.89 | 0.0264 | 0.0071 |
| Jupiter | 34189-08-30 21:36 G | 14208578.19 | 14208578.40 | 14208578.60 | 0.0494 | 0.0255 |
| Jupiter | 34190-10-01 06:00 G | 14208974.56 | 14208974.75 | 14208974.93 | 0.0495 | 0.0285 |
| Jupiter | 34196-03-18 16:19 G | 14210969.94 | 14210970.18 | 14210970.42 | 0.0532 | 0.0042 |
| Saturn | 34199-03-05 12:43 G | 14212051.90 | 14212052.03 | 14212052.19 | 0.0296 | 0.0231 |
| Mars | 34201-01-10 19:55 G | 14212728.16 | 14212728.33 | 14212728.51 | 0.1791 | 0.0173 |
| Jupiter | 34201-09-05 07:41 G | 14212965.62 | 14212965.82 | 14212966.02 | 0.0494 | 0.0217 |

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| Jupiter | 34202-10-06 10:19 G | 14213361.78 | 14213361.93 | 14213362.08 | 0.0496 | 0.0384 |
| Jupiter | 34207-02-17 00:29 G | 14214956.44 | 14214956.52 | 14214956.61 | 0.0530 | 0.0497 |
| Jupiter | 34208-03-24 21:21 G | 14215358.18 | 14215358.39 | 14215358.60 | 0.0532 | 0.0189 |
| Uranus | 34213-03-12 23:45 G | 14217172.30 | 14217172.49 | 14217172.72 | 0.0136 | 0.0083 |
| Saturn | 34213-08-22 12:43 G | 14217334.92 | 14217335.03 | 14217335.16 | 0.0263 | 0.0226 |
| Jupiter | 34213-09-09 18:14 G | 14217353.03 | 14217353.26 | 14217353.50 | 0.0494 | 0.0125 |
| Uranus | 34214-03-17 14:53 G | 14217541.88 | 14217542.12 | 14217542.37 | 0.0137 | 0.0002 |
| Saturn | 34214-09-03 06:43 G | 14217711.57 | 14217711.78 | 14217712.00 | 0.0265 | 0.0134 |
| Jupiter | 34214-10-10 22:05 G | 14217749.32 | 14217749.42 | 14217749.53 | 0.0496 | 0.0434 |
| Uranus | 34215-03-22 02:24 G | 14217911.37 | 14217911.60 | 14217911.83 | 0.0137 | 0.0067 |
| Jupiter | 34219-02-22 02:53 G | 14219344.51 | 14219344.62 | 14219344.73 | 0.0531 | 0.0457 |
| Jupiter | 34220-03-30 01:55 G | 14219746.38 | 14219746.58 | 14219746.78 | 0.0532 | 0.0290 |
| Mars | 34222-07-12 08:09 G | 14220580.73 | 14220580.84 | 14220580.94 | 0.1752 | 0.1410 |
| Jupiter | 34225-09-13 23:17 G | 14221740.25 | 14221740.47 | 14221740.70 | 0.0494 | 0.0012 |
| Jupiter | 34226-10-15 08:38 G | 14222136.79 | 14222136.86 | 14222136.93 | 0.0497 | 0.0473 |
| Saturn | 34228-02-28 06:57 G | 14222637.54 | 14222637.79 | 14222638.05 | 0.0297 | 0.0008 |
| Jupiter | 34231-02-27 09:07 G | 14223732.72 | 14223732.88 | 14223733.06 | 0.0532 | 0.0365 |
| Jupiter | 34232-04-04 01:41 G | 14224134.40 | 14224134.57 | 14224134.75 | 0.0531 | 0.0342 |
| Jupiter | 34237-09-18 14:38 G | 14226127.88 | 14226128.11 | 14226128.34 | 0.0494 | 0.0065 |
| Jupiter | 34243-03-04 08:53 G | 14228120.67 | 14228120.87 | 14228121.08 | 0.0532 | 0.0224 |
| Saturn | 34243-08-28 22:33 G | 14228298.21 | 14228298.44 | 14228298.69 | 0.0264 | 0.0034 |
| Jupiter | 34244-04-09 14:53 G | 14228523.00 | 14228523.12 | 14228523.25 | 0.0531 | 0.0443 |
| Jupiter | 34248-08-22 18:14 G | 14230119.14 | 14230119.26 | 14230119.39 | 0.0495 | 0.0409 |
| Jupiter | 34249-09-22 16:19 G | 14230514.95 | 14230515.18 | 14230515.41 | 0.0494 | 0.0109 |
| Uranus | 34252-09-10 07:55 G | 14231598.70 | 14231598.83 | 14231599.00 | 0.0142 | 0.0111 |
| Uranus | 34253-09-15 03:07 G | 14231968.38 | 14231968.63 | 14231968.89 | 0.0142 | 0.0033 |
| Uranus | 34254-09-19 22:19 G | 14232338.20 | 14232338.43 | 14232338.67 | 0.0141 | 0.0043 |
| Jupiter | 34255-03-09 20:09 G | 14232509.12 | 14232509.34 | 14232509.57 | 0.0532 | 0.0122 |
| Uranus | 34255-09-24 16:48 G | 14232708.13 | 14232708.20 | 14232708.32 | 0.0141 | 0.0131 |
| Neptune | 34256-07-22 12:29 G | 14233009.90 | 14233010.02 | 14233010.19 | 0.0088 | 0.0072 |

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| Saturn | 34257-02-20 17:45 G | 14233223.13 | 14233223.24 | 14233223.37 | 0.0299 | 0.0255 |
| Neptune | 34257-07-24 16:33 G | 14233377.04 | 14233377.19 | 14233377.38 | 0.0088 | 0.0065 |
| Saturn | 34258-03-07 17:02 G | 14233603.15 | 14233603.21 | 14233603.29 | 0.0296 | 0.0284 |
| Neptune | 34258-07-27 09:21 G | 14233744.67 | 14233744.89 | 14233745.14 | 0.0088 | 0.0040 |
| Neptune | 34259-07-29 16:19 G | 14234111.95 | 14234112.18 | 14234112.42 | 0.0088 | 0.0032 |
| Neptune | 34260-07-31 05:17 G | 14234479.46 | 14234479.72 | 14234479.99 | 0.0088 | 0.0008 |
| Jupiter | 34260-08-26 20:53 G | 14234506.19 | 14234506.37 | 14234506.56 | 0.0495 | 0.0319 |
| Neptune | 34261-08-02 16:48 G | 14234846.95 | 14234847.20 | 14234847.45 | 0.0088 | 0.0001 |
| Jupiter | 34261-09-27 07:55 G | 14234902.62 | 14234902.83 | 14234903.05 | 0.0495 | 0.0174 |
| Neptune | 34262-08-05 00:29 G | 14235214.28 | 14235214.52 | 14235214.79 | 0.0088 | 0.0025 |
| Neptune | 34263-08-07 16:05 G | 14235581.94 | 14235582.17 | 14235582.41 | 0.0088 | 0.0032 |
| Neptune | 34264-08-08 19:55 G | 14235949.16 | 14235949.33 | 14235949.55 | 0.0088 | 0.0057 |
| Neptune | 34265-08-11 13:41 G | 14236316.91 | 14236317.07 | 14236317.26 | 0.0088 | 0.0064 |
| Jupiter | 34267-03-14 18:14 G | 14236897.02 | 14236897.26 | 14236897.50 | 0.0532 | 0.0068 |
| Saturn | 34272-08-23 12:14 G | 14238885.85 | 14238886.01 | 14238886.19 | 0.0263 | 0.0186 |
| Jupiter | 34272-08-31 09:36 G | 14238893.71 | 14238893.90 | 14238894.09 | 0.0495 | 0.0271 |
| Saturn | 34273-09-03 23:17 G | 14239262.27 | 14239262.47 | 14239262.66 | 0.0265 | 0.0167 |
| Jupiter | 34273-10-01 12:43 G | 14239289.84 | 14239290.03 | 14239290.23 | 0.0495 | 0.0287 |
| Jupiter | 34279-03-19 23:02 G | 14241285.24 | 14241285.46 | 14241285.69 | 0.0532 | 0.0036 |
| Jupiter | 34284-09-04 21:07 G | 14243281.16 | 14243281.38 | 14243281.60 | 0.0494 | 0.0221 |
| Jupiter | 34285-10-06 00:14 G | 14243677.37 | 14243677.51 | 14243677.65 | 0.0495 | 0.0385 |
| Saturn | 34287-03-01 02:09 G | 14244188.35 | 14244188.59 | 14244188.83 | 0.0297 | 0.0044 |
| Jupiter | 34290-02-16 08:38 G | 14245271.81 | 14245271.86 | 14245271.91 | 0.0530 | 0.0514 |
| Jupiter | 34291-03-25 05:02 G | 14245673.49 | 14245673.71 | 14245673.95 | 0.0532 | 0.0186 |
| Jupiter | 34296-09-09 01:55 G | 14247668.36 | 14247668.58 | 14247668.80 | 0.0494 | 0.0122 |
| Uranus | 34297-03-13 06:57 G | 14247853.58 | 14247853.79 | 14247854.04 | 0.0136 | 0.0067 |
| Jupiter | 34297-10-10 10:05 G | 14248064.81 | 14248064.92 | 14248065.05 | 0.0496 | 0.0425 |
| Uranus | 34298-03-17 23:17 G | 14248223.22 | 14248223.47 | 14248223.72 | 0.0137 | 0.0007 |
| Uranus | 34299-03-22 08:38 G | 14248592.65 | 14248592.86 | 14248593.09 | 0.0137 | 0.0075 |
| Mars | 34301-07-15 13:41 G | 14249437.94 | 14249438.07 | 14249438.21 | 0.1746 | 0.1099 |

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| Jupiter | 34302-02-22 14:24 G | 14249659.99 | 14249660.10 | 14249660.21 | 0.0531 | 0.0468 |
| Saturn | 34302-08-30 22:05 G | 14249849.18 | 14249849.42 | 14249849.66 | 0.0264 | 0.0001 |
| Jupiter | 34303-03-31 06:43 G | 14250061.59 | 14250061.78 | 14250061.98 | 0.0532 | 0.0281 |
| Jupiter | 34308-09-14 18:43 G | 14252056.04 | 14252056.28 | 14252056.51 | 0.0494 | 0.0010 |
| Jupiter | 34309-10-15 17:02 G | 14252452.16 | 14252452.21 | 14252452.28 | 0.0496 | 0.0475 |
| Jupiter | 34314-02-27 14:24 G | 14254047.94 | 14254048.10 | 14254048.26 | 0.0531 | 0.0375 |
| Jupiter | 34315-04-05 17:17 G | 14254450.04 | 14254450.22 | 14254450.40 | 0.0531 | 0.0327 |
| Saturn | 34316-02-23 17:17 G | 14254774.06 | 14254774.22 | 14254774.40 | 0.0299 | 0.0209 |
| Jupiter | 34320-09-18 18:14 G | 14256443.03 | 14256443.26 | 14256443.49 | 0.0494 | 0.0059 |
| Pluto | 34325-04-01 16:33 G | 14258099.06 | 14258099.19 | 14258099.37 | 0.0065 | 0.0053 |
| Jupiter | 34326-03-05 01:26 G | 14258436.35 | 14258436.56 | 14258436.77 | 0.0531 | 0.0226 |
| Pluto | 34326-04-03 12:43 G | 14258465.81 | 14258466.03 | 14258466.28 | 0.0066 | 0.0027 |
| Jupiter | 34327-04-10 13:55 G | 14258837.95 | 14258838.08 | 14258838.22 | 0.0530 | 0.0431 |
| Jupiter | 34331-08-23 23:02 G | 14260434.33 | 14260434.46 | 14260434.59 | 0.0496 | 0.0414 |
| Saturn | 34331-08-26 04:05 G | 14260436.47 | 14260436.67 | 14260436.89 | 0.0263 | 0.0154 |
| Saturn | 34332-09-05 14:53 G | 14260812.98 | 14260813.12 | 14260813.30 | 0.0265 | 0.0200 |
| Jupiter | 34332-09-23 11:17 G | 14260830.75 | 14260830.97 | 14260831.20 | 0.0495 | 0.0101 |
| Uranus | 34336-09-11 14:24 G | 14262279.98 | 14262280.10 | 14262280.25 | 0.0142 | 0.0119 |
| Uranus | 34337-09-16 07:26 G | 14262649.56 | 14262649.81 | 14262650.07 | 0.0142 | 0.0032 |
| Jupiter | 34338-03-09 20:09 G | 14262824.11 | 14262824.34 | 14262824.57 | 0.0532 | 0.0134 |
| Uranus | 34338-09-21 04:05 G | 14263019.45 | 14263019.67 | 14263019.91 | 0.0141 | 0.0051 |
| Neptune | 34339-01-21 11:02 G | 14263141.87 | 14263141.96 | 14263142.10 | 0.0089 | 0.0080 |
| Uranus | 34339-09-25 21:21 G | 14263389.27 | 14263389.39 | 14263389.55 | 0.0141 | 0.0119 |
| Neptune | 34340-01-24 03:21 G | 14263509.47 | 14263509.64 | 14263509.83 | 0.0090 | 0.0066 |
| Neptune | 34341-01-25 14:09 G | 14263876.89 | 14263877.09 | 14263877.33 | 0.0090 | 0.0045 |
| Neptune | 34342-01-28 01:26 G | 14264244.33 | 14264244.56 | 14264244.83 | 0.0090 | 0.0032 |
| Neptune | 34343-01-30 17:45 G | 14264612.00 | 14264612.24 | 14264612.50 | 0.0090 | 0.0010 |
| Jupiter | 34343-08-28 12:14 G | 14264821.85 | 14264822.01 | 14264822.19 | 0.0495 | 0.0326 |
| Neptune | 34344-02-02 01:26 G | 14264979.30 | 14264979.56 | 14264979.82 | 0.0090 | 0.0002 |
| Jupiter | 34344-09-27 16:19 G | 14265217.96 | 14265218.18 | 14265218.41 | 0.0495 | 0.0178 |

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| Neptune | 34345-02-03 20:24 G | 14265347.12 | 14265347.35 | 14265347.61 | 0.0090 | 0.0025 |
| Neptune | 34346-02-06 02:09 G | 14265714.37 | 14265714.59 | 14265714.84 | 0.0090 | 0.0036 |
| Saturn | 34346-03-03 00:00 G | 14265739.28 | 14265739.50 | 14265739.73 | 0.0298 | 0.0090 |
| Neptune | 34347-02-08 21:21 G | 14266082.22 | 14266082.39 | 14266082.61 | 0.0090 | 0.0060 |
| Neptune | 34348-02-11 04:33 G | 14266449.56 | 14266449.69 | 14266449.87 | 0.0090 | 0.0071 |
| Jupiter | 34350-03-15 04:05 G | 14267212.45 | 14267212.67 | 14267212.90 | 0.0532 | 0.0078 |
| Jupiter | 34355-09-02 00:14 G | 14269209.32 | 14269209.51 | 14269209.71 | 0.0495 | 0.0282 |
| Jupiter | 34356-10-02 02:53 G | 14269605.44 | 14269605.62 | 14269605.80 | 0.0495 | 0.0295 |
| Saturn | 34361-08-31 21:21 G | 14271400.15 | 14271400.39 | 14271400.63 | 0.0264 | 0.0034 |
| Jupiter | 34362-03-20 10:33 G | 14271600.70 | 14271600.94 | 14271601.18 | 0.0532 | 0.0035 |
| Jupiter | 34367-09-06 05:45 G | 14273596.53 | 14273596.74 | 14273596.94 | 0.0494 | 0.0227 |
| Jupiter | 34368-10-06 14:38 G | 14273992.96 | 14273993.11 | 14273993.27 | 0.0495 | 0.0380 |
| Jupiter | 34373-02-16 22:19 G | 14275587.40 | 14275587.43 | 14275587.47 | 0.0530 | 0.0524 |
| Jupiter | 34374-03-25 11:17 G | 14275988.76 | 14275988.97 | 14275989.19 | 0.0532 | 0.0182 |
| Saturn | 34375-02-24 08:53 G | 14276324.67 | 14276324.87 | 14276325.09 | 0.0299 | 0.0166 |
| Jupiter | 34379-09-10 19:26 G | 14277984.08 | 14277984.31 | 14277984.54 | 0.0495 | 0.0121 |
| Uranus | 34380-03-10 09:36 G | 14278165.89 | 14278165.90 | 14278165.94 | 0.0136 | 0.0135 |
| Jupiter | 34380-10-10 19:12 G | 14278380.19 | 14278380.30 | 14278380.42 | 0.0496 | 0.0422 |
| Uranus | 34381-03-14 16:19 G | 14278534.98 | 14278535.18 | 14278535.41 | 0.0136 | 0.0077 |
| Uranus | 34382-03-19 09:50 G | 14278904.66 | 14278904.91 | 14278905.16 | 0.0137 | 0.0008 |
| Uranus | 34383-03-23 18:14 G | 14279274.05 | 14279274.26 | 14279274.50 | 0.0137 | 0.0070 |
| Jupiter | 34385-02-21 21:36 G | 14279975.31 | 14279975.40 | 14279975.50 | 0.0530 | 0.0478 |
| Jupiter | 34386-03-30 22:19 G | 14280377.24 | 14280377.43 | 14280377.64 | 0.0531 | 0.0265 |
| Saturn | 34390-08-26 19:41 G | 14281987.11 | 14281987.32 | 14281987.55 | 0.0262 | 0.0124 |
| Saturn | 34391-09-07 12:43 G | 14282363.93 | 14282364.03 | 14282364.16 | 0.0265 | 0.0232 |
| Jupiter | 34391-09-14 21:36 G | 14282371.16 | 14282371.40 | 14282371.63 | 0.0495 | 0.0012 |
| Jupiter | 34392-10-15 12:00 G | 14282767.93 | 14282768.00 | 14282768.07 | 0.0497 | 0.0472 |
| Jupiter | 34397-02-27 04:48 G | 14284363.53 | 14284363.70 | 14284363.86 | 0.0531 | 0.0373 |
| Jupiter | 34398-04-04 16:33 G | 14284765.01 | 14284765.19 | 14284765.38 | 0.0531 | 0.0320 |
| Jupiter | 34403-09-19 15:07 G | 14286758.90 | 14286759.13 | 14286759.36 | 0.0494 | 0.0052 |

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| Saturn | 34405-03-04 00:00 G | 14287290.29 | 14287290.50 | 14287290.71 | 0.0298 | 0.0136 |
| Jupiter | 34409-03-04 00:43 G | 14288751.32 | 14288751.53 | 14288751.75 | 0.0531 | 0.0230 |
| Jupiter | 34410-04-10 02:09 G | 14289153.46 | 14289153.59 | 14289153.72 | 0.0531 | 0.0436 |
| Pluto | 34413-10-03 22:05 G | 14290426.19 | 14290426.42 | 14290426.66 | 0.0079 | 0.0028 |
| Jupiter | 34414-08-23 14:38 G | 14290750.00 | 14290750.11 | 14290750.24 | 0.0496 | 0.0417 |
| Jupiter | 34415-09-23 19:26 G | 14291146.08 | 14291146.31 | 14291146.55 | 0.0494 | 0.0093 |
| Neptune | 34420-07-22 17:02 G | 14292910.17 | 14292910.21 | 14292910.29 | 0.0088 | 0.0085 |
| Saturn | 34420-09-01 14:24 G | 14292950.86 | 14292951.10 | 14292951.36 | 0.0264 | 0.0065 |
| Uranus | 34420-09-11 21:50 G | 14292961.26 | 14292961.41 | 14292961.58 | 0.0142 | 0.0108 |
| Jupiter | 34421-03-09 10:48 G | 14293139.73 | 14293139.95 | 14293140.17 | 0.0532 | 0.0146 |
| Neptune | 34421-07-25 09:36 G | 14293277.75 | 14293277.90 | 14293278.08 | 0.0088 | 0.0068 |
| Uranus | 34421-09-16 13:41 G | 14293330.82 | 14293331.07 | 14293331.33 | 0.0142 | 0.0034 |
| Neptune | 34422-07-27 17:02 G | 14293645.03 | 14293645.21 | 14293645.43 | 0.0088 | 0.0053 |
| Uranus | 34422-09-21 12:14 G | 14293700.78 | 14293701.01 | 14293701.25 | 0.0141 | 0.0046 |
| Neptune | 34423-07-30 04:48 G | 14294012.47 | 14294012.70 | 14294012.96 | 0.0088 | 0.0036 |
| Uranus | 34423-09-26 04:05 G | 14294070.57 | 14294070.67 | 14294070.77 | 0.0141 | 0.0130 |
| Neptune | 34424-07-31 17:02 G | 14294379.98 | 14294380.21 | 14294380.47 | 0.0088 | 0.0021 |
| Neptune | 34425-08-03 00:00 G | 14294747.24 | 14294747.50 | 14294747.77 | 0.0088 | 0.0004 |
| Neptune | 34426-08-05 16:48 G | 14295114.95 | 14295115.20 | 14295115.45 | 0.0088 | 0.0012 |
| Jupiter | 34426-08-28 02:53 G | 14295137.45 | 14295137.62 | 14295137.81 | 0.0495 | 0.0332 |
| Neptune | 34427-08-07 20:24 G | 14295482.13 | 14295482.35 | 14295482.61 | 0.0088 | 0.0030 |
| Jupiter | 34427-09-28 06:43 G | 14295533.57 | 14295533.78 | 14295533.99 | 0.0494 | 0.0183 |
| Neptune | 34428-08-09 14:09 G | 14295849.88 | 14295850.09 | 14295850.33 | 0.0088 | 0.0045 |
| Neptune | 34429-08-11 18:43 G | 14296217.12 | 14296217.28 | 14296217.47 | 0.0088 | 0.0062 |
| Neptune | 34430-08-14 10:19 G | 14296584.82 | 14296584.93 | 14296585.08 | 0.0088 | 0.0076 |
| Jupiter | 34433-03-14 15:50 G | 14297527.92 | 14297528.16 | 14297528.40 | 0.0532 | 0.0086 |
| Saturn | 34434-02-24 23:31 G | 14297875.26 | 14297875.48 | 14297875.71 | 0.0299 | 0.0121 |
| Jupiter | 34438-09-01 04:33 G | 14299524.51 | 14299524.69 | 14299524.87 | 0.0495 | 0.0299 |
| Jupiter | 34439-10-02 15:50 G | 14299920.97 | 14299921.16 | 14299921.35 | 0.0495 | 0.0295 |
| Jupiter | 34445-03-19 17:02 G | 14301915.99 | 14301916.21 | 14301916.44 | 0.0531 | 0.0038 |

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| Saturn | 34449-08-27 19:26 G | 14303538.08 | 14303538.31 | 14303538.53 | 0.0262 | 0.0091 |
| Jupiter | 34450-09-05 21:36 G | 14303912.20 | 14303912.40 | 14303912.61 | 0.0495 | 0.0233 |
| Saturn | 34450-09-08 13:55 G | 14303915.07 | 14303915.08 | 14303915.11 | 0.0265 | 0.0264 |
| Jupiter | 34451-10-06 21:36 G | 14304308.26 | 14304308.40 | 14304308.56 | 0.0496 | 0.0378 |
| Jupiter | 34457-03-25 00:29 G | 14306304.30 | 14306304.52 | 14306304.74 | 0.0531 | 0.0181 |
| Jupiter | 34462-09-10 00:43 G | 14308299.30 | 14308299.53 | 14308299.76 | 0.0495 | 0.0123 |
| Jupiter | 34463-10-11 14:09 G | 14308695.97 | 14308696.09 | 14308696.23 | 0.0496 | 0.0412 |
| Saturn | 34464-03-04 19:55 G | 14308841.13 | 14308841.33 | 14308841.53 | 0.0298 | 0.0179 |
| Uranus | 34465-03-15 01:26 G | 14309216.34 | 14309216.56 | 14309216.81 | 0.0136 | 0.0061 |
| Uranus | 34466-03-19 19:55 G | 14309586.08 | 14309586.33 | 14309586.58 | 0.0137 | 0.0002 |
| Uranus | 34467-03-24 03:21 G | 14309955.45 | 14309955.64 | 14309955.86 | 0.0137 | 0.0083 |
| Jupiter | 34468-02-22 09:50 G | 14310290.82 | 14310290.91 | 14310291.00 | 0.0530 | 0.0485 |
| Jupiter | 34469-03-29 20:53 G | 14310692.17 | 14310692.37 | 14310692.58 | 0.0531 | 0.0259 |
| Jupiter | 34474-09-14 17:31 G | 14312687.00 | 14312687.23 | 14312687.45 | 0.0494 | 0.0017 |
| Jupiter | 34475-10-15 16:19 G | 14313083.11 | 14313083.18 | 14313083.25 | 0.0496 | 0.0471 |
| Saturn | 34478-08-23 00:57 G | 14314125.47 | 14314125.54 | 14314125.64 | 0.0262 | 0.0247 |
| Saturn | 34479-09-03 07:41 G | 14314501.60 | 14314501.82 | 14314502.06 | 0.0264 | 0.0097 |
| Jupiter | 34480-02-27 06:14 G | 14314678.60 | 14314678.76 | 14314678.93 | 0.0531 | 0.0374 |
| Jupiter | 34481-04-04 08:09 G | 14315080.67 | 14315080.84 | 14315081.03 | 0.0531 | 0.0319 |
| Mars | 34485-01-12 07:12 G | 14316459.59 | 14316459.80 | 14316460.00 | 0.1782 | 0.0171 |
| Jupiter | 34486-09-18 22:33 G | 14317074.20 | 14317074.44 | 14317074.68 | 0.0494 | 0.0041 |
| Jupiter | 34492-03-03 17:31 G | 14319067.03 | 14319067.23 | 14319067.44 | 0.0531 | 0.0233 |
| Saturn | 34493-02-25 22:19 G | 14319426.20 | 14319426.43 | 14319426.66 | 0.0299 | 0.0073 |
| Jupiter | 34493-04-09 11:02 G | 14319468.83 | 14319468.96 | 14319469.10 | 0.0530 | 0.0437 |
| Jupiter | 34497-08-22 23:17 G | 14321065.34 | 14321065.47 | 14321065.60 | 0.0496 | 0.0418 |
| Jupiter | 34498-09-23 05:45 G | 14321461.52 | 14321461.74 | 14321461.96 | 0.0495 | 0.0085 |
| Neptune | 34503-01-22 00:00 G | 14323042.43 | 14323042.50 | 14323042.60 | 0.0089 | 0.0085 |
| Neptune | 34504-01-24 12:57 G | 14323409.93 | 14323410.04 | 14323410.18 | 0.0090 | 0.0077 |
| Jupiter | 34504-03-09 19:55 G | 14323455.11 | 14323455.33 | 14323455.57 | 0.0531 | 0.0154 |
| Uranus | 34504-09-13 07:12 G | 14323642.68 | 14323642.80 | 14323642.95 | 0.0142 | 0.0117 |

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| Neptune | 34505-01-25 23:02 G | 14323777.27 | 14323777.46 | 14323777.70 | 0.0090 | 0.0052 |
| Uranus | 34505-09-17 21:36 G | 14324012.15 | 14324012.40 | 14324012.66 | 0.0142 | 0.0027 |
| Neptune | 34506-01-28 16:19 G | 14324144.97 | 14324145.18 | 14324145.41 | 0.0090 | 0.0043 |
| Mars | 34506-07-14 14:09 G | 14324311.93 | 14324312.09 | 14324312.25 | 0.1760 | 0.1136 |
| Uranus | 34506-09-22 21:07 G | 14324382.16 | 14324382.38 | 14324382.62 | 0.0141 | 0.0051 |
| Neptune | 34507-01-30 22:48 G | 14324512.20 | 14324512.45 | 14324512.71 | 0.0090 | 0.0017 |
| Uranus | 34507-09-27 11:31 G | 14324751.87 | 14324751.98 | 14324752.12 | 0.0141 | 0.0123 |
| Neptune | 34508-02-02 18:14 G | 14324880.01 | 14324880.26 | 14324880.52 | 0.0090 | 0.0008 |
| Saturn | 34508-08-29 21:50 G | 14325089.17 | 14325089.41 | 14325089.65 | 0.0263 | 0.0056 |
| Neptune | 34509-02-04 00:00 G | 14325247.25 | 14325247.50 | 14325247.75 | 0.0090 | 0.0018 |
| Jupiter | 34509-08-28 04:48 G | 14325452.54 | 14325452.70 | 14325452.87 | 0.0496 | 0.0346 |
| Neptune | 34510-02-06 18:00 G | 14325615.02 | 14325615.25 | 14325615.52 | 0.0090 | 0.0028 |
| Jupiter | 34510-09-28 17:45 G | 14325849.01 | 14325849.24 | 14325849.46 | 0.0495 | 0.0181 |
| Neptune | 34511-02-09 01:55 G | 14325982.39 | 14325982.58 | 14325982.80 | 0.0090 | 0.0052 |
| Neptune | 34512-02-11 17:31 G | 14326350.04 | 14326350.23 | 14326350.43 | 0.0090 | 0.0061 |
| Neptune | 34513-02-13 05:45 G | 14326717.69 | 14326717.74 | 14326717.82 | 0.0090 | 0.0086 |
| Jupiter | 34516-03-14 18:29 G | 14327843.05 | 14327843.27 | 14327843.49 | 0.0531 | 0.0093 |
| Jupiter | 34521-09-01 23:17 G | 14329840.29 | 14329840.47 | 14329840.65 | 0.0495 | 0.0308 |
| Jupiter | 34522-10-02 23:17 G | 14330236.29 | 14330236.47 | 14330236.66 | 0.0495 | 0.0298 |
| Saturn | 34523-03-07 13:26 G | 14330391.91 | 14330392.06 | 14330392.23 | 0.0298 | 0.0231 |
| Jupiter | 34528-03-20 03:07 G | 14332231.39 | 14332231.63 | 14332231.86 | 0.0532 | 0.0039 |
| Jupiter | 34533-09-06 01:41 G | 14334227.37 | 14334227.57 | 14334227.78 | 0.0495 | 0.0238 |
| Jupiter | 34534-10-07 14:38 G | 14334623.96 | 14334624.11 | 14334624.27 | 0.0495 | 0.0367 |
| Saturn | 34537-08-24 21:07 G | 14335676.24 | 14335676.38 | 14335676.53 | 0.0262 | 0.0210 |
| Saturn | 34538-09-05 10:05 G | 14336052.72 | 14336052.92 | 14336053.13 | 0.0264 | 0.0137 |
| Jupiter | 34540-03-25 00:14 G | 14336619.29 | 14336619.51 | 14336619.74 | 0.0532 | 0.0177 |
| Jupiter | 34545-09-10 18:14 G | 14338615.04 | 14338615.26 | 14338615.48 | 0.0494 | 0.0122 |
| Jupiter | 34546-10-11 17:02 G | 14339011.08 | 14339011.21 | 14339011.35 | 0.0496 | 0.0403 |
| Uranus | 34548-03-12 06:00 G | 14339528.70 | 14339528.75 | 14339528.84 | 0.0136 | 0.0130 |
| Uranus | 34549-03-16 11:45 G | 14339897.77 | 14339897.99 | 14339898.21 | 0.0136 | 0.0071 |

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| Uranus | 34550-03-21 06:43 G | 14340267.54 | 14340267.78 | 14340268.04 | 0.0137 | 0.0016 |
| Jupiter | 34551-02-22 12:29 G | 14340605.94 | 14340606.02 | 14340606.10 | 0.0530 | 0.0494 |
| Uranus | 34551-03-25 13:55 G | 14340636.87 | 14340637.08 | 14340637.30 | 0.0137 | 0.0076 |
| Saturn | 34552-02-29 03:36 G | 14340977.41 | 14340977.65 | 14340977.89 | 0.0299 | 0.0021 |
| Jupiter | 34552-03-30 12:43 G | 14341007.83 | 14341008.03 | 14341008.23 | 0.0531 | 0.0251 |
| Jupiter | 34557-09-14 18:57 G | 14343002.04 | 14343002.29 | 14343002.53 | 0.0495 | 0.0026 |
| Jupiter | 34558-10-16 06:43 G | 14343398.72 | 14343398.78 | 14343398.85 | 0.0497 | 0.0473 |
| Jupiter | 34563-02-27 22:05 G | 14344994.27 | 14344994.42 | 14344994.59 | 0.0531 | 0.0370 |
| Jupiter | 34564-04-04 13:12 G | 14345395.86 | 14345396.05 | 14345396.25 | 0.0530 | 0.0314 |
| Saturn | 34567-08-31 22:33 G | 14346640.18 | 14346640.44 | 14346640.69 | 0.0263 | 0.0015 |
| Jupiter | 34569-09-19 05:31 G | 14347389.51 | 14347389.73 | 14347389.96 | 0.0495 | 0.0028 |
| Pluto | 34571-04-05 01:26 G | 14347952.38 | 14347952.56 | 14347952.76 | 0.0065 | 0.0043 |
| Pluto | 34572-04-05 15:07 G | 14348318.92 | 14348319.13 | 14348319.36 | 0.0066 | 0.0038 |
| Jupiter | 34575-03-04 18:29 G | 14349382.06 | 14349382.27 | 14349382.49 | 0.0531 | 0.0239 |
| Jupiter | 34576-04-09 11:31 G | 14349783.86 | 14349783.98 | 14349784.11 | 0.0530 | 0.0441 |
| Jupiter | 34580-08-23 04:05 G | 14351380.56 | 14351380.67 | 14351380.80 | 0.0496 | 0.0421 |
| Saturn | 34581-02-21 15:21 G | 14351563.03 | 14351563.14 | 14351563.27 | 0.0300 | 0.0262 |
| Jupiter | 34581-09-23 18:14 G | 14351777.02 | 14351777.26 | 14351777.50 | 0.0495 | 0.0080 |
| Saturn | 34582-03-08 14:38 G | 14351943.06 | 14351943.11 | 14351943.18 | 0.0298 | 0.0286 |
| Mars | 34585-07-17 12:00 G | 14353169.90 | 14353170.00 | 14353170.10 | 0.1754 | 0.1510 |
| Neptune | 34585-07-25 17:31 G | 14353178.11 | 14353178.23 | 14353178.38 | 0.0088 | 0.0073 |
| Neptune | 34586-07-28 04:05 G | 14353545.50 | 14353545.67 | 14353545.86 | 0.0088 | 0.0065 |
| Jupiter | 34587-03-09 19:55 G | 14353770.11 | 14353770.33 | 14353770.54 | 0.0531 | 0.0167 |
| Neptune | 34587-07-30 18:00 G | 14353913.04 | 14353913.25 | 14353913.48 | 0.0088 | 0.0041 |
| Neptune | 34588-08-01 00:00 G | 14354280.26 | 14354280.50 | 14354280.75 | 0.0088 | 0.0033 |
| Uranus | 34588-09-13 18:14 G | 14354324.11 | 14354324.26 | 14354324.46 | 0.0142 | 0.0101 |
| Neptune | 34589-08-03 17:31 G | 14354647.97 | 14354648.23 | 14354648.48 | 0.0088 | 0.0007 |
| Uranus | 34589-09-18 08:09 G | 14354693.59 | 14354693.84 | 14354694.10 | 0.0142 | 0.0030 |
| Neptune | 34590-08-05 21:21 G | 14355015.14 | 14355015.39 | 14355015.65 | 0.0088 | 0.0001 |
| Uranus | 34590-09-23 08:53 G | 14355063.64 | 14355063.87 | 14355064.10 | 0.0141 | 0.0053 |

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| Neptune | 34591-08-08 14:38 G | 14355382.88 | 14355383.11 | 14355383.38 | 0.0088 | 0.0026 |
| Uranus | 34591-09-27 21:36 G | 14355433.35 | 14355433.40 | 14355433.49 | 0.0141 | 0.0135 |
| Neptune | 34592-08-09 19:55 G | 14355750.11 | 14355750.33 | 14355750.57 | 0.0088 | 0.0033 |
| Jupiter | 34592-08-27 22:05 G | 14355768.26 | 14355768.42 | 14355768.58 | 0.0496 | 0.0356 |
| Neptune | 34593-08-12 10:05 G | 14356117.74 | 14356117.92 | 14356118.14 | 0.0088 | 0.0058 |
| Jupiter | 34593-09-27 22:33 G | 14356164.22 | 14356164.44 | 14356164.65 | 0.0495 | 0.0179 |
| Neptune | 34594-08-14 19:12 G | 14356485.15 | 14356485.30 | 14356485.48 | 0.0088 | 0.0066 |
| Saturn | 34596-08-26 00:00 G | 14357227.32 | 14357227.50 | 14357227.69 | 0.0262 | 0.0168 |
| Saturn | 34597-09-06 17:45 G | 14357604.08 | 14357604.24 | 14357604.43 | 0.0264 | 0.0182 |
| Jupiter | 34599-03-15 03:50 G | 14358158.43 | 14358158.66 | 14358158.90 | 0.0532 | 0.0103 |
| Jupiter | 34604-09-02 00:00 G | 14360155.32 | 14360155.50 | 14360155.69 | 0.0495 | 0.0314 |
| Jupiter | 34605-10-03 13:41 G | 14360551.88 | 14360552.07 | 14360552.26 | 0.0495 | 0.0295 |
| Saturn | 34611-03-03 09:36 G | 14362528.66 | 14362528.90 | 14362529.15 | 0.0298 | 0.0038 |
| Jupiter | 34611-03-21 02:53 G | 14362546.39 | 14362546.62 | 14362546.86 | 0.0532 | 0.0035 |
| Jupiter | 34616-09-06 12:14 G | 14364542.82 | 14364543.01 | 14364543.21 | 0.0495 | 0.0244 |
| Jupiter | 34617-10-07 12:14 G | 14364938.85 | 14364939.01 | 14364939.17 | 0.0496 | 0.0358 |
| Jupiter | 34623-03-26 13:55 G | 14366934.87 | 14366935.08 | 14366935.30 | 0.0531 | 0.0172 |
| Saturn | 34626-09-02 22:33 G | 14368191.19 | 14368191.44 | 14368191.70 | 0.0263 | 0.0028 |
| Jupiter | 34628-09-10 16:33 G | 14368929.96 | 14368930.19 | 14368930.43 | 0.0495 | 0.0126 |
| Jupiter | 34629-10-12 04:19 G | 14369326.55 | 14369326.68 | 14369326.82 | 0.0496 | 0.0396 |
| Uranus | 34633-03-17 20:09 G | 14370579.12 | 14370579.34 | 14370579.58 | 0.0137 | 0.0056 |
| Jupiter | 34634-02-22 20:24 G | 14370921.29 | 14370921.35 | 14370921.42 | 0.0530 | 0.0507 |
| Uranus | 34634-03-22 16:05 G | 14370948.92 | 14370949.17 | 14370949.42 | 0.0137 | 0.0004 |
| Uranus | 34635-03-26 22:19 G | 14371318.25 | 14371318.43 | 14371318.64 | 0.0137 | 0.0091 |
| Jupiter | 34635-03-31 08:24 G | 14371322.64 | 14371322.85 | 14371323.07 | 0.0531 | 0.0239 |
| Saturn | 34640-02-25 00:57 G | 14373114.37 | 14373114.54 | 14373114.72 | 0.0300 | 0.0203 |
| Jupiter | 34640-09-15 04:19 G | 14373317.46 | 14373317.68 | 14373317.91 | 0.0495 | 0.0031 |
| Jupiter | 34641-10-16 09:36 G | 14373713.83 | 14373713.90 | 14373713.98 | 0.0497 | 0.0470 |
| Jupiter | 34646-02-27 16:33 G | 14375309.03 | 14375309.19 | 14375309.36 | 0.0530 | 0.0382 |
| Jupiter | 34647-04-05 10:48 G | 14375710.77 | 14375710.95 | 14375711.14 | 0.0531 | 0.0307 |

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| Jupiter | 34652-09-19 15:36 G | 14377704.91 | 14377705.15 | 14377705.39 | 0.0494 | 0.0016 |
| Saturn | 34655-08-29 10:19 G | 14378778.73 | 14378778.93 | 14378779.15 | 0.0262 | 0.0125 |
| Saturn | 34656-09-09 01:55 G | 14379155.46 | 14379155.58 | 14379155.70 | 0.0265 | 0.0230 |
| Jupiter | 34658-03-04 19:41 G | 14379697.12 | 14379697.32 | 14379697.51 | 0.0531 | 0.0255 |
| Jupiter | 34659-04-10 18:57 G | 14380099.16 | 14380099.29 | 14380099.43 | 0.0531 | 0.0438 |
| Pluto | 34659-10-08 12:14 G | 14380279.83 | 14380280.01 | 14380280.23 | 0.0079 | 0.0050 |
| Jupiter | 34663-08-24 17:45 G | 14381696.12 | 14381696.24 | 14381696.37 | 0.0496 | 0.0422 |
| Jupiter | 34664-09-23 19:26 G | 14382092.09 | 14382092.31 | 14382092.54 | 0.0494 | 0.0073 |
| Neptune | 34668-01-24 19:41 G | 14383310.24 | 14383310.32 | 14383310.45 | 0.0089 | 0.0082 |
| Neptune | 34669-01-26 13:55 G | 14383677.93 | 14383678.08 | 14383678.27 | 0.0089 | 0.0066 |
| Neptune | 34670-01-28 19:55 G | 14384045.13 | 14384045.33 | 14384045.57 | 0.0090 | 0.0047 |
| Saturn | 34670-03-04 16:19 G | 14384079.95 | 14384080.18 | 14384080.43 | 0.0298 | 0.0102 |
| Jupiter | 34670-03-10 04:19 G | 14384085.46 | 14384085.68 | 14384085.91 | 0.0531 | 0.0185 |
| Neptune | 34671-01-31 15:50 G | 14384412.93 | 14384413.16 | 14384413.41 | 0.0090 | 0.0031 |
| Neptune | 34672-02-02 22:05 G | 14384780.17 | 14384780.42 | 14384780.68 | 0.0090 | 0.0011 |
| Uranus | 34672-09-15 05:31 G | 14385005.60 | 14385005.73 | 14385005.91 | 0.0142 | 0.0111 |
| Neptune | 34673-02-04 16:19 G | 14385147.91 | 14385148.18 | 14385148.44 | 0.0090 | 0.0004 |
| Uranus | 34673-09-19 18:57 G | 14385375.03 | 14385375.29 | 14385375.54 | 0.0142 | 0.0018 |
| Neptune | 34674-02-07 01:26 G | 14385515.32 | 14385515.56 | 14385515.80 | 0.0090 | 0.0024 |
| Uranus | 34674-09-24 19:41 G | 14385745.11 | 14385745.32 | 14385745.56 | 0.0141 | 0.0057 |
| Neptune | 34675-02-09 15:21 G | 14385882.90 | 14385883.14 | 14385883.38 | 0.0090 | 0.0038 |
| Jupiter | 34675-08-28 15:50 G | 14386083.00 | 14386083.16 | 14386083.32 | 0.0496 | 0.0364 |
| Uranus | 34675-09-29 07:55 G | 14386114.76 | 14386114.83 | 14386114.94 | 0.0141 | 0.0132 |
| Neptune | 34676-02-12 04:19 G | 14386250.52 | 14386250.68 | 14386250.89 | 0.0090 | 0.0060 |
| Jupiter | 34676-09-28 06:29 G | 14386479.56 | 14386479.77 | 14386480.00 | 0.0495 | 0.0177 |
| Neptune | 34677-02-13 13:12 G | 14386617.93 | 14386618.05 | 14386618.23 | 0.0090 | 0.0074 |
| Jupiter | 34682-03-15 01:26 G | 14388473.34 | 14388473.56 | 14388473.79 | 0.0531 | 0.0113 |
| Saturn | 34685-09-04 04:05 G | 14389742.44 | 14389742.67 | 14389742.90 | 0.0263 | 0.0075 |
| Jupiter | 34687-09-02 07:41 G | 14390470.66 | 14390470.82 | 14390471.00 | 0.0495 | 0.0326 |
| Jupiter | 34688-10-02 08:09 G | 14390866.66 | 14390866.84 | 14390867.04 | 0.0495 | 0.0290 |

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| Jupiter | 34694-03-20 07:55 G | 14392861.60 | 14392861.83 | 14392862.06 | 0.0531 | 0.0024 |
| Saturn | 34699-02-26 19:12 G | 14394666.09 | 14394666.30 | 14394666.51 | 0.0300 | 0.0133 |
| Jupiter | 34699-09-06 13:12 G | 14394857.84 | 14394858.05 | 14394858.26 | 0.0495 | 0.0246 |
| Jupiter | 34700-10-08 00:57 G | 14395254.38 | 14395254.54 | 14395254.70 | 0.0495 | 0.0350 |
| Jupiter | 34706-03-26 03:21 G | 14397249.41 | 14397249.64 | 14397249.87 | 0.0531 | 0.0154 |
| Jupiter | 34711-09-12 00:14 G | 14399245.29 | 14399245.51 | 14399245.72 | 0.0495 | 0.0128 |
| Jupiter | 34712-10-12 04:05 G | 14399641.53 | 14399641.67 | 14399641.83 | 0.0496 | 0.0388 |
| Saturn | 34714-08-31 22:19 G | 14400330.19 | 14400330.43 | 14400330.67 | 0.0263 | 0.0075 |
| Uranus | 34716-03-14 23:02 G | 14400891.39 | 14400891.46 | 14400891.56 | 0.0136 | 0.0127 |
| Jupiter | 34717-02-22 12:57 G | 14401236.00 | 14401236.04 | 14401236.08 | 0.0530 | 0.0521 |
| Uranus | 34717-03-19 04:05 G | 14401260.46 | 14401260.67 | 14401260.91 | 0.0136 | 0.0067 |
| Uranus | 34718-03-24 00:14 G | 14401630.27 | 14401630.51 | 14401630.77 | 0.0137 | 0.0020 |
| Jupiter | 34718-03-31 08:24 G | 14401637.65 | 14401637.85 | 14401638.05 | 0.0531 | 0.0222 |
| Uranus | 34719-03-28 06:29 G | 14401999.58 | 14401999.77 | 14401999.99 | 0.0137 | 0.0079 |
| Jupiter | 34723-09-16 10:48 G | 14403632.71 | 14403632.95 | 14403633.19 | 0.0494 | 0.0039 |
| Jupiter | 34724-10-16 15:21 G | 14404029.08 | 14404029.14 | 14404029.22 | 0.0496 | 0.0470 |
| Jupiter | 34729-02-27 19:26 G | 14405624.17 | 14405624.31 | 14405624.46 | 0.0531 | 0.0395 |
| Saturn | 34729-03-07 06:57 G | 14405631.60 | 14405631.79 | 14405631.99 | 0.0298 | 0.0175 |
| Jupiter | 34730-04-05 16:48 G | 14406026.01 | 14406026.20 | 14406026.41 | 0.0531 | 0.0296 |
| Jupiter | 34735-09-20 10:48 G | 14408019.73 | 14408019.95 | 14408020.18 | 0.0494 | 0.0009 |
| Jupiter | 34741-03-05 00:43 G | 14410012.32 | 14410012.53 | 14410012.74 | 0.0531 | 0.0264 |
| Jupiter | 34742-04-10 13:26 G | 14410413.94 | 14410414.06 | 14410414.20 | 0.0530 | 0.0431 |
| Saturn | 34743-08-27 00:57 G | 14410917.42 | 14410917.54 | 14410917.66 | 0.0262 | 0.0226 |
| Saturn | 34744-09-06 17:02 G | 14411294.01 | 14411294.21 | 14411294.43 | 0.0264 | 0.0127 |
| Jupiter | 34746-08-24 09:07 G | 14412010.77 | 14412010.88 | 14412011.00 | 0.0496 | 0.0434 |
| Jupiter | 34747-09-25 01:26 G | 14412407.33 | 14412407.56 | 14412407.80 | 0.0495 | 0.0065 |
| Neptune | 34749-07-27 05:02 G | 14413078.65 | 14413078.71 | 14413078.79 | 0.0088 | 0.0084 |
| Neptune | 34750-07-29 19:41 G | 14413446.19 | 14413446.32 | 14413446.48 | 0.0088 | 0.0071 |
| Neptune | 34751-08-01 00:29 G | 14413813.32 | 14413813.52 | 14413813.74 | 0.0088 | 0.0051 |
| Neptune | 34752-08-02 18:14 G | 14414181.03 | 14414181.26 | 14414181.50 | 0.0088 | 0.0037 |

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| Jupiter | 34753-03-09 17:45 G | 14414400.03 | 14414400.24 | 14414400.45 | 0.0531 | 0.0205 |
| Neptune | 34753-08-04 21:50 G | 14414548.18 | 14414548.41 | 14414548.68 | 0.0088 | 0.0019 |
| Neptune | 34754-08-07 15:07 G | 14414915.87 | 14414916.13 | 14414916.40 | 0.0088 | 0.0005 |
| Neptune | 34755-08-09 20:53 G | 14415283.13 | 14415283.37 | 14415283.63 | 0.0088 | 0.0014 |
| Neptune | 34756-08-11 10:33 G | 14415650.70 | 14415650.94 | 14415651.20 | 0.0088 | 0.0029 |
| Uranus | 34756-09-16 15:50 G | 14415686.98 | 14415687.16 | 14415687.36 | 0.0142 | 0.0093 |
| Neptune | 34757-08-13 21:07 G | 14416018.19 | 14416018.38 | 14416018.60 | 0.0088 | 0.0048 |
| Uranus | 34757-09-21 04:33 G | 14416056.44 | 14416056.69 | 14416056.95 | 0.0142 | 0.0025 |
| Saturn | 34758-03-01 15:21 G | 14416217.90 | 14416218.14 | 14416218.39 | 0.0299 | 0.0056 |
| Neptune | 34758-08-16 06:00 G | 14416385.57 | 14416385.75 | 14416385.94 | 0.0088 | 0.0062 |
| Jupiter | 34758-08-29 02:53 G | 14416398.47 | 14416398.62 | 14416398.76 | 0.0496 | 0.0377 |
| Uranus | 34758-09-26 06:43 G | 14416426.55 | 14416426.78 | 14416427.01 | 0.0141 | 0.0062 |
| Neptune | 34759-08-18 20:53 G | 14416753.28 | 14416753.37 | 14416753.48 | 0.0088 | 0.0080 |
| Jupiter | 34759-09-29 04:05 G | 14416794.45 | 14416794.67 | 14416794.89 | 0.0495 | 0.0175 |
| Uranus | 34759-09-30 18:00 G | 14416796.25 | 14416796.25 | 14416796.28 | 0.0141 | 0.0140 |
| Jupiter | 34765-03-15 01:55 G | 14418788.36 | 14418788.58 | 14418788.81 | 0.0531 | 0.0132 |
| Mars | 34769-01-15 04:48 G | 14420190.51 | 14420190.70 | 14420190.89 | 0.1773 | 0.0166 |
| Jupiter | 34770-09-02 06:57 G | 14420785.62 | 14420785.79 | 14420785.97 | 0.0495 | 0.0336 |
| Jupiter | 34771-10-03 18:57 G | 14421182.11 | 14421182.29 | 14421182.48 | 0.0495 | 0.0285 |
| Saturn | 34773-09-02 06:00 G | 14421881.49 | 14421881.75 | 14421882.00 | 0.0263 | 0.0023 |
| Jupiter | 34777-03-19 20:24 G | 14423176.12 | 14423176.35 | 14423176.59 | 0.0532 | 0.0010 |
| Jupiter | 34782-09-06 18:00 G | 14425173.06 | 14425173.25 | 14425173.45 | 0.0495 | 0.0251 |
| Jupiter | 34783-10-07 21:36 G | 14425569.23 | 14425569.40 | 14425569.58 | 0.0495 | 0.0340 |
| Saturn | 34787-02-23 04:05 G | 14426803.63 | 14426803.67 | 14426803.71 | 0.0300 | 0.0295 |
| Saturn | 34788-03-09 05:17 G | 14427183.61 | 14427183.72 | 14427183.85 | 0.0297 | 0.0252 |
| Jupiter | 34789-03-25 06:00 G | 14427564.53 | 14427564.75 | 14427564.97 | 0.0532 | 0.0141 |
| Mars | 34790-07-16 16:33 G | 14428043.04 | 14428043.19 | 14428043.34 | 0.1769 | 0.1051 |
| Jupiter | 34794-09-11 00:57 G | 14429560.31 | 14429560.54 | 14429560.78 | 0.0494 | 0.0135 |
| Jupiter | 34795-10-12 06:00 G | 14429956.61 | 14429956.75 | 14429956.89 | 0.0496 | 0.0383 |
| Uranus | 34800-03-15 06:14 G | 14431572.73 | 14431572.76 | 14431572.83 | 0.0136 | 0.0133 |

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| Uranus | 34801-03-19 11:45 G | 14431941.76 | 14431941.99 | 14431942.23 | 0.0136 | 0.0054 |
| Jupiter | 34801-03-30 11:02 G | 14431952.73 | 14431952.96 | 14431953.18 | 0.0531 | 0.0204 |
| Uranus | 34802-03-24 07:26 G | 14432311.55 | 14432311.81 | 14432312.06 | 0.0137 | 0.0007 |
| Saturn | 34802-08-28 14:09 G | 14432468.92 | 14432469.09 | 14432469.28 | 0.0262 | 0.0173 |
| Uranus | 34803-03-28 12:57 G | 14432680.88 | 14432681.04 | 14432681.25 | 0.0137 | 0.0094 |
| Saturn | 34803-09-09 08:24 G | 14432845.68 | 14432845.85 | 14432846.03 | 0.0264 | 0.0181 |
| Jupiter | 34806-09-15 05:02 G | 14433947.49 | 14433947.71 | 14433947.94 | 0.0494 | 0.0050 |
| Jupiter | 34807-10-16 14:53 G | 14434344.05 | 14434344.12 | 14434344.21 | 0.0496 | 0.0467 |
| Jupiter | 34812-02-27 15:07 G | 14435938.99 | 14435939.13 | 14435939.29 | 0.0530 | 0.0409 |
| Jupiter | 34813-04-04 03:50 G | 14436340.47 | 14436340.66 | 14436340.86 | 0.0531 | 0.0278 |
| Saturn | 34817-03-03 11:17 G | 14437769.72 | 14437769.97 | 14437770.22 | 0.0299 | 0.0027 |
| Pluto | 34817-04-08 14:24 G | 14437805.89 | 14437806.10 | 14437806.36 | 0.0065 | 0.0029 |
| Pluto | 34818-04-09 21:07 G | 14438172.27 | 14438172.38 | 14438172.56 | 0.0066 | 0.0055 |
| Jupiter | 34818-09-19 20:38 G | 14438335.12 | 14438335.36 | 14438335.60 | 0.0495 | 0.0007 |
| Jupiter | 34824-03-03 11:31 G | 14440326.79 | 14440326.98 | 14440327.17 | 0.0531 | 0.0286 |
| Jupiter | 34825-04-09 12:14 G | 14440728.87 | 14440729.01 | 14440729.16 | 0.0530 | 0.0414 |
| Jupiter | 34829-08-23 19:26 G | 14442326.22 | 14442326.31 | 14442326.41 | 0.0497 | 0.0449 |
| Jupiter | 34830-09-23 22:05 G | 14442722.19 | 14442722.42 | 14442722.65 | 0.0494 | 0.0056 |
| Neptune | 34832-01-25 12:00 G | 14443210.97 | 14443211.00 | 14443211.10 | 0.0089 | 0.0087 |
| Saturn | 34832-09-03 13:41 G | 14443432.82 | 14443433.07 | 14443433.32 | 0.0263 | 0.0031 |
| Neptune | 34833-01-26 18:00 G | 14443578.14 | 14443578.25 | 14443578.38 | 0.0089 | 0.0078 |
| Neptune | 34834-01-29 13:12 G | 14443945.86 | 14443946.05 | 14443946.29 | 0.0090 | 0.0052 |
| Neptune | 34835-01-31 19:55 G | 14444313.14 | 14444313.33 | 14444313.57 | 0.0090 | 0.0044 |
| Neptune | 34836-02-03 13:12 G | 14444680.80 | 14444681.05 | 14444681.32 | 0.0090 | 0.0017 |
| Jupiter | 34836-03-08 18:43 G | 14444715.07 | 14444715.28 | 14444715.50 | 0.0531 | 0.0226 |
| Neptune | 34837-02-04 23:17 G | 14445048.23 | 14445048.47 | 14445048.72 | 0.0090 | 0.0008 |
| Neptune | 34838-02-07 11:31 G | 14445415.73 | 14445415.98 | 14445416.25 | 0.0090 | 0.0019 |
| Neptune | 34839-02-10 02:38 G | 14445783.38 | 14445783.61 | 14445783.86 | 0.0090 | 0.0028 |
| Neptune | 34840-02-12 10:33 G | 14446150.76 | 14446150.94 | 14446151.17 | 0.0090 | 0.0055 |
| Uranus | 34840-09-16 22:48 G | 14446368.30 | 14446368.45 | 14446368.63 | 0.0142 | 0.0107 |

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| Neptune | 34841-02-14 05:17 G | 14446518.56 | 14446518.72 | 14446518.92 | 0.0090 | 0.0063 |
| Jupiter | 34841-08-27 23:31 G | 14446713.33 | 14446713.48 | 14446713.63 | 0.0496 | 0.0390 |
| Uranus | 34841-09-21 11:45 G | 14446737.74 | 14446737.99 | 14446738.24 | 0.0142 | 0.0013 |
| Neptune | 34842-02-16 11:17 G | 14446885.95 | 14446885.97 | 14446886.02 | 0.0090 | 0.0089 |
| Uranus | 34842-09-26 13:55 G | 14447107.85 | 14447108.08 | 14447108.31 | 0.0141 | 0.0059 |
| Jupiter | 34842-09-28 12:29 G | 14447109.81 | 14447110.02 | 14447110.24 | 0.0494 | 0.0173 |
| Uranus | 34843-10-01 00:57 G | 14447477.51 | 14447477.54 | 14447477.60 | 0.0141 | 0.0138 |
| Saturn | 34846-02-25 06:00 G | 14448355.58 | 14448355.75 | 14448355.92 | 0.0300 | 0.0212 |
| Jupiter | 34848-03-13 15:36 G | 14449102.93 | 14449103.15 | 14449103.38 | 0.0532 | 0.0147 |
| Jupiter | 34853-09-01 08:38 G | 14451100.71 | 14451100.86 | 14451101.03 | 0.0495 | 0.0353 |
| Jupiter | 34854-10-02 12:14 G | 14451496.81 | 14451497.01 | 14451497.21 | 0.0495 | 0.0273 |
| Jupiter | 34860-03-19 01:12 G | 14453491.32 | 14453491.55 | 14453491.77 | 0.0532 | 0.0007 |
| Saturn | 34861-08-30 04:33 G | 14454020.48 | 14454020.69 | 14454020.91 | 0.0263 | 0.0119 |
| Saturn | 34862-09-10 17:45 G | 14454397.14 | 14454397.24 | 14454397.36 | 0.0265 | 0.0237 |
| Jupiter | 34865-09-05 18:43 G | 14455488.08 | 14455488.28 | 14455488.49 | 0.0495 | 0.0259 |
| Jupiter | 34866-10-07 00:00 G | 14455884.34 | 14455884.50 | 14455884.67 | 0.0495 | 0.0332 |
| Mars | 34869-07-19 10:33 G | 14456900.81 | 14456900.94 | 14456901.06 | 0.1763 | 0.1393 |
| Jupiter | 34872-03-23 23:02 G | 14457879.23 | 14457879.46 | 14457879.70 | 0.0531 | 0.0120 |
| Saturn | 34876-03-05 04:48 G | 14459321.48 | 14459321.70 | 14459321.94 | 0.0299 | 0.0112 |
| Jupiter | 34877-09-09 23:45 G | 14459875.27 | 14459875.49 | 14459875.71 | 0.0495 | 0.0147 |
| Jupiter | 34878-10-11 09:50 G | 14460271.75 | 14460271.91 | 14460272.07 | 0.0496 | 0.0373 |
| Uranus | 34884-03-15 13:26 G | 14462253.99 | 14462254.06 | 14462254.18 | 0.0136 | 0.0126 |
| Jupiter | 34884-03-28 20:53 G | 14462267.15 | 14462267.37 | 14462267.58 | 0.0531 | 0.0185 |
| Uranus | 34885-03-19 19:26 G | 14462623.11 | 14462623.31 | 14462623.55 | 0.0136 | 0.0063 |
| Uranus | 34886-03-24 14:53 G | 14462992.87 | 14462993.12 | 14462993.38 | 0.0137 | 0.0022 |
| Uranus | 34887-03-28 21:21 G | 14463362.19 | 14463362.39 | 14463362.60 | 0.0137 | 0.0081 |
| Jupiter | 34889-09-14 14:38 G | 14464262.88 | 14464263.11 | 14464263.35 | 0.0495 | 0.0065 |
| Saturn | 34890-08-25 12:43 G | 14464608.01 | 14464608.03 | 14464608.07 | 0.0262 | 0.0260 |
| Jupiter | 34890-10-15 14:38 G | 14464659.05 | 14464659.11 | 14464659.20 | 0.0496 | 0.0466 |
| Saturn | 34891-09-06 01:12 G | 14464984.33 | 14464984.55 | 14464984.78 | 0.0263 | 0.0088 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 34895-02-26 05:17 G | 14466253.59 | 14466253.72 | 14466253.86 | 0.0530 | 0.0426 |
| Jupiter | 34896-04-03 05:02 G | 14466655.51 | 14466655.71 | 14466655.92 | 0.0531 | 0.0261 |
| Jupiter | 34901-09-19 15:50 G | 14468649.93 | 14468650.16 | 14468650.39 | 0.0494 | 0.0021 |
| Pluto | 34904-10-09 17:45 G | 14469766.13 | 14469766.24 | 14469766.42 | 0.0079 | 0.0065 |
| Saturn | 34905-02-28 08:53 G | 14469907.66 | 14469907.87 | 14469908.09 | 0.0299 | 0.0125 |
| Jupiter | 34907-03-04 14:24 G | 14470641.92 | 14470642.10 | 14470642.30 | 0.0531 | 0.0301 |
| Jupiter | 34908-04-09 02:24 G | 14471043.45 | 14471043.60 | 14471043.76 | 0.0531 | 0.0401 |
| Jupiter | 34912-08-23 14:09 G | 14472641.01 | 14472641.09 | 14472641.18 | 0.0496 | 0.0463 |
| Jupiter | 34913-09-24 04:33 G | 14473037.47 | 14473037.69 | 14473037.92 | 0.0494 | 0.0048 |
| Neptune | 34914-07-30 00:43 G | 14473346.41 | 14473346.53 | 14473346.69 | 0.0088 | 0.0074 |
| Neptune | 34915-08-01 19:12 G | 14473714.13 | 14473714.30 | 14473714.47 | 0.0088 | 0.0065 |
| Neptune | 34916-08-02 23:02 G | 14474081.25 | 14474081.46 | 14474081.70 | 0.0088 | 0.0041 |
| Neptune | 34917-08-05 15:36 G | 14474448.93 | 14474449.15 | 14474449.42 | 0.0088 | 0.0033 |
| Neptune | 34918-08-07 23:02 G | 14474816.22 | 14474816.46 | 14474816.71 | 0.0088 | 0.0008 |
| Jupiter | 34919-03-09 10:19 G | 14475029.72 | 14475029.93 | 14475030.14 | 0.0531 | 0.0237 |
| Neptune | 34919-08-10 11:17 G | 14475183.70 | 14475183.97 | 14475184.24 | 0.0088 | 0.0002 |
| Jupiter | 34920-04-14 12:14 G | 14475431.99 | 14475432.01 | 14475432.04 | 0.0530 | 0.0525 |
| Neptune | 34920-08-11 22:19 G | 14475551.21 | 14475551.43 | 14475551.69 | 0.0088 | 0.0027 |
| Saturn | 34920-09-01 14:24 G | 14475571.86 | 14475572.10 | 14475572.35 | 0.0263 | 0.0064 |
| Neptune | 34921-08-14 05:45 G | 14475918.51 | 14475918.74 | 14475918.99 | 0.0088 | 0.0035 |
| Neptune | 34922-08-16 21:36 G | 14476286.23 | 14476286.40 | 14476286.60 | 0.0088 | 0.0060 |
| Neptune | 34923-08-19 01:41 G | 14476653.44 | 14476653.57 | 14476653.77 | 0.0088 | 0.0068 |
| Jupiter | 34924-08-28 02:38 G | 14477028.49 | 14477028.61 | 14477028.74 | 0.0496 | 0.0413 |
| Uranus | 34924-09-18 04:05 G | 14477049.50 | 14477049.67 | 14477049.89 | 0.0142 | 0.0092 |
| Uranus | 34925-09-22 17:45 G | 14477419.00 | 14477419.24 | 14477419.49 | 0.0142 | 0.0025 |
| Jupiter | 34925-09-28 07:12 G | 14477424.58 | 14477424.80 | 14477425.03 | 0.0494 | 0.0162 |
| Uranus | 34926-09-27 20:09 G | 14477789.12 | 14477789.34 | 14477789.57 | 0.0141 | 0.0065 |
| Uranus | 34927-10-02 07:26 G | 14478158.81 | 14478158.81 | 14478158.83 | 0.0141 | 0.0141 |
| Jupiter | 34931-03-14 17:02 G | 14479418.00 | 14479418.21 | 14479418.43 | 0.0531 | 0.0166 |
| Saturn | 34935-03-09 00:57 G | 14480873.35 | 14480873.54 | 14480873.72 | 0.0298 | 0.0193 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 34936-09-01 12:29 G | 14481415.86 | 14481416.02 | 14481416.18 | 0.0496 | 0.0369 |
| Jupiter | 34937-10-02 20:09 G | 14481812.16 | 14481812.34 | 14481812.54 | 0.0495 | 0.0265 |
| Jupiter | 34943-03-19 15:21 G | 14483805.89 | 14483806.14 | 14483806.38 | 0.0531 | 0.0024 |
| Jupiter | 34948-09-05 18:14 G | 14485803.08 | 14485803.26 | 14485803.45 | 0.0495 | 0.0276 |
| Saturn | 34949-08-27 20:09 G | 14486159.21 | 14486159.34 | 14486159.49 | 0.0262 | 0.0210 |
| Jupiter | 34949-10-07 04:19 G | 14486199.50 | 14486199.68 | 14486199.87 | 0.0495 | 0.0315 |
| Saturn | 34950-09-08 13:26 G | 14486535.87 | 14486536.06 | 14486536.27 | 0.0264 | 0.0142 |
| Jupiter | 34955-03-24 14:53 G | 14488193.90 | 14488194.12 | 14488194.34 | 0.0532 | 0.0104 |
| Jupiter | 34960-09-10 09:21 G | 14490190.67 | 14490190.89 | 14490191.12 | 0.0495 | 0.0154 |
| Jupiter | 34961-10-11 09:36 G | 14490586.75 | 14490586.90 | 14490587.05 | 0.0495 | 0.0364 |
| Saturn | 34964-03-02 03:36 G | 14491459.40 | 14491459.65 | 14491459.90 | 0.0299 | 0.0046 |
| Jupiter | 34967-03-30 00:57 G | 14492582.32 | 14492582.54 | 14492582.77 | 0.0532 | 0.0170 |
| Uranus | 34968-03-16 22:48 G | 14492935.36 | 14492935.45 | 14492935.54 | 0.0136 | 0.0126 |
| Uranus | 34969-03-21 05:31 G | 14493304.50 | 14493304.73 | 14493304.96 | 0.0136 | 0.0051 |
| Uranus | 34970-03-25 23:17 G | 14493674.22 | 14493674.47 | 14493674.74 | 0.0137 | 0.0012 |
| Uranus | 34971-03-30 06:14 G | 14494043.60 | 14494043.76 | 14494043.94 | 0.0137 | 0.0099 |
| Jupiter | 34972-09-14 09:36 G | 14494577.67 | 14494577.90 | 14494578.13 | 0.0494 | 0.0079 |
| Jupiter | 34973-10-15 21:50 G | 14494974.33 | 14494974.41 | 14494974.50 | 0.0496 | 0.0460 |
| Jupiter | 34978-02-26 11:17 G | 14496568.84 | 14496568.97 | 14496569.11 | 0.0530 | 0.0432 |
| Jupiter | 34979-04-03 22:19 G | 14496970.23 | 14496970.43 | 14496970.64 | 0.0532 | 0.0252 |
| Saturn | 34979-09-03 16:48 G | 14497122.94 | 14497123.20 | 14497123.45 | 0.0263 | 0.0018 |
| Jupiter | 34984-09-19 01:12 G | 14498965.32 | 14498965.55 | 14498965.78 | 0.0494 | 0.0038 |
| Jupiter | 34990-03-03 04:33 G | 14500956.51 | 14500956.69 | 14500956.88 | 0.0530 | 0.0320 |
| Jupiter | 34991-04-09 04:48 G | 14501358.55 | 14501358.70 | 14501358.86 | 0.0531 | 0.0392 |
| Saturn | 34993-02-23 17:45 G | 14502045.18 | 14502045.24 | 14502045.32 | 0.0301 | 0.0287 |
| Saturn | 34994-03-10 21:36 G | 14502425.31 | 14502425.40 | 14502425.52 | 0.0298 | 0.0269 |
| Jupiter | 34995-08-23 19:55 G | 14502956.29 | 14502956.33 | 14502956.39 | 0.0497 | 0.0483 |
| Jupiter | 34996-09-23 04:19 G | 14503352.44 | 14503352.68 | 14503352.92 | 0.0495 | 0.0036 |
| Neptune | 34997-01-27 11:17 G | 14503478.88 | 14503478.97 | 14503479.08 | 0.0089 | 0.0083 |
| Neptune | 34998-01-29 18:29 G | 14503846.10 | 14503846.27 | 14503846.45 | 0.0090 | 0.0065 |

Neptune 34999-02-01 10:19 G 14504213.71 14504213.93 14504214.16 0.0090 0.0048

Neptune 35000-02-03 21:50 G 14504581.19 14504581.41 14504581.66 0.0090 0.0030

36TH MILLENNIUM CE

This is a list of transits of Moon in the 36th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------|---|-------------|-------------|-------------|--------|--------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Neptune | 35001-02-06 09:21 | G | 14504948.63 | 14504948.89 | 14504949.16 | 0.0090 | 0.0012 | |
| Neptune | 35002-02-09 01:55 | G | 14505316.33 | 14505316.58 | 14505316.83 | 0.0090 | 0.0006 | |
| Jupiter | 35002-03-09 13:41 | G | 14505344.87 | 14505345.07 | 14505345.27 | 0.0531 | 0.0258 | |
| Neptune | 35003-02-11 08:38 | G | 14505683.62 | 14505683.86 | 14505684.13 | 0.0090 | 0.0024 | |
| Jupiter | 35003-04-15 02:53 | G | 14505746.56 | 14505746.62 | 14505746.70 | 0.0530 | 0.0506 | |
| Neptune | 35004-02-14 03:50 | G | 14506051.44 | 14506051.66 | 14506051.90 | 0.0090 | 0.0041 | |
| Neptune | 35005-02-15 09:07 | G | 14506418.71 | 14506418.88 | 14506419.09 | 0.0090 | 0.0060 | |
| Neptune | 35006-02-18 04:33 | G | 14506786.57 | 14506786.69 | 14506786.84 | 0.0090 | 0.0076 | |
| Jupiter | 35007-08-29 07:26 | G | 14507343.69 | 14507343.81 | 14507343.92 | 0.0497 | 0.0433 | |
| Saturn | 35008-08-30 06:00 | G | 14507710.57 | 14507710.75 | 14507710.94 | 0.0262 | 0.0165 | |
| Uranus | 35008-09-19 11:31 | G | 14507730.83 | 14507730.98 | 14507731.18 | 0.0142 | 0.0106 | |
| Jupiter | 35008-09-28 17:02 | G | 14507740.00 | 14507740.21 | 14507740.43 | 0.0495 | 0.0156 | |
| Saturn | 35009-09-10 21:07 | G | 14508087.22 | 14508087.38 | 14508087.56 | 0.0264 | 0.0190 | |
| Uranus | 35009-09-24 01:55 | G | 14508100.33 | 14508100.58 | 14508100.83 | 0.0142 | 0.0010 | |
| Uranus | 35010-09-29 03:21 | G | 14508470.41 | 14508470.64 | 14508470.88 | 0.0141 | 0.0059 | |
| Jupiter | 35014-03-14 08:53 | G | 14509732.65 | 14509732.87 | 14509733.10 | 0.0531 | 0.0180 | |
| Jupiter | 35019-09-02 13:55 | G | 14511730.95 | 14511731.08 | 14511731.23 | 0.0496 | 0.0383 | |

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| Jupiter | 35020-10-03 00:57 G | 14512127.34 | 14512127.54 | 14512127.75 | 0.0495 | 0.0253 |
| Saturn | 35023-03-05 14:38 G | 14513010.86 | 14513011.11 | 14513011.37 | 0.0299 | 0.0026 |
| Jupiter | 35026-03-19 13:26 G | 14514120.83 | 14514121.06 | 14514121.28 | 0.0532 | 0.0033 |
| Jupiter | 35031-09-07 05:02 G | 14516118.52 | 14516118.71 | 14516118.91 | 0.0495 | 0.0282 |
| Jupiter | 35032-10-07 05:17 G | 14516514.54 | 14516514.72 | 14516514.90 | 0.0495 | 0.0300 |
| Jupiter | 35038-03-24 22:48 G | 14518509.21 | 14518509.45 | 14518509.68 | 0.0532 | 0.0093 |
| Saturn | 35038-09-05 17:45 G | 14518673.99 | 14518674.24 | 14518674.48 | 0.0263 | 0.0026 |
| Jupiter | 35043-09-11 07:12 G | 14520505.59 | 14520505.80 | 14520506.03 | 0.0495 | 0.0165 |
| Jupiter | 35044-10-11 20:24 G | 14520902.19 | 14520902.35 | 14520902.52 | 0.0495 | 0.0355 |
| Jupiter | 35050-03-29 17:02 G | 14522896.99 | 14522897.21 | 14522897.44 | 0.0531 | 0.0155 |
| Saturn | 35052-02-27 09:07 G | 14523596.73 | 14523596.88 | 14523597.05 | 0.0301 | 0.0219 |
| Uranus | 35052-03-18 07:12 G | 14523616.69 | 14523616.80 | 14523616.92 | 0.0136 | 0.0122 |
| Mars | 35053-01-18 02:53 G | 14523922.46 | 14523922.62 | 14523922.79 | 0.1765 | 0.0640 |
| Uranus | 35053-03-22 15:07 G | 14523985.91 | 14523986.13 | 14523986.36 | 0.0136 | 0.0055 |
| Uranus | 35054-03-27 08:09 G | 14524355.59 | 14524355.84 | 14524356.11 | 0.0137 | 0.0027 |
| Uranus | 35055-03-31 16:19 G | 14524725.00 | 14524725.18 | 14524725.38 | 0.0137 | 0.0087 |
| Jupiter | 35055-09-15 22:33 G | 14524893.22 | 14524893.44 | 14524893.66 | 0.0495 | 0.0098 |
| Jupiter | 35056-10-15 22:33 G | 14525289.35 | 14525289.44 | 14525289.54 | 0.0496 | 0.0454 |
| Jupiter | 35061-02-26 04:33 G | 14526883.57 | 14526883.69 | 14526883.81 | 0.0529 | 0.0450 |
| Jupiter | 35062-04-04 02:53 G | 14527285.42 | 14527285.62 | 14527285.83 | 0.0531 | 0.0239 |
| Pluto | 35063-04-12 17:02 G | 14527658.96 | 14527659.21 | 14527659.47 | 0.0065 | 0.0020 |
| Saturn | 35067-09-01 10:33 G | 14529261.73 | 14529261.94 | 14529262.16 | 0.0262 | 0.0124 |
| Jupiter | 35067-09-20 02:38 G | 14529280.37 | 14529280.61 | 14529280.85 | 0.0495 | 0.0052 |
| Saturn | 35068-09-11 19:26 G | 14529638.21 | 14529638.31 | 14529638.44 | 0.0264 | 0.0233 |
| Jupiter | 35073-03-03 11:45 G | 14531271.81 | 14531271.99 | 14531272.17 | 0.0530 | 0.0335 |
| Jupiter | 35074-04-08 23:17 G | 14531673.31 | 14531673.47 | 14531673.64 | 0.0531 | 0.0383 |
| Mars | 35074-07-19 14:09 G | 14531774.92 | 14531775.09 | 14531775.26 | 0.1777 | 0.0566 |
| Neptune | 35078-07-30 18:57 G | 14533247.26 | 14533247.29 | 14533247.40 | 0.0088 | 0.0085 |
| Jupiter | 35078-08-24 03:50 G | 14533271.63 | 14533271.66 | 14533271.71 | 0.0498 | 0.0490 |
| Neptune | 35079-08-02 00:14 G | 14533614.39 | 14533614.51 | 14533614.66 | 0.0088 | 0.0073 |

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| Jupiter | 35079-09-24 15:36 G | 14533667.93 | 14533668.15 | 14533668.38 | 0.0495 | 0.0034 |
| Neptune | 35080-08-03 16:05 G | 14533981.96 | 14533982.17 | 14533982.39 | 0.0088 | 0.0051 |
| Neptune | 35081-08-05 23:45 G | 14534349.28 | 14534349.49 | 14534349.73 | 0.0088 | 0.0039 |
| Saturn | 35082-03-06 22:19 G | 14534562.20 | 14534562.43 | 14534562.67 | 0.0299 | 0.0092 |
| Neptune | 35082-08-08 10:48 G | 14534716.70 | 14534716.95 | 14534717.22 | 0.0088 | 0.0017 |
| Neptune | 35083-08-11 00:14 G | 14535084.26 | 14535084.51 | 14535084.76 | 0.0088 | 0.0005 |
| Neptune | 35084-08-12 06:29 G | 14535451.53 | 14535451.77 | 14535452.05 | 0.0088 | 0.0017 |
| Jupiter | 35085-03-08 08:24 G | 14535659.65 | 14535659.85 | 14535660.06 | 0.0531 | 0.0274 |
| Neptune | 35085-08-14 23:17 G | 14535819.24 | 14535819.47 | 14535819.72 | 0.0088 | 0.0029 |
| Jupiter | 35086-04-14 05:31 G | 14536061.67 | 14536061.73 | 14536061.81 | 0.0531 | 0.0501 |
| Neptune | 35086-08-17 03:07 G | 14536186.43 | 14536186.63 | 14536186.85 | 0.0088 | 0.0050 |
| Neptune | 35087-08-19 20:53 G | 14536554.20 | 14536554.37 | 14536554.56 | 0.0088 | 0.0063 |
| Neptune | 35088-08-21 01:12 G | 14536921.50 | 14536921.55 | 14536921.65 | 0.0088 | 0.0084 |
| Jupiter | 35090-08-28 11:17 G | 14537658.87 | 14537658.97 | 14537659.07 | 0.0496 | 0.0448 |
| Jupiter | 35091-09-28 23:02 G | 14538055.23 | 14538055.46 | 14538055.69 | 0.0494 | 0.0151 |
| Uranus | 35092-09-19 20:53 G | 14538412.17 | 14538412.37 | 14538412.58 | 0.0142 | 0.0088 |
| Uranus | 35093-09-24 11:45 G | 14538781.75 | 14538781.99 | 14538782.24 | 0.0142 | 0.0021 |
| Uranus | 35094-09-29 12:43 G | 14539151.81 | 14539152.03 | 14539152.26 | 0.0141 | 0.0071 |
| Jupiter | 35097-03-13 14:53 G | 14540047.91 | 14540048.12 | 14540048.33 | 0.0532 | 0.0190 |
| Saturn | 35097-09-06 21:36 G | 14540225.17 | 14540225.40 | 14540225.63 | 0.0263 | 0.0068 |
| Jupiter | 35102-09-03 03:50 G | 14542046.52 | 14542046.66 | 14542046.80 | 0.0496 | 0.0391 |
| Jupiter | 35103-10-04 05:45 G | 14542442.55 | 14542442.74 | 14542442.94 | 0.0495 | 0.0245 |
| Jupiter | 35109-03-19 20:53 G | 14544436.13 | 14544436.37 | 14544436.61 | 0.0531 | 0.0042 |
| Saturn | 35111-03-01 17:17 G | 14545148.02 | 14545148.22 | 14545148.43 | 0.0301 | 0.0157 |
| Jupiter | 35114-09-07 04:33 G | 14546433.50 | 14546433.69 | 14546433.88 | 0.0496 | 0.0291 |
| Jupiter | 35115-10-08 20:24 G | 14546830.17 | 14546830.35 | 14546830.55 | 0.0495 | 0.0286 |
| Jupiter | 35121-03-24 17:45 G | 14548824.01 | 14548824.24 | 14548824.47 | 0.0531 | 0.0078 |
| Saturn | 35126-09-03 06:29 G | 14550812.53 | 14550812.77 | 14550813.01 | 0.0261 | 0.0085 |
| Jupiter | 35126-09-11 21:50 G | 14550821.20 | 14550821.41 | 14550821.63 | 0.0496 | 0.0173 |
| Jupiter | 35127-10-12 22:48 G | 14551217.29 | 14551217.45 | 14551217.62 | 0.0495 | 0.0348 |

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| Jupiter | 35133-03-30 02:24 G | 14553212.37 | 14553212.60 | 14553212.82 | 0.0531 | 0.0138 |
| Uranus | 35136-03-19 16:05 G | 14554298.05 | 14554298.17 | 14554298.30 | 0.0136 | 0.0120 |
| Uranus | 35137-03-24 01:12 G | 14554667.33 | 14554667.55 | 14554667.80 | 0.0137 | 0.0048 |
| Uranus | 35138-03-28 17:02 G | 14555036.95 | 14555037.21 | 14555037.47 | 0.0137 | 0.0018 |
| Jupiter | 35138-09-16 03:07 G | 14555208.39 | 14555208.63 | 14555208.86 | 0.0495 | 0.0107 |
| Uranus | 35139-04-02 01:55 G | 14555406.44 | 14555406.58 | 14555406.76 | 0.0137 | 0.0104 |
| Jupiter | 35139-10-17 16:05 G | 14555605.08 | 14555605.17 | 14555605.26 | 0.0496 | 0.0456 |
| Saturn | 35141-03-09 04:33 G | 14556113.49 | 14556113.69 | 14556113.90 | 0.0299 | 0.0148 |
| Jupiter | 35144-02-27 15:21 G | 14557199.03 | 14557199.14 | 14557199.26 | 0.0529 | 0.0460 |
| Jupiter | 35145-04-04 00:57 G | 14557600.32 | 14557600.54 | 14557600.75 | 0.0531 | 0.0232 |
| Jupiter | 35150-09-20 15:50 G | 14559595.93 | 14559596.16 | 14559596.38 | 0.0495 | 0.0061 |
| Pluto | 35150-10-14 07:55 G | 14559619.63 | 14559619.83 | 14559620.05 | 0.0079 | 0.0046 |
| Mars | 35153-07-22 22:33 G | 14560632.39 | 14560632.44 | 14560632.49 | 0.1771 | 0.1697 |
| Saturn | 35155-08-29 07:55 G | 14561399.75 | 14561399.83 | 14561399.92 | 0.0261 | 0.0243 |
| Jupiter | 35156-03-03 11:45 G | 14561586.82 | 14561586.99 | 14561587.17 | 0.0530 | 0.0349 |
| Saturn | 35156-09-08 22:33 G | 14561776.22 | 14561776.44 | 14561776.67 | 0.0263 | 0.0106 |
| Jupiter | 35157-04-09 09:07 G | 14561988.73 | 14561988.88 | 14561989.03 | 0.0531 | 0.0385 |
| Neptune | 35161-01-28 17:45 G | 14563379.20 | 14563379.24 | 14563379.28 | 0.0089 | 0.0088 |
| Neptune | 35162-01-31 07:26 G | 14563746.71 | 14563746.81 | 14563746.96 | 0.0090 | 0.0079 |
| Jupiter | 35162-09-25 01:12 G | 14563983.31 | 14563983.55 | 14563983.79 | 0.0494 | 0.0032 |
| Neptune | 35163-02-02 20:09 G | 14564114.16 | 14564114.34 | 14564114.57 | 0.0090 | 0.0053 |
| Neptune | 35164-02-05 05:31 G | 14564481.51 | 14564481.73 | 14564481.98 | 0.0090 | 0.0043 |
| Neptune | 35165-02-06 23:02 G | 14564849.22 | 14564849.46 | 14564849.72 | 0.0090 | 0.0016 |
| Neptune | 35166-02-09 05:31 G | 14565216.48 | 14565216.73 | 14565217.00 | 0.0090 | 0.0008 |
| Neptune | 35167-02-12 01:12 G | 14565584.30 | 14565584.55 | 14565584.81 | 0.0090 | 0.0020 |
| Neptune | 35168-02-14 06:57 G | 14565951.56 | 14565951.79 | 14565952.04 | 0.0090 | 0.0029 |
| Jupiter | 35168-03-08 18:43 G | 14565975.10 | 14565975.28 | 14565975.47 | 0.0530 | 0.0298 |
| Neptune | 35169-02-16 01:41 G | 14566319.38 | 14566319.57 | 14566319.79 | 0.0090 | 0.0056 |
| Jupiter | 35169-04-14 13:12 G | 14566376.95 | 14566377.05 | 14566377.14 | 0.0530 | 0.0485 |
| Neptune | 35170-02-18 10:19 G | 14566686.77 | 14566686.93 | 14566687.11 | 0.0090 | 0.0065 |

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| Saturn | 35170-03-02 14:24 G | 14566698.87 | 14566699.10 | 14566699.35 | 0.0301 | 0.0108 |
| Jupiter | 35173-08-29 00:14 G | 14567974.43 | 14567974.51 | 14567974.60 | 0.0497 | 0.0461 |
| Jupiter | 35174-09-29 06:14 G | 14568370.55 | 14568370.76 | 14568370.98 | 0.0495 | 0.0151 |
| Uranus | 35176-09-21 08:24 G | 14569093.67 | 14569093.85 | 14569094.04 | 0.0142 | 0.0098 |
| Uranus | 35177-09-26 00:14 G | 14569463.26 | 14569463.51 | 14569463.75 | 0.0142 | 0.0004 |
| Uranus | 35178-09-30 23:31 G | 14569833.26 | 14569833.48 | 14569833.72 | 0.0141 | 0.0065 |
| Jupiter | 35180-03-14 00:00 G | 14570363.28 | 14570363.50 | 14570363.73 | 0.0530 | 0.0198 |
| Jupiter | 35185-09-02 04:33 G | 14572361.56 | 14572361.69 | 14572361.83 | 0.0497 | 0.0402 |
| Saturn | 35185-09-03 23:02 G | 14572363.22 | 14572363.46 | 14572363.71 | 0.0261 | 0.0051 |
| Jupiter | 35186-10-03 22:33 G | 14572758.23 | 14572758.44 | 14572758.65 | 0.0495 | 0.0235 |
| Jupiter | 35192-03-18 19:12 G | 14574751.08 | 14574751.30 | 14574751.53 | 0.0531 | 0.0054 |
| Jupiter | 35197-09-06 23:02 G | 14576749.28 | 14576749.46 | 14576749.65 | 0.0496 | 0.0285 |
| Jupiter | 35198-10-08 00:43 G | 14577145.35 | 14577145.53 | 14577145.73 | 0.0495 | 0.0282 |
| Saturn | 35200-03-10 08:38 G | 14577664.68 | 14577664.86 | 14577665.04 | 0.0299 | 0.0197 |
| Jupiter | 35204-03-24 06:14 G | 14579139.53 | 14579139.76 | 14579139.99 | 0.0531 | 0.0066 |
| Jupiter | 35209-09-11 04:48 G | 14581136.47 | 14581136.70 | 14581136.92 | 0.0495 | 0.0176 |
| Jupiter | 35210-10-12 17:31 G | 14581533.07 | 14581533.23 | 14581533.39 | 0.0495 | 0.0347 |
| Saturn | 35214-08-30 08:09 G | 14582950.70 | 14582950.84 | 14582950.99 | 0.0261 | 0.0210 |
| Saturn | 35215-09-10 16:05 G | 14583326.96 | 14583327.17 | 14583327.39 | 0.0262 | 0.0143 |
| Jupiter | 35216-03-29 05:17 G | 14583527.48 | 14583527.72 | 14583527.95 | 0.0532 | 0.0125 |
| Uranus | 35220-03-19 23:02 G | 14584979.37 | 14584979.46 | 14584979.61 | 0.0136 | 0.0121 |
| Uranus | 35221-03-24 10:19 G | 14585348.71 | 14585348.93 | 14585349.16 | 0.0137 | 0.0049 |
| Jupiter | 35221-09-15 18:00 G | 14585524.04 | 14585524.25 | 14585524.47 | 0.0495 | 0.0117 |
| Uranus | 35222-03-29 00:43 G | 14585718.28 | 14585718.53 | 14585718.79 | 0.0137 | 0.0030 |
| Jupiter | 35222-10-16 21:21 G | 14585920.31 | 14585920.39 | 14585920.49 | 0.0496 | 0.0458 |
| Uranus | 35223-04-02 11:02 G | 14586087.80 | 14586087.96 | 14586088.16 | 0.0137 | 0.0094 |
| Jupiter | 35227-02-26 18:57 G | 14587514.19 | 14587514.29 | 14587514.41 | 0.0529 | 0.0469 |
| Jupiter | 35228-04-03 12:43 G | 14587915.83 | 14587916.03 | 14587916.24 | 0.0531 | 0.0228 |
| Saturn | 35229-03-03 07:26 G | 14588249.57 | 14588249.81 | 14588250.05 | 0.0301 | 0.0066 |
| Jupiter | 35233-09-20 01:12 G | 14589911.31 | 14589911.55 | 14589911.79 | 0.0495 | 0.0069 |

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| Jupiter | 35239-03-04 02:24 G | 14591902.44 | 14591902.60 | 14591902.76 | 0.0529 | 0.0366 |
| Jupiter | 35240-04-08 17:02 G | 14592304.05 | 14592304.21 | 14592304.39 | 0.0530 | 0.0376 |
| Neptune | 35243-08-02 15:07 G | 14593515.02 | 14593515.13 | 14593515.29 | 0.0088 | 0.0076 |
| Neptune | 35244-08-04 00:57 G | 14593882.39 | 14593882.54 | 14593882.73 | 0.0088 | 0.0065 |
| Saturn | 35244-09-04 19:41 G | 14593914.08 | 14593914.32 | 14593914.56 | 0.0261 | 0.0016 |
| Neptune | 35245-08-06 11:02 G | 14594249.75 | 14594249.96 | 14594250.22 | 0.0088 | 0.0042 |
| Jupiter | 35245-09-24 08:53 G | 14594298.64 | 14594298.87 | 14594299.09 | 0.0495 | 0.0034 |
| Neptune | 35246-08-09 01:41 G | 14594617.34 | 14594617.57 | 14594617.81 | 0.0088 | 0.0031 |
| Neptune | 35247-08-11 07:12 G | 14594984.54 | 14594984.80 | 14594985.06 | 0.0088 | 0.0008 |
| Neptune | 35248-08-13 00:29 G | 14595352.26 | 14595352.52 | 14595352.77 | 0.0088 | 0.0002 |
| Neptune | 35249-08-15 04:05 G | 14595719.43 | 14595719.67 | 14595719.92 | 0.0088 | 0.0027 |
| Neptune | 35250-08-17 21:07 G | 14596087.16 | 14596087.38 | 14596087.64 | 0.0088 | 0.0037 |
| Jupiter | 35251-03-09 02:53 G | 14596290.43 | 14596290.62 | 14596290.82 | 0.0530 | 0.0311 |
| Neptune | 35251-08-20 02:38 G | 14596454.44 | 14596454.61 | 14596454.80 | 0.0088 | 0.0061 |
| Jupiter | 35252-04-13 14:24 G | 14596692.01 | 14596692.10 | 14596692.20 | 0.0530 | 0.0478 |
| Neptune | 35252-08-21 16:48 G | 14596822.05 | 14596822.20 | 14596822.37 | 0.0088 | 0.0070 |
| Jupiter | 35256-08-28 05:45 G | 14598289.67 | 14598289.74 | 14598289.82 | 0.0498 | 0.0470 |
| Jupiter | 35257-09-29 01:41 G | 14598686.34 | 14598686.57 | 14598686.79 | 0.0495 | 0.0157 |
| Saturn | 35259-03-12 03:36 G | 14599215.51 | 14599215.65 | 14599215.82 | 0.0300 | 0.0236 |
| Uranus | 35260-09-21 18:43 G | 14599775.08 | 14599775.28 | 14599775.51 | 0.0142 | 0.0081 |
| Uranus | 35261-09-26 11:45 G | 14600144.75 | 14600144.99 | 14600145.24 | 0.0142 | 0.0013 |
| Uranus | 35262-10-01 10:33 G | 14600514.73 | 14600514.94 | 14600515.16 | 0.0141 | 0.0079 |
| Jupiter | 35263-03-14 00:57 G | 14600678.34 | 14600678.54 | 14600678.76 | 0.0531 | 0.0209 |
| Jupiter | 35264-04-19 01:26 G | 14601080.54 | 14601080.56 | 14601080.59 | 0.0530 | 0.0526 |
| Jupiter | 35268-09-02 00:57 G | 14602677.42 | 14602677.54 | 14602677.68 | 0.0497 | 0.0403 |
| Jupiter | 35269-10-03 03:21 G | 14603073.44 | 14603073.64 | 14603073.85 | 0.0495 | 0.0232 |
| Saturn | 35273-08-31 02:53 G | 14604501.44 | 14604501.62 | 14604501.81 | 0.0260 | 0.0178 |
| Saturn | 35274-09-11 06:29 G | 14604877.59 | 14604877.77 | 14604877.96 | 0.0262 | 0.0179 |
| Jupiter | 35275-03-19 12:43 G | 14605066.80 | 14605067.03 | 14605067.26 | 0.0531 | 0.0054 |
| Jupiter | 35280-09-06 07:12 G | 14607064.60 | 14607064.80 | 14607065.00 | 0.0496 | 0.0281 |

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| Jupiter | 35281-10-07 21:21 G | 14607461.20 | 14607461.39 | 14607461.58 | 0.0495 | 0.0276 |
| Jupiter | 35287-03-24 10:48 G | 14609454.72 | 14609454.95 | 14609455.19 | 0.0531 | 0.0053 |
| Saturn | 35288-03-04 05:17 G | 14609800.48 | 14609800.72 | 14609800.95 | 0.0301 | 0.0032 |
| Jupiter | 35292-09-10 17:02 G | 14611452.00 | 14611452.21 | 14611452.42 | 0.0496 | 0.0185 |
| Jupiter | 35293-10-11 23:02 G | 14611848.29 | 14611848.46 | 14611848.64 | 0.0496 | 0.0347 |
| Jupiter | 35299-03-29 19:26 G | 14613843.09 | 14613843.31 | 14613843.53 | 0.0531 | 0.0112 |
| Saturn | 35303-09-07 18:57 G | 14615465.05 | 14615465.29 | 14615465.53 | 0.0261 | 0.0018 |
| Uranus | 35304-03-21 06:14 G | 14615660.63 | 14615660.76 | 14615660.91 | 0.0136 | 0.0114 |
| Jupiter | 35304-09-16 03:50 G | 14615839.42 | 14615839.66 | 14615839.89 | 0.0496 | 0.0128 |
| Uranus | 35305-03-25 18:43 G | 14616030.05 | 14616030.28 | 14616030.51 | 0.0137 | 0.0046 |
| Jupiter | 35305-10-17 12:43 G | 14616235.97 | 14616236.03 | 14616236.11 | 0.0496 | 0.0469 |
| Uranus | 35306-03-30 06:57 G | 14616399.53 | 14616399.79 | 14616400.06 | 0.0137 | 0.0023 |
| Uranus | 35307-04-03 18:57 G | 14616769.15 | 14616769.29 | 14616769.46 | 0.0137 | 0.0107 |
| Pluto | 35309-04-15 22:19 G | 14617512.17 | 14617512.43 | 14617512.69 | 0.0066 | 0.0006 |
| Jupiter | 35310-02-27 08:24 G | 14617829.76 | 14617829.85 | 14617829.96 | 0.0528 | 0.0471 |
| Jupiter | 35311-04-04 19:55 G | 14618231.11 | 14618231.33 | 14618231.55 | 0.0531 | 0.0223 |
| Jupiter | 35316-09-20 12:00 G | 14620226.78 | 14620227.00 | 14620227.23 | 0.0495 | 0.0072 |
| Saturn | 35317-02-26 15:36 G | 14620386.10 | 14620386.15 | 14620386.22 | 0.0302 | 0.0292 |
| Saturn | 35318-03-13 17:17 G | 14620766.12 | 14620766.22 | 14620766.34 | 0.0300 | 0.0269 |
| Jupiter | 35322-03-04 09:21 G | 14622217.73 | 14622217.89 | 14622218.06 | 0.0529 | 0.0377 |
| Jupiter | 35323-04-09 20:38 G | 14622619.20 | 14622619.36 | 14622619.52 | 0.0531 | 0.0375 |
| Neptune | 35326-01-31 18:43 G | 14623647.23 | 14623647.28 | 14623647.38 | 0.0090 | 0.0086 |
| Neptune | 35327-02-03 03:07 G | 14624014.47 | 14624014.63 | 14624014.84 | 0.0090 | 0.0064 |
| Neptune | 35328-02-05 21:50 G | 14624382.20 | 14624382.41 | 14624382.62 | 0.0090 | 0.0050 |
| Jupiter | 35328-09-25 04:33 G | 14624614.46 | 14624614.69 | 14624614.93 | 0.0495 | 0.0041 |
| Neptune | 35329-02-07 03:21 G | 14624749.41 | 14624749.64 | 14624749.90 | 0.0090 | 0.0028 |
| Neptune | 35330-02-09 23:02 G | 14625117.21 | 14625117.46 | 14625117.72 | 0.0090 | 0.0013 |
| Neptune | 35331-02-12 05:02 G | 14625484.47 | 14625484.71 | 14625484.97 | 0.0090 | 0.0009 |
| Neptune | 35332-02-14 22:33 G | 14625852.20 | 14625852.44 | 14625852.71 | 0.0090 | 0.0025 |
| Saturn | 35332-09-01 17:17 G | 14626052.02 | 14626052.22 | 14626052.44 | 0.0260 | 0.0147 |

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| Neptune | 35333-02-16 07:55 G | 14626219.62 | 14626219.83 | 14626220.05 | 0.0090 | 0.0044 |
| Saturn | 35333-09-13 02:09 G | 14626428.46 | 14626428.59 | 14626428.73 | 0.0262 | 0.0216 |
| Neptune | 35334-02-18 20:53 G | 14626587.20 | 14626587.37 | 14626587.59 | 0.0090 | 0.0060 |
| Jupiter | 35334-03-09 08:53 G | 14626605.70 | 14626605.87 | 14626606.05 | 0.0530 | 0.0322 |
| Neptune | 35335-02-21 10:48 G | 14626954.87 | 14626954.95 | 14626955.09 | 0.0090 | 0.0080 |
| Jupiter | 35335-04-15 08:24 G | 14627007.74 | 14627007.85 | 14627007.96 | 0.0531 | 0.0466 |
| Mars | 35337-01-20 17:45 G | 14627654.07 | 14627654.24 | 14627654.41 | 0.1757 | 0.0955 |
| Jupiter | 35339-08-30 02:24 G | 14628605.55 | 14628605.60 | 14628605.66 | 0.0497 | 0.0483 |
| Jupiter | 35340-09-29 07:12 G | 14629001.58 | 14629001.80 | 14629002.02 | 0.0495 | 0.0156 |
| Uranus | 35344-09-23 04:33 G | 14630456.50 | 14630456.69 | 14630456.90 | 0.0142 | 0.0090 |
| Uranus | 35345-09-27 23:02 G | 14630826.21 | 14630826.46 | 14630826.70 | 0.0142 | 0.0005 |
| Jupiter | 35346-03-14 20:53 G | 14630994.16 | 14630994.37 | 14630994.59 | 0.0530 | 0.0208 |
| Uranus | 35346-10-02 19:55 G | 14631196.12 | 14631196.33 | 14631196.57 | 0.0141 | 0.0072 |
| Saturn | 35347-03-07 03:21 G | 14631351.40 | 14631351.64 | 14631351.88 | 0.0301 | 0.0003 |
| Jupiter | 35347-04-20 05:31 G | 14631395.68 | 14631395.73 | 14631395.78 | 0.0530 | 0.0516 |
| Jupiter | 35351-09-03 04:05 G | 14632992.55 | 14632992.67 | 14632992.82 | 0.0497 | 0.0407 |
| Jupiter | 35352-10-03 21:36 G | 14633389.19 | 14633389.40 | 14633389.60 | 0.0495 | 0.0225 |
| Jupiter | 35358-03-19 17:45 G | 14635382.01 | 14635382.24 | 14635382.48 | 0.0530 | 0.0054 |
| Mars | 35358-07-21 14:38 G | 14635505.92 | 14635506.11 | 14635506.31 | 0.1786 | 0.0647 |
| Saturn | 35362-09-08 15:21 G | 14637015.90 | 14637016.14 | 14637016.39 | 0.0261 | 0.0052 |
| Jupiter | 35363-09-07 18:00 G | 14637380.07 | 14637380.25 | 14637380.44 | 0.0497 | 0.0288 |
| Jupiter | 35364-10-08 02:09 G | 14637776.39 | 14637776.59 | 14637776.79 | 0.0496 | 0.0270 |
| Jupiter | 35370-03-24 23:17 G | 14639770.25 | 14639770.47 | 14639770.70 | 0.0531 | 0.0039 |
| Jupiter | 35375-09-12 06:43 G | 14641767.55 | 14641767.78 | 14641768.00 | 0.0496 | 0.0188 |
| Saturn | 35376-02-28 07:12 G | 14641936.68 | 14641936.80 | 14641936.93 | 0.0302 | 0.0260 |
| Jupiter | 35376-10-12 15:36 G | 14642164.00 | 14642164.15 | 14642164.31 | 0.0496 | 0.0358 |
| Jupiter | 35382-03-30 00:43 G | 14644158.29 | 14644158.53 | 14644158.77 | 0.0531 | 0.0103 |
| Jupiter | 35387-09-16 14:24 G | 14646154.88 | 14646155.10 | 14646155.32 | 0.0496 | 0.0141 |
| Uranus | 35388-03-21 12:14 G | 14646341.89 | 14646342.01 | 14646342.14 | 0.0136 | 0.0119 |
| Jupiter | 35388-10-17 02:09 G | 14646551.53 | 14646551.59 | 14646551.67 | 0.0496 | 0.0472 |

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| Uranus | 35389-03-26 01:55 G | 14646711.35 | 14646711.58 | 14646711.82 | 0.0136 | 0.0044 |
| Uranus | 35390-03-30 12:43 G | 14647080.78 | 14647081.03 | 14647081.30 | 0.0137 | 0.0031 |
| Uranus | 35391-04-04 02:38 G | 14647450.45 | 14647450.61 | 14647450.80 | 0.0137 | 0.0097 |
| Saturn | 35391-09-03 13:41 G | 14647602.86 | 14647603.07 | 14647603.30 | 0.0260 | 0.0113 |
| Saturn | 35392-09-14 03:36 G | 14647979.61 | 14647979.65 | 14647979.70 | 0.0262 | 0.0256 |
| Jupiter | 35393-02-26 16:33 G | 14648145.09 | 14648145.19 | 14648145.31 | 0.0529 | 0.0470 |
| Jupiter | 35394-04-04 03:21 G | 14648546.43 | 14648546.64 | 14648546.84 | 0.0531 | 0.0224 |
| Pluto | 35396-10-16 17:02 G | 14649472.97 | 14649473.21 | 14649473.49 | 0.0079 | 0.0017 |
| Jupiter | 35399-09-21 07:12 G | 14650542.56 | 14650542.80 | 14650543.03 | 0.0495 | 0.0075 |
| Jupiter | 35405-03-04 18:29 G | 14652533.12 | 14652533.27 | 14652533.43 | 0.0529 | 0.0388 |
| Saturn | 35406-03-08 21:50 G | 14652902.17 | 14652902.41 | 14652902.67 | 0.0301 | 0.0039 |
| Jupiter | 35406-04-10 14:38 G | 14652934.94 | 14652935.11 | 14652935.27 | 0.0530 | 0.0376 |
| Neptune | 35407-08-04 00:29 G | 14653415.49 | 14653415.52 | 14653415.62 | 0.0088 | 0.0085 |
| Neptune | 35408-08-05 09:07 G | 14653782.77 | 14653782.88 | 14653783.05 | 0.0088 | 0.0075 |
| Neptune | 35409-08-08 00:43 G | 14654150.35 | 14654150.53 | 14654150.76 | 0.0088 | 0.0051 |
| Neptune | 35410-08-10 06:00 G | 14654517.54 | 14654517.75 | 14654518.00 | 0.0088 | 0.0041 |
| Neptune | 35411-08-13 00:14 G | 14654885.26 | 14654885.51 | 14654885.77 | 0.0088 | 0.0016 |
| Jupiter | 35411-09-26 05:31 G | 14654929.49 | 14654929.73 | 14654929.96 | 0.0495 | 0.0037 |
| Neptune | 35412-08-14 04:33 G | 14655252.43 | 14655252.69 | 14655252.94 | 0.0088 | 0.0005 |
| Neptune | 35413-08-16 21:36 G | 14655620.14 | 14655620.40 | 14655620.66 | 0.0088 | 0.0018 |
| Neptune | 35414-08-19 03:50 G | 14655987.43 | 14655987.66 | 14655987.90 | 0.0088 | 0.0029 |
| Neptune | 35415-08-21 16:48 G | 14656355.00 | 14656355.20 | 14656355.43 | 0.0088 | 0.0052 |
| Neptune | 35416-08-23 02:53 G | 14656722.48 | 14656722.62 | 14656722.82 | 0.0088 | 0.0064 |
| Jupiter | 35417-03-10 04:19 G | 14656921.50 | 14656921.68 | 14656921.87 | 0.0530 | 0.0327 |
| Neptune | 35417-08-25 10:48 G | 14657089.94 | 14657089.95 | 14657090.02 | 0.0088 | 0.0087 |
| Jupiter | 35418-04-15 11:02 G | 14657322.85 | 14657322.96 | 14657323.08 | 0.0530 | 0.0456 |
| Saturn | 35421-09-10 08:24 G | 14658566.61 | 14658566.85 | 14658567.09 | 0.0261 | 0.0091 |
| Jupiter | 35422-08-30 03:36 G | 14658920.63 | 14658920.65 | 14658920.69 | 0.0498 | 0.0494 |
| Jupiter | 35423-09-30 23:17 G | 14659317.25 | 14659317.47 | 14659317.69 | 0.0495 | 0.0152 |
| Uranus | 35428-09-24 09:50 G | 14661137.71 | 14661137.91 | 14661138.15 | 0.0142 | 0.0078 |

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| Jupiter | 35429-03-14 20:38 G | 14661309.14 | 14661309.36 | 14661309.57 | 0.0530 | 0.0210 |
| Uranus | 35429-09-29 06:14 G | 14661507.52 | 14661507.76 | 14661508.01 | 0.0142 | 0.0009 |
| Jupiter | 35430-04-20 17:17 G | 14661711.18 | 14661711.22 | 14661711.28 | 0.0530 | 0.0515 |
| Uranus | 35430-10-04 01:55 G | 14661877.39 | 14661877.58 | 14661877.81 | 0.0141 | 0.0086 |
| Jupiter | 35434-09-03 18:57 G | 14663308.17 | 14663308.29 | 14663308.42 | 0.0497 | 0.0409 |
| Saturn | 35435-03-02 06:29 G | 14663487.61 | 14663487.77 | 14663487.93 | 0.0302 | 0.0220 |
| Jupiter | 35435-10-05 04:19 G | 14663704.47 | 14663704.68 | 14663704.90 | 0.0495 | 0.0217 |
| Jupiter | 35441-03-20 04:19 G | 14665697.45 | 14665697.68 | 14665697.90 | 0.0530 | 0.0058 |
| Jupiter | 35446-09-08 07:26 G | 14667695.61 | 14667695.81 | 14667696.01 | 0.0497 | 0.0286 |
| Jupiter | 35447-10-09 16:48 G | 14668092.02 | 14668092.20 | 14668092.40 | 0.0495 | 0.0264 |
| Saturn | 35450-09-05 18:00 G | 14669154.02 | 14669154.25 | 14669154.48 | 0.0260 | 0.0071 |
| Jupiter | 35453-03-25 05:02 G | 14670085.47 | 14670085.71 | 14670085.96 | 0.0531 | 0.0031 |
| Jupiter | 35458-09-12 14:38 G | 14672082.91 | 14672083.11 | 14672083.33 | 0.0496 | 0.0199 |
| Jupiter | 35459-10-14 03:50 G | 14672479.50 | 14672479.66 | 14672479.83 | 0.0496 | 0.0358 |
| Saturn | 35465-03-09 16:19 G | 14674452.94 | 14674453.18 | 14674453.43 | 0.0301 | 0.0079 |
| Jupiter | 35465-03-30 10:05 G | 14674473.70 | 14674473.92 | 14674474.14 | 0.0531 | 0.0099 |
| Jupiter | 35470-09-17 02:53 G | 14676470.39 | 14676470.62 | 14676470.84 | 0.0496 | 0.0157 |
| Jupiter | 35471-10-18 06:14 G | 14676866.70 | 14676866.76 | 14676866.83 | 0.0496 | 0.0473 |
| Uranus | 35472-03-22 19:26 G | 14677023.17 | 14677023.31 | 14677023.48 | 0.0136 | 0.0109 |
| Uranus | 35473-03-27 10:48 G | 14677392.72 | 14677392.95 | 14677393.19 | 0.0136 | 0.0044 |
| Uranus | 35474-03-31 19:55 G | 14677762.07 | 14677762.33 | 14677762.59 | 0.0137 | 0.0028 |
| Uranus | 35475-04-05 11:02 G | 14678131.82 | 14678131.96 | 14678132.12 | 0.0137 | 0.0109 |
| Jupiter | 35476-02-28 02:09 G | 14678460.50 | 14678460.59 | 14678460.69 | 0.0528 | 0.0472 |
| Jupiter | 35477-04-04 18:57 G | 14678862.08 | 14678862.29 | 14678862.50 | 0.0530 | 0.0231 |
| Saturn | 35479-09-01 00:57 G | 14679741.42 | 14679741.54 | 14679741.67 | 0.0260 | 0.0226 |
| Saturn | 35480-09-11 06:14 G | 14680117.57 | 14680117.76 | 14680117.98 | 0.0261 | 0.0137 |
| Jupiter | 35482-09-21 05:17 G | 14680857.49 | 14680857.72 | 14680857.96 | 0.0496 | 0.0084 |
| Jupiter | 35488-03-04 06:29 G | 14682848.61 | 14682848.77 | 14682848.92 | 0.0529 | 0.0397 |
| Jupiter | 35489-04-09 11:31 G | 14683249.81 | 14683249.98 | 14683250.15 | 0.0530 | 0.0372 |
| Neptune | 35491-02-03 18:57 G | 14683915.20 | 14683915.29 | 14683915.43 | 0.0089 | 0.0080 |

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| Neptune | 35492-02-06 00:43 G | 14684282.34 | 14684282.53 | 14684282.75 | 0.0090 | 0.0054 |
| Neptune | 35493-02-07 19:55 G | 14684650.11 | 14684650.33 | 14684650.57 | 0.0090 | 0.0043 |
| Neptune | 35494-02-10 02:38 G | 14685017.37 | 14685017.61 | 14685017.86 | 0.0090 | 0.0017 |
| Saturn | 35494-03-03 12:43 G | 14685038.83 | 14685039.03 | 14685039.22 | 0.0302 | 0.0172 |
| Jupiter | 35494-09-26 00:00 G | 14685245.27 | 14685245.50 | 14685245.73 | 0.0495 | 0.0038 |
| Neptune | 35495-02-12 18:57 G | 14685385.03 | 14685385.29 | 14685385.56 | 0.0090 | 0.0007 |
| Neptune | 35496-02-15 05:45 G | 14685752.50 | 14685752.74 | 14685752.99 | 0.0090 | 0.0020 |
| Neptune | 35497-02-16 18:00 G | 14686120.01 | 14686120.25 | 14686120.51 | 0.0090 | 0.0030 |
| Neptune | 35498-02-19 09:07 G | 14686487.71 | 14686487.88 | 14686488.09 | 0.0090 | 0.0057 |
| Neptune | 35499-02-21 16:48 G | 14686855.05 | 14686855.20 | 14686855.40 | 0.0090 | 0.0067 |
| Jupiter | 35500-03-09 23:31 G | 14687236.31 | 14687236.48 | 14687236.67 | 0.0529 | 0.0338 |
| Jupiter | 35501-04-15 20:09 G | 14687638.23 | 14687638.34 | 14687638.47 | 0.0530 | 0.0449 |
| Jupiter | 35506-10-01 04:05 G | 14689632.45 | 14689632.67 | 14689632.91 | 0.0495 | 0.0146 |
| Saturn | 35509-09-07 22:05 G | 14690705.18 | 14690705.42 | 14690705.67 | 0.0261 | 0.0027 |
| Jupiter | 35512-03-15 07:55 G | 14691624.62 | 14691624.83 | 14691625.04 | 0.0530 | 0.0210 |
| Uranus | 35512-09-25 16:05 G | 14691818.98 | 14691819.17 | 14691819.40 | 0.0142 | 0.0087 |
| Jupiter | 35513-04-20 19:55 G | 14692026.27 | 14692026.33 | 14692026.40 | 0.0530 | 0.0508 |
| Uranus | 35513-09-30 14:09 G | 14692188.85 | 14692189.09 | 14692189.34 | 0.0142 | 0.0006 |
| Uranus | 35514-10-05 08:24 G | 14692558.63 | 14692558.85 | 14692559.08 | 0.0141 | 0.0073 |
| Jupiter | 35517-09-04 05:02 G | 14693623.59 | 14693623.71 | 14693623.86 | 0.0497 | 0.0409 |
| Jupiter | 35518-10-05 16:19 G | 14694019.98 | 14694020.18 | 14694020.38 | 0.0495 | 0.0204 |
| Saturn | 35524-03-11 19:26 G | 14696004.10 | 14696004.31 | 14696004.53 | 0.0301 | 0.0132 |
| Jupiter | 35524-03-20 09:50 G | 14696012.67 | 14696012.91 | 14696013.15 | 0.0530 | 0.0062 |
| Jupiter | 35529-09-08 08:09 G | 14698010.66 | 14698010.84 | 14698011.02 | 0.0497 | 0.0293 |
| Jupiter | 35530-10-09 22:48 G | 14698407.25 | 14698407.45 | 14698407.66 | 0.0496 | 0.0253 |
| Jupiter | 35536-03-25 13:26 G | 14700400.83 | 14700401.06 | 14700401.28 | 0.0531 | 0.0021 |
| Saturn | 35538-09-03 01:26 G | 14701292.39 | 14701292.56 | 14701292.73 | 0.0260 | 0.0184 |
| Saturn | 35539-09-14 13:41 G | 14701668.91 | 14701669.07 | 14701669.25 | 0.0261 | 0.0185 |
| Jupiter | 35541-09-13 00:14 G | 14702398.30 | 14702398.51 | 14702398.72 | 0.0496 | 0.0212 |
| Jupiter | 35542-10-14 04:33 G | 14702794.54 | 14702794.69 | 14702794.85 | 0.0496 | 0.0355 |

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| Jupiter | 35548-03-30 16:33 G | 14704788.96 | 14704789.19 | 14704789.43 | 0.0530 | 0.0088 |
| Saturn | 35553-03-05 19:12 G | 14706590.07 | 14706590.30 | 14706590.54 | 0.0302 | 0.0115 |
| Jupiter | 35553-09-17 03:50 G | 14706785.44 | 14706785.66 | 14706785.88 | 0.0496 | 0.0166 |
| Jupiter | 35554-10-18 21:07 G | 14707182.32 | 14707182.38 | 14707182.46 | 0.0496 | 0.0473 |
| Pluto | 35555-04-20 10:19 G | 14707365.68 | 14707365.93 | 14707366.18 | 0.0066 | 0.0003 |
| Uranus | 35556-03-24 04:05 G | 14707704.55 | 14707704.67 | 14707704.82 | 0.0136 | 0.0116 |
| Uranus | 35557-03-28 20:38 G | 14708074.12 | 14708074.36 | 14708074.60 | 0.0136 | 0.0038 |
| Uranus | 35558-04-02 04:48 G | 14708443.45 | 14708443.70 | 14708443.96 | 0.0137 | 0.0034 |
| Jupiter | 35559-02-28 07:55 G | 14708775.74 | 14708775.83 | 14708775.93 | 0.0528 | 0.0481 |
| Uranus | 35559-04-06 21:36 G | 14708813.25 | 14708813.40 | 14708813.58 | 0.0137 | 0.0103 |
| Jupiter | 35560-04-04 11:17 G | 14709176.76 | 14709176.97 | 14709177.18 | 0.0531 | 0.0224 |
| Jupiter | 35565-09-21 21:36 G | 14711173.18 | 14711173.40 | 14711173.63 | 0.0496 | 0.0089 |
| Saturn | 35568-09-08 23:45 G | 14712256.24 | 14712256.49 | 14712256.75 | 0.0261 | 0.0023 |
| Jupiter | 35571-03-05 00:43 G | 14713163.40 | 14713163.53 | 14713163.68 | 0.0529 | 0.0413 |
| Jupiter | 35572-04-09 21:07 G | 14713565.22 | 14713565.38 | 14713565.55 | 0.0531 | 0.0366 |
| Neptune | 35572-08-06 00:43 G | 14713683.45 | 14713683.53 | 14713683.68 | 0.0088 | 0.0079 |
| Neptune | 35573-08-08 05:31 G | 14714050.57 | 14714050.73 | 14714050.92 | 0.0088 | 0.0065 |
| Neptune | 35574-08-10 23:31 G | 14714418.28 | 14714418.48 | 14714418.73 | 0.0088 | 0.0043 |
| Neptune | 35575-08-13 04:19 G | 14714785.45 | 14714785.68 | 14714785.92 | 0.0088 | 0.0030 |
| Neptune | 35576-08-14 20:38 G | 14715153.10 | 14715153.36 | 14715153.63 | 0.0088 | 0.0008 |
| Neptune | 35577-08-17 03:50 G | 14715520.41 | 14715520.66 | 14715520.91 | 0.0088 | 0.0004 |
| Jupiter | 35577-09-26 01:12 G | 14715560.31 | 14715560.55 | 14715560.79 | 0.0495 | 0.0033 |
| Neptune | 35578-08-19 15:36 G | 14715887.90 | 14715888.15 | 14715888.42 | 0.0088 | 0.0026 |
| Neptune | 35579-08-22 03:50 G | 14716255.45 | 14716255.66 | 14716255.89 | 0.0088 | 0.0039 |
| Neptune | 35580-08-23 11:17 G | 14716622.78 | 14716622.97 | 14716623.16 | 0.0088 | 0.0061 |
| Neptune | 35581-08-26 03:36 G | 14716990.52 | 14716990.65 | 14716990.79 | 0.0088 | 0.0073 |
| Jupiter | 35583-03-10 11:45 G | 14717551.82 | 14717551.99 | 14717552.16 | 0.0530 | 0.0349 |
| Saturn | 35583-03-14 08:53 G | 14717555.70 | 14717555.87 | 14717556.06 | 0.0300 | 0.0193 |
| Jupiter | 35584-04-14 21:21 G | 14717953.26 | 14717953.39 | 14717953.53 | 0.0530 | 0.0440 |
| Jupiter | 35589-09-30 09:21 G | 14719947.67 | 14719947.89 | 14719948.10 | 0.0495 | 0.0135 |

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| Jupiter | 35595-03-15 10:05 G | 14721939.71 | 14721939.92 | 14721940.15 | 0.0530 | 0.0212 |
| Jupiter | 35596-04-20 02:09 G | 14722341.53 | 14722341.59 | 14722341.65 | 0.0530 | 0.0508 |
| Uranus | 35596-09-25 23:17 G | 14722500.27 | 14722500.47 | 14722500.71 | 0.0142 | 0.0078 |
| Saturn | 35597-09-04 09:07 G | 14722843.69 | 14722843.88 | 14722844.09 | 0.0260 | 0.0137 |
| Uranus | 35597-09-30 23:02 G | 14722870.21 | 14722870.46 | 14722870.70 | 0.0142 | 0.0006 |
| Saturn | 35598-09-15 23:17 G | 14723220.37 | 14723220.47 | 14723220.58 | 0.0262 | 0.0237 |
| Uranus | 35598-10-05 15:50 G | 14723239.97 | 14723240.16 | 14723240.37 | 0.0141 | 0.0088 |
| Jupiter | 35600-09-03 02:53 G | 14723938.50 | 14723938.62 | 14723938.75 | 0.0497 | 0.0419 |
| Jupiter | 35601-10-04 19:12 G | 14724335.08 | 14724335.30 | 14724335.53 | 0.0495 | 0.0189 |
| Jupiter | 35607-03-20 10:05 G | 14726327.70 | 14726327.92 | 14726328.15 | 0.0530 | 0.0078 |
| Saturn | 35612-03-07 03:07 G | 14728141.38 | 14728141.63 | 14728141.88 | 0.0302 | 0.0052 |
| Jupiter | 35612-09-07 20:09 G | 14728326.15 | 14728326.34 | 14728326.53 | 0.0497 | 0.0296 |
| Jupiter | 35613-10-09 01:55 G | 14728722.38 | 14728722.58 | 14728722.78 | 0.0496 | 0.0248 |
| Jupiter | 35619-03-25 13:12 G | 14730715.81 | 14730716.05 | 14730716.29 | 0.0530 | 0.0009 |
| Mars | 35621-01-22 18:14 G | 14731385.10 | 14731385.26 | 14731385.43 | 0.1748 | 0.0899 |
| Jupiter | 35624-09-11 23:17 G | 14732713.26 | 14732713.47 | 14732713.68 | 0.0496 | 0.0223 |
| Jupiter | 35625-10-13 16:48 G | 14733110.04 | 14733110.20 | 14733110.37 | 0.0496 | 0.0352 |
| Saturn | 35627-09-11 04:05 G | 14733807.44 | 14733807.67 | 14733807.91 | 0.0261 | 0.0076 |
| Jupiter | 35631-03-30 08:53 G | 14735103.64 | 14735103.87 | 14735104.10 | 0.0531 | 0.0073 |
| Jupiter | 35636-09-16 16:19 G | 14737100.97 | 14737101.18 | 14737101.40 | 0.0496 | 0.0177 |
| Jupiter | 35637-10-17 18:14 G | 14737497.20 | 14737497.26 | 14737497.34 | 0.0496 | 0.0468 |
| Uranus | 35640-03-24 13:41 G | 14738385.90 | 14738386.07 | 14738386.24 | 0.0136 | 0.0102 |
| Uranus | 35641-03-29 06:57 G | 14738755.56 | 14738755.79 | 14738756.04 | 0.0136 | 0.0040 |
| Jupiter | 35642-02-27 02:38 G | 14739090.54 | 14739090.61 | 14739090.69 | 0.0528 | 0.0497 |
| Saturn | 35642-03-16 03:07 G | 14739107.52 | 14739107.63 | 14739107.75 | 0.0300 | 0.0261 |
| Uranus | 35642-04-02 14:09 G | 14739124.84 | 14739125.09 | 14739125.35 | 0.0137 | 0.0036 |
| Mars | 35642-07-23 11:17 G | 14739236.81 | 14739236.97 | 14739237.12 | 0.1796 | 0.0981 |
| Pluto | 35642-10-20 23:31 G | 14739326.22 | 14739326.48 | 14739326.73 | 0.0079 | 0.0001 |
| Jupiter | 35643-04-04 21:21 G | 14739492.18 | 14739492.39 | 14739492.60 | 0.0531 | 0.0221 |
| Uranus | 35643-04-07 08:09 G | 14739494.71 | 14739494.84 | 14739494.98 | 0.0137 | 0.0114 |

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| Jupiter | 35648-09-20 15:50 G | 14741487.92 | 14741488.16 | 14741488.40 | 0.0495 | 0.0098 |
| Jupiter | 35654-03-04 11:31 G | 14743478.86 | 14743478.98 | 14743479.12 | 0.0529 | 0.0434 |
| Neptune | 35655-02-03 21:50 G | 14743815.38 | 14743815.41 | 14743815.47 | 0.0089 | 0.0088 |
| Jupiter | 35655-04-09 18:29 G | 14743880.10 | 14743880.27 | 14743880.45 | 0.0531 | 0.0356 |
| Neptune | 35656-02-06 16:19 G | 14744183.02 | 14744183.18 | 14744183.39 | 0.0089 | 0.0064 |
| Saturn | 35656-09-05 21:21 G | 14744395.16 | 14744395.39 | 14744395.62 | 0.0261 | 0.0085 |
| Neptune | 35657-02-08 00:14 G | 14744550.32 | 14744550.51 | 14744550.73 | 0.0090 | 0.0052 |
| Neptune | 35658-02-10 15:36 G | 14744917.91 | 14744918.15 | 14744918.42 | 0.0090 | 0.0028 |
| Neptune | 35659-02-13 03:36 G | 14745285.41 | 14745285.65 | 14745285.90 | 0.0090 | 0.0015 |
| Neptune | 35660-02-15 13:41 G | 14745652.82 | 14745653.07 | 14745653.35 | 0.0090 | 0.0010 |
| Jupiter | 35660-09-25 04:05 G | 14745875.45 | 14745875.67 | 14745875.89 | 0.0495 | 0.0028 |
| Neptune | 35661-02-17 06:00 G | 14746020.51 | 14746020.75 | 14746021.00 | 0.0090 | 0.0023 |
| Neptune | 35662-02-19 12:29 G | 14746387.82 | 14746388.02 | 14746388.26 | 0.0090 | 0.0047 |
| Neptune | 35663-02-22 07:55 G | 14746755.66 | 14746755.83 | 14746756.04 | 0.0090 | 0.0060 |
| Neptune | 35664-02-24 13:41 G | 14747122.98 | 14747123.07 | 14747123.19 | 0.0090 | 0.0082 |
| Jupiter | 35666-03-09 04:05 G | 14747866.50 | 14747866.67 | 14747866.85 | 0.0529 | 0.0367 |
| Jupiter | 35667-04-14 19:55 G | 14748268.21 | 14748268.33 | 14748268.47 | 0.0530 | 0.0426 |
| Saturn | 35671-03-09 18:14 G | 14749693.02 | 14749693.26 | 14749693.51 | 0.0301 | 0.0023 |
| Jupiter | 35672-09-29 14:53 G | 14750262.89 | 14750263.12 | 14750263.36 | 0.0495 | 0.0126 |
| Jupiter | 35678-03-14 06:29 G | 14752254.58 | 14752254.77 | 14752254.98 | 0.0530 | 0.0234 |
| Jupiter | 35679-04-19 22:19 G | 14752656.34 | 14752656.43 | 14752656.52 | 0.0530 | 0.0491 |
| Uranus | 35680-09-26 10:33 G | 14753181.74 | 14753181.94 | 14753182.17 | 0.0142 | 0.0080 |
| Uranus | 35681-10-01 11:02 G | 14753551.72 | 14753551.96 | 14753552.21 | 0.0142 | 0.0012 |
| Uranus | 35682-10-06 02:38 G | 14753921.40 | 14753921.61 | 14753921.84 | 0.0141 | 0.0078 |
| Jupiter | 35683-09-03 13:12 G | 14754253.92 | 14754254.05 | 14754254.17 | 0.0498 | 0.0421 |
| Jupiter | 35684-10-03 20:09 G | 14754650.13 | 14754650.34 | 14754650.55 | 0.0495 | 0.0178 |
| Saturn | 35685-09-01 05:17 G | 14754982.63 | 14754982.72 | 14754982.84 | 0.0260 | 0.0236 |
| Saturn | 35686-09-12 14:24 G | 14755358.91 | 14755359.10 | 14755359.32 | 0.0261 | 0.0132 |
| Jupiter | 35690-03-19 07:26 G | 14756642.57 | 14756642.81 | 14756643.05 | 0.0530 | 0.0095 |
| Jupiter | 35695-09-07 16:05 G | 14758640.99 | 14758641.17 | 14758641.35 | 0.0497 | 0.0305 |

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| Jupiter | 35696-10-08 10:33 G | 14759037.73 | 14759037.94 | 14759038.15 | 0.0495 | 0.0238 |
| Saturn | 35700-03-03 19:26 G | 14760279.15 | 14760279.31 | 14760279.48 | 0.0301 | 0.0226 |
| Jupiter | 35702-03-25 06:57 G | 14761030.56 | 14761030.79 | 14761031.02 | 0.0531 | 0.0019 |
| Jupiter | 35707-09-13 06:00 G | 14763028.55 | 14763028.75 | 14763028.96 | 0.0496 | 0.0238 |
| Jupiter | 35708-10-13 08:24 G | 14763424.69 | 14763424.85 | 14763425.02 | 0.0495 | 0.0344 |
| Jupiter | 35714-03-30 17:31 G | 14765419.00 | 14765419.23 | 14765419.46 | 0.0531 | 0.0061 |
| Saturn | 35715-09-09 06:57 G | 14765946.55 | 14765946.79 | 14765947.05 | 0.0261 | 0.0030 |
| Jupiter | 35719-09-17 08:38 G | 14767415.64 | 14767415.86 | 14767416.09 | 0.0496 | 0.0188 |
| Jupiter | 35720-10-18 00:14 G | 14767812.43 | 14767812.51 | 14767812.59 | 0.0496 | 0.0462 |
| Uranus | 35724-03-25 23:17 G | 14769067.34 | 14769067.47 | 14769067.64 | 0.0136 | 0.0112 |
| Jupiter | 35725-02-27 06:14 G | 14769405.73 | 14769405.76 | 14769405.81 | 0.0528 | 0.0519 |
| Uranus | 35725-03-30 17:45 G | 14769437.00 | 14769437.24 | 14769437.49 | 0.0136 | 0.0030 |
| Uranus | 35726-04-04 00:14 G | 14769806.27 | 14769806.51 | 14769806.77 | 0.0137 | 0.0039 |
| Jupiter | 35726-04-04 08:53 G | 14769806.65 | 14769806.87 | 14769807.09 | 0.0531 | 0.0197 * |
| Uranus | 35727-04-08 19:26 G | 14770176.18 | 14770176.31 | 14770176.47 | 0.0137 | 0.0110 |
| Saturn | 35730-03-12 18:14 G | 14771245.04 | 14771245.26 | 14771245.48 | 0.0301 | 0.0106 |
| Jupiter | 35731-09-21 22:19 G | 14771803.21 | 14771803.43 | 14771803.65 | 0.0496 | 0.0104 |
| Neptune | 35736-08-06 03:36 G | 14773583.61 | 14773583.65 | 14773583.73 | 0.0088 | 0.0085 |
| Jupiter | 35737-03-03 22:48 G | 14773793.33 | 14773793.45 | 14773793.57 | 0.0528 | 0.0457 |
| Neptune | 35737-08-08 22:05 G | 14773951.29 | 14773951.42 | 14773951.55 | 0.0088 | 0.0076 |
| Jupiter | 35738-04-09 14:09 G | 14774194.92 | 14774195.09 | 14774195.27 | 0.0530 | 0.0336 |
| Neptune | 35738-08-11 02:38 G | 14774318.42 | 14774318.61 | 14774318.83 | 0.0088 | 0.0051 |
| Neptune | 35739-08-13 18:00 G | 14774686.03 | 14774686.25 | 14774686.50 | 0.0088 | 0.0042 |
| Neptune | 35740-08-15 02:53 G | 14775053.39 | 14775053.62 | 14775053.88 | 0.0088 | 0.0017 |
| Neptune | 35741-08-17 14:24 G | 14775420.83 | 14775421.10 | 14775421.37 | 0.0088 | 0.0006 |
| Neptune | 35742-08-20 03:21 G | 14775788.41 | 14775788.64 | 14775788.90 | 0.0088 | 0.0020 |
| Neptune | 35743-08-22 09:21 G | 14776155.66 | 14776155.89 | 14776156.16 | 0.0088 | 0.0029 |
| Jupiter | 35743-09-26 08:09 G | 14776190.59 | 14776190.84 | 14776191.08 | 0.0495 | 0.0024 |
| Neptune | 35744-08-24 02:24 G | 14776523.42 | 14776523.60 | 14776523.82 | 0.0088 | 0.0054 |
| Saturn | 35744-09-03 15:21 G | 14776533.98 | 14776534.14 | 14776534.32 | 0.0260 | 0.0181 |

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| Neptune | 35745-08-26 06:29 G | 14776890.60 | 14776890.77 | 14776890.96 | 0.0088 | 0.0063 |
| Saturn | 35745-09-15 05:31 G | 14776910.57 | 14776910.73 | 14776910.90 | 0.0262 | 0.0190 |
| Jupiter | 35749-03-09 01:26 G | 14778181.41 | 14778181.56 | 14778181.71 | 0.0529 | 0.0389 |
| Jupiter | 35750-04-14 14:53 G | 14778582.96 | 14778583.12 | 14778583.28 | 0.0531 | 0.0402 |
| Jupiter | 35755-09-30 12:57 G | 14780577.82 | 14780578.04 | 14780578.26 | 0.0495 | 0.0116 |
| Saturn | 35759-03-06 15:36 G | 14781830.93 | 14781831.15 | 14781831.39 | 0.0301 | 0.0138 |
| Jupiter | 35761-03-14 03:21 G | 14782569.43 | 14782569.64 | 14782569.85 | 0.0530 | 0.0248 |
| Jupiter | 35762-04-19 15:07 G | 14782971.05 | 14782971.13 | 14782971.23 | 0.0530 | 0.0481 |
| Uranus | 35764-09-27 22:48 G | 14783863.23 | 14783863.45 | 14783863.68 | 0.0142 | 0.0069 |
| Uranus | 35765-10-03 00:00 G | 14784233.26 | 14784233.50 | 14784233.75 | 0.0142 | 0.0005 |
| Jupiter | 35766-09-03 05:02 G | 14784568.60 | 14784568.71 | 14784568.82 | 0.0497 | 0.0435 |
| Uranus | 35766-10-07 14:38 G | 14784602.94 | 14784603.11 | 14784603.31 | 0.0141 | 0.0098 |
| Jupiter | 35767-10-05 00:29 G | 14784965.29 | 14784965.52 | 14784965.74 | 0.0495 | 0.0163 |
| Jupiter | 35773-03-19 02:38 G | 14786957.39 | 14786957.61 | 14786957.84 | 0.0531 | 0.0112 |
| Saturn | 35774-09-10 12:29 G | 14787497.77 | 14787498.02 | 14787498.28 | 0.0261 | 0.0030 |
| Jupiter | 35778-09-07 22:19 G | 14788956.25 | 14788956.43 | 14788956.60 | 0.0497 | 0.0320 |
| Jupiter | 35779-10-09 01:55 G | 14789352.38 | 14789352.58 | 14789352.79 | 0.0495 | 0.0228 |
| Jupiter | 35785-03-24 08:24 G | 14791345.61 | 14791345.85 | 14791346.08 | 0.0530 | 0.0048 |
| Saturn | 35789-03-14 21:07 G | 14792797.20 | 14792797.38 | 14792797.56 | 0.0301 | 0.0193 |
| Jupiter | 35790-09-12 00:57 G | 14793343.34 | 14793343.54 | 14793343.75 | 0.0497 | 0.0254 |
| Jupiter | 35791-10-13 18:43 G | 14793740.12 | 14793740.28 | 14793740.44 | 0.0496 | 0.0345 |
| Jupiter | 35797-03-29 01:12 G | 14795733.31 | 14795733.55 | 14795733.78 | 0.0530 | 0.0036 |
| Pluto | 35801-04-23 19:12 G | 14797219.04 | 14797219.30 | 14797219.56 | 0.0066 | 0.0016 |
| Jupiter | 35802-09-17 15:21 G | 14797730.93 | 14797731.14 | 14797731.34 | 0.0496 | 0.0206 |
| Saturn | 35803-09-07 05:45 G | 14798085.53 | 14798085.74 | 14798085.95 | 0.0260 | 0.0123 |
| Jupiter | 35803-10-18 21:36 G | 14798127.31 | 14798127.40 | 14798127.50 | 0.0496 | 0.0452 |
| Saturn | 35804-09-17 18:00 G | 14798462.19 | 14798462.25 | 14798462.34 | 0.0262 | 0.0249 |
| Uranus | 35808-03-27 08:24 G | 14799748.69 | 14799748.85 | 14799749.05 | 0.0136 | 0.0097 |
| Uranus | 35809-04-01 03:36 G | 14800118.42 | 14800118.65 | 14800118.90 | 0.0136 | 0.0036 |
| Jupiter | 35809-04-04 07:41 G | 14800121.60 | 14800121.82 | 14800122.03 | 0.0531 | 0.0179 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 35810-04-05 09:21 G | 14800487.65 | 14800487.89 | 14800488.14 | 0.0137 | 0.0043 |
| Uranus | 35811-04-10 04:48 G | 14800857.59 | 14800857.70 | 14800857.84 | 0.0137 | 0.0119 |
| Jupiter | 35814-09-22 00:29 G | 14802118.28 | 14802118.52 | 14802118.75 | 0.0496 | 0.0110 |
| Saturn | 35818-03-09 12:00 G | 14803382.76 | 14803383.00 | 14803383.25 | 0.0301 | 0.0052 |
| Neptune | 35820-02-07 21:07 G | 14804083.29 | 14804083.38 | 14804083.51 | 0.0089 | 0.0080 |
| Jupiter | 35820-03-03 23:02 G | 14804108.37 | 14804108.46 | 14804108.55 | 0.0528 | 0.0480 |
| Neptune | 35821-02-09 11:02 G | 14804450.76 | 14804450.96 | 14804451.18 | 0.0089 | 0.0056 |
| Jupiter | 35821-04-09 09:07 G | 14804509.69 | 14804509.88 | 14804510.08 | 0.0531 | 0.0318 |
| Neptune | 35822-02-12 00:29 G | 14804818.31 | 14804818.52 | 14804818.74 | 0.0089 | 0.0043 |
| Neptune | 35823-02-14 09:50 G | 14805185.66 | 14805185.91 | 14805186.18 | 0.0090 | 0.0018 |
| Neptune | 35824-02-17 03:36 G | 14805553.40 | 14805553.65 | 14805553.90 | 0.0090 | 0.0006 |
| Neptune | 35825-02-18 09:21 G | 14805920.65 | 14805920.89 | 14805921.16 | 0.0090 | 0.0020 |
| Mars | 35826-01-23 11:02 G | 14806259.84 | 14806259.96 | 14806260.08 | 0.1735 | 0.1336 |
| Neptune | 35826-02-21 05:02 G | 14806288.47 | 14806288.71 | 14806288.96 | 0.0090 | 0.0031 |
| Jupiter | 35826-09-26 04:05 G | 14806505.44 | 14806505.67 | 14806505.90 | 0.0495 | 0.0011 |
| Neptune | 35827-02-23 10:33 G | 14806655.76 | 14806655.94 | 14806656.15 | 0.0090 | 0.0057 |
| Neptune | 35828-02-26 04:33 G | 14807023.54 | 14807023.69 | 14807023.89 | 0.0090 | 0.0068 |
| Jupiter | 35832-03-08 22:19 G | 14808496.28 | 14808496.43 | 14808496.59 | 0.0529 | 0.0405 |
| Jupiter | 35833-04-14 10:33 G | 14808897.79 | 14808897.94 | 14808898.09 | 0.0531 | 0.0387 |
| Saturn | 35833-09-12 19:55 G | 14809049.11 | 14809049.33 | 14809049.57 | 0.0261 | 0.0089 |
| Jupiter | 35838-09-30 18:14 G | 14810893.02 | 14810893.26 | 14810893.49 | 0.0495 | 0.0102 |
| Jupiter | 35844-03-13 20:24 G | 14812884.16 | 14812884.35 | 14812884.54 | 0.0529 | 0.0271 |
| Jupiter | 35845-04-19 15:36 G | 14813286.04 | 14813286.15 | 14813286.27 | 0.0530 | 0.0460 |
| Saturn | 35847-03-03 14:53 G | 14813969.07 | 14813969.12 | 14813969.19 | 0.0302 | 0.0291 |
| Saturn | 35848-03-17 19:55 G | 14814349.25 | 14814349.33 | 14814349.43 | 0.0300 | 0.0279 |
| Uranus | 35848-09-29 12:14 G | 14814544.79 | 14814545.01 | 14814545.24 | 0.0142 | 0.0068 |
| Jupiter | 35849-09-03 13:12 G | 14814883.96 | 14814884.05 | 14814884.15 | 0.0498 | 0.0451 |
| Uranus | 35849-10-04 14:09 G | 14814914.85 | 14814915.09 | 14814915.34 | 0.0142 | 0.0021 |
| Jupiter | 35850-10-04 20:24 G | 14815280.14 | 14815280.35 | 14815280.58 | 0.0495 | 0.0150 |
| Uranus | 35850-10-09 03:50 G | 14815284.47 | 14815284.66 | 14815284.88 | 0.0141 | 0.0089 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 35856-03-19 02:09 G | 14817272.36 | 14817272.59 | 14817272.82 | 0.0530 | 0.0135 |
| Jupiter | 35861-09-07 17:17 G | 14819271.05 | 14819271.22 | 14819271.40 | 0.0497 | 0.0338 |
| Saturn | 35862-09-08 17:02 G | 14819636.97 | 14819637.21 | 14819637.45 | 0.0260 | 0.0068 |
| Jupiter | 35862-10-09 12:43 G | 14819667.82 | 14819668.03 | 14819668.24 | 0.0495 | 0.0220 |
| Jupiter | 35868-03-23 18:00 G | 14821660.02 | 14821660.25 | 14821660.48 | 0.0530 | 0.0066 |
| Jupiter | 35873-09-12 08:09 G | 14823658.66 | 14823658.84 | 14823659.03 | 0.0497 | 0.0274 |
| Jupiter | 35874-10-13 15:21 G | 14824054.96 | 14824055.14 | 14824055.31 | 0.0495 | 0.0337 |
| Saturn | 35877-03-11 09:50 G | 14824934.67 | 14824934.91 | 14824935.15 | 0.0301 | 0.0035 |
| Jupiter | 35880-03-29 04:05 G | 14826048.44 | 14826048.67 | 14826048.90 | 0.0531 | 0.0020 |
| Jupiter | 35885-09-16 16:19 G | 14828045.96 | 14828046.18 | 14828046.40 | 0.0496 | 0.0223 |
| Jupiter | 35886-10-18 01:41 G | 14828442.48 | 14828442.57 | 14828442.67 | 0.0495 | 0.0443 |
| Pluto | 35888-10-24 16:48 G | 14829179.98 | 14829180.20 | 14829180.44 | 0.0079 | 0.0030 |
| Saturn | 35891-09-03 19:12 G | 14830224.19 | 14830224.30 | 14830224.43 | 0.0260 | 0.0227 |
| Uranus | 35892-03-27 17:45 G | 14830430.10 | 14830430.24 | 14830430.41 | 0.0136 | 0.0107 |
| Jupiter | 35892-04-03 03:50 G | 14830436.43 | 14830436.66 | 14830436.89 | 0.0531 | 0.0167 |
| Saturn | 35892-09-14 07:12 G | 14830600.61 | 14830600.80 | 14830601.00 | 0.0262 | 0.0145 |
| Uranus | 35893-04-01 12:57 G | 14830799.79 | 14830800.04 | 14830800.29 | 0.0136 | 0.0024 |
| Uranus | 35894-04-05 18:14 G | 14831169.01 | 14831169.26 | 14831169.50 | 0.0137 | 0.0042 |
| Uranus | 35895-04-10 13:55 G | 14831538.96 | 14831539.08 | 14831539.23 | 0.0137 | 0.0117 |
| Jupiter | 35897-09-20 22:33 G | 14832433.22 | 14832433.44 | 14832433.66 | 0.0495 | 0.0124 |
| Neptune | 35901-08-10 01:26 G | 14833851.50 | 14833851.56 | 14833851.68 | 0.0088 | 0.0082 |
| Neptune | 35902-08-12 15:50 G | 14834219.01 | 14834219.16 | 14834219.36 | 0.0088 | 0.0066 |
| Jupiter | 35903-03-04 17:45 G | 14834423.18 | 14834423.24 | 14834423.33 | 0.0528 | 0.0500 |
| Neptune | 35903-08-15 01:41 G | 14834586.37 | 14834586.57 | 14834586.79 | 0.0088 | 0.0046 |
| Jupiter | 35904-04-09 03:21 G | 14834824.46 | 14834824.64 | 14834824.83 | 0.0531 | 0.0297 |
| Neptune | 35904-08-16 10:48 G | 14834953.72 | 14834953.95 | 14834954.22 | 0.0088 | 0.0030 |
| Mars | 35905-01-26 17:45 G | 14835117.13 | 14835117.24 | 14835117.36 | 0.1740 | 0.1312 |
| Neptune | 35905-08-19 01:41 G | 14835321.32 | 14835321.57 | 14835321.82 | 0.0088 | 0.0010 |
| Saturn | 35906-03-06 10:19 G | 14835520.76 | 14835520.93 | 14835521.12 | 0.0302 | 0.0210 |
| Neptune | 35906-08-21 07:12 G | 14835688.54 | 14835688.80 | 14835689.06 | 0.0088 | 0.0005 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 35907-08-24 00:43 G | 14836056.29 | 14836056.53 | 14836056.79 | 0.0088 | 0.0025 |
| Neptune | 35908-08-25 04:33 G | 14836423.48 | 14836423.69 | 14836423.94 | 0.0088 | 0.0040 |
| Neptune | 35909-08-27 21:50 G | 14836791.25 | 14836791.41 | 14836791.63 | 0.0088 | 0.0061 |
| Jupiter | 35909-09-26 12:57 G | 14836820.80 | 14836821.04 | 14836821.28 | 0.0496 | 0.0004 |
| Neptune | 35910-08-30 04:05 G | 14837158.55 | 14837158.67 | 14837158.81 | 0.0088 | 0.0075 |
| Jupiter | 35915-03-09 18:14 G | 14838811.14 | 14838811.26 | 14838811.40 | 0.0528 | 0.0426 |
| Jupiter | 35916-04-14 10:05 G | 14839212.75 | 14839212.92 | 14839213.09 | 0.0530 | 0.0362 |
| Saturn | 35921-09-10 21:36 G | 14841188.15 | 14841188.40 | 14841188.66 | 0.0260 | 0.0016 |
| Jupiter | 35921-09-30 15:36 G | 14841207.93 | 14841208.15 | 14841208.38 | 0.0496 | 0.0088 |
| Mars | 35926-07-27 02:53 G | 14842968.46 | 14842968.62 | 14842968.78 | 0.1804 | 0.0943 |
| Jupiter | 35927-03-14 20:53 G | 14843199.18 | 14843199.37 | 14843199.58 | 0.0529 | 0.0281 |
| Jupiter | 35928-04-19 03:07 G | 14843600.51 | 14843600.63 | 14843600.76 | 0.0530 | 0.0444 |
| Uranus | 35931-09-27 08:38 G | 14844856.86 | 14844856.86 | 14844856.86 | 0.0143 | 0.0143 |
| Jupiter | 35932-09-03 10:33 G | 14845198.86 | 14845198.94 | 14845199.03 | 0.0498 | 0.0463 |
| Uranus | 35932-09-30 22:19 G | 14845226.21 | 14845226.43 | 14845226.67 | 0.0142 | 0.0062 |
| Jupiter | 35933-10-05 08:09 G | 14845595.62 | 14845595.84 | 14845596.06 | 0.0495 | 0.0133 |
| Uranus | 35933-10-06 01:26 G | 14845596.31 | 14845596.56 | 14845596.81 | 0.0142 | 0.0014 |
| Uranus | 35934-10-10 14:24 G | 14845965.95 | 14845966.10 | 14845966.28 | 0.0141 | 0.0107 |
| Saturn | 35936-03-14 06:43 G | 14846486.57 | 14846486.78 | 14846487.01 | 0.0301 | 0.0112 |
| Jupiter | 35939-03-19 15:50 G | 14847586.94 | 14847587.16 | 14847587.38 | 0.0530 | 0.0152 |
| Jupiter | 35944-09-08 01:55 G | 14849586.43 | 14849586.58 | 14849586.75 | 0.0497 | 0.0355 |
| Jupiter | 35945-10-09 09:36 G | 14849982.68 | 14849982.90 | 14849983.12 | 0.0495 | 0.0208 |
| Saturn | 35950-09-06 02:24 G | 14851775.43 | 14851775.60 | 14851775.78 | 0.0260 | 0.0177 |
| Jupiter | 35951-03-25 02:38 G | 14851975.38 | 14851975.61 | 14851975.84 | 0.0531 | 0.0082 |
| Saturn | 35951-09-17 15:50 G | 14852152.01 | 14852152.16 | 14852152.32 | 0.0261 | 0.0197 |
| Jupiter | 35956-09-12 11:31 G | 14853973.78 | 14853973.98 | 14853974.17 | 0.0497 | 0.0293 |
| Jupiter | 35957-10-13 23:02 G | 14854370.29 | 14854370.46 | 14854370.62 | 0.0495 | 0.0332 |
| Jupiter | 35963-03-29 22:19 G | 14856363.19 | 14856363.43 | 14856363.67 | 0.0530 | 0.0006 |
| Saturn | 35965-03-07 20:09 G | 14857072.12 | 14857072.34 | 14857072.57 | 0.0302 | 0.0140 |
| Jupiter | 35968-09-16 17:02 G | 14858361.02 | 14858361.21 | 14858361.41 | 0.0497 | 0.0243 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 35969-10-18 06:29 G | 14858757.66 | 14858757.77 | 14858757.89 | 0.0496 | 0.0431 |
| Jupiter | 35975-04-04 01:41 G | 14860751.36 | 14860751.57 | 14860751.79 | 0.0530 | 0.0156 |
| Uranus | 35976-03-29 02:09 G | 14861111.42 | 14861111.59 | 14861111.80 | 0.0136 | 0.0091 |
| Uranus | 35977-04-02 21:07 G | 14861481.14 | 14861481.38 | 14861481.64 | 0.0136 | 0.0033 |
| Uranus | 35978-04-07 02:24 G | 14861850.37 | 14861850.60 | 14861850.84 | 0.0137 | 0.0049 |
| Uranus | 35979-04-11 21:36 G | 14862220.31 | 14862220.40 | 14862220.54 | 0.0137 | 0.0122 |
| Saturn | 35980-09-11 21:21 G | 14862739.14 | 14862739.39 | 14862739.64 | 0.0260 | 0.0035 |
| Jupiter | 35980-09-21 09:07 G | 14862748.65 | 14862748.88 | 14862749.11 | 0.0496 | 0.0134 |
| Jupiter | 35981-10-22 14:38 G | 14863145.08 | 14863145.11 | 14863145.16 | 0.0496 | 0.0485 |
| Neptune | 35985-02-09 20:38 G | 14864351.20 | 14864351.36 | 14864351.54 | 0.0089 | 0.0065 |
| Neptune | 35986-02-12 04:48 G | 14864718.50 | 14864718.70 | 14864718.92 | 0.0089 | 0.0054 |
| Jupiter | 35986-03-03 17:45 G | 14864738.22 | 14864738.24 | 14864738.28 | 0.0527 | 0.0521 |
| Neptune | 35987-02-14 23:02 G | 14865086.23 | 14865086.46 | 14865086.71 | 0.0089 | 0.0028 |
| Jupiter | 35987-04-09 05:45 G | 14865139.54 | 14865139.74 | 14865139.94 | 0.0531 | 0.0282 |
| Neptune | 35988-02-17 04:33 G | 14865453.45 | 14865453.69 | 14865453.95 | 0.0090 | 0.0018 |
| Neptune | 35989-02-19 00:00 G | 14865821.25 | 14865821.50 | 14865821.77 | 0.0090 | 0.0010 |
| Neptune | 35990-02-21 06:00 G | 14866188.52 | 14866188.75 | 14866189.01 | 0.0090 | 0.0022 |
| Neptune | 35991-02-23 23:31 G | 14866556.26 | 14866556.48 | 14866556.71 | 0.0090 | 0.0047 |
| Neptune | 35992-02-26 08:53 G | 14866923.70 | 14866923.87 | 14866924.07 | 0.0090 | 0.0060 |
| Jupiter | 35992-09-25 12:43 G | 14867135.80 | 14867136.03 | 14867136.26 | 0.0496 | 0.0010 |
| Neptune | 35993-02-27 22:05 G | 14867291.35 | 14867291.42 | 14867291.53 | 0.0090 | 0.0084 |
| Saturn | 35995-03-16 23:02 G | 14868038.27 | 14868038.46 | 14868038.66 | 0.0301 | 0.0180 |
| Jupiter | 35998-03-08 21:21 G | 14869126.26 | 14869126.39 | 14869126.52 | 0.0528 | 0.0438 |
| Jupiter | 35999-04-14 02:53 G | 14869527.45 | 14869527.62 | 14869527.79 | 0.0531 | 0.0354 |

37TH MILLENNIUM CE

This is a list of transits of Moon in the 37th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 36004-09-30 05:02 | G | 14871523.48 | 14871523.71 | 14871523.93 | 0.0495 | 0.0070 | |
| Saturn | 36009-09-07 09:36 | G | 14873326.70 | 14873326.90 | 14873327.12 | 0.0260 | 0.0130 | |
| Jupiter | 36010-03-13 17:02 | G | 14873514.02 | 14873514.21 | 14873514.41 | 0.0529 | 0.0294 | |
| Saturn | 36010-09-18 17:17 | G | 14873703.14 | 14873703.22 | 14873703.32 | 0.0261 | 0.0243 | |
| Jupiter | 36011-04-19 14:53 | G | 14873916.00 | 14873916.12 | 14873916.26 | 0.0531 | 0.0440 | |
| Jupiter | 36015-09-03 22:05 | G | 14875514.36 | 14875514.42 | 14875514.50 | 0.0498 | 0.0471 | |
| Uranus | 36016-10-01 07:26 | G | 14875907.59 | 14875907.81 | 14875908.05 | 0.0142 | 0.0061 | |
| Jupiter | 36016-10-04 08:38 | G | 14875910.63 | 14875910.86 | 14875911.09 | 0.0495 | 0.0119 | |
| Uranus | 36017-10-06 11:02 | G | 14876277.72 | 14876277.96 | 14876278.21 | 0.0142 | 0.0027 | |
| Uranus | 36018-10-11 00:00 | G | 14876647.31 | 14876647.50 | 14876647.69 | 0.0141 | 0.0096 | |
| Jupiter | 36022-03-19 02:53 | G | 14877902.41 | 14877902.62 | 14877902.84 | 0.0529 | 0.0170 | |
| Saturn | 36024-03-09 02:24 | G | 14878623.36 | 14878623.60 | 14878623.83 | 0.0302 | 0.0079 | |
| Jupiter | 36027-09-08 05:02 | G | 14879901.56 | 14879901.71 | 14879901.88 | 0.0498 | 0.0369 | |
| Jupiter | 36028-10-08 20:53 | G | 14880298.17 | 14880298.37 | 14880298.58 | 0.0496 | 0.0203 | |
| Jupiter | 36034-03-23 23:02 | G | 14882290.22 | 14882290.46 | 14882290.69 | 0.0530 | 0.0099 | |
| Jupiter | 36039-09-12 14:09 | G | 14884288.92 | 14884289.09 | 14884289.27 | 0.0497 | 0.0315 | |
| Saturn | 36039-09-13 22:19 | G | 14884290.20 | 14884290.43 | 14884290.66 | 0.0260 | 0.0082 | |
| Jupiter | 36040-10-13 05:45 | G | 14884685.56 | 14884685.74 | 14884685.93 | 0.0496 | 0.0325 | |
| Jupiter | 36046-03-29 01:41 | G | 14886678.35 | 14886678.57 | 14886678.80 | 0.0530 | 0.0008 | |
| Pluto | 36046-04-25 09:07 | G | 14886705.80 | 14886705.88 | 14886706.04 | 0.0065 | 0.0058 | |
| Pluto | 36047-04-26 18:29 | G | 14887072.04 | 14887072.27 | 14887072.54 | 0.0066 | 0.0024 | |
| Jupiter | 36051-09-17 07:41 | G | 14888676.61 | 14888676.82 | 14888677.02 | 0.0497 | 0.0251 | |
| Jupiter | 36052-10-17 13:55 | G | 14889072.98 | 14889073.08 | 14889073.20 | 0.0496 | 0.0426 | |
| Saturn | 36054-03-18 02:38 | G | 14889589.46 | 14889589.61 | 14889589.77 | 0.0301 | 0.0239 | |
| Jupiter | 36058-04-03 06:57 | G | 14891066.56 | 14891066.79 | 14891067.03 | 0.0531 | 0.0150 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 36060-03-29 13:41 G | 14891792.91 | 14891793.07 | 14891793.24 | 0.0136 | 0.0101 |
| Uranus | 36061-04-03 07:41 G | 14892162.57 | 14892162.82 | 14892163.08 | 0.0136 | 0.0017 |
| Uranus | 36062-04-07 12:43 G | 14892531.80 | 14892532.03 | 14892532.27 | 0.0137 | 0.0047 |
| Uranus | 36063-04-12 08:09 G | 14892901.74 | 14892901.84 | 14892901.96 | 0.0137 | 0.0123 |
| Jupiter | 36063-09-21 11:17 G | 14893063.75 | 14893063.97 | 14893064.19 | 0.0496 | 0.0142 |
| Jupiter | 36064-10-22 03:50 G | 14893460.59 | 14893460.66 | 14893460.74 | 0.0496 | 0.0467 |
| Neptune | 36065-08-09 12:14 G | 14893752.01 | 14893752.01 | 14893752.04 | 0.0088 | 0.0088 |
| Neptune | 36066-08-11 23:31 G | 14894119.39 | 14894119.48 | 14894119.61 | 0.0088 | 0.0079 |
| Neptune | 36067-08-14 08:24 G | 14894486.64 | 14894486.85 | 14894487.07 | 0.0088 | 0.0052 |
| Neptune | 36068-08-16 00:00 G | 14894854.29 | 14894854.50 | 14894854.73 | 0.0088 | 0.0044 |
| Saturn | 36068-09-08 09:21 G | 14894877.66 | 14894877.89 | 14894878.14 | 0.0260 | 0.0085 |
| Neptune | 36069-08-18 04:48 G | 14895221.45 | 14895221.70 | 14895221.96 | 0.0088 | 0.0017 |
| Jupiter | 36070-04-08 05:31 G | 14895454.54 | 14895454.73 | 14895454.93 | 0.0531 | 0.0275 |
| Neptune | 36070-08-20 22:48 G | 14895589.19 | 14895589.45 | 14895589.70 | 0.0088 | 0.0008 |
| Neptune | 36071-08-23 02:38 G | 14895956.37 | 14895956.61 | 14895956.87 | 0.0088 | 0.0019 |
| Neptune | 36072-08-24 19:12 G | 14896324.06 | 14896324.30 | 14896324.56 | 0.0088 | 0.0028 |
| Neptune | 36073-08-27 01:26 G | 14896691.39 | 14896691.56 | 14896691.78 | 0.0088 | 0.0055 |
| Neptune | 36074-08-29 14:09 G | 14897058.92 | 14897059.09 | 14897059.29 | 0.0088 | 0.0063 |
| Jupiter | 36075-09-26 05:02 G | 14897451.48 | 14897451.71 | 14897451.94 | 0.0496 | 0.0014 |
| Jupiter | 36081-03-07 22:19 G | 14899441.32 | 14899441.43 | 14899441.55 | 0.0528 | 0.0452 |
| Jupiter | 36082-04-13 16:05 G | 14899842.99 | 14899843.17 | 14899843.35 | 0.0530 | 0.0337 |
| Saturn | 36083-03-11 09:07 G | 14900174.64 | 14900174.88 | 14900175.11 | 0.0302 | 0.0023 |
| Jupiter | 36087-09-30 06:43 G | 14901838.54 | 14901838.78 | 14901839.02 | 0.0496 | 0.0055 |
| Jupiter | 36093-03-13 08:24 G | 14903829.66 | 14903829.85 | 14903830.04 | 0.0528 | 0.0299 |
| Jupiter | 36094-04-18 12:29 G | 14904230.89 | 14904231.02 | 14904231.17 | 0.0530 | 0.0429 |
| Saturn | 36097-09-03 13:55 G | 14905465.00 | 14905465.08 | 14905465.16 | 0.0259 | 0.0242 |
| Jupiter | 36098-09-03 02:38 G | 14905829.54 | 14905829.61 | 14905829.68 | 0.0499 | 0.0474 |
| Saturn | 36098-09-15 00:57 G | 14905841.34 | 14905841.54 | 14905841.76 | 0.0260 | 0.0127 |
| Uranus | 36099-09-28 01:41 G | 14906219.52 | 14906219.57 | 14906219.66 | 0.0143 | 0.0137 |
| Jupiter | 36099-10-04 21:21 G | 14906226.17 | 14906226.39 | 14906226.61 | 0.0496 | 0.0108 |

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| Uranus | 36100-10-02 16:05 G | 14906588.94 | 14906589.17 | 14906589.40 | 0.0142 | 0.0059 |
| Uranus | 36101-10-07 19:41 G | 14906959.07 | 14906959.32 | 14906959.57 | 0.0142 | 0.0020 |
| Uranus | 36102-10-12 07:55 G | 14907328.69 | 14907328.83 | 14907329.00 | 0.0141 | 0.0112 |
| Jupiter | 36105-03-19 00:29 G | 14908217.30 | 14908217.52 | 14908217.75 | 0.0529 | 0.0182 |
| Mars | 36110-01-25 17:45 G | 14909991.07 | 14909991.24 | 14909991.40 | 0.1727 | 0.0978 |
| Jupiter | 36110-09-08 13:12 G | 14910216.91 | 14910217.05 | 14910217.20 | 0.0498 | 0.0378 |
| Jupiter | 36111-10-10 06:57 G | 14910613.57 | 14910613.79 | 14910614.02 | 0.0496 | 0.0202 |
| Saturn | 36112-03-04 18:14 G | 14910760.18 | 14910760.26 | 14910760.34 | 0.0303 | 0.0287 |
| Saturn | 36113-03-19 22:33 G | 14911140.39 | 14911140.44 | 14911140.51 | 0.0301 | 0.0291 |
| Jupiter | 36117-03-24 06:43 G | 14912605.56 | 14912605.78 | 14912606.00 | 0.0530 | 0.0116 |
| Jupiter | 36122-09-13 07:26 G | 14914604.64 | 14914604.81 | 14914604.99 | 0.0497 | 0.0326 |
| Jupiter | 36123-10-14 14:53 G | 14915000.96 | 14915001.12 | 14915001.29 | 0.0495 | 0.0327 |
| Saturn | 36127-09-11 01:55 G | 14916428.33 | 14916428.58 | 14916428.83 | 0.0260 | 0.0041 |
| Jupiter | 36129-03-29 11:31 G | 14916993.74 | 14916993.98 | 14916994.22 | 0.0530 | 0.0014 |
| Jupiter | 36134-09-17 12:00 G | 14918991.80 | 14918992.00 | 14918992.19 | 0.0497 | 0.0258 |
| Pluto | 36134-10-29 01:55 G | 14919033.38 | 14919033.58 | 14919033.82 | 0.0079 | 0.0044 |
| Jupiter | 36135-10-19 06:14 G | 14919388.64 | 14919388.76 | 14919388.89 | 0.0496 | 0.0415 |
| Jupiter | 36141-04-03 10:33 G | 14921381.72 | 14921381.94 | 14921382.16 | 0.0530 | 0.0142 |
| Saturn | 36142-03-13 10:05 G | 14921725.68 | 14921725.92 | 14921726.16 | 0.0302 | 0.0023 |
| Uranus | 36144-03-31 00:43 G | 14922474.34 | 14922474.53 | 14922474.74 | 0.0136 | 0.0083 |
| Uranus | 36145-04-04 18:29 G | 14922844.02 | 14922844.27 | 14922844.53 | 0.0136 | 0.0025 |
| Uranus | 36146-04-09 00:00 G | 14923213.28 | 14923213.50 | 14923213.73 | 0.0137 | 0.0058 |
| Jupiter | 36146-09-22 02:38 G | 14923379.39 | 14923379.61 | 14923379.84 | 0.0497 | 0.0142 |
| Uranus | 36147-04-13 18:57 G | 14923583.21 | 14923583.29 | 14923583.39 | 0.0137 | 0.0127 |
| Jupiter | 36147-10-23 07:41 G | 14923775.73 | 14923775.82 | 14923775.90 | 0.0496 | 0.0460 |
| Neptune | 36149-02-09 22:19 G | 14924251.34 | 14924251.43 | 14924251.57 | 0.0089 | 0.0081 |
| Neptune | 36150-02-12 17:31 G | 14924619.06 | 14924619.23 | 14924619.45 | 0.0089 | 0.0060 |
| Neptune | 36151-02-14 23:02 G | 14924986.26 | 14924986.46 | 14924986.71 | 0.0089 | 0.0045 |
| Neptune | 36152-02-17 18:29 G | 14925354.03 | 14925354.27 | 14925354.53 | 0.0090 | 0.0021 |
| Neptune | 36153-02-19 01:55 G | 14925721.34 | 14925721.58 | 14925721.84 | 0.0090 | 0.0006 |

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| Jupiter | 36153-04-08 21:21 G | 14925770.19 | 14925770.39 | 14925770.60 | 0.0530 | 0.0263 |
| Neptune | 36154-02-21 18:00 G | 14926089.00 | 14926089.25 | 14926089.52 | 0.0090 | 0.0018 |
| Neptune | 36155-02-24 05:02 G | 14926456.49 | 14926456.71 | 14926456.95 | 0.0090 | 0.0032 |
| Neptune | 36156-02-26 15:50 G | 14926823.97 | 14926824.16 | 14926824.39 | 0.0090 | 0.0055 |
| Saturn | 36156-09-05 13:55 G | 14927015.95 | 14927016.08 | 14927016.24 | 0.0259 | 0.0204 |
| Neptune | 36157-02-28 07:26 G | 14927191.67 | 14927191.81 | 14927191.99 | 0.0090 | 0.0069 |
| Saturn | 36157-09-16 22:19 G | 14927392.25 | 14927392.43 | 14927392.63 | 0.0260 | 0.0167 |
| Jupiter | 36158-09-26 07:55 G | 14927766.59 | 14927766.83 | 14927767.08 | 0.0496 | 0.0023 |
| Jupiter | 36164-03-08 13:41 G | 14929756.96 | 14929757.07 | 14929757.19 | 0.0527 | 0.0458 |
| Jupiter | 36165-04-13 15:07 G | 14930157.94 | 14930158.13 | 14930158.32 | 0.0530 | 0.0325 |
| Jupiter | 36170-09-30 23:17 G | 14932154.25 | 14932154.47 | 14932154.70 | 0.0496 | 0.0048 |
| Saturn | 36171-03-06 11:31 G | 14932310.85 | 14932310.98 | 14932311.14 | 0.0303 | 0.0247 |
| Jupiter | 36176-03-13 06:57 G | 14934144.61 | 14934144.79 | 14934144.99 | 0.0528 | 0.0310 |
| Jupiter | 36177-04-18 22:33 G | 14934546.32 | 14934546.44 | 14934546.58 | 0.0530 | 0.0432 |
| Jupiter | 36181-09-03 13:41 G | 14936145.01 | 14936145.07 | 14936145.14 | 0.0499 | 0.0475 |
| Jupiter | 36182-10-05 09:21 G | 14936541.65 | 14936541.89 | 14936542.13 | 0.0496 | 0.0102 |
| Uranus | 36183-09-29 12:57 G | 14936901.01 | 14936901.04 | 14936901.08 | 0.0143 | 0.0141 |
| Uranus | 36184-10-03 03:36 G | 14937270.43 | 14937270.65 | 14937270.89 | 0.0142 | 0.0054 |
| Uranus | 36185-10-08 07:12 G | 14937640.56 | 14937640.80 | 14937641.05 | 0.0142 | 0.0032 |
| Saturn | 36186-09-11 19:55 G | 14937979.09 | 14937979.33 | 14937979.58 | 0.0259 | 0.0004 |
| Uranus | 36186-10-12 19:26 G | 14938010.16 | 14938010.31 | 14938010.50 | 0.0141 | 0.0104 |
| Jupiter | 36188-03-18 14:38 G | 14938532.90 | 14938533.11 | 14938533.32 | 0.0529 | 0.0198 |
| Mars | 36189-01-28 13:26 G | 14938849.03 | 14938849.06 | 14938849.09 | 0.1733 | 0.1708 |
| Jupiter | 36193-09-08 08:09 G | 14940532.69 | 14940532.84 | 14940532.99 | 0.0498 | 0.0382 |
| Jupiter | 36194-10-09 17:45 G | 14940929.04 | 14940929.24 | 14940929.45 | 0.0495 | 0.0207 |
| Jupiter | 36200-03-24 19:12 G | 14942921.07 | 14942921.30 | 14942921.54 | 0.0529 | 0.0133 |
| Saturn | 36201-03-15 02:53 G | 14943276.38 | 14943276.62 | 14943276.87 | 0.0302 | 0.0064 |
| Jupiter | 36205-09-13 08:38 G | 14944919.69 | 14944919.86 | 14944920.03 | 0.0498 | 0.0336 |
| Jupiter | 36206-10-15 06:29 G | 14945316.60 | 14945316.77 | 14945316.95 | 0.0496 | 0.0330 |
| Mars | 36210-07-28 19:41 G | 14946699.20 | 14946699.32 | 14946699.44 | 0.1814 | 0.1483 |

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| Jupiter | 36212-03-29 18:29 G | 14947309.04 | 14947309.27 | 14947309.50 | 0.0530 | 0.0017 |
| Saturn | 36215-09-08 11:02 G | 14948566.78 | 14948566.96 | 14948567.16 | 0.0259 | 0.0169 |
| Saturn | 36216-09-18 12:14 G | 14948942.87 | 14948943.01 | 14948943.18 | 0.0260 | 0.0206 |
| Jupiter | 36217-09-18 03:36 G | 14949307.46 | 14949307.65 | 14949307.85 | 0.0497 | 0.0263 |
| Jupiter | 36218-10-19 10:19 G | 14949703.80 | 14949703.93 | 14949704.06 | 0.0496 | 0.0412 |
| Jupiter | 36224-04-04 01:41 G | 14951697.35 | 14951697.57 | 14951697.80 | 0.0530 | 0.0140 |
| Uranus | 36228-04-01 14:09 G | 14953155.92 | 14953156.09 | 14953156.28 | 0.0136 | 0.0092 |
| Uranus | 36229-04-06 06:57 G | 14953525.53 | 14953525.79 | 14953526.05 | 0.0136 | 0.0007 |
| Jupiter | 36229-09-22 10:33 G | 14953694.71 | 14953694.94 | 14953695.17 | 0.0497 | 0.0136 |
| Saturn | 36230-03-08 07:55 G | 14953861.66 | 14953861.83 | 14953862.00 | 0.0303 | 0.0206 |
| Uranus | 36230-04-10 12:43 G | 14953894.81 | 14953895.03 | 14953895.27 | 0.0137 | 0.0055 |
| Neptune | 36230-08-13 04:05 G | 14954019.63 | 14954019.67 | 14954019.73 | 0.0088 | 0.0086 |
| Jupiter | 36230-10-24 05:17 G | 14954091.64 | 14954091.72 | 14954091.81 | 0.0496 | 0.0457 |
| Uranus | 36231-04-15 07:12 G | 14954264.76 | 14954264.80 | 14954264.87 | 0.0137 | 0.0133 |
| Neptune | 36231-08-15 20:53 G | 14954387.22 | 14954387.37 | 14954387.54 | 0.0088 | 0.0067 |
| Neptune | 36232-08-17 00:43 G | 14954754.34 | 14954754.53 | 14954754.76 | 0.0088 | 0.0051 |
| Neptune | 36233-08-19 18:57 G | 14955122.05 | 14955122.29 | 14955122.54 | 0.0088 | 0.0031 |
| Neptune | 36234-08-21 23:17 G | 14955489.23 | 14955489.47 | 14955489.73 | 0.0088 | 0.0014 |
| Neptune | 36235-08-24 15:21 G | 14955856.87 | 14955857.14 | 14955857.41 | 0.0088 | 0.0005 |
| Jupiter | 36236-04-08 21:07 G | 14956085.17 | 14956085.38 | 14956085.59 | 0.0530 | 0.0252 |
| Neptune | 36236-08-25 23:31 G | 14956224.24 | 14956224.48 | 14956224.72 | 0.0088 | 0.0022 |
| Neptune | 36237-08-28 10:33 G | 14956591.72 | 14956591.94 | 14956592.19 | 0.0088 | 0.0040 |
| Neptune | 36238-08-30 23:31 G | 14956959.30 | 14956959.48 | 14956959.68 | 0.0088 | 0.0058 |
| Neptune | 36239-09-02 06:00 G | 14957326.63 | 14957326.75 | 14957326.88 | 0.0088 | 0.0076 |
| Jupiter | 36241-09-27 01:41 G | 14958082.34 | 14958082.57 | 14958082.80 | 0.0496 | 0.0024 |
| Saturn | 36245-09-13 18:29 G | 14959530.04 | 14959530.27 | 14959530.51 | 0.0259 | 0.0036 |
| Jupiter | 36247-03-09 16:05 G | 14960072.06 | 14960072.17 | 14960072.28 | 0.0528 | 0.0465 |
| Jupiter | 36248-04-14 06:29 G | 14960473.60 | 14960473.77 | 14960473.96 | 0.0530 | 0.0315 |
| Jupiter | 36253-10-01 12:29 G | 14962469.77 | 14962470.02 | 14962470.26 | 0.0496 | 0.0040 |
| Jupiter | 36259-03-15 01:41 G | 14964460.40 | 14964460.57 | 14964460.76 | 0.0528 | 0.0313 |

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| Saturn | 36260-03-15 15:21 G | 14964826.91 | 14964827.14 | 14964827.38 | 0.0302 | 0.0104 |
| Jupiter | 36260-04-19 10:48 G | 14964861.81 | 14964861.95 | 14964862.10 | 0.0530 | 0.0429 |
| Jupiter | 36264-09-04 03:07 G | 14966460.57 | 14966460.63 | 14966460.71 | 0.0499 | 0.0477 |
| Jupiter | 36265-10-05 17:02 G | 14966856.98 | 14966857.21 | 14966857.43 | 0.0496 | 0.0097 |
| Uranus | 36267-10-01 02:38 G | 14967582.50 | 14967582.61 | 14967582.74 | 0.0143 | 0.0126 |
| Uranus | 36268-10-04 17:17 G | 14967952.00 | 14967952.22 | 14967952.47 | 0.0142 | 0.0051 |
| Uranus | 36269-10-09 20:24 G | 14968322.11 | 14968322.35 | 14968322.61 | 0.0142 | 0.0031 |
| Uranus | 36270-10-14 09:07 G | 14968691.75 | 14968691.88 | 14968692.01 | 0.0142 | 0.0121 |
| Jupiter | 36271-03-20 04:19 G | 14968848.46 | 14968848.68 | 14968848.90 | 0.0529 | 0.0209 |
| Saturn | 36274-09-09 02:38 G | 14970117.39 | 14970117.61 | 14970117.83 | 0.0259 | 0.0131 |
| Saturn | 36275-09-20 04:48 G | 14970493.62 | 14970493.70 | 14970493.78 | 0.0260 | 0.0243 |
| Jupiter | 36276-09-08 08:24 G | 14970847.71 | 14970847.85 | 14970847.99 | 0.0499 | 0.0393 |
| Jupiter | 36277-10-10 09:07 G | 14971244.67 | 14971244.88 | 14971245.10 | 0.0496 | 0.0212 |
| Jupiter | 36283-03-25 00:14 G | 14973236.29 | 14973236.51 | 14973236.73 | 0.0529 | 0.0144 |
| Jupiter | 36288-09-13 05:17 G | 14975235.56 | 14975235.72 | 14975235.89 | 0.0498 | 0.0346 |
| Saturn | 36289-03-09 05:45 G | 14975412.54 | 14975412.74 | 14975412.94 | 0.0304 | 0.0166 |
| Jupiter | 36289-10-14 13:26 G | 14975631.89 | 14975632.06 | 14975632.24 | 0.0496 | 0.0335 |
| Pluto | 36292-04-28 15:21 G | 14976559.00 | 14976559.14 | 14976559.35 | 0.0066 | 0.0050 |
| Pluto | 36293-04-30 01:55 G | 14976925.38 | 14976925.58 | 14976925.82 | 0.0066 | 0.0032 |
| Jupiter | 36295-03-30 08:38 G | 14977624.62 | 14977624.86 | 14977625.09 | 0.0530 | 0.0024 |
| Jupiter | 36300-09-18 12:14 G | 14979622.81 | 14979623.01 | 14979623.22 | 0.0497 | 0.0262 |
| Jupiter | 36301-10-20 07:41 G | 14980019.69 | 14980019.82 | 14980019.95 | 0.0496 | 0.0407 |
| Saturn | 36304-09-15 16:48 G | 14981080.97 | 14981081.20 | 14981081.44 | 0.0259 | 0.0073 |
| Jupiter | 36307-04-05 04:19 G | 14982012.45 | 14982012.68 | 14982012.91 | 0.0530 | 0.0135 |
| Uranus | 36312-04-03 02:09 G | 14983837.40 | 14983837.59 | 14983837.81 | 0.0136 | 0.0074 |
| Jupiter | 36312-09-23 03:21 G | 14984010.42 | 14984010.64 | 14984010.85 | 0.0497 | 0.0132 |
| Uranus | 36313-04-07 18:14 G | 14984207.00 | 14984207.26 | 14984207.52 | 0.0136 | 0.0016 |
| Jupiter | 36313-10-24 11:31 G | 14984406.89 | 14984406.98 | 14984407.08 | 0.0496 | 0.0454 |
| Neptune | 36314-02-13 17:17 G | 14984519.08 | 14984519.22 | 14984519.41 | 0.0089 | 0.0068 |
| Uranus | 36314-04-12 01:12 G | 14984576.35 | 14984576.55 | 14984576.78 | 0.0137 | 0.0069 |

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| Neptune | 36315-02-16 11:17 G | 14984886.80 | 14984886.97 | 14984887.20 | 0.0089 | 0.0058 |
| Uranus | 36315-04-16 19:12 G | 14984946.27 | 14984946.30 | 14984946.34 | 0.0137 | 0.0136 |
| Neptune | 36316-02-18 19:41 G | 14985254.10 | 14985254.32 | 14985254.57 | 0.0090 | 0.0030 |
| Neptune | 36317-02-20 10:05 G | 14985621.67 | 14985621.92 | 14985622.19 | 0.0090 | 0.0020 |
| Neptune | 36318-02-22 23:02 G | 14985989.22 | 14985989.46 | 14985989.71 | 0.0090 | 0.0008 |
| Neptune | 36319-02-25 08:53 G | 14986356.62 | 14986356.87 | 14986357.14 | 0.0090 | 0.0019 |
| Saturn | 36319-03-18 09:07 G | 14986377.67 | 14986377.88 | 14986378.09 | 0.0302 | 0.0145 |
| Jupiter | 36319-04-10 15:21 G | 14986400.95 | 14986401.14 | 14986401.35 | 0.0530 | 0.0239 |
| Neptune | 36320-02-28 02:09 G | 14986724.40 | 14986724.59 | 14986724.82 | 0.0090 | 0.0047 |
| Neptune | 36321-03-01 08:53 G | 14987091.68 | 14987091.87 | 14987092.08 | 0.0090 | 0.0057 |
| Neptune | 36322-03-04 04:05 G | 14987459.61 | 14987459.67 | 14987459.77 | 0.0090 | 0.0085 |
| Jupiter | 36324-09-27 09:36 G | 14988397.65 | 14988397.90 | 14988398.14 | 0.0497 | 0.0032 |
| Jupiter | 36330-03-10 12:57 G | 14990387.93 | 14990388.04 | 14990388.15 | 0.0527 | 0.0460 |
| Jupiter | 36331-04-15 17:45 G | 14990789.05 | 14990789.24 | 14990789.44 | 0.0530 | 0.0307 |
| Saturn | 36333-09-10 18:14 G | 14991668.03 | 14991668.26 | 14991668.50 | 0.0259 | 0.0093 |
| Jupiter | 36336-10-01 18:14 G | 14992785.04 | 14992785.26 | 14992785.49 | 0.0496 | 0.0029 |
| Jupiter | 36342-03-15 09:21 G | 14994775.70 | 14994775.89 | 14994776.09 | 0.0528 | 0.0313 |
| Jupiter | 36343-04-20 15:50 G | 14995177.03 | 14995177.16 | 14995177.29 | 0.0530 | 0.0429 |
| Jupiter | 36347-09-05 08:24 G | 14996775.80 | 14996775.85 | 14996775.91 | 0.0500 | 0.0483 |
| Saturn | 36348-03-10 23:17 G | 14996963.24 | 14996963.47 | 14996963.70 | 0.0304 | 0.0120 |
| Jupiter | 36348-10-06 11:31 G | 14997172.75 | 14997172.98 | 14997173.21 | 0.0496 | 0.0096 |
| Uranus | 36351-10-02 17:31 G | 14998264.13 | 14998264.23 | 14998264.35 | 0.0143 | 0.0129 |
| Uranus | 36352-10-06 09:21 G | 14998633.65 | 14998633.89 | 14998634.13 | 0.0142 | 0.0040 |
| Uranus | 36353-10-11 11:45 G | 14999003.75 | 14999003.99 | 14999004.24 | 0.0142 | 0.0044 |
| Jupiter | 36354-03-20 07:12 G | 14999163.60 | 14999163.80 | 14999164.01 | 0.0528 | 0.0223 |
| Uranus | 36354-10-16 00:29 G | 14999373.40 | 14999373.52 | 14999373.68 | 0.0142 | 0.0117 |
| Jupiter | 36359-09-10 05:31 G | 15001163.60 | 15001163.73 | 15001163.87 | 0.0499 | 0.0405 |
| Jupiter | 36360-10-10 15:21 G | 15001559.93 | 15001560.14 | 15001560.35 | 0.0496 | 0.0214 |
| Saturn | 36362-09-06 08:53 G | 15002255.87 | 15002255.87 | 15002255.89 | 0.0259 | 0.0258 |
| Saturn | 36363-09-17 11:31 G | 15002631.75 | 15002631.98 | 15002632.21 | 0.0259 | 0.0112 |

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| Jupiter | 36366-03-25 15:07 G | 15003551.90 | 15003552.13 | 15003552.36 | 0.0529 | 0.0153 |
| Jupiter | 36371-09-14 12:00 G | 15005550.84 | 15005551.00 | 15005551.18 | 0.0498 | 0.0355 |
| Jupiter | 36372-10-15 09:07 G | 15005947.71 | 15005947.88 | 15005948.05 | 0.0496 | 0.0335 |
| Saturn | 36378-03-19 11:17 G | 15007928.79 | 15007928.97 | 15007929.15 | 0.0302 | 0.0195 |
| Jupiter | 36378-03-30 12:57 G | 15007939.81 | 15007940.04 | 15007940.27 | 0.0530 | 0.0023 |
| Pluto | 36380-11-01 06:00 G | 15008886.60 | 15008886.75 | 15008886.92 | 0.0078 | 0.0063 |
| Jupiter | 36383-09-18 22:19 G | 15009938.24 | 15009938.43 | 15009938.62 | 0.0497 | 0.0267 |
| Jupiter | 36384-10-19 08:53 G | 15010334.73 | 15010334.87 | 15010335.01 | 0.0496 | 0.0400 |
| Jupiter | 36390-04-04 22:48 G | 15012328.24 | 15012328.45 | 15012328.67 | 0.0530 | 0.0139 |
| Saturn | 36392-09-11 18:14 G | 15013219.03 | 15013219.26 | 15013219.50 | 0.0259 | 0.0052 |
| Mars | 36394-01-28 10:33 G | 15013722.77 | 15013722.94 | 15013723.12 | 0.1720 | 0.0427 |
| Neptune | 36395-08-15 21:36 G | 15014287.31 | 15014287.40 | 15014287.49 | 0.0088 | 0.0082 |
| Jupiter | 36395-09-23 09:07 G | 15014325.65 | 15014325.88 | 15014326.12 | 0.0497 | 0.0137 |
| Uranus | 36396-04-03 15:50 G | 15014518.96 | 15014519.16 | 15014519.35 | 0.0136 | 0.0082 |
| Neptune | 36396-08-17 14:53 G | 15014654.94 | 15014655.12 | 15014655.35 | 0.0088 | 0.0056 |
| Jupiter | 36396-10-23 23:31 G | 15014722.39 | 15014722.48 | 15014722.57 | 0.0497 | 0.0451 |
| Uranus | 36397-04-08 06:00 G | 15014888.49 | 15014888.75 | 15014889.02 | 0.0136 | 0.0004 |
| Neptune | 36397-08-19 20:53 G | 15015022.16 | 15015022.37 | 15015022.59 | 0.0088 | 0.0046 |
| Uranus | 36398-04-12 13:26 G | 15015257.86 | 15015258.06 | 15015258.30 | 0.0137 | 0.0064 |
| Neptune | 36398-08-22 11:17 G | 15015389.72 | 15015389.97 | 15015390.25 | 0.0088 | 0.0020 |
| Neptune | 36399-08-24 20:53 G | 15015757.12 | 15015757.37 | 15015757.62 | 0.0088 | 0.0010 |
| Neptune | 36400-08-26 05:45 G | 15016124.49 | 15016124.74 | 15016125.02 | 0.0088 | 0.0017 |
| Neptune | 36401-08-28 19:55 G | 15016492.11 | 15016492.33 | 15016492.59 | 0.0088 | 0.0027 |
| Jupiter | 36402-04-09 19:41 G | 15016716.10 | 15016716.32 | 15016716.54 | 0.0530 | 0.0226 |
| Neptune | 36402-08-31 01:41 G | 15016859.37 | 15016859.57 | 15016859.78 | 0.0088 | 0.0053 |
| Neptune | 36403-09-02 19:26 G | 15017227.13 | 15017227.31 | 15017227.49 | 0.0088 | 0.0062 |
| Saturn | 36407-03-12 17:02 G | 15018513.97 | 15018514.21 | 15018514.46 | 0.0303 | 0.0067 |
| Jupiter | 36407-09-27 18:57 G | 15018713.06 | 15018713.29 | 15018713.51 | 0.0497 | 0.0038 |
| Jupiter | 36413-03-09 14:53 G | 15020703.01 | 15020703.12 | 15020703.24 | 0.0527 | 0.0461 |
| Jupiter | 36414-04-14 20:09 G | 15021104.15 | 15021104.34 | 15021104.52 | 0.0530 | 0.0300 |

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| Jupiter | 36419-10-02 11:45 G | 15023100.75 | 15023100.99 | 15023101.23 | 0.0496 | 0.0014 |
| Saturn | 36421-09-07 06:00 G | 15023806.62 | 15023806.75 | 15023806.90 | 0.0259 | 0.0214 |
| Saturn | 36422-09-18 06:43 G | 15024182.59 | 15024182.78 | 15024182.99 | 0.0259 | 0.0156 |
| Jupiter | 36425-03-14 13:26 G | 15025090.89 | 15025091.06 | 15025091.24 | 0.0528 | 0.0320 |
| Jupiter | 36426-04-20 03:50 G | 15025492.52 | 15025492.66 | 15025492.80 | 0.0530 | 0.0428 |
| Jupiter | 36430-09-05 02:38 G | 15027091.58 | 15027091.61 | 15027091.67 | 0.0500 | 0.0488 |
| Jupiter | 36431-10-06 14:53 G | 15027487.89 | 15027488.12 | 15027488.35 | 0.0496 | 0.0091 |
| Uranus | 36435-10-03 08:09 G | 15028945.69 | 15028945.84 | 15028946.02 | 0.0143 | 0.0112 |
| Uranus | 36436-10-07 00:43 G | 15029315.29 | 15029315.53 | 15029315.77 | 0.0142 | 0.0037 |
| Jupiter | 36437-03-19 23:02 G | 15029479.25 | 15029479.46 | 15029479.67 | 0.0529 | 0.0231 |
| Saturn | 36437-03-20 13:55 G | 15029479.95 | 15029480.08 | 15029480.22 | 0.0302 | 0.0249 |
| Uranus | 36437-10-12 02:09 G | 15029685.35 | 15029685.59 | 15029685.85 | 0.0142 | 0.0046 |
| Uranus | 36438-10-16 15:21 G | 15030055.08 | 15030055.14 | 15030055.23 | 0.0142 | 0.0135 |
| Jupiter | 36442-09-09 04:33 G | 15031478.56 | 15031478.69 | 15031478.82 | 0.0499 | 0.0420 |
| Jupiter | 36443-10-11 04:05 G | 15031875.47 | 15031875.67 | 15031875.88 | 0.0496 | 0.0212 |
| Jupiter | 36449-03-24 18:29 G | 15033867.05 | 15033867.27 | 15033867.50 | 0.0529 | 0.0158 |
| Saturn | 36451-09-13 23:45 G | 15034770.24 | 15034770.49 | 15034770.73 | 0.0259 | 0.0007 |
| Jupiter | 36454-09-13 19:26 G | 15035866.16 | 15035866.31 | 15035866.45 | 0.0498 | 0.0372 |
| Jupiter | 36455-10-15 07:41 G | 15036262.64 | 15036262.82 | 15036263.00 | 0.0496 | 0.0326 |
| Jupiter | 36461-03-30 00:29 G | 15038255.29 | 15038255.52 | 15038255.74 | 0.0529 | 0.0024 |
| Saturn | 36466-03-13 21:50 G | 15040065.18 | 15040065.41 | 15040065.65 | 0.0303 | 0.0009 |
| Jupiter | 36466-09-18 07:26 G | 15040253.61 | 15040253.81 | 15040254.01 | 0.0498 | 0.0271 |
| Jupiter | 36467-10-19 23:02 G | 15040650.33 | 15040650.46 | 15040650.60 | 0.0496 | 0.0391 |
| Jupiter | 36473-04-03 20:53 G | 15042643.13 | 15042643.37 | 15042643.60 | 0.0529 | 0.0127 |
| Neptune | 36478-02-13 03:36 G | 15044419.57 | 15044419.65 | 15044419.76 | 0.0090 | 0.0083 |
| Jupiter | 36478-09-22 16:48 G | 15044640.99 | 15044641.20 | 15044641.42 | 0.0497 | 0.0143 |
| Neptune | 36479-02-15 13:26 G | 15044786.90 | 15044787.06 | 15044787.24 | 0.0090 | 0.0065 |
| Jupiter | 36479-10-24 08:53 G | 15045037.77 | 15045037.87 | 15045037.99 | 0.0496 | 0.0440 |
| Neptune | 36480-02-18 02:09 G | 15045154.38 | 15045154.59 | 15045154.84 | 0.0090 | 0.0046 |
| Uranus | 36480-04-04 02:24 G | 15045200.40 | 15045200.60 | 15045200.83 | 0.0136 | 0.0066 |

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| Saturn | 36480-09-08 04:19 G | 15045357.49 | 15045357.68 | 15045357.87 | 0.0259 | 0.0165 |
| Neptune | 36481-02-19 17:02 G | 15045521.97 | 15045522.21 | 15045522.45 | 0.0090 | 0.0027 |
| Uranus | 36481-04-08 15:50 G | 15045569.89 | 15045570.16 | 15045570.42 | 0.0136 | 0.0008 |
| Saturn | 36481-09-19 10:48 G | 15045733.80 | 15045733.95 | 15045734.10 | 0.0260 | 0.0203 |
| Neptune | 36482-02-22 01:12 G | 15045889.29 | 15045889.55 | 15045889.81 | 0.0090 | 0.0007 |
| Uranus | 36482-04-13 00:57 G | 15045939.35 | 15045939.54 | 15045939.75 | 0.0137 | 0.0078 |
| Neptune | 36483-02-24 19:26 G | 15046257.06 | 15046257.31 | 15046257.56 | 0.0090 | 0.0013 |
| Neptune | 36484-02-27 00:57 G | 15046624.31 | 15046624.54 | 15046624.79 | 0.0090 | 0.0032 |
| Neptune | 36485-02-28 20:24 G | 15046992.16 | 15046992.35 | 15046992.58 | 0.0090 | 0.0052 |
| Jupiter | 36485-04-08 22:48 G | 15047031.25 | 15047031.45 | 15047031.66 | 0.0530 | 0.0216 |
| Neptune | 36486-03-03 02:24 G | 15047359.46 | 15047359.60 | 15047359.78 | 0.0090 | 0.0069 |
| Neptune | 36487-03-05 19:55 G | 15047727.33 | 15047727.33 | 15047727.36 | 0.0090 | 0.0089 |
| Jupiter | 36490-09-27 08:53 G | 15049028.63 | 15049028.87 | 15049029.10 | 0.0497 | 0.0050 |
| Saturn | 36495-03-07 12:00 G | 15050650.90 | 15050651.00 | 15050651.11 | 0.0303 | 0.0275 |
| Jupiter | 36496-03-08 20:24 G | 15051018.25 | 15051018.35 | 15051018.45 | 0.0527 | 0.0466 |
| Jupiter | 36497-04-14 07:26 G | 15051419.61 | 15051419.81 | 15051420.01 | 0.0530 | 0.0292 |
| Jupiter | 36502-10-02 07:41 G | 15053415.58 | 15053415.82 | 15053416.05 | 0.0496 | 0.0010 |
| Jupiter | 36508-03-15 02:53 G | 15055406.43 | 15055406.62 | 15055406.81 | 0.0528 | 0.0323 |
| Jupiter | 36509-04-20 04:33 G | 15055807.56 | 15055807.69 | 15055807.82 | 0.0530 | 0.0432 |
| Saturn | 36510-09-16 02:53 G | 15056321.37 | 15056321.62 | 15056321.87 | 0.0259 | 0.0043 |
| Jupiter | 36513-09-04 22:19 G | 15057406.43 | 15057406.43 | 15057406.44 | 0.0499 | 0.0499 |
| Jupiter | 36514-10-07 00:43 G | 15057803.31 | 15057803.53 | 15057803.76 | 0.0496 | 0.0083 |
| Uranus | 36519-10-04 18:57 G | 15059627.15 | 15059627.29 | 15059627.45 | 0.0143 | 0.0118 |
| Jupiter | 36520-03-19 18:00 G | 15059794.05 | 15059794.25 | 15059794.46 | 0.0528 | 0.0246 |
| Uranus | 36520-10-08 12:57 G | 15059996.80 | 15059997.04 | 15059997.29 | 0.0143 | 0.0027 |
| Uranus | 36521-10-13 14:09 G | 15060366.86 | 15060367.09 | 15060367.34 | 0.0142 | 0.0055 |
| Uranus | 36522-10-18 04:48 G | 15060736.61 | 15060736.70 | 15060736.81 | 0.0142 | 0.0130 |
| Saturn | 36525-03-16 12:00 G | 15061616.77 | 15061617.00 | 15061617.23 | 0.0303 | 0.0061 |
| Jupiter | 36525-09-09 14:24 G | 15061794.00 | 15061794.10 | 15061794.21 | 0.0499 | 0.0441 |
| Jupiter | 36526-10-11 05:17 G | 15062190.51 | 15062190.72 | 15062190.94 | 0.0496 | 0.0205 |

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| Jupiter | 36532-03-25 00:43 G | 15064182.32 | 15064182.53 | 15064182.75 | 0.0529 | 0.0174 |
| Jupiter | 36537-09-14 02:24 G | 15066181.45 | 15066181.60 | 15066181.76 | 0.0498 | 0.0382 |
| Pluto | 36538-05-02 12:57 G | 15066411.89 | 15066412.04 | 15066412.23 | 0.0066 | 0.0050 |
| Jupiter | 36538-10-15 19:41 G | 15066578.15 | 15066578.32 | 15066578.49 | 0.0496 | 0.0318 |
| Pluto | 36539-05-04 09:21 G | 15066778.68 | 15066778.89 | 15066779.14 | 0.0066 | 0.0032 |
| Saturn | 36539-09-11 10:19 G | 15066908.72 | 15066908.93 | 15066909.15 | 0.0259 | 0.0116 |
| Saturn | 36540-09-21 21:21 G | 15067285.36 | 15067285.39 | 15067285.46 | 0.0260 | 0.0254 |
| Jupiter | 36544-03-29 19:26 G | 15068570.07 | 15068570.31 | 15068570.55 | 0.0529 | 0.0034 |
| Jupiter | 36549-09-18 11:17 G | 15070568.79 | 15070568.97 | 15070569.16 | 0.0498 | 0.0279 |
| Jupiter | 36550-10-20 04:19 G | 15070965.53 | 15070965.68 | 15070965.85 | 0.0496 | 0.0374 |
| Saturn | 36554-03-09 21:36 G | 15072202.22 | 15072202.40 | 15072202.60 | 0.0303 | 0.0202 |
| Jupiter | 36556-04-04 01:12 G | 15072958.33 | 15072958.55 | 15072958.77 | 0.0530 | 0.0119 |
| Neptune | 36560-08-17 16:05 G | 15074555.03 | 15074555.17 | 15074555.33 | 0.0088 | 0.0069 |
| Neptune | 36561-08-20 05:17 G | 15074922.52 | 15074922.72 | 15074922.94 | 0.0088 | 0.0055 |
| Jupiter | 36561-09-22 23:02 G | 15074956.24 | 15074956.46 | 15074956.69 | 0.0497 | 0.0150 |
| Neptune | 36562-08-22 16:33 G | 15075289.97 | 15075290.19 | 15075290.44 | 0.0088 | 0.0033 |
| Jupiter | 36562-10-24 06:29 G | 15075352.67 | 15075352.77 | 15075352.89 | 0.0496 | 0.0432 |
| Uranus | 36563-04-02 05:02 G | 15075512.68 | 15075512.71 | 15075512.79 | 0.0135 | 0.0133 |
| Neptune | 36563-08-25 00:57 G | 15075657.30 | 15075657.54 | 15075657.82 | 0.0088 | 0.0019 |
| Uranus | 36564-04-05 15:21 G | 15075881.94 | 15075882.14 | 15075882.36 | 0.0136 | 0.0073 |
| Neptune | 36564-08-26 17:02 G | 15076024.96 | 15076025.21 | 15076025.46 | 0.0088 | 0.0004 |
| Uranus | 36565-04-10 02:53 G | 15076251.36 | 15076251.62 | 15076251.89 | 0.0136 | 0.0011 |
| Neptune | 36565-08-28 21:21 G | 15076392.14 | 15076392.39 | 15076392.66 | 0.0088 | 0.0019 |
| Uranus | 36566-04-14 13:12 G | 15076620.84 | 15076621.05 | 15076621.26 | 0.0136 | 0.0071 |
| Neptune | 36566-08-31 15:21 G | 15076759.91 | 15076760.14 | 15076760.37 | 0.0088 | 0.0040 |
| Neptune | 36567-09-02 18:43 G | 15077127.11 | 15077127.28 | 15077127.50 | 0.0088 | 0.0055 |
| Jupiter | 36568-04-09 06:43 G | 15077346.56 | 15077346.78 | 15077347.01 | 0.0530 | 0.0204 |
| Neptune | 36568-09-04 11:02 G | 15077494.86 | 15077494.96 | 15077495.13 | 0.0088 | 0.0076 |
| Saturn | 36569-09-17 05:02 G | 15077872.49 | 15077872.71 | 15077872.96 | 0.0260 | 0.0096 |
| Jupiter | 36573-09-27 01:55 G | 15079343.35 | 15079343.58 | 15079343.81 | 0.0497 | 0.0065 |

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| Jupiter | 36579-03-10 00:29 G | 15081333.43 | 15081333.52 | 15081333.63 | 0.0527 | 0.0479 |
| Jupiter | 36580-04-13 23:31 G | 15081734.29 | 15081734.48 | 15081734.68 | 0.0530 | 0.0278 |
| Saturn | 36584-03-18 06:29 G | 15083168.56 | 15083168.77 | 15083169.00 | 0.0303 | 0.0138 |
| Jupiter | 36585-10-01 20:09 G | 15083731.11 | 15083731.34 | 15083731.58 | 0.0497 | 0.0018 |
| Jupiter | 36591-03-14 16:33 G | 15085721.03 | 15085721.19 | 15085721.37 | 0.0527 | 0.0347 |
| Jupiter | 36592-04-19 06:57 G | 15086122.66 | 15086122.79 | 15086122.93 | 0.0530 | 0.0422 |
| Jupiter | 36597-10-05 23:45 G | 15088118.25 | 15088118.49 | 15088118.73 | 0.0496 | 0.0072 |
| Saturn | 36598-09-12 22:33 G | 15088460.22 | 15088460.44 | 15088460.68 | 0.0259 | 0.0062 |
| Jupiter | 36603-03-20 22:05 G | 15090109.23 | 15090109.42 | 15090109.63 | 0.0528 | 0.0269 |
| Uranus | 36603-10-06 04:19 G | 15090308.52 | 15090308.68 | 15090308.88 | 0.0143 | 0.0103 |
| Uranus | 36604-10-09 23:45 G | 15090678.25 | 15090678.49 | 15090678.73 | 0.0143 | 0.0030 |
| Uranus | 36605-10-14 23:31 G | 15091048.25 | 15091048.48 | 15091048.73 | 0.0142 | 0.0056 |
| Jupiter | 36608-09-09 18:00 G | 15092109.15 | 15092109.25 | 15092109.35 | 0.0499 | 0.0452 |
| Jupiter | 36609-10-11 13:26 G | 15092505.86 | 15092506.06 | 15092506.27 | 0.0496 | 0.0201 |
| Saturn | 36613-03-12 15:07 G | 15093753.92 | 15093754.13 | 15093754.36 | 0.0303 | 0.0123 |
| Jupiter | 36615-03-25 18:29 G | 15094497.05 | 15094497.27 | 15094497.50 | 0.0529 | 0.0190 |
| Jupiter | 36620-09-14 00:29 G | 15096496.39 | 15096496.52 | 15096496.65 | 0.0498 | 0.0399 |
| Jupiter | 36621-10-15 18:00 G | 15096893.07 | 15096893.25 | 15096893.45 | 0.0496 | 0.0303 |
| Pluto | 36626-11-05 10:19 G | 15098739.81 | 15098739.93 | 15098740.10 | 0.0078 | 0.0063 |
| Jupiter | 36627-03-30 23:45 G | 15098885.27 | 15098885.49 | 15098885.72 | 0.0530 | 0.0045 |
| Saturn | 36627-09-09 09:36 G | 15099047.78 | 15099047.90 | 15099048.04 | 0.0260 | 0.0222 |
| Saturn | 36628-09-19 13:26 G | 15099423.86 | 15099424.06 | 15099424.25 | 0.0260 | 0.0151 |
| Jupiter | 36632-09-18 15:07 G | 15100883.94 | 15100884.13 | 15100884.33 | 0.0497 | 0.0288 |
| Jupiter | 36633-10-20 00:29 G | 15101280.37 | 15101280.52 | 15101280.68 | 0.0496 | 0.0362 |
| Jupiter | 36639-04-04 23:02 G | 15103273.23 | 15103273.46 | 15103273.70 | 0.0529 | 0.0098 |
| Neptune | 36643-02-16 17:31 G | 15104687.09 | 15104687.23 | 15104687.40 | 0.0090 | 0.0073 |
| Saturn | 36643-03-22 01:12 G | 15104720.38 | 15104720.55 | 15104720.73 | 0.0303 | 0.0220 |
| Neptune | 36644-02-19 09:07 G | 15105054.72 | 15105054.88 | 15105055.08 | 0.0090 | 0.0063 |
| Jupiter | 36644-09-22 18:43 G | 15105271.07 | 15105271.28 | 15105271.51 | 0.0497 | 0.0163 |
| Neptune | 36645-02-20 16:19 G | 15105421.95 | 15105422.18 | 15105422.43 | 0.0090 | 0.0034 |

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| Jupiter | 36645-10-24 16:19 G | 15105668.06 | 15105668.18 | 15105668.31 | 0.0496 | 0.0421 |
| Neptune | 36646-02-23 11:17 G | 15105789.73 | 15105789.97 | 15105790.23 | 0.0090 | 0.0024 |
| Neptune | 36647-02-25 17:02 G | 15106156.95 | 15106157.21 | 15106157.47 | 0.0090 | 0.0005 |
| Uranus | 36647-04-03 16:48 G | 15106194.17 | 15106194.20 | 15106194.24 | 0.0135 | 0.0134 |
| Neptune | 36648-02-28 12:00 G | 15106524.75 | 15106525.00 | 15106525.27 | 0.0090 | 0.0015 |
| Uranus | 36648-04-07 04:19 G | 15106563.46 | 15106563.68 | 15106563.91 | 0.0135 | 0.0056 |
| Neptune | 36649-03-01 18:57 G | 15106892.09 | 15106892.29 | 15106892.53 | 0.0090 | 0.0044 |
| Uranus | 36649-04-11 14:38 G | 15106932.85 | 15106933.11 | 15106933.37 | 0.0136 | 0.0003 |
| Neptune | 36650-03-04 11:31 G | 15107259.78 | 15107259.98 | 15107260.20 | 0.0090 | 0.0054 |
| Uranus | 36650-04-16 02:09 G | 15107302.42 | 15107302.59 | 15107302.79 | 0.0136 | 0.0089 |
| Neptune | 36651-03-06 22:33 G | 15107627.37 | 15107627.44 | 15107627.56 | 0.0090 | 0.0083 |
| Jupiter | 36651-04-09 18:43 G | 15107661.07 | 15107661.28 | 15107661.50 | 0.0530 | 0.0181 |
| Jupiter | 36656-09-27 12:57 G | 15109658.81 | 15109659.04 | 15109659.27 | 0.0497 | 0.0082 |
| Saturn | 36657-09-15 11:31 G | 15110011.73 | 15110011.98 | 15110012.23 | 0.0259 | 0.0004 |
| Jupiter | 36662-03-09 13:12 G | 15111648.00 | 15111648.05 | 15111648.12 | 0.0526 | 0.0506 |
| Jupiter | 36663-04-15 01:12 G | 15112049.35 | 15112049.55 | 15112049.76 | 0.0530 | 0.0259 |
| Jupiter | 36668-10-01 15:50 G | 15114045.92 | 15114046.16 | 15114046.40 | 0.0496 | 0.0025 |
| Saturn | 36672-03-14 17:31 G | 15115306.00 | 15115306.23 | 15115306.47 | 0.0303 | 0.0033 |
| Jupiter | 36674-03-14 20:38 G | 15116036.20 | 15116036.36 | 15116036.54 | 0.0528 | 0.0366 |
| Jupiter | 36675-04-19 21:50 G | 15116437.27 | 15116437.41 | 15116437.57 | 0.0530 | 0.0406 |
| Mars | 36678-01-31 16:19 G | 15117455.00 | 15117455.18 | 15117455.36 | 0.1713 | 0.0324 |
| Jupiter | 36680-10-06 03:21 G | 15118433.41 | 15118433.64 | 15118433.86 | 0.0496 | 0.0061 |
| Jupiter | 36686-03-19 14:38 G | 15120423.92 | 15120424.11 | 15120424.32 | 0.0529 | 0.0292 |
| Saturn | 36686-09-10 16:19 G | 15120599.00 | 15120599.18 | 15120599.38 | 0.0260 | 0.0163 |
| Saturn | 36687-09-22 02:24 G | 15120975.47 | 15120975.60 | 15120975.75 | 0.0260 | 0.0209 |
| Uranus | 36687-10-06 12:57 G | 15120989.89 | 15120990.04 | 15120990.21 | 0.0143 | 0.0112 |
| Uranus | 36688-10-10 10:19 G | 15121359.69 | 15121359.93 | 15121360.17 | 0.0143 | 0.0018 |
| Uranus | 36689-10-15 09:07 G | 15121729.66 | 15121729.88 | 15121730.13 | 0.0142 | 0.0060 |
| Uranus | 36690-10-20 02:24 G | 15122099.57 | 15122099.60 | 15122099.66 | 0.0142 | 0.0139 |
| Jupiter | 36691-09-09 14:53 G | 15122424.06 | 15122424.12 | 15122424.20 | 0.0499 | 0.0474 |

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| Jupiter | 36692-10-10 10:33 G | 15122820.72 | 15122820.94 | 15122821.17 | 0.0496 | 0.0190 |
| Jupiter | 36698-03-24 17:45 G | 15124812.04 | 15124812.24 | 15124812.45 | 0.0529 | 0.0217 |
| Saturn | 36701-03-09 15:21 G | 15125892.04 | 15125892.14 | 15125892.25 | 0.0303 | 0.0276 |
| Jupiter | 36703-09-15 05:17 G | 15126811.59 | 15126811.72 | 15126811.85 | 0.0499 | 0.0416 |
| Jupiter | 36704-10-15 18:14 G | 15127208.08 | 15127208.26 | 15127208.45 | 0.0496 | 0.0292 |
| Jupiter | 36710-03-30 16:33 G | 15129199.95 | 15129200.19 | 15129200.43 | 0.0529 | 0.0070 |
| Jupiter | 36715-09-19 09:50 G | 15131198.74 | 15131198.91 | 15131199.10 | 0.0498 | 0.0303 |
| Saturn | 36716-09-17 19:55 G | 15131563.08 | 15131563.33 | 15131563.58 | 0.0260 | 0.0055 |
| Jupiter | 36716-10-20 08:53 G | 15131595.71 | 15131595.87 | 15131596.05 | 0.0496 | 0.0346 |
| Jupiter | 36722-04-04 12:43 G | 15133587.81 | 15133588.03 | 15133588.25 | 0.0529 | 0.0074 |
| Neptune | 36724-08-18 23:17 G | 15134455.45 | 15134455.47 | 15134455.57 | 0.0088 | 0.0086 |
| Neptune | 36725-08-21 12:43 G | 15134822.87 | 15134823.03 | 15134823.23 | 0.0088 | 0.0061 |
| Neptune | 36726-08-23 19:12 G | 15135190.10 | 15135190.30 | 15135190.55 | 0.0088 | 0.0049 |
| Neptune | 36727-08-26 12:14 G | 15135557.77 | 15135558.01 | 15135558.26 | 0.0088 | 0.0024 |
| Jupiter | 36727-09-24 04:05 G | 15135586.46 | 15135586.67 | 15135586.89 | 0.0497 | 0.0173 |
| Neptune | 36728-08-27 16:33 G | 15135924.94 | 15135925.19 | 15135925.45 | 0.0088 | 0.0012 |
| Jupiter | 36728-10-24 10:33 G | 15135982.82 | 15135982.94 | 15135983.08 | 0.0496 | 0.0412 |
| Neptune | 36729-08-30 10:33 G | 15136292.68 | 15136292.94 | 15136293.20 | 0.0088 | 0.0013 |
| Neptune | 36730-09-01 14:53 G | 15136659.88 | 15136660.12 | 15136660.37 | 0.0088 | 0.0024 |
| Saturn | 36731-03-18 21:50 G | 15136858.18 | 15136858.41 | 15136858.65 | 0.0302 | 0.0061 |
| Uranus | 36731-04-05 07:12 G | 15136875.69 | 15136875.80 | 15136875.91 | 0.0135 | 0.0122 |
| Neptune | 36731-09-04 06:00 G | 15137027.55 | 15137027.75 | 15137027.98 | 0.0088 | 0.0050 |
| Uranus | 36732-04-08 19:26 G | 15137245.09 | 15137245.31 | 15137245.53 | 0.0135 | 0.0061 |
| Neptune | 36732-09-05 14:09 G | 15137394.94 | 15137395.09 | 15137395.29 | 0.0088 | 0.0062 |
| Uranus | 36733-04-13 04:19 G | 15137614.42 | 15137614.68 | 15137614.95 | 0.0136 | 0.0022 |
| Neptune | 36733-09-08 00:57 G | 15137762.53 | 15137762.54 | 15137762.62 | 0.0088 | 0.0087 |
| Jupiter | 36734-04-09 21:07 G | 15137976.16 | 15137976.38 | 15137976.61 | 0.0530 | 0.0155 |
| Uranus | 36734-04-17 17:02 G | 15137984.03 | 15137984.21 | 15137984.42 | 0.0136 | 0.0082 |
| Jupiter | 36739-09-28 05:17 G | 15139973.48 | 15139973.72 | 15139973.95 | 0.0496 | 0.0097 |
| Jupiter | 36745-03-09 18:00 G | 15141963.23 | 15141963.25 | 15141963.27 | 0.0527 | 0.0523 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 36745-09-13 04:48 G | 15142150.49 | 15142150.70 | 15142150.93 | 0.0260 | 0.0104 |
| Jupiter | 36746-04-14 16:33 G | 15142363.98 | 15142364.19 | 15142364.40 | 0.0530 | 0.0241 |
| Jupiter | 36751-10-02 19:55 G | 15144361.10 | 15144361.33 | 15144361.55 | 0.0496 | 0.0042 |
| Jupiter | 36757-03-14 09:21 G | 15146350.74 | 15146350.89 | 15146351.05 | 0.0527 | 0.0393 |
| Jupiter | 36758-04-19 22:05 G | 15146752.27 | 15146752.42 | 15146752.58 | 0.0530 | 0.0385 |
| Saturn | 36760-03-11 11:45 G | 15147443.80 | 15147443.99 | 15147444.19 | 0.0303 | 0.0184 |
| Jupiter | 36763-10-07 03:07 G | 15148748.39 | 15148748.63 | 15148748.87 | 0.0496 | 0.0050 |
| Jupiter | 36769-03-19 14:09 G | 15150738.92 | 15150739.09 | 15150739.28 | 0.0528 | 0.0323 |
| Jupiter | 36770-04-24 18:57 G | 15151140.26 | 15151140.29 | 15151140.34 | 0.0530 | 0.0521 |
| Uranus | 36771-10-08 01:55 G | 15151671.39 | 15151671.58 | 15151671.79 | 0.0143 | 0.0093 |
| Uranus | 36772-10-12 00:14 G | 15152041.27 | 15152041.51 | 15152041.75 | 0.0143 | 0.0022 |
| Uranus | 36773-10-16 21:21 G | 15152411.18 | 15152411.39 | 15152411.64 | 0.0142 | 0.0068 |
| Saturn | 36774-09-08 23:17 G | 15152738.46 | 15152738.47 | 15152738.50 | 0.0259 | 0.0258 |
| Jupiter | 36774-09-09 18:57 G | 15152739.27 | 15152739.29 | 15152739.33 | 0.0500 | 0.0496 |
| Saturn | 36775-09-20 00:57 G | 15153114.32 | 15153114.54 | 15153114.77 | 0.0260 | 0.0115 |
| Jupiter | 36775-10-11 11:17 G | 15153135.76 | 15153135.97 | 15153136.18 | 0.0496 | 0.0182 |
| Jupiter | 36781-03-24 09:21 G | 15155126.67 | 15155126.89 | 15155127.10 | 0.0528 | 0.0239 |
| Pluto | 36784-05-05 17:31 G | 15156265.10 | 15156265.23 | 15156265.39 | 0.0066 | 0.0054 |
| Pluto | 36785-05-07 06:00 G | 15156631.54 | 15156631.75 | 15156632.02 | 0.0066 | 0.0031 |
| Jupiter | 36786-09-14 00:43 G | 15157126.43 | 15157126.53 | 15157126.65 | 0.0499 | 0.0434 |
| Jupiter | 36787-10-16 01:26 G | 15157523.37 | 15157523.56 | 15157523.76 | 0.0496 | 0.0280 |
| Saturn | 36790-03-20 21:21 G | 15158410.18 | 15158410.39 | 15158410.61 | 0.0302 | 0.0152 |
| Jupiter | 36793-03-29 09:36 G | 15159514.68 | 15159514.90 | 15159515.13 | 0.0529 | 0.0092 |
| Jupiter | 36798-09-18 18:29 G | 15161514.10 | 15161514.27 | 15161514.45 | 0.0498 | 0.0315 |
| Jupiter | 36799-10-20 01:55 G | 15161910.41 | 15161910.58 | 15161910.75 | 0.0496 | 0.0334 |
| Saturn | 36804-09-14 18:00 G | 15163702.02 | 15163702.25 | 15163702.49 | 0.0260 | 0.0046 |
| Jupiter | 36805-04-03 16:33 G | 15163902.96 | 15163903.19 | 15163903.43 | 0.0530 | 0.0056 |
| Neptune | 36807-02-17 01:26 G | 15164587.52 | 15164587.56 | 15164587.64 | 0.0090 | 0.0087 |
| Neptune | 36808-02-19 07:26 G | 15164954.68 | 15164954.81 | 15164954.98 | 0.0090 | 0.0072 |
| Neptune | 36809-02-21 02:38 G | 15165322.41 | 15165322.61 | 15165322.84 | 0.0090 | 0.0049 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 36810-02-23 08:24 G | 15165689.63 | 15165689.85 | 15165690.10 | 0.0090 | 0.0034 |
| Jupiter | 36810-09-22 21:21 G | 15165901.18 | 15165901.39 | 15165901.62 | 0.0497 | 0.0192 |
| Neptune | 36811-02-26 02:53 G | 15166057.36 | 15166057.62 | 15166057.88 | 0.0090 | 0.0011 |
| Jupiter | 36811-10-24 18:00 G | 15166298.12 | 15166298.25 | 15166298.39 | 0.0496 | 0.0401 |
| Neptune | 36812-02-28 10:48 G | 15166424.71 | 15166424.95 | 15166425.21 | 0.0090 | 0.0007 |
| Neptune | 36813-03-02 00:43 G | 15166792.29 | 15166792.53 | 15166792.79 | 0.0090 | 0.0029 |
| Neptune | 36814-03-04 13:26 G | 15167159.87 | 15167160.06 | 15167160.29 | 0.0090 | 0.0047 |
| Neptune | 36815-03-06 23:17 G | 15167527.32 | 15167527.47 | 15167527.66 | 0.0090 | 0.0068 |
| Uranus | 36815-04-05 19:55 G | 15167557.23 | 15167557.33 | 15167557.46 | 0.0135 | 0.0120 |
| Neptune | 36816-03-08 17:02 G | 15167895.15 | 15167895.21 | 15167895.31 | 0.0090 | 0.0085 |
| Uranus | 36816-04-09 10:19 G | 15167926.70 | 15167926.93 | 15167927.16 | 0.0135 | 0.0044 |
| Jupiter | 36817-04-08 09:21 G | 15168290.67 | 15168290.89 | 15168291.12 | 0.0530 | 0.0130 |
| Uranus | 36817-04-13 18:14 G | 15168296.01 | 15168296.26 | 15168296.53 | 0.0136 | 0.0016 |
| Uranus | 36818-04-18 08:38 G | 15168665.71 | 15168665.86 | 15168666.03 | 0.0136 | 0.0102 |
| Saturn | 36819-03-14 10:05 G | 15168995.70 | 15168995.92 | 15168996.15 | 0.0303 | 0.0100 |
| Jupiter | 36822-09-27 12:00 G | 15170288.79 | 15170289.00 | 15170289.23 | 0.0497 | 0.0119 |
| Jupiter | 36829-04-13 17:31 G | 15172679.02 | 15172679.23 | 15172679.44 | 0.0530 | 0.0218 |
| Saturn | 36833-09-10 02:53 G | 15174289.47 | 15174289.62 | 15174289.79 | 0.0259 | 0.0201 |
| Saturn | 36834-09-21 09:07 G | 15174665.70 | 15174665.88 | 15174666.07 | 0.0259 | 0.0170 |
| Jupiter | 36834-10-01 19:55 G | 15174676.09 | 15174676.33 | 15174676.58 | 0.0497 | 0.0061 |
| Jupiter | 36840-03-13 11:17 G | 15176665.83 | 15176665.97 | 15176666.11 | 0.0527 | 0.0415 |
| Jupiter | 36841-04-18 11:45 G | 15177066.82 | 15177066.99 | 15177067.17 | 0.0530 | 0.0362 |
| Jupiter | 36846-10-06 05:02 G | 15179063.49 | 15179063.71 | 15179063.94 | 0.0496 | 0.0042 |
| Saturn | 36849-03-22 13:12 G | 15179961.90 | 15179962.05 | 15179962.21 | 0.0302 | 0.0236 |
| Jupiter | 36852-03-18 06:57 G | 15181053.61 | 15181053.79 | 15181053.97 | 0.0528 | 0.0341 |
| Jupiter | 36853-04-23 15:50 G | 15181455.10 | 15181455.16 | 15181455.23 | 0.0530 | 0.0507 |
| Uranus | 36855-10-08 15:07 G | 15182352.96 | 15182353.13 | 15182353.33 | 0.0143 | 0.0101 |
| Uranus | 36856-10-12 15:07 G | 15182722.89 | 15182723.13 | 15182723.38 | 0.0143 | 0.0005 |
| Uranus | 36857-10-17 11:31 G | 15183092.77 | 15183092.98 | 15183093.23 | 0.0142 | 0.0071 |
| Jupiter | 36858-10-10 18:29 G | 15183451.04 | 15183451.27 | 15183451.49 | 0.0496 | 0.0171 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 36863-09-17 00:29 G | 15185253.27 | 15185253.52 | 15185253.77 | 0.0259 | 0.0008 |
| Jupiter | 36864-03-23 08:38 G | 15185441.67 | 15185441.86 | 15185442.06 | 0.0529 | 0.0259 |
| Jupiter | 36869-09-13 11:17 G | 15187441.87 | 15187441.97 | 15187442.07 | 0.0499 | 0.0450 |
| Jupiter | 36870-10-14 21:21 G | 15187838.20 | 15187838.39 | 15187838.58 | 0.0496 | 0.0268 |
| Pluto | 36872-11-07 18:29 G | 15188593.14 | 15188593.27 | 15188593.44 | 0.0078 | 0.0063 |
| Jupiter | 36876-03-28 12:43 G | 15189829.80 | 15189830.03 | 15189830.27 | 0.0529 | 0.0108 |
| Saturn | 36878-03-16 06:43 G | 15190547.55 | 15190547.78 | 15190548.02 | 0.0303 | 0.0021 |
| Jupiter | 36881-09-17 12:29 G | 15191828.85 | 15191829.02 | 15191829.21 | 0.0499 | 0.0335 |
| Jupiter | 36882-10-19 13:26 G | 15192225.88 | 15192226.06 | 15192226.24 | 0.0496 | 0.0317 |
| Jupiter | 36888-04-02 07:26 G | 15194217.58 | 15194217.81 | 15194218.05 | 0.0529 | 0.0035 |
| Neptune | 36889-08-20 13:26 G | 15194722.92 | 15194723.06 | 15194723.22 | 0.0088 | 0.0071 |
| Neptune | 36890-08-23 06:43 G | 15195090.62 | 15195090.78 | 15195090.99 | 0.0088 | 0.0061 |
| Neptune | 36891-08-25 11:17 G | 15195457.74 | 15195457.97 | 15195458.21 | 0.0088 | 0.0035 |
| Neptune | 36892-08-27 04:48 G | 15195825.46 | 15195825.70 | 15195825.97 | 0.0088 | 0.0024 |
| Saturn | 36892-09-11 07:12 G | 15195840.61 | 15195840.80 | 15195841.01 | 0.0259 | 0.0152 |
| Neptune | 36893-08-29 10:48 G | 15196192.71 | 15196192.95 | 15196193.21 | 0.0088 | 0.0003 |
| Jupiter | 36893-09-22 06:00 G | 15196216.54 | 15196216.75 | 15196216.96 | 0.0498 | 0.0210 |
| Saturn | 36893-09-22 18:29 G | 15196217.15 | 15196217.27 | 15196217.41 | 0.0259 | 0.0219 |
| Neptune | 36894-09-01 01:12 G | 15196560.29 | 15196560.55 | 15196560.82 | 0.0088 | 0.0014 |
| Jupiter | 36894-10-23 16:48 G | 15196613.06 | 15196613.20 | 15196613.35 | 0.0496 | 0.0391 |
| Neptune | 36895-09-03 10:19 G | 15196927.73 | 15196927.93 | 15196928.18 | 0.0088 | 0.0040 |
| Neptune | 36896-09-04 19:26 G | 15197295.11 | 15197295.31 | 15197295.55 | 0.0088 | 0.0051 |
| Neptune | 36897-09-07 09:50 G | 15197662.81 | 15197662.91 | 15197663.06 | 0.0088 | 0.0076 |
| Neptune | 36898-09-09 15:07 G | 15198030.12 | 15198030.13 | 15198030.17 | 0.0088 | 0.0087 |
| Uranus | 36899-04-06 11:02 G | 15198238.83 | 15198238.96 | 15198239.13 | 0.0135 | 0.0110 |
| Jupiter | 36900-04-08 13:55 G | 15198605.86 | 15198606.08 | 15198606.31 | 0.0529 | 0.0110 |
| Uranus | 36900-04-11 01:41 G | 15198608.35 | 15198608.57 | 15198608.82 | 0.0136 | 0.0048 |
| Uranus | 36901-04-15 08:38 G | 15198977.61 | 15198977.86 | 15198978.12 | 0.0136 | 0.0035 |
| Uranus | 36902-04-19 23:45 G | 15199347.32 | 15199347.49 | 15199347.68 | 0.0136 | 0.0095 |
| Jupiter | 36905-09-27 14:53 G | 15200603.88 | 15200604.12 | 15200604.35 | 0.0497 | 0.0135 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 36907-03-10 18:43 G | 15201133.19 | 15201133.28 | 15201133.38 | 0.0303 | 0.0280 |
| Jupiter | 36912-04-13 09:50 G | 15202993.70 | 15202993.91 | 15202994.14 | 0.0530 | 0.0202 |
| Jupiter | 36917-10-02 00:14 G | 15204991.29 | 15204991.51 | 15204991.73 | 0.0497 | 0.0078 |
| Saturn | 36922-09-18 23:45 G | 15206804.24 | 15206804.49 | 15206804.74 | 0.0259 | 0.0056 |
| Jupiter | 36923-03-14 07:55 G | 15206980.70 | 15206980.83 | 15206980.97 | 0.0527 | 0.0431 |
| Jupiter | 36924-04-18 16:05 G | 15207382.01 | 15207382.17 | 15207382.33 | 0.0530 | 0.0357 |
| Jupiter | 36929-10-06 15:07 G | 15209378.89 | 15209379.13 | 15209379.37 | 0.0496 | 0.0033 |
| Jupiter | 36935-03-19 11:02 G | 15211368.80 | 15211368.96 | 15211369.12 | 0.0527 | 0.0364 |
| Jupiter | 36936-04-23 20:09 G | 15211770.25 | 15211770.34 | 15211770.44 | 0.0530 | 0.0487 |
| Saturn | 36937-03-18 19:41 G | 15212099.08 | 15212099.32 | 15212099.56 | 0.0303 | 0.0049 |
| Uranus | 36939-10-10 08:09 G | 15213034.63 | 15213034.84 | 15213035.07 | 0.0143 | 0.0078 |
| Uranus | 36940-10-14 08:53 G | 15213404.62 | 15213404.87 | 15213405.11 | 0.0143 | 0.0008 |
| Jupiter | 36941-10-10 16:48 G | 15213765.98 | 15213766.20 | 15213766.42 | 0.0497 | 0.0158 |
| Uranus | 36941-10-19 03:36 G | 15213774.46 | 15213774.65 | 15213774.88 | 0.0142 | 0.0084 |
| Jupiter | 36947-03-24 14:38 G | 15215756.90 | 15215757.11 | 15215757.31 | 0.0528 | 0.0271 |
| Saturn | 36951-09-14 13:12 G | 15217391.84 | 15217392.05 | 15217392.27 | 0.0259 | 0.0104 |
| Jupiter | 36952-09-13 06:43 G | 15217756.71 | 15217756.78 | 15217756.87 | 0.0500 | 0.0467 |
| Jupiter | 36953-10-15 10:48 G | 15218153.75 | 15218153.95 | 15218154.15 | 0.0496 | 0.0253 |
| Jupiter | 36959-03-29 07:12 G | 15220144.57 | 15220144.80 | 15220145.02 | 0.0528 | 0.0119 |
| Mars | 36962-02-03 04:33 G | 15221186.50 | 15221186.69 | 15221186.87 | 0.1706 | 0.0757 |
| Jupiter | 36964-09-18 01:55 G | 15222144.42 | 15222144.58 | 15222144.75 | 0.0499 | 0.0342 |
| Jupiter | 36965-10-19 14:24 G | 15222540.92 | 15222541.10 | 15222541.30 | 0.0496 | 0.0305 |
| Saturn | 36966-03-12 01:26 G | 15222684.40 | 15222684.56 | 15222684.73 | 0.0304 | 0.0216 |
| Jupiter | 36971-04-03 15:50 G | 15224532.93 | 15224533.16 | 15224533.39 | 0.0529 | 0.0020 |
| Neptune | 36972-02-19 17:45 G | 15224855.13 | 15224855.24 | 15224855.37 | 0.0090 | 0.0079 |
| Neptune | 36973-02-21 00:00 G | 15225222.34 | 15225222.50 | 15225222.67 | 0.0090 | 0.0067 |
| Neptune | 36974-02-23 16:48 G | 15225589.97 | 15225590.20 | 15225590.44 | 0.0090 | 0.0040 |
| Neptune | 36975-02-26 02:38 G | 15225957.39 | 15225957.61 | 15225957.86 | 0.0090 | 0.0028 |
| Neptune | 36976-02-28 15:21 G | 15226324.88 | 15226325.14 | 15226325.41 | 0.0090 | 0.0001 |
| Jupiter | 36976-09-22 11:17 G | 15226531.75 | 15226531.97 | 15226532.19 | 0.0498 | 0.0221 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 36977-03-02 06:14 G | 15226692.51 | 15226692.76 | 15226693.01 | 0.0090 | 0.0012 |
| Jupiter | 36977-10-24 05:02 G | 15226928.57 | 15226928.71 | 15226928.85 | 0.0496 | 0.0387 |
| Neptune | 36978-03-04 13:55 G | 15227059.85 | 15227060.08 | 15227060.32 | 0.0090 | 0.0039 |
| Neptune | 36979-03-07 07:55 G | 15227427.65 | 15227427.83 | 15227428.06 | 0.0090 | 0.0051 |
| Neptune | 36980-03-08 13:12 G | 15227794.96 | 15227795.05 | 15227795.20 | 0.0090 | 0.0079 |
| Neptune | 36981-03-11 09:07 G | 15228162.88 | 15228162.88 | 15228162.91 | 0.0090 | 0.0090 |
| Saturn | 36981-09-19 22:05 G | 15228355.20 | 15228355.42 | 15228355.66 | 0.0259 | 0.0101 |
| Uranus | 36983-04-07 23:45 G | 15228920.35 | 15228920.49 | 15228920.67 | 0.0135 | 0.0107 |
| Jupiter | 36983-04-08 11:45 G | 15228920.75 | 15228920.99 | 15228921.22 | 0.0530 | 0.0097 |
| Uranus | 36984-04-11 15:50 G | 15229289.93 | 15229290.16 | 15229290.41 | 0.0135 | 0.0032 |
| Uranus | 36985-04-15 22:05 G | 15229659.16 | 15229659.42 | 15229659.67 | 0.0136 | 0.0028 |
| Uranus | 36986-04-20 13:41 G | 15230028.96 | 15230029.07 | 15230029.23 | 0.0136 | 0.0115 |
| Jupiter | 36988-09-26 22:05 G | 15230919.20 | 15230919.42 | 15230919.63 | 0.0497 | 0.0155 |
| Jupiter | 36995-04-13 18:29 G | 15233309.07 | 15233309.27 | 15233309.48 | 0.0529 | 0.0193 |
| Saturn | 36996-03-19 21:50 G | 15233650.18 | 15233650.41 | 15233650.65 | 0.0303 | 0.0110 |
| Jupiter | 37000-10-02 10:19 G | 15235306.70 | 15235306.93 | 15235307.17 | 0.0497 | 0.0093 |

38TH MILLENNIUM CE

This is a list of transits of Moon in the 38th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Jupiter | 37006-03-14 18:14 G | 15237296.15 | 15237296.26 | 15237296.38 | 0.0526 | 0.0446 | | |
| Jupiter | 37007-04-19 22:19 G | 15237697.25 | 15237697.43 | 15237697.61 | 0.0529 | 0.0352 | | |
| Saturn | 37010-09-16 16:05 G | 15238942.93 | 15238943.17 | 15238943.41 | 0.0258 | 0.0059 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 37012-10-06 15:21 G | 15239693.91 | 15239694.14 | 15239694.37 | 0.0497 | 0.0021 |
| Jupiter | 37018-03-19 17:02 G | 15241684.05 | 15241684.21 | 15241684.38 | 0.0527 | 0.0378 |
| Jupiter | 37019-04-24 17:02 G | 15242085.12 | 15242085.21 | 15242085.31 | 0.0529 | 0.0480 |
| Uranus | 37023-10-11 21:07 G | 15243716.19 | 15243716.38 | 15243716.60 | 0.0143 | 0.0087 |
| Jupiter | 37024-10-11 10:19 G | 15244081.71 | 15244081.93 | 15244082.15 | 0.0497 | 0.0157 |
| Uranus | 37024-10-15 23:17 G | 15244086.23 | 15244086.47 | 15244086.72 | 0.0143 | 0.0011 |
| Saturn | 37025-03-14 07:26 G | 15244235.61 | 15244235.81 | 15244236.01 | 0.0304 | 0.0159 |
| Uranus | 37025-10-20 18:00 G | 15244456.05 | 15244456.25 | 15244456.47 | 0.0142 | 0.0085 |
| Jupiter | 37030-03-24 12:29 G | 15246071.83 | 15246072.02 | 15246072.21 | 0.0528 | 0.0284 |
| Pluto | 37030-05-09 20:38 G | 15246118.32 | 15246118.36 | 15246118.44 | 0.0065 | 0.0064 |
| Pluto | 37031-05-11 04:19 G | 15246484.45 | 15246484.68 | 15246484.93 | 0.0066 | 0.0023 |
| Jupiter | 37035-09-14 23:45 G | 15248072.43 | 15248072.49 | 15248072.56 | 0.0500 | 0.0474 |
| Jupiter | 37036-10-15 14:24 G | 15248468.89 | 15248469.10 | 15248469.31 | 0.0496 | 0.0240 |
| Saturn | 37039-09-11 15:21 G | 15249530.03 | 15249530.14 | 15249530.27 | 0.0258 | 0.0224 |
| Saturn | 37040-09-21 23:17 G | 15249906.28 | 15249906.47 | 15249906.68 | 0.0259 | 0.0141 |
| Jupiter | 37042-03-29 21:21 G | 15250460.16 | 15250460.39 | 15250460.62 | 0.0529 | 0.0123 |
| Jupiter | 37047-09-19 09:21 G | 15252459.72 | 15252459.89 | 15252460.07 | 0.0499 | 0.0343 |
| Jupiter | 37048-10-20 05:45 G | 15252856.56 | 15252856.74 | 15252856.92 | 0.0496 | 0.0294 |
| Jupiter | 37054-04-03 17:45 G | 15254848.00 | 15254848.24 | 15254848.47 | 0.0529 | 0.0012 |
| Neptune | 37054-08-24 06:14 G | 15254990.61 | 15254990.76 | 15254990.93 | 0.0088 | 0.0067 |
| Saturn | 37055-03-22 17:17 G | 15255201.01 | 15255201.22 | 15255201.43 | 0.0303 | 0.0163 |
| Neptune | 37055-08-26 22:48 G | 15255358.25 | 15255358.45 | 15255358.68 | 0.0088 | 0.0052 |
| Neptune | 37056-08-28 05:31 G | 15255725.50 | 15255725.73 | 15255725.98 | 0.0088 | 0.0029 |
| Neptune | 37057-08-30 18:14 G | 15256093.00 | 15256093.26 | 15256093.53 | 0.0088 | 0.0014 |
| Neptune | 37058-09-02 05:45 G | 15256460.50 | 15256460.74 | 15256461.00 | 0.0088 | 0.0009 |
| Neptune | 37059-09-04 13:55 G | 15256827.83 | 15256828.08 | 15256828.35 | 0.0088 | 0.0023 |
| Jupiter | 37059-09-23 17:02 G | 15256847.01 | 15256847.21 | 15256847.41 | 0.0498 | 0.0235 |
| Neptune | 37060-09-06 05:45 G | 15257195.55 | 15257195.74 | 15257195.98 | 0.0088 | 0.0046 |
| Jupiter | 37060-10-24 11:31 G | 15257243.83 | 15257243.98 | 15257244.14 | 0.0497 | 0.0381 |
| Neptune | 37061-09-08 10:05 G | 15257562.75 | 15257562.92 | 15257563.13 | 0.0088 | 0.0060 |

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| Neptune | 37062-09-11 03:36 G | 15257930.61 | 15257930.65 | 15257930.76 | 0.0088 | 0.0084 |
| Jupiter | 37066-04-09 01:26 G | 15259236.34 | 15259236.56 | 15259236.78 | 0.0529 | 0.0084 |
| Uranus | 37067-04-09 13:12 G | 15259601.90 | 15259602.05 | 15259602.24 | 0.0135 | 0.0100 |
| Uranus | 37068-04-13 05:45 G | 15259971.50 | 15259971.74 | 15259971.98 | 0.0135 | 0.0035 |
| Uranus | 37069-04-17 10:19 G | 15260340.69 | 15260340.93 | 15260341.18 | 0.0136 | 0.0046 |
| Saturn | 37069-09-17 10:33 G | 15260493.69 | 15260493.94 | 15260494.20 | 0.0258 | 0.0020 |
| Uranus | 37070-04-22 02:38 G | 15260710.47 | 15260710.61 | 15260710.78 | 0.0136 | 0.0106 |
| Jupiter | 37071-09-28 09:36 G | 15261234.67 | 15261234.90 | 15261235.12 | 0.0498 | 0.0171 |
| Jupiter | 37078-04-14 00:57 G | 15263624.31 | 15263624.54 | 15263624.77 | 0.0529 | 0.0187 |
| Jupiter | 37083-10-02 15:36 G | 15265621.93 | 15265622.15 | 15265622.38 | 0.0498 | 0.0099 |
| Saturn | 37084-03-15 08:53 G | 15265786.64 | 15265786.87 | 15265787.10 | 0.0304 | 0.0109 |
| Jupiter | 37089-03-14 00:43 G | 15267611.42 | 15267611.53 | 15267611.65 | 0.0526 | 0.0458 |
| Jupiter | 37090-04-18 22:33 G | 15268012.28 | 15268012.44 | 15268012.62 | 0.0530 | 0.0350 |
| Jupiter | 37095-10-07 11:31 G | 15270009.74 | 15270009.98 | 15270010.21 | 0.0497 | 0.0023 |
| Saturn | 37098-09-12 15:21 G | 15271080.98 | 15271081.14 | 15271081.31 | 0.0258 | 0.0185 |
| Saturn | 37099-09-23 23:45 G | 15271457.33 | 15271457.49 | 15271457.68 | 0.0259 | 0.0178 |
| Jupiter | 37101-03-19 21:07 G | 15271999.23 | 15271999.38 | 15271999.53 | 0.0527 | 0.0398 |
| Jupiter | 37102-04-25 09:50 G | 15272400.81 | 15272400.91 | 15272401.02 | 0.0530 | 0.0473 |
| Jupiter | 37107-10-12 15:50 G | 15274396.94 | 15274397.16 | 15274397.39 | 0.0496 | 0.0154 |
| Uranus | 37107-10-13 09:36 G | 15274397.68 | 15274397.90 | 15274398.14 | 0.0143 | 0.0067 |
| Uranus | 37108-10-17 12:43 G | 15274767.79 | 15274768.03 | 15274768.28 | 0.0143 | 0.0004 |
| Uranus | 37109-10-22 06:00 G | 15275137.56 | 15275137.75 | 15275137.95 | 0.0142 | 0.0097 |
| Jupiter | 37113-03-25 07:12 G | 15276387.61 | 15276387.80 | 15276388.00 | 0.0527 | 0.0288 |
| Saturn | 37114-03-24 13:55 G | 15276751.92 | 15276752.08 | 15276752.26 | 0.0304 | 0.0207 |
| Jupiter | 37118-09-15 03:21 G | 15278387.57 | 15278387.64 | 15278387.71 | 0.0500 | 0.0478 |
| Pluto | 37118-11-12 11:17 G | 15278445.77 | 15278445.97 | 15278446.21 | 0.0078 | 0.0046 |
| Jupiter | 37119-10-17 04:05 G | 15278784.47 | 15278784.67 | 15278784.87 | 0.0497 | 0.0227 |
| Jupiter | 37125-03-30 02:38 G | 15280775.39 | 15280775.61 | 15280775.85 | 0.0528 | 0.0127 |
| Saturn | 37128-09-19 02:09 G | 15282044.34 | 15282044.59 | 15282044.84 | 0.0258 | 0.0017 |
| Jupiter | 37130-09-19 15:50 G | 15282775.01 | 15282775.16 | 15282775.33 | 0.0499 | 0.0347 |

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| Jupiter | 37131-10-21 13:26 G | 15283171.87 | 15283172.06 | 15283172.26 | 0.0497 | 0.0286 |
| Neptune | 37137-02-22 06:57 G | 15285122.68 | 15285122.79 | 15285122.92 | 0.0089 | 0.0079 |
| Jupiter | 37137-04-04 07:41 G | 15285163.59 | 15285163.82 | 15285164.04 | 0.0528 | 0.0009 |
| Neptune | 37138-02-24 18:29 G | 15285490.08 | 15285490.27 | 15285490.48 | 0.0090 | 0.0053 |
| Neptune | 37139-02-27 04:48 G | 15285857.47 | 15285857.70 | 15285857.95 | 0.0090 | 0.0040 |
| Neptune | 37140-02-29 21:07 G | 15286225.13 | 15286225.38 | 15286225.63 | 0.0090 | 0.0014 |
| Neptune | 37141-03-03 03:50 G | 15286592.40 | 15286592.66 | 15286592.92 | 0.0090 | 0.0001 |
| Mars | 37141-08-07 23:02 G | 15286750.37 | 15286750.46 | 15286750.54 | 0.1834 | 0.1653 |
| Neptune | 37142-03-05 22:48 G | 15286960.22 | 15286960.45 | 15286960.71 | 0.0090 | 0.0027 |
| Jupiter | 37142-09-24 10:05 G | 15287162.72 | 15287162.92 | 15287163.14 | 0.0499 | 0.0239 |
| Neptune | 37143-03-08 04:19 G | 15287327.46 | 15287327.68 | 15287327.91 | 0.0090 | 0.0040 |
| Saturn | 37143-03-17 23:45 G | 15287337.25 | 15287337.49 | 15287337.74 | 0.0304 | 0.0070 |
| Jupiter | 37143-10-26 00:43 G | 15287559.39 | 15287559.53 | 15287559.67 | 0.0497 | 0.0388 |
| Neptune | 37144-03-09 23:02 G | 15287695.30 | 15287695.46 | 15287695.65 | 0.0090 | 0.0066 |
| Neptune | 37145-03-12 06:43 G | 15288062.68 | 15288062.78 | 15288062.90 | 0.0090 | 0.0080 |
| Jupiter | 37149-04-09 07:26 G | 15289551.57 | 15289551.81 | 15289552.05 | 0.0529 | 0.0068 |
| Uranus | 37151-04-11 02:09 G | 15290283.41 | 15290283.59 | 15290283.78 | 0.0135 | 0.0094 |
| Uranus | 37152-04-14 18:57 G | 15290653.04 | 15290653.29 | 15290653.54 | 0.0135 | 0.0021 |
| Uranus | 37153-04-18 22:48 G | 15291022.21 | 15291022.45 | 15291022.71 | 0.0136 | 0.0040 |
| Uranus | 37154-04-23 15:50 G | 15291392.08 | 15291392.16 | 15291392.28 | 0.0136 | 0.0125 |
| Jupiter | 37154-09-28 17:02 G | 15291549.99 | 15291550.21 | 15291550.43 | 0.0498 | 0.0178 |
| Saturn | 37157-09-14 15:07 G | 15292631.94 | 15292632.13 | 15292632.34 | 0.0258 | 0.0148 |
| Saturn | 37158-09-25 17:31 G | 15293008.09 | 15293008.23 | 15293008.39 | 0.0258 | 0.0208 |
| Jupiter | 37161-04-14 06:57 G | 15293939.58 | 15293939.79 | 15293940.00 | 0.0529 | 0.0184 |
| Jupiter | 37166-10-03 12:43 G | 15295937.80 | 15295938.03 | 15295938.26 | 0.0497 | 0.0101 |
| Mars | 37167-02-03 19:55 G | 15296061.23 | 15296061.33 | 15296061.43 | 0.1695 | 0.1365 |
| Jupiter | 37172-03-14 10:05 G | 15297926.83 | 15297926.92 | 15297927.02 | 0.0526 | 0.0473 |
| Saturn | 37173-03-25 12:57 G | 15298302.91 | 15298303.04 | 15298303.19 | 0.0304 | 0.0245 |
| Jupiter | 37173-04-19 18:29 G | 15298328.10 | 15298328.27 | 15298328.45 | 0.0529 | 0.0350 |
| Jupiter | 37178-10-07 12:57 G | 15300324.81 | 15300325.04 | 15300325.28 | 0.0497 | 0.0024 |

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| Jupiter | 37184-03-19 18:57 G | 15302315.15 | 15302315.29 | 15302315.44 | 0.0526 | 0.0410 |
| Jupiter | 37185-04-24 14:53 G | 15302716.01 | 15302716.12 | 15302716.23 | 0.0529 | 0.0467 |
| Saturn | 37187-09-20 23:31 G | 15303595.24 | 15303595.48 | 15303595.72 | 0.0258 | 0.0050 |
| Jupiter | 37190-10-12 05:31 G | 15304712.51 | 15304712.73 | 15304712.94 | 0.0497 | 0.0150 |
| Uranus | 37191-10-13 17:17 G | 15305079.00 | 15305079.22 | 15305079.43 | 0.0143 | 0.0079 |
| Uranus | 37192-10-17 21:21 G | 15305449.15 | 15305449.39 | 15305449.64 | 0.0143 | 0.0019 |
| Uranus | 37193-10-22 13:41 G | 15305818.89 | 15305819.07 | 15305819.29 | 0.0143 | 0.0092 |
| Jupiter | 37196-03-24 10:05 G | 15306702.73 | 15306702.92 | 15306703.12 | 0.0527 | 0.0293 |
| Jupiter | 37201-09-14 15:50 G | 15308703.11 | 15308703.16 | 15308703.23 | 0.0500 | 0.0479 |
| Saturn | 37202-03-18 12:29 G | 15308887.78 | 15308888.02 | 15308888.27 | 0.0304 | 0.0036 |
| Jupiter | 37202-10-16 16:19 G | 15309099.97 | 15309100.18 | 15309100.40 | 0.0497 | 0.0221 |
| Jupiter | 37208-03-29 16:19 G | 15311090.96 | 15311091.18 | 15311091.40 | 0.0528 | 0.0133 |
| Jupiter | 37213-09-19 10:48 G | 15313090.79 | 15313090.95 | 15313091.14 | 0.0499 | 0.0341 |
| Jupiter | 37214-10-21 03:07 G | 15313487.44 | 15313487.63 | 15313487.81 | 0.0496 | 0.0284 |
| Saturn | 37216-09-15 09:50 G | 15314182.69 | 15314182.91 | 15314183.15 | 0.0258 | 0.0114 |
| Saturn | 37217-09-26 08:24 G | 15314558.76 | 15314558.85 | 15314558.95 | 0.0258 | 0.0238 |
| Neptune | 37218-08-24 17:02 G | 15314891.08 | 15314891.21 | 15314891.36 | 0.0088 | 0.0075 |
| Neptune | 37219-08-27 01:26 G | 15315258.41 | 15315258.56 | 15315258.74 | 0.0088 | 0.0065 |
| Jupiter | 37220-04-03 15:21 G | 15315478.90 | 15315479.14 | 15315479.39 | 0.0529 | 0.0020 |
| Neptune | 37220-08-28 12:57 G | 15315625.81 | 15315626.04 | 15315626.29 | 0.0088 | 0.0038 |
| Neptune | 37221-08-31 01:55 G | 15315993.35 | 15315993.58 | 15315993.82 | 0.0088 | 0.0028 |
| Neptune | 37222-09-02 08:24 G | 15316360.59 | 15316360.85 | 15316361.12 | 0.0088 | 0.0001 |
| Neptune | 37223-09-05 01:26 G | 15316728.30 | 15316728.56 | 15316728.81 | 0.0088 | 0.0010 |
| Neptune | 37224-09-06 05:02 G | 15317095.49 | 15317095.71 | 15317095.96 | 0.0088 | 0.0038 |
| Neptune | 37225-09-08 22:48 G | 15317463.25 | 15317463.45 | 15317463.69 | 0.0088 | 0.0048 |
| Jupiter | 37225-09-23 17:17 G | 15317478.02 | 15317478.22 | 15317478.42 | 0.0499 | 0.0243 |
| Neptune | 37226-09-11 03:21 G | 15317830.53 | 15317830.64 | 15317830.79 | 0.0088 | 0.0075 |
| Jupiter | 37226-10-25 18:14 G | 15317875.11 | 15317875.26 | 15317875.40 | 0.0496 | 0.0394 |
| Neptune | 37227-09-13 18:29 G | 15318198.23 | 15318198.27 | 15318198.37 | 0.0088 | 0.0085 |
| Saturn | 37232-03-26 05:45 G | 15319853.64 | 15319853.74 | 15319853.84 | 0.0304 | 0.0278 |

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| Jupiter | 37232-04-08 17:45 G | 15319867.02 | 15319867.24 | 15319867.47 | 0.0529 | 0.0057 |
| Uranus | 37235-04-11 16:19 G | 15320965.01 | 15320965.18 | 15320965.39 | 0.0135 | 0.0089 |
| Uranus | 37236-04-15 09:21 G | 15321334.65 | 15321334.89 | 15321335.15 | 0.0135 | 0.0022 |
| Uranus | 37237-04-19 12:29 G | 15321703.80 | 15321704.02 | 15321704.27 | 0.0136 | 0.0058 |
| Jupiter | 37237-09-28 08:24 G | 15321865.64 | 15321865.85 | 15321866.07 | 0.0498 | 0.0188 |
| Uranus | 37238-04-24 05:45 G | 15322073.64 | 15322073.74 | 15322073.89 | 0.0136 | 0.0118 |
| Jupiter | 37244-04-14 03:50 G | 15324255.44 | 15324255.66 | 15324255.88 | 0.0529 | 0.0187 |
| Mars | 37246-02-05 21:21 G | 15324918.28 | 15324918.39 | 15324918.51 | 0.1699 | 0.1279 |
| Saturn | 37246-09-21 23:31 G | 15325146.25 | 15325146.48 | 15325146.71 | 0.0258 | 0.0082 |
| Jupiter | 37249-10-02 13:26 G | 15326252.83 | 15326253.06 | 15326253.30 | 0.0498 | 0.0106 |
| Jupiter | 37255-03-15 03:36 G | 15328242.57 | 15328242.65 | 15328242.74 | 0.0525 | 0.0488 |
| Jupiter | 37256-04-18 19:41 G | 15328643.15 | 15328643.32 | 15328643.50 | 0.0529 | 0.0344 |
| Saturn | 37261-03-19 09:07 G | 15330438.64 | 15330438.88 | 15330439.12 | 0.0304 | 0.0002 |
| Jupiter | 37261-10-07 07:12 G | 15330640.57 | 15330640.80 | 15330641.02 | 0.0498 | 0.0032 |
| Jupiter | 37267-03-19 18:57 G | 15332630.15 | 15332630.29 | 15332630.43 | 0.0526 | 0.0420 |
| Jupiter | 37268-04-24 03:50 G | 15333031.54 | 15333031.66 | 15333031.77 | 0.0529 | 0.0454 |
| Jupiter | 37273-10-11 18:00 G | 15335028.02 | 15335028.25 | 15335028.49 | 0.0497 | 0.0147 |
| Saturn | 37275-09-17 01:55 G | 15335733.35 | 15335733.58 | 15335733.83 | 0.0258 | 0.0079 |
| Uranus | 37275-10-14 04:05 G | 15335760.45 | 15335760.67 | 15335760.92 | 0.0143 | 0.0061 |
| Uranus | 37276-10-18 09:07 G | 15336130.63 | 15336130.88 | 15336131.13 | 0.0143 | 0.0009 |
| Pluto | 37277-05-13 08:09 G | 15336337.59 | 15336337.84 | 15336338.10 | 0.0066 | 0.0012 |
| Uranus | 37277-10-23 00:29 G | 15336500.35 | 15336500.52 | 15336500.69 | 0.0143 | 0.0105 |
| Jupiter | 37279-03-25 01:12 G | 15337018.37 | 15337018.55 | 15337018.74 | 0.0527 | 0.0298 |
| Jupiter | 37280-04-29 04:05 G | 15337419.62 | 15337419.67 | 15337419.71 | 0.0529 | 0.0518 |
| Jupiter | 37284-09-14 09:50 G | 15339018.84 | 15339018.91 | 15339018.99 | 0.0500 | 0.0473 |
| Jupiter | 37285-10-16 04:05 G | 15339415.47 | 15339415.67 | 15339415.87 | 0.0497 | 0.0215 |
| Saturn | 37290-03-12 13:41 G | 15341023.99 | 15341024.07 | 15341024.16 | 0.0303 | 0.0283 |
| Jupiter | 37291-03-30 01:55 G | 15341406.35 | 15341406.58 | 15341406.82 | 0.0528 | 0.0134 |
| Jupiter | 37296-09-18 11:02 G | 15343405.80 | 15343405.96 | 15343406.13 | 0.0499 | 0.0350 |
| Jupiter | 37297-10-20 14:38 G | 15343802.91 | 15343803.11 | 15343803.31 | 0.0497 | 0.0277 |

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| Neptune | 37301-02-22 09:50 G | 15345022.87 | 15345022.91 | 15345022.98 | 0.0089 | 0.0087 |
| Neptune | 37302-02-24 18:43 G | 15345390.14 | 15345390.28 | 15345390.46 | 0.0089 | 0.0071 |
| Neptune | 37303-02-27 12:43 G | 15345757.83 | 15345758.03 | 15345758.26 | 0.0090 | 0.0048 |
| Jupiter | 37303-04-05 03:21 G | 15345794.42 | 15345794.64 | 15345794.87 | 0.0528 | 0.0031 |
| Neptune | 37304-02-29 18:43 G | 15346125.05 | 15346125.28 | 15346125.53 | 0.0090 | 0.0032 |
| Saturn | 37304-09-12 14:38 G | 15346321.03 | 15346321.11 | 15346321.20 | 0.0259 | 0.0240 |
| Neptune | 37305-03-03 14:24 G | 15346492.84 | 15346493.10 | 15346493.36 | 0.0090 | 0.0007 |
| Saturn | 37305-09-23 20:24 G | 15346697.13 | 15346697.35 | 15346697.58 | 0.0258 | 0.0117 |
| Neptune | 37306-03-05 19:55 G | 15346860.09 | 15346860.33 | 15346860.59 | 0.0090 | 0.0009 |
| Neptune | 37307-03-08 13:55 G | 15347227.84 | 15347228.08 | 15347228.33 | 0.0090 | 0.0034 |
| Neptune | 37308-03-09 22:33 G | 15347595.23 | 15347595.44 | 15347595.65 | 0.0090 | 0.0048 |
| Jupiter | 37308-09-24 06:57 G | 15347793.60 | 15347793.79 | 15347794.00 | 0.0499 | 0.0256 |
| Neptune | 37309-03-12 11:45 G | 15347962.85 | 15347962.99 | 15347963.15 | 0.0090 | 0.0073 |
| Jupiter | 37309-10-25 19:12 G | 15348190.17 | 15348190.30 | 15348190.44 | 0.0497 | 0.0397 |
| Neptune | 37310-03-15 00:43 G | 15348330.50 | 15348330.53 | 15348330.61 | 0.0090 | 0.0088 |
| Jupiter | 37315-04-10 08:24 G | 15350182.61 | 15350182.85 | 15350183.09 | 0.0528 | 0.0045 |
| Uranus | 37319-04-13 06:43 G | 15351646.59 | 15351646.78 | 15351647.00 | 0.0135 | 0.0081 |
| Saturn | 37320-03-21 10:05 G | 15351989.68 | 15351989.92 | 15351990.16 | 0.0304 | 0.0043 |
| Uranus | 37320-04-17 00:00 G | 15352016.25 | 15352016.50 | 15352016.76 | 0.0135 | 0.0009 |
| Jupiter | 37320-09-28 13:26 G | 15352180.84 | 15352181.06 | 15352181.28 | 0.0499 | 0.0198 |
| Uranus | 37321-04-21 03:07 G | 15352385.41 | 15352385.63 | 15352385.88 | 0.0136 | 0.0054 |
| Jupiter | 37327-04-15 01:12 G | 15354570.33 | 15354570.55 | 15354570.77 | 0.0529 | 0.0177 |
| Jupiter | 37332-10-03 06:57 G | 15356568.57 | 15356568.79 | 15356569.01 | 0.0498 | 0.0105 |
| Saturn | 37334-09-18 23:17 G | 15357284.23 | 15357284.47 | 15357284.71 | 0.0258 | 0.0041 |
| Jupiter | 37338-03-15 02:53 G | 15358557.55 | 15358557.62 | 15358557.69 | 0.0525 | 0.0500 |
| Jupiter | 37339-04-20 10:05 G | 15358958.74 | 15358958.92 | 15358959.09 | 0.0529 | 0.0341 |
| Jupiter | 37344-10-07 17:31 G | 15360955.98 | 15360956.23 | 15360956.47 | 0.0497 | 0.0033 |
| Saturn | 37349-03-14 09:21 G | 15362574.75 | 15362574.89 | 15362575.05 | 0.0303 | 0.0238 |
| Jupiter | 37350-03-20 12:00 G | 15362945.87 | 15362946.00 | 15362946.13 | 0.0526 | 0.0429 |
| Jupiter | 37351-04-25 11:17 G | 15363346.84 | 15363346.97 | 15363347.11 | 0.0529 | 0.0441 |

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| Jupiter | 37356-10-11 22:33 G | 15365343.22 | 15365343.44 | 15365343.66 | 0.0497 | 0.0139 |
| Uranus | 37358-10-10 23:17 G | 15366072.46 | 15366072.47 | 15366072.50 | 0.0144 | 0.0143 |
| Uranus | 37359-10-15 15:07 G | 15366441.92 | 15366442.13 | 15366442.36 | 0.0143 | 0.0070 |
| Uranus | 37360-10-19 20:24 G | 15366812.10 | 15366812.35 | 15366812.60 | 0.0143 | 0.0028 |
| Uranus | 37361-10-24 11:02 G | 15367181.79 | 15367181.96 | 15367182.16 | 0.0143 | 0.0099 |
| Jupiter | 37362-03-25 09:50 G | 15367333.72 | 15367333.91 | 15367334.12 | 0.0527 | 0.0294 |
| Jupiter | 37363-04-30 14:09 G | 15367735.05 | 15367735.09 | 15367735.14 | 0.0529 | 0.0517 |
| Saturn | 37363-09-14 15:21 G | 15367871.99 | 15367872.14 | 15367872.31 | 0.0259 | 0.0199 |
| Saturn | 37364-09-24 15:21 G | 15368247.93 | 15368248.14 | 15368248.35 | 0.0258 | 0.0152 |
| Pluto | 37364-11-14 08:38 G | 15368298.63 | 15368298.86 | 15368299.09 | 0.0078 | 0.0030 |
| Jupiter | 37367-09-15 07:12 G | 15369333.76 | 15369333.80 | 15369333.86 | 0.0500 | 0.0488 |
| Jupiter | 37368-10-16 13:26 G | 15369730.84 | 15369731.06 | 15369731.28 | 0.0497 | 0.0200 |
| Jupiter | 37374-03-30 07:55 G | 15371721.62 | 15371721.83 | 15371722.05 | 0.0527 | 0.0142 |
| Saturn | 37379-03-23 12:43 G | 15373540.79 | 15373541.03 | 15373541.26 | 0.0304 | 0.0095 |
| Jupiter | 37379-09-20 04:33 G | 15373721.53 | 15373721.69 | 15373721.85 | 0.0500 | 0.0356 |
| Jupiter | 37380-10-20 18:57 G | 15374118.10 | 15374118.29 | 15374118.49 | 0.0497 | 0.0274 |
| Neptune | 37383-08-27 06:14 G | 15375158.63 | 15375158.76 | 15375158.93 | 0.0088 | 0.0073 |
| Neptune | 37384-08-28 20:24 G | 15375526.18 | 15375526.35 | 15375526.57 | 0.0088 | 0.0055 |
| Neptune | 37385-08-31 02:24 G | 15375893.37 | 15375893.60 | 15375893.85 | 0.0088 | 0.0035 |
| Jupiter | 37386-04-04 12:14 G | 15376109.78 | 15376110.01 | 15376110.25 | 0.0528 | 0.0047 |
| Neptune | 37386-09-02 20:24 G | 15376261.10 | 15376261.35 | 15376261.61 | 0.0088 | 0.0016 |
| Neptune | 37387-09-05 00:14 G | 15376628.26 | 15376628.51 | 15376628.77 | 0.0088 | 0.0004 |
| Neptune | 37388-09-06 17:45 G | 15376995.99 | 15376996.24 | 15376996.50 | 0.0088 | 0.0022 |
| Neptune | 37389-09-08 23:17 G | 15377363.27 | 15377363.47 | 15377363.71 | 0.0088 | 0.0042 |
| Neptune | 37390-09-11 13:26 G | 15377730.89 | 15377731.06 | 15377731.28 | 0.0088 | 0.0059 |
| Neptune | 37391-09-13 23:31 G | 15378098.40 | 15378098.48 | 15378098.60 | 0.0088 | 0.0080 |
| Jupiter | 37391-09-24 11:02 G | 15378108.76 | 15378108.96 | 15378109.16 | 0.0499 | 0.0269 |
| Jupiter | 37392-10-25 13:26 G | 15378505.93 | 15378506.06 | 15378506.20 | 0.0497 | 0.0401 |
| Saturn | 37393-09-20 03:50 G | 15378835.43 | 15378835.66 | 15378835.90 | 0.0258 | 0.0004 |
| Jupiter | 37398-04-09 05:02 G | 15380497.48 | 15380497.71 | 15380497.94 | 0.0529 | 0.0034 |

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| Uranus | 37403-04-14 22:05 G | 15382328.22 | 15382328.42 | 15382328.63 | 0.0135 | 0.0076 |
| Jupiter | 37403-09-30 03:36 G | 15382496.45 | 15382496.65 | 15382496.86 | 0.0498 | 0.0213 |
| Uranus | 37404-04-18 15:07 G | 15382697.88 | 15382698.13 | 15382698.39 | 0.0135 | 0.0009 |
| Uranus | 37405-04-22 17:45 G | 15383067.04 | 15383067.24 | 15383067.48 | 0.0136 | 0.0071 |
| Uranus | 37406-04-27 12:00 G | 15383436.94 | 15383437.00 | 15383437.08 | 0.0136 | 0.0130 |
| Saturn | 37408-03-16 15:07 G | 15384125.94 | 15384126.13 | 15384126.32 | 0.0303 | 0.0183 |
| Jupiter | 37410-04-15 16:33 G | 15384885.97 | 15384886.19 | 15384886.40 | 0.0529 | 0.0179 |
| Jupiter | 37415-10-04 09:36 G | 15386883.66 | 15386883.90 | 15386884.14 | 0.0498 | 0.0114 |
| Jupiter | 37421-03-15 19:12 G | 15388873.27 | 15388873.30 | 15388873.36 | 0.0526 | 0.0515 |
| Jupiter | 37422-04-20 14:53 G | 15389273.94 | 15389274.12 | 15389274.31 | 0.0529 | 0.0338 |
| Saturn | 37422-09-16 12:43 G | 15389422.83 | 15389423.03 | 15389423.24 | 0.0259 | 0.0157 |
| Saturn | 37423-09-27 15:07 G | 15389798.97 | 15389799.13 | 15389799.29 | 0.0259 | 0.0195 |
| Mars | 37425-08-09 00:57 G | 15390480.35 | 15390480.54 | 15390480.74 | 0.1845 | 0.0430 |
| Jupiter | 37427-10-08 18:57 G | 15391271.06 | 15391271.29 | 15391271.51 | 0.0497 | 0.0022 |
| Jupiter | 37433-03-20 12:14 G | 15393260.88 | 15393261.01 | 15393261.14 | 0.0526 | 0.0441 |
| Jupiter | 37434-04-25 14:24 G | 15393661.97 | 15393662.10 | 15393662.23 | 0.0529 | 0.0429 |
| Saturn | 37438-03-25 16:05 G | 15395091.96 | 15395092.17 | 15395092.40 | 0.0304 | 0.0153 |
| Jupiter | 37439-10-13 11:02 G | 15395658.73 | 15395658.96 | 15395659.19 | 0.0497 | 0.0127 |
| Uranus | 37443-10-17 06:57 G | 15397123.56 | 15397123.79 | 15397124.04 | 0.0143 | 0.0050 |
| Uranus | 37444-10-21 12:14 G | 15397493.76 | 15397494.01 | 15397494.26 | 0.0143 | 0.0020 |
| Jupiter | 37445-03-25 11:17 G | 15397648.79 | 15397648.97 | 15397649.16 | 0.0527 | 0.0305 |
| Uranus | 37445-10-26 02:09 G | 15397863.47 | 15397863.59 | 15397863.75 | 0.0143 | 0.0118 |
| Jupiter | 37446-04-30 17:45 G | 15398050.17 | 15398050.24 | 15398050.32 | 0.0529 | 0.0501 |
| Jupiter | 37450-09-15 22:48 G | 15399649.43 | 15399649.45 | 15399649.49 | 0.0501 | 0.0497 |
| Mars | 37451-02-06 22:05 G | 15399793.24 | 15399793.42 | 15399793.60 | 0.1689 | 0.0715 |
| Jupiter | 37451-10-17 15:50 G | 15400045.94 | 15400046.16 | 15400046.37 | 0.0497 | 0.0185 |
| Saturn | 37452-09-22 10:33 G | 15400386.70 | 15400386.94 | 15400387.18 | 0.0259 | 0.0044 |
| Jupiter | 37457-03-30 13:26 G | 15402036.83 | 15402037.06 | 15402037.29 | 0.0527 | 0.0153 |
| Jupiter | 37462-09-20 04:33 G | 15404036.53 | 15404036.69 | 15404036.86 | 0.0500 | 0.0366 |
| Jupiter | 37463-10-22 09:21 G | 15404433.70 | 15404433.89 | 15404434.08 | 0.0497 | 0.0268 |

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| Neptune | 37466-02-25 04:05 G | 15405290.63 | 15405290.67 | 15405290.76 | 0.0089 | 0.0087 |
| Neptune | 37467-02-27 10:05 G | 15405657.73 | 15405657.92 | 15405658.12 | 0.0089 | 0.0057 |
| Saturn | 37467-03-19 07:12 G | 15405677.58 | 15405677.80 | 15405678.02 | 0.0303 | 0.0118 |
| Neptune | 37468-03-01 05:02 G | 15406025.50 | 15406025.71 | 15406025.95 | 0.0089 | 0.0046 |
| Neptune | 37469-03-03 11:31 G | 15406392.74 | 15406392.98 | 15406393.24 | 0.0090 | 0.0018 |
| Jupiter | 37469-04-04 09:07 G | 15406424.66 | 15406424.88 | 15406425.11 | 0.0528 | 0.0058 |
| Neptune | 37470-03-06 04:19 G | 15406760.42 | 15406760.68 | 15406760.95 | 0.0090 | 0.0006 |
| Neptune | 37471-03-08 14:24 G | 15407127.87 | 15407128.10 | 15407128.35 | 0.0090 | 0.0023 |
| Neptune | 37472-03-10 02:53 G | 15407495.38 | 15407495.62 | 15407495.87 | 0.0090 | 0.0035 |
| Neptune | 37473-03-12 17:45 G | 15407863.08 | 15407863.24 | 15407863.44 | 0.0090 | 0.0064 |
| Neptune | 37474-03-15 01:41 G | 15408230.43 | 15408230.57 | 15408230.72 | 0.0090 | 0.0075 |
| Jupiter | 37474-09-24 18:14 G | 15408424.07 | 15408424.26 | 15408424.44 | 0.0499 | 0.0293 |
| Jupiter | 37475-10-26 07:55 G | 15408820.69 | 15408820.83 | 15408820.98 | 0.0496 | 0.0388 |
| Jupiter | 37481-04-09 18:57 G | 15410813.06 | 15410813.29 | 15410813.52 | 0.0529 | 0.0027 |
| Saturn | 37481-09-17 13:55 G | 15410973.87 | 15410974.08 | 15410974.31 | 0.0259 | 0.0112 |
| Saturn | 37482-09-28 23:17 G | 15411350.38 | 15411350.47 | 15411350.55 | 0.0259 | 0.0242 |
| Jupiter | 37486-09-29 03:07 G | 15412811.42 | 15412811.63 | 15412811.85 | 0.0498 | 0.0231 |
| Uranus | 37487-04-15 12:29 G | 15413009.81 | 15413010.02 | 15413010.24 | 0.0135 | 0.0068 |
| Uranus | 37488-04-19 05:17 G | 15413379.46 | 15413379.72 | 15413379.98 | 0.0135 | 0.0003 |
| Uranus | 37489-04-23 08:24 G | 15413748.64 | 15413748.85 | 15413749.08 | 0.0136 | 0.0067 |
| Jupiter | 37493-04-14 11:31 G | 15415200.75 | 15415200.98 | 15415201.21 | 0.0529 | 0.0166 |
| Saturn | 37497-03-27 02:53 G | 15416643.47 | 15416643.62 | 15416643.79 | 0.0304 | 0.0224 |
| Jupiter | 37498-10-03 13:41 G | 15417198.85 | 15417199.07 | 15417199.29 | 0.0498 | 0.0126 |
| Jupiter | 37505-04-20 13:26 G | 15419588.88 | 15419589.06 | 15419589.24 | 0.0529 | 0.0323 |
| Jupiter | 37510-10-09 05:02 G | 15421586.47 | 15421586.71 | 15421586.95 | 0.0498 | 0.0015 |
| Saturn | 37511-09-25 13:41 G | 15421937.84 | 15421938.07 | 15421938.32 | 0.0259 | 0.0091 |
| Jupiter | 37516-03-20 12:00 G | 15423575.90 | 15423576.00 | 15423576.10 | 0.0526 | 0.0463 |
| Jupiter | 37517-04-25 14:53 G | 15423976.97 | 15423977.12 | 15423977.27 | 0.0529 | 0.0410 |
| Jupiter | 37522-10-13 09:21 G | 15425973.67 | 15425973.89 | 15425974.12 | 0.0497 | 0.0113 |
| Pluto | 37523-05-18 01:26 G | 15426190.30 | 15426190.56 | 15426190.84 | 0.0066 | 0.0007 |

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| Saturn | 37526-03-22 01:55 G | 15427229.34 | 15427229.58 | 15427229.83 | 0.0303 | 0.0041 |
| Uranus | 37526-10-14 05:02 G | 15427435.61 | 15427435.71 | 15427435.82 | 0.0144 | 0.0130 |
| Uranus | 37527-10-18 20:38 G | 15427805.14 | 15427805.36 | 15427805.60 | 0.0143 | 0.0057 |
| Jupiter | 37528-03-25 14:53 G | 15427963.93 | 15427964.12 | 15427964.32 | 0.0527 | 0.0314 |
| Uranus | 37528-10-23 01:41 G | 15428175.34 | 15428175.57 | 15428175.82 | 0.0143 | 0.0042 |
| Jupiter | 37529-04-30 13:55 G | 15428365.00 | 15428365.08 | 15428365.16 | 0.0529 | 0.0494 |
| Uranus | 37529-10-27 15:36 G | 15428545.02 | 15428545.15 | 15428545.33 | 0.0143 | 0.0112 |
| Jupiter | 37534-10-17 23:02 G | 15430361.25 | 15430361.46 | 15430361.69 | 0.0497 | 0.0166 |
| Jupiter | 37540-03-30 09:36 G | 15432351.69 | 15432351.90 | 15432352.12 | 0.0528 | 0.0169 |
| Saturn | 37540-09-20 00:14 G | 15432525.28 | 15432525.51 | 15432525.74 | 0.0259 | 0.0062 |
| Jupiter | 37545-09-20 09:36 G | 15434351.76 | 15434351.90 | 15434352.04 | 0.0499 | 0.0385 |
| Jupiter | 37546-10-22 01:26 G | 15434748.36 | 15434748.56 | 15434748.77 | 0.0497 | 0.0252 |
| Neptune | 37547-08-28 16:48 G | 15435059.12 | 15435059.20 | 15435059.33 | 0.0088 | 0.0080 |
| Neptune | 37548-08-29 22:05 G | 15435426.27 | 15435426.42 | 15435426.59 | 0.0088 | 0.0069 |
| Neptune | 37549-09-01 16:05 G | 15435793.95 | 15435794.17 | 15435794.41 | 0.0088 | 0.0041 |
| Neptune | 37550-09-03 20:24 G | 15436161.12 | 15436161.35 | 15436161.59 | 0.0088 | 0.0031 |
| Neptune | 37551-09-06 13:12 G | 15436528.78 | 15436529.05 | 15436529.31 | 0.0088 | 0.0003 |
| Jupiter | 37552-04-04 15:21 G | 15436739.91 | 15436740.14 | 15436740.37 | 0.0528 | 0.0082 |
| Neptune | 37552-09-07 19:41 G | 15436896.07 | 15436896.32 | 15436896.57 | 0.0088 | 0.0007 |
| Neptune | 37553-09-10 07:55 G | 15437263.59 | 15437263.83 | 15437264.09 | 0.0088 | 0.0035 |
| Neptune | 37554-09-12 19:26 G | 15437631.11 | 15437631.31 | 15437631.54 | 0.0088 | 0.0046 |
| Saturn | 37555-03-15 14:53 G | 15437815.08 | 15437815.12 | 15437815.19 | 0.0303 | 0.0294 |
| Neptune | 37555-09-15 03:21 G | 15437998.51 | 15437998.64 | 15437998.80 | 0.0088 | 0.0073 |
| Neptune | 37556-09-16 19:41 G | 15438366.25 | 15438366.32 | 15438366.40 | 0.0088 | 0.0083 |
| Jupiter | 37557-09-24 18:29 G | 15438739.09 | 15438739.27 | 15438739.47 | 0.0499 | 0.0314 |
| Jupiter | 37558-10-26 17:45 G | 15439136.10 | 15439136.24 | 15439136.39 | 0.0497 | 0.0382 |
| Jupiter | 37564-04-09 07:41 G | 15441127.58 | 15441127.82 | 15441128.05 | 0.0528 | 0.0010 |
| Saturn | 37569-09-15 17:45 G | 15443113.09 | 15443113.24 | 15443113.39 | 0.0259 | 0.0210 |
| Jupiter | 37569-09-29 05:31 G | 15443126.54 | 15443126.73 | 15443126.93 | 0.0499 | 0.0250 |
| Uranus | 37570-04-12 22:48 G | 15443322.39 | 15443322.45 | 15443322.54 | 0.0135 | 0.0128 |

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| Saturn | 37570-09-26 18:29 G | 15443489.07 | 15443489.27 | 15443489.49 | 0.0259 | 0.0142 |
| Jupiter | 37570-10-31 01:12 G | 15443523.54 | 15443523.55 | 15443523.58 | 0.0497 | 0.0494 |
| Uranus | 37571-04-17 02:09 G | 15443691.37 | 15443691.59 | 15443691.81 | 0.0135 | 0.0066 |
| Uranus | 37572-04-20 18:29 G | 15444061.01 | 15444061.27 | 15444061.53 | 0.0135 | 0.0005 |
| Uranus | 37573-04-24 21:36 G | 15444430.22 | 15444430.40 | 15444430.62 | 0.0136 | 0.0082 |
| Jupiter | 37576-04-14 09:36 G | 15445515.69 | 15445515.90 | 15445516.12 | 0.0529 | 0.0152 |
| Jupiter | 37581-10-03 20:24 G | 15447514.12 | 15447514.35 | 15447514.58 | 0.0498 | 0.0135 |
| Saturn | 37585-03-23 20:53 G | 15448781.12 | 15448781.37 | 15448781.62 | 0.0303 | 0.0046 |
| Jupiter | 37588-04-19 12:29 G | 15449903.83 | 15449904.02 | 15449904.22 | 0.0529 | 0.0307 |
| Jupiter | 37593-10-07 22:19 G | 15451901.20 | 15451901.43 | 15451901.66 | 0.0497 | 0.0003 |
| Jupiter | 37599-03-20 12:57 G | 15453890.96 | 15453891.04 | 15453891.14 | 0.0526 | 0.0484 |
| Saturn | 37599-09-22 13:26 G | 15454076.82 | 15454077.06 | 15454077.30 | 0.0259 | 0.0007 |
| Jupiter | 37600-04-24 10:48 G | 15454291.81 | 15454291.95 | 15454292.11 | 0.0529 | 0.0398 |
| Jupiter | 37605-10-12 15:07 G | 15456288.91 | 15456289.13 | 15456289.36 | 0.0497 | 0.0092 |
| Uranus | 37610-10-14 18:29 G | 15458117.18 | 15458117.27 | 15458117.39 | 0.0144 | 0.0131 |
| Pluto | 37610-11-18 07:26 G | 15458151.56 | 15458151.81 | 15458152.07 | 0.0079 | 0.0004 |
| Jupiter | 37611-03-25 06:14 G | 15458278.59 | 15458278.76 | 15458278.93 | 0.0527 | 0.0343 |
| Uranus | 37611-10-19 10:48 G | 15458486.72 | 15458486.95 | 15458487.21 | 0.0143 | 0.0038 |
| Jupiter | 37612-04-29 15:50 G | 15458680.06 | 15458680.16 | 15458680.27 | 0.0529 | 0.0472 |
| Uranus | 37612-10-23 16:05 G | 15458856.93 | 15458857.17 | 15458857.42 | 0.0143 | 0.0033 |
| Uranus | 37613-10-28 06:00 G | 15459226.67 | 15459226.75 | 15459226.87 | 0.0143 | 0.0131 |
| Saturn | 37614-03-17 17:02 G | 15459367.04 | 15459367.21 | 15459367.39 | 0.0303 | 0.0205 |
| Jupiter | 37617-10-16 18:00 G | 15460676.03 | 15460676.25 | 15460676.48 | 0.0497 | 0.0150 |
| Jupiter | 37623-03-30 11:45 G | 15462666.77 | 15462666.99 | 15462667.21 | 0.0527 | 0.0194 |
| Saturn | 37628-09-16 23:45 G | 15464664.29 | 15464664.49 | 15464664.70 | 0.0259 | 0.0153 |
| Jupiter | 37628-09-19 07:41 G | 15464666.68 | 15464666.82 | 15464666.97 | 0.0500 | 0.0402 |
| Saturn | 37629-09-28 06:00 G | 15465040.60 | 15465040.75 | 15465040.91 | 0.0259 | 0.0199 |
| Jupiter | 37629-10-21 10:05 G | 15465063.73 | 15465063.92 | 15465064.12 | 0.0497 | 0.0242 |
| Neptune | 37631-02-27 20:53 G | 15465558.23 | 15465558.37 | 15465558.53 | 0.0089 | 0.0074 |
| Neptune | 37632-03-01 04:19 G | 15465925.50 | 15465925.68 | 15465925.89 | 0.0089 | 0.0054 |

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| Neptune | 37633-03-03 19:41 G | 15466293.09 | 15466293.32 | 15466293.58 | 0.0090 | 0.0035 |
| Neptune | 37634-03-06 07:26 G | 15466660.58 | 15466660.81 | 15466661.07 | 0.0090 | 0.0014 |
| Neptune | 37635-03-08 18:00 G | 15467027.99 | 15467028.25 | 15467028.52 | 0.0090 | 0.0006 |
| Jupiter | 37635-04-04 01:26 G | 15467054.33 | 15467054.56 | 15467054.79 | 0.0528 | 0.0108 |
| Neptune | 37636-03-10 10:05 G | 15467395.70 | 15467395.92 | 15467396.17 | 0.0090 | 0.0029 |
| Neptune | 37637-03-12 16:33 G | 15467762.98 | 15467763.19 | 15467763.43 | 0.0090 | 0.0047 |
| Neptune | 37638-03-15 12:00 G | 15468130.85 | 15468131.00 | 15468131.17 | 0.0090 | 0.0069 |
| Neptune | 37639-03-17 17:17 G | 15468498.17 | 15468498.22 | 15468498.31 | 0.0090 | 0.0086 |
| Jupiter | 37640-09-23 19:26 G | 15469054.15 | 15469054.31 | 15469054.48 | 0.0499 | 0.0333 |
| Jupiter | 37641-10-25 16:33 G | 15469451.03 | 15469451.19 | 15469451.35 | 0.0497 | 0.0371 |
| Saturn | 37644-03-25 18:00 G | 15470333.04 | 15470333.25 | 15470333.48 | 0.0303 | 0.0138 |
| Jupiter | 37647-04-09 07:26 G | 15471442.59 | 15471442.81 | 15471443.04 | 0.0529 | 0.0021 |
| Jupiter | 37652-09-28 08:38 G | 15473441.66 | 15473441.86 | 15473442.06 | 0.0498 | 0.0268 |
| Jupiter | 37653-10-29 22:33 G | 15473838.40 | 15473838.44 | 15473838.50 | 0.0496 | 0.0480 |
| Uranus | 37654-04-13 11:17 G | 15474003.93 | 15474003.97 | 15474004.03 | 0.0135 | 0.0132 |
| Uranus | 37655-04-17 14:38 G | 15474372.89 | 15474373.11 | 15474373.34 | 0.0135 | 0.0056 |
| Uranus | 37656-04-21 06:14 G | 15474742.50 | 15474742.76 | 15474743.02 | 0.0135 | 0.0013 |
| Uranus | 37657-04-25 09:50 G | 15475111.72 | 15475111.91 | 15475112.13 | 0.0136 | 0.0079 |
| Saturn | 37658-09-24 00:14 G | 15475628.27 | 15475628.51 | 15475628.76 | 0.0259 | 0.0053 |
| Jupiter | 37659-04-14 07:41 G | 15475830.59 | 15475830.82 | 15475831.05 | 0.0529 | 0.0133 |
| Jupiter | 37664-10-02 13:12 G | 15477828.84 | 15477829.05 | 15477829.28 | 0.0498 | 0.0152 |
| Jupiter | 37671-04-19 04:33 G | 15480218.50 | 15480218.69 | 15480218.88 | 0.0529 | 0.0281 |
| Saturn | 37673-03-19 20:53 G | 15480919.15 | 15480919.37 | 15480919.60 | 0.0303 | 0.0110 |
| Jupiter | 37676-10-07 06:00 G | 15482216.52 | 15482216.75 | 15482216.99 | 0.0498 | 0.0016 |
| Jupiter | 37682-03-19 04:19 G | 15484205.64 | 15484205.68 | 15484205.73 | 0.0525 | 0.0513 |
| Jupiter | 37683-04-24 09:36 G | 15484606.74 | 15484606.90 | 15484607.08 | 0.0529 | 0.0366 |
| Saturn | 37687-09-19 08:53 G | 15486215.65 | 15486215.87 | 15486216.11 | 0.0259 | 0.0096 |
| Saturn | 37688-09-29 20:24 G | 15486592.32 | 15486592.35 | 15486592.39 | 0.0259 | 0.0255 |
| Jupiter | 37688-10-11 09:36 G | 15486603.66 | 15486603.90 | 15486604.13 | 0.0497 | 0.0075 |
| Jupiter | 37694-03-24 06:29 G | 15488593.61 | 15488593.77 | 15488593.95 | 0.0526 | 0.0367 |

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| Uranus | 37694-10-15 02:24 G | 15488798.48 | 15488798.60 | 15488798.74 | 0.0144 | 0.0123 |
| Jupiter | 37695-04-29 01:12 G | 15488994.43 | 15488994.55 | 15488994.68 | 0.0529 | 0.0449 |
| Uranus | 37695-10-19 19:12 G | 15489168.08 | 15489168.30 | 15489168.55 | 0.0143 | 0.0048 |
| Uranus | 37696-10-24 00:00 G | 15489538.27 | 15489538.50 | 15489538.75 | 0.0143 | 0.0051 |
| Uranus | 37697-10-28 14:38 G | 15489907.99 | 15489908.11 | 15489908.26 | 0.0143 | 0.0120 |
| Jupiter | 37700-10-17 01:41 G | 15490991.36 | 15490991.57 | 15490991.79 | 0.0497 | 0.0136 |
| Saturn | 37703-03-29 18:14 G | 15491885.12 | 15491885.26 | 15491885.42 | 0.0303 | 0.0233 |
| Jupiter | 37706-03-29 22:33 G | 15492981.23 | 15492981.44 | 15492981.65 | 0.0527 | 0.0221 |
| Mars | 37709-08-11 04:33 G | 15494211.50 | 15494211.69 | 15494211.87 | 0.1853 | 0.0079 |
| Jupiter | 37711-09-20 08:24 G | 15494981.74 | 15494981.85 | 15494981.97 | 0.0500 | 0.0424 |
| Neptune | 37712-08-30 10:33 G | 15495326.85 | 15495326.94 | 15495327.09 | 0.0088 | 0.0078 |
| Jupiter | 37712-10-21 06:29 G | 15495378.55 | 15495378.77 | 15495378.99 | 0.0496 | 0.0226 |
| Neptune | 37713-09-01 15:50 G | 15495693.97 | 15495694.16 | 15495694.36 | 0.0088 | 0.0056 |
| Neptune | 37714-09-04 07:55 G | 15496061.60 | 15496061.83 | 15496062.08 | 0.0088 | 0.0039 |
| Neptune | 37715-09-06 16:05 G | 15496428.94 | 15496429.17 | 15496429.42 | 0.0088 | 0.0018 |
| Neptune | 37716-09-08 03:50 G | 15496796.40 | 15496796.66 | 15496796.93 | 0.0088 | 0.0002 |
| Saturn | 37716-09-15 04:05 G | 15496803.62 | 15496803.67 | 15496803.75 | 0.0260 | 0.0251 |
| Neptune | 37717-09-10 16:48 G | 15497163.97 | 15497164.20 | 15497164.45 | 0.0088 | 0.0022 |
| Saturn | 37717-09-26 06:29 G | 15497179.55 | 15497179.77 | 15497180.01 | 0.0259 | 0.0107 |
| Jupiter | 37718-04-04 04:48 G | 15497369.48 | 15497369.70 | 15497369.92 | 0.0528 | 0.0139 |
| Neptune | 37718-09-12 23:02 G | 15497531.23 | 15497531.46 | 15497531.71 | 0.0088 | 0.0038 |
| Neptune | 37719-09-15 15:50 G | 15497898.99 | 15497899.16 | 15497899.36 | 0.0088 | 0.0059 |
| Neptune | 37720-09-16 19:55 G | 15498266.21 | 15498266.33 | 15498266.47 | 0.0088 | 0.0076 |
| Jupiter | 37723-09-24 22:33 G | 15499369.27 | 15499369.44 | 15499369.61 | 0.0499 | 0.0353 |
| Jupiter | 37724-10-25 15:36 G | 15499766.00 | 15499766.15 | 15499766.31 | 0.0496 | 0.0364 |
| Jupiter | 37730-04-09 01:26 G | 15501757.32 | 15501757.56 | 15501757.80 | 0.0528 | 0.0049 |
| Saturn | 37732-03-22 19:41 G | 15502471.07 | 15502471.32 | 15502471.57 | 0.0303 | 0.0020 |
| Mars | 37735-02-09 09:21 G | 15503524.70 | 15503524.89 | 15503525.08 | 0.1682 | 0.0343 |
| Jupiter | 37735-09-29 02:53 G | 15503756.43 | 15503756.62 | 15503756.80 | 0.0499 | 0.0290 |
| Jupiter | 37736-10-30 04:48 G | 15504153.63 | 15504153.70 | 15504153.79 | 0.0497 | 0.0465 |

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| Uranus | 37738-04-14 22:48 G | 15504685.33 | 15504685.45 | 15504685.59 | 0.0135 | 0.0117 |
| Uranus | 37739-04-19 03:21 G | 15505054.41 | 15505054.64 | 15505054.86 | 0.0135 | 0.0056 |
| Uranus | 37740-04-22 18:14 G | 15505424.00 | 15505424.26 | 15505424.52 | 0.0135 | 0.0016 |
| Uranus | 37741-04-26 22:48 G | 15505793.28 | 15505793.45 | 15505793.65 | 0.0135 | 0.0091 |
| Jupiter | 37742-04-14 00:43 G | 15506145.31 | 15506145.53 | 15506145.75 | 0.0528 | 0.0107 |
| Saturn | 37746-09-21 22:33 G | 15507767.21 | 15507767.44 | 15507767.68 | 0.0259 | 0.0042 |
| Jupiter | 37747-10-03 21:07 G | 15508144.16 | 15508144.38 | 15508144.60 | 0.0499 | 0.0163 |
| Jupiter | 37754-04-19 03:07 G | 15510533.42 | 15510533.63 | 15510533.84 | 0.0529 | 0.0257 |
| Jupiter | 37759-10-08 01:12 G | 15512531.31 | 15512531.55 | 15512531.79 | 0.0498 | 0.0029 |
| Saturn | 37761-03-16 09:21 G | 15513056.81 | 15513056.89 | 15513056.99 | 0.0303 | 0.0280 |
| Jupiter | 37766-04-23 21:50 G | 15514921.24 | 15514921.41 | 15514921.59 | 0.0529 | 0.0343 |
| Pluto | 37769-05-19 14:24 G | 15516042.89 | 15516043.10 | 15516043.33 | 0.0066 | 0.0034 |
| Pluto | 37770-05-21 10:33 G | 15516409.76 | 15516409.94 | 15516410.13 | 0.0066 | 0.0047 |
| Jupiter | 37771-10-12 17:31 G | 15516919.00 | 15516919.23 | 15516919.45 | 0.0497 | 0.0056 |
| Saturn | 37775-09-17 09:21 G | 15518354.73 | 15518354.89 | 15518355.06 | 0.0259 | 0.0197 |
| Saturn | 37776-09-27 11:45 G | 15518730.80 | 15518730.99 | 15518731.19 | 0.0259 | 0.0159 |
| Jupiter | 37777-03-23 21:07 G | 15518908.23 | 15518908.38 | 15518908.54 | 0.0526 | 0.0393 |
| Jupiter | 37778-04-29 07:12 G | 15519309.68 | 15519309.80 | 15519309.94 | 0.0530 | 0.0434 |
| Uranus | 37778-10-16 10:05 G | 15519479.81 | 15519479.92 | 15519480.06 | 0.0144 | 0.0125 |
| Uranus | 37779-10-21 04:19 G | 15519849.45 | 15519849.68 | 15519849.93 | 0.0143 | 0.0035 |
| Uranus | 37780-10-25 08:38 G | 15520219.62 | 15520219.86 | 15520220.12 | 0.0143 | 0.0038 |
| Uranus | 37781-10-29 23:31 G | 15520589.44 | 15520589.48 | 15520589.58 | 0.0143 | 0.0137 |
| Jupiter | 37783-10-16 23:31 G | 15521306.25 | 15521306.48 | 15521306.72 | 0.0497 | 0.0119 |
| Jupiter | 37789-03-29 03:50 G | 15523296.46 | 15523296.66 | 15523296.86 | 0.0527 | 0.0247 |
| Saturn | 37791-03-25 10:05 G | 15524022.68 | 15524022.92 | 15524023.17 | 0.0304 | 0.0059 |
| Jupiter | 37794-09-19 10:05 G | 15525296.82 | 15525296.92 | 15525297.05 | 0.0501 | 0.0443 |
| Jupiter | 37795-10-21 08:38 G | 15525693.66 | 15525693.86 | 15525694.07 | 0.0497 | 0.0218 |
| Neptune | 37796-03-01 12:00 G | 15525825.83 | 15525826.00 | 15525826.21 | 0.0089 | 0.0062 |
| Neptune | 37797-03-04 01:26 G | 15526193.36 | 15526193.56 | 15526193.77 | 0.0089 | 0.0050 |
| Neptune | 37798-03-06 10:19 G | 15526560.68 | 15526560.93 | 15526561.20 | 0.0090 | 0.0021 |

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| Neptune | 37799-03-09 04:19 G | 15526928.43 | 15526928.68 | 15526928.93 | 0.0090 | 0.0009 |
| Neptune | 37800-03-11 10:05 G | 15527295.68 | 15527295.92 | 15527296.18 | 0.0090 | 0.0020 |
| Neptune | 37801-03-14 05:17 G | 15527663.50 | 15527663.72 | 15527663.98 | 0.0090 | 0.0032 |
| Jupiter | 37801-04-03 23:45 G | 15527684.26 | 15527684.49 | 15527684.72 | 0.0527 | 0.0164 |
| Neptune | 37802-03-16 11:31 G | 15528030.80 | 15528030.98 | 15528031.17 | 0.0090 | 0.0061 |
| Neptune | 37803-03-19 05:02 G | 15528398.58 | 15528398.71 | 15528398.89 | 0.0090 | 0.0073 |
| Saturn | 37805-09-24 09:21 G | 15529318.65 | 15529318.89 | 15529319.14 | 0.0259 | 0.0010 |
| Jupiter | 37806-09-24 17:45 G | 15529684.10 | 15529684.24 | 15529684.39 | 0.0500 | 0.0378 |
| Jupiter | 37807-10-26 23:02 G | 15530081.29 | 15530081.46 | 15530081.62 | 0.0497 | 0.0355 |
| Jupiter | 37813-04-08 22:05 G | 15532072.20 | 15532072.42 | 15532072.64 | 0.0528 | 0.0071 |
| Jupiter | 37818-09-29 13:41 G | 15534071.88 | 15534072.07 | 15534072.25 | 0.0499 | 0.0304 |
| Jupiter | 37819-10-31 03:07 G | 15534468.55 | 15534468.63 | 15534468.72 | 0.0497 | 0.0458 |
| Saturn | 37820-03-19 06:00 G | 15534608.59 | 15534608.75 | 15534608.93 | 0.0303 | 0.0206 |
| Uranus | 37822-04-16 11:17 G | 15535366.88 | 15535366.97 | 15535367.10 | 0.0135 | 0.0123 |
| Uranus | 37823-04-20 16:33 G | 15535735.97 | 15535736.19 | 15535736.44 | 0.0135 | 0.0045 |
| Uranus | 37824-04-24 06:29 G | 15536105.51 | 15536105.77 | 15536106.03 | 0.0135 | 0.0022 |
| Jupiter | 37825-04-14 01:26 G | 15536460.32 | 15536460.56 | 15536460.79 | 0.0528 | 0.0090 |
| Uranus | 37825-04-28 12:14 G | 15536474.83 | 15536475.01 | 15536475.20 | 0.0135 | 0.0090 |
| Jupiter | 37830-10-03 18:14 G | 15538459.04 | 15538459.26 | 15538459.48 | 0.0498 | 0.0177 |
| Saturn | 37834-09-19 12:00 G | 15539905.81 | 15539906.00 | 15539906.21 | 0.0259 | 0.0149 |
| Saturn | 37835-09-30 20:09 G | 15540282.20 | 15540282.34 | 15540282.49 | 0.0259 | 0.0206 |
| Jupiter | 37837-04-18 21:07 G | 15540848.17 | 15540848.38 | 15540848.58 | 0.0529 | 0.0239 |
| Jupiter | 37842-10-08 11:45 G | 15542846.77 | 15542846.99 | 15542847.22 | 0.0498 | 0.0045 |
| Jupiter | 37849-04-24 05:45 G | 15545236.56 | 15545236.74 | 15545236.92 | 0.0529 | 0.0317 |
| Saturn | 37850-03-27 21:07 G | 15545574.17 | 15545574.38 | 15545574.61 | 0.0304 | 0.0129 |
| Jupiter | 37854-10-12 16:05 G | 15547233.92 | 15547234.17 | 15547234.41 | 0.0498 | 0.0038 |
| Pluto | 37856-11-20 19:12 G | 15548004.10 | 15548004.30 | 15548004.53 | 0.0079 | 0.0046 |
| Jupiter | 37860-03-24 07:55 G | 15549223.68 | 15549223.83 | 15549223.97 | 0.0525 | 0.0400 |
| Jupiter | 37861-04-29 01:12 G | 15549624.41 | 15549624.55 | 15549624.70 | 0.0529 | 0.0413 |
| Uranus | 37862-10-17 17:31 G | 15550161.10 | 15550161.23 | 15550161.38 | 0.0144 | 0.0121 |

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| Uranus | 37863-10-22 12:57 G | 15550530.80 | 15550531.04 | 15550531.28 | 0.0143 | 0.0042 |
| Saturn | 37864-09-25 11:02 G | 15550869.72 | 15550869.96 | 15550870.22 | 0.0258 | 0.0054 |
| Uranus | 37864-10-26 15:36 G | 15550900.92 | 15550901.15 | 15550901.40 | 0.0143 | 0.0054 |
| Uranus | 37865-10-31 07:41 G | 15551270.72 | 15551270.82 | 15551270.96 | 0.0143 | 0.0124 |
| Jupiter | 37866-10-17 04:19 G | 15551621.46 | 15551621.68 | 15551621.90 | 0.0498 | 0.0102 |
| Jupiter | 37872-03-28 23:17 G | 15553611.27 | 15553611.47 | 15553611.68 | 0.0526 | 0.0264 |
| Neptune | 37876-08-30 12:29 G | 15555226.96 | 15555227.02 | 15555227.10 | 0.0088 | 0.0084 |
| Neptune | 37877-09-02 03:36 G | 15555594.51 | 15555594.65 | 15555594.81 | 0.0088 | 0.0072 |
| Jupiter | 37877-09-19 11:17 G | 15555611.89 | 15555611.97 | 15555612.06 | 0.0501 | 0.0460 |
| Neptune | 37878-09-04 12:57 G | 15555961.84 | 15555962.04 | 15555962.27 | 0.0088 | 0.0045 |
| Jupiter | 37878-10-21 18:57 G | 15556009.08 | 15556009.29 | 15556009.51 | 0.0497 | 0.0214 |
| Saturn | 37879-03-21 18:00 G | 15556160.04 | 15556160.25 | 15556160.47 | 0.0304 | 0.0140 |
| Neptune | 37879-09-06 22:48 G | 15556329.21 | 15556329.45 | 15556329.71 | 0.0088 | 0.0033 |
| Neptune | 37880-09-08 13:26 G | 15556696.81 | 15556697.06 | 15556697.32 | 0.0088 | 0.0006 |
| Neptune | 37881-09-10 18:57 G | 15557064.04 | 15557064.29 | 15557064.56 | 0.0088 | 0.0006 |
| Neptune | 37882-09-13 12:43 G | 15557431.80 | 15557432.03 | 15557432.28 | 0.0088 | 0.0033 |
| Neptune | 37883-09-15 16:33 G | 15557798.98 | 15557799.19 | 15557799.42 | 0.0088 | 0.0044 |
| Jupiter | 37884-04-03 00:43 G | 15557999.32 | 15557999.53 | 15557999.74 | 0.0527 | 0.0185 |
| Neptune | 37884-09-17 10:05 G | 15558166.78 | 15558166.92 | 15558167.08 | 0.0088 | 0.0072 |
| Neptune | 37885-09-19 15:50 G | 15558534.10 | 15558534.16 | 15558534.25 | 0.0088 | 0.0083 |
| Jupiter | 37889-09-24 08:09 G | 15559999.70 | 15559999.84 | 15559999.98 | 0.0500 | 0.0400 |
| Jupiter | 37890-10-25 23:31 G | 15560396.32 | 15560396.48 | 15560396.64 | 0.0497 | 0.0347 |
| Saturn | 37893-09-20 16:48 G | 15561456.98 | 15561457.20 | 15561457.42 | 0.0259 | 0.0104 |
| Saturn | 37894-10-02 02:53 G | 15561833.55 | 15561833.62 | 15561833.69 | 0.0259 | 0.0247 |
| Jupiter | 37896-04-08 02:53 G | 15562387.39 | 15562387.62 | 15562387.86 | 0.0528 | 0.0086 |
| Jupiter | 37901-09-29 13:26 G | 15564386.88 | 15564387.06 | 15564387.25 | 0.0499 | 0.0318 |
| Jupiter | 37902-10-31 17:17 G | 15564784.12 | 15564784.22 | 15564784.32 | 0.0496 | 0.0446 |
| Uranus | 37906-04-17 23:02 G | 15566048.32 | 15566048.46 | 15566048.64 | 0.0135 | 0.0107 |
| Uranus | 37907-04-22 06:00 G | 15566417.53 | 15566417.75 | 15566417.99 | 0.0135 | 0.0047 |
| Jupiter | 37908-04-14 00:14 G | 15566775.28 | 15566775.51 | 15566775.73 | 0.0528 | 0.0079 |

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| Uranus | 37908-04-25 19:26 G | 15566787.06 | 15566787.31 | 15566787.57 | 0.0135 | 0.0028 |
| Saturn | 37909-03-30 06:57 G | 15567125.61 | 15567125.79 | 15567125.98 | 0.0304 | 0.0189 |
| Uranus | 37909-04-30 02:09 G | 15567156.44 | 15567156.59 | 15567156.77 | 0.0136 | 0.0101 |
| Jupiter | 37913-10-04 04:19 G | 15568774.47 | 15568774.68 | 15568774.89 | 0.0499 | 0.0190 |
| Jupiter | 37920-04-19 09:21 G | 15571163.68 | 15571163.89 | 15571164.10 | 0.0528 | 0.0224 |
| Saturn | 37923-09-28 07:26 G | 15572420.58 | 15572420.81 | 15572421.05 | 0.0258 | 0.0092 |
| Jupiter | 37925-10-08 12:14 G | 15573161.77 | 15573162.01 | 15573162.25 | 0.0499 | 0.0059 |
| Jupiter | 37932-04-24 01:26 G | 15575551.37 | 15575551.56 | 15575551.76 | 0.0529 | 0.0304 |
| Jupiter | 37937-10-13 01:55 G | 15577549.35 | 15577549.58 | 15577549.80 | 0.0498 | 0.0020 |
| Saturn | 37938-03-23 18:29 G | 15577711.03 | 15577711.27 | 15577711.51 | 0.0304 | 0.0085 |
| Mars | 37940-02-10 15:07 G | 15578400.01 | 15578400.13 | 15578400.26 | 0.1672 | 0.1239 |
| Jupiter | 37943-03-25 04:48 G | 15579538.56 | 15579538.70 | 15579538.85 | 0.0525 | 0.0409 |
| Jupiter | 37944-04-29 07:26 G | 15579939.67 | 15579939.81 | 15579939.95 | 0.0529 | 0.0407 |
| Uranus | 37946-10-19 04:19 G | 15580842.55 | 15580842.68 | 15580842.85 | 0.0144 | 0.0117 |
| Uranus | 37947-10-24 01:26 G | 15581212.33 | 15581212.56 | 15581212.81 | 0.0143 | 0.0030 |
| Uranus | 37948-10-28 03:21 G | 15581582.40 | 15581582.64 | 15581582.90 | 0.0143 | 0.0045 |
| Jupiter | 37949-10-17 17:17 G | 15581936.99 | 15581937.22 | 15581937.46 | 0.0497 | 0.0088 |
| Uranus | 37949-11-01 20:38 G | 15581952.36 | 15581952.36 | 15581952.38 | 0.0143 | 0.0142 |
| Saturn | 37952-09-22 20:38 G | 15583008.13 | 15583008.36 | 15583008.59 | 0.0258 | 0.0065 |
| Jupiter | 37955-03-30 06:57 G | 15583926.60 | 15583926.79 | 15583926.98 | 0.0526 | 0.0282 |
| Neptune | 37960-03-02 21:07 G | 15585726.26 | 15585726.38 | 15585726.53 | 0.0089 | 0.0076 |
| Jupiter | 37960-09-20 03:50 G | 15585927.59 | 15585927.66 | 15585927.74 | 0.0501 | 0.0473 |
| Neptune | 37961-03-05 04:19 G | 15586093.50 | 15586093.68 | 15586093.90 | 0.0089 | 0.0059 |
| Jupiter | 37961-10-21 22:19 G | 15586324.23 | 15586324.43 | 15586324.65 | 0.0497 | 0.0207 |
| Neptune | 37962-03-07 23:02 G | 15586461.23 | 15586461.46 | 15586461.69 | 0.0089 | 0.0036 |
| Neptune | 37963-03-10 04:19 G | 15586828.43 | 15586828.68 | 15586828.93 | 0.0089 | 0.0018 |
| Neptune | 37964-03-11 23:17 G | 15587196.22 | 15587196.47 | 15587196.73 | 0.0090 | 0.0005 |
| Neptune | 37965-03-14 05:17 G | 15587563.49 | 15587563.72 | 15587563.97 | 0.0090 | 0.0025 |
| Neptune | 37966-03-16 21:50 G | 15587931.21 | 15587931.41 | 15587931.66 | 0.0090 | 0.0047 |
| Neptune | 37967-03-19 07:55 G | 15588298.69 | 15588298.83 | 15588299.03 | 0.0090 | 0.0067 |

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| Jupiter | 37967-04-04 10:19 G | 15588314.71 | 15588314.93 | 15588315.15 | 0.0527 | 0.0200 |
| Neptune | 37968-03-20 20:24 G | 15588666.32 | 15588666.35 | 15588666.45 | 0.0090 | 0.0087 |
| Saturn | 37968-03-31 12:14 G | 15588676.86 | 15588677.01 | 15588677.16 | 0.0304 | 0.0237 |
| Jupiter | 37972-09-24 05:31 G | 15590314.60 | 15590314.73 | 15590314.86 | 0.0501 | 0.0417 |
| Jupiter | 37973-10-26 13:55 G | 15590711.91 | 15590712.08 | 15590712.25 | 0.0497 | 0.0341 |
| Jupiter | 37979-04-09 07:55 G | 15592702.61 | 15592702.83 | 15592703.06 | 0.0527 | 0.0091 |
| Saturn | 37981-09-18 00:57 G | 15593595.43 | 15593595.54 | 15593595.68 | 0.0259 | 0.0223 |
| Saturn | 37982-09-29 05:45 G | 15593971.54 | 15593971.74 | 15593971.95 | 0.0258 | 0.0130 |
| Jupiter | 37984-09-29 01:12 G | 15594702.38 | 15594702.55 | 15594702.72 | 0.0500 | 0.0330 |
| Jupiter | 37985-10-30 18:00 G | 15595099.14 | 15595099.25 | 15595099.36 | 0.0497 | 0.0435 |
| Uranus | 37990-04-18 11:45 G | 15596729.87 | 15596729.99 | 15596730.15 | 0.0135 | 0.0114 |
| Jupiter | 37991-04-14 13:41 G | 15597090.84 | 15597091.07 | 15597091.30 | 0.0528 | 0.0079 |
| Uranus | 37991-04-22 19:55 G | 15597099.10 | 15597099.33 | 15597099.57 | 0.0135 | 0.0034 |
| Uranus | 37992-04-26 07:41 G | 15597468.56 | 15597468.82 | 15597469.08 | 0.0135 | 0.0031 |
| Uranus | 37993-04-30 15:36 G | 15597838.00 | 15597838.15 | 15597838.33 | 0.0136 | 0.0102 |
| Mars | 37993-08-12 19:26 G | 15597942.13 | 15597942.31 | 15597942.50 | 0.1862 | 0.0993 |
| Jupiter | 37996-10-03 10:33 G | 15599089.72 | 15599089.94 | 15599090.17 | 0.0499 | 0.0194 |
| Saturn | 37997-03-24 13:26 G | 15599261.82 | 15599262.06 | 15599262.30 | 0.0304 | 0.0042 |
| Jupiter | 37997-11-04 11:31 G | 15599486.96 | 15599486.98 | 15599487.02 | 0.0497 | 0.0491 |

39TH MILLENNIUM CE

This is a list of transits of Moon in the 39th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|------|-------------------------|---|-------|-----|-----|--------|-------|---|
|------|-------------------------|---|-------|-----|-----|--------|-------|---|

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 38003-04-19 06:57 G | 15601478.58 | 15601478.79 | 15601479.01 | 0.0528 | 0.0213 |
| Jupiter | 38008-10-08 01:26 G | 15603477.34 | 15603477.56 | 15603477.79 | 0.0498 | 0.0068 |
| Saturn | 38011-09-24 18:14 G | 15604559.02 | 15604559.26 | 15604559.52 | 0.0258 | 0.0031 |
| Jupiter | 38015-04-24 14:24 G | 15605866.92 | 15605867.10 | 15605867.29 | 0.0529 | 0.0294 |
| Pluto | 38016-05-23 18:14 G | 15606262.00 | 15606262.26 | 15606262.52 | 0.0066 | 0.0013 |
| Mars | 38019-02-12 14:24 G | 15607256.93 | 15607257.10 | 15607257.27 | 0.1677 | 0.0421 |
| Jupiter | 38020-10-12 17:17 G | 15607864.97 | 15607865.22 | 15607865.46 | 0.0498 | 0.0009 |
| Jupiter | 38026-03-24 18:57 G | 15609854.16 | 15609854.29 | 15609854.44 | 0.0525 | 0.0414 |
| Saturn | 38027-04-02 07:12 G | 15610227.71 | 15610227.80 | 15610227.90 | 0.0304 | 0.0279 |
| Jupiter | 38027-04-29 17:17 G | 15610255.07 | 15610255.22 | 15610255.38 | 0.0529 | 0.0403 |
| Uranus | 38030-10-19 16:19 G | 15611524.04 | 15611524.18 | 15611524.36 | 0.0144 | 0.0114 |
| Uranus | 38031-10-24 14:24 G | 15611893.87 | 15611894.10 | 15611894.35 | 0.0143 | 0.0031 |
| Jupiter | 38032-10-16 18:43 G | 15612252.05 | 15612252.28 | 15612252.51 | 0.0498 | 0.0077 |
| Uranus | 38032-10-28 14:53 G | 15612263.89 | 15612264.12 | 15612264.36 | 0.0143 | 0.0062 |
| Uranus | 38033-11-02 08:53 G | 15612633.80 | 15612633.87 | 15612633.97 | 0.0142 | 0.0133 |
| Jupiter | 38038-03-29 21:07 G | 15614242.18 | 15614242.38 | 15614242.58 | 0.0526 | 0.0286 |
| Saturn | 38040-09-18 19:55 G | 15615146.18 | 15615146.33 | 15615146.50 | 0.0259 | 0.0192 |
| Neptune | 38041-09-02 09:50 G | 15615494.83 | 15615494.91 | 15615495.01 | 0.0088 | 0.0082 |
| Saturn | 38041-09-30 05:45 G | 15615522.56 | 15615522.74 | 15615522.93 | 0.0258 | 0.0161 |
| Neptune | 38042-09-04 18:29 G | 15615862.09 | 15615862.27 | 15615862.50 | 0.0088 | 0.0057 |
| Neptune | 38043-09-07 10:48 G | 15616229.75 | 15616229.95 | 15616230.19 | 0.0088 | 0.0044 |
| Jupiter | 38043-09-20 02:09 G | 15616242.54 | 15616242.59 | 15616242.65 | 0.0502 | 0.0487 |
| Neptune | 38044-09-08 16:05 G | 15616596.92 | 15616597.17 | 15616597.44 | 0.0088 | 0.0018 |
| Jupiter | 38044-10-21 14:09 G | 15616639.88 | 15616640.09 | 15616640.31 | 0.0498 | 0.0203 |
| Neptune | 38045-09-11 10:19 G | 15616964.68 | 15616964.93 | 15616965.20 | 0.0088 | 0.0004 |
| Neptune | 38046-09-13 14:24 G | 15617331.86 | 15617332.10 | 15617332.36 | 0.0088 | 0.0022 |
| Neptune | 38047-09-16 07:12 G | 15617699.58 | 15617699.80 | 15617700.06 | 0.0088 | 0.0037 |
| Neptune | 38048-09-17 13:55 G | 15618066.91 | 15618067.08 | 15618067.27 | 0.0088 | 0.0060 |
| Neptune | 38049-09-20 01:55 G | 15618434.47 | 15618434.58 | 15618434.75 | 0.0088 | 0.0075 |
| Jupiter | 38050-04-03 15:36 G | 15618629.95 | 15618630.15 | 15618630.36 | 0.0526 | 0.0215 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 38055-09-24 23:45 G | 15620630.38 | 15620630.49 | 15620630.61 | 0.0501 | 0.0429 |
| Saturn | 38056-03-25 10:19 G | 15620812.69 | 15620812.93 | 15620813.16 | 0.0304 | 0.0006 |
| Jupiter | 38056-10-25 19:41 G | 15621027.15 | 15621027.32 | 15621027.49 | 0.0497 | 0.0339 |
| Jupiter | 38062-04-08 21:50 G | 15623018.18 | 15623018.41 | 15623018.64 | 0.0527 | 0.0095 |
| Jupiter | 38067-09-29 10:48 G | 15625017.77 | 15625017.95 | 15625018.13 | 0.0500 | 0.0332 |
| Jupiter | 38068-10-30 13:12 G | 15625414.94 | 15625415.05 | 15625415.17 | 0.0497 | 0.0424 |
| Saturn | 38070-09-25 09:07 G | 15626109.62 | 15626109.88 | 15626110.13 | 0.0258 | 0.0005 |
| Jupiter | 38074-04-13 15:36 G | 15627405.91 | 15627406.15 | 15627406.38 | 0.0528 | 0.0072 |
| Uranus | 38074-04-18 22:48 G | 15627411.29 | 15627411.45 | 15627411.65 | 0.0135 | 0.0097 |
| Uranus | 38075-04-23 08:24 G | 15627780.63 | 15627780.85 | 15627781.10 | 0.0135 | 0.0039 |
| Uranus | 38076-04-26 19:26 G | 15628150.06 | 15628150.31 | 15628150.57 | 0.0135 | 0.0039 |
| Uranus | 38077-05-01 04:48 G | 15628519.57 | 15628519.70 | 15628519.86 | 0.0136 | 0.0109 |
| Jupiter | 38079-10-04 01:12 G | 15629405.35 | 15629405.55 | 15629405.76 | 0.0499 | 0.0190 |
| Jupiter | 38080-11-03 21:50 G | 15629802.37 | 15629802.41 | 15629802.48 | 0.0497 | 0.0481 |
| Saturn | 38085-03-18 12:57 G | 15631397.99 | 15631398.04 | 15631398.11 | 0.0303 | 0.0293 |
| Jupiter | 38086-04-19 01:12 G | 15631794.35 | 15631794.55 | 15631794.76 | 0.0528 | 0.0206 |
| Jupiter | 38091-10-08 12:29 G | 15633792.78 | 15633793.02 | 15633793.26 | 0.0499 | 0.0076 |
| Jupiter | 38098-04-24 02:53 G | 15636182.42 | 15636182.62 | 15636182.83 | 0.0528 | 0.0285 |
| Saturn | 38099-09-20 19:26 G | 15636697.13 | 15636697.31 | 15636697.50 | 0.0259 | 0.0164 |
| Saturn | 38100-10-02 02:09 G | 15637073.43 | 15637073.59 | 15637073.76 | 0.0258 | 0.0191 |
| Jupiter | 38103-10-13 18:57 G | 15638180.06 | 15638180.29 | 15638180.52 | 0.0498 | 0.0007 |
| Pluto | 38103-11-26 09:07 G | 15638223.64 | 15638223.88 | 15638224.12 | 0.0078 | 0.0034 |
| Jupiter | 38109-03-25 06:29 G | 15640169.63 | 15640169.77 | 15640169.92 | 0.0525 | 0.0416 |
| Jupiter | 38110-04-29 23:31 G | 15640570.34 | 15640570.48 | 15640570.63 | 0.0528 | 0.0405 |
| Uranus | 38114-10-21 05:31 G | 15642205.57 | 15642205.73 | 15642205.93 | 0.0144 | 0.0104 |
| Saturn | 38115-03-28 06:57 G | 15642363.55 | 15642363.79 | 15642364.02 | 0.0305 | 0.0032 |
| Jupiter | 38115-10-18 16:05 G | 15642567.94 | 15642568.17 | 15642568.40 | 0.0498 | 0.0075 |
| Uranus | 38115-10-26 05:02 G | 15642575.48 | 15642575.71 | 15642575.96 | 0.0143 | 0.0021 |
| Uranus | 38116-10-30 04:33 G | 15642945.45 | 15642945.69 | 15642945.94 | 0.0143 | 0.0056 |
| Jupiter | 38121-03-30 02:09 G | 15644557.41 | 15644557.59 | 15644557.78 | 0.0525 | 0.0303 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 38125-03-05 18:43 G | 15645994.12 | 15645994.28 | 15645994.48 | 0.0089 | 0.0065 |
| Neptune | 38126-03-07 23:45 G | 15646361.31 | 15646361.49 | 15646361.72 | 0.0089 | 0.0053 |
| Jupiter | 38126-09-20 23:02 G | 15646558.45 | 15646558.46 | 15646558.48 | 0.0502 | 0.0500 |
| Neptune | 38127-03-10 18:29 G | 15646729.03 | 15646729.27 | 15646729.54 | 0.0090 | 0.0024 |
| Jupiter | 38127-10-22 21:21 G | 15646955.18 | 15646955.39 | 15646955.61 | 0.0498 | 0.0206 |
| Neptune | 38128-03-12 01:55 G | 15647096.34 | 15647096.58 | 15647096.83 | 0.0090 | 0.0011 |
| Neptune | 38129-03-14 17:17 G | 15647463.97 | 15647464.22 | 15647464.49 | 0.0090 | 0.0019 |
| Saturn | 38129-09-27 01:26 G | 15647660.32 | 15647660.56 | 15647660.80 | 0.0258 | 0.0027 |
| Neptune | 38130-03-17 04:48 G | 15647831.47 | 15647831.70 | 15647831.94 | 0.0090 | 0.0031 |
| Neptune | 38131-03-19 14:38 G | 15648198.94 | 15648199.11 | 15648199.33 | 0.0090 | 0.0060 |
| Neptune | 38132-03-21 06:43 G | 15648566.66 | 15648566.78 | 15648566.96 | 0.0090 | 0.0072 |
| Jupiter | 38133-04-04 07:55 G | 15648945.62 | 15648945.83 | 15648946.04 | 0.0527 | 0.0231 |
| Jupiter | 38138-09-25 09:36 G | 15650945.79 | 15650945.90 | 15650946.03 | 0.0501 | 0.0433 |
| Jupiter | 38139-10-27 14:53 G | 15651342.97 | 15651343.12 | 15651343.29 | 0.0497 | 0.0342 |
| Saturn | 38144-03-20 01:41 G | 15652948.45 | 15652948.57 | 15652948.70 | 0.0303 | 0.0260 |
| Jupiter | 38145-04-09 03:50 G | 15653333.43 | 15653333.66 | 15653333.90 | 0.0527 | 0.0098 |
| Jupiter | 38150-09-29 19:41 G | 15655333.16 | 15655333.32 | 15655333.49 | 0.0500 | 0.0337 |
| Jupiter | 38151-10-31 19:26 G | 15655730.19 | 15655730.31 | 15655730.45 | 0.0497 | 0.0413 |
| Jupiter | 38157-04-14 13:12 G | 15657721.82 | 15657722.05 | 15657722.27 | 0.0528 | 0.0076 |
| Uranus | 38158-04-20 09:36 G | 15658092.76 | 15658092.90 | 15658093.08 | 0.0135 | 0.0106 |
| Saturn | 38158-09-22 16:19 G | 15658247.97 | 15658248.18 | 15658248.40 | 0.0259 | 0.0134 |
| Uranus | 38159-04-24 20:24 G | 15658462.11 | 15658462.35 | 15658462.60 | 0.0135 | 0.0025 |
| Saturn | 38159-10-03 16:33 G | 15658624.07 | 15658624.19 | 15658624.33 | 0.0258 | 0.0221 |
| Uranus | 38160-04-28 05:17 G | 15658831.47 | 15658831.72 | 15658831.98 | 0.0135 | 0.0037 |
| Uranus | 38161-05-02 15:36 G | 15659201.03 | 15659201.15 | 15659201.31 | 0.0136 | 0.0112 |
| Jupiter | 38162-10-04 11:45 G | 15659720.77 | 15659720.99 | 15659721.21 | 0.0500 | 0.0189 |
| Jupiter | 38163-11-05 06:57 G | 15660117.74 | 15660117.79 | 15660117.86 | 0.0497 | 0.0480 |
| Jupiter | 38169-04-19 09:21 G | 15662109.67 | 15662109.89 | 15662110.12 | 0.0528 | 0.0193 |
| Saturn | 38174-03-28 23:31 G | 15663914.23 | 15663914.48 | 15663914.72 | 0.0304 | 0.0070 |
| Jupiter | 38174-10-08 19:41 G | 15664108.09 | 15664108.32 | 15664108.55 | 0.0499 | 0.0081 |

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| Jupiter | 38181-04-24 08:09 G | 15666497.65 | 15666497.84 | 15666498.04 | 0.0528 | 0.0272 |
| Jupiter | 38186-10-13 17:17 G | 15668495.98 | 15668496.22 | 15668496.45 | 0.0498 | 0.0015 |
| Saturn | 38188-09-28 00:57 G | 15669211.31 | 15669211.54 | 15669211.77 | 0.0258 | 0.0058 |
| Jupiter | 38192-03-24 12:57 G | 15670484.92 | 15670485.04 | 15670485.18 | 0.0525 | 0.0426 |
| Jupiter | 38193-04-29 15:50 G | 15670886.01 | 15670886.16 | 15670886.31 | 0.0529 | 0.0404 |
| Jupiter | 38198-10-17 22:19 G | 15672883.19 | 15672883.43 | 15672883.66 | 0.0498 | 0.0075 |
| Uranus | 38198-10-21 15:07 G | 15672886.97 | 15672887.13 | 15672887.33 | 0.0144 | 0.0106 |
| Uranus | 38199-10-26 15:50 G | 15673256.92 | 15673257.16 | 15673257.41 | 0.0143 | 0.0020 |
| Uranus | 38200-10-31 13:26 G | 15673626.85 | 15673627.06 | 15673627.31 | 0.0143 | 0.0071 |
| Uranus | 38201-11-05 10:19 G | 15673996.93 | 15673996.93 | 15673996.95 | 0.0143 | 0.0142 |
| Saturn | 38203-03-22 22:05 G | 15674499.26 | 15674499.42 | 15674499.58 | 0.0303 | 0.0221 |
| Jupiter | 38204-03-30 20:53 G | 15674873.19 | 15674873.37 | 15674873.56 | 0.0526 | 0.0318 |
| Neptune | 38206-09-06 07:55 G | 15675762.71 | 15675762.83 | 15675762.97 | 0.0088 | 0.0074 |
| Neptune | 38207-09-08 12:14 G | 15676129.82 | 15676130.01 | 15676130.25 | 0.0088 | 0.0049 |
| Neptune | 38208-09-10 06:43 G | 15676497.56 | 15676497.78 | 15676498.04 | 0.0088 | 0.0035 |
| Neptune | 38209-09-12 11:45 G | 15676864.74 | 15676864.99 | 15676865.24 | 0.0088 | 0.0008 |
| Neptune | 38210-09-15 04:05 G | 15677232.40 | 15677232.67 | 15677232.94 | 0.0088 | 0.0005 |
| Jupiter | 38210-10-23 10:48 G | 15677270.75 | 15677270.95 | 15677271.16 | 0.0498 | 0.0211 |
| Neptune | 38211-09-17 12:14 G | 15677599.79 | 15677600.01 | 15677600.25 | 0.0088 | 0.0031 |
| Neptune | 38212-09-19 00:00 G | 15677967.28 | 15677967.50 | 15677967.75 | 0.0088 | 0.0044 |
| Neptune | 38213-09-21 12:29 G | 15678334.90 | 15678335.02 | 15678335.20 | 0.0088 | 0.0071 |
| Neptune | 38214-09-23 19:12 G | 15678702.25 | 15678702.30 | 15678702.41 | 0.0088 | 0.0084 |
| Jupiter | 38216-04-04 15:50 G | 15679260.95 | 15679261.16 | 15679261.37 | 0.0526 | 0.0237 |
| Saturn | 38217-09-24 08:09 G | 15679798.61 | 15679798.84 | 15679799.08 | 0.0259 | 0.0103 |
| Saturn | 38218-10-05 09:21 G | 15680174.86 | 15680174.89 | 15680174.93 | 0.0258 | 0.0255 |
| Jupiter | 38221-09-25 17:31 G | 15681261.13 | 15681261.23 | 15681261.33 | 0.0501 | 0.0449 |
| Jupiter | 38222-10-27 20:09 G | 15681658.16 | 15681658.34 | 15681658.52 | 0.0498 | 0.0335 |
| Mars | 38224-02-13 10:05 G | 15682131.74 | 15682131.92 | 15682132.10 | 0.1667 | 0.0703 |
| Jupiter | 38228-04-09 20:53 G | 15683649.15 | 15683649.37 | 15683649.59 | 0.0527 | 0.0101 |
| Saturn | 38233-03-30 13:26 G | 15685464.83 | 15685465.06 | 15685465.29 | 0.0304 | 0.0114 |

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| Jupiter | 38233-09-30 10:33 G | 15685648.77 | 15685648.94 | 15685649.13 | 0.0500 | 0.0334 |
| Jupiter | 38234-11-01 08:24 G | 15686045.73 | 15686045.85 | 15686045.98 | 0.0498 | 0.0410 |
| Jupiter | 38240-04-14 16:33 G | 15688036.95 | 15688037.19 | 15688037.43 | 0.0527 | 0.0065 |
| Uranus | 38242-04-21 18:43 G | 15688774.09 | 15688774.28 | 15688774.48 | 0.0135 | 0.0089 |
| Uranus | 38243-04-26 06:43 G | 15689143.55 | 15689143.78 | 15689144.02 | 0.0135 | 0.0033 |
| Uranus | 38244-04-29 14:09 G | 15689512.86 | 15689513.09 | 15689513.35 | 0.0135 | 0.0048 |
| Uranus | 38245-05-04 02:24 G | 15689882.48 | 15689882.60 | 15689882.74 | 0.0136 | 0.0114 |
| Jupiter | 38245-10-04 19:12 G | 15690036.09 | 15690036.30 | 15690036.51 | 0.0500 | 0.0192 |
| Jupiter | 38246-11-05 23:45 G | 15690433.43 | 15690433.49 | 15690433.57 | 0.0497 | 0.0475 |
| Saturn | 38247-10-01 01:12 G | 15690762.32 | 15690762.55 | 15690762.78 | 0.0258 | 0.0093 |
| Jupiter | 38252-04-19 16:19 G | 15692424.97 | 15692425.18 | 15692425.39 | 0.0528 | 0.0177 |
| Jupiter | 38257-10-09 16:05 G | 15694423.94 | 15694424.17 | 15694424.40 | 0.0499 | 0.0087 |
| Saturn | 38262-03-24 00:14 G | 15696050.32 | 15696050.51 | 15696050.72 | 0.0303 | 0.0172 |
| Pluto | 38262-05-27 06:29 G | 15696114.57 | 15696114.77 | 15696115.00 | 0.0066 | 0.0032 |
| Pluto | 38263-05-28 18:43 G | 15696481.16 | 15696481.28 | 15696481.44 | 0.0066 | 0.0056 |
| Jupiter | 38264-04-25 01:41 G | 15696813.36 | 15696813.57 | 15696813.77 | 0.0528 | 0.0262 |
| Jupiter | 38269-10-13 16:05 G | 15698810.93 | 15698811.17 | 15698811.41 | 0.0498 | 0.0024 |
| Jupiter | 38275-03-26 08:09 G | 15700800.71 | 15700800.84 | 15700800.98 | 0.0525 | 0.0425 |
| Jupiter | 38276-04-29 21:21 G | 15701201.24 | 15701201.39 | 15701201.54 | 0.0528 | 0.0403 |
| Saturn | 38276-09-25 02:53 G | 15701349.38 | 15701349.62 | 15701349.86 | 0.0259 | 0.0068 |
| Jupiter | 38281-10-18 09:36 G | 15703198.67 | 15703198.90 | 15703199.12 | 0.0498 | 0.0071 |
| Uranus | 38282-10-22 21:36 G | 15703568.23 | 15703568.40 | 15703568.62 | 0.0144 | 0.0098 |
| Uranus | 38283-10-28 00:29 G | 15703938.28 | 15703938.52 | 15703938.77 | 0.0143 | 0.0017 |
| Uranus | 38284-10-31 20:53 G | 15704308.14 | 15704308.37 | 15704308.61 | 0.0143 | 0.0063 |
| Jupiter | 38287-03-30 22:48 G | 15705188.28 | 15705188.45 | 15705188.63 | 0.0525 | 0.0334 |
| Neptune | 38289-03-05 21:21 G | 15705894.28 | 15705894.39 | 15705894.53 | 0.0089 | 0.0077 |
| Neptune | 38290-03-08 15:21 G | 15706261.96 | 15706262.14 | 15706262.34 | 0.0089 | 0.0061 |
| Neptune | 38291-03-10 23:17 G | 15706629.25 | 15706629.47 | 15706629.70 | 0.0089 | 0.0036 |
| Neptune | 38292-03-12 12:57 G | 15706996.78 | 15706997.04 | 15706997.30 | 0.0089 | 0.0020 |
| Saturn | 38292-03-31 12:14 G | 15707015.81 | 15707016.01 | 15707016.21 | 0.0304 | 0.0168 |

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| Neptune | 38293-03-15 01:41 G | 15707364.32 | 15707364.57 | 15707364.82 | 0.0090 | 0.0005 |
| Jupiter | 38293-10-22 19:55 G | 15707586.11 | 15707586.33 | 15707586.55 | 0.0498 | 0.0212 |
| Neptune | 38294-03-17 10:33 G | 15707731.70 | 15707731.94 | 15707732.21 | 0.0090 | 0.0022 |
| Neptune | 38295-03-20 03:50 G | 15708099.47 | 15708099.66 | 15708099.89 | 0.0090 | 0.0048 |
| Neptune | 38296-03-21 10:05 G | 15708466.75 | 15708466.92 | 15708467.11 | 0.0090 | 0.0064 |
| Neptune | 38297-03-24 05:17 G | 15708834.70 | 15708834.72 | 15708834.78 | 0.0090 | 0.0089 |
| Jupiter | 38299-04-05 03:50 G | 15709576.47 | 15709576.66 | 15709576.87 | 0.0526 | 0.0253 |
| Mars | 38303-02-16 22:19 G | 15710989.30 | 15710989.43 | 15710989.56 | 0.1671 | 0.1230 |
| Jupiter | 38304-09-26 07:41 G | 15711576.73 | 15711576.82 | 15711576.91 | 0.0501 | 0.0462 |
| Saturn | 38305-09-21 18:14 G | 15711937.15 | 15711937.26 | 15711937.39 | 0.0259 | 0.0225 |
| Jupiter | 38305-10-28 07:26 G | 15711973.65 | 15711973.81 | 15711973.99 | 0.0498 | 0.0333 |
| Saturn | 38306-10-02 21:50 G | 15712313.20 | 15712313.41 | 15712313.63 | 0.0258 | 0.0134 |
| Jupiter | 38311-04-10 21:50 G | 15713964.18 | 15713964.41 | 15713964.65 | 0.0527 | 0.0112 |
| Jupiter | 38316-09-30 15:21 G | 15715963.98 | 15715964.14 | 15715964.31 | 0.0500 | 0.0339 |
| Jupiter | 38317-11-01 22:05 G | 15716361.29 | 15716361.42 | 15716361.58 | 0.0497 | 0.0399 |
| Saturn | 38321-03-26 01:41 G | 15717601.34 | 15717601.57 | 15717601.80 | 0.0303 | 0.0113 |
| Jupiter | 38323-04-16 01:12 G | 15718352.33 | 15718352.55 | 15718352.78 | 0.0528 | 0.0061 |
| Uranus | 38326-04-23 04:05 G | 15719455.51 | 15719455.67 | 15719455.86 | 0.0135 | 0.0100 |
| Uranus | 38327-04-27 17:31 G | 15719824.98 | 15719825.23 | 15719825.47 | 0.0135 | 0.0017 |
| Uranus | 38328-04-30 23:02 G | 15720194.22 | 15720194.46 | 15720194.72 | 0.0135 | 0.0043 |
| Jupiter | 38328-10-05 07:55 G | 15720351.62 | 15720351.83 | 15720352.05 | 0.0499 | 0.0202 |
| Uranus | 38329-05-05 12:00 G | 15720563.91 | 15720564.00 | 15720564.14 | 0.0136 | 0.0120 |
| Jupiter | 38329-11-05 22:48 G | 15720748.38 | 15720748.45 | 15720748.53 | 0.0497 | 0.0468 |
| Jupiter | 38335-04-21 08:10 G | 15722740.62 | 15722740.84 | 15722741.07 | 0.0528 | 0.0162 |
| Saturn | 38335-09-28 05:31 G | 15722900.49 | 15722900.73 | 15722900.97 | 0.0259 | 0.0025 |
| Jupiter | 38340-10-09 12:00 G | 15724738.77 | 15724739.00 | 15724739.24 | 0.0499 | 0.0102 |
| Jupiter | 38347-04-25 23:31 G | 15727128.28 | 15727128.48 | 15727128.69 | 0.0528 | 0.0248 |
| Pluto | 38349-11-28 08:10 G | 15728075.62 | 15728075.84 | 15728076.08 | 0.0079 | 0.0038 |
| Saturn | 38351-04-03 22:34 G | 15728567.30 | 15728567.44 | 15728567.59 | 0.0304 | 0.0234 |
| Jupiter | 38352-10-14 06:43 G | 15729126.56 | 15729126.78 | 15729127.01 | 0.0499 | 0.0042 |

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| Jupiter | 38358-03-26 04:34 G | 15731115.57 | 15731115.69 | 15731115.82 | 0.0524 | 0.0441 |
| Jupiter | 38359-05-01 06:43 G | 15731516.63 | 15731516.78 | 15731516.94 | 0.0528 | 0.0393 |
| Saturn | 38364-09-22 19:12 G | 15733488.14 | 15733488.30 | 15733488.50 | 0.0259 | 0.0182 |
| Jupiter | 38364-10-18 16:34 G | 15733513.95 | 15733514.19 | 15733514.44 | 0.0498 | 0.0066 |
| Saturn | 38365-10-03 20:10 G | 15733864.17 | 15733864.34 | 15733864.53 | 0.0258 | 0.0181 |
| Uranus | 38366-10-24 02:53 G | 15734249.46 | 15734249.62 | 15734249.81 | 0.0144 | 0.0107 |
| Uranus | 38367-10-29 06:29 G | 15734619.53 | 15734619.77 | 15734620.02 | 0.0143 | 0.0017 |
| Uranus | 38368-11-02 01:12 G | 15734989.32 | 15734989.55 | 15734989.78 | 0.0143 | 0.0070 |
| Jupiter | 38370-03-31 08:24 G | 15735503.69 | 15735503.85 | 15735504.02 | 0.0525 | 0.0354 |
| Neptune | 38370-09-06 10:48 G | 15735662.90 | 15735662.95 | 15735663.02 | 0.0088 | 0.0085 |
| Neptune | 38371-09-09 04:34 G | 15736030.52 | 15736030.69 | 15736030.91 | 0.0088 | 0.0058 |
| Neptune | 38372-09-10 10:05 G | 15736397.73 | 15736397.92 | 15736398.16 | 0.0088 | 0.0046 |
| Neptune | 38373-09-13 01:41 G | 15736765.32 | 15736765.57 | 15736765.84 | 0.0088 | 0.0019 |
| Neptune | 38374-09-15 11:17 G | 15737132.72 | 15737132.97 | 15737133.23 | 0.0088 | 0.0006 |
| Neptune | 38375-09-17 21:07 G | 15737500.14 | 15737500.38 | 15737500.66 | 0.0088 | 0.0022 |
| Neptune | 38376-09-19 11:17 G | 15737867.76 | 15737867.97 | 15737868.22 | 0.0088 | 0.0035 |
| Jupiter | 38376-10-23 03:36 G | 15737901.44 | 15737901.65 | 15737901.85 | 0.0498 | 0.0209 |
| Neptune | 38377-09-21 17:02 G | 15738235.05 | 15738235.21 | 15738235.43 | 0.0088 | 0.0062 |
| Neptune | 38378-09-24 11:02 G | 15738602.84 | 15738602.96 | 15738603.11 | 0.0088 | 0.0074 |
| Saturn | 38380-03-27 05:46 G | 15739152.50 | 15739152.74 | 15739152.99 | 0.0303 | 0.0043 |
| Jupiter | 38382-04-05 03:50 G | 15739891.46 | 15739891.66 | 15739891.87 | 0.0526 | 0.0264 |
| Jupiter | 38387-09-26 05:31 G | 15741891.68 | 15741891.73 | 15741891.80 | 0.0501 | 0.0482 |
| Jupiter | 38388-10-27 13:26 G | 15742288.88 | 15742289.06 | 15742289.25 | 0.0497 | 0.0318 |
| Jupiter | 38394-04-10 06:43 G | 15744279.56 | 15744279.78 | 15744280.00 | 0.0527 | 0.0114 |
| Saturn | 38394-09-29 13:12 G | 15744451.81 | 15744452.05 | 15744452.29 | 0.0259 | 0.0021 |
| Jupiter | 38399-10-01 01:26 G | 15746279.40 | 15746279.56 | 15746279.72 | 0.0500 | 0.0354 |
| Jupiter | 38400-10-31 18:29 G | 15746676.13 | 15746676.27 | 15746676.42 | 0.0497 | 0.0383 |
| Jupiter | 38406-04-15 08:10 G | 15748667.60 | 15748667.84 | 15748668.08 | 0.0527 | 0.0045 |
| Uranus | 38410-04-23 13:26 G | 15750136.87 | 15750137.06 | 15750137.28 | 0.0135 | 0.0083 |
| Uranus | 38411-04-28 03:50 G | 15750506.43 | 15750506.66 | 15750506.92 | 0.0135 | 0.0027 |

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| Jupiter | 38411-10-05 06:00 G | 15750666.54 | 15750666.75 | 15750666.97 | 0.0500 | 0.0218 |
| Uranus | 38412-05-01 08:53 G | 15750875.64 | 15750875.87 | 15750876.12 | 0.0135 | 0.0056 |
| Jupiter | 38412-11-05 12:58 G | 15751063.97 | 15751064.04 | 15751064.13 | 0.0497 | 0.0462 |
| Uranus | 38413-05-05 23:46 G | 15751245.38 | 15751245.49 | 15751245.61 | 0.0136 | 0.0119 |
| Jupiter | 38418-04-20 00:14 G | 15753055.29 | 15753055.51 | 15753055.74 | 0.0528 | 0.0144 |
| Saturn | 38423-09-24 19:41 G | 15755039.11 | 15755039.32 | 15755039.54 | 0.0259 | 0.0137 |
| Jupiter | 38423-10-10 00:58 G | 15755054.32 | 15755054.54 | 15755054.76 | 0.0499 | 0.0124 |
| Saturn | 38424-10-05 02:24 G | 15755415.50 | 15755415.60 | 15755415.71 | 0.0258 | 0.0232 |
| Jupiter | 38430-04-25 06:29 G | 15757443.57 | 15757443.77 | 15757443.98 | 0.0528 | 0.0232 |
| Jupiter | 38435-10-14 09:50 G | 15759441.67 | 15759441.91 | 15759442.15 | 0.0499 | 0.0057 |
| Saturn | 38439-03-29 20:10 G | 15760704.10 | 15760704.34 | 15760704.58 | 0.0303 | 0.0034 |
| Jupiter | 38441-03-25 13:12 G | 15761430.95 | 15761431.05 | 15761431.16 | 0.0525 | 0.0459 |
| Jupiter | 38442-04-30 02:38 G | 15761831.45 | 15761831.61 | 15761831.77 | 0.0529 | 0.0383 |
| Jupiter | 38447-10-18 17:31 G | 15763829.00 | 15763829.23 | 15763829.45 | 0.0498 | 0.0050 |
| Uranus | 38450-10-24 09:50 G | 15764930.73 | 15764930.91 | 15764931.12 | 0.0144 | 0.0095 |
| Uranus | 38451-10-29 14:53 G | 15765300.88 | 15765301.12 | 15765301.37 | 0.0143 | 0.0017 |
| Uranus | 38452-11-02 08:10 G | 15765670.62 | 15765670.84 | 15765671.08 | 0.0143 | 0.0066 |
| Jupiter | 38453-03-30 06:00 G | 15765818.59 | 15765818.75 | 15765818.93 | 0.0526 | 0.0371 |
| Saturn | 38453-09-30 20:10 G | 15766003.10 | 15766003.34 | 15766003.58 | 0.0259 | 0.0073 |
| Neptune | 38454-03-08 20:38 G | 15766162.23 | 15766162.36 | 15766162.55 | 0.0089 | 0.0068 |
| Neptune | 38455-03-11 09:36 G | 15766529.70 | 15766529.90 | 15766530.13 | 0.0089 | 0.0053 |
| Neptune | 38456-03-13 00:14 G | 15766897.28 | 15766897.51 | 15766897.75 | 0.0089 | 0.0026 |
| Neptune | 38457-03-15 08:10 G | 15767264.58 | 15767264.84 | 15767265.10 | 0.0089 | 0.0011 |
| Neptune | 38458-03-18 01:55 G | 15767632.34 | 15767632.58 | 15767632.83 | 0.0090 | 0.0017 |
| Neptune | 38459-03-20 06:58 G | 15767999.56 | 15767999.79 | 15768000.04 | 0.0090 | 0.0032 |
| Jupiter | 38459-10-23 06:58 G | 15768216.57 | 15768216.79 | 15768217.01 | 0.0497 | 0.0193 |
| Neptune | 38460-03-22 01:55 G | 15768367.41 | 15768367.58 | 15768367.79 | 0.0090 | 0.0060 |
| Neptune | 38461-03-24 07:41 G | 15768734.70 | 15768734.82 | 15768734.99 | 0.0090 | 0.0073 |
| Jupiter | 38465-04-04 06:58 G | 15770206.60 | 15770206.79 | 15770206.98 | 0.0526 | 0.0288 |
| Saturn | 38468-03-22 21:50 G | 15771290.26 | 15771290.41 | 15771290.59 | 0.0303 | 0.0227 |

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| Jupiter | 38471-10-27 12:29 G | 15772603.85 | 15772604.02 | 15772604.21 | 0.0498 | 0.0302 |
| Jupiter | 38477-04-09 06:43 G | 15774594.55 | 15774594.78 | 15774595.02 | 0.0526 | 0.0130 |
| Saturn | 38482-09-26 02:53 G | 15776590.39 | 15776590.62 | 15776590.85 | 0.0259 | 0.0085 |
| Jupiter | 38482-09-29 20:38 G | 15776594.21 | 15776594.36 | 15776594.52 | 0.0501 | 0.0375 |
| Jupiter | 38483-11-01 06:29 G | 15776991.62 | 15776991.77 | 15776991.93 | 0.0497 | 0.0362 |
| Jupiter | 38489-04-13 22:05 G | 15778982.19 | 15778982.42 | 15778982.65 | 0.0527 | 0.0024 |
| Uranus | 38494-04-23 23:31 G | 15780818.31 | 15780818.48 | 15780818.68 | 0.0135 | 0.0093 |
| Jupiter | 38494-10-04 16:05 G | 15780981.97 | 15780982.17 | 15780982.37 | 0.0500 | 0.0233 |
| Uranus | 38495-04-28 14:53 G | 15781187.88 | 15781188.12 | 15781188.37 | 0.0135 | 0.0010 |
| Jupiter | 38495-11-05 09:07 G | 15781378.79 | 15781378.88 | 15781378.99 | 0.0497 | 0.0448 |
| Uranus | 38496-05-01 18:43 G | 15781557.04 | 15781557.28 | 15781557.53 | 0.0135 | 0.0048 |
| Uranus | 38497-05-06 09:50 G | 15781926.85 | 15781926.91 | 15781927.01 | 0.0136 | 0.0128 |
| Saturn | 38498-03-31 18:43 G | 15782256.07 | 15782256.28 | 15782256.50 | 0.0303 | 0.0121 |
| Jupiter | 38501-04-20 06:29 G | 15783370.55 | 15783370.77 | 15783371.00 | 0.0528 | 0.0125 |
| Jupiter | 38506-10-09 21:50 G | 15785369.18 | 15785369.41 | 15785369.65 | 0.0499 | 0.0149 |
| Mars | 38508-02-16 05:46 G | 15785863.56 | 15785863.74 | 15785863.93 | 0.1661 | 0.0179 |
| Pluto | 38509-05-31 02:10 G | 15786333.34 | 15786333.59 | 15786333.85 | 0.0066 | 0.0002 |
| Saturn | 38511-09-22 20:24 G | 15787178.27 | 15787178.35 | 15787178.45 | 0.0261 | 0.0241 |
| Saturn | 38512-10-03 00:00 G | 15787554.28 | 15787554.50 | 15787554.73 | 0.0259 | 0.0128 |
| Jupiter | 38513-04-25 00:14 G | 15787758.30 | 15787758.51 | 15787758.73 | 0.0529 | 0.0216 |
| Jupiter | 38518-10-14 08:53 G | 15789756.65 | 15789756.87 | 15789757.10 | 0.0498 | 0.0080 |
| Jupiter | 38524-03-25 04:48 G | 15791745.62 | 15791745.70 | 15791745.79 | 0.0524 | 0.0485 |
| Jupiter | 38525-04-30 03:22 G | 15792146.49 | 15792146.64 | 15792146.81 | 0.0528 | 0.0369 |
| Saturn | 38527-03-26 16:48 G | 15792841.98 | 15792842.20 | 15792842.43 | 0.0303 | 0.0135 |
| Jupiter | 38530-10-18 22:05 G | 15794144.18 | 15794144.42 | 15794144.67 | 0.0498 | 0.0034 |
| Uranus | 38534-10-25 19:26 G | 15795612.15 | 15795612.31 | 15795612.51 | 0.0143 | 0.0104 |
| Neptune | 38535-09-09 09:07 G | 15795930.75 | 15795930.88 | 15795931.02 | 0.0088 | 0.0074 |
| Uranus | 38535-10-31 00:43 G | 15795982.28 | 15795982.53 | 15795982.78 | 0.0143 | 0.0010 |
| Jupiter | 38536-03-30 06:43 G | 15796133.64 | 15796133.78 | 15796133.92 | 0.0525 | 0.0402 |
| Neptune | 38536-09-10 22:48 G | 15796298.25 | 15796298.45 | 15796298.68 | 0.0088 | 0.0051 |

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| Uranus | 38536-11-03 16:34 G | 15796351.98 | 15796352.19 | 15796352.42 | 0.0143 | 0.0073 |
| Jupiter | 38537-05-05 02:24 G | 15796534.57 | 15796534.60 | 15796534.64 | 0.0528 | 0.0522 |
| Neptune | 38537-09-13 10:05 G | 15796665.69 | 15796665.92 | 15796666.15 | 0.0088 | 0.0034 |
| Neptune | 38538-09-15 19:12 G | 15797033.04 | 15797033.30 | 15797033.57 | 0.0088 | 0.0011 |
| Neptune | 38539-09-18 11:02 G | 15797400.71 | 15797400.96 | 15797401.22 | 0.0088 | 0.0007 |
| Neptune | 38540-09-19 16:05 G | 15797767.94 | 15797768.17 | 15797768.43 | 0.0088 | 0.0030 |
| Neptune | 38541-09-22 10:05 G | 15798135.72 | 15798135.92 | 15798136.16 | 0.0088 | 0.0046 |
| Saturn | 38541-09-28 16:48 G | 15798141.96 | 15798142.20 | 15798142.43 | 0.0259 | 0.0027 |
| Neptune | 38542-09-24 14:24 G | 15798502.97 | 15798503.10 | 15798503.28 | 0.0088 | 0.0070 |
| Jupiter | 38542-10-23 04:19 G | 15798531.47 | 15798531.68 | 15798531.90 | 0.0498 | 0.0178 |
| Neptune | 38543-09-27 07:26 G | 15798870.77 | 15798870.81 | 15798870.91 | 0.0088 | 0.0085 |
| Jupiter | 38548-04-04 01:55 G | 15800521.40 | 15800521.58 | 15800521.78 | 0.0526 | 0.0312 |
| Jupiter | 38554-10-27 21:36 G | 15802919.21 | 15802919.40 | 15802919.59 | 0.0497 | 0.0283 |
| Saturn | 38557-04-03 22:48 G | 15803808.29 | 15803808.45 | 15803808.62 | 0.0303 | 0.0215 |
| Jupiter | 38560-04-08 21:07 G | 15804909.16 | 15804909.38 | 15804909.60 | 0.0527 | 0.0155 |
| Jupiter | 38565-09-30 03:50 G | 15806909.52 | 15806909.66 | 15806909.81 | 0.0500 | 0.0390 |
| Jupiter | 38566-10-31 22:05 G | 15807306.25 | 15807306.42 | 15807306.59 | 0.0497 | 0.0341 |
| Saturn | 38570-09-24 03:07 G | 15808729.46 | 15808729.63 | 15808729.82 | 0.0260 | 0.0183 |
| Saturn | 38571-10-05 07:26 G | 15809105.65 | 15809105.81 | 15809105.99 | 0.0259 | 0.0187 |
| Jupiter | 38572-04-14 03:50 G | 15809297.42 | 15809297.66 | 15809297.89 | 0.0528 | 0.0006 |
| Jupiter | 38577-10-04 11:02 G | 15811296.76 | 15811296.96 | 15811297.18 | 0.0499 | 0.0253 |
| Uranus | 38578-04-25 08:53 G | 15811499.67 | 15811499.87 | 15811500.09 | 0.0135 | 0.0077 |
| Jupiter | 38578-11-05 13:55 G | 15811693.97 | 15811694.08 | 15811694.19 | 0.0497 | 0.0433 |
| Uranus | 38579-04-30 00:58 G | 15811869.30 | 15811869.54 | 15811869.80 | 0.0135 | 0.0021 |
| Uranus | 38580-05-03 04:34 G | 15812238.46 | 15812238.69 | 15812238.92 | 0.0135 | 0.0063 |
| Uranus | 38581-05-07 20:38 G | 15812608.29 | 15812608.36 | 15812608.48 | 0.0136 | 0.0125 |
| Jupiter | 38584-04-18 18:58 G | 15813685.06 | 15813685.29 | 15813685.52 | 0.0528 | 0.0097 |
| Saturn | 38586-03-28 12:58 G | 15814393.80 | 15814394.04 | 15814394.29 | 0.0303 | 0.0041 |
| Jupiter | 38589-10-08 22:05 G | 15815684.21 | 15815684.42 | 15815684.63 | 0.0499 | 0.0175 |
| Jupiter | 38596-04-23 23:46 G | 15818073.28 | 15818073.49 | 15818073.70 | 0.0528 | 0.0190 |

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| Pluto | 38596-12-01 12:00 G | 15818294.74 | 15818295.00 | 15818295.27 | 0.0078 | 0.0015 |
| Saturn | 38600-10-01 05:31 G | 15819693.49 | 15819693.73 | 15819693.98 | 0.0259 | 0.0031 |
| Jupiter | 38601-10-14 12:00 G | 15820071.76 | 15820072.00 | 15820072.24 | 0.0499 | 0.0101 |
| Jupiter | 38607-03-26 04:34 G | 15822060.65 | 15822060.69 | 15822060.73 | 0.0524 | 0.0515 |
| Jupiter | 38608-04-29 18:58 G | 15822461.12 | 15822461.29 | 15822461.48 | 0.0528 | 0.0345 |
| Jupiter | 38613-10-18 18:43 G | 15824459.05 | 15824459.28 | 15824459.51 | 0.0498 | 0.0020 |
| Saturn | 38615-03-23 18:29 G | 15824980.23 | 15824980.27 | 15824980.31 | 0.0302 | 0.0296 |
| Neptune | 38618-03-10 06:43 G | 15826062.68 | 15826062.78 | 15826062.94 | 0.0089 | 0.0078 |
| Uranus | 38618-10-27 06:43 G | 15826293.59 | 15826293.78 | 15826294.00 | 0.0143 | 0.0086 |
| Neptune | 38619-03-12 22:19 G | 15826430.27 | 15826430.43 | 15826430.62 | 0.0089 | 0.0064 |
| Jupiter | 38619-03-31 00:00 G | 15826448.36 | 15826448.50 | 15826448.63 | 0.0525 | 0.0431 |
| Uranus | 38619-11-01 12:43 G | 15826663.78 | 15826664.03 | 15826664.28 | 0.0143 | 0.0012 |
| Neptune | 38620-03-14 05:31 G | 15826797.49 | 15826797.73 | 15826797.97 | 0.0089 | 0.0035 |
| Jupiter | 38620-05-04 18:29 G | 15826849.20 | 15826849.27 | 15826849.33 | 0.0529 | 0.0505 |
| Uranus | 38620-11-05 04:19 G | 15827033.46 | 15827033.68 | 15827033.90 | 0.0143 | 0.0074 |
| Neptune | 38621-03-17 00:00 G | 15827165.27 | 15827165.50 | 15827165.76 | 0.0089 | 0.0022 |
| Neptune | 38622-03-19 05:17 G | 15827532.47 | 15827532.72 | 15827532.98 | 0.0089 | 0.0007 |
| Neptune | 38623-03-22 00:14 G | 15827900.26 | 15827900.51 | 15827900.77 | 0.0090 | 0.0021 |
| Neptune | 38624-03-23 06:29 G | 15828267.58 | 15828267.77 | 15828268.00 | 0.0090 | 0.0049 |
| Neptune | 38625-03-25 22:48 G | 15828635.28 | 15828635.45 | 15828635.65 | 0.0090 | 0.0064 |
| Jupiter | 38625-10-23 10:48 G | 15828846.73 | 15828846.95 | 15828847.17 | 0.0497 | 0.0163 |
| Saturn | 38629-09-26 10:48 G | 15830280.73 | 15830280.95 | 15830281.17 | 0.0260 | 0.0126 |
| Saturn | 38630-10-07 20:53 G | 15830657.31 | 15830657.37 | 15830657.45 | 0.0259 | 0.0247 |
| Jupiter | 38631-04-04 19:12 G | 15830836.13 | 15830836.30 | 15830836.47 | 0.0526 | 0.0342 |
| Jupiter | 38637-10-27 13:12 G | 15833233.86 | 15833234.05 | 15833234.26 | 0.0497 | 0.0262 |
| Mars | 38640-08-19 17:46 G | 15834261.16 | 15834261.24 | 15834261.32 | 0.1874 | 0.1663 |
| Jupiter | 38643-04-10 00:14 G | 15835224.29 | 15835224.51 | 15835224.73 | 0.0526 | 0.0183 |
| Saturn | 38645-03-31 14:24 G | 15835945.87 | 15835946.10 | 15835946.33 | 0.0303 | 0.0054 |
| Jupiter | 38648-09-29 21:07 G | 15837224.25 | 15837224.38 | 15837224.52 | 0.0501 | 0.0408 |
| Jupiter | 38649-11-01 05:02 G | 15837621.55 | 15837621.71 | 15837621.89 | 0.0497 | 0.0325 |

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| Jupiter | 38655-04-14 15:36 G | 15839611.92 | 15839612.15 | 15839612.39 | 0.0527 | 0.0027 |
| Saturn | 38659-10-03 13:41 G | 15841244.83 | 15841245.07 | 15841245.31 | 0.0259 | 0.0089 |
| Jupiter | 38660-10-04 11:02 G | 15841611.78 | 15841611.96 | 15841612.15 | 0.0500 | 0.0276 |
| Jupiter | 38661-11-05 11:02 G | 15842008.83 | 15842008.96 | 15842009.09 | 0.0497 | 0.0417 |
| Uranus | 38662-04-26 18:29 G | 15842181.09 | 15842181.27 | 15842181.48 | 0.0135 | 0.0087 |
| Uranus | 38663-05-01 11:02 G | 15842550.71 | 15842550.96 | 15842551.21 | 0.0135 | 0.0004 |
| Uranus | 38664-05-04 13:26 G | 15842919.84 | 15842920.06 | 15842920.31 | 0.0135 | 0.0054 |
| Uranus | 38665-05-09 06:43 G | 15843289.77 | 15843289.78 | 15843289.81 | 0.0136 | 0.0135 |
| Jupiter | 38667-04-19 19:12 G | 15844000.07 | 15844000.30 | 15844000.52 | 0.0527 | 0.0066 |
| Jupiter | 38672-10-09 01:26 G | 15845999.34 | 15845999.56 | 15845999.79 | 0.0500 | 0.0193 |
| Saturn | 38674-03-25 15:22 G | 15846531.97 | 15846532.14 | 15846532.33 | 0.0302 | 0.0208 |
| Jupiter | 38679-04-24 15:07 G | 15848387.91 | 15848388.13 | 15848388.37 | 0.0528 | 0.0164 |
| Jupiter | 38684-10-13 08:53 G | 15850386.65 | 15850386.87 | 15850387.09 | 0.0499 | 0.0121 |
| Saturn | 38688-09-27 21:22 G | 15851832.16 | 15851832.39 | 15851832.63 | 0.0260 | 0.0070 |
| Jupiter | 38691-04-29 15:36 G | 15852775.98 | 15852776.15 | 15852776.33 | 0.0529 | 0.0326 |
| Jupiter | 38696-10-18 02:10 G | 15854774.35 | 15854774.59 | 15854774.82 | 0.0498 | 0.0009 |
| Neptune | 38699-09-09 21:50 G | 15855831.40 | 15855831.41 | 15855831.47 | 0.0088 | 0.0087 |
| Neptune | 38700-09-12 10:05 G | 15856198.75 | 15856198.92 | 15856199.13 | 0.0088 | 0.0059 |
| Neptune | 38701-09-14 17:46 G | 15856566.04 | 15856566.24 | 15856566.49 | 0.0088 | 0.0047 |
| Jupiter | 38702-03-30 19:41 G | 15856763.23 | 15856763.32 | 15856763.43 | 0.0525 | 0.0467 |
| Neptune | 38702-09-17 10:34 G | 15856933.69 | 15856933.94 | 15856934.19 | 0.0088 | 0.0018 |
| Uranus | 38702-10-28 18:14 G | 15856975.09 | 15856975.26 | 15856975.47 | 0.0143 | 0.0096 |
| Jupiter | 38703-05-05 19:41 G | 15857164.23 | 15857164.32 | 15857164.42 | 0.0528 | 0.0478 |
| Neptune | 38703-09-19 14:53 G | 15857300.87 | 15857301.12 | 15857301.39 | 0.0088 | 0.0007 |
| Uranus | 38703-11-03 00:14 G | 15857345.26 | 15857345.51 | 15857345.76 | 0.0143 | 0.0000 |
| Saturn | 38704-04-03 14:53 G | 15857497.92 | 15857498.12 | 15857498.33 | 0.0303 | 0.0143 |
| Neptune | 38704-09-21 09:07 G | 15857668.64 | 15857668.88 | 15857669.14 | 0.0088 | 0.0022 |
| Uranus | 38704-11-06 14:53 G | 15857714.92 | 15857715.12 | 15857715.34 | 0.0143 | 0.0080 |
| Neptune | 38705-09-23 13:41 G | 15858035.84 | 15858036.07 | 15858036.31 | 0.0088 | 0.0034 |
| Neptune | 38706-09-26 05:46 G | 15858403.58 | 15858403.74 | 15858403.95 | 0.0088 | 0.0063 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 38707-09-28 13:41 G | 15858770.96 | 15858771.07 | 15858771.22 | 0.0088 | 0.0075 |
| Jupiter | 38708-10-23 03:36 G | 15859161.42 | 15859161.65 | 15859161.88 | 0.0498 | 0.0146 |
| Mars | 38713-02-16 17:46 G | 15860739.20 | 15860739.24 | 15860739.27 | 0.1653 | 0.1617 |
| Jupiter | 38714-04-05 00:14 G | 15861151.34 | 15861151.51 | 15861151.68 | 0.0525 | 0.0364 |
| Saturn | 38717-09-24 15:07 G | 15862420.02 | 15862420.13 | 15862420.27 | 0.0260 | 0.0226 |
| Saturn | 38718-10-05 18:00 G | 15862796.05 | 15862796.25 | 15862796.47 | 0.0259 | 0.0144 |
| Jupiter | 38720-10-27 21:22 G | 15863549.19 | 15863549.39 | 15863549.59 | 0.0498 | 0.0245 |
| Jupiter | 38726-04-09 12:58 G | 15865538.83 | 15865539.04 | 15865539.25 | 0.0526 | 0.0211 |
| Jupiter | 38731-10-01 01:12 G | 15867539.44 | 15867539.55 | 15867539.68 | 0.0501 | 0.0421 |
| Jupiter | 38732-11-01 03:36 G | 15867936.47 | 15867936.65 | 15867936.85 | 0.0498 | 0.0311 |
| Saturn | 38733-03-28 06:14 G | 15868083.53 | 15868083.76 | 15868083.99 | 0.0303 | 0.0123 |
| Jupiter | 38738-04-14 18:43 G | 15869927.05 | 15869927.28 | 15869927.51 | 0.0527 | 0.0053 |
| Jupiter | 38743-10-05 16:19 G | 15871926.99 | 15871927.18 | 15871927.38 | 0.0500 | 0.0291 |
| Jupiter | 38744-11-05 15:36 G | 15872324.03 | 15872324.15 | 15872324.28 | 0.0497 | 0.0410 |
| Uranus | 38746-04-28 02:24 G | 15872862.40 | 15872862.60 | 15872862.82 | 0.0135 | 0.0073 |
| Uranus | 38747-05-02 19:12 G | 15873232.05 | 15873232.30 | 15873232.55 | 0.0135 | 0.0016 |
| Saturn | 38747-10-01 09:36 G | 15873383.66 | 15873383.90 | 15873384.14 | 0.0259 | 0.0018 |
| Uranus | 38748-05-05 21:36 G | 15873601.19 | 15873601.40 | 15873601.63 | 0.0135 | 0.0069 |
| Uranus | 38749-05-10 15:07 G | 15873971.07 | 15873971.13 | 15873971.23 | 0.0136 | 0.0128 |
| Jupiter | 38750-04-19 13:12 G | 15874314.81 | 15874315.05 | 15874315.30 | 0.0528 | 0.0039 |
| Pluto | 38755-06-03 10:48 G | 15876185.94 | 15876185.95 | 15876186.00 | 0.0066 | 0.0065 |
| Jupiter | 38755-10-10 00:29 G | 15876314.32 | 15876314.52 | 15876314.73 | 0.0499 | 0.0214 |
| Pluto | 38756-06-03 17:31 G | 15876552.02 | 15876552.23 | 15876552.48 | 0.0066 | 0.0030 |
| Jupiter | 38762-04-24 15:22 G | 15878702.93 | 15878703.14 | 15878703.36 | 0.0528 | 0.0141 |
| Saturn | 38763-04-06 09:07 G | 15879049.72 | 15879049.88 | 15879050.05 | 0.0304 | 0.0221 |
| Jupiter | 38767-10-14 15:22 G | 15880701.92 | 15880702.14 | 15880702.37 | 0.0499 | 0.0141 |
| Jupiter | 38774-04-29 19:12 G | 15883091.10 | 15883091.30 | 15883091.49 | 0.0528 | 0.0306 |
| Saturn | 38776-09-25 17:02 G | 15883971.03 | 15883971.21 | 15883971.40 | 0.0260 | 0.0178 |
| Saturn | 38777-10-06 23:17 G | 15884347.32 | 15884347.47 | 15884347.64 | 0.0259 | 0.0195 |
| Jupiter | 38779-10-18 20:10 G | 15885089.11 | 15885089.34 | 15885089.58 | 0.0499 | 0.0013 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 38783-03-13 03:07 G | 15886330.49 | 15886330.63 | 15886330.82 | 0.0089 | 0.0069 |
| Neptune | 38784-03-14 22:05 G | 15886698.24 | 15886698.42 | 15886698.65 | 0.0089 | 0.0053 |
| Neptune | 38785-03-17 03:50 G | 15887065.42 | 15887065.66 | 15887065.91 | 0.0089 | 0.0027 |
| Jupiter | 38785-03-30 00:58 G | 15887078.46 | 15887078.54 | 15887078.63 | 0.0524 | 0.0487 |
| Neptune | 38786-03-19 22:19 G | 15887433.18 | 15887433.43 | 15887433.69 | 0.0089 | 0.0011 |
| Jupiter | 38786-05-04 11:31 G | 15887478.87 | 15887478.98 | 15887479.09 | 0.0528 | 0.0459 |
| Uranus | 38786-10-29 02:38 G | 15887656.41 | 15887656.61 | 15887656.84 | 0.0143 | 0.0079 |
| Neptune | 38787-03-22 05:46 G | 15887800.50 | 15887800.74 | 15887800.99 | 0.0089 | 0.0016 |
| Uranus | 38787-11-03 08:53 G | 15888026.62 | 15888026.87 | 15888027.13 | 0.0143 | 0.0006 |
| Neptune | 38788-03-23 20:10 G | 15888168.10 | 15888168.34 | 15888168.59 | 0.0090 | 0.0033 |
| Uranus | 38788-11-06 23:46 G | 15888396.29 | 15888396.49 | 15888396.71 | 0.0143 | 0.0083 |
| Neptune | 38789-03-26 07:41 G | 15888535.65 | 15888535.82 | 15888536.02 | 0.0090 | 0.0060 |
| Neptune | 38790-03-28 17:46 G | 15888903.12 | 15888903.24 | 15888903.40 | 0.0090 | 0.0075 |
| Jupiter | 38791-10-23 15:22 G | 15889476.92 | 15889477.14 | 15889477.36 | 0.0498 | 0.0138 |
| Mars | 38792-02-19 19:41 G | 15889596.16 | 15889596.32 | 15889596.49 | 0.1657 | 0.0639 |
| Saturn | 38792-03-29 17:02 G | 15889634.98 | 15889635.21 | 15889635.46 | 0.0303 | 0.0053 |
| Jupiter | 38797-04-03 15:22 G | 15891466.00 | 15891466.14 | 15891466.30 | 0.0525 | 0.0389 |
| Jupiter | 38803-10-27 22:05 G | 15893864.21 | 15893864.42 | 15893864.64 | 0.0498 | 0.0229 |
| Saturn | 38806-10-02 16:05 G | 15894934.92 | 15894935.17 | 15894935.42 | 0.0259 | 0.0030 |
| Jupiter | 38809-04-08 21:07 G | 15895854.18 | 15895854.38 | 15895854.59 | 0.0526 | 0.0226 |
| Jupiter | 38814-09-30 08:38 G | 15897854.74 | 15897854.86 | 15897854.99 | 0.0501 | 0.0429 |
| Jupiter | 38815-11-01 11:31 G | 15898251.80 | 15898251.98 | 15898252.16 | 0.0497 | 0.0298 |
| Jupiter | 38821-04-13 16:34 G | 15900241.95 | 15900242.19 | 15900242.43 | 0.0526 | 0.0074 |
| Saturn | 38822-04-07 16:34 G | 15900601.13 | 15900601.19 | 15900601.28 | 0.0304 | 0.0289 |
| Jupiter | 38826-10-04 13:55 G | 15902241.90 | 15902242.08 | 15902242.26 | 0.0501 | 0.0311 |
| Jupiter | 38827-11-05 21:22 G | 15902639.25 | 15902639.39 | 15902639.54 | 0.0498 | 0.0403 |
| Uranus | 38830-04-28 10:48 G | 15903543.77 | 15903543.95 | 15903544.17 | 0.0135 | 0.0082 |
| Uranus | 38831-05-03 03:22 G | 15903913.38 | 15903913.64 | 15903913.89 | 0.0135 | 0.0001 |
| Uranus | 38832-05-06 05:46 G | 15904282.52 | 15904282.74 | 15904282.98 | 0.0135 | 0.0057 |
| Jupiter | 38833-04-18 19:55 G | 15904630.11 | 15904630.33 | 15904630.56 | 0.0527 | 0.0020 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 38835-09-27 19:55 G | 15905522.12 | 15905522.33 | 15905522.54 | 0.0259 | 0.0133 |
| Saturn | 38836-10-08 06:43 G | 15905898.71 | 15905898.78 | 15905898.87 | 0.0258 | 0.0243 |
| Jupiter | 38838-10-09 08:53 G | 15906629.66 | 15906629.87 | 15906630.08 | 0.0500 | 0.0236 |
| Pluto | 38843-12-06 12:14 G | 15908513.88 | 15908514.01 | 15908514.19 | 0.0078 | 0.0064 |
| Jupiter | 38845-04-23 19:26 G | 15909018.08 | 15909018.31 | 15909018.55 | 0.0527 | 0.0124 |
| Jupiter | 38850-10-13 15:22 G | 15911016.92 | 15911017.14 | 15911017.37 | 0.0500 | 0.0153 |
| Saturn | 38851-04-01 03:36 G | 15911186.41 | 15911186.65 | 15911186.88 | 0.0304 | 0.0015 |
| Jupiter | 38857-04-28 14:38 G | 15913405.93 | 15913406.11 | 15913406.30 | 0.0528 | 0.0293 |
| Jupiter | 38862-10-18 11:46 G | 15915404.76 | 15915404.99 | 15915405.22 | 0.0499 | 0.0015 |
| Neptune | 38864-09-11 16:34 G | 15916099.06 | 15916099.19 | 15916099.36 | 0.0088 | 0.0073 |
| Neptune | 38865-09-14 10:05 G | 15916466.74 | 15916466.92 | 15916467.15 | 0.0088 | 0.0053 |
| Saturn | 38865-10-03 13:26 G | 15916485.82 | 15916486.06 | 15916486.31 | 0.0259 | 0.0076 |
| Neptune | 38866-09-16 14:53 G | 15916833.88 | 15916834.12 | 15916834.36 | 0.0088 | 0.0033 |
| Neptune | 38867-09-19 09:07 G | 15917201.62 | 15917201.88 | 15917202.14 | 0.0088 | 0.0012 |
| Jupiter | 38868-03-28 21:36 G | 15917393.35 | 15917393.40 | 15917393.46 | 0.0524 | 0.0506 |
| Neptune | 38868-09-20 14:24 G | 15917568.85 | 15917569.10 | 15917569.35 | 0.0088 | 0.0008 |
| Jupiter | 38869-05-03 22:48 G | 15917794.33 | 15917794.45 | 15917794.58 | 0.0528 | 0.0444 |
| Neptune | 38869-09-23 06:00 G | 15917936.51 | 15917936.75 | 15917937.01 | 0.0088 | 0.0030 |
| Neptune | 38870-09-25 14:53 G | 15918303.91 | 15918304.12 | 15918304.33 | 0.0088 | 0.0048 |
| Uranus | 38870-10-29 09:07 G | 15918337.70 | 15918337.88 | 15918338.08 | 0.0143 | 0.0093 |
| Neptune | 38871-09-28 00:58 G | 15918671.41 | 15918671.54 | 15918671.73 | 0.0088 | 0.0070 |
| Uranus | 38871-11-03 14:53 G | 15918707.86 | 15918708.12 | 15918708.38 | 0.0143 | 0.0005 |
| Uranus | 38872-11-07 05:31 G | 15919077.54 | 15919077.73 | 15919077.95 | 0.0143 | 0.0082 |
| Jupiter | 38874-10-22 18:58 G | 15919792.06 | 15919792.29 | 15919792.53 | 0.0498 | 0.0126 |
| Saturn | 38880-03-24 10:05 G | 15921771.81 | 15921771.92 | 15921772.05 | 0.0302 | 0.0265 |
| Jupiter | 38880-04-03 06:00 G | 15921781.60 | 15921781.75 | 15921781.90 | 0.0525 | 0.0399 |
| Jupiter | 38881-05-08 18:43 G | 15922182.28 | 15922182.28 | 15922182.30 | 0.0528 | 0.0528 |
| Jupiter | 38886-10-27 05:31 G | 15924179.53 | 15924179.73 | 15924179.93 | 0.0498 | 0.0213 |
| Jupiter | 38892-04-08 00:43 G | 15926169.31 | 15926169.53 | 15926169.74 | 0.0525 | 0.0228 |
| Saturn | 38894-09-29 00:29 G | 15927073.30 | 15927073.52 | 15927073.75 | 0.0259 | 0.0089 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 38897-09-29 07:55 G | 15928169.74 | 15928169.83 | 15928169.94 | 0.0502 | 0.0448 |
| Jupiter | 38898-10-31 18:58 G | 15928567.09 | 15928567.29 | 15928567.49 | 0.0498 | 0.0282 |
| Jupiter | 38904-04-14 01:26 G | 15930557.34 | 15930557.56 | 15930557.79 | 0.0526 | 0.0089 |
| Jupiter | 38909-10-05 04:48 G | 15932557.53 | 15932557.70 | 15932557.89 | 0.0501 | 0.0324 |
| Saturn | 38910-04-03 07:55 G | 15932737.59 | 15932737.83 | 15932738.06 | 0.0304 | 0.0071 |
| Jupiter | 38910-11-06 02:38 G | 15932954.48 | 15932954.61 | 15932954.75 | 0.0498 | 0.0402 |
| Uranus | 38914-04-29 18:58 G | 15934225.09 | 15934225.29 | 15934225.52 | 0.0135 | 0.0070 |
| Uranus | 38915-05-04 10:48 G | 15934594.70 | 15934594.95 | 15934595.22 | 0.0135 | 0.0011 |
| Jupiter | 38916-04-19 01:12 G | 15934945.31 | 15934945.55 | 15934945.79 | 0.0527 | 0.0004 |
| Uranus | 38916-05-07 14:10 G | 15934963.89 | 15934964.09 | 15934964.31 | 0.0135 | 0.0073 |
| Uranus | 38917-05-12 07:26 G | 15935333.75 | 15935333.81 | 15935333.88 | 0.0136 | 0.0131 |
| Jupiter | 38921-10-09 13:12 G | 15936944.84 | 15936945.05 | 15936945.25 | 0.0500 | 0.0253 |
| Saturn | 38923-09-25 06:29 G | 15937660.74 | 15937660.77 | 15937660.82 | 0.0260 | 0.0256 |
| Mars | 38924-08-21 16:48 G | 15937992.03 | 15937992.20 | 15937992.38 | 0.1882 | 0.0870 |
| Saturn | 38924-10-05 09:50 G | 15938036.70 | 15938036.91 | 15938037.14 | 0.0258 | 0.0118 |
| Jupiter | 38928-04-23 21:36 G | 15939333.17 | 15939333.40 | 15939333.62 | 0.0528 | 0.0115 |
| Jupiter | 38933-10-14 09:22 G | 15941332.67 | 15941332.89 | 15941333.11 | 0.0500 | 0.0159 |
| Saturn | 38939-03-27 05:46 G | 15943322.58 | 15943322.74 | 15943322.92 | 0.0302 | 0.0214 |
| Jupiter | 38940-04-29 07:12 G | 15943721.61 | 15943721.80 | 15943721.99 | 0.0528 | 0.0296 |
| Jupiter | 38945-10-18 12:29 G | 15945719.78 | 15945720.02 | 15945720.26 | 0.0499 | 0.0024 |
| Neptune | 38947-03-13 20:53 G | 15946231.27 | 15946231.37 | 15946231.52 | 0.0089 | 0.0078 |
| Neptune | 38948-03-15 02:38 G | 15946598.44 | 15946598.61 | 15946598.78 | 0.0089 | 0.0065 |
| Neptune | 38949-03-17 19:55 G | 15946966.09 | 15946966.33 | 15946966.58 | 0.0089 | 0.0035 |
| Neptune | 38950-03-20 04:34 G | 15947333.46 | 15947333.69 | 15947333.94 | 0.0089 | 0.0022 |
| Neptune | 38951-03-22 18:29 G | 15947701.00 | 15947701.27 | 15947701.53 | 0.0089 | 0.0008 |
| Jupiter | 38951-03-30 18:43 G | 15947709.25 | 15947709.28 | 15947709.32 | 0.0524 | 0.0515 |
| Neptune | 38952-03-24 07:41 G | 15948068.59 | 15948068.82 | 15948069.07 | 0.0089 | 0.0021 |
| Jupiter | 38952-05-04 02:53 G | 15948109.50 | 15948109.62 | 15948109.76 | 0.0528 | 0.0437 |
| Neptune | 38953-03-26 16:05 G | 15948435.98 | 15948436.17 | 15948436.41 | 0.0090 | 0.0051 |
| Saturn | 38953-10-01 01:26 G | 15948624.32 | 15948624.56 | 15948624.81 | 0.0259 | 0.0051 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 38954-03-29 09:36 G | 15948803.74 | 15948803.90 | 15948804.09 | 0.0090 | 0.0064 |
| Uranus | 38954-10-30 14:24 G | 15949018.90 | 15949019.10 | 15949019.32 | 0.0143 | 0.0078 |
| Uranus | 38955-11-04 19:12 G | 15949389.05 | 15949389.30 | 15949389.57 | 0.0143 | 0.0008 |
| Uranus | 38956-11-08 11:02 G | 15949758.77 | 15949758.96 | 15949759.17 | 0.0143 | 0.0086 |
| Jupiter | 38957-10-23 03:50 G | 15950107.44 | 15950107.66 | 15950107.88 | 0.0499 | 0.0116 |
| Jupiter | 38963-04-04 09:07 G | 15952096.73 | 15952096.88 | 15952097.04 | 0.0524 | 0.0403 |
| Jupiter | 38964-05-09 07:26 G | 15952497.78 | 15952497.81 | 15952497.84 | 0.0528 | 0.0520 |
| Saturn | 38969-04-04 01:26 G | 15954288.33 | 15954288.56 | 15954288.79 | 0.0304 | 0.0120 |
| Jupiter | 38969-10-27 19:12 G | 15954495.07 | 15954495.30 | 15954495.52 | 0.0499 | 0.0197 |
| Jupiter | 38975-04-09 11:17 G | 15956484.77 | 15956484.97 | 15956485.17 | 0.0525 | 0.0233 |
| Jupiter | 38980-09-30 02:53 G | 15958485.52 | 15958485.62 | 15958485.73 | 0.0502 | 0.0447 |
| Jupiter | 38981-11-01 03:22 G | 15958882.45 | 15958882.64 | 15958882.83 | 0.0498 | 0.0275 |
| Saturn | 38982-09-25 23:31 G | 15959211.37 | 15959211.48 | 15959211.62 | 0.0260 | 0.0223 |
| Saturn | 38983-10-07 09:50 G | 15959587.73 | 15959587.91 | 15959588.10 | 0.0258 | 0.0158 |
| Jupiter | 38987-04-14 10:05 G | 15960872.68 | 15960872.92 | 15960873.15 | 0.0526 | 0.0099 |
| Jupiter | 38992-10-04 10:48 G | 15962872.78 | 15962872.95 | 15962873.13 | 0.0501 | 0.0334 |
| Jupiter | 38993-11-05 22:34 G | 15963270.31 | 15963270.44 | 15963270.58 | 0.0498 | 0.0403 |
| Mars | 38997-02-18 10:19 G | 15964470.77 | 15964470.93 | 15964471.09 | 0.1648 | 0.0992 |
| Saturn | 38998-03-28 03:36 G | 15964873.46 | 15964873.65 | 15964873.85 | 0.0302 | 0.0172 |
| Uranus | 38998-04-30 05:02 G | 15964906.52 | 15964906.71 | 15964906.93 | 0.0135 | 0.0076 |
| Jupiter | 38999-04-19 09:36 G | 15965260.67 | 15965260.90 | 15965261.12 | 0.0527 | 0.0010 |
| Uranus | 38999-05-04 20:10 G | 15965276.08 | 15965276.34 | 15965276.60 | 0.0135 | 0.0005 |
| Uranus | 39000-05-09 00:00 G | 15965645.30 | 15965645.50 | 15965645.74 | 0.0135 | 0.0063 |

40TH MILLENNIUM CE

This is a list of transits of Moon in the 40th millennium CE.

| | FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------|-------|---|-------------|-------------|-------------|--------|--------|---|
| | TRANSIT | | | | | | | | |
| | TIME | | | | | | | | |
| Pluto | 39002-06-07 | 00:58 | G | 15966404.37 | 15966404.54 | 15966404.76 | 0.0066 | 0.0042 | |
| Pluto | 39003-06-08 | 08:53 | G | 15966770.68 | 15966770.87 | 15966771.08 | 0.0066 | 0.0042 | |
| Jupiter | 39004-10-10 | 02:38 | G | 15967260.42 | 15967260.61 | 15967260.81 | 0.0500 | 0.0270 | |
| Jupiter | 39011-04-25 | 18:29 | G | 15969649.05 | 15969649.27 | 15969649.50 | 0.0527 | 0.0120 | |
| Saturn | 39012-10-02 | 18:58 | G | 15970175.04 | 15970175.29 | 15970175.55 | 0.0259 | 0.0014 | |
| Jupiter | 39016-10-14 | 11:02 | G | 15971647.73 | 15971647.96 | 15971648.19 | 0.0500 | 0.0169 | |
| Jupiter | 39023-04-30 | 10:05 | G | 15974036.73 | 15974036.92 | 15974037.12 | 0.0527 | 0.0293 | |
| Saturn | 39028-04-05 | 13:55 | G | 15975838.87 | 15975839.08 | 15975839.29 | 0.0304 | 0.0163 | |
| Jupiter | 39028-10-19 | 04:05 | G | 15976035.45 | 15976035.67 | 15976035.90 | 0.0500 | 0.0024 | |
| Neptune | 39029-09-15 | 14:10 | G | 15976366.93 | 15976367.09 | 15976367.31 | 0.0088 | 0.0059 | |
| Neptune | 39030-09-18 | 08:24 | G | 15976734.64 | 15976734.85 | 15976735.09 | 0.0088 | 0.0047 | |
| Neptune | 39031-09-20 | 14:10 | G | 15977101.86 | 15977102.09 | 15977102.35 | 0.0088 | 0.0018 | |
| Neptune | 39032-09-22 | 04:48 | G | 15977469.44 | 15977469.70 | 15977469.98 | 0.0088 | 0.0006 | |
| Neptune | 39033-09-24 | 14:53 | G | 15977836.88 | 15977837.12 | 15977837.36 | 0.0088 | 0.0023 | |
| Neptune | 39034-09-27 | 00:29 | G | 15978204.29 | 15978204.52 | 15978204.78 | 0.0088 | 0.0035 | |
| Jupiter | 39035-05-05 | 16:05 | G | 15978425.05 | 15978425.17 | 15978425.31 | 0.0528 | 0.0429 | |
| Neptune | 39035-09-29 | 15:36 | G | 15978571.99 | 15978572.15 | 15978572.33 | 0.0088 | 0.0064 | |
| Neptune | 39036-09-30 | 20:53 | G | 15978939.26 | 15978939.37 | 15978939.53 | 0.0088 | 0.0076 | |
| Uranus | 39038-10-31 | 22:48 | G | 15979700.27 | 15979700.45 | 15979700.65 | 0.0143 | 0.0091 | |
| Uranus | 39039-11-06 | 02:38 | G | 15980070.35 | 15980070.61 | 15980070.87 | 0.0143 | 0.0007 | |
| Jupiter | 39040-10-23 | 19:55 | G | 15980423.09 | 15980423.33 | 15980423.57 | 0.0499 | 0.0110 | |
| Uranus | 39040-11-09 | 18:58 | G | 15980440.10 | 15980440.29 | 15980440.51 | 0.0143 | 0.0081 | |
| Saturn | 39041-09-27 | 20:38 | G | 15980762.21 | 15980762.36 | 15980762.54 | 0.0260 | 0.0190 | |
| Saturn | 39042-10-09 | 08:24 | G | 15981138.70 | 15981138.85 | 15981139.02 | 0.0258 | 0.0196 | |
| Jupiter | 39046-04-04 | 22:48 | G | 15982412.31 | 15982412.45 | 15982412.59 | 0.0524 | 0.0408 | |
| Jupiter | 39047-05-10 | 14:53 | G | 15982813.06 | 15982813.12 | 15982813.18 | 0.0528 | 0.0509 | |

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| Jupiter | 39052-10-28 03:50 G | 15984810.45 | 15984810.66 | 15984810.87 | 0.0498 | 0.0187 |
| Saturn | 39057-03-29 23:46 G | 15986424.27 | 15986424.49 | 15986424.71 | 0.0302 | 0.0131 |
| Jupiter | 39058-04-10 00:00 G | 15986800.28 | 15986800.50 | 15986800.71 | 0.0525 | 0.0233 |
| Jupiter | 39063-10-01 03:36 G | 15988800.56 | 15988800.65 | 15988800.75 | 0.0502 | 0.0455 |
| Jupiter | 39064-11-01 18:43 G | 15989198.08 | 15989198.28 | 15989198.48 | 0.0498 | 0.0267 |
| Jupiter | 39070-04-14 23:17 G | 15991188.25 | 15991188.47 | 15991188.69 | 0.0526 | 0.0105 |
| Saturn | 39071-10-04 09:07 G | 15991725.63 | 15991725.88 | 15991726.13 | 0.0259 | 0.0021 |
| Jupiter | 39075-10-06 00:29 G | 15993188.37 | 15993188.52 | 15993188.69 | 0.0501 | 0.0351 |
| Mars | 39076-02-22 21:36 G | 15993328.28 | 15993328.40 | 15993328.52 | 0.1652 | 0.1292 |
| Jupiter | 39076-11-05 23:17 G | 15993585.33 | 15993585.47 | 15993585.61 | 0.0498 | 0.0397 |
| Jupiter | 39082-04-20 03:36 G | 15995576.41 | 15995576.65 | 15995576.88 | 0.0526 | 0.0024 |
| Uranus | 39082-05-01 13:55 G | 15995587.88 | 15995588.08 | 15995588.31 | 0.0135 | 0.0067 |
| Uranus | 39083-05-06 04:19 G | 15995957.42 | 15995957.68 | 15995957.94 | 0.0135 | 0.0005 |
| Uranus | 39084-05-09 09:22 G | 15996326.70 | 15996326.89 | 15996327.10 | 0.0135 | 0.0079 |
| Uranus | 39085-05-14 01:12 G | 15996696.55 | 15996696.55 | 15996696.57 | 0.0136 | 0.0136 |
| Saturn | 39087-04-07 06:58 G | 15997389.62 | 15997389.79 | 15997389.97 | 0.0304 | 0.0201 |
| Jupiter | 39087-10-10 10:34 G | 15997575.74 | 15997575.94 | 15997576.14 | 0.0501 | 0.0278 |
| Pluto | 39089-12-07 23:46 G | 15998365.33 | 15998365.49 | 15998365.67 | 0.0079 | 0.0059 |
| Jupiter | 39094-04-24 19:41 G | 15999964.10 | 15999964.32 | 15999964.56 | 0.0527 | 0.0114 |
| Jupiter | 39099-10-15 04:19 G | 16001963.47 | 16001963.68 | 16001963.89 | 0.0500 | 0.0170 |
| Saturn | 39100-09-29 20:10 G | 16002313.15 | 16002313.34 | 16002313.54 | 0.0260 | 0.0155 |
| Saturn | 39101-10-11 01:26 G | 16002689.46 | 16002689.56 | 16002689.68 | 0.0258 | 0.0232 |
| Jupiter | 39106-05-01 01:55 G | 16004352.39 | 16004352.58 | 16004352.77 | 0.0527 | 0.0292 |
| Jupiter | 39111-10-20 19:41 G | 16006351.08 | 16006351.32 | 16006351.57 | 0.0499 | 0.0017 |
| Neptune | 39112-03-16 18:43 G | 16006499.13 | 16006499.28 | 16006499.45 | 0.0089 | 0.0070 |
| Neptune | 39113-03-19 04:05 G | 16006866.49 | 16006866.67 | 16006866.89 | 0.0089 | 0.0051 |
| Neptune | 39114-03-21 16:05 G | 16007233.93 | 16007234.17 | 16007234.43 | 0.0089 | 0.0027 |
| Neptune | 39115-03-24 06:29 G | 16007601.53 | 16007601.77 | 16007602.02 | 0.0089 | 0.0009 |
| Neptune | 39116-03-25 13:55 G | 16007968.83 | 16007969.08 | 16007969.35 | 0.0089 | 0.0015 |
| Saturn | 39116-03-31 14:10 G | 16007974.85 | 16007975.09 | 16007975.33 | 0.0303 | 0.0093 |

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| Neptune | 39117-03-28 08:24 G | 16008336.63 | 16008336.85 | 16008337.09 | 0.0089 | 0.0035 |
| Neptune | 39118-03-30 13:41 G | 16008703.90 | 16008704.07 | 16008704.28 | 0.0089 | 0.0060 |
| Jupiter | 39118-05-06 02:38 G | 16008740.47 | 16008740.61 | 16008740.76 | 0.0528 | 0.0420 |
| Neptune | 39119-04-02 08:53 G | 16009071.76 | 16009071.87 | 16009072.01 | 0.0090 | 0.0078 |
| Uranus | 39122-11-02 09:22 G | 16010381.68 | 16010381.89 | 16010382.10 | 0.0143 | 0.0074 |
| Jupiter | 39123-10-24 22:48 G | 16010738.23 | 16010738.45 | 16010738.68 | 0.0499 | 0.0101 |
| Uranus | 39123-11-07 11:46 G | 16010751.73 | 16010751.99 | 16010752.25 | 0.0143 | 0.0003 |
| Uranus | 39124-11-11 05:17 G | 16011121.54 | 16011121.72 | 16011121.92 | 0.0143 | 0.0092 |
| Jupiter | 39129-04-05 13:55 G | 16012727.93 | 16012728.08 | 16012728.23 | 0.0524 | 0.0405 |
| Jupiter | 39130-05-11 05:02 G | 16013128.66 | 16013128.71 | 16013128.77 | 0.0528 | 0.0507 |
| Saturn | 39130-10-06 04:34 G | 16013276.46 | 16013276.69 | 16013276.93 | 0.0259 | 0.0059 |
| Jupiter | 39135-10-29 18:43 G | 16015126.06 | 16015126.28 | 16015126.50 | 0.0499 | 0.0175 |
| Jupiter | 39141-04-10 09:36 G | 16017115.70 | 16017115.90 | 16017116.10 | 0.0525 | 0.0241 |
| Saturn | 39146-04-09 05:02 G | 16018940.58 | 16018940.71 | 16018940.87 | 0.0304 | 0.0241 |
| Jupiter | 39146-10-01 22:19 G | 16019116.35 | 16019116.43 | 16019116.53 | 0.0502 | 0.0460 |
| Jupiter | 39147-11-03 00:14 G | 16019513.32 | 16019513.51 | 16019513.72 | 0.0498 | 0.0265 |
| Jupiter | 39153-04-15 13:26 G | 16021503.83 | 16021504.06 | 16021504.29 | 0.0525 | 0.0124 |
| Jupiter | 39158-10-06 09:22 G | 16023503.72 | 16023503.89 | 16023504.06 | 0.0502 | 0.0359 |
| Saturn | 39159-10-01 14:24 G | 16023863.88 | 16023864.10 | 16023864.34 | 0.0260 | 0.0117 |
| Jupiter | 39159-11-07 20:24 G | 16023901.22 | 16023901.35 | 16023901.48 | 0.0498 | 0.0407 |
| Jupiter | 39165-04-20 04:48 G | 16025891.47 | 16025891.70 | 16025891.93 | 0.0526 | 0.0038 |
| Uranus | 39166-05-03 00:58 G | 16026269.34 | 16026269.54 | 16026269.76 | 0.0135 | 0.0069 |
| Uranus | 39167-05-07 13:41 G | 16026638.81 | 16026639.07 | 16026639.34 | 0.0135 | 0.0009 |
| Uranus | 39168-05-10 20:10 G | 16027008.13 | 16027008.34 | 16027008.56 | 0.0135 | 0.0068 |
| Jupiter | 39170-10-11 02:38 G | 16027891.42 | 16027891.61 | 16027891.79 | 0.0501 | 0.0287 |
| Saturn | 39175-04-02 05:02 G | 16029525.47 | 16029525.71 | 16029525.96 | 0.0302 | 0.0051 |
| Jupiter | 39177-04-25 14:10 G | 16030279.87 | 16030280.09 | 16030280.31 | 0.0527 | 0.0115 |
| Jupiter | 39182-10-15 12:58 G | 16032278.81 | 16032279.04 | 16032279.27 | 0.0500 | 0.0173 |
| Jupiter | 39189-04-30 12:58 G | 16034667.84 | 16034668.04 | 16034668.24 | 0.0527 | 0.0290 |
| Saturn | 39189-10-07 05:02 G | 16034827.50 | 16034827.71 | 16034827.94 | 0.0259 | 0.0102 |

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| Neptune | 39193-09-16 07:12 G | 16036267.67 | 16036267.80 | 16036267.97 | 0.0088 | 0.0072 |
| Neptune | 39194-09-18 14:24 G | 16036634.92 | 16036635.10 | 16036635.32 | 0.0088 | 0.0054 |
| Jupiter | 39194-10-19 21:07 G | 16036666.15 | 16036666.38 | 16036666.61 | 0.0499 | 0.0022 |
| Neptune | 39195-09-21 04:19 G | 16037002.45 | 16037002.68 | 16037002.95 | 0.0088 | 0.0032 |
| Neptune | 39196-09-22 16:19 G | 16037369.94 | 16037370.18 | 16037370.43 | 0.0088 | 0.0013 |
| Neptune | 39197-09-25 00:43 G | 16037737.27 | 16037737.53 | 16037737.80 | 0.0088 | 0.0010 |
| Neptune | 39198-09-27 16:05 G | 16038104.95 | 16038105.17 | 16038105.43 | 0.0088 | 0.0030 |
| Neptune | 39199-09-29 20:53 G | 16038472.18 | 16038472.37 | 16038472.60 | 0.0088 | 0.0052 |
| Neptune | 39200-10-01 14:53 G | 16038839.99 | 16038840.12 | 16038840.29 | 0.0088 | 0.0071 |
| Jupiter | 39201-05-05 12:00 G | 16039055.87 | 16039056.00 | 16039056.15 | 0.0527 | 0.0406 |
| Saturn | 39205-04-10 02:53 G | 16040491.55 | 16040491.62 | 16040491.71 | 0.0304 | 0.0286 |
| Jupiter | 39206-10-24 18:00 G | 16041054.02 | 16041054.25 | 16041054.48 | 0.0499 | 0.0093 |
| Uranus | 39206-11-02 22:34 G | 16041063.25 | 16041063.44 | 16041063.65 | 0.0143 | 0.0083 |
| Uranus | 39207-11-07 23:46 G | 16041433.24 | 16041433.49 | 16041433.76 | 0.0143 | 0.0016 |
| Mars | 39208-08-22 05:31 G | 16041721.59 | 16041721.73 | 16041721.86 | 0.1892 | 0.1448 |
| Uranus | 39208-11-11 18:00 G | 16041803.07 | 16041803.25 | 16041803.46 | 0.0143 | 0.0088 |
| Jupiter | 39212-04-04 19:26 G | 16043043.18 | 16043043.31 | 16043043.45 | 0.0524 | 0.0420 |
| Jupiter | 39213-05-10 16:05 G | 16043444.09 | 16043444.17 | 16043444.26 | 0.0528 | 0.0489 |
| Saturn | 39218-10-02 06:29 G | 16045414.53 | 16045414.77 | 16045415.02 | 0.0260 | 0.0073 |
| Jupiter | 39218-10-28 23:46 G | 16045441.26 | 16045441.49 | 16045441.71 | 0.0499 | 0.0169 |
| Jupiter | 39224-04-09 21:07 G | 16047431.18 | 16047431.38 | 16047431.59 | 0.0525 | 0.0251 |
| Jupiter | 39229-10-01 05:02 G | 16049431.63 | 16049431.71 | 16049431.81 | 0.0502 | 0.0464 |
| Jupiter | 39230-11-02 18:43 G | 16049829.09 | 16049829.28 | 16049829.47 | 0.0498 | 0.0266 |
| Saturn | 39234-04-03 05:31 G | 16051076.49 | 16051076.73 | 16051076.97 | 0.0302 | 0.0002 |
| Jupiter | 39236-04-14 15:36 G | 16051818.93 | 16051819.15 | 16051819.38 | 0.0526 | 0.0140 |
| Jupiter | 39241-10-05 18:29 G | 16053819.13 | 16053819.27 | 16053819.42 | 0.0501 | 0.0380 |
| Jupiter | 39242-11-06 21:50 G | 16054216.27 | 16054216.41 | 16054216.56 | 0.0498 | 0.0402 |
| Saturn | 39247-09-27 17:31 G | 16056002.16 | 16056002.23 | 16056002.30 | 0.0261 | 0.0249 |
| Jupiter | 39248-04-19 23:46 G | 16056207.26 | 16056207.49 | 16056207.72 | 0.0527 | 0.0048 |
| Saturn | 39248-10-08 03:36 G | 16056378.45 | 16056378.65 | 16056378.87 | 0.0259 | 0.0147 |

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| Uranus | 39249-04-29 01:41 G | 16056581.55 | 16056581.57 | 16056581.65 | 0.0135 | 0.0133 |
| Pluto | 39249-06-09 11:17 G | 16056622.77 | 16056622.97 | 16056623.18 | 0.0066 | 0.0038 |
| Uranus | 39250-05-03 09:36 G | 16056950.70 | 16056950.90 | 16056951.13 | 0.0135 | 0.0064 |
| Pluto | 39250-06-10 19:55 G | 16056989.17 | 16056989.33 | 16056989.52 | 0.0066 | 0.0048 |
| Uranus | 39251-05-07 20:53 G | 16057320.11 | 16057320.37 | 16057320.64 | 0.0135 | 0.0002 |
| Uranus | 39252-05-11 04:48 G | 16057689.51 | 16057689.70 | 16057689.90 | 0.0136 | 0.0083 |
| Jupiter | 39253-10-10 08:24 G | 16058206.67 | 16058206.85 | 16058207.05 | 0.0501 | 0.0304 |
| Jupiter | 39260-04-24 17:46 G | 16060595.00 | 16060595.24 | 16060595.47 | 0.0527 | 0.0102 |
| Saturn | 39263-03-27 23:17 G | 16061662.37 | 16061662.47 | 16061662.59 | 0.0301 | 0.0270 |
| Jupiter | 39265-10-14 17:31 G | 16062594.02 | 16062594.23 | 16062594.45 | 0.0500 | 0.0181 |
| Jupiter | 39272-04-29 17:46 G | 16064983.05 | 16064983.24 | 16064983.43 | 0.0527 | 0.0276 |
| Neptune | 39276-03-16 03:36 G | 16066399.54 | 16066399.65 | 16066399.79 | 0.0089 | 0.0078 |
| Neptune | 39277-03-18 14:24 G | 16066766.92 | 16066767.10 | 16066767.29 | 0.0089 | 0.0065 |
| Saturn | 39277-10-03 06:00 G | 16066965.51 | 16066965.75 | 16066965.99 | 0.0260 | 0.0026 |
| Jupiter | 39277-10-19 14:38 G | 16066981.87 | 16066982.11 | 16066982.34 | 0.0500 | 0.0026 |
| Neptune | 39278-03-21 06:14 G | 16067134.53 | 16067134.76 | 16067134.99 | 0.0089 | 0.0035 |
| Neptune | 39279-03-23 12:29 G | 16067501.78 | 16067502.02 | 16067502.29 | 0.0089 | 0.0023 |
| Neptune | 39280-03-25 07:26 G | 16067869.56 | 16067869.81 | 16067870.07 | 0.0089 | 0.0009 |
| Mars | 39281-02-21 16:05 G | 16068202.99 | 16068203.17 | 16068203.34 | 0.1644 | 0.0179 |
| Neptune | 39281-03-27 12:29 G | 16068236.79 | 16068237.02 | 16068237.28 | 0.0089 | 0.0022 |
| Neptune | 39282-03-30 07:26 G | 16068604.60 | 16068604.81 | 16068605.02 | 0.0090 | 0.0052 |
| Neptune | 39283-04-01 14:10 G | 16068971.93 | 16068972.09 | 16068972.27 | 0.0090 | 0.0065 |
| Jupiter | 39284-05-04 19:55 G | 16069371.17 | 16069371.33 | 16069371.49 | 0.0528 | 0.0383 |
| Jupiter | 39289-10-23 19:26 G | 16071369.08 | 16071369.31 | 16071369.55 | 0.0499 | 0.0085 |
| Uranus | 39290-11-03 10:19 G | 16071744.71 | 16071744.93 | 16071745.15 | 0.0143 | 0.0065 |
| Uranus | 39291-11-08 10:05 G | 16072114.66 | 16072114.92 | 16072115.18 | 0.0143 | 0.0006 |
| Uranus | 39292-11-12 06:00 G | 16072484.59 | 16072484.75 | 16072484.93 | 0.0143 | 0.0102 |
| Saturn | 39293-04-04 15:07 G | 16072627.90 | 16072628.13 | 16072628.36 | 0.0303 | 0.0059 |
| Jupiter | 39295-04-05 06:00 G | 16073358.62 | 16073358.75 | 16073358.89 | 0.0524 | 0.0425 |
| Jupiter | 39296-05-09 16:05 G | 16073759.08 | 16073759.17 | 16073759.26 | 0.0528 | 0.0479 |

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| Jupiter | 39301-10-29 10:34 G | 16075756.73 | 16075756.94 | 16075757.17 | 0.0498 | 0.0153 |
| Saturn | 39306-09-29 19:55 G | 16077553.18 | 16077553.33 | 16077553.49 | 0.0261 | 0.0203 |
| Jupiter | 39307-04-10 23:02 G | 16077746.26 | 16077746.46 | 16077746.66 | 0.0525 | 0.0264 |
| Saturn | 39307-10-11 00:14 G | 16077929.35 | 16077929.51 | 16077929.68 | 0.0260 | 0.0197 |
| Jupiter | 39312-10-01 11:46 G | 16079746.94 | 16079746.99 | 16079747.05 | 0.0502 | 0.0486 |
| Jupiter | 39313-11-02 17:31 G | 16080144.02 | 16080144.23 | 16080144.44 | 0.0498 | 0.0253 |
| Jupiter | 39319-04-16 03:50 G | 16082134.45 | 16082134.66 | 16082134.88 | 0.0526 | 0.0166 |
| Saturn | 39322-03-30 03:22 G | 16083213.46 | 16083213.64 | 16083213.82 | 0.0301 | 0.0207 |
| Jupiter | 39324-10-06 01:26 G | 16084134.42 | 16084134.56 | 16084134.71 | 0.0502 | 0.0401 |
| Jupiter | 39325-11-07 06:29 G | 16084531.65 | 16084531.77 | 16084531.91 | 0.0498 | 0.0402 |
| Jupiter | 39331-04-20 20:24 G | 16086522.12 | 16086522.35 | 16086522.59 | 0.0526 | 0.0069 |
| Uranus | 39333-04-30 09:50 G | 16087262.91 | 16087262.91 | 16087262.93 | 0.0135 | 0.0135 |
| Uranus | 39334-05-04 19:12 G | 16087632.09 | 16087632.30 | 16087632.52 | 0.0135 | 0.0063 |
| Uranus | 39335-05-09 04:48 G | 16088001.44 | 16088001.70 | 16088001.96 | 0.0135 | 0.0011 |
| Uranus | 39336-05-12 14:10 G | 16088370.88 | 16088371.09 | 16088371.29 | 0.0135 | 0.0073 |
| Saturn | 39336-10-05 12:58 G | 16088516.81 | 16088517.04 | 16088517.28 | 0.0260 | 0.0026 |
| Jupiter | 39336-10-10 11:17 G | 16088521.80 | 16088521.97 | 16088522.15 | 0.0501 | 0.0324 |
| Pluto | 39336-12-11 12:29 G | 16088583.83 | 16088584.02 | 16088584.23 | 0.0078 | 0.0048 |
| Jupiter | 39343-04-25 20:10 G | 16090910.12 | 16090910.34 | 16090910.56 | 0.0527 | 0.0088 |
| Jupiter | 39348-10-15 07:41 G | 16092909.61 | 16092909.82 | 16092910.05 | 0.0500 | 0.0189 |
| Saturn | 39352-04-07 05:31 G | 16094179.51 | 16094179.73 | 16094179.95 | 0.0303 | 0.0132 |
| Jupiter | 39355-04-30 23:31 G | 16095298.28 | 16095298.48 | 16095298.69 | 0.0527 | 0.0263 |
| Neptune | 39358-09-19 03:07 G | 16096535.43 | 16096535.63 | 16096535.82 | 0.0088 | 0.0059 |
| Neptune | 39359-09-21 15:22 G | 16096902.94 | 16096903.14 | 16096903.37 | 0.0088 | 0.0047 |
| Neptune | 39360-09-22 23:02 G | 16097270.21 | 16097270.46 | 16097270.73 | 0.0088 | 0.0018 |
| Jupiter | 39360-10-19 09:22 G | 16097296.66 | 16097296.89 | 16097297.13 | 0.0499 | 0.0046 |
| Neptune | 39361-09-25 16:34 G | 16097637.93 | 16097638.19 | 16097638.44 | 0.0088 | 0.0005 |
| Neptune | 39362-09-27 20:53 G | 16098005.14 | 16098005.37 | 16098005.64 | 0.0088 | 0.0025 |
| Neptune | 39363-09-30 15:22 G | 16098372.91 | 16098373.14 | 16098373.39 | 0.0088 | 0.0036 |
| Neptune | 39364-10-01 19:55 G | 16098740.18 | 16098740.33 | 16098740.52 | 0.0088 | 0.0066 |

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| Saturn | 39365-09-30 20:53 G | 16099104.16 | 16099104.37 | 16099104.58 | 0.0261 | 0.0149 |
| Neptune | 39365-10-04 12:43 G | 16099107.91 | 16099108.03 | 16099108.16 | 0.0088 | 0.0077 |
| Saturn | 39366-10-12 03:22 G | 16099480.58 | 16099480.64 | 16099480.70 | 0.0260 | 0.0251 |
| Jupiter | 39367-05-05 18:58 G | 16099686.13 | 16099686.29 | 16099686.45 | 0.0528 | 0.0368 |
| Jupiter | 39372-10-24 04:05 G | 16101684.44 | 16101684.67 | 16101684.90 | 0.0499 | 0.0061 |
| Uranus | 39374-11-04 20:10 G | 16102426.14 | 16102426.34 | 16102426.56 | 0.0143 | 0.0075 |
| Uranus | 39375-11-09 18:29 G | 16102796.02 | 16102796.27 | 16102796.54 | 0.0143 | 0.0024 |
| Uranus | 39376-11-13 15:50 G | 16103165.99 | 16103166.16 | 16103166.35 | 0.0143 | 0.0094 |
| Jupiter | 39378-04-05 01:55 G | 16103673.47 | 16103673.58 | 16103673.70 | 0.0524 | 0.0447 |
| Jupiter | 39379-05-11 01:26 G | 16104074.44 | 16104074.56 | 16104074.67 | 0.0528 | 0.0459 |
| Saturn | 39381-03-31 17:02 G | 16104765.01 | 16104765.21 | 16104765.44 | 0.0301 | 0.0134 |
| Jupiter | 39384-10-28 10:48 G | 16106071.72 | 16106071.95 | 16106072.19 | 0.0499 | 0.0132 |
| Jupiter | 39390-04-10 06:14 G | 16108061.57 | 16108061.76 | 16108061.96 | 0.0525 | 0.0287 |
| Saturn | 39395-10-07 22:19 G | 16110068.20 | 16110068.43 | 16110068.66 | 0.0260 | 0.0080 |
| Jupiter | 39396-11-02 00:00 G | 16110459.31 | 16110459.50 | 16110459.70 | 0.0498 | 0.0244 |
| Jupiter | 39402-04-15 19:41 G | 16112449.10 | 16112449.32 | 16112449.54 | 0.0525 | 0.0188 |
| Jupiter | 39407-10-07 01:55 G | 16114449.47 | 16114449.58 | 16114449.70 | 0.0502 | 0.0427 |
| Jupiter | 39408-11-07 13:26 G | 16114846.91 | 16114847.06 | 16114847.21 | 0.0498 | 0.0391 |
| Saturn | 39411-04-10 19:55 G | 16115731.15 | 16115731.33 | 16115731.51 | 0.0303 | 0.0211 |
| Jupiter | 39414-04-20 22:48 G | 16116837.23 | 16116837.45 | 16116837.67 | 0.0526 | 0.0088 |
| Uranus | 39417-05-01 16:05 G | 16117944.11 | 16117944.17 | 16117944.29 | 0.0134 | 0.0127 |
| Uranus | 39418-05-06 03:07 G | 16118313.41 | 16118313.63 | 16118313.85 | 0.0135 | 0.0061 |
| Uranus | 39419-05-10 10:48 G | 16118682.68 | 16118682.95 | 16118683.21 | 0.0135 | 0.0007 |
| Jupiter | 39419-10-11 20:10 G | 16118837.17 | 16118837.34 | 16118837.51 | 0.0500 | 0.0347 |
| Uranus | 39420-05-13 21:07 G | 16119052.21 | 16119052.38 | 16119052.59 | 0.0135 | 0.0086 |
| Saturn | 39424-10-03 01:12 G | 16120655.32 | 16120655.55 | 16120655.79 | 0.0261 | 0.0091 |
| Jupiter | 39426-04-25 23:02 G | 16121225.23 | 16121225.46 | 16121225.70 | 0.0527 | 0.0076 |
| Jupiter | 39431-10-16 00:00 G | 16123224.30 | 16123224.50 | 16123224.72 | 0.0500 | 0.0214 |
| Jupiter | 39438-04-30 16:48 G | 16125613.00 | 16125613.20 | 16125613.40 | 0.0527 | 0.0239 |
| Saturn | 39440-04-03 17:46 G | 16126317.01 | 16126317.24 | 16126317.47 | 0.0302 | 0.0047 |

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| Neptune | 39441-03-20 06:00 G | 16126667.61 | 16126667.75 | 16126667.90 | 0.0089 | 0.0072 |
| Neptune | 39442-03-22 11:17 G | 16127034.77 | 16127034.97 | 16127035.20 | 0.0089 | 0.0049 |
| Neptune | 39443-03-25 06:14 G | 16127402.53 | 16127402.76 | 16127403.02 | 0.0089 | 0.0028 |
| Jupiter | 39443-10-20 18:29 G | 16127612.05 | 16127612.27 | 16127612.50 | 0.0500 | 0.0067 |
| Neptune | 39444-03-26 11:31 G | 16127769.73 | 16127769.98 | 16127770.24 | 0.0089 | 0.0006 |
| Neptune | 39445-03-29 05:17 G | 16128137.47 | 16128137.72 | 16128137.99 | 0.0089 | 0.0016 |
| Neptune | 39446-03-31 12:58 G | 16128504.82 | 16128505.04 | 16128505.28 | 0.0089 | 0.0037 |
| Neptune | 39447-04-03 03:07 G | 16128872.46 | 16128872.63 | 16128872.85 | 0.0090 | 0.0060 |
| Neptune | 39448-04-04 15:36 G | 16129240.08 | 16129240.15 | 16129240.28 | 0.0090 | 0.0082 |
| Jupiter | 39450-05-05 22:34 G | 16130001.27 | 16130001.44 | 16130001.63 | 0.0527 | 0.0343 |
| Saturn | 39453-09-28 19:26 G | 16131243.31 | 16131243.31 | 16131243.34 | 0.0262 | 0.0261 |
| Saturn | 39454-10-10 05:31 G | 16131619.51 | 16131619.73 | 16131619.94 | 0.0260 | 0.0139 |
| Jupiter | 39455-10-25 01:26 G | 16131999.32 | 16131999.56 | 16131999.80 | 0.0499 | 0.0037 |
| Uranus | 39458-11-06 02:24 G | 16133107.39 | 16133107.60 | 16133107.83 | 0.0143 | 0.0063 |
| Uranus | 39459-11-10 23:17 G | 16133477.21 | 16133477.47 | 16133477.73 | 0.0143 | 0.0009 |
| Uranus | 39460-11-14 22:19 G | 16133847.28 | 16133847.43 | 16133847.61 | 0.0143 | 0.0107 |
| Jupiter | 39461-04-05 05:17 G | 16133988.62 | 16133988.72 | 16133988.82 | 0.0523 | 0.0465 |
| Jupiter | 39462-05-10 12:14 G | 16134388.88 | 16134389.01 | 16134389.14 | 0.0528 | 0.0437 |
| Jupiter | 39467-10-29 14:53 G | 16136386.90 | 16136387.12 | 16136387.34 | 0.0499 | 0.0111 |
| Saturn | 39470-04-12 14:24 G | 16137283.08 | 16137283.10 | 16137283.15 | 0.0303 | 0.0300 |
| Jupiter | 39473-04-09 19:41 G | 16138376.14 | 16138376.32 | 16138376.52 | 0.0525 | 0.0312 |
| Jupiter | 39479-11-03 01:55 G | 16140774.36 | 16140774.58 | 16140774.80 | 0.0498 | 0.0222 |
| Saturn | 39483-10-05 13:26 G | 16142206.83 | 16142207.06 | 16142207.30 | 0.0261 | 0.0029 |
| Jupiter | 39485-04-14 22:19 G | 16142764.23 | 16142764.43 | 16142764.63 | 0.0526 | 0.0217 |
| Mars | 39486-02-22 23:02 G | 16143078.33 | 16143078.46 | 16143078.58 | 0.1637 | 0.1243 |
| Jupiter | 39490-10-06 08:24 G | 16144764.76 | 16144764.85 | 16144764.95 | 0.0501 | 0.0455 |
| Jupiter | 39491-11-07 07:55 G | 16145161.68 | 16145161.83 | 16145161.98 | 0.0498 | 0.0371 |
| Pluto | 39496-06-12 17:46 G | 16146841.07 | 16146841.24 | 16146841.46 | 0.0066 | 0.0042 |
| Jupiter | 39497-04-19 19:41 G | 16147152.08 | 16147152.32 | 16147152.56 | 0.0526 | 0.0116 |
| Pluto | 39497-06-14 05:31 G | 16147207.59 | 16147207.73 | 16147207.90 | 0.0066 | 0.0053 |

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| Saturn | 39499-04-06 19:41 G | 16147869.08 | 16147869.32 | 16147869.56 | 0.0302 | 0.0046 |
| Uranus | 39501-05-03 00:43 G | 16148625.49 | 16148625.53 | 16148625.59 | 0.0134 | 0.0132 |
| Uranus | 39502-05-07 12:43 G | 16148994.82 | 16148995.03 | 16148995.26 | 0.0135 | 0.0057 |
| Jupiter | 39502-10-11 11:17 G | 16149151.82 | 16149151.97 | 16149152.13 | 0.0501 | 0.0373 |
| Uranus | 39503-05-11 19:12 G | 16149364.04 | 16149364.30 | 16149364.56 | 0.0135 | 0.0013 |
| Jupiter | 39503-11-13 00:14 G | 16149549.45 | 16149549.51 | 16149549.56 | 0.0498 | 0.0483 |
| Uranus | 39504-05-15 06:43 G | 16149733.60 | 16149733.78 | 16149734.00 | 0.0135 | 0.0079 |
| Jupiter | 39509-04-25 14:24 G | 16151539.88 | 16151540.10 | 16151540.33 | 0.0526 | 0.0051 |
| Saturn | 39512-10-01 05:02 G | 16152794.55 | 16152794.71 | 16152794.89 | 0.0262 | 0.0197 |
| Saturn | 39513-10-12 11:46 G | 16153170.84 | 16153170.99 | 16153171.15 | 0.0260 | 0.0203 |
| Jupiter | 39514-10-16 07:26 G | 16153539.61 | 16153539.81 | 16153540.01 | 0.0501 | 0.0234 |
| Jupiter | 39521-04-30 17:31 G | 16155928.02 | 16155928.23 | 16155928.45 | 0.0527 | 0.0214 |
| Neptune | 39522-09-20 15:50 G | 16156436.03 | 16156436.16 | 16156436.32 | 0.0088 | 0.0071 |
| Neptune | 39523-09-22 22:19 G | 16156803.24 | 16156803.43 | 16156803.65 | 0.0088 | 0.0055 |
| Neptune | 39524-09-24 16:05 G | 16157170.94 | 16157171.17 | 16157171.42 | 0.0088 | 0.0030 |
| Neptune | 39525-09-26 20:38 G | 16157538.11 | 16157538.36 | 16157538.62 | 0.0088 | 0.0014 |
| Neptune | 39526-09-29 15:07 G | 16157905.87 | 16157906.13 | 16157906.39 | 0.0088 | 0.0011 |
| Jupiter | 39526-10-20 14:10 G | 16157926.85 | 16157927.09 | 16157927.33 | 0.0500 | 0.0085 |
| Neptune | 39527-10-01 20:10 G | 16158273.11 | 16158273.34 | 16158273.59 | 0.0088 | 0.0029 |
| Saturn | 39528-03-31 12:43 G | 16158454.86 | 16158455.03 | 16158455.21 | 0.0301 | 0.0209 |
| Neptune | 39528-10-03 11:31 G | 16158640.77 | 16158640.98 | 16158641.20 | 0.0088 | 0.0053 |
| Neptune | 39529-10-05 19:55 G | 16159008.22 | 16159008.33 | 16159008.50 | 0.0088 | 0.0072 |
| Jupiter | 39533-05-05 09:07 G | 16160315.70 | 16160315.88 | 16160316.07 | 0.0528 | 0.0321 |
| Jupiter | 39538-10-25 03:50 G | 16162314.43 | 16162314.66 | 16162314.88 | 0.0499 | 0.0009 |
| Saturn | 39542-10-08 05:17 G | 16163758.49 | 16163758.72 | 16163758.97 | 0.0261 | 0.0037 |
| Uranus | 39542-11-07 09:36 G | 16163788.70 | 16163788.90 | 16163789.12 | 0.0143 | 0.0072 |
| Uranus | 39543-11-12 04:48 G | 16164158.45 | 16164158.70 | 16164158.97 | 0.0143 | 0.0024 |
| Jupiter | 39544-04-04 18:00 G | 16164303.18 | 16164303.25 | 16164303.33 | 0.0524 | 0.0496 |
| Uranus | 39544-11-16 05:46 G | 16164528.56 | 16164528.74 | 16164528.93 | 0.0143 | 0.0094 |
| Jupiter | 39545-05-10 15:50 G | 16164704.03 | 16164704.16 | 16164704.30 | 0.0528 | 0.0418 |

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| Jupiter | 39550-10-29 15:50 G | 16166701.92 | 16166702.16 | 16166702.40 | 0.0498 | 0.0085 |
| Jupiter | 39556-04-09 21:50 G | 16168691.24 | 16168691.41 | 16168691.58 | 0.0524 | 0.0345 |
| Saturn | 39558-04-09 19:12 G | 16169421.08 | 16169421.30 | 16169421.52 | 0.0302 | 0.0141 |
| Jupiter | 39562-11-02 21:22 G | 16171089.19 | 16171089.39 | 16171089.60 | 0.0498 | 0.0203 |
| Mars | 39565-02-26 04:19 G | 16171935.51 | 16171935.68 | 16171935.85 | 0.1640 | 0.0684 |
| Jupiter | 39568-04-14 17:17 G | 16173079.01 | 16173079.22 | 16173079.44 | 0.0525 | 0.0246 |
| Saturn | 39571-10-03 12:14 G | 16174345.80 | 16174346.01 | 16174346.24 | 0.0262 | 0.0133 |
| Jupiter | 39573-10-05 21:50 G | 16175079.35 | 16175079.41 | 16175079.49 | 0.0502 | 0.0480 |
| Jupiter | 39574-11-07 14:10 G | 16175476.94 | 16175477.09 | 16175477.27 | 0.0498 | 0.0357 |
| Jupiter | 39580-04-19 11:17 G | 16177466.75 | 16177466.97 | 16177467.18 | 0.0526 | 0.0146 |
| Pluto | 39583-12-15 21:07 G | 16178802.22 | 16178802.38 | 16178802.59 | 0.0078 | 0.0055 |
| Uranus | 39585-05-03 07:55 G | 16179306.74 | 16179306.83 | 16179306.97 | 0.0135 | 0.0121 |
| Jupiter | 39585-10-10 19:41 G | 16179467.17 | 16179467.32 | 16179467.46 | 0.0502 | 0.0392 |
| Uranus | 39586-05-07 21:07 G | 16179676.17 | 16179676.38 | 16179676.62 | 0.0135 | 0.0059 |
| Jupiter | 39586-11-11 18:14 G | 16179864.19 | 16179864.26 | 16179864.35 | 0.0498 | 0.0466 |
| Saturn | 39587-04-03 13:12 G | 16180006.83 | 16180007.05 | 16180007.27 | 0.0301 | 0.0118 |
| Uranus | 39587-05-12 02:10 G | 16180045.34 | 16180045.59 | 16180045.86 | 0.0135 | 0.0014 |
| Uranus | 39588-05-15 15:36 G | 16180414.98 | 16180415.15 | 16180415.35 | 0.0135 | 0.0089 |
| Jupiter | 39592-04-24 14:53 G | 16181854.89 | 16181855.12 | 16181855.36 | 0.0526 | 0.0027 |
| Jupiter | 39597-10-15 02:24 G | 16183854.40 | 16183854.60 | 16183854.82 | 0.0500 | 0.0253 |
| Saturn | 39601-10-09 16:34 G | 16185309.96 | 16185310.19 | 16185310.43 | 0.0261 | 0.0098 |
| Jupiter | 39604-04-29 06:00 G | 16186242.54 | 16186242.75 | 16186242.97 | 0.0527 | 0.0187 |
| Neptune | 39605-03-20 09:36 G | 16186567.80 | 16186567.90 | 16186568.05 | 0.0089 | 0.0078 |
| Neptune | 39606-03-23 04:34 G | 16186935.54 | 16186935.69 | 16186935.89 | 0.0089 | 0.0066 |
| Neptune | 39607-03-25 10:34 G | 16187302.71 | 16187302.94 | 16187303.18 | 0.0089 | 0.0035 |
| Neptune | 39608-03-27 03:50 G | 16187670.41 | 16187670.66 | 16187670.92 | 0.0089 | 0.0022 |
| Neptune | 39609-03-29 12:43 G | 16188037.79 | 16188038.03 | 16188038.28 | 0.0089 | 0.0009 |
| Jupiter | 39609-10-19 17:31 G | 16188242.01 | 16188242.23 | 16188242.45 | 0.0500 | 0.0105 |
| Neptune | 39610-04-01 01:26 G | 16188405.31 | 16188405.56 | 16188405.82 | 0.0089 | 0.0023 |
| Neptune | 39611-04-03 14:24 G | 16188772.92 | 16188773.10 | 16188773.31 | 0.0090 | 0.0054 |

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| Neptune | 39612-04-04 22:19 G | 16189140.29 | 16189140.43 | 16189140.64 | 0.0090 | 0.0067 |
| Jupiter | 39616-05-04 12:58 G | 16190630.86 | 16190631.04 | 16190631.23 | 0.0527 | 0.0290 |
| Saturn | 39617-04-11 13:41 G | 16190972.92 | 16190973.07 | 16190973.24 | 0.0302 | 0.0230 |
| Jupiter | 39621-10-24 03:22 G | 16192629.40 | 16192629.64 | 16192629.88 | 0.0499 | 0.0016 |
| Uranus | 39626-11-07 18:00 G | 16194470.04 | 16194470.25 | 16194470.49 | 0.0143 | 0.0062 |
| Jupiter | 39627-04-05 00:00 G | 16194618.48 | 16194618.50 | 16194618.54 | 0.0523 | 0.0518 |
| Uranus | 39627-11-12 12:00 G | 16194839.74 | 16194840.00 | 16194840.26 | 0.0143 | 0.0012 |
| Jupiter | 39628-05-09 08:38 G | 16195018.70 | 16195018.86 | 16195019.02 | 0.0527 | 0.0391 |
| Uranus | 39628-11-16 14:10 G | 16195209.95 | 16195210.09 | 16195210.26 | 0.0143 | 0.0110 |
| Saturn | 39630-10-04 22:05 G | 16195897.19 | 16195897.42 | 16195897.66 | 0.0261 | 0.0074 |
| Jupiter | 39633-10-28 11:46 G | 16197016.76 | 16197016.99 | 16197017.21 | 0.0499 | 0.0065 |
| Jupiter | 39639-04-09 14:53 G | 16199005.96 | 16199006.12 | 16199006.30 | 0.0524 | 0.0371 |
| Jupiter | 39645-11-02 05:31 G | 16201404.51 | 16201404.73 | 16201404.95 | 0.0499 | 0.0192 |
| Saturn | 39646-04-05 13:41 G | 16201558.84 | 16201559.07 | 16201559.31 | 0.0302 | 0.0033 |
| Jupiter | 39651-04-14 11:31 G | 16203393.80 | 16203393.98 | 16203394.17 | 0.0525 | 0.0280 |
| Jupiter | 39656-10-05 08:38 G | 16205394.85 | 16205394.86 | 16205394.87 | 0.0502 | 0.0501 |
| Jupiter | 39657-11-06 09:36 G | 16205791.73 | 16205791.90 | 16205792.07 | 0.0498 | 0.0341 |
| Saturn | 39659-09-30 14:24 G | 16206485.03 | 16206485.10 | 16206485.17 | 0.0262 | 0.0250 |
| Saturn | 39660-10-10 21:36 G | 16206861.20 | 16206861.40 | 16206861.61 | 0.0260 | 0.0156 |
| Jupiter | 39663-04-19 13:41 G | 16207781.84 | 16207782.07 | 16207782.29 | 0.0526 | 0.0173 |
| Jupiter | 39668-10-09 15:36 G | 16209782.01 | 16209782.15 | 16209782.29 | 0.0501 | 0.0408 |
| Uranus | 39669-05-03 17:17 G | 16209988.16 | 16209988.22 | 16209988.31 | 0.0135 | 0.0129 |
| Jupiter | 39669-11-11 03:07 G | 16210179.54 | 16210179.63 | 16210179.73 | 0.0498 | 0.0447 |
| Uranus | 39670-05-08 07:41 G | 16210357.60 | 16210357.82 | 16210358.06 | 0.0135 | 0.0051 |
| Uranus | 39671-05-12 12:00 G | 16210726.74 | 16210727.00 | 16210727.25 | 0.0135 | 0.0017 |
| Uranus | 39672-05-16 02:10 G | 16211096.41 | 16211096.59 | 16211096.80 | 0.0135 | 0.0084 |
| Saturn | 39675-03-30 03:22 G | 16212144.63 | 16212144.64 | 16212144.67 | 0.0300 | 0.0298 |
| Jupiter | 39675-04-24 06:14 G | 16212169.53 | 16212169.76 | 16212169.99 | 0.0526 | 0.0006 |
| Jupiter | 39680-10-14 04:34 G | 16214169.50 | 16214169.69 | 16214169.89 | 0.0501 | 0.0268 |
| Neptune | 39686-09-19 20:38 G | 16216336.34 | 16216336.36 | 16216336.39 | 0.0088 | 0.0087 |

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| Jupiter | 39687-04-29 14:10 G | 16216557.87 | 16216558.09 | 16216558.30 | 0.0527 | 0.0165 |
| Neptune | 39687-09-22 14:38 G | 16216703.94 | 16216704.11 | 16216704.31 | 0.0088 | 0.0060 |
| Neptune | 39688-09-23 18:58 G | 16217071.09 | 16217071.29 | 16217071.53 | 0.0088 | 0.0047 |
| Neptune | 39689-09-26 13:12 G | 16217438.80 | 16217439.05 | 16217439.31 | 0.0088 | 0.0018 |
| Saturn | 39689-10-06 09:36 G | 16217448.66 | 16217448.90 | 16217449.14 | 0.0261 | 0.0017 |
| Neptune | 39690-09-28 19:41 G | 16217806.07 | 16217806.32 | 16217806.57 | 0.0088 | 0.0004 |
| Neptune | 39691-10-01 10:05 G | 16218173.68 | 16218173.92 | 16218174.19 | 0.0088 | 0.0025 |
| Neptune | 39692-10-02 20:38 G | 16218541.16 | 16218541.36 | 16218541.61 | 0.0088 | 0.0039 |
| Jupiter | 39692-10-18 17:17 G | 16218556.99 | 16218557.22 | 16218557.46 | 0.0500 | 0.0123 |
| Neptune | 39693-10-05 06:29 G | 16218908.61 | 16218908.77 | 16218908.96 | 0.0088 | 0.0066 |
| Neptune | 39694-10-07 20:53 G | 16219276.30 | 16219276.37 | 16219276.51 | 0.0088 | 0.0080 |
| Jupiter | 39699-05-04 05:17 G | 16220945.52 | 16220945.72 | 16220945.93 | 0.0527 | 0.0262 |
| Jupiter | 39704-10-24 03:36 G | 16222944.42 | 16222944.65 | 16222944.88 | 0.0500 | 0.0033 |
| Saturn | 39705-04-08 06:29 G | 16223110.53 | 16223110.77 | 16223111.01 | 0.0302 | 0.0042 |
| Uranus | 39710-11-09 05:46 G | 16225151.53 | 16225151.74 | 16225151.98 | 0.0143 | 0.0066 |
| Jupiter | 39711-05-10 06:29 G | 16225333.61 | 16225333.77 | 16225333.93 | 0.0528 | 0.0371 |
| Uranus | 39711-11-13 22:48 G | 16225521.20 | 16225521.45 | 16225521.71 | 0.0143 | 0.0029 |
| Uranus | 39712-11-18 02:10 G | 16225891.41 | 16225891.59 | 16225891.77 | 0.0143 | 0.0099 |
| Jupiter | 39716-10-28 22:19 G | 16227332.19 | 16227332.43 | 16227332.66 | 0.0499 | 0.0049 |
| Saturn | 39718-10-02 18:29 G | 16228036.11 | 16228036.27 | 16228036.45 | 0.0262 | 0.0194 |
| Saturn | 39719-10-14 01:26 G | 16228412.42 | 16228412.56 | 16228412.70 | 0.0260 | 0.0210 |
| Jupiter | 39722-04-09 14:38 G | 16229320.97 | 16229321.11 | 16229321.25 | 0.0524 | 0.0400 |
| Jupiter | 39728-11-02 03:07 G | 16231719.41 | 16231719.63 | 16231719.85 | 0.0498 | 0.0182 |
| Saturn | 39734-04-01 14:38 G | 16233695.97 | 16233696.11 | 16233696.27 | 0.0300 | 0.0233 |
| Jupiter | 39734-04-14 17:46 G | 16233709.05 | 16233709.24 | 16233709.44 | 0.0525 | 0.0308 |
| Jupiter | 39740-11-06 18:14 G | 16236107.09 | 16236107.26 | 16236107.43 | 0.0498 | 0.0332 |
| Pluto | 39743-06-16 20:38 G | 16237059.20 | 16237059.36 | 16237059.53 | 0.0066 | 0.0050 |
| Pluto | 39744-06-17 11:02 G | 16237425.74 | 16237425.96 | 16237426.20 | 0.0066 | 0.0033 |
| Jupiter | 39746-04-19 11:17 G | 16238096.76 | 16238096.97 | 16238097.19 | 0.0525 | 0.0191 |
| Saturn | 39748-10-08 18:29 G | 16239000.02 | 16239000.27 | 16239000.51 | 0.0260 | 0.0036 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 39751-10-10 19:26 G | 16240097.20 | 16240097.31 | 16240097.43 | 0.0502 | 0.0428 |
| Jupiter | 39752-11-11 00:29 G | 16240494.40 | 16240494.52 | 16240494.64 | 0.0498 | 0.0432 |
| Uranus | 39753-05-05 01:55 G | 16240669.46 | 16240669.58 | 16240669.72 | 0.0135 | 0.0115 |
| Uranus | 39754-05-09 16:48 G | 16241038.98 | 16241039.20 | 16241039.44 | 0.0135 | 0.0055 |
| Uranus | 39755-05-13 19:55 G | 16241408.07 | 16241408.33 | 16241408.58 | 0.0135 | 0.0020 |
| Uranus | 39756-05-17 11:17 G | 16241777.81 | 16241777.97 | 16241778.17 | 0.0135 | 0.0093 |
| Jupiter | 39758-04-24 15:50 G | 16242484.93 | 16242485.16 | 16242485.39 | 0.0526 | 0.0018 |
| Jupiter | 39763-10-15 09:36 G | 16244484.70 | 16244484.90 | 16244485.11 | 0.0501 | 0.0275 |
| Saturn | 39764-04-09 11:17 G | 16244661.74 | 16244661.97 | 16244662.21 | 0.0303 | 0.0103 |
| Mars | 39770-02-25 17:46 G | 16246810.08 | 16246810.24 | 16246810.40 | 0.1632 | 0.0787 |
| Neptune | 39770-03-23 09:07 G | 16246835.77 | 16246835.88 | 16246836.05 | 0.0089 | 0.0075 |
| Jupiter | 39770-04-29 07:41 G | 16246872.59 | 16246872.82 | 16246873.05 | 0.0526 | 0.0141 |
| Neptune | 39771-03-26 01:26 G | 16247203.36 | 16247203.56 | 16247203.80 | 0.0089 | 0.0049 |
| Neptune | 39772-03-27 11:02 G | 16247570.75 | 16247570.96 | 16247571.21 | 0.0089 | 0.0030 |
| Neptune | 39773-03-29 23:02 G | 16247938.20 | 16247938.46 | 16247938.73 | 0.0089 | 0.0004 |
| Neptune | 39774-04-01 13:41 G | 16248305.84 | 16248306.07 | 16248306.33 | 0.0089 | 0.0016 |
| Neptune | 39775-04-03 20:53 G | 16248673.16 | 16248673.37 | 16248673.63 | 0.0090 | 0.0040 |
| Jupiter | 39775-10-19 21:50 G | 16248872.19 | 16248872.41 | 16248872.63 | 0.0500 | 0.0137 |
| Neptune | 39776-04-05 15:22 G | 16249040.96 | 16249041.14 | 16249041.34 | 0.0090 | 0.0059 |
| Neptune | 39777-04-07 19:55 G | 16249408.27 | 16249408.33 | 16249408.46 | 0.0090 | 0.0084 |
| Saturn | 39777-10-03 18:14 G | 16249587.06 | 16249587.26 | 16249587.48 | 0.0261 | 0.0141 |
| Saturn | 39778-10-15 06:14 G | 16249963.76 | 16249963.76 | 16249963.80 | 0.0259 | 0.0259 |
| Jupiter | 39782-05-04 09:50 G | 16251260.72 | 16251260.91 | 16251261.11 | 0.0527 | 0.0238 |
| Jupiter | 39787-10-24 16:34 G | 16253259.95 | 16253260.19 | 16253260.43 | 0.0500 | 0.0050 |
| Saturn | 39793-04-02 23:31 G | 16255247.30 | 16255247.48 | 16255247.68 | 0.0301 | 0.0179 |
| Uranus | 39793-11-04 12:00 G | 16255462.97 | 16255463.00 | 16255463.09 | 0.0144 | 0.0140 |
| Jupiter | 39794-05-09 13:26 G | 16255648.88 | 16255649.06 | 16255649.24 | 0.0527 | 0.0353 |
| Uranus | 39794-11-09 18:29 G | 16255833.05 | 16255833.27 | 16255833.52 | 0.0143 | 0.0054 |
| Uranus | 39795-11-14 10:48 G | 16256202.70 | 16256202.95 | 16256203.22 | 0.0143 | 0.0023 |
| Uranus | 39796-11-18 15:07 G | 16256573.00 | 16256573.13 | 16256573.27 | 0.0143 | 0.0119 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 39799-10-28 18:00 G | 16257647.02 | 16257647.25 | 16257647.49 | 0.0499 | 0.0032 |
| Jupiter | 39805-04-10 02:53 G | 16259636.48 | 16259636.62 | 16259636.77 | 0.0523 | 0.0411 |
| Saturn | 39807-10-11 18:58 G | 16260551.05 | 16260551.29 | 16260551.53 | 0.0260 | 0.0085 |
| Jupiter | 39811-11-03 13:41 G | 16262034.86 | 16262035.07 | 16262035.29 | 0.0499 | 0.0177 |
| Jupiter | 39817-04-14 17:17 G | 16264024.05 | 16264024.22 | 16264024.40 | 0.0524 | 0.0326 |
| Saturn | 39823-04-12 10:34 G | 16266212.73 | 16266212.94 | 16266213.16 | 0.0303 | 0.0153 |
| Jupiter | 39823-11-07 21:22 G | 16266422.21 | 16266422.39 | 16266422.57 | 0.0499 | 0.0323 |
| Jupiter | 39829-04-19 22:19 G | 16268412.23 | 16268412.43 | 16268412.65 | 0.0525 | 0.0207 |
| Pluto | 39830-12-19 01:55 G | 16269020.44 | 16269020.58 | 16269020.73 | 0.0078 | 0.0066 |
| Pluto | 39831-12-21 10:05 G | 16269387.88 | 16269387.92 | 16269387.98 | 0.0078 | 0.0076 |
| Jupiter | 39834-10-11 04:48 G | 16270412.59 | 16270412.70 | 16270412.83 | 0.0502 | 0.0436 |
| Jupiter | 39835-11-12 14:10 G | 16270809.97 | 16270810.09 | 16270810.21 | 0.0498 | 0.0422 |
| Saturn | 39836-10-05 20:53 G | 16271138.15 | 16271138.37 | 16271138.60 | 0.0261 | 0.0094 |
| Uranus | 39837-05-06 11:02 G | 16271350.88 | 16271350.96 | 16271351.07 | 0.0135 | 0.0125 |
| Uranus | 39838-05-11 02:53 G | 16271720.39 | 16271720.62 | 16271720.86 | 0.0135 | 0.0044 |
| Uranus | 39839-05-15 05:17 G | 16272089.47 | 16272089.72 | 16272089.98 | 0.0135 | 0.0020 |
| Uranus | 39840-05-18 21:36 G | 16272459.22 | 16272459.40 | 16272459.59 | 0.0135 | 0.0091 |
| Jupiter | 39841-04-24 13:26 G | 16272799.83 | 16272800.06 | 16272800.30 | 0.0526 | 0.0033 |
| Jupiter | 39846-10-15 17:02 G | 16274800.02 | 16274800.21 | 16274800.40 | 0.0501 | 0.0283 |
| Jupiter | 39847-11-17 02:10 G | 16275197.55 | 16275197.59 | 16275197.62 | 0.0498 | 0.0492 |
| Mars | 39849-03-01 00:14 G | 16275667.40 | 16275667.51 | 16275667.63 | 0.1635 | 0.1346 |
| Neptune | 39851-09-23 18:29 G | 16276604.13 | 16276604.27 | 16276604.42 | 0.0088 | 0.0071 |
| Saturn | 39852-04-05 02:10 G | 16276798.37 | 16276798.59 | 16276798.81 | 0.0301 | 0.0131 |
| Neptune | 39852-09-25 11:31 G | 16276971.80 | 16276971.98 | 16276972.20 | 0.0088 | 0.0056 |
| Jupiter | 39853-04-29 19:26 G | 16277188.09 | 16277188.31 | 16277188.53 | 0.0526 | 0.0127 |
| Neptune | 39853-09-27 18:43 G | 16277339.06 | 16277339.28 | 16277339.53 | 0.0088 | 0.0029 |
| Neptune | 39854-09-30 07:41 G | 16277706.56 | 16277706.82 | 16277707.10 | 0.0088 | 0.0014 |
| Mars | 39855-08-30 15:50 G | 16278041.05 | 16278041.16 | 16278041.27 | 0.1901 | 0.1560 |
| Neptune | 39855-10-02 19:26 G | 16278074.07 | 16278074.31 | 16278074.56 | 0.0088 | 0.0013 |
| Neptune | 39856-10-04 03:36 G | 16278441.41 | 16278441.65 | 16278441.91 | 0.0088 | 0.0028 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 39857-10-06 19:41 G | 16278809.15 | 16278809.32 | 16278809.54 | 0.0088 | 0.0056 |
| Neptune | 39858-10-09 00:43 G | 16279176.40 | 16279176.53 | 16279176.71 | 0.0088 | 0.0071 |
| Jupiter | 39858-10-20 07:26 G | 16279187.58 | 16279187.81 | 16279188.04 | 0.0501 | 0.0152 |
| Jupiter | 39865-05-04 22:19 G | 16281576.21 | 16281576.43 | 16281576.64 | 0.0527 | 0.0224 |
| Saturn | 39866-10-12 12:29 G | 16282101.82 | 16282102.02 | 16282102.25 | 0.0260 | 0.0131 |
| Jupiter | 39870-10-24 14:10 G | 16283574.86 | 16283575.09 | 16283575.32 | 0.0500 | 0.0068 |
| Jupiter | 39877-05-09 16:34 G | 16285964.02 | 16285964.19 | 16285964.36 | 0.0527 | 0.0346 |
| Uranus | 39877-11-06 00:00 G | 16286144.45 | 16286144.50 | 16286144.57 | 0.0144 | 0.0139 |
| Uranus | 39878-11-11 06:43 G | 16286514.55 | 16286514.78 | 16286515.02 | 0.0144 | 0.0054 |
| Uranus | 39879-11-15 22:34 G | 16286884.20 | 16286884.44 | 16286884.70 | 0.0143 | 0.0039 |
| Uranus | 39880-11-20 03:07 G | 16287254.50 | 16287254.63 | 16287254.81 | 0.0143 | 0.0110 |
| Saturn | 39882-04-13 09:36 G | 16287763.72 | 16287763.90 | 16287764.08 | 0.0303 | 0.0198 |
| Jupiter | 39882-10-29 11:31 G | 16287962.75 | 16287962.98 | 16287963.21 | 0.0500 | 0.0027 |
| Jupiter | 39888-04-09 03:36 G | 16289951.52 | 16289951.65 | 16289951.78 | 0.0523 | 0.0427 |
| Jupiter | 39889-05-14 22:48 G | 16290352.43 | 16290352.45 | 16290352.47 | 0.0527 | 0.0525 |
| Jupiter | 39894-11-02 20:24 G | 16292350.13 | 16292350.35 | 16292350.58 | 0.0499 | 0.0173 |
| Saturn | 39895-10-07 23:46 G | 16292689.25 | 16292689.49 | 16292689.72 | 0.0261 | 0.0049 |
| Jupiter | 39900-04-15 07:55 G | 16294339.66 | 16294339.83 | 16294340.01 | 0.0524 | 0.0341 |
| Jupiter | 39906-11-08 12:58 G | 16296737.87 | 16296738.04 | 16296738.21 | 0.0499 | 0.0320 |
| Saturn | 39911-04-07 18:58 G | 16298349.05 | 16298349.29 | 16298349.53 | 0.0301 | 0.0094 |
| Jupiter | 39912-04-20 01:55 G | 16298727.36 | 16298727.58 | 16298727.80 | 0.0525 | 0.0212 |
| Jupiter | 39917-10-11 08:24 G | 16300727.76 | 16300727.85 | 16300727.95 | 0.0502 | 0.0452 |
| Jupiter | 39918-11-12 20:24 G | 16301125.22 | 16301125.35 | 16301125.50 | 0.0499 | 0.0406 |
| Uranus | 39921-05-07 18:58 G | 16302032.17 | 16302032.29 | 16302032.46 | 0.0134 | 0.0110 |
| Uranus | 39922-05-12 10:48 G | 16302401.73 | 16302401.95 | 16302402.19 | 0.0135 | 0.0052 |
| Uranus | 39923-05-16 12:43 G | 16302770.79 | 16302771.03 | 16302771.29 | 0.0135 | 0.0027 |
| Jupiter | 39924-04-25 08:24 G | 16303115.62 | 16303115.85 | 16303116.07 | 0.0526 | 0.0025 |
| Uranus | 39924-05-20 05:17 G | 16303140.56 | 16303140.72 | 16303140.91 | 0.0135 | 0.0095 |
| Saturn | 39924-10-02 22:34 G | 16303276.34 | 16303276.44 | 16303276.57 | 0.0262 | 0.0232 |
| Saturn | 39925-10-14 10:05 G | 16303652.74 | 16303652.92 | 16303653.10 | 0.0260 | 0.0172 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 39929-10-16 03:50 G | 16305115.47 | 16305115.66 | 16305115.86 | 0.0502 | 0.0292 |
| Jupiter | 39930-11-17 05:46 G | 16305512.70 | 16305512.74 | 16305512.80 | 0.0498 | 0.0484 |
| Neptune | 39934-03-24 22:05 G | 16306736.33 | 16306736.42 | 16306736.57 | 0.0089 | 0.0080 |
| Neptune | 39935-03-27 10:19 G | 16307103.76 | 16307103.93 | 16307104.10 | 0.0089 | 0.0065 |
| Neptune | 39936-03-28 20:10 G | 16307471.11 | 16307471.34 | 16307471.60 | 0.0089 | 0.0036 |
| Jupiter | 39936-04-30 06:14 G | 16307503.53 | 16307503.76 | 16307504.00 | 0.0526 | 0.0116 |
| Neptune | 39937-03-31 12:14 G | 16307838.78 | 16307839.01 | 16307839.26 | 0.0089 | 0.0021 |
| Neptune | 39938-04-02 18:43 G | 16308206.02 | 16308206.28 | 16308206.54 | 0.0089 | 0.0009 |
| Neptune | 39939-04-05 13:12 G | 16308573.81 | 16308574.05 | 16308574.30 | 0.0089 | 0.0023 |
| Neptune | 39940-04-06 18:14 G | 16308941.07 | 16308941.26 | 16308941.47 | 0.0089 | 0.0054 |
| Neptune | 39941-04-09 12:14 G | 16309308.86 | 16309309.01 | 16309309.21 | 0.0090 | 0.0068 |
| Saturn | 39941-04-15 07:55 G | 16309314.69 | 16309314.83 | 16309314.99 | 0.0303 | 0.0234 |
| Jupiter | 39941-10-20 12:29 G | 16309502.80 | 16309503.02 | 16309503.24 | 0.0501 | 0.0164 |
| Jupiter | 39948-05-05 01:55 G | 16311891.38 | 16311891.58 | 16311891.79 | 0.0526 | 0.0213 |
| Jupiter | 39953-10-25 11:02 G | 16313890.73 | 16313890.96 | 16313891.19 | 0.0500 | 0.0085 |
| Saturn | 39954-10-09 19:26 G | 16314240.06 | 16314240.31 | 16314240.57 | 0.0261 | 0.0010 |
| Jupiter | 39960-05-10 07:26 G | 16316279.64 | 16316279.81 | 16316280.00 | 0.0527 | 0.0343 |
| Uranus | 39961-11-07 08:38 G | 16316825.77 | 16316825.86 | 16316825.98 | 0.0144 | 0.0131 |
| Uranus | 39962-11-12 15:36 G | 16317195.92 | 16317196.15 | 16317196.40 | 0.0144 | 0.0047 |
| Uranus | 39963-11-17 07:26 G | 16317565.57 | 16317565.81 | 16317566.07 | 0.0143 | 0.0032 |
| Uranus | 39964-11-21 12:43 G | 16317935.94 | 16317936.03 | 16317936.16 | 0.0143 | 0.0128 |
| Jupiter | 39965-10-29 19:41 G | 16318278.08 | 16318278.32 | 16318278.56 | 0.0500 | 0.0020 |
| Saturn | 39970-04-08 07:12 G | 16319899.56 | 16319899.80 | 16319900.04 | 0.0301 | 0.0064 |
| Jupiter | 39971-04-10 23:02 G | 16320267.34 | 16320267.46 | 16320267.59 | 0.0523 | 0.0437 |
| Jupiter | 39977-11-03 07:26 G | 16322665.60 | 16322665.81 | 16322666.03 | 0.0499 | 0.0168 |
| Jupiter | 39983-04-15 16:34 G | 16324655.02 | 16324655.19 | 16324655.37 | 0.0524 | 0.0347 |
| Saturn | 39983-10-04 17:46 G | 16324827.08 | 16324827.24 | 16324827.41 | 0.0262 | 0.0194 |
| Saturn | 39984-10-15 10:19 G | 16325203.79 | 16325203.93 | 16325204.07 | 0.0260 | 0.0210 |
| Jupiter | 39989-11-07 20:10 G | 16327053.15 | 16327053.34 | 16327053.53 | 0.0499 | 0.0308 |
| Pluto | 39991-06-21 13:26 G | 16327643.80 | 16327644.06 | 16327644.33 | 0.0066 | 0.0014 |

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| Jupiter | 39995-04-20 19:41 G | 16329043.11 | 16329043.32 | 16329043.52 | 0.0525 | 0.0212 |
| Saturn | 40000-04-16 00:29 G | 16330865.41 | 16330865.52 | 16330865.64 | 0.0303 | 0.0268 |
| Jupiter | 40000-10-11 01:41 G | 16331043.48 | 16331043.57 | 16331043.67 | 0.0503 | 0.0456 |

41ST MILLENNIUM CE

This is a list of transits of Moon in the 41st millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 40001-11-12 06:43 G | | 16331440.65 | 16331440.78 | 16331440.92 | 0.0499 | 0.0394 | |
| Uranus | 40005-05-08 04:19 G | | 16332713.59 | 16332713.68 | 16332713.81 | 0.0134 | 0.0120 | |
| Uranus | 40006-05-12 20:10 G | | 16333083.10 | 16333083.34 | 16333083.59 | 0.0135 | 0.0038 | |
| Jupiter | 40007-04-25 17:02 G | | 16333430.96 | 16333431.21 | 16333431.45 | 0.0525 | 0.0031 | |
| Uranus | 40007-05-16 22:19 G | | 16333452.18 | 16333452.43 | 16333452.68 | 0.0135 | 0.0023 | |
| Uranus | 40008-05-20 15:07 G | | 16333821.96 | 16333822.13 | 16333822.31 | 0.0135 | 0.0097 | |
| Jupiter | 40012-10-15 11:17 G | | 16335430.79 | 16335430.97 | 16335431.16 | 0.0502 | 0.0297 | |
| Saturn | 40013-10-10 10:19 G | | 16335790.68 | 16335790.93 | 16335791.18 | 0.0261 | 0.0029 | |
| Jupiter | 40013-11-17 03:22 G | | 16335828.57 | 16335828.64 | 16335828.70 | 0.0498 | 0.0478 | |
| Neptune | 40015-09-24 08:38 G | | 16336504.86 | 16336504.86 | 16336504.89 | 0.0088 | 0.0088 | |
| Neptune | 40016-09-25 17:02 G | | 16336872.05 | 16336872.21 | 16336872.41 | 0.0088 | 0.0062 | |
| Neptune | 40017-09-28 04:48 G | | 16337239.49 | 16337239.70 | 16337239.95 | 0.0088 | 0.0046 | |
| Neptune | 40018-09-30 18:43 G | | 16337607.04 | 16337607.28 | 16337607.53 | 0.0088 | 0.0020 | |
| Jupiter | 40019-04-30 12:29 G | | 16337818.80 | 16337819.02 | 16337819.24 | 0.0526 | 0.0106 | |
| Neptune | 40019-10-03 02:10 G | | 16337974.32 | 16337974.59 | 16337974.86 | 0.0088 | 0.0003 | |
| Neptune | 40020-10-04 18:58 G | | 16338342.06 | 16338342.29 | 16338342.55 | 0.0088 | 0.0024 | |

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| Neptune | 40021-10-06 23:17 G | 16338709.25 | 16338709.47 | 16338709.72 | 0.0088 | 0.0040 |
| Neptune | 40022-10-09 17:31 G | 16339077.08 | 16339077.23 | 16339077.41 | 0.0088 | 0.0067 |
| Neptune | 40023-10-11 22:19 G | 16339444.37 | 16339444.43 | 16339444.55 | 0.0088 | 0.0082 |
| Jupiter | 40024-10-20 09:36 G | 16339818.69 | 16339818.90 | 16339819.12 | 0.0501 | 0.0175 |
| Saturn | 40029-04-09 01:41 G | 16341450.34 | 16341450.57 | 16341450.81 | 0.0301 | 0.0029 |
| Jupiter | 40031-05-05 20:53 G | 16342207.15 | 16342207.37 | 16342207.59 | 0.0527 | 0.0203 |
| Jupiter | 40036-10-24 13:26 G | 16344205.82 | 16344206.06 | 16344206.29 | 0.0500 | 0.0100 |
| Saturn | 40042-10-05 16:48 G | 16346378.01 | 16346378.20 | 16346378.40 | 0.0262 | 0.0154 |
| Jupiter | 40043-05-10 16:34 G | 16346595.02 | 16346595.19 | 16346595.37 | 0.0527 | 0.0348 |
| Saturn | 40043-10-17 06:14 G | 16346754.69 | 16346754.76 | 16346754.85 | 0.0260 | 0.0246 |
| Uranus | 40045-11-07 14:53 G | 16347507.08 | 16347507.12 | 16347507.22 | 0.0144 | 0.0138 |
| Uranus | 40046-11-12 22:05 G | 16347877.18 | 16347877.42 | 16347877.67 | 0.0144 | 0.0048 |
| Uranus | 40047-11-17 14:24 G | 16348246.86 | 16348247.10 | 16348247.35 | 0.0143 | 0.0042 |
| Jupiter | 40048-10-29 06:29 G | 16348593.54 | 16348593.77 | 16348593.99 | 0.0500 | 0.0013 |
| Uranus | 40048-11-21 20:10 G | 16348617.20 | 16348617.34 | 16348617.51 | 0.0143 | 0.0114 |
| Mars | 40054-03-01 06:43 G | 16350542.60 | 16350542.78 | 16350542.95 | 0.1629 | 0.0085 |
| Jupiter | 40054-04-10 05:02 G | 16350582.59 | 16350582.71 | 16350582.82 | 0.0523 | 0.0451 |
| Saturn | 40059-04-17 12:00 G | 16352415.99 | 16352416.00 | 16352416.03 | 0.0303 | 0.0301 |
| Jupiter | 40060-11-02 20:24 G | 16352981.12 | 16352981.35 | 16352981.58 | 0.0500 | 0.0168 |
| Jupiter | 40066-04-15 07:55 G | 16354970.67 | 16354970.83 | 16354970.99 | 0.0524 | 0.0366 |
| Saturn | 40072-10-11 03:50 G | 16357341.43 | 16357341.66 | 16357341.91 | 0.0261 | 0.0069 |
| Jupiter | 40072-11-07 07:26 G | 16357368.63 | 16357368.81 | 16357368.99 | 0.0499 | 0.0304 |
| Jupiter | 40078-04-20 03:07 G | 16359358.41 | 16359358.63 | 16359358.85 | 0.0525 | 0.0216 |
| Pluto | 40078-12-23 07:12 G | 16359605.61 | 16359605.80 | 16359606.03 | 0.0078 | 0.0042 |
| Jupiter | 40083-10-11 08:38 G | 16361358.77 | 16361358.86 | 16361358.96 | 0.0503 | 0.0459 |
| Jupiter | 40084-11-12 03:07 G | 16361756.48 | 16361756.63 | 16361756.78 | 0.0499 | 0.0382 |
| Saturn | 40088-04-10 00:29 G | 16363001.28 | 16363001.52 | 16363001.76 | 0.0301 | 0.0010 |
| Uranus | 40089-05-08 14:10 G | 16363394.94 | 16363395.09 | 16363395.26 | 0.0134 | 0.0104 |
| Jupiter | 40090-04-25 02:24 G | 16363746.37 | 16363746.60 | 16363746.82 | 0.0525 | 0.0034 |
| Uranus | 40090-05-13 05:17 G | 16363764.49 | 16363764.72 | 16363764.97 | 0.0135 | 0.0047 |

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| Uranus | 40091-05-17 07:12 G | 16364133.57 | 16364133.80 | 16364134.06 | 0.0135 | 0.0034 |
| Uranus | 40092-05-20 23:17 G | 16364503.32 | 16364503.47 | 16364503.67 | 0.0135 | 0.0099 |
| Jupiter | 40095-10-16 02:38 G | 16365746.43 | 16365746.61 | 16365746.80 | 0.0502 | 0.0303 |
| Jupiter | 40096-11-16 02:38 G | 16366143.54 | 16366143.61 | 16366143.70 | 0.0498 | 0.0469 |
| Neptune | 40099-03-26 16:05 G | 16367004.06 | 16367004.17 | 16367004.33 | 0.0089 | 0.0077 |
| Neptune | 40100-03-29 09:22 G | 16367371.69 | 16367371.89 | 16367372.11 | 0.0089 | 0.0049 |
| Neptune | 40101-03-31 15:22 G | 16367738.90 | 16367739.14 | 16367739.39 | 0.0089 | 0.0032 |
| Saturn | 40101-10-07 14:53 G | 16367928.91 | 16367929.12 | 16367929.35 | 0.0262 | 0.0113 |
| Neptune | 40102-04-03 10:34 G | 16368106.68 | 16368106.94 | 16368107.20 | 0.0089 | 0.0003 |
| Jupiter | 40102-05-01 09:22 G | 16368134.66 | 16368134.89 | 16368135.12 | 0.0526 | 0.0096 |
| Neptune | 40103-04-05 15:50 G | 16368473.92 | 16368474.16 | 16368474.42 | 0.0089 | 0.0014 |
| Neptune | 40104-04-07 09:36 G | 16368841.68 | 16368841.90 | 16368842.15 | 0.0089 | 0.0041 |
| Neptune | 40105-04-09 17:31 G | 16369209.07 | 16369209.23 | 16369209.44 | 0.0090 | 0.0059 |
| Neptune | 40106-04-12 07:12 G | 16369576.74 | 16369576.80 | 16369576.91 | 0.0090 | 0.0085 |
| Jupiter | 40107-10-21 11:02 G | 16370133.74 | 16370133.96 | 16370134.18 | 0.0501 | 0.0191 |
| Jupiter | 40114-05-06 01:12 G | 16372522.34 | 16372522.55 | 16372522.77 | 0.0526 | 0.0189 |
| Saturn | 40117-04-04 05:46 G | 16373586.64 | 16373586.74 | 16373586.86 | 0.0300 | 0.0267 |
| Jupiter | 40119-10-26 04:48 G | 16374521.48 | 16374521.70 | 16374521.92 | 0.0501 | 0.0112 |
| Jupiter | 40126-05-11 06:29 G | 16376910.60 | 16376910.77 | 16376910.94 | 0.0527 | 0.0344 |
| Uranus | 40129-11-08 23:31 G | 16378188.37 | 16378188.48 | 16378188.60 | 0.0144 | 0.0127 |
| Uranus | 40130-11-14 05:17 G | 16378558.48 | 16378558.72 | 16378558.97 | 0.0144 | 0.0047 |
| Saturn | 40131-10-14 03:50 G | 16378892.45 | 16378892.66 | 16378892.89 | 0.0261 | 0.0109 |
| Jupiter | 40131-10-30 19:26 G | 16378909.06 | 16378909.31 | 16378909.55 | 0.0500 | 0.0012 |
| Uranus | 40131-11-18 22:05 G | 16378928.19 | 16378928.42 | 16378928.67 | 0.0143 | 0.0036 |
| Uranus | 40132-11-23 03:50 G | 16379298.56 | 16379298.66 | 16379298.77 | 0.0143 | 0.0129 |
| Jupiter | 40137-04-10 18:29 G | 16380898.18 | 16380898.27 | 16380898.36 | 0.0523 | 0.0476 |
| Jupiter | 40138-05-16 01:26 G | 16381298.52 | 16381298.56 | 16381298.60 | 0.0527 | 0.0520 |
| Mars | 40139-08-31 05:17 G | 16381770.53 | 16381770.72 | 16381770.92 | 0.1909 | 0.0898 |
| Jupiter | 40143-11-04 05:31 G | 16383296.52 | 16383296.73 | 16383296.95 | 0.0499 | 0.0172 |
| Saturn | 40147-04-12 22:05 G | 16384552.18 | 16384552.42 | 16384552.67 | 0.0301 | 0.0058 |

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| Jupiter | 40149-04-15 15:22 G | 16385285.99 | 16385286.14 | 16385286.32 | 0.0524 | 0.0380 |
| Jupiter | 40155-11-08 20:38 G | 16387684.17 | 16387684.36 | 16387684.55 | 0.0499 | 0.0290 |
| Saturn | 40160-10-08 08:10 G | 16389479.60 | 16389479.84 | 16389480.10 | 0.0263 | 0.0069 |
| Jupiter | 40161-04-20 14:10 G | 16389673.89 | 16389674.09 | 16389674.29 | 0.0525 | 0.0224 |
| Jupiter | 40166-10-11 22:05 G | 16391674.35 | 16391674.42 | 16391674.51 | 0.0502 | 0.0467 |
| Jupiter | 40167-11-13 00:58 G | 16392071.38 | 16392071.54 | 16392071.69 | 0.0498 | 0.0371 |
| Jupiter | 40173-04-25 17:17 G | 16394061.98 | 16394062.22 | 16394062.46 | 0.0525 | 0.0046 |
| Uranus | 40173-05-10 00:43 G | 16394076.42 | 16394076.53 | 16394076.68 | 0.0134 | 0.0115 |
| Uranus | 40174-05-14 15:36 G | 16394445.90 | 16394446.15 | 16394446.41 | 0.0135 | 0.0031 |
| Uranus | 40175-05-18 18:43 G | 16394815.04 | 16394815.28 | 16394815.53 | 0.0135 | 0.0028 |
| Saturn | 40176-04-05 07:55 G | 16395137.67 | 16395137.83 | 16395138.00 | 0.0300 | 0.0214 |
| Uranus | 40176-05-22 10:19 G | 16395184.79 | 16395184.93 | 16395185.11 | 0.0135 | 0.0105 |
| Jupiter | 40178-10-16 06:29 G | 16396061.59 | 16396061.77 | 16396061.96 | 0.0502 | 0.0313 |
| Jupiter | 40179-11-17 21:22 G | 16396459.32 | 16396459.39 | 16396459.47 | 0.0499 | 0.0467 |
| Neptune | 40180-09-26 01:41 G | 16396772.44 | 16396772.57 | 16396772.74 | 0.0088 | 0.0072 |
| Neptune | 40181-09-28 16:19 G | 16397140.01 | 16397140.18 | 16397140.38 | 0.0088 | 0.0059 |
| Neptune | 40182-09-30 22:19 G | 16397507.19 | 16397507.43 | 16397507.69 | 0.0088 | 0.0029 |
| Neptune | 40183-10-03 16:19 G | 16397874.94 | 16397875.18 | 16397875.44 | 0.0088 | 0.0016 |
| Neptune | 40184-10-04 20:38 G | 16398242.11 | 16398242.36 | 16398242.62 | 0.0088 | 0.0014 |
| Jupiter | 40185-04-30 08:38 G | 16398449.63 | 16398449.86 | 16398450.09 | 0.0526 | 0.0073 |
| Neptune | 40185-10-07 14:24 G | 16398609.86 | 16398610.10 | 16398610.36 | 0.0088 | 0.0027 |
| Neptune | 40186-10-09 20:10 G | 16398977.16 | 16398977.34 | 16398977.55 | 0.0088 | 0.0056 |
| Neptune | 40187-10-12 11:02 G | 16399344.82 | 16399344.96 | 16399345.15 | 0.0088 | 0.0070 |
| Saturn | 40189-10-03 11:31 G | 16400066.92 | 16400066.98 | 16400067.05 | 0.0264 | 0.0252 |
| Saturn | 40190-10-15 05:46 G | 16400443.55 | 16400443.74 | 16400443.95 | 0.0261 | 0.0153 |
| Jupiter | 40190-10-21 01:12 G | 16400449.34 | 16400449.55 | 16400449.75 | 0.0501 | 0.0208 |
| Jupiter | 40197-05-05 12:58 G | 16402837.82 | 16402838.04 | 16402838.25 | 0.0526 | 0.0171 |
| Jupiter | 40202-10-26 15:07 G | 16404836.89 | 16404837.13 | 16404837.36 | 0.0501 | 0.0122 |
| Saturn | 40206-04-14 20:24 G | 16406103.13 | 16406103.35 | 16406103.59 | 0.0301 | 0.0120 |
| Jupiter | 40209-05-11 09:50 G | 16407225.72 | 16407225.91 | 16407226.09 | 0.0527 | 0.0334 |

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| Uranus | 40213-11-10 09:22 G | 16408869.83 | 16408869.89 | 16408870.00 | 0.0144 | 0.0135 |
| Jupiter | 40214-10-30 21:50 G | 16409224.19 | 16409224.41 | 16409224.64 | 0.0499 | 0.0007 |
| Uranus | 40214-11-15 15:07 G | 16409239.88 | 16409240.13 | 16409240.38 | 0.0144 | 0.0042 |
| Uranus | 40215-11-20 08:53 G | 16409609.63 | 16409609.87 | 16409610.11 | 0.0143 | 0.0044 |
| Uranus | 40216-11-24 13:55 G | 16409979.95 | 16409980.08 | 16409980.24 | 0.0143 | 0.0119 |
| Saturn | 40219-10-11 04:19 G | 16411030.43 | 16411030.68 | 16411030.93 | 0.0263 | 0.0022 |
| Jupiter | 40220-04-11 00:29 G | 16411213.46 | 16411213.52 | 16411213.59 | 0.0523 | 0.0500 |
| Jupiter | 40221-05-16 12:58 G | 16411614.01 | 16411614.04 | 16411614.09 | 0.0528 | 0.0517 |
| Jupiter | 40226-11-04 16:19 G | 16413611.95 | 16413612.18 | 16413612.40 | 0.0499 | 0.0162 |
| Jupiter | 40232-04-15 21:36 G | 16415601.26 | 16415601.40 | 16415601.54 | 0.0524 | 0.0405 |
| Saturn | 40235-04-08 18:14 G | 16416689.06 | 16416689.26 | 16416689.47 | 0.0300 | 0.0149 |
| Pluto | 40238-06-24 09:22 G | 16417861.65 | 16417861.89 | 16417862.16 | 0.0066 | 0.0020 |
| Jupiter | 40238-11-08 21:07 G | 16417999.19 | 16417999.38 | 16417999.58 | 0.0499 | 0.0279 |
| Pluto | 40239-06-25 21:36 G | 16418228.34 | 16418228.40 | 16418228.47 | 0.0066 | 0.0064 |
| Jupiter | 40244-04-20 23:02 G | 16419989.25 | 16419989.46 | 16419989.67 | 0.0524 | 0.0239 |
| Saturn | 40248-10-05 16:19 G | 16421618.02 | 16421618.18 | 16421618.34 | 0.0264 | 0.0202 |
| Jupiter | 40249-10-11 23:17 G | 16421989.41 | 16421989.47 | 16421989.56 | 0.0503 | 0.0478 |
| Saturn | 40249-10-17 04:34 G | 16421994.53 | 16421994.69 | 16421994.87 | 0.0261 | 0.0197 |
| Jupiter | 40250-11-13 17:31 G | 16422387.08 | 16422387.23 | 16422387.39 | 0.0499 | 0.0359 |
| Jupiter | 40256-04-25 12:43 G | 16424376.80 | 16424377.03 | 16424377.26 | 0.0525 | 0.0067 |
| Uranus | 40257-05-11 12:14 G | 16424757.86 | 16424758.01 | 16424758.19 | 0.0134 | 0.0098 |
| Uranus | 40258-05-16 01:55 G | 16425127.34 | 16425127.58 | 16425127.84 | 0.0135 | 0.0041 |
| Mars | 40259-03-02 07:55 G | 16425417.67 | 16425417.83 | 16425417.99 | 0.1623 | 0.0996 |
| Uranus | 40259-05-20 05:31 G | 16425496.50 | 16425496.73 | 16425496.97 | 0.0135 | 0.0041 |
| Uranus | 40260-05-23 19:55 G | 16425866.19 | 16425866.33 | 16425866.52 | 0.0135 | 0.0105 |
| Jupiter | 40261-10-16 18:14 G | 16426377.09 | 16426377.26 | 16426377.43 | 0.0502 | 0.0327 |
| Jupiter | 40262-11-17 23:46 G | 16426774.41 | 16426774.49 | 16426774.59 | 0.0498 | 0.0460 |
| Neptune | 40263-03-28 06:58 G | 16426904.70 | 16426904.79 | 16426904.89 | 0.0089 | 0.0083 |
| Neptune | 40264-03-29 12:00 G | 16427271.83 | 16427272.00 | 16427272.17 | 0.0089 | 0.0066 |
| Neptune | 40265-04-01 06:29 G | 16427639.56 | 16427639.77 | 16427640.03 | 0.0089 | 0.0038 |

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| Saturn | 40265-04-16 04:19 G | 16427654.51 | 16427654.68 | 16427654.88 | 0.0301 | 0.0190 |
| Neptune | 40266-04-03 12:29 G | 16428006.79 | 16428007.02 | 16428007.28 | 0.0089 | 0.0022 |
| Neptune | 40267-04-06 05:17 G | 16428374.46 | 16428374.72 | 16428374.99 | 0.0089 | 0.0008 |
| Neptune | 40268-04-07 14:24 G | 16428741.87 | 16428742.10 | 16428742.35 | 0.0089 | 0.0024 |
| Jupiter | 40268-04-30 19:26 G | 16428765.08 | 16428765.31 | 16428765.54 | 0.0526 | 0.0048 |
| Neptune | 40269-04-10 02:24 G | 16429109.41 | 16429109.60 | 16429109.84 | 0.0089 | 0.0053 |
| Neptune | 40270-04-12 17:02 G | 16429477.07 | 16429477.21 | 16429477.38 | 0.0090 | 0.0069 |
| Jupiter | 40273-10-21 05:02 G | 16430764.49 | 16430764.71 | 16430764.93 | 0.0501 | 0.0229 |
| Saturn | 40278-10-12 09:36 G | 16432581.66 | 16432581.90 | 16432582.14 | 0.0263 | 0.0027 |
| Jupiter | 40280-05-05 14:10 G | 16433152.86 | 16433153.09 | 16433153.32 | 0.0527 | 0.0152 |
| Jupiter | 40285-10-25 15:07 G | 16435151.91 | 16435152.13 | 16435152.35 | 0.0500 | 0.0146 |
| Jupiter | 40292-05-10 15:22 G | 16437540.97 | 16437541.14 | 16437541.32 | 0.0527 | 0.0318 |
| Saturn | 40294-04-10 07:12 G | 16438240.56 | 16438240.80 | 16438241.04 | 0.0300 | 0.0076 |
| Jupiter | 40297-10-30 09:07 G | 16439539.64 | 16439539.88 | 16439540.12 | 0.0500 | 0.0011 |
| Uranus | 40297-11-11 00:00 G | 16439551.37 | 16439551.50 | 16439551.65 | 0.0144 | 0.0118 |
| Uranus | 40298-11-16 04:05 G | 16439921.42 | 16439921.67 | 16439921.93 | 0.0144 | 0.0039 |
| Uranus | 40299-11-20 22:19 G | 16440291.20 | 16440291.43 | 16440291.67 | 0.0143 | 0.0045 |
| Uranus | 40300-11-26 02:24 G | 16440661.55 | 16440661.60 | 16440661.69 | 0.0143 | 0.0137 |
| Jupiter | 40304-05-16 15:07 G | 16441929.06 | 16441929.13 | 16441929.23 | 0.0527 | 0.0492 |
| Saturn | 40307-10-08 18:58 G | 16443169.08 | 16443169.29 | 16443169.50 | 0.0264 | 0.0150 |
| Saturn | 40308-10-19 04:34 G | 16443545.62 | 16443545.69 | 16443545.78 | 0.0261 | 0.0246 |
| Jupiter | 40309-11-04 14:24 G | 16443926.87 | 16443927.10 | 16443927.32 | 0.0500 | 0.0147 |
| Jupiter | 40315-04-17 00:43 G | 16445916.40 | 16445916.53 | 16445916.67 | 0.0523 | 0.0426 |
| Jupiter | 40321-11-09 10:19 G | 16448314.74 | 16448314.93 | 16448315.13 | 0.0499 | 0.0264 |
| Saturn | 40324-04-18 23:02 G | 16449206.37 | 16449206.46 | 16449206.57 | 0.0301 | 0.0272 |
| Pluto | 40325-12-26 22:48 G | 16449823.20 | 16449823.45 | 16449823.70 | 0.0078 | 0.0013 |
| Jupiter | 40327-04-21 16:48 G | 16450304.01 | 16450304.20 | 16450304.40 | 0.0524 | 0.0262 |
| Jupiter | 40332-10-12 06:58 G | 16452304.77 | 16452304.79 | 16452304.82 | 0.0502 | 0.0498 |
| Jupiter | 40333-11-13 13:12 G | 16452701.88 | 16452702.05 | 16452702.23 | 0.0498 | 0.0337 |
| Saturn | 40337-10-14 19:26 G | 16454133.08 | 16454133.31 | 16454133.54 | 0.0263 | 0.0080 |

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| Mars | 40338-03-05 17:02 G | 16454275.05 | 16454275.21 | 16454275.38 | 0.1626 | 0.0880 |
| Jupiter | 40339-04-26 21:50 G | 16454692.19 | 16454692.41 | 16454692.64 | 0.0526 | 0.0090 |
| Uranus | 40341-05-13 00:14 G | 16455439.37 | 16455439.51 | 16455439.67 | 0.0134 | 0.0107 |
| Uranus | 40342-05-17 12:43 G | 16455808.79 | 16455809.03 | 16455809.30 | 0.0135 | 0.0024 |
| Uranus | 40343-05-21 17:31 G | 16456178.00 | 16456178.23 | 16456178.48 | 0.0135 | 0.0035 |
| Uranus | 40344-05-25 07:55 G | 16456547.69 | 16456547.83 | 16456547.98 | 0.0135 | 0.0113 |
| Jupiter | 40344-10-16 18:58 G | 16456692.12 | 16456692.29 | 16456692.47 | 0.0501 | 0.0349 |
| Neptune | 40345-09-29 18:58 G | 16457040.13 | 16457040.29 | 16457040.48 | 0.0088 | 0.0065 |
| Jupiter | 40345-11-18 03:07 G | 16457089.53 | 16457089.63 | 16457089.73 | 0.0498 | 0.0446 |
| Neptune | 40346-10-02 13:26 G | 16457407.86 | 16457408.06 | 16457408.30 | 0.0088 | 0.0046 |
| Neptune | 40347-10-04 18:14 G | 16457775.02 | 16457775.26 | 16457775.52 | 0.0088 | 0.0022 |
| Neptune | 40348-10-06 11:46 G | 16458142.73 | 16458142.99 | 16458143.26 | 0.0088 | 0.0004 |
| Neptune | 40349-10-08 18:29 G | 16458510.03 | 16458510.27 | 16458510.52 | 0.0088 | 0.0021 |
| Neptune | 40350-10-11 07:41 G | 16458877.59 | 16458877.82 | 16458878.07 | 0.0088 | 0.0040 |
| Jupiter | 40351-05-01 13:55 G | 16459079.84 | 16459080.08 | 16459080.32 | 0.0526 | 0.0019 |
| Neptune | 40351-10-13 18:29 G | 16459245.12 | 16459245.27 | 16459245.46 | 0.0088 | 0.0065 |
| Neptune | 40352-10-15 02:53 G | 16459612.56 | 16459612.62 | 16459612.73 | 0.0088 | 0.0083 |
| Saturn | 40353-04-12 21:50 G | 16459792.15 | 16459792.41 | 16459792.66 | 0.0300 | 0.0010 |
| Jupiter | 40356-10-21 04:34 G | 16461079.50 | 16461079.69 | 16461079.89 | 0.0501 | 0.0259 |
| Jupiter | 40363-05-06 15:50 G | 16463467.94 | 16463468.16 | 16463468.38 | 0.0526 | 0.0128 |
| Saturn | 40366-10-09 22:34 G | 16464720.20 | 16464720.44 | 16464720.68 | 0.0264 | 0.0093 |
| Jupiter | 40368-10-25 23:02 G | 16465467.24 | 16465467.46 | 16465467.69 | 0.0501 | 0.0171 |
| Jupiter | 40375-05-11 11:46 G | 16467855.80 | 16467855.99 | 16467856.20 | 0.0527 | 0.0294 |
| Jupiter | 40380-10-30 04:34 G | 16469854.46 | 16469854.69 | 16469854.93 | 0.0500 | 0.0030 |
| Uranus | 40381-11-12 14:24 G | 16470232.99 | 16470233.10 | 16470233.24 | 0.0144 | 0.0123 |
| Saturn | 40382-04-06 22:34 G | 16470378.32 | 16470378.44 | 16470378.57 | 0.0298 | 0.0251 |
| Uranus | 40382-11-17 18:00 G | 16470603.00 | 16470603.25 | 16470603.51 | 0.0144 | 0.0028 |
| Uranus | 40383-11-22 13:26 G | 16470972.83 | 16470973.06 | 16470973.29 | 0.0143 | 0.0056 |
| Uranus | 40384-11-26 17:17 G | 16471343.12 | 16471343.22 | 16471343.32 | 0.0143 | 0.0131 |
| Jupiter | 40387-05-16 07:41 G | 16472243.73 | 16472243.82 | 16472243.92 | 0.0527 | 0.0472 |

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| Jupiter | 40392-11-03 23:02 G | 16474242.24 | 16474242.46 | 16474242.69 | 0.0499 | 0.0125 |
| Saturn | 40396-10-16 04:19 G | 16475684.47 | 16475684.68 | 16475684.90 | 0.0262 | 0.0138 |
| Jupiter | 40398-04-15 17:31 G | 16476231.13 | 16476231.23 | 16476231.34 | 0.0524 | 0.0458 |
| Jupiter | 40404-11-08 03:36 G | 16478629.45 | 16478629.65 | 16478629.87 | 0.0498 | 0.0238 |
| Jupiter | 40410-04-20 22:05 G | 16480619.23 | 16480619.42 | 16480619.62 | 0.0524 | 0.0285 |
| Saturn | 40412-04-14 16:05 G | 16481343.94 | 16481344.17 | 16481344.40 | 0.0300 | 0.0098 |
| Jupiter | 40416-11-12 17:31 G | 16483017.06 | 16483017.23 | 16483017.41 | 0.0499 | 0.0313 |
| Jupiter | 40422-04-25 12:58 G | 16485006.81 | 16485007.04 | 16485007.27 | 0.0525 | 0.0116 |
| Uranus | 40425-05-13 11:46 G | 16486120.83 | 16486120.99 | 16486121.19 | 0.0134 | 0.0090 |
| Saturn | 40425-10-11 07:55 G | 16486271.59 | 16486271.83 | 16486272.08 | 0.0263 | 0.0032 |
| Uranus | 40426-05-17 23:17 G | 16486490.21 | 16486490.47 | 16486490.72 | 0.0135 | 0.0033 |
| Uranus | 40427-05-22 04:19 G | 16486859.47 | 16486859.68 | 16486859.92 | 0.0135 | 0.0050 |
| Jupiter | 40427-10-16 16:34 G | 16487007.04 | 16487007.19 | 16487007.34 | 0.0502 | 0.0379 |
| Neptune | 40428-03-30 01:41 G | 16487172.47 | 16487172.57 | 16487172.71 | 0.0089 | 0.0080 |
| Uranus | 40428-05-25 16:48 G | 16487229.06 | 16487229.20 | 16487229.36 | 0.0135 | 0.0110 |
| Jupiter | 40428-11-17 05:17 G | 16487404.60 | 16487404.72 | 16487404.85 | 0.0498 | 0.0428 |
| Neptune | 40429-04-01 08:38 G | 16487539.65 | 16487539.86 | 16487540.07 | 0.0089 | 0.0050 |
| Neptune | 40430-04-04 00:00 G | 16487907.26 | 16487907.50 | 16487907.74 | 0.0089 | 0.0035 |
| Neptune | 40431-04-06 11:02 G | 16488274.71 | 16488274.96 | 16488275.21 | 0.0089 | 0.0005 |
| Neptune | 40432-04-07 22:05 G | 16488642.15 | 16488642.42 | 16488642.68 | 0.0089 | 0.0011 |
| Neptune | 40433-04-10 13:12 G | 16489009.84 | 16489010.05 | 16489010.28 | 0.0089 | 0.0041 |
| Neptune | 40434-04-12 19:41 G | 16489377.13 | 16489377.32 | 16489377.54 | 0.0089 | 0.0056 |
| Jupiter | 40434-04-30 13:12 G | 16489394.82 | 16489395.05 | 16489395.27 | 0.0525 | 0.0011 |
| Neptune | 40435-04-15 14:10 G | 16489745.04 | 16489745.09 | 16489745.19 | 0.0090 | 0.0086 |
| Jupiter | 40439-10-21 10:48 G | 16491394.76 | 16491394.95 | 16491395.16 | 0.0502 | 0.0288 |
| Saturn | 40441-04-09 00:43 G | 16491930.33 | 16491930.53 | 16491930.74 | 0.0299 | 0.0159 |
| Jupiter | 40446-05-05 09:22 G | 16493782.66 | 16493782.89 | 16493783.13 | 0.0526 | 0.0101 |
| Jupiter | 40451-10-25 16:34 G | 16495781.98 | 16495782.19 | 16495782.41 | 0.0500 | 0.0198 |
| Saturn | 40454-10-06 23:17 G | 16496859.33 | 16496859.47 | 16496859.64 | 0.0265 | 0.0206 |
| Saturn | 40455-10-18 11:31 G | 16497235.81 | 16497235.98 | 16497236.15 | 0.0262 | 0.0196 |

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| Jupiter | 40458-05-10 05:31 G | 16498170.54 | 16498170.73 | 16498170.93 | 0.0527 | 0.0273 |
| Jupiter | 40463-10-30 12:14 G | 16500169.78 | 16500170.01 | 16500170.24 | 0.0500 | 0.0053 |
| Uranus | 40465-11-13 04:34 G | 16500914.54 | 16500914.69 | 16500914.87 | 0.0144 | 0.0105 |
| Uranus | 40466-11-18 06:43 G | 16501284.52 | 16501284.78 | 16501285.04 | 0.0144 | 0.0028 |
| Uranus | 40467-11-23 02:53 G | 16501654.41 | 16501654.62 | 16501654.86 | 0.0143 | 0.0060 |
| Jupiter | 40470-05-15 10:34 G | 16502558.83 | 16502558.94 | 16502559.07 | 0.0527 | 0.0446 |
| Saturn | 40471-04-17 16:05 G | 16502896.00 | 16502896.17 | 16502896.36 | 0.0301 | 0.0193 |
| Jupiter | 40475-11-03 15:07 G | 16504556.89 | 16504557.13 | 16504557.37 | 0.0500 | 0.0099 |
| Jupiter | 40481-04-14 22:34 G | 16506546.36 | 16506546.44 | 16506546.54 | 0.0523 | 0.0481 |
| Saturn | 40484-10-12 23:46 G | 16507823.25 | 16507823.49 | 16507823.73 | 0.0263 | 0.0031 |
| Pluto | 40486-06-27 12:43 G | 16508445.81 | 16508446.03 | 16508446.28 | 0.0066 | 0.0023 |
| Jupiter | 40487-11-08 06:58 G | 16508944.59 | 16508944.79 | 16508945.00 | 0.0499 | 0.0210 |
| Jupiter | 40493-04-19 09:50 G | 16510933.73 | 16510933.91 | 16510934.11 | 0.0524 | 0.0313 |
| Jupiter | 40499-11-12 18:43 G | 16513332.08 | 16513332.28 | 16513332.48 | 0.0499 | 0.0289 |
| Saturn | 40500-04-11 22:34 G | 16513482.20 | 16513482.44 | 16513482.69 | 0.0299 | 0.0065 |
| Jupiter | 40505-04-25 12:14 G | 16515321.80 | 16515322.01 | 16515322.23 | 0.0525 | 0.0148 |
| Uranus | 40509-05-14 23:46 G | 16516802.32 | 16516802.49 | 16516802.65 | 0.0134 | 0.0098 |
| Neptune | 40509-09-30 09:07 G | 16516940.75 | 16516940.88 | 16516941.03 | 0.0088 | 0.0074 |
| Uranus | 40510-05-19 09:07 G | 16517171.63 | 16517171.88 | 16517172.15 | 0.0135 | 0.0016 |
| Neptune | 40510-10-02 13:55 G | 16517307.92 | 16517308.08 | 16517308.28 | 0.0088 | 0.0062 |
| Jupiter | 40510-10-16 22:19 G | 16517322.28 | 16517322.43 | 16517322.57 | 0.0502 | 0.0401 |
| Uranus | 40511-05-23 16:05 G | 16517540.95 | 16517541.17 | 16517541.41 | 0.0135 | 0.0042 |
| Neptune | 40511-10-05 06:43 G | 16517675.53 | 16517675.78 | 16517676.03 | 0.0088 | 0.0031 |
| Jupiter | 40511-11-18 02:24 G | 16517719.47 | 16517719.60 | 16517719.73 | 0.0498 | 0.0408 |
| Uranus | 40512-05-27 03:22 G | 16517910.54 | 16517910.64 | 16517910.77 | 0.0135 | 0.0122 |
| Neptune | 40512-10-06 14:53 G | 16518042.88 | 16518043.12 | 16518043.37 | 0.0088 | 0.0018 |
| Neptune | 40513-10-09 02:53 G | 16518410.37 | 16518410.62 | 16518410.90 | 0.0088 | 0.0013 |
| Saturn | 40513-10-09 08:10 G | 16518410.63 | 16518410.84 | 16518411.06 | 0.0264 | 0.0142 * |
| Neptune | 40514-10-11 16:05 G | 16518777.94 | 16518778.17 | 16518778.42 | 0.0088 | 0.0026 |
| Saturn | 40514-10-20 20:38 G | 16518787.32 | 16518787.36 | 16518787.40 | 0.0262 | 0.0258 |

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| Neptune | 40515-10-13 23:17 G | 16519145.29 | 16519145.47 | 16519145.70 | 0.0088 | 0.0056 |
| Neptune | 40516-10-15 16:05 G | 16519513.04 | 16519513.17 | 16519513.35 | 0.0088 | 0.0069 |
| Jupiter | 40517-04-30 05:46 G | 16519709.50 | 16519709.74 | 16519709.98 | 0.0526 | 0.0042 |
| Jupiter | 40522-10-21 04:19 G | 16521709.50 | 16521709.68 | 16521709.87 | 0.0501 | 0.0313 |
| Jupiter | 40529-05-05 04:19 G | 16524097.46 | 16524097.68 | 16524097.91 | 0.0526 | 0.0072 |
| Saturn | 40530-04-20 19:55 G | 16524448.27 | 16524448.33 | 16524448.40 | 0.0301 | 0.0287 |
| Jupiter | 40534-10-25 21:50 G | 16526097.21 | 16526097.41 | 16526097.62 | 0.0501 | 0.0223 |
| Jupiter | 40541-05-10 08:38 G | 16528485.66 | 16528485.86 | 16528486.07 | 0.0526 | 0.0253 |
| Mars | 40543-03-05 11:02 G | 16529149.78 | 16529149.96 | 16529150.14 | 0.1619 | 0.0259 |
| Saturn | 40543-10-16 14:53 G | 16529374.90 | 16529375.12 | 16529375.36 | 0.0262 | 0.0094 |
| Jupiter | 40546-10-30 02:53 G | 16530484.39 | 16530484.62 | 16530484.86 | 0.0500 | 0.0079 |
| Uranus | 40549-11-14 15:07 G | 16531595.99 | 16531596.13 | 16531596.29 | 0.0144 | 0.0114 |
| Uranus | 40550-11-19 16:05 G | 16531965.91 | 16531966.17 | 16531966.43 | 0.0144 | 0.0017 |
| Uranus | 40551-11-24 13:55 G | 16532335.87 | 16532336.08 | 16532336.31 | 0.0144 | 0.0065 |
| Uranus | 40552-11-28 15:50 G | 16532706.16 | 16532706.16 | 16532706.18 | 0.0143 | 0.0143 |
| Jupiter | 40553-05-14 21:07 G | 16532873.25 | 16532873.38 | 16532873.53 | 0.0527 | 0.0419 |
| Jupiter | 40558-11-03 20:53 G | 16534872.15 | 16534872.37 | 16534872.59 | 0.0500 | 0.0082 |
| Saturn | 40559-04-14 15:22 G | 16535033.89 | 16535034.14 | 16535034.39 | 0.0300 | 0.0024 |
| Jupiter | 40564-04-14 10:19 G | 16536860.89 | 16536860.93 | 16536860.98 | 0.0523 | 0.0511 |
| Jupiter | 40570-11-08 08:24 G | 16539259.63 | 16539259.85 | 16539260.08 | 0.0499 | 0.0183 |
| Saturn | 40572-10-10 17:02 G | 16539961.97 | 16539962.21 | 16539962.45 | 0.0264 | 0.0080 |
| Pluto | 40573-12-30 05:31 G | 16540407.56 | 16540407.73 | 16540407.94 | 0.0078 | 0.0054 |
| Jupiter | 40576-04-19 12:00 G | 16541248.84 | 16541249.00 | 16541249.18 | 0.0524 | 0.0342 |
| Jupiter | 40582-11-12 17:31 G | 16543647.04 | 16543647.23 | 16543647.42 | 0.0498 | 0.0269 |
| Saturn | 40588-04-07 18:29 G | 16545620.13 | 16545620.27 | 16545620.41 | 0.0298 | 0.0239 |
| Jupiter | 40588-04-24 06:29 G | 16545636.55 | 16545636.77 | 16545637.00 | 0.0525 | 0.0176 |
| Neptune | 40592-03-30 04:34 G | 16547072.68 | 16547072.69 | 16547072.75 | 0.0089 | 0.0089 |
| Neptune | 40593-04-01 18:43 G | 16547440.11 | 16547440.28 | 16547440.45 | 0.0089 | 0.0068 |
| Uranus | 40593-05-15 11:17 G | 16547483.80 | 16547483.97 | 16547484.18 | 0.0134 | 0.0083 |
| Jupiter | 40593-10-15 12:29 G | 16547636.91 | 16547637.02 | 16547637.15 | 0.0503 | 0.0427 |

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| Neptune | 40594-04-04 06:14 G | 16547807.56 | 16547807.76 | 16547808.00 | 0.0089 | 0.0043 |
| Uranus | 40594-05-19 19:41 G | 16547853.06 | 16547853.32 | 16547853.58 | 0.0134 | 0.0025 |
| Jupiter | 40594-11-17 06:43 G | 16548034.64 | 16548034.78 | 16548034.94 | 0.0499 | 0.0390 |
| Neptune | 40595-04-06 15:22 G | 16548174.90 | 16548175.14 | 16548175.41 | 0.0089 | 0.0022 |
| Uranus | 40595-05-24 03:22 G | 16548222.42 | 16548222.64 | 16548222.87 | 0.0135 | 0.0058 |
| Neptune | 40596-04-08 08:24 G | 16548542.60 | 16548542.85 | 16548543.10 | 0.0089 | 0.0004 |
| Uranus | 40596-05-27 12:29 G | 16548591.90 | 16548592.02 | 16548592.16 | 0.0135 | 0.0116 |
| Neptune | 40597-04-10 13:55 G | 16548909.84 | 16548910.08 | 16548910.34 | 0.0089 | 0.0023 |
| Neptune | 40598-04-13 09:07 G | 16549277.67 | 16549277.88 | 16549278.10 | 0.0089 | 0.0049 |
| Neptune | 40599-04-15 14:10 G | 16549644.95 | 16549645.09 | 16549645.28 | 0.0090 | 0.0068 |
| Jupiter | 40600-04-30 06:43 G | 16550024.56 | 16550024.78 | 16550025.00 | 0.0525 | 0.0069 |
| Saturn | 40601-10-07 07:41 G | 16550549.79 | 16550549.82 | 16550549.89 | 0.0265 | 0.0259 |
| Saturn | 40602-10-18 23:31 G | 16550926.27 | 16550926.48 | 16550926.69 | 0.0262 | 0.0149 |
| Jupiter | 40605-10-21 09:50 G | 16552024.73 | 16552024.91 | 16552025.08 | 0.0502 | 0.0338 |
| Jupiter | 40612-05-05 06:29 G | 16554412.53 | 16554412.77 | 16554413.00 | 0.0526 | 0.0046 |
| Jupiter | 40617-10-25 16:19 G | 16556411.97 | 16556412.18 | 16556412.39 | 0.0501 | 0.0241 |
| Saturn | 40618-04-17 07:26 G | 16556585.59 | 16556585.81 | 16556586.04 | 0.0301 | 0.0105 |
| Mars | 40622-03-08 12:29 G | 16558006.93 | 16558007.02 | 16558007.12 | 0.1622 | 0.1395 |
| Jupiter | 40624-05-09 21:07 G | 16558800.18 | 16558800.38 | 16558800.59 | 0.0526 | 0.0225 |
| Jupiter | 40629-10-30 12:14 G | 16560799.79 | 16560800.01 | 16560800.23 | 0.0500 | 0.0089 |
| Saturn | 40631-10-14 04:34 G | 16561513.45 | 16561513.69 | 16561513.93 | 0.0263 | 0.0023 |
| Uranus | 40633-11-16 00:29 G | 16562277.35 | 16562277.52 | 16562277.71 | 0.0144 | 0.0098 |
| Uranus | 40634-11-20 23:17 G | 16562647.22 | 16562647.47 | 16562647.74 | 0.0144 | 0.0024 |
| Uranus | 40635-11-25 22:48 G | 16563017.25 | 16563017.45 | 16563017.68 | 0.0144 | 0.0068 |
| Jupiter | 40636-05-15 03:07 G | 16563188.49 | 16563188.63 | 16563188.79 | 0.0527 | 0.0395 |
| Jupiter | 40641-11-03 23:31 G | 16565187.24 | 16565187.48 | 16565187.72 | 0.0500 | 0.0066 |
| Saturn | 40647-04-11 09:22 G | 16567171.69 | 16567171.89 | 16567172.09 | 0.0298 | 0.0167 |
| Jupiter | 40648-05-19 21:50 G | 16567576.35 | 16567576.41 | 16567576.48 | 0.0527 | 0.0504 |
| Jupiter | 40653-11-08 06:00 G | 16569574.54 | 16569574.75 | 16569574.97 | 0.0499 | 0.0164 |
| Jupiter | 40659-04-20 12:00 G | 16571563.82 | 16571564.00 | 16571564.17 | 0.0523 | 0.0358 |

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| Saturn | 40660-10-08 16:05 G | 16572101.02 | 16572101.17 | 16572101.34 | 0.0264 | 0.0202 |
| Saturn | 40661-10-20 02:38 G | 16572477.46 | 16572477.61 | 16572477.78 | 0.0262 | 0.0201 |
| Jupiter | 40665-11-12 22:48 G | 16573962.25 | 16573962.45 | 16573962.67 | 0.0499 | 0.0251 |
| Jupiter | 40671-04-25 09:36 G | 16575951.70 | 16575951.90 | 16575952.11 | 0.0524 | 0.0202 |
| Neptune | 40674-10-03 01:12 G | 16577208.41 | 16577208.55 | 16577208.73 | 0.0088 | 0.0070 |
| Neptune | 40675-10-05 11:17 G | 16577575.77 | 16577575.97 | 16577576.19 | 0.0088 | 0.0047 |
| Neptune | 40676-10-06 21:36 G | 16577943.16 | 16577943.40 | 16577943.68 | 0.0088 | 0.0027 |
| Jupiter | 40676-10-15 23:46 G | 16577952.38 | 16577952.49 | 16577952.60 | 0.0503 | 0.0445 |
| Saturn | 40677-04-18 20:53 G | 16578137.19 | 16578137.37 | 16578137.57 | 0.0301 | 0.0177 |
| Uranus | 40677-05-17 00:00 G | 16578165.33 | 16578165.50 | 16578165.70 | 0.0134 | 0.0088 |
| Neptune | 40677-10-09 12:29 G | 16578310.77 | 16578311.02 | 16578311.27 | 0.0088 | 0.0004 |
| Jupiter | 40677-11-17 05:17 G | 16578349.58 | 16578349.72 | 16578349.88 | 0.0499 | 0.0381 |
| Uranus | 40678-05-21 06:58 G | 16578534.53 | 16578534.79 | 16578535.06 | 0.0134 | 0.0007 |
| Neptune | 40678-10-11 18:14 G | 16578678.01 | 16578678.26 | 16578678.53 | 0.0088 | 0.0017 |
| Uranus | 40679-05-25 16:05 G | 16578903.96 | 16578904.17 | 16578904.41 | 0.0135 | 0.0051 |
| Neptune | 40679-10-14 12:00 G | 16579045.78 | 16579046.00 | 16579046.24 | 0.0088 | 0.0039 |
| Uranus | 40680-05-29 00:43 G | 16579273.48 | 16579273.53 | 16579273.60 | 0.0135 | 0.0131 |
| Neptune | 40680-10-15 16:05 G | 16579413.00 | 16579413.17 | 16579413.37 | 0.0088 | 0.0061 |
| Neptune | 40681-10-18 09:50 G | 16579780.85 | 16579780.91 | 16579781.02 | 0.0088 | 0.0083 |
| Jupiter | 40683-04-30 09:07 G | 16580339.64 | 16580339.88 | 16580340.11 | 0.0525 | 0.0100 |
| Jupiter | 40688-10-20 08:10 G | 16582339.68 | 16582339.84 | 16582340.02 | 0.0502 | 0.0354 |
| Saturn | 40690-10-15 15:07 G | 16583064.89 | 16583065.13 | 16583065.37 | 0.0263 | 0.0029 |
| Jupiter | 40695-05-05 00:00 G | 16584727.27 | 16584727.50 | 16584727.73 | 0.0526 | 0.0021 |
| Jupiter | 40700-10-26 04:34 G | 16586727.49 | 16586727.69 | 16586727.88 | 0.0501 | 0.0253 |
| Saturn | 40706-04-13 13:41 G | 16588722.83 | 16588723.07 | 16588723.31 | 0.0299 | 0.0101 |
| Jupiter | 40707-05-11 08:38 G | 16589115.65 | 16589115.86 | 16589116.08 | 0.0526 | 0.0210 |
| Jupiter | 40712-10-30 11:17 G | 16591114.73 | 16591114.97 | 16591115.21 | 0.0501 | 0.0101 |
| Uranus | 40717-11-17 10:34 G | 16592958.78 | 16592958.94 | 16592959.10 | 0.0144 | 0.0110 |
| Uranus | 40718-11-22 08:24 G | 16593328.59 | 16593328.85 | 16593329.11 | 0.0144 | 0.0010 |
| Jupiter | 40719-05-16 03:07 G | 16593503.47 | 16593503.63 | 16593503.79 | 0.0527 | 0.0379 |

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| Saturn | 40719-10-11 16:48 G | 16593652.00 | 16593652.20 | 16593652.42 | 0.0264 | 0.0149 |
| Uranus | 40719-11-27 09:36 G | 16593698.69 | 16593698.90 | 16593699.12 | 0.0144 | 0.0068 |
| Saturn | 40720-10-22 07:12 G | 16594028.75 | 16594028.80 | 16594028.89 | 0.0261 | 0.0250 |
| Jupiter | 40724-11-03 23:17 G | 16595502.24 | 16595502.47 | 16595502.69 | 0.0500 | 0.0051 |
| Jupiter | 40731-05-21 04:48 G | 16597891.61 | 16597891.70 | 16597891.79 | 0.0527 | 0.0481 |
| Pluto | 40733-06-30 22:48 G | 16598663.27 | 16598663.45 | 16598663.69 | 0.0066 | 0.0036 |
| Pluto | 40734-07-02 15:22 G | 16599029.99 | 16599030.14 | 16599030.34 | 0.0066 | 0.0050 |
| Saturn | 40736-04-21 05:46 G | 16599688.61 | 16599688.74 | 16599688.90 | 0.0301 | 0.0238 |
| Jupiter | 40736-11-08 17:46 G | 16599890.01 | 16599890.24 | 16599890.47 | 0.0500 | 0.0149 |
| Jupiter | 40742-04-20 17:17 G | 16601879.07 | 16601879.22 | 16601879.38 | 0.0523 | 0.0377 |
| Mars | 40748-03-06 04:34 G | 16604025.58 | 16604025.69 | 16604025.80 | 0.1615 | 0.1320 |
| Jupiter | 40748-11-13 01:41 G | 16604277.37 | 16604277.57 | 16604277.78 | 0.0499 | 0.0239 |
| Saturn | 40749-10-17 18:58 G | 16604616.05 | 16604616.29 | 16604616.53 | 0.0262 | 0.0076 |
| Jupiter | 40754-04-25 14:38 G | 16606266.90 | 16606267.11 | 16606267.33 | 0.0524 | 0.0223 |
| Neptune | 40757-04-03 00:58 G | 16607340.48 | 16607340.54 | 16607340.64 | 0.0089 | 0.0085 |
| Neptune | 40758-04-05 09:07 G | 16607707.67 | 16607707.88 | 16607708.10 | 0.0089 | 0.0053 |
| Neptune | 40759-04-08 02:38 G | 16608075.40 | 16608075.61 | 16608075.85 | 0.0089 | 0.0040 |
| Jupiter | 40759-10-17 00:43 G | 16608267.44 | 16608267.53 | 16608267.64 | 0.0503 | 0.0458 |
| Neptune | 40760-04-09 07:55 G | 16608442.58 | 16608442.83 | 16608443.09 | 0.0089 | 0.0008 |
| Jupiter | 40760-11-17 21:36 G | 16608665.25 | 16608665.40 | 16608665.55 | 0.0499 | 0.0383 |
| Neptune | 40761-04-12 02:53 G | 16608810.37 | 16608810.62 | 16608810.88 | 0.0089 | 0.0007 |
| Uranus | 40761-05-18 13:26 G | 16608846.87 | 16608847.06 | 16608847.28 | 0.0134 | 0.0074 |
| Neptune | 40762-04-14 08:24 G | 16609177.64 | 16609177.85 | 16609178.09 | 0.0089 | 0.0039 |
| Uranus | 40762-05-22 19:12 G | 16609216.04 | 16609216.30 | 16609216.56 | 0.0134 | 0.0014 |
| Neptune | 40763-04-17 01:12 G | 16609545.35 | 16609545.55 | 16609545.78 | 0.0090 | 0.0053 |
| Uranus | 40763-05-27 05:17 G | 16609585.52 | 16609585.72 | 16609585.94 | 0.0135 | 0.0069 |
| Neptune | 40764-04-18 10:19 G | 16609912.85 | 16609912.93 | 16609913.02 | 0.0090 | 0.0084 |
| Uranus | 40764-05-30 12:00 G | 16609954.92 | 16609955.00 | 16609955.11 | 0.0135 | 0.0125 |
| Saturn | 40765-04-14 11:31 G | 16610273.74 | 16610273.98 | 16610274.22 | 0.0299 | 0.0045 |
| Jupiter | 40766-04-30 09:50 G | 16610654.69 | 16610654.91 | 16610655.13 | 0.0525 | 0.0121 |

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| Jupiter | 40771-10-21 17:17 G | 16612655.08 | 16612655.22 | 16612655.37 | 0.0502 | 0.0378 |
| Jupiter | 40778-05-05 18:43 G | 16615043.05 | 16615043.28 | 16615043.51 | 0.0525 | 0.0015 |
| Saturn | 40778-10-12 16:34 G | 16615202.97 | 16615203.19 | 16615203.42 | 0.0264 | 0.0103 |
| Jupiter | 40783-10-26 05:02 G | 16617042.51 | 16617042.71 | 16617042.92 | 0.0502 | 0.0268 |
| Mars | 40786-09-07 05:31 G | 16618089.62 | 16618089.73 | 16618089.84 | 0.1917 | 0.1529 |
| Jupiter | 40790-05-10 09:07 G | 16619430.66 | 16619430.88 | 16619431.10 | 0.0526 | 0.0196 |
| Saturn | 40795-04-23 04:05 G | 16621239.62 | 16621239.67 | 16621239.74 | 0.0302 | 0.0292 |
| Jupiter | 40795-10-30 18:58 G | 16621430.07 | 16621430.29 | 16621430.51 | 0.0501 | 0.0107 |
| Uranus | 40801-11-17 23:17 G | 16623640.29 | 16623640.47 | 16623640.67 | 0.0144 | 0.0090 |
| Jupiter | 40802-05-15 12:14 G | 16623818.85 | 16623819.01 | 16623819.18 | 0.0526 | 0.0361 |
| Uranus | 40802-11-22 19:41 G | 16624010.07 | 16624010.32 | 16624010.59 | 0.0144 | 0.0017 |
| Uranus | 40803-11-27 22:05 G | 16624380.22 | 16624380.42 | 16624380.64 | 0.0144 | 0.0077 |
| Jupiter | 40807-11-04 15:07 G | 16625817.89 | 16625818.13 | 16625818.37 | 0.0500 | 0.0043 |
| Saturn | 40808-10-18 14:10 G | 16626166.86 | 16626167.09 | 16626167.32 | 0.0262 | 0.0115 |
| Jupiter | 40814-05-20 10:48 G | 16628206.84 | 16628206.95 | 16628207.08 | 0.0527 | 0.0459 |
| Jupiter | 40819-11-08 22:48 G | 16630205.23 | 16630205.45 | 16630205.67 | 0.0500 | 0.0138 |
| Pluto | 40821-01-01 11:02 G | 16630624.76 | 16630624.96 | 16630625.21 | 0.0078 | 0.0043 |
| Saturn | 40824-04-15 11:17 G | 16631824.73 | 16631824.97 | 16631825.21 | 0.0299 | 0.0006 |
| Jupiter | 40825-04-20 03:36 G | 16632194.49 | 16632194.65 | 16632194.82 | 0.0523 | 0.0378 |
| Mars | 40827-03-09 04:34 G | 16632882.53 | 16632882.69 | 16632882.85 | 0.1617 | 0.0758 |
| Jupiter | 40831-11-13 14:24 G | 16634592.90 | 16634593.10 | 16634593.31 | 0.0499 | 0.0227 |
| Jupiter | 40837-04-24 23:17 G | 16636582.27 | 16636582.47 | 16636582.68 | 0.0524 | 0.0234 |
| Saturn | 40837-10-13 18:29 G | 16636754.04 | 16636754.27 | 16636754.51 | 0.0264 | 0.0065 |
| Neptune | 40838-10-03 05:46 G | 16637108.66 | 16637108.74 | 16637108.88 | 0.0088 | 0.0079 |
| Neptune | 40839-10-05 14:53 G | 16637475.96 | 16637476.12 | 16637476.32 | 0.0088 | 0.0065 |
| Neptune | 40840-10-07 07:26 G | 16637843.59 | 16637843.81 | 16637844.05 | 0.0088 | 0.0035 |
| Neptune | 40841-10-09 12:43 G | 16638210.79 | 16638211.03 | 16638211.30 | 0.0088 | 0.0022 |
| Neptune | 40842-10-12 07:26 G | 16638578.55 | 16638578.81 | 16638579.07 | 0.0088 | 0.0010 |
| Jupiter | 40842-10-16 12:00 G | 16638582.94 | 16638583.00 | 16638583.07 | 0.0503 | 0.0481 |
| Neptune | 40843-10-14 11:46 G | 16638945.76 | 16638945.99 | 16638946.25 | 0.0088 | 0.0023 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 40843-11-17 21:07 G | 16638980.22 | 16638980.38 | 16638980.54 | 0.0499 | 0.0375 |
| Neptune | 40844-10-16 05:17 G | 16639313.53 | 16639313.72 | 16639313.95 | 0.0088 | 0.0054 |
| Uranus | 40845-05-19 03:36 G | 16639528.46 | 16639528.65 | 16639528.86 | 0.0134 | 0.0077 |
| Neptune | 40845-10-18 12:00 G | 16639680.86 | 16639681.00 | 16639681.18 | 0.0088 | 0.0067 |
| Uranus | 40846-05-23 08:10 G | 16639897.58 | 16639897.84 | 16639898.11 | 0.0134 | 0.0004 |
| Uranus | 40847-05-27 19:55 G | 16640267.12 | 16640267.33 | 16640267.55 | 0.0135 | 0.0061 |
| Jupiter | 40849-04-30 04:34 G | 16640970.47 | 16640970.69 | 16640970.91 | 0.0524 | 0.0136 |
| Saturn | 40853-04-09 00:00 G | 16642410.40 | 16642410.50 | 16642410.61 | 0.0298 | 0.0271 |
| Jupiter | 40854-10-21 00:58 G | 16642970.39 | 16642970.54 | 16642970.69 | 0.0503 | 0.0397 |
| Jupiter | 40861-05-04 18:43 G | 16645358.05 | 16645358.28 | 16645358.52 | 0.0525 | 0.0007 |
| Saturn | 40866-10-08 16:19 G | 16647341.11 | 16647341.18 | 16647341.26 | 0.0265 | 0.0253 |
| Jupiter | 40866-10-25 16:48 G | 16647358.01 | 16647358.20 | 16647358.39 | 0.0502 | 0.0276 |
| Saturn | 40867-10-20 07:12 G | 16647717.60 | 16647717.80 | 16647718.00 | 0.0262 | 0.0150 |
| Jupiter | 40873-05-09 22:05 G | 16649746.21 | 16649746.42 | 16649746.63 | 0.0526 | 0.0194 |
| Jupiter | 40878-10-30 12:43 G | 16651745.80 | 16651746.03 | 16651746.27 | 0.0501 | 0.0107 |
| Saturn | 40883-04-17 08:38 G | 16653375.63 | 16653375.86 | 16653376.10 | 0.0299 | 0.0052 |
| Jupiter | 40885-05-14 23:17 G | 16654134.29 | 16654134.47 | 16654134.65 | 0.0526 | 0.0349 |
| Uranus | 40885-11-18 14:53 G | 16654321.95 | 16654322.12 | 16654322.32 | 0.0144 | 0.0098 |
| Uranus | 40886-11-23 11:02 G | 16654691.70 | 16654691.96 | 16654692.22 | 0.0144 | 0.0003 |
| Uranus | 40887-11-28 14:24 G | 16655061.91 | 16655062.10 | 16655062.32 | 0.0144 | 0.0080 |
| Jupiter | 40890-11-03 15:50 G | 16656132.93 | 16656133.16 | 16656133.39 | 0.0500 | 0.0029 |
| Saturn | 40896-10-14 17:17 G | 16658304.98 | 16658305.22 | 16658305.47 | 0.0264 | 0.0030 |
| Jupiter | 40897-05-19 22:48 G | 16658522.34 | 16658522.45 | 16658522.57 | 0.0527 | 0.0456 |
| Jupiter | 40902-11-09 12:43 G | 16660520.80 | 16660521.03 | 16660521.26 | 0.0500 | 0.0117 |
| Jupiter | 40908-04-20 12:14 G | 16662509.86 | 16662510.01 | 16662510.17 | 0.0523 | 0.0384 |
| Saturn | 40912-04-10 13:12 G | 16663960.90 | 16663961.05 | 16663961.21 | 0.0298 | 0.0228 |
| Jupiter | 40914-11-13 20:53 G | 16664908.16 | 16664908.37 | 16664908.59 | 0.0500 | 0.0220 |
| Jupiter | 40920-04-25 16:48 G | 16666898.00 | 16666898.20 | 16666898.40 | 0.0523 | 0.0249 |
| Neptune | 40922-04-05 20:10 G | 16667608.20 | 16667608.34 | 16667608.50 | 0.0089 | 0.0072 |
| Neptune | 40923-04-08 00:43 G | 16667975.34 | 16667975.53 | 16667975.76 | 0.0089 | 0.0050 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 40924-04-09 19:26 G | 16668343.06 | 16668343.31 | 16668343.56 | 0.0089 | 0.0026 |
| Neptune | 40925-04-12 01:55 G | 16668710.34 | 16668710.58 | 16668710.83 | 0.0089 | 0.0003 |
| Saturn | 40925-10-10 08:10 G | 16668891.71 | 16668891.84 | 16668891.98 | 0.0265 | 0.0220 |
| Jupiter | 40925-10-16 22:19 G | 16668898.40 | 16668898.43 | 16668898.47 | 0.0504 | 0.0497 |
| Neptune | 40926-04-14 17:17 G | 16669077.98 | 16669078.22 | 16669078.49 | 0.0090 | 0.0021 |
| Saturn | 40926-10-22 05:17 G | 16669268.55 | 16669268.72 | 16669268.89 | 0.0262 | 0.0181 |
| Jupiter | 40926-11-18 16:05 G | 16669296.03 | 16669296.17 | 16669296.32 | 0.0499 | 0.0380 |
| Neptune | 40927-04-17 04:05 G | 16669445.47 | 16669445.67 | 16669445.90 | 0.0090 | 0.0044 |
| Neptune | 40928-04-18 14:53 G | 16669812.96 | 16669813.12 | 16669813.32 | 0.0090 | 0.0066 |
| Uranus | 40929-05-20 18:00 G | 16670210.05 | 16670210.25 | 16670210.48 | 0.0134 | 0.0063 |
| Uranus | 40930-05-24 21:36 G | 16670579.14 | 16670579.40 | 16670579.66 | 0.0134 | 0.0003 |
| Uranus | 40931-05-29 09:36 G | 16670948.72 | 16670948.90 | 16670949.12 | 0.0135 | 0.0081 |
| Jupiter | 40932-04-30 05:31 G | 16671285.51 | 16671285.73 | 16671285.96 | 0.0524 | 0.0148 |
| Jupiter | 40937-10-21 14:10 G | 16673285.96 | 16673286.09 | 16673286.22 | 0.0503 | 0.0413 |
| Saturn | 40942-04-18 22:48 G | 16674926.22 | 16674926.45 | 16674926.70 | 0.0299 | 0.0092 |
| Jupiter | 40944-05-05 12:43 G | 16675673.81 | 16675674.03 | 16675674.26 | 0.0525 | 0.0007 |
| Jupiter | 40949-10-26 05:31 G | 16677673.54 | 16677673.73 | 16677673.93 | 0.0502 | 0.0287 |
| Saturn | 40955-10-17 07:41 G | 16679855.56 | 16679855.82 | 16679856.07 | 0.0264 | 0.0003 |
| Jupiter | 40956-05-10 12:58 G | 16680061.82 | 16680062.04 | 16680062.27 | 0.0526 | 0.0200 |
| Jupiter | 40961-10-30 13:41 G | 16682060.85 | 16682061.07 | 16682061.30 | 0.0501 | 0.0122 |
| Jupiter | 40968-05-15 09:22 G | 16684449.72 | 16684449.89 | 16684450.07 | 0.0526 | 0.0341 |
| Uranus | 40969-11-20 06:58 G | 16685003.59 | 16685003.79 | 16685004.01 | 0.0144 | 0.0075 |
| Uranus | 40970-11-25 02:10 G | 16685373.33 | 16685373.59 | 16685373.85 | 0.0144 | 0.0002 |
| Saturn | 40971-04-12 07:12 G | 16685511.63 | 16685511.80 | 16685511.99 | 0.0298 | 0.0190 |
| Uranus | 40971-11-30 06:14 G | 16685743.59 | 16685743.76 | 16685743.96 | 0.0144 | 0.0094 |
| Jupiter | 40973-11-04 11:46 G | 16686448.76 | 16686448.99 | 16686449.22 | 0.0501 | 0.0016 |
| Jupiter | 40980-05-20 13:55 G | 16688837.96 | 16688838.08 | 16688838.22 | 0.0526 | 0.0441 |
| Pluto | 40981-07-04 01:55 G | 16689247.32 | 16689247.58 | 16689247.85 | 0.0066 | 0.0009 |
| Saturn | 40984-10-11 05:31 G | 16690442.56 | 16690442.73 | 16690442.90 | 0.0265 | 0.0187 |
| Saturn | 40985-10-23 03:36 G | 16690819.51 | 16690819.65 | 16690819.79 | 0.0262 | 0.0211 |

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| Jupiter | 40985-11-08 20:53 G | 16690836.14 | 16690836.37 | 16690836.61 | 0.0500 | 0.0103 |
| Jupiter | 40991-04-21 04:34 G | 16692825.55 | 16692825.69 | 16692825.85 | 0.0523 | 0.0391 |
| Jupiter | 40997-11-13 15:07 G | 16695223.93 | 16695224.13 | 16695224.34 | 0.0500 | 0.0221 |

42ND MILLENNIUM CE

This is a list of transits of Moon in the 42nd millennium CE.

| | FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 41001-04-20 11:02 G | | | 16696476.74 | 16696476.96 | 16696477.19 | 0.0299 | 0.0136 | |
| Jupiter | 41003-04-26 20:38 G | | | 16697213.16 | 16697213.36 | 16697213.57 | 0.0524 | 0.0259 | |
| Neptune | 41003-10-07 01:55 G | | | 16697376.49 | 16697376.58 | 16697376.74 | 0.0088 | 0.0077 | |
| Neptune | 41004-10-08 07:12 G | | | 16697743.59 | 16697743.80 | 16697744.02 | 0.0088 | 0.0049 | |
| Neptune | 41005-10-11 01:26 G | | | 16698111.32 | 16698111.56 | 16698111.81 | 0.0088 | 0.0031 | |
| Neptune | 41006-10-13 06:14 G | | | 16698478.51 | 16698478.76 | 16698479.02 | 0.0088 | 0.0006 | |
| Neptune | 41007-10-15 22:34 G | | | 16698846.18 | 16698846.44 | 16698846.71 | 0.0088 | 0.0013 | |
| Neptune | 41008-10-17 06:29 G | | | 16699213.56 | 16699213.77 | 16699214.01 | 0.0088 | 0.0038 | |
| Neptune | 41009-10-19 18:58 G | | | 16699581.08 | 16699581.29 | 16699581.49 | 0.0088 | 0.0056 | |
| Jupiter | 41009-11-18 22:34 G | | | 16699611.28 | 16699611.44 | 16699611.61 | 0.0499 | 0.0370 | |
| Neptune | 41010-10-22 08:10 G | | | 16699948.76 | 16699948.84 | 16699948.93 | 0.0088 | 0.0082 | |
| Uranus | 41012-05-17 18:43 G | | | 16700522.23 | 16700522.28 | 16700522.38 | 0.0134 | 0.0128 | |
| Uranus | 41013-05-22 07:55 G | | | 16700891.62 | 16700891.83 | 16700892.06 | 0.0134 | 0.0064 | |
| Uranus | 41014-05-26 10:48 G | | | 16701260.69 | 16701260.95 | 16701261.21 | 0.0134 | 0.0015 | |
| Saturn | 41014-10-18 21:50 G | | | 16701406.17 | 16701406.41 | 16701406.66 | 0.0264 | 0.0032 | |
| Jupiter | 41015-05-02 03:22 G | | | 16701601.43 | 16701601.64 | 16701601.86 | 0.0525 | 0.0158 | |

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| Uranus | 41015-05-31 00:14 G | 16701630.31 | 16701630.51 | 16701630.73 | 0.0135 | 0.0073 |
| Jupiter | 41020-10-22 02:38 G | 16703601.49 | 16703601.61 | 16703601.74 | 0.0502 | 0.0430 |
| Jupiter | 41027-05-06 23:46 G | 16705989.25 | 16705989.49 | 16705989.73 | 0.0525 | 0.0005 |
| Saturn | 41030-04-14 05:46 G | 16707062.54 | 16707062.74 | 16707062.95 | 0.0297 | 0.0143 |
| Mars | 41032-03-09 01:55 G | 16707757.41 | 16707757.58 | 16707757.76 | 0.1612 | 0.0712 |
| Jupiter | 41032-10-26 11:02 G | 16707988.78 | 16707988.96 | 16707989.15 | 0.0502 | 0.0298 |
| Jupiter | 41039-05-11 19:55 G | 16710377.13 | 16710377.33 | 16710377.54 | 0.0526 | 0.0192 |
| Saturn | 41043-10-14 03:50 G | 16711993.47 | 16711993.66 | 16711993.87 | 0.0265 | 0.0152 |
| Saturn | 41044-10-24 19:55 G | 16712370.24 | 16712370.33 | 16712370.42 | 0.0262 | 0.0244 |
| Jupiter | 41044-10-31 10:19 G | 16712376.70 | 16712376.93 | 16712377.16 | 0.0501 | 0.0122 |
| Jupiter | 41051-05-16 23:02 G | 16714765.28 | 16714765.46 | 16714765.65 | 0.0526 | 0.0325 |
| Uranus | 41053-11-21 21:22 G | 16715685.20 | 16715685.39 | 16715685.61 | 0.0144 | 0.0083 |
| Uranus | 41054-11-26 16:19 G | 16716054.92 | 16716055.18 | 16716055.44 | 0.0144 | 0.0019 |
| Uranus | 41055-12-01 21:50 G | 16716425.24 | 16716425.41 | 16716425.61 | 0.0144 | 0.0094 |
| Jupiter | 41056-11-04 18:58 G | 16716764.05 | 16716764.29 | 16716764.53 | 0.0501 | 0.0005 |
| Saturn | 41060-04-21 06:14 G | 16718027.57 | 16718027.76 | 16718027.95 | 0.0299 | 0.0182 |
| Jupiter | 41063-05-21 18:00 G | 16719153.12 | 16719153.25 | 16719153.38 | 0.0527 | 0.0432 |
| Jupiter | 41068-11-09 09:07 G | 16721151.66 | 16721151.88 | 16721152.11 | 0.0500 | 0.0086 |
| Pluto | 41069-01-05 17:31 G | 16721208.98 | 16721209.23 | 16721209.48 | 0.0078 | 0.0004 |
| Mars | 41070-09-08 00:14 G | 16721819.31 | 16721819.51 | 16721819.72 | 0.1923 | 0.0729 |
| Saturn | 41073-10-19 19:41 G | 16722957.09 | 16722957.32 | 16722957.56 | 0.0264 | 0.0070 |
| Jupiter | 41074-04-21 09:50 G | 16723140.77 | 16723140.91 | 16723141.07 | 0.0523 | 0.0404 |
| Jupiter | 41080-11-13 20:38 G | 16725539.14 | 16725539.36 | 16725539.59 | 0.0499 | 0.0206 |
| Jupiter | 41086-04-26 14:53 G | 16727528.93 | 16727529.12 | 16727529.31 | 0.0524 | 0.0284 |
| Neptune | 41087-04-08 11:02 G | 16727875.79 | 16727875.96 | 16727876.18 | 0.0089 | 0.0059 |
| Neptune | 41088-04-09 19:12 G | 16728243.10 | 16728243.30 | 16728243.53 | 0.0089 | 0.0045 |
| Neptune | 41089-04-12 09:22 G | 16728610.63 | 16728610.89 | 16728611.16 | 0.0089 | 0.0013 |
| Saturn | 41089-04-15 03:22 G | 16728613.40 | 16728613.64 | 16728613.88 | 0.0297 | 0.0092 |
| Neptune | 41090-04-14 21:22 G | 16728978.15 | 16728978.39 | 16728978.64 | 0.0089 | 0.0003 |
| Neptune | 41091-04-17 06:14 G | 16729345.52 | 16729345.76 | 16729346.01 | 0.0090 | 0.0034 |

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| Neptune | 41092-04-18 22:48 G | 16729713.26 | 16729713.45 | 16729713.68 | 0.0090 | 0.0049 |
| Jupiter | 41092-11-18 08:38 G | 16729926.71 | 16729926.86 | 16729927.01 | 0.0499 | 0.0371 |
| Neptune | 41093-04-21 04:34 G | 16730080.60 | 16730080.69 | 16730080.82 | 0.0090 | 0.0081 |
| Uranus | 41096-05-18 08:24 G | 16731203.76 | 16731203.85 | 16731203.97 | 0.0134 | 0.0122 |
| Uranus | 41097-05-22 22:19 G | 16731573.20 | 16731573.43 | 16731573.66 | 0.0134 | 0.0050 |
| Jupiter | 41098-05-01 08:53 G | 16731916.65 | 16731916.87 | 16731917.10 | 0.0524 | 0.0178 |
| Uranus | 41098-05-26 23:46 G | 16731942.23 | 16731942.49 | 16731942.75 | 0.0134 | 0.0010 |
| Uranus | 41099-05-31 13:26 G | 16732311.90 | 16732312.06 | 16732312.26 | 0.0134 | 0.0093 |
| Saturn | 41102-10-15 23:31 G | 16733544.26 | 16733544.48 | 16733544.72 | 0.0265 | 0.0113 |
| Jupiter | 41103-10-23 07:12 G | 16733916.70 | 16733916.80 | 16733916.91 | 0.0503 | 0.0446 |
| Jupiter | 41110-05-07 04:34 G | 16736304.46 | 16736304.69 | 16736304.91 | 0.0525 | 0.0012 |
| Mars | 41111-03-13 08:53 G | 16736614.81 | 16736614.87 | 16736614.93 | 0.1614 | 0.1532 |
| Jupiter | 41115-10-28 06:14 G | 16738304.57 | 16738304.76 | 16738304.95 | 0.0502 | 0.0298 |
| Saturn | 41119-04-24 11:02 G | 16739578.83 | 16739578.96 | 16739579.11 | 0.0299 | 0.0239 |
| Jupiter | 41122-05-12 09:22 G | 16740692.67 | 16740692.89 | 16740693.12 | 0.0526 | 0.0182 |
| Jupiter | 41127-11-01 11:17 G | 16742691.74 | 16742691.97 | 16742692.20 | 0.0501 | 0.0136 |
| Saturn | 41132-10-21 22:05 G | 16744508.20 | 16744508.42 | 16744508.64 | 0.0264 | 0.0110 |
| Jupiter | 41134-05-17 03:22 G | 16745080.46 | 16745080.64 | 16745080.83 | 0.0527 | 0.0311 |
| Uranus | 41137-11-23 07:41 G | 16746366.60 | 16746366.82 | 16746367.05 | 0.0144 | 0.0064 |
| Uranus | 41138-11-28 01:55 G | 16746736.33 | 16746736.58 | 16746736.84 | 0.0144 | 0.0009 |
| Jupiter | 41139-11-06 05:02 G | 16747079.48 | 16747079.71 | 16747079.94 | 0.0500 | 0.0019 |
| Uranus | 41139-12-03 08:10 G | 16747106.69 | 16747106.84 | 16747107.02 | 0.0144 | 0.0106 |
| Jupiter | 41146-05-22 09:22 G | 16749468.75 | 16749468.89 | 16749469.03 | 0.0527 | 0.0414 |
| Saturn | 41148-04-17 01:12 G | 16750164.31 | 16750164.55 | 16750164.80 | 0.0297 | 0.0032 |
| Jupiter | 41151-11-10 16:48 G | 16751466.96 | 16751467.20 | 16751467.44 | 0.0500 | 0.0070 |
| Jupiter | 41157-04-22 00:00 G | 16753456.37 | 16753456.50 | 16753456.64 | 0.0523 | 0.0424 |
| Saturn | 41161-10-16 18:43 G | 16755095.04 | 16755095.28 | 16755095.53 | 0.0265 | 0.0072 |
| Jupiter | 41163-11-15 05:02 G | 16755854.50 | 16755854.71 | 16755854.92 | 0.0500 | 0.0201 |
| Neptune | 41167-10-07 00:43 G | 16757276.48 | 16757276.53 | 16757276.64 | 0.0088 | 0.0084 |
| Neptune | 41168-10-08 19:12 G | 16757644.14 | 16757644.30 | 16757644.47 | 0.0088 | 0.0068 |

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| Jupiter | 41169-04-26 14:53 G | 16757843.93 | 16757844.12 | 16757844.32 | 0.0523 | 0.0311 |
| Neptune | 41169-10-11 00:43 G | 16758011.32 | 16758011.53 | 16758011.78 | 0.0088 | 0.0040 |
| Neptune | 41170-10-13 16:34 G | 16758378.94 | 16758379.19 | 16758379.45 | 0.0088 | 0.0024 |
| Neptune | 41171-10-16 02:24 G | 16758746.35 | 16758746.60 | 16758746.85 | 0.0088 | 0.0005 |
| Neptune | 41172-10-17 12:29 G | 16759113.77 | 16759114.02 | 16759114.30 | 0.0088 | 0.0021 |
| Neptune | 41173-10-20 02:53 G | 16759481.42 | 16759481.62 | 16759481.84 | 0.0088 | 0.0050 |
| Neptune | 41174-10-22 08:38 G | 16759848.70 | 16759848.86 | 16759849.06 | 0.0088 | 0.0065 |
| Jupiter | 41175-11-19 23:17 G | 16760242.31 | 16760242.47 | 16760242.63 | 0.0499 | 0.0370 |
| Saturn | 41177-04-11 03:50 G | 16760750.64 | 16760750.66 | 16760750.68 | 0.0295 | 0.0294 |
| Uranus | 41180-05-19 21:36 G | 16761885.30 | 16761885.40 | 16761885.55 | 0.0134 | 0.0117 |
| Jupiter | 41181-05-01 13:26 G | 16762231.85 | 16762232.06 | 16762232.26 | 0.0524 | 0.0200 |
| Uranus | 41181-05-24 11:46 G | 16762254.77 | 16762254.99 | 16762255.24 | 0.0134 | 0.0051 |
| Uranus | 41182-05-28 12:58 G | 16762623.80 | 16762624.04 | 16762624.30 | 0.0134 | 0.0027 |
| Uranus | 41183-06-02 03:36 G | 16762993.47 | 16762993.65 | 16762993.86 | 0.0134 | 0.0085 |
| Jupiter | 41186-10-22 21:07 G | 16764232.30 | 16764232.38 | 16764232.47 | 0.0502 | 0.0466 |
| Jupiter | 41187-11-24 00:43 G | 16764629.50 | 16764629.53 | 16764629.58 | 0.0498 | 0.0491 |
| Saturn | 41190-10-12 01:12 G | 16765682.49 | 16765682.55 | 16765682.62 | 0.0268 | 0.0257 |
| Saturn | 41191-10-24 00:00 G | 16766059.30 | 16766059.50 | 16766059.71 | 0.0264 | 0.0157 |
| Jupiter | 41193-05-06 16:05 G | 16766619.93 | 16766620.17 | 16766620.41 | 0.0526 | 0.0026 |
| Jupiter | 41198-10-27 04:19 G | 16768619.50 | 16768619.68 | 16768619.87 | 0.0502 | 0.0313 |
| Jupiter | 41205-05-11 08:10 G | 16771007.63 | 16771007.84 | 16771008.06 | 0.0526 | 0.0159 |
| Saturn | 41207-04-19 09:36 G | 16771715.66 | 16771715.90 | 16771716.14 | 0.0297 | 0.0039 |
| Jupiter | 41210-10-31 21:50 G | 16773007.19 | 16773007.41 | 16773007.63 | 0.0501 | 0.0152 |
| Jupiter | 41217-05-16 13:26 G | 16775395.87 | 16775396.06 | 16775396.26 | 0.0526 | 0.0281 |
| Saturn | 41220-10-17 21:22 G | 16776646.15 | 16776646.39 | 16776646.64 | 0.0265 | 0.0025 |
| Uranus | 41221-11-23 17:31 G | 16777048.02 | 16777048.23 | 16777048.45 | 0.0144 | 0.0075 |
| Jupiter | 41222-11-05 09:50 G | 16777394.66 | 16777394.91 | 16777395.15 | 0.0501 | 0.0038 |
| Uranus | 41222-11-28 11:31 G | 16777417.74 | 16777417.98 | 16777418.24 | 0.0144 | 0.0028 |
| Uranus | 41223-12-03 18:58 G | 16777788.13 | 16777788.29 | 16777788.48 | 0.0144 | 0.0100 |
| Jupiter | 41229-05-21 04:19 G | 16779783.52 | 16779783.68 | 16779783.84 | 0.0527 | 0.0389 |

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| Pluto | 41229-07-07 20:24 G | 16779831.10 | 16779831.35 | 16779831.60 | 0.0066 | 0.0002 |
| Jupiter | 41234-11-09 22:19 G | 16781782.20 | 16781782.43 | 16781782.65 | 0.0500 | 0.0054 |
| Saturn | 41236-04-12 16:05 G | 16782302.01 | 16782302.17 | 16782302.34 | 0.0296 | 0.0220 |
| Mars | 41237-03-09 17:46 G | 16782633.16 | 16782633.24 | 16782633.32 | 0.1608 | 0.1416 |
| Jupiter | 41240-04-20 20:38 G | 16783771.24 | 16783771.36 | 16783771.49 | 0.0523 | 0.0449 |
| Jupiter | 41246-11-14 13:26 G | 16786169.84 | 16786170.06 | 16786170.28 | 0.0499 | 0.0187 |
| Saturn | 41249-10-13 06:29 G | 16787233.62 | 16787233.77 | 16787233.94 | 0.0267 | 0.0206 |
| Saturn | 41250-10-25 00:14 G | 16787610.36 | 16787610.51 | 16787610.68 | 0.0264 | 0.0206 |
| Neptune | 41251-04-08 10:48 G | 16787775.86 | 16787775.95 | 16787776.11 | 0.0089 | 0.0077 |
| Neptune | 41252-04-09 23:31 G | 16788143.29 | 16788143.48 | 16788143.69 | 0.0089 | 0.0057 |
| Jupiter | 41252-04-25 18:14 G | 16788159.09 | 16788159.26 | 16788159.43 | 0.0524 | 0.0346 |
| Neptune | 41253-04-12 13:55 G | 16788510.85 | 16788511.08 | 16788511.32 | 0.0089 | 0.0030 |
| Neptune | 41254-04-14 21:50 G | 16788878.15 | 16788878.41 | 16788878.67 | 0.0089 | 0.0010 |
| Neptune | 41255-04-17 15:36 G | 16789245.91 | 16789246.15 | 16789246.40 | 0.0089 | 0.0018 |
| Neptune | 41256-04-18 20:38 G | 16789613.14 | 16789613.36 | 16789613.60 | 0.0090 | 0.0037 |
| Neptune | 41257-04-21 15:22 G | 16789980.98 | 16789981.14 | 16789981.34 | 0.0090 | 0.0063 |
| Neptune | 41258-04-23 20:53 G | 16790348.31 | 16790348.37 | 16790348.49 | 0.0090 | 0.0084 |
| Jupiter | 41258-11-18 18:14 G | 16790557.09 | 16790557.26 | 16790557.42 | 0.0499 | 0.0351 |
| Jupiter | 41264-04-30 18:58 G | 16792547.08 | 16792547.29 | 16792547.51 | 0.0524 | 0.0228 |
| Uranus | 41264-05-20 12:14 G | 16792566.88 | 16792567.01 | 16792567.17 | 0.0134 | 0.0109 |
| Uranus | 41265-05-25 02:53 G | 16792936.38 | 16792936.62 | 16792936.87 | 0.0134 | 0.0039 |
| Saturn | 41266-04-21 04:05 G | 16793267.46 | 16793267.67 | 16793267.89 | 0.0298 | 0.0117 |
| Uranus | 41266-05-29 03:22 G | 16793305.40 | 16793305.64 | 16793305.90 | 0.0134 | 0.0024 |
| Uranus | 41267-06-02 18:14 G | 16793675.12 | 16793675.26 | 16793675.43 | 0.0134 | 0.0104 |
| Jupiter | 41269-10-21 16:48 G | 16794547.15 | 16794547.20 | 16794547.25 | 0.0503 | 0.0488 |
| Jupiter | 41270-11-23 13:12 G | 16794944.98 | 16794945.05 | 16794945.12 | 0.0499 | 0.0474 |
| Jupiter | 41276-05-05 11:02 G | 16796934.73 | 16796934.96 | 16796935.18 | 0.0525 | 0.0053 |
| Saturn | 41279-10-20 08:38 G | 16798197.62 | 16798197.86 | 16798198.10 | 0.0265 | 0.0029 |
| Jupiter | 41281-10-26 11:31 G | 16798934.82 | 16798934.98 | 16798935.16 | 0.0502 | 0.0332 |
| Jupiter | 41288-05-10 13:26 G | 16801322.83 | 16801323.06 | 16801323.28 | 0.0525 | 0.0132 |

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| Jupiter | 41293-10-30 23:31 G | 16803322.26 | 16803322.48 | 16803322.71 | 0.0501 | 0.0171 |
| Saturn | 41295-04-15 05:46 G | 16803853.52 | 16803853.74 | 16803853.96 | 0.0296 | 0.0139 |
| Jupiter | 41300-05-16 05:31 G | 16805710.52 | 16805710.73 | 16805710.94 | 0.0526 | 0.0251 |
| Jupiter | 41305-11-05 11:31 G | 16807709.76 | 16807709.98 | 16807710.21 | 0.0500 | 0.0065 |
| Uranus | 41305-11-25 03:22 G | 16807729.41 | 16807729.64 | 16807729.88 | 0.0145 | 0.0058 |
| Uranus | 41306-11-29 21:36 G | 16808099.15 | 16808099.40 | 16808099.65 | 0.0144 | 0.0015 |
| Uranus | 41307-12-05 04:48 G | 16808469.56 | 16808469.70 | 16808469.87 | 0.0144 | 0.0114 |
| Saturn | 41308-10-15 10:48 G | 16808784.75 | 16808784.95 | 16808785.17 | 0.0267 | 0.0150 |
| Saturn | 41309-10-27 06:00 G | 16809161.73 | 16809161.75 | 16809161.77 | 0.0264 | 0.0262 |
| Jupiter | 41312-05-21 08:10 G | 16810098.68 | 16810098.84 | 16810099.00 | 0.0527 | 0.0366 |
| Mars | 41316-03-12 11:31 G | 16811489.81 | 16811489.98 | 16811490.16 | 0.1609 | 0.0099 |
| Pluto | 41317-01-09 11:02 G | 16811792.71 | 16811792.96 | 16811793.22 | 0.0078 | 0.0018 |
| Jupiter | 41317-11-10 03:50 G | 16812097.42 | 16812097.66 | 16812097.90 | 0.0500 | 0.0027 |
| Jupiter | 41323-04-21 21:36 G | 16814086.32 | 16814086.40 | 16814086.49 | 0.0523 | 0.0483 |
| Saturn | 41325-04-24 03:07 G | 16814819.47 | 16814819.63 | 16814819.81 | 0.0298 | 0.0204 |
| Jupiter | 41329-11-14 07:41 G | 16816484.60 | 16816484.82 | 16816485.04 | 0.0500 | 0.0167 |
| Neptune | 41332-10-08 19:26 G | 16817544.25 | 16817544.31 | 16817544.42 | 0.0088 | 0.0083 |
| Neptune | 41333-10-11 09:07 G | 16817911.69 | 16817911.88 | 16817912.11 | 0.0088 | 0.0053 |
| Neptune | 41334-10-13 20:53 G | 16818279.14 | 16818279.37 | 16818279.59 | 0.0088 | 0.0037 |
| Jupiter | 41335-04-26 20:24 G | 16818474.19 | 16818474.35 | 16818474.52 | 0.0523 | 0.0373 |
| Neptune | 41335-10-16 05:17 G | 16818646.46 | 16818646.72 | 16818646.99 | 0.0088 | 0.0008 |
| Neptune | 41336-10-17 21:22 G | 16819014.14 | 16819014.39 | 16819014.65 | 0.0088 | 0.0008 |
| Neptune | 41337-10-20 02:10 G | 16819381.38 | 16819381.59 | 16819381.85 | 0.0088 | 0.0037 |
| Saturn | 41338-10-22 20:38 G | 16819749.13 | 16819749.36 | 16819749.60 | 0.0265 | 0.0087 |
| Neptune | 41338-10-22 20:38 G | 16819749.17 | 16819749.36 | 16819749.59 | 0.0088 | 0.0052 * |
| Neptune | 41339-10-25 00:43 G | 16820116.46 | 16820116.53 | 16820116.66 | 0.0088 | 0.0081 |
| Jupiter | 41341-11-19 03:22 G | 16820872.47 | 16820872.64 | 16820872.82 | 0.0499 | 0.0334 |
| Jupiter | 41347-05-01 10:05 G | 16822861.73 | 16822861.92 | 16822862.12 | 0.0524 | 0.0260 |
| Uranus | 41348-05-22 03:07 G | 16823248.48 | 16823248.63 | 16823248.79 | 0.0134 | 0.0105 |
| Uranus | 41349-05-26 17:31 G | 16823617.98 | 16823618.23 | 16823618.47 | 0.0134 | 0.0037 |

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| Uranus | 41350-05-30 18:00 G | 16823987.00 | 16823987.25 | 16823987.49 | 0.0134 | 0.0039 |
| Uranus | 41351-06-04 08:38 G | 16824356.71 | 16824356.86 | 16824357.06 | 0.0134 | 0.0098 |
| Jupiter | 41353-11-23 08:10 G | 16825259.75 | 16825259.84 | 16825259.94 | 0.0499 | 0.0455 |
| Saturn | 41354-04-18 00:14 G | 16825405.27 | 16825405.51 | 16825405.75 | 0.0296 | 0.0051 |
| Jupiter | 41359-05-06 13:26 G | 16827249.83 | 16827250.06 | 16827250.29 | 0.0525 | 0.0077 |
| Jupiter | 41364-10-26 10:48 G | 16829249.79 | 16829249.95 | 16829250.13 | 0.0502 | 0.0355 |
| Saturn | 41367-10-17 19:41 G | 16830336.10 | 16830336.32 | 16830336.56 | 0.0267 | 0.0090 |
| Jupiter | 41371-05-11 03:07 G | 16831637.40 | 16831637.63 | 16831637.86 | 0.0526 | 0.0100 |
| Jupiter | 41376-10-31 00:00 G | 16833637.30 | 16833637.50 | 16833637.71 | 0.0501 | 0.0198 |
| Jupiter | 41383-05-16 07:12 G | 16836025.59 | 16836025.80 | 16836026.00 | 0.0526 | 0.0219 |
| Saturn | 41384-04-26 00:58 G | 16836371.51 | 16836371.54 | 16836371.58 | 0.0298 | 0.0295 |
| Jupiter | 41388-11-04 13:41 G | 16838024.83 | 16838025.07 | 16838025.31 | 0.0501 | 0.0096 |
| Uranus | 41388-11-20 09:07 G | 16838040.87 | 16838040.88 | 16838040.93 | 0.0145 | 0.0144 |
| Uranus | 41389-11-25 17:31 G | 16838411.01 | 16838411.23 | 16838411.47 | 0.0144 | 0.0065 |
| Uranus | 41390-11-30 11:46 G | 16838780.75 | 16838780.99 | 16838781.24 | 0.0144 | 0.0037 |
| Uranus | 41391-12-05 18:58 G | 16839151.15 | 16839151.29 | 16839151.48 | 0.0144 | 0.0109 |
| Jupiter | 41395-05-21 03:36 G | 16840413.47 | 16840413.65 | 16840413.84 | 0.0526 | 0.0337 |
| Saturn | 41396-10-12 07:41 G | 16840923.82 | 16840923.82 | 16840923.85 | 0.0268 | 0.0268 |
| Saturn | 41397-10-24 05:17 G | 16841300.52 | 16841300.72 | 16841300.94 | 0.0265 | 0.0150 |
| Jupiter | 41400-11-09 19:41 G | 16842412.09 | 16842412.32 | 16842412.56 | 0.0500 | 0.0009 |
| Jupiter | 41406-04-21 19:12 G | 16844401.25 | 16844401.30 | 16844401.35 | 0.0522 | 0.0508 |
| Jupiter | 41407-05-26 22:05 G | 16844801.37 | 16844801.42 | 16844801.47 | 0.0527 | 0.0513 |
| Jupiter | 41412-11-14 16:19 G | 16846799.95 | 16846800.18 | 16846800.40 | 0.0500 | 0.0148 |
| Saturn | 41413-04-21 00:29 G | 16846957.28 | 16846957.52 | 16846957.75 | 0.0297 | 0.0040 |
| Neptune | 41416-04-11 06:43 G | 16848043.61 | 16848043.78 | 16848043.95 | 0.0089 | 0.0066 |
| Neptune | 41417-04-13 12:58 G | 16848410.82 | 16848411.04 | 16848411.26 | 0.0089 | 0.0049 |
| Neptune | 41418-04-16 07:12 G | 16848778.56 | 16848778.80 | 16848779.06 | 0.0089 | 0.0019 |
| Jupiter | 41418-04-26 10:34 G | 16848788.80 | 16848788.94 | 16848789.08 | 0.0523 | 0.0405 |
| Neptune | 41419-04-18 12:29 G | 16849145.77 | 16849146.02 | 16849146.28 | 0.0089 | 0.0003 |
| Neptune | 41420-04-20 06:58 G | 16849513.54 | 16849513.79 | 16849514.04 | 0.0089 | 0.0028 |

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| Neptune | 41421-04-22 13:26 G | 16849880.85 | 16849881.06 | 16849881.29 | 0.0090 | 0.0044 |
| Neptune | 41422-04-25 04:34 G | 16850248.56 | 16850248.69 | 16850248.85 | 0.0090 | 0.0075 |
| Jupiter | 41424-11-18 20:38 G | 16851187.18 | 16851187.36 | 16851187.55 | 0.0499 | 0.0307 |
| Saturn | 41426-10-20 10:34 G | 16851887.70 | 16851887.94 | 16851888.18 | 0.0266 | 0.0024 |
| Jupiter | 41430-05-01 11:17 G | 16853176.78 | 16853176.97 | 16853177.16 | 0.0524 | 0.0292 |
| Uranus | 41432-05-23 18:14 G | 16853930.08 | 16853930.26 | 16853930.43 | 0.0134 | 0.0095 |
| Uranus | 41433-05-28 08:24 G | 16854299.61 | 16854299.85 | 16854300.11 | 0.0134 | 0.0027 |
| Uranus | 41434-06-01 09:07 G | 16854668.64 | 16854668.88 | 16854669.13 | 0.0134 | 0.0037 |
| Uranus | 41435-06-06 00:14 G | 16855038.39 | 16855038.51 | 16855038.64 | 0.0135 | 0.0117 |
| Jupiter | 41436-11-23 13:41 G | 16855574.95 | 16855575.07 | 16855575.18 | 0.0498 | 0.0429 |
| Saturn | 41442-04-15 09:22 G | 16857543.73 | 16857543.89 | 16857544.08 | 0.0295 | 0.0210 |
| Jupiter | 41442-05-06 02:24 G | 16857564.37 | 16857564.60 | 16857564.83 | 0.0525 | 0.0107 |
| Jupiter | 41447-10-27 08:10 G | 16859564.70 | 16859564.84 | 16859564.99 | 0.0502 | 0.0384 |
| Jupiter | 41454-05-11 06:58 G | 16861952.57 | 16861952.79 | 16861953.02 | 0.0525 | 0.0075 |
| Saturn | 41455-10-15 19:55 G | 16862475.18 | 16862475.33 | 16862475.51 | 0.0268 | 0.0203 |
| Saturn | 41456-10-26 13:41 G | 16862851.93 | 16862852.07 | 16862852.23 | 0.0264 | 0.0211 |
| Jupiter | 41459-10-31 23:31 G | 16863952.26 | 16863952.48 | 16863952.70 | 0.0502 | 0.0225 |
| Jupiter | 41466-05-15 23:02 G | 16866340.24 | 16866340.46 | 16866340.69 | 0.0526 | 0.0189 |
| Jupiter | 41471-11-05 07:41 G | 16868339.60 | 16868339.82 | 16868340.04 | 0.0501 | 0.0125 |
| Saturn | 41472-04-23 01:41 G | 16868509.36 | 16868509.57 | 16868509.79 | 0.0298 | 0.0131 |
| Uranus | 41472-11-22 00:00 G | 16868722.48 | 16868722.50 | 16868722.57 | 0.0145 | 0.0142 |
| Uranus | 41473-11-27 08:10 G | 16869092.60 | 16869092.84 | 16869093.09 | 0.0145 | 0.0045 |
| Uranus | 41474-12-02 02:38 G | 16869462.37 | 16869462.61 | 16869462.87 | 0.0144 | 0.0029 |
| Uranus | 41475-12-07 09:36 G | 16869832.80 | 16869832.90 | 16869833.04 | 0.0144 | 0.0128 |
| Pluto | 41477-07-11 12:43 G | 16870414.76 | 16870415.03 | 16870415.30 | 0.0066 | 0.0007 |
| Jupiter | 41478-05-20 20:24 G | 16870728.18 | 16870728.35 | 16870728.54 | 0.0526 | 0.0310 |
| Jupiter | 41483-11-10 05:02 G | 16872727.47 | 16872727.71 | 16872727.94 | 0.0500 | 0.0026 |
| Saturn | 41485-10-22 03:07 G | 16873439.40 | 16873439.63 | 16873439.87 | 0.0265 | 0.0038 |
| Jupiter | 41490-05-25 22:19 G | 16875116.34 | 16875116.43 | 16875116.51 | 0.0527 | 0.0491 |
| Jupiter | 41495-11-14 09:50 G | 16877114.68 | 16877114.91 | 16877115.14 | 0.0500 | 0.0123 |

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| Neptune | 41497-10-11 15:36 G | 16877812.02 | 16877812.15 | 16877812.31 | 0.0088 | 0.0071 |
| Neptune | 41498-10-13 23:02 G | 16878179.25 | 16878179.46 | 16878179.70 | 0.0088 | 0.0045 |
| Neptune | 41499-10-16 16:05 G | 16878546.94 | 16878547.17 | 16878547.42 | 0.0088 | 0.0027 |
| Neptune | 41500-10-18 20:38 G | 16878914.11 | 16878914.36 | 16878914.63 | 0.0088 | 0.0002 |
| Saturn | 41501-04-18 00:43 G | 16879095.31 | 16879095.53 | 16879095.76 | 0.0295 | 0.0127 |
| Jupiter | 41501-04-26 13:12 G | 16879103.93 | 16879104.05 | 16879104.18 | 0.0523 | 0.0437 |
| Neptune | 41501-10-21 15:07 G | 16879281.88 | 16879282.13 | 16879282.39 | 0.0088 | 0.0017 |
| Neptune | 41502-10-23 19:26 G | 16879649.11 | 16879649.31 | 16879649.55 | 0.0088 | 0.0045 |
| Neptune | 41503-10-26 11:17 G | 16880016.81 | 16880016.97 | 16880017.18 | 0.0088 | 0.0063 |
| Jupiter | 41507-11-20 00:29 G | 16881502.34 | 16881502.52 | 16881502.71 | 0.0499 | 0.0286 |
| Jupiter | 41513-05-01 04:48 G | 16883491.52 | 16883491.70 | 16883491.89 | 0.0524 | 0.0315 |
| Saturn | 41514-10-18 04:05 G | 16884026.47 | 16884026.67 | 16884026.89 | 0.0267 | 0.0143 |
| Uranus | 41516-05-25 09:07 G | 16884611.71 | 16884611.88 | 16884612.07 | 0.0134 | 0.0093 |
| Uranus | 41517-05-29 23:02 G | 16884981.21 | 16884981.46 | 16884981.72 | 0.0134 | 0.0024 |
| Uranus | 41518-06-02 23:31 G | 16885350.26 | 16885350.48 | 16885350.72 | 0.0134 | 0.0051 |
| Uranus | 41519-06-07 14:10 G | 16885719.97 | 16885720.09 | 16885720.26 | 0.0135 | 0.0111 |
| Jupiter | 41519-11-24 09:22 G | 16885889.75 | 16885889.89 | 16885890.04 | 0.0499 | 0.0401 |
| Mars | 41521-03-14 00:00 G | 16886365.32 | 16886365.50 | 16886365.69 | 0.1605 | 0.0629 |
| Jupiter | 41525-05-06 06:29 G | 16887879.55 | 16887879.77 | 16887879.99 | 0.0524 | 0.0130 |
| Jupiter | 41530-10-27 10:19 G | 16889879.79 | 16889879.93 | 16889880.08 | 0.0503 | 0.0401 |
| Saturn | 41531-04-26 22:05 G | 16890061.26 | 16890061.42 | 16890061.60 | 0.0298 | 0.0215 |
| Jupiter | 41531-11-28 20:53 G | 16890277.34 | 16890277.37 | 16890277.42 | 0.0499 | 0.0489 |
| Jupiter | 41537-05-10 22:19 G | 16892267.19 | 16892267.43 | 16892267.67 | 0.0525 | 0.0043 |
| Jupiter | 41542-10-31 21:07 G | 16894267.18 | 16894267.38 | 16894267.58 | 0.0502 | 0.0248 |
| Saturn | 41544-10-24 15:07 G | 16894990.90 | 16894991.13 | 16894991.37 | 0.0265 | 0.0097 |
| Jupiter | 41549-05-15 20:10 G | 16896655.13 | 16896655.34 | 16896655.55 | 0.0526 | 0.0159 |
| Jupiter | 41554-11-05 18:14 G | 16898655.04 | 16898655.26 | 16898655.48 | 0.0501 | 0.0149 |
| Uranus | 41556-11-23 17:02 G | 16899404.12 | 16899404.21 | 16899404.34 | 0.0145 | 0.0129 |
| Uranus | 41557-11-29 00:14 G | 16899774.27 | 16899774.51 | 16899774.76 | 0.0145 | 0.0048 |
| Uranus | 41558-12-03 18:58 G | 16900144.06 | 16900144.29 | 16900144.53 | 0.0144 | 0.0052 |

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| Uranus | 41559-12-09 02:10 G | 16900514.46 | 16900514.59 | 16900514.73 | 0.0144 | 0.0123 |
| Saturn | 41560-04-19 14:38 G | 16900646.88 | 16900647.11 | 16900647.35 | 0.0296 | 0.0053 |
| Jupiter | 41561-05-20 22:48 G | 16901043.25 | 16901043.45 | 16901043.65 | 0.0526 | 0.0284 |
| Pluto | 41565-01-13 11:46 G | 16902376.75 | 16902376.99 | 16902377.24 | 0.0078 | 0.0024 |
| Jupiter | 41566-11-09 19:12 G | 16903042.07 | 16903042.30 | 16903042.54 | 0.0501 | 0.0050 |
| Jupiter | 41573-05-25 17:02 G | 16905431.11 | 16905431.21 | 16905431.31 | 0.0527 | 0.0475 |
| Saturn | 41573-10-19 14:24 G | 16905577.88 | 16905578.10 | 16905578.34 | 0.0267 | 0.0086 |
| Jupiter | 41578-11-14 14:38 G | 16907429.89 | 16907430.11 | 16907430.34 | 0.0500 | 0.0105 |
| Neptune | 41580-04-11 04:19 G | 16907943.57 | 16907943.68 | 16907943.80 | 0.0089 | 0.0080 |
| Neptune | 41581-04-13 22:48 G | 16908311.29 | 16908311.45 | 16908311.64 | 0.0089 | 0.0065 |
| Neptune | 41582-04-16 04:05 G | 16908678.45 | 16908678.67 | 16908678.92 | 0.0089 | 0.0035 |
| Neptune | 41583-04-18 21:50 G | 16909046.17 | 16909046.41 | 16909046.68 | 0.0089 | 0.0018 |
| Neptune | 41584-04-20 06:14 G | 16909413.52 | 16909413.76 | 16909414.01 | 0.0089 | 0.0014 |
| Jupiter | 41584-04-25 07:55 G | 16909418.73 | 16909418.83 | 16909418.93 | 0.0522 | 0.0466 |
| Neptune | 41585-04-22 19:41 G | 16909781.08 | 16909781.32 | 16909781.58 | 0.0089 | 0.0031 |
| Neptune | 41586-04-25 07:55 G | 16910148.68 | 16910148.83 | 16910149.04 | 0.0089 | 0.0061 |
| Neptune | 41587-04-27 16:48 G | 16910516.08 | 16910516.20 | 16910516.35 | 0.0090 | 0.0077 |
| Saturn | 41590-04-28 08:10 G | 16911612.77 | 16911612.84 | 16911612.92 | 0.0299 | 0.0285 |
| Jupiter | 41590-11-19 00:29 G | 16911817.32 | 16911817.52 | 16911817.73 | 0.0500 | 0.0269 |
| Jupiter | 41596-04-30 10:05 G | 16913806.75 | 16913806.92 | 16913807.10 | 0.0523 | 0.0341 |
| Mars | 41600-03-16 03:36 G | 16915222.50 | 16915222.65 | 16915222.80 | 0.1607 | 0.0970 |
| Uranus | 41600-05-25 23:17 G | 16915293.29 | 16915293.47 | 16915293.68 | 0.0134 | 0.0082 |
| Uranus | 41601-05-30 12:58 G | 16915662.79 | 16915663.04 | 16915663.30 | 0.0134 | 0.0015 |
| Uranus | 41602-06-03 14:10 G | 16916031.86 | 16916032.09 | 16916032.33 | 0.0134 | 0.0050 |
| Jupiter | 41602-11-23 13:55 G | 16916204.94 | 16916205.08 | 16916205.23 | 0.0499 | 0.0382 |
| Uranus | 41603-06-08 04:05 G | 16916401.63 | 16916401.67 | 16916401.76 | 0.0134 | 0.0130 |
| Saturn | 41603-10-26 18:58 G | 16916542.09 | 16916542.29 | 16916542.51 | 0.0264 | 0.0151 |
| Jupiter | 41608-05-04 23:46 G | 16918194.26 | 16918194.49 | 16918194.72 | 0.0524 | 0.0157 |
| Jupiter | 41613-10-26 10:48 G | 16920194.82 | 16920194.95 | 16920195.08 | 0.0503 | 0.0414 |
| Jupiter | 41614-11-28 06:00 G | 16920592.68 | 16920592.75 | 16920592.84 | 0.0499 | 0.0470 |

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| Saturn | 41619-04-22 04:48 G | 16922198.46 | 16922198.70 | 16922198.93 | 0.0296 | 0.0014 |
| Jupiter | 41620-05-10 02:10 G | 16922582.37 | 16922582.59 | 16922582.81 | 0.0525 | 0.0020 |
| Jupiter | 41625-10-31 03:36 G | 16924582.46 | 16924582.65 | 16924582.86 | 0.0502 | 0.0270 |
| Jupiter | 41632-05-15 04:19 G | 16926970.45 | 16926970.68 | 16926970.91 | 0.0525 | 0.0135 |
| Saturn | 41632-10-21 02:10 G | 16927129.36 | 16927129.59 | 16927129.83 | 0.0266 | 0.0031 |
| Jupiter | 41637-11-04 09:50 G | 16928969.69 | 16928969.91 | 16928970.13 | 0.0502 | 0.0170 |
| Uranus | 41640-11-24 05:17 G | 16930085.61 | 16930085.72 | 16930085.85 | 0.0145 | 0.0127 |
| Uranus | 41641-11-29 11:31 G | 16930455.73 | 16930455.98 | 16930456.24 | 0.0145 | 0.0032 |
| Uranus | 41642-12-04 07:26 G | 16930825.57 | 16930825.81 | 16930826.05 | 0.0144 | 0.0042 |
| Uranus | 41643-12-09 13:26 G | 16931196.04 | 16931196.06 | 16931196.12 | 0.0144 | 0.0142 |
| Jupiter | 41644-05-19 19:41 G | 16931358.13 | 16931358.32 | 16931358.53 | 0.0526 | 0.0265 |
| Saturn | 41648-04-15 00:14 G | 16932784.39 | 16932784.51 | 16932784.65 | 0.0295 | 0.0252 |
| Jupiter | 41649-11-09 07:12 G | 16933357.57 | 16933357.80 | 16933358.03 | 0.0501 | 0.0064 |
| Jupiter | 41656-05-25 00:58 G | 16935746.44 | 16935746.54 | 16935746.66 | 0.0526 | 0.0457 |
| Neptune | 41661-10-11 15:36 G | 16937712.15 | 16937712.15 | 16937712.19 | 0.0088 | 0.0088 |
| Saturn | 41661-10-16 02:10 G | 16937716.46 | 16937716.59 | 16937716.76 | 0.0267 | 0.0218 |
| Jupiter | 41661-11-13 18:29 G | 16937745.03 | 16937745.27 | 16937745.51 | 0.0500 | 0.0098 |
| Neptune | 41662-10-14 10:05 G | 16938079.73 | 16938079.92 | 16938080.12 | 0.0088 | 0.0056 |
| Saturn | 41662-10-27 21:50 G | 16938093.26 | 16938093.41 | 16938093.57 | 0.0264 | 0.0200 |
| Neptune | 41663-10-16 14:10 G | 16938446.88 | 16938447.09 | 16938447.34 | 0.0088 | 0.0043 |
| Neptune | 41664-10-18 08:38 G | 16938814.60 | 16938814.86 | 16938815.13 | 0.0088 | 0.0011 |
| Neptune | 41665-10-20 14:38 G | 16939181.86 | 16939182.11 | 16939182.37 | 0.0088 | 0.0004 |
| Neptune | 41666-10-23 05:46 G | 16939549.50 | 16939549.74 | 16939549.99 | 0.0088 | 0.0034 |
| Jupiter | 41667-04-25 16:19 G | 16939734.11 | 16939734.18 | 16939734.25 | 0.0522 | 0.0497 |
| Neptune | 41667-10-25 15:22 G | 16939916.96 | 16939917.14 | 16939917.37 | 0.0088 | 0.0049 |
| Neptune | 41668-10-27 01:12 G | 16940284.47 | 16940284.55 | 16940284.70 | 0.0088 | 0.0079 |
| Jupiter | 41673-11-18 08:10 G | 16942132.65 | 16942132.84 | 16942133.03 | 0.0500 | 0.0262 |
| Saturn | 41678-04-23 11:46 G | 16943749.75 | 16943749.99 | 16943750.22 | 0.0297 | 0.0069 |
| Jupiter | 41679-04-30 09:07 G | 16944121.71 | 16944121.88 | 16944122.06 | 0.0523 | 0.0359 |
| Uranus | 41684-05-26 13:41 G | 16945974.88 | 16945975.07 | 16945975.27 | 0.0134 | 0.0081 |

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| Uranus | 41685-05-31 02:10 G | 16946344.33 | 16946344.59 | 16946344.84 | 0.0134 | 0.0010 |
| Jupiter | 41685-11-22 20:10 G | 16946520.18 | 16946520.34 | 16946520.51 | 0.0499 | 0.0363 |
| Uranus | 41686-06-04 03:22 G | 16946713.42 | 16946713.64 | 16946713.86 | 0.0134 | 0.0063 |
| Uranus | 41687-06-08 16:48 G | 16947083.11 | 16947083.20 | 16947083.31 | 0.0134 | 0.0123 |
| Jupiter | 41691-05-05 12:43 G | 16948509.82 | 16948510.03 | 16948510.24 | 0.0524 | 0.0165 |
| Saturn | 41691-10-23 09:07 G | 16948680.63 | 16948680.88 | 16948681.13 | 0.0266 | 0.0019 |
| Jupiter | 41696-10-25 19:12 G | 16950510.18 | 16950510.30 | 16950510.42 | 0.0503 | 0.0428 |
| Jupiter | 41697-11-27 03:07 G | 16950907.54 | 16950907.63 | 16950907.72 | 0.0499 | 0.0457 |
| Jupiter | 41703-05-11 10:34 G | 16952897.70 | 16952897.94 | 16952898.18 | 0.0524 | 0.0001 |
| Saturn | 41707-04-17 23:02 G | 16954335.29 | 16954335.46 | 16954335.64 | 0.0295 | 0.0200 |
| Jupiter | 41708-10-31 02:53 G | 16954897.42 | 16954897.62 | 16954897.81 | 0.0503 | 0.0286 |
| Jupiter | 41715-05-16 03:07 G | 16957285.41 | 16957285.63 | 16957285.85 | 0.0525 | 0.0109 |
| Mars | 41717-09-14 04:19 G | 16958137.50 | 16958137.68 | 16958137.86 | 0.1930 | 0.0323 |
| Saturn | 41720-10-18 01:41 G | 16959267.39 | 16959267.57 | 16959267.76 | 0.0267 | 0.0172 |
| Jupiter | 41720-11-05 02:24 G | 16959285.39 | 16959285.60 | 16959285.81 | 0.0502 | 0.0187 |
| Saturn | 41721-10-30 02:53 G | 16959644.55 | 16959644.62 | 16959644.70 | 0.0264 | 0.0249 |
| Uranus | 41724-11-25 15:50 G | 16960767.05 | 16960767.16 | 16960767.31 | 0.0145 | 0.0122 |
| Pluto | 41725-07-15 06:43 G | 16960998.53 | 16960998.78 | 16960999.03 | 0.0066 | 0.0009 |
| Uranus | 41725-11-30 20:38 G | 16961137.11 | 16961137.36 | 16961137.62 | 0.0145 | 0.0038 |
| Uranus | 41726-12-05 17:17 G | 16961507.01 | 16961507.22 | 16961507.46 | 0.0144 | 0.0061 |
| Jupiter | 41727-05-21 07:41 G | 16961673.61 | 16961673.82 | 16961674.02 | 0.0526 | 0.0248 |
| Uranus | 41727-12-10 23:02 G | 16961877.37 | 16961877.46 | 16961877.58 | 0.0144 | 0.0132 |
| Jupiter | 41732-11-09 13:26 G | 16963672.81 | 16963673.06 | 16963673.30 | 0.0501 | 0.0072 |
| Saturn | 41737-04-25 08:24 G | 16965300.62 | 16965300.85 | 16965301.08 | 0.0297 | 0.0115 |
| Jupiter | 41739-05-26 01:26 G | 16966061.44 | 16966061.56 | 16966061.69 | 0.0526 | 0.0443 |
| Jupiter | 41744-11-13 23:02 G | 16968060.24 | 16968060.46 | 16968060.69 | 0.0500 | 0.0090 |
| Neptune | 41745-04-13 21:50 G | 16968211.28 | 16968211.41 | 16968211.57 | 0.0089 | 0.0074 |
| Neptune | 41746-04-16 13:41 G | 16968578.88 | 16968579.07 | 16968579.30 | 0.0089 | 0.0054 |
| Neptune | 41747-04-18 23:17 G | 16968946.24 | 16968946.47 | 16968946.71 | 0.0089 | 0.0026 |
| Neptune | 41748-04-20 10:48 G | 16969313.69 | 16969313.95 | 16969314.22 | 0.0089 | 0.0006 |

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| Neptune | 41749-04-23 01:12 G | 16969681.32 | 16969681.55 | 16969681.80 | 0.0089 | 0.0022 |
| Neptune | 41750-04-25 08:38 G | 16970048.65 | 16970048.86 | 16970049.12 | 0.0089 | 0.0041 |
| Jupiter | 41750-04-25 22:48 G | 16970049.41 | 16970049.45 | 16970049.50 | 0.0522 | 0.0510 |
| Saturn | 41750-10-25 06:58 G | 16970231.55 | 16970231.79 | 16970232.05 | 0.0266 | 0.0065 |
| Neptune | 41751-04-28 03:07 G | 16970416.48 | 16970416.63 | 16970416.80 | 0.0089 | 0.0069 |
| Neptune | 41752-04-29 07:41 G | 16970783.80 | 16970783.82 | 16970783.91 | 0.0090 | 0.0088 |
| Jupiter | 41756-11-18 16:05 G | 16972447.96 | 16972448.17 | 16972448.38 | 0.0500 | 0.0248 |
| Jupiter | 41762-04-30 23:31 G | 16974437.33 | 16974437.48 | 16974437.65 | 0.0523 | 0.0372 |
| Saturn | 41766-04-18 21:50 G | 16975886.22 | 16975886.41 | 16975886.61 | 0.0295 | 0.0159 |
| Uranus | 41768-05-28 03:07 G | 16976656.43 | 16976656.63 | 16976656.85 | 0.0134 | 0.0069 |
| Jupiter | 41768-11-23 00:43 G | 16976835.37 | 16976835.53 | 16976835.69 | 0.0500 | 0.0354 |
| Uranus | 41769-06-01 15:07 G | 16977025.87 | 16977026.13 | 16977026.39 | 0.0134 | 0.0005 |
| Uranus | 41770-06-05 17:17 G | 16977395.02 | 16977395.22 | 16977395.45 | 0.0134 | 0.0063 |
| Jupiter | 41774-05-05 20:24 G | 16978825.12 | 16978825.35 | 16978825.58 | 0.0523 | 0.0176 |
| Saturn | 41779-10-20 02:38 G | 16980818.41 | 16980818.61 | 16980818.83 | 0.0267 | 0.0130 |
| Jupiter | 41779-10-26 22:19 G | 16980825.33 | 16980825.43 | 16980825.55 | 0.0504 | 0.0441 |
| Jupiter | 41780-11-27 22:34 G | 16981223.35 | 16981223.44 | 16981223.55 | 0.0499 | 0.0450 |
| Jupiter | 41786-05-10 12:43 G | 16983212.81 | 16983213.03 | 16983213.26 | 0.0524 | 0.0021 |
| Jupiter | 41791-10-31 22:05 G | 16985213.24 | 16985213.42 | 16985213.60 | 0.0503 | 0.0299 |
| Saturn | 41796-04-25 23:17 G | 16986851.26 | 16986851.47 | 16986851.69 | 0.0297 | 0.0154 |
| Jupiter | 41798-05-15 20:24 G | 16987601.12 | 16987601.35 | 16987601.58 | 0.0525 | 0.0092 |
| Jupiter | 41803-11-06 04:19 G | 16989600.46 | 16989600.68 | 16989600.90 | 0.0502 | 0.0207 |
| Mars | 41805-03-16 22:34 G | 16990097.25 | 16990097.44 | 16990097.63 | 0.1603 | 0.0087 |
| Uranus | 41808-11-26 23:46 G | 16991448.37 | 16991448.49 | 16991448.64 | 0.0145 | 0.0120 |
| Saturn | 41809-10-27 00:14 G | 16991782.28 | 16991782.51 | 16991782.75 | 0.0266 | 0.0104 |
| Uranus | 41809-12-02 02:53 G | 16991818.37 | 16991818.62 | 16991818.89 | 0.0145 | 0.0029 |
| Jupiter | 41810-05-21 14:38 G | 16991988.90 | 16991989.11 | 16991989.32 | 0.0526 | 0.0243 |
| Uranus | 41810-12-07 01:26 G | 16992188.34 | 16992188.56 | 16992188.80 | 0.0144 | 0.0049 |
| Pluto | 41813-01-16 20:10 G | 16992960.13 | 16992960.34 | 16992960.60 | 0.0078 | 0.0030 |
| Jupiter | 41815-11-10 19:41 G | 16993988.10 | 16993988.32 | 16993988.55 | 0.0501 | 0.0086 |

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| Jupiter | 41822-05-26 19:12 G | 16996377.19 | 16996377.30 | 16996377.43 | 0.0526 | 0.0442 |
| Saturn | 41825-04-20 19:55 G | 16997437.11 | 16997437.33 | 16997437.55 | 0.0295 | 0.0122 |
| Neptune | 41826-10-15 08:38 G | 16997979.73 | 16997979.86 | 16997980.00 | 0.0088 | 0.0074 |
| Neptune | 41827-10-18 01:55 G | 16998347.39 | 16998347.58 | 16998347.83 | 0.0088 | 0.0051 |
| Jupiter | 41827-11-15 14:10 G | 16998375.85 | 16998376.09 | 16998376.33 | 0.0501 | 0.0087 |
| Neptune | 41828-10-19 09:36 G | 16998714.67 | 16998714.90 | 16998715.15 | 0.0088 | 0.0029 |
| Neptune | 41829-10-21 23:17 G | 16999082.20 | 16999082.47 | 16999082.74 | 0.0088 | 0.0005 |
| Neptune | 41830-10-24 10:34 G | 16999449.69 | 16999449.94 | 16999450.19 | 0.0088 | 0.0016 |
| Neptune | 41831-10-26 18:29 G | 16999817.06 | 16999817.27 | 16999817.53 | 0.0088 | 0.0040 |
| Neptune | 41832-10-28 10:48 G | 17000184.80 | 17000184.95 | 17000185.16 | 0.0088 | 0.0062 |
| Neptune | 41833-10-30 15:36 G | 17000552.13 | 17000552.15 | 17000552.24 | 0.0088 | 0.0086 |
| Saturn | 41838-10-22 03:07 G | 17002369.41 | 17002369.63 | 17002369.86 | 0.0267 | 0.0093 |
| Jupiter | 41839-11-19 23:46 G | 17002763.30 | 17002763.49 | 17002763.70 | 0.0500 | 0.0243 |
| Jupiter | 41845-05-01 07:26 G | 17004752.65 | 17004752.81 | 17004752.98 | 0.0523 | 0.0379 |
| Uranus | 41851-05-26 14:24 G | 17006969.04 | 17006969.10 | 17006969.18 | 0.0134 | 0.0128 |
| Jupiter | 41851-11-24 21:36 G | 17007151.23 | 17007151.40 | 17007151.57 | 0.0500 | 0.0341 |
| Uranus | 41852-05-29 17:17 G | 17007338.02 | 17007338.22 | 17007338.44 | 0.0134 | 0.0071 |
| Uranus | 41853-06-03 04:05 G | 17007707.41 | 17007707.67 | 17007707.93 | 0.0134 | 0.0002 |
| Uranus | 41854-06-07 06:43 G | 17008076.59 | 17008076.78 | 17008077.00 | 0.0134 | 0.0073 |
| Saturn | 41855-04-28 15:50 G | 17008401.99 | 17008402.16 | 17008402.35 | 0.0297 | 0.0190 |
| Jupiter | 41857-05-06 03:50 G | 17009140.45 | 17009140.66 | 17009140.87 | 0.0524 | 0.0181 |
| Jupiter | 41862-10-27 14:10 G | 17011141.00 | 17011141.09 | 17011141.19 | 0.0503 | 0.0455 |
| Jupiter | 41863-11-28 23:17 G | 17011538.36 | 17011538.47 | 17011538.59 | 0.0499 | 0.0437 |
| Saturn | 41868-10-27 19:55 G | 17013333.14 | 17013333.33 | 17013333.54 | 0.0266 | 0.0144 |
| Jupiter | 41869-05-11 11:17 G | 17013528.74 | 17013528.97 | 17013529.20 | 0.0525 | 0.0032 |
| Jupiter | 41874-11-01 00:43 G | 17015528.35 | 17015528.53 | 17015528.73 | 0.0502 | 0.0321 |
| Jupiter | 41881-05-16 02:10 G | 17017916.36 | 17017916.59 | 17017916.82 | 0.0525 | 0.0080 |
| Saturn | 41884-04-21 11:17 G | 17018987.74 | 17018987.97 | 17018988.21 | 0.0295 | 0.0088 |
| Jupiter | 41886-11-05 17:17 G | 17019916.02 | 17019916.22 | 17019916.42 | 0.0502 | 0.0229 |
| Uranus | 41892-11-27 10:48 G | 17022129.83 | 17022129.95 | 17022130.11 | 0.0145 | 0.0119 |

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| Jupiter | 41893-05-21 06:43 G | 17022304.58 | 17022304.78 | 17022304.98 | 0.0525 | 0.0238 |
| Uranus | 41893-12-02 12:29 G | 17022499.76 | 17022500.02 | 17022500.28 | 0.0145 | 0.0032 |
| Uranus | 41894-12-07 12:14 G | 17022869.79 | 17022870.01 | 17022870.23 | 0.0144 | 0.0065 |
| Uranus | 41895-12-12 15:07 G | 17023240.06 | 17023240.13 | 17023240.23 | 0.0144 | 0.0136 |
| Saturn | 41897-10-22 21:07 G | 17023920.14 | 17023920.38 | 17023920.63 | 0.0267 | 0.0057 |
| Jupiter | 41898-11-10 12:58 G | 17024303.80 | 17024304.04 | 17024304.28 | 0.0501 | 0.0091 |
| Jupiter | 41905-05-27 01:41 G | 17026692.43 | 17026692.57 | 17026692.70 | 0.0526 | 0.0435 |
| Neptune | 41909-04-15 06:14 G | 17028111.70 | 17028111.76 | 17028111.87 | 0.0089 | 0.0085 |
| Neptune | 41910-04-17 18:00 G | 17028479.11 | 17028479.25 | 17028479.41 | 0.0089 | 0.0070 |
| Jupiter | 41910-11-15 22:19 G | 17028691.20 | 17028691.43 | 17028691.66 | 0.0501 | 0.0084 |
| Neptune | 41911-04-20 04:05 G | 17028846.44 | 17028846.67 | 17028846.92 | 0.0089 | 0.0038 |
| Neptune | 41912-04-21 19:26 G | 17029214.08 | 17029214.31 | 17029214.57 | 0.0089 | 0.0024 |
| Neptune | 41913-04-24 01:41 G | 17029581.32 | 17029581.57 | 17029581.83 | 0.0089 | 0.0010 |
| Neptune | 41914-04-26 20:10 G | 17029949.11 | 17029949.34 | 17029949.60 | 0.0089 | 0.0025 |
| Saturn | 41914-04-30 13:41 G | 17029952.92 | 17029953.07 | 17029953.23 | 0.0297 | 0.0223 |
| Neptune | 41915-04-29 00:58 G | 17030316.37 | 17030316.54 | 17030316.75 | 0.0089 | 0.0058 |
| Neptune | 41916-04-30 19:12 G | 17030684.17 | 17030684.30 | 17030684.47 | 0.0089 | 0.0073 |
| Jupiter | 41922-11-20 15:36 G | 17033078.94 | 17033079.15 | 17033079.36 | 0.0500 | 0.0225 |
| Saturn | 41926-10-18 11:46 G | 17034506.93 | 17034506.99 | 17034507.05 | 0.0270 | 0.0259 |
| Saturn | 41927-10-30 18:29 G | 17034884.11 | 17034884.27 | 17034884.46 | 0.0266 | 0.0183 |
| Jupiter | 41928-05-01 19:26 G | 17035068.16 | 17035068.31 | 17035068.46 | 0.0523 | 0.0382 |
| Jupiter | 41934-11-24 22:05 G | 17037466.24 | 17037466.42 | 17037466.61 | 0.0499 | 0.0321 |
| Uranus | 41936-05-31 06:43 G | 17038019.57 | 17038019.78 | 17038020.01 | 0.0134 | 0.0058 |
| Uranus | 41937-06-04 16:48 G | 17038388.94 | 17038389.20 | 17038389.47 | 0.0134 | 0.0006 |
| Uranus | 41938-06-08 21:22 G | 17038758.20 | 17038758.39 | 17038758.60 | 0.0134 | 0.0075 |
| Jupiter | 41940-05-07 00:00 G | 17039456.29 | 17039456.50 | 17039456.72 | 0.0524 | 0.0187 |
| Saturn | 41943-04-23 23:31 G | 17040538.24 | 17040538.48 | 17040538.73 | 0.0295 | 0.0056 |
| Jupiter | 41945-10-27 20:38 G | 17041456.28 | 17041456.36 | 17041456.46 | 0.0504 | 0.0467 |
| Jupiter | 41946-11-29 17:17 G | 17041854.12 | 17041854.22 | 17041854.34 | 0.0499 | 0.0435 |
| Jupiter | 41952-05-11 13:55 G | 17043843.85 | 17043844.08 | 17043844.31 | 0.0524 | 0.0047 |

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| Saturn | 41956-10-24 09:50 G | 17045470.66 | 17045470.91 | 17045471.17 | 0.0267 | 0.0018 |
| Jupiter | 41957-11-01 14:53 G | 17045843.96 | 17045844.12 | 17045844.28 | 0.0503 | 0.0343 |
| Jupiter | 41964-05-16 17:31 G | 17048232.00 | 17048232.23 | 17048232.45 | 0.0525 | 0.0066 |
| Jupiter | 41969-11-06 10:05 G | 17050231.72 | 17050231.92 | 17050232.14 | 0.0502 | 0.0244 |
| Saturn | 41973-05-01 09:07 G | 17051503.78 | 17051503.88 | 17051504.01 | 0.0297 | 0.0261 |
| Pluto | 41973-07-18 12:00 G | 17051581.75 | 17051582.00 | 17051582.27 | 0.0066 | 0.0004 |
| Jupiter | 41976-05-21 14:24 G | 17052619.89 | 17052620.10 | 17052620.32 | 0.0526 | 0.0236 |
| Uranus | 41976-11-28 23:31 G | 17052811.33 | 17052811.48 | 17052811.65 | 0.0145 | 0.0110 |
| Uranus | 41977-12-03 23:46 G | 17053181.23 | 17053181.49 | 17053181.75 | 0.0145 | 0.0022 |
| Uranus | 41978-12-09 00:43 G | 17053551.31 | 17053551.53 | 17053551.77 | 0.0144 | 0.0057 |
| Jupiter | 41981-11-10 16:05 G | 17054618.95 | 17054619.17 | 17054619.40 | 0.0501 | 0.0108 |
| Saturn | 41985-10-19 10:34 G | 17056057.81 | 17056057.94 | 17056058.09 | 0.0270 | 0.0220 |
| Saturn | 41986-10-31 14:10 G | 17056434.96 | 17056435.09 | 17056435.23 | 0.0266 | 0.0223 |
| Jupiter | 41988-05-26 14:38 G | 17057008.00 | 17057008.11 | 17057008.24 | 0.0527 | 0.0439 |
| Neptune | 41991-10-18 04:19 G | 17058247.50 | 17058247.68 | 17058247.86 | 0.0088 | 0.0060 |
| Neptune | 41992-10-19 16:19 G | 17058614.96 | 17058615.18 | 17058615.42 | 0.0088 | 0.0046 |
| Neptune | 41993-10-22 06:14 G | 17058982.52 | 17058982.76 | 17058983.01 | 0.0088 | 0.0015 |
| Jupiter | 41993-11-15 13:26 G | 17059006.82 | 17059007.06 | 17059007.29 | 0.0500 | 0.0072 |
| Neptune | 41994-10-24 13:55 G | 17059349.81 | 17059350.08 | 17059350.35 | 0.0088 | 0.0000 |
| Neptune | 41995-10-27 06:58 G | 17059717.57 | 17059717.79 | 17059718.04 | 0.0088 | 0.0032 |
| Neptune | 41996-10-28 11:17 G | 17060084.77 | 17060084.97 | 17060085.21 | 0.0088 | 0.0046 |
| Neptune | 41997-10-31 05:46 G | 17060452.63 | 17060452.74 | 17060452.88 | 0.0088 | 0.0077 |

43RD MILLENNIUM CE

This is a list of transits of Moon in the 43rd millennium CE.

| | FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------|---------|-------------|-------------|-------------|--------|--------|-------|---|
| | | TRANSIT | | | | | | | |
| | | TIME | | | | | | | |
| Mars | 42001-09-15 04:05 | G | 17061867.57 | 17061867.67 | 17061867.77 | 0.1933 | 0.1713 | | |
| Saturn | 42002-04-24 20:38 | G | 17062089.13 | 17062089.36 | 17062089.60 | 0.0295 | 0.0015 | | |
| Jupiter | 42005-11-19 20:10 | G | 17063394.13 | 17063394.34 | 17063394.56 | 0.0500 | 0.0210 | | |
| Mars | 42010-03-17 19:26 | G | 17064973.17 | 17064973.31 | 17064973.45 | 0.1600 | 0.1032 | | |
| Jupiter | 42011-05-02 11:46 | G | 17065383.85 | 17065383.99 | 17065384.16 | 0.0523 | 0.0388 | | |
| Saturn | 42015-10-26 04:48 | G | 17067021.46 | 17067021.70 | 17067021.94 | 0.0267 | 0.0024 | | |
| Jupiter | 42017-11-24 16:05 | G | 17067781.99 | 17067782.17 | 17067782.35 | 0.0500 | 0.0305 | | |
| Uranus | 42019-05-28 15:36 | G | 17068332.03 | 17068332.15 | 17068332.28 | 0.0134 | 0.0117 | | |
| Uranus | 42020-05-31 21:07 | G | 17068701.17 | 17068701.38 | 17068701.60 | 0.0134 | 0.0061 | | |
| Uranus | 42021-06-05 05:46 | G | 17069070.48 | 17069070.74 | 17069071.00 | 0.0134 | 0.0014 | | |
| Uranus | 42022-06-09 11:17 | G | 17069439.78 | 17069439.97 | 17069440.16 | 0.0134 | 0.0083 | | |
| Jupiter | 42023-05-06 23:46 | G | 17069771.28 | 17069771.49 | 17069771.70 | 0.0523 | 0.0204 | | |
| Jupiter | 42028-10-27 10:34 | G | 17071771.88 | 17071771.94 | 17071772.01 | 0.0504 | 0.0478 | | |
| Jupiter | 42029-11-29 03:36 | G | 17072169.53 | 17072169.65 | 17072169.78 | 0.0499 | 0.0426 | | |
| Saturn | 42031-04-18 21:36 | G | 17072675.33 | 17072675.40 | 17072675.49 | 0.0292 | 0.0276 | | |
| Jupiter | 42035-05-12 05:46 | G | 17074159.52 | 17074159.74 | 17074159.97 | 0.0524 | 0.0066 | | |
| Jupiter | 42040-11-01 03:07 | G | 17076159.47 | 17076159.63 | 17076159.80 | 0.0502 | 0.0365 | | |
| Saturn | 42044-10-20 06:58 | G | 17077608.60 | 17077608.79 | 17077608.98 | 0.0270 | 0.0177 | | |
| Jupiter | 42047-05-17 00:58 | G | 17078547.30 | 17078547.54 | 17078547.78 | 0.0526 | 0.0050 | | |
| Jupiter | 42052-11-05 12:00 | G | 17080546.80 | 17080547.00 | 17080547.19 | 0.0502 | 0.0265 | | |
| Jupiter | 42059-05-22 00:00 | G | 17082935.30 | 17082935.50 | 17082935.70 | 0.0526 | 0.0229 | | |
| Uranus | 42060-11-29 14:53 | G | 17083492.97 | 17083493.12 | 17083493.30 | 0.0145 | 0.0108 | | |
| Pluto | 42061-01-19 12:43 | G | 17083543.79 | 17083544.03 | 17083544.30 | 0.0078 | 0.0016 | | |
| Saturn | 42061-04-26 01:41 | G | 17083640.34 | 17083640.57 | 17083640.80 | 0.0295 | 0.0038 | | |
| Uranus | 42061-12-04 13:55 | G | 17083862.82 | 17083863.08 | 17083863.34 | 0.0144 | 0.0018 | | |
| Uranus | 42062-12-09 16:05 | G | 17084232.96 | 17084233.17 | 17084233.38 | 0.0144 | 0.0076 | | |
| Jupiter | 42064-11-10 09:07 | G | 17084934.65 | 17084934.88 | 17084935.11 | 0.0501 | 0.0117 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 42071-05-27 02:38 G | 17087323.48 | 17087323.61 | 17087323.76 | 0.0526 | 0.0423 |
| Neptune | 42074-04-16 21:50 G | 17088379.30 | 17088379.41 | 17088379.54 | 0.0089 | 0.0080 |
| Saturn | 42074-10-27 06:58 G | 17088572.56 | 17088572.79 | 17088573.02 | 0.0267 | 0.0073 |
| Neptune | 42075-04-19 14:24 G | 17088746.92 | 17088747.10 | 17088747.31 | 0.0089 | 0.0057 |
| Neptune | 42076-04-20 19:55 G | 17089114.10 | 17089114.33 | 17089114.58 | 0.0089 | 0.0032 |
| Jupiter | 42076-11-14 16:19 G | 17089321.94 | 17089322.18 | 17089322.42 | 0.0501 | 0.0061 |
| Neptune | 42077-04-23 14:53 G | 17089481.86 | 17089482.12 | 17089482.38 | 0.0089 | 0.0008 |
| Neptune | 42078-04-25 19:55 G | 17089849.09 | 17089849.33 | 17089849.58 | 0.0089 | 0.0017 |
| Neptune | 42079-04-28 12:58 G | 17090216.82 | 17090217.04 | 17090217.30 | 0.0089 | 0.0039 |
| Neptune | 42080-04-29 21:07 G | 17090584.23 | 17090584.38 | 17090584.58 | 0.0089 | 0.0065 |
| Neptune | 42081-05-02 10:34 G | 17090951.89 | 17090951.94 | 17090952.04 | 0.0089 | 0.0086 |
| Jupiter | 42088-11-19 12:00 G | 17093709.80 | 17093710.00 | 17093710.21 | 0.0500 | 0.0194 |
| Mars | 42089-03-19 14:24 G | 17093829.97 | 17093830.10 | 17093830.24 | 0.1602 | 0.1047 |
| Saturn | 42090-04-19 20:38 G | 17094226.20 | 17094226.36 | 17094226.52 | 0.0293 | 0.0222 |
| Jupiter | 42094-05-01 10:19 G | 17095698.78 | 17095698.93 | 17095699.07 | 0.0523 | 0.0409 |
| Jupiter | 42100-11-24 20:10 G | 17098097.14 | 17098097.34 | 17098097.54 | 0.0499 | 0.0282 |
| Uranus | 42103-05-30 03:36 G | 17099013.56 | 17099013.65 | 17099013.75 | 0.0134 | 0.0124 |
| Saturn | 42103-10-23 01:26 G | 17099159.35 | 17099159.56 | 17099159.80 | 0.0270 | 0.0129 |
| Uranus | 42104-06-02 10:19 G | 17099382.71 | 17099382.93 | 17099383.17 | 0.0134 | 0.0046 |
| Uranus | 42105-06-06 18:14 G | 17099752.00 | 17099752.26 | 17099752.52 | 0.0134 | 0.0015 |
| Jupiter | 42106-05-07 14:38 G | 17100086.91 | 17100087.11 | 17100087.32 | 0.0524 | 0.0225 |
| Uranus | 42106-06-11 01:26 G | 17100121.38 | 17100121.56 | 17100121.75 | 0.0134 | 0.0087 |
| Jupiter | 42111-10-28 20:10 G | 17102087.30 | 17102087.34 | 17102087.40 | 0.0503 | 0.0492 |
| Jupiter | 42112-11-29 08:24 G | 17102484.73 | 17102484.85 | 17102484.98 | 0.0499 | 0.0413 |
| Jupiter | 42118-05-12 07:55 G | 17104474.59 | 17104474.83 | 17104475.07 | 0.0525 | 0.0095 |
| Saturn | 42120-04-28 08:53 G | 17105191.65 | 17105191.87 | 17105192.11 | 0.0295 | 0.0101 |
| Jupiter | 42123-11-02 04:05 G | 17106474.53 | 17106474.67 | 17106474.82 | 0.0503 | 0.0387 |
| Jupiter | 42130-05-17 06:43 G | 17108862.56 | 17108862.78 | 17108863.01 | 0.0525 | 0.0029 |
| Saturn | 42133-10-29 09:22 G | 17110123.67 | 17110123.89 | 17110124.11 | 0.0267 | 0.0123 |
| Jupiter | 42135-11-07 01:55 G | 17110862.39 | 17110862.58 | 17110862.78 | 0.0502 | 0.0283 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 42142-05-22 06:00 G | 17113250.54 | 17113250.75 | 17113250.97 | 0.0526 | 0.0209 |
| Uranus | 42144-12-01 04:48 G | 17114174.51 | 17114174.70 | 17114174.89 | 0.0145 | 0.0095 |
| Uranus | 42145-12-06 02:38 G | 17114544.35 | 17114544.61 | 17114544.87 | 0.0144 | 0.0010 |
| Uranus | 42146-12-11 06:14 G | 17114914.55 | 17114914.76 | 17114914.98 | 0.0144 | 0.0071 |
| Jupiter | 42147-11-11 09:36 G | 17115249.67 | 17115249.90 | 17115250.13 | 0.0501 | 0.0129 |
| Saturn | 42149-04-22 03:50 G | 17115777.47 | 17115777.66 | 17115777.88 | 0.0293 | 0.0157 |
| Jupiter | 42154-05-26 23:02 G | 17117638.32 | 17117638.46 | 17117638.61 | 0.0526 | 0.0403 |
| Neptune | 42155-10-18 10:19 G | 17118147.81 | 17118147.93 | 17118148.08 | 0.0088 | 0.0076 |
| Neptune | 42156-10-20 00:43 G | 17118515.37 | 17118515.53 | 17118515.75 | 0.0088 | 0.0057 |
| Neptune | 42157-10-22 07:12 G | 17118882.57 | 17118882.80 | 17118883.06 | 0.0088 | 0.0030 |
| Neptune | 42158-10-25 01:41 G | 17119250.32 | 17119250.57 | 17119250.83 | 0.0088 | 0.0010 |
| Neptune | 42159-10-27 06:14 G | 17119617.52 | 17119617.76 | 17119618.02 | 0.0088 | 0.0016 |
| Jupiter | 42159-11-16 03:36 G | 17119637.42 | 17119637.65 | 17119637.88 | 0.0500 | 0.0045 |
| Neptune | 42160-10-29 00:29 G | 17119985.29 | 17119985.52 | 17119985.77 | 0.0088 | 0.0036 |
| Neptune | 42161-10-31 06:14 G | 17120352.60 | 17120352.76 | 17120352.96 | 0.0088 | 0.0061 |
| Saturn | 42162-10-24 02:24 G | 17120710.37 | 17120710.60 | 17120710.84 | 0.0270 | 0.0076 |
| Neptune | 42162-11-02 21:36 G | 17120720.32 | 17120720.40 | 17120720.51 | 0.0088 | 0.0082 |
| Jupiter | 42171-11-20 13:26 G | 17124024.84 | 17124025.06 | 17124025.30 | 0.0500 | 0.0170 |
| Jupiter | 42177-05-01 21:22 G | 17126014.27 | 17126014.39 | 17126014.52 | 0.0523 | 0.0435 |
| Saturn | 42179-04-30 17:31 G | 17126743.04 | 17126743.23 | 17126743.44 | 0.0295 | 0.0174 |
| Jupiter | 42183-11-25 01:12 G | 17128412.36 | 17128412.55 | 17128412.74 | 0.0499 | 0.0265 |
| Uranus | 42187-05-30 15:22 G | 17129694.99 | 17129695.14 | 17129695.31 | 0.0134 | 0.0106 |
| Uranus | 42188-06-02 23:46 G | 17130064.26 | 17130064.49 | 17130064.72 | 0.0134 | 0.0051 |
| Jupiter | 42189-05-06 12:29 G | 17130401.81 | 17130402.02 | 17130402.23 | 0.0523 | 0.0251 |
| Uranus | 42189-06-07 05:46 G | 17130433.48 | 17130433.74 | 17130434.00 | 0.0134 | 0.0026 |
| Uranus | 42190-06-11 13:41 G | 17130802.91 | 17130803.07 | 17130803.26 | 0.0134 | 0.0092 |
| Saturn | 42192-10-30 11:17 G | 17131674.78 | 17131674.97 | 17131675.16 | 0.0267 | 0.0179 |
| Jupiter | 42195-11-29 16:48 G | 17132800.07 | 17132800.20 | 17132800.35 | 0.0499 | 0.0400 |
| Jupiter | 42201-05-12 09:36 G | 17134789.69 | 17134789.90 | 17134790.12 | 0.0524 | 0.0131 |
| Jupiter | 42206-11-02 16:05 G | 17136790.04 | 17136790.17 | 17136790.31 | 0.0503 | 0.0409 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 42208-04-24 21:50 G | 17137329.19 | 17137329.41 | 17137329.64 | 0.0293 | 0.0081 |
| Jupiter | 42213-05-17 09:07 G | 17139177.64 | 17139177.88 | 17139178.12 | 0.0525 | 0.0010 |
| Jupiter | 42218-11-06 22:48 G | 17141177.27 | 17141177.45 | 17141177.65 | 0.0502 | 0.0307 |
| Pluto | 42221-07-22 03:22 G | 17142165.40 | 17142165.64 | 17142165.90 | 0.0066 | 0.0017 |
| Saturn | 42221-10-26 12:14 G | 17142261.77 | 17142262.01 | 17142262.25 | 0.0269 | 0.0016 |
| Jupiter | 42225-05-22 00:43 G | 17143565.32 | 17143565.53 | 17143565.75 | 0.0526 | 0.0179 |
| Uranus | 42228-12-02 16:05 G | 17144855.99 | 17144856.17 | 17144856.36 | 0.0145 | 0.0098 |
| Uranus | 42229-12-07 12:43 G | 17145225.77 | 17145226.03 | 17145226.29 | 0.0144 | 0.0006 |
| Jupiter | 42230-11-11 18:29 G | 17145565.05 | 17145565.27 | 17145565.49 | 0.0501 | 0.0144 |
| Uranus | 42230-12-12 17:31 G | 17145596.04 | 17145596.23 | 17145596.44 | 0.0144 | 0.0086 |
| Jupiter | 42237-05-27 06:43 G | 17147953.62 | 17147953.78 | 17147953.95 | 0.0526 | 0.0375 |
| Neptune | 42238-04-18 10:48 G | 17148279.94 | 17148279.95 | 17148280.02 | 0.0089 | 0.0089 |
| Saturn | 42238-05-03 06:29 G | 17148294.66 | 17148294.77 | 17148294.91 | 0.0295 | 0.0254 |
| Neptune | 42239-04-20 15:50 G | 17148647.04 | 17148647.16 | 17148647.33 | 0.0089 | 0.0074 |
| Neptune | 42240-04-22 10:34 G | 17149014.73 | 17149014.94 | 17149015.19 | 0.0089 | 0.0041 |
| Neptune | 42241-04-24 16:19 G | 17149381.96 | 17149382.18 | 17149382.43 | 0.0089 | 0.0026 |
| Neptune | 42242-04-27 08:38 G | 17149749.59 | 17149749.86 | 17149750.12 | 0.0089 | 0.0007 |
| Jupiter | 42242-11-16 02:10 G | 17149952.35 | 17149952.59 | 17149952.83 | 0.0501 | 0.0024 |
| Neptune | 42243-04-29 17:31 G | 17150117.00 | 17150117.23 | 17150117.48 | 0.0089 | 0.0022 |
| Neptune | 42244-05-01 05:02 G | 17150484.51 | 17150484.71 | 17150484.93 | 0.0089 | 0.0055 |
| Neptune | 42245-05-03 19:26 G | 17150852.18 | 17150852.31 | 17150852.48 | 0.0089 | 0.0071 |
| Jupiter | 42249-05-31 22:19 G | 17152341.37 | 17152341.43 | 17152341.51 | 0.0527 | 0.0502 |
| Saturn | 42250-10-21 14:10 G | 17152848.94 | 17152849.09 | 17152849.25 | 0.0271 | 0.0217 |
| Saturn | 42251-11-02 16:19 G | 17153226.09 | 17153226.18 | 17153226.29 | 0.0267 | 0.0242 |
| Jupiter | 42254-11-20 15:22 G | 17154339.93 | 17154340.14 | 17154340.36 | 0.0500 | 0.0147 |
| Jupiter | 42260-05-01 12:58 G | 17156328.95 | 17156329.04 | 17156329.16 | 0.0522 | 0.0466 |
| Jupiter | 42266-11-25 06:58 G | 17158727.58 | 17158727.79 | 17158728.01 | 0.0500 | 0.0243 |
| Saturn | 42267-04-27 20:10 G | 17158881.10 | 17158881.34 | 17158881.58 | 0.0294 | 0.0003 |
| Uranus | 42271-06-01 01:55 G | 17160376.47 | 17160376.58 | 17160376.73 | 0.0134 | 0.0115 |
| Jupiter | 42272-05-06 12:14 G | 17160716.83 | 17160717.01 | 17160717.20 | 0.0523 | 0.0287 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 42272-06-04 12:00 G | 17160745.76 | 17160746.00 | 17160746.24 | 0.0134 | 0.0035 |
| Uranus | 42273-06-08 16:48 G | 17161114.95 | 17161115.20 | 17161115.46 | 0.0134 | 0.0024 |
| Uranus | 42274-06-13 02:38 G | 17161484.46 | 17161484.61 | 17161484.79 | 0.0134 | 0.0099 |
| Jupiter | 42278-11-29 13:12 G | 17163114.90 | 17163115.05 | 17163115.20 | 0.0499 | 0.0381 |
| Saturn | 42280-10-28 03:07 G | 17163813.40 | 17163813.63 | 17163813.88 | 0.0269 | 0.0050 |
| Jupiter | 42284-05-11 07:55 G | 17165104.60 | 17165104.83 | 17165105.06 | 0.0525 | 0.0168 |
| Jupiter | 42289-11-01 10:19 G | 17167104.83 | 17167104.93 | 17167105.06 | 0.0503 | 0.0437 |
| Mars | 42294-03-20 21:07 G | 17168705.18 | 17168705.38 | 17168705.58 | 0.1599 | 0.0336 |
| Saturn | 42296-04-20 21:50 G | 17169467.29 | 17169467.41 | 17169467.56 | 0.0291 | 0.0243 |
| Jupiter | 42296-05-16 01:55 G | 17169492.35 | 17169492.58 | 17169492.81 | 0.0525 | 0.0039 |
| Jupiter | 42301-11-07 03:50 G | 17171492.50 | 17171492.66 | 17171492.84 | 0.0502 | 0.0335 |
| Jupiter | 42308-05-22 06:43 G | 17173880.56 | 17173880.78 | 17173881.01 | 0.0525 | 0.0155 |
| Pluto | 42309-01-23 16:05 G | 17174126.93 | 17174127.17 | 17174127.43 | 0.0078 | 0.0012 |
| Saturn | 42309-10-23 22:34 G | 17174400.24 | 17174400.44 | 17174400.66 | 0.0271 | 0.0148 |
| Uranus | 42312-12-03 23:31 G | 17175537.30 | 17175537.48 | 17175537.70 | 0.0145 | 0.0088 |
| Jupiter | 42313-11-11 12:58 G | 17175879.81 | 17175880.04 | 17175880.27 | 0.0502 | 0.0169 |
| Uranus | 42313-12-08 19:55 G | 17175907.07 | 17175907.33 | 17175907.59 | 0.0144 | 0.0006 |
| Uranus | 42314-12-14 01:55 G | 17176277.38 | 17176277.58 | 17176277.80 | 0.0144 | 0.0079 |
| Jupiter | 42320-05-26 18:58 G | 17178268.11 | 17178268.29 | 17178268.47 | 0.0526 | 0.0341 |
| Neptune | 42320-10-21 02:24 G | 17178415.45 | 17178415.60 | 17178415.81 | 0.0088 | 0.0064 |
| Neptune | 42321-10-23 21:36 G | 17178783.19 | 17178783.40 | 17178783.62 | 0.0088 | 0.0048 |
| Neptune | 42322-10-26 02:10 G | 17179150.36 | 17179150.59 | 17179150.86 | 0.0088 | 0.0018 |
| Neptune | 42323-10-28 20:10 G | 17179518.08 | 17179518.34 | 17179518.61 | 0.0088 | 0.0003 |
| Neptune | 42324-10-30 03:07 G | 17179885.41 | 17179885.63 | 17179885.88 | 0.0088 | 0.0029 |
| Neptune | 42325-11-01 16:48 G | 17180252.98 | 17180253.20 | 17180253.45 | 0.0088 | 0.0044 |
| Jupiter | 42325-11-16 03:50 G | 17180267.43 | 17180267.66 | 17180267.89 | 0.0501 | 0.0001 |
| Saturn | 42326-04-30 16:19 G | 17180432.94 | 17180433.18 | 17180433.42 | 0.0294 | 0.0091 |
| Neptune | 42326-11-04 04:05 G | 17180620.57 | 17180620.67 | 17180620.82 | 0.0088 | 0.0076 |
| Jupiter | 42332-05-31 21:50 G | 17182656.31 | 17182656.41 | 17182656.51 | 0.0527 | 0.0468 |
| Jupiter | 42337-11-20 19:12 G | 17184655.07 | 17184655.30 | 17184655.54 | 0.0500 | 0.0117 |

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| Saturn | 42339-10-31 15:36 G | 17185364.93 | 17185365.15 | 17185365.39 | 0.0268 | 0.0120 |
| Jupiter | 42343-05-02 12:00 G | 17186643.95 | 17186644.00 | 17186644.07 | 0.0522 | 0.0498 |
| Jupiter | 42349-11-25 02:24 G | 17189042.39 | 17189042.60 | 17189042.81 | 0.0499 | 0.0216 |
| Saturn | 42355-04-24 20:53 G | 17191019.17 | 17191019.37 | 17191019.57 | 0.0292 | 0.0156 |
| Jupiter | 42355-05-07 08:38 G | 17191031.67 | 17191031.86 | 17191032.05 | 0.0523 | 0.0318 |
| Uranus | 42355-06-02 13:26 G | 17191057.89 | 17191058.06 | 17191058.25 | 0.0134 | 0.0097 |
| Uranus | 42356-06-06 00:14 G | 17191427.28 | 17191427.51 | 17191427.75 | 0.0134 | 0.0043 |
| Uranus | 42357-06-10 03:36 G | 17191796.41 | 17191796.65 | 17191796.91 | 0.0134 | 0.0037 |
| Uranus | 42358-06-14 14:24 G | 17192165.94 | 17192166.10 | 17192166.27 | 0.0134 | 0.0099 |
| Jupiter | 42361-11-29 18:43 G | 17193430.12 | 17193430.28 | 17193430.44 | 0.0499 | 0.0362 |
| Mars | 42364-09-20 10:05 G | 17194455.73 | 17194455.92 | 17194456.10 | 0.1934 | 0.1100 |
| Jupiter | 42367-05-12 03:22 G | 17195419.44 | 17195419.64 | 17195419.85 | 0.0524 | 0.0197 |
| Saturn | 42368-10-25 14:24 G | 17195951.87 | 17195952.10 | 17195952.33 | 0.0270 | 0.0077 |
| Jupiter | 42372-11-01 12:58 G | 17197419.98 | 17197420.04 | 17197420.12 | 0.0503 | 0.0475 |
| Jupiter | 42379-05-17 04:19 G | 17199807.44 | 17199807.68 | 17199807.91 | 0.0524 | 0.0070 |
| Jupiter | 42384-11-05 22:48 G | 17201807.29 | 17201807.45 | 17201807.62 | 0.0503 | 0.0361 |
| Saturn | 42385-05-02 09:50 G | 17201984.72 | 17201984.91 | 17201985.11 | 0.0295 | 0.0180 |
| Jupiter | 42391-05-21 17:02 G | 17204194.99 | 17204195.21 | 17204195.44 | 0.0525 | 0.0121 |
| Jupiter | 42396-11-10 15:50 G | 17206194.96 | 17206195.16 | 17206195.37 | 0.0502 | 0.0194 |
| Uranus | 42396-12-04 07:12 G | 17206218.63 | 17206218.80 | 17206219.00 | 0.0145 | 0.0097 |
| Uranus | 42397-12-09 02:24 G | 17206588.34 | 17206588.60 | 17206588.86 | 0.0144 | 0.0001 |
| Saturn | 42398-11-02 00:58 G | 17206916.38 | 17206916.54 | 17206916.73 | 0.0268 | 0.0190 |
| Uranus | 42398-12-14 09:36 G | 17206958.70 | 17206958.90 | 17206959.10 | 0.0144 | 0.0087 |
| Neptune | 42403-04-21 06:14 G | 17208547.70 | 17208547.76 | 17208547.88 | 0.0089 | 0.0084 |
| Jupiter | 42403-05-26 19:12 G | 17208583.13 | 17208583.30 | 17208583.49 | 0.0526 | 0.0310 |
| Neptune | 42404-04-22 13:12 G | 17208914.87 | 17208915.05 | 17208915.25 | 0.0089 | 0.0058 |
| Neptune | 42405-04-25 04:05 G | 17209282.44 | 17209282.67 | 17209282.92 | 0.0089 | 0.0036 |
| Neptune | 42406-04-27 15:07 G | 17209649.89 | 17209650.13 | 17209650.39 | 0.0089 | 0.0010 |
| Neptune | 42407-04-30 01:26 G | 17210017.31 | 17210017.56 | 17210017.83 | 0.0089 | 0.0013 |
| Neptune | 42408-05-01 16:34 G | 17210384.99 | 17210385.19 | 17210385.44 | 0.0089 | 0.0040 |

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| Jupiter | 42408-11-15 06:43 G | 17210582.53 | 17210582.78 | 17210583.02 | 0.0501 | 0.0024 |
| Neptune | 42409-05-03 22:34 G | 17210752.27 | 17210752.44 | 17210752.65 | 0.0089 | 0.0061 |
| Neptune | 42410-05-06 17:02 G | 17211120.16 | 17211120.21 | 17211120.30 | 0.0089 | 0.0086 |
| Saturn | 42414-04-26 20:38 G | 17212571.14 | 17212571.36 | 17212571.60 | 0.0292 | 0.0071 |
| Jupiter | 42415-05-31 14:53 G | 17212970.99 | 17212971.12 | 17212971.26 | 0.0527 | 0.0436 |
| Jupiter | 42420-11-19 11:31 G | 17214969.75 | 17214969.98 | 17214970.21 | 0.0500 | 0.0087 |
| Jupiter | 42426-05-01 11:31 G | 17216958.95 | 17216958.98 | 17216959.03 | 0.0522 | 0.0513 |
| Saturn | 42427-10-28 08:53 G | 17217503.63 | 17217503.87 | 17217504.11 | 0.0269 | 0.0006 |
| Jupiter | 42432-11-24 06:29 G | 17219357.55 | 17219357.77 | 17219357.99 | 0.0500 | 0.0188 |
| Jupiter | 42438-05-06 04:05 G | 17221346.51 | 17221346.67 | 17221346.84 | 0.0522 | 0.0348 |
| Uranus | 42439-06-02 23:31 G | 17221739.34 | 17221739.48 | 17221739.65 | 0.0134 | 0.0107 |
| Uranus | 42440-06-06 12:00 G | 17222108.76 | 17222109.00 | 17222109.24 | 0.0134 | 0.0026 |
| Uranus | 42441-06-10 14:24 G | 17222477.85 | 17222478.10 | 17222478.36 | 0.0134 | 0.0031 |
| Uranus | 42442-06-15 02:24 G | 17222847.48 | 17222847.60 | 17222847.77 | 0.0134 | 0.0108 |
| Saturn | 42444-05-04 03:22 G | 17223536.55 | 17223536.64 | 17223536.75 | 0.0296 | 0.0266 |
| Jupiter | 42444-11-28 11:46 G | 17223744.82 | 17223744.99 | 17223745.16 | 0.0500 | 0.0338 |
| Jupiter | 42450-05-11 04:19 G | 17225734.47 | 17225734.68 | 17225734.89 | 0.0523 | 0.0230 |
| Jupiter | 42455-11-01 09:50 G | 17227734.91 | 17227734.91 | 17227734.93 | 0.0504 | 0.0503 |
| Saturn | 42456-10-22 08:53 G | 17228090.71 | 17228090.87 | 17228091.04 | 0.0271 | 0.0207 |
| Saturn | 42457-11-03 12:43 G | 17228467.97 | 17228468.03 | 17228468.10 | 0.0267 | 0.0256 |
| Jupiter | 42462-05-15 15:50 G | 17230121.93 | 17230122.16 | 17230122.39 | 0.0525 | 0.0103 |
| Jupiter | 42467-11-06 03:22 G | 17232122.50 | 17232122.64 | 17232122.79 | 0.0503 | 0.0386 |
| Pluto | 42469-07-24 01:55 G | 17232748.40 | 17232748.58 | 17232748.77 | 0.0066 | 0.0046 |
| Pluto | 42470-07-25 20:53 G | 17233115.21 | 17233115.37 | 17233115.55 | 0.0066 | 0.0051 |
| Saturn | 42473-04-28 15:22 G | 17234122.89 | 17234123.14 | 17234123.38 | 0.0293 | 0.0009 |
| Jupiter | 42474-05-20 21:36 G | 17234510.18 | 17234510.40 | 17234510.62 | 0.0525 | 0.0100 |
| Jupiter | 42479-11-10 13:41 G | 17236509.85 | 17236510.07 | 17236510.29 | 0.0502 | 0.0219 |
| Uranus | 42480-12-04 16:05 G | 17236899.97 | 17236900.17 | 17236900.39 | 0.0144 | 0.0082 |
| Uranus | 42481-12-09 11:02 G | 17237269.70 | 17237269.96 | 17237270.22 | 0.0144 | 0.0004 |
| Uranus | 42482-12-14 18:29 G | 17237640.08 | 17237640.27 | 17237640.49 | 0.0144 | 0.0084 |

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| Neptune | 42484-10-20 17:17 G | 17238316.13 | 17238316.22 | 17238316.36 | 0.0088 | 0.0078 |
| Neptune | 42485-10-22 22:34 G | 17238683.28 | 17238683.44 | 17238683.65 | 0.0088 | 0.0061 |
| Jupiter | 42486-05-25 16:48 G | 17238898.00 | 17238898.20 | 17238898.40 | 0.0526 | 0.0287 |
| Neptune | 42486-10-25 15:36 G | 17239050.90 | 17239051.15 | 17239051.40 | 0.0088 | 0.0031 |
| Saturn | 42486-10-30 00:00 G | 17239055.26 | 17239055.50 | 17239055.75 | 0.0269 | 0.0059 |
| Neptune | 42487-10-27 23:46 G | 17239418.25 | 17239418.49 | 17239418.75 | 0.0088 | 0.0013 |
| Neptune | 42488-10-29 12:00 G | 17239785.75 | 17239786.00 | 17239786.28 | 0.0088 | 0.0016 |
| Neptune | 42489-11-01 01:26 G | 17240153.35 | 17240153.56 | 17240153.82 | 0.0088 | 0.0034 |
| Neptune | 42490-11-03 09:36 G | 17240520.71 | 17240520.90 | 17240521.09 | 0.0088 | 0.0061 |
| Neptune | 42491-11-06 02:24 G | 17240888.52 | 17240888.60 | 17240888.73 | 0.0088 | 0.0080 |
| Jupiter | 42491-11-14 23:31 G | 17240897.25 | 17240897.48 | 17240897.71 | 0.0501 | 0.0052 |
| Jupiter | 42498-05-30 14:53 G | 17243285.99 | 17243286.12 | 17243286.26 | 0.0526 | 0.0411 |
| Mars | 42499-03-21 07:26 G | 17243580.68 | 17243580.81 | 17243580.95 | 0.1597 | 0.1001 |
| Saturn | 42502-04-23 12:58 G | 17244708.92 | 17244709.04 | 17244709.18 | 0.0292 | 0.0244 |
| Jupiter | 42503-11-20 19:55 G | 17245285.09 | 17245285.33 | 17245285.56 | 0.0501 | 0.0058 |
| Saturn | 42515-10-25 17:31 G | 17249642.03 | 17249642.23 | 17249642.45 | 0.0270 | 0.0144 |
| Jupiter | 42515-11-25 02:53 G | 17249672.40 | 17249672.62 | 17249672.85 | 0.0500 | 0.0167 |
| Jupiter | 42521-05-06 05:46 G | 17251661.58 | 17251661.74 | 17251661.91 | 0.0522 | 0.0376 |
| Uranus | 42523-06-04 10:34 G | 17252420.76 | 17252420.94 | 17252421.14 | 0.0134 | 0.0090 |
| Uranus | 42524-06-07 23:17 G | 17252790.24 | 17252790.47 | 17252790.72 | 0.0134 | 0.0036 |
| Uranus | 42525-06-12 00:43 G | 17253159.30 | 17253159.53 | 17253159.78 | 0.0134 | 0.0046 |
| Uranus | 42526-06-16 13:55 G | 17253528.93 | 17253529.08 | 17253529.23 | 0.0134 | 0.0106 |
| Jupiter | 42527-11-29 23:02 G | 17254060.29 | 17254060.46 | 17254060.63 | 0.0499 | 0.0326 |
| Saturn | 42532-05-01 00:00 G | 17255674.27 | 17255674.50 | 17255674.75 | 0.0294 | 0.0079 |
| Jupiter | 42533-05-10 21:36 G | 17256049.20 | 17256049.40 | 17256049.60 | 0.0523 | 0.0258 |
| Jupiter | 42539-12-04 02:10 G | 17258447.55 | 17258447.59 | 17258447.64 | 0.0499 | 0.0488 |
| Jupiter | 42545-05-16 04:05 G | 17260437.45 | 17260437.67 | 17260437.90 | 0.0524 | 0.0119 |
| Saturn | 42545-11-01 07:12 G | 17260606.58 | 17260606.80 | 17260607.04 | 0.0268 | 0.0121 |
| Jupiter | 42550-11-06 01:41 G | 17262437.44 | 17262437.57 | 17262437.71 | 0.0503 | 0.0410 |
| Pluto | 42557-01-25 19:12 G | 17264710.17 | 17264710.30 | 17264710.49 | 0.0078 | 0.0062 |

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| Jupiter | 42557-05-20 19:12 G | 17264825.06 | 17264825.30 | 17264825.54 | 0.0525 | 0.0079 |
| Saturn | 42561-04-25 00:58 G | 17266260.36 | 17266260.54 | 17266260.72 | 0.0292 | 0.0181 |
| Jupiter | 42562-11-10 13:26 G | 17266824.87 | 17266825.06 | 17266825.27 | 0.0502 | 0.0239 |
| Uranus | 42564-12-06 04:19 G | 17267581.49 | 17267581.68 | 17267581.89 | 0.0144 | 0.0091 |
| Uranus | 42565-12-10 22:34 G | 17267951.19 | 17267951.44 | 17267951.70 | 0.0144 | 0.0007 |
| Uranus | 42566-12-16 06:14 G | 17268321.57 | 17268321.76 | 17268321.96 | 0.0144 | 0.0091 |
| Neptune | 42568-04-23 01:26 G | 17268815.43 | 17268815.56 | 17268815.72 | 0.0089 | 0.0075 |
| Neptune | 42569-04-25 13:12 G | 17269182.85 | 17269183.05 | 17269183.29 | 0.0089 | 0.0043 |
| Jupiter | 42569-05-25 18:43 G | 17269213.08 | 17269213.28 | 17269213.47 | 0.0525 | 0.0262 |
| Neptune | 42570-04-27 22:05 G | 17269550.18 | 17269550.42 | 17269550.68 | 0.0089 | 0.0027 |
| Neptune | 42571-04-30 14:53 G | 17269917.87 | 17269918.12 | 17269918.37 | 0.0089 | 0.0006 |
| Neptune | 42572-05-01 19:55 G | 17270285.10 | 17270285.33 | 17270285.60 | 0.0089 | 0.0022 |
| Neptune | 42573-05-04 15:07 G | 17270652.93 | 17270653.13 | 17270653.33 | 0.0089 | 0.0054 |
| Neptune | 42574-05-06 19:41 G | 17271020.18 | 17271020.32 | 17271020.50 | 0.0089 | 0.0070 |
| Saturn | 42574-10-27 04:34 G | 17271193.46 | 17271193.69 | 17271193.92 | 0.0270 | 0.0081 |
| Jupiter | 42574-11-15 12:00 G | 17271212.76 | 17271213.00 | 17271213.23 | 0.0502 | 0.0069 |
| Mars | 42578-03-24 01:26 G | 17272437.39 | 17272437.56 | 17272437.74 | 0.1598 | 0.0390 |
| Jupiter | 42581-05-30 15:36 G | 17273601.00 | 17273601.15 | 17273601.32 | 0.0526 | 0.0381 |
| Jupiter | 42586-11-19 18:43 G | 17275600.04 | 17275600.28 | 17275600.52 | 0.0501 | 0.0040 |
| Saturn | 42591-05-03 02:10 G | 17277225.38 | 17277225.59 | 17277225.82 | 0.0294 | 0.0138 |
| Jupiter | 42593-06-04 12:00 G | 17277988.98 | 17277989.00 | 17277989.03 | 0.0527 | 0.0522 |
| Jupiter | 42598-11-24 11:17 G | 17279987.75 | 17279987.97 | 17279988.19 | 0.0500 | 0.0147 |
| Jupiter | 42604-05-06 07:55 G | 17281976.69 | 17281976.83 | 17281976.99 | 0.0522 | 0.0397 |
| Saturn | 42604-11-03 08:10 G | 17282157.67 | 17282157.84 | 17282158.04 | 0.0268 | 0.0180 |
| Uranus | 42607-06-05 21:07 G | 17283102.21 | 17283102.38 | 17283102.55 | 0.0134 | 0.0099 |
| Uranus | 42608-06-09 10:48 G | 17283471.70 | 17283471.95 | 17283472.19 | 0.0134 | 0.0018 |
| Uranus | 42609-06-13 11:31 G | 17283840.74 | 17283840.98 | 17283841.23 | 0.0134 | 0.0037 |
| Uranus | 42610-06-18 01:41 G | 17284210.45 | 17284210.57 | 17284210.70 | 0.0134 | 0.0117 |
| Jupiter | 42610-11-29 18:43 G | 17284375.09 | 17284375.28 | 17284375.48 | 0.0500 | 0.0306 |
| Jupiter | 42616-05-11 11:46 G | 17286364.80 | 17286364.99 | 17286365.18 | 0.0523 | 0.0286 |

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| Saturn | 42620-04-27 07:26 G | 17287811.59 | 17287811.81 | 17287812.03 | 0.0292 | 0.0127 |
| Jupiter | 42622-12-04 11:02 G | 17288762.90 | 17288762.96 | 17288763.02 | 0.0500 | 0.0481 |
| Jupiter | 42628-05-16 01:55 G | 17290752.35 | 17290752.58 | 17290752.81 | 0.0524 | 0.0141 |
| Saturn | 42633-10-29 12:58 G | 17292744.79 | 17292745.04 | 17292745.28 | 0.0269 | 0.0025 |
| Jupiter | 42633-11-06 06:43 G | 17292752.67 | 17292752.78 | 17292752.90 | 0.0504 | 0.0427 |
| Jupiter | 42640-05-21 00:58 G | 17295140.32 | 17295140.54 | 17295140.77 | 0.0525 | 0.0060 |
| Jupiter | 42645-11-11 04:34 G | 17297140.49 | 17297140.69 | 17297140.91 | 0.0503 | 0.0240 |
| Mars | 42648-09-21 00:14 G | 17298185.37 | 17298185.51 | 17298185.66 | 0.1937 | 0.1264 |
| Uranus | 42648-12-07 16:48 G | 17298262.99 | 17298263.20 | 17298263.44 | 0.0144 | 0.0071 |
| Neptune | 42649-10-24 11:31 G | 17298583.84 | 17298583.98 | 17298584.19 | 0.0088 | 0.0067 |
| Uranus | 42649-12-12 11:17 G | 17298632.72 | 17298632.97 | 17298633.23 | 0.0144 | 0.0006 |
| Saturn | 42650-05-05 03:50 G | 17298776.49 | 17298776.66 | 17298776.85 | 0.0295 | 0.0192 |
| Neptune | 42650-10-26 21:50 G | 17298951.22 | 17298951.41 | 17298951.64 | 0.0088 | 0.0049 |
| Uranus | 42650-12-17 18:58 G | 17299003.11 | 17299003.29 | 17299003.49 | 0.0144 | 0.0095 |
| Neptune | 42651-10-29 08:53 G | 17299318.61 | 17299318.87 | 17299319.14 | 0.0088 | 0.0020 |
| Jupiter | 42652-05-26 00:58 G | 17299528.33 | 17299528.54 | 17299528.75 | 0.0525 | 0.0242 |
| Neptune | 42652-10-30 23:31 G | 17299686.23 | 17299686.48 | 17299686.74 | 0.0088 | 0.0003 |
| Neptune | 42653-11-02 05:46 G | 17300053.49 | 17300053.74 | 17300053.99 | 0.0088 | 0.0026 |
| Neptune | 42654-11-04 23:17 G | 17300421.27 | 17300421.47 | 17300421.71 | 0.0088 | 0.0044 |
| Neptune | 42655-11-07 03:50 G | 17300788.54 | 17300788.66 | 17300788.82 | 0.0088 | 0.0074 |
| Jupiter | 42657-11-15 07:41 G | 17301527.59 | 17301527.82 | 17301528.05 | 0.0502 | 0.0090 |
| Saturn | 42662-10-24 02:38 G | 17303331.49 | 17303331.61 | 17303331.74 | 0.0272 | 0.0232 |
| Saturn | 42663-11-05 10:48 G | 17303708.85 | 17303708.95 | 17303709.08 | 0.0268 | 0.0234 |
| Jupiter | 42664-05-30 22:48 G | 17303916.29 | 17303916.45 | 17303916.61 | 0.0526 | 0.0365 |
| Jupiter | 42669-11-20 05:17 G | 17305915.49 | 17305915.72 | 17305915.95 | 0.0501 | 0.0019 |
| Jupiter | 42676-06-05 03:50 G | 17308304.61 | 17308304.66 | 17308304.72 | 0.0526 | 0.0510 |
| Saturn | 42679-04-29 02:53 G | 17309362.38 | 17309362.62 | 17309362.86 | 0.0292 | 0.0078 |
| Jupiter | 42681-11-24 14:24 G | 17310302.86 | 17310303.10 | 17310303.33 | 0.0501 | 0.0135 |
| Jupiter | 42687-05-06 22:19 G | 17312292.31 | 17312292.43 | 17312292.57 | 0.0522 | 0.0421 |
| Uranus | 42691-06-06 07:12 G | 17313783.61 | 17313783.80 | 17313784.01 | 0.0134 | 0.0083 |

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| Uranus | 42692-06-09 21:07 G | 17314153.14 | 17314153.38 | 17314153.63 | 0.0134 | 0.0029 |
| Saturn | 42692-10-30 12:00 G | 17314295.75 | 17314296.00 | 17314296.25 | 0.0269 | 0.0026 |
| Uranus | 42693-06-13 21:36 G | 17314522.17 | 17314522.40 | 17314522.64 | 0.0134 | 0.0053 |
| Jupiter | 42693-11-29 08:24 G | 17314690.67 | 17314690.85 | 17314691.02 | 0.0500 | 0.0309 |
| Uranus | 42694-06-18 12:00 G | 17314891.87 | 17314892.00 | 17314892.14 | 0.0134 | 0.0112 |
| Jupiter | 42699-05-11 10:48 G | 17316679.76 | 17316679.95 | 17316680.14 | 0.0523 | 0.0311 |
| Jupiter | 42705-12-05 00:29 G | 17319078.46 | 17319078.52 | 17319078.60 | 0.0499 | 0.0476 |
| Saturn | 42709-05-07 04:48 G | 17320327.58 | 17320327.70 | 17320327.85 | 0.0295 | 0.0241 |
| Jupiter | 42711-05-17 14:10 G | 17321067.87 | 17321068.09 | 17321068.30 | 0.0524 | 0.0153 |
| Jupiter | 42716-11-06 18:29 G | 17323068.16 | 17323068.27 | 17323068.39 | 0.0503 | 0.0441 |
| Pluto | 42718-07-29 22:05 G | 17323698.19 | 17323698.42 | 17323698.68 | 0.0066 | 0.0016 |
| Saturn | 42721-10-26 01:55 G | 17324882.41 | 17324882.58 | 17324882.76 | 0.0272 | 0.0186 |
| Jupiter | 42723-05-22 14:10 G | 17325455.86 | 17325456.09 | 17325456.33 | 0.0525 | 0.0056 |
| Jupiter | 42728-11-11 02:38 G | 17327455.41 | 17327455.61 | 17327455.81 | 0.0502 | 0.0257 |
| Neptune | 42732-04-24 11:31 G | 17328715.95 | 17328715.98 | 17328716.06 | 0.0089 | 0.0087 |
| Uranus | 42732-12-09 04:48 G | 17328944.49 | 17328944.70 | 17328944.92 | 0.0144 | 0.0080 |
| Neptune | 42733-04-26 19:12 G | 17329083.13 | 17329083.30 | 17329083.53 | 0.0089 | 0.0058 |
| Uranus | 42733-12-13 23:02 G | 17329314.22 | 17329314.46 | 17329314.72 | 0.0144 | 0.0019 |
| Neptune | 42734-04-29 13:12 G | 17329450.84 | 17329451.05 | 17329451.29 | 0.0089 | 0.0039 |
| Uranus | 42734-12-19 06:14 G | 17329684.60 | 17329684.76 | 17329684.96 | 0.0144 | 0.0101 |
| Neptune | 42735-05-01 18:29 G | 17329818.02 | 17329818.27 | 17329818.53 | 0.0089 | 0.0009 |
| Jupiter | 42735-05-27 09:36 G | 17329843.69 | 17329843.90 | 17329844.10 | 0.0525 | 0.0224 |
| Neptune | 42736-05-03 13:12 G | 17330185.80 | 17330186.05 | 17330186.31 | 0.0089 | 0.0012 |
| Neptune | 42737-05-05 18:29 G | 17330553.06 | 17330553.27 | 17330553.51 | 0.0089 | 0.0041 |
| Saturn | 42738-04-30 16:34 G | 17330912.95 | 17330913.19 | 17330913.44 | 0.0292 | 0.0033 |
| Neptune | 42738-05-08 10:48 G | 17330920.78 | 17330920.95 | 17330921.17 | 0.0089 | 0.0061 |
| Neptune | 42739-05-10 20:10 G | 17331288.30 | 17331288.34 | 17331288.38 | 0.0089 | 0.0088 |
| Jupiter | 42740-11-16 01:26 G | 17331843.33 | 17331843.56 | 17331843.79 | 0.0502 | 0.0105 |
| Jupiter | 42747-06-01 13:55 G | 17334231.91 | 17334232.08 | 17334232.26 | 0.0526 | 0.0340 |
| Saturn | 42751-11-02 04:05 G | 17335846.43 | 17335846.67 | 17335846.92 | 0.0269 | 0.0074 |

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| Jupiter | 42752-11-20 12:00 G | 17336230.76 | 17336231.00 | 17336231.24 | 0.0501 | 0.0006 |
| Jupiter | 42759-06-06 03:22 G | 17338619.57 | 17338619.64 | 17338619.73 | 0.0526 | 0.0494 |
| Jupiter | 42764-11-25 05:46 G | 17340618.53 | 17340618.74 | 17340618.96 | 0.0501 | 0.0133 |
| Saturn | 42768-05-07 22:19 G | 17341878.37 | 17341878.43 | 17341878.50 | 0.0295 | 0.0284 |
| Jupiter | 42770-05-07 01:55 G | 17342607.46 | 17342607.58 | 17342607.71 | 0.0522 | 0.0440 |
| Uranus | 42775-06-07 16:34 G | 17344465.02 | 17344465.19 | 17344465.39 | 0.0134 | 0.0092 |
| Uranus | 42776-06-11 06:58 G | 17344834.54 | 17344834.79 | 17344835.04 | 0.0134 | 0.0011 |
| Jupiter | 42776-11-29 17:31 G | 17345006.04 | 17345006.23 | 17345006.43 | 0.0500 | 0.0302 |
| Uranus | 42777-06-15 06:58 G | 17345203.56 | 17345203.79 | 17345204.04 | 0.0134 | 0.0043 |
| Uranus | 42778-06-19 21:36 G | 17345573.32 | 17345573.40 | 17345573.50 | 0.0134 | 0.0125 |
| Saturn | 42780-10-27 02:10 G | 17346433.39 | 17346433.59 | 17346433.80 | 0.0272 | 0.0140 |
| Jupiter | 42782-05-12 05:31 G | 17346995.56 | 17346995.73 | 17346995.91 | 0.0523 | 0.0330 |
| Mars | 42783-03-25 22:34 G | 17347313.25 | 17347313.44 | 17347313.63 | 0.1596 | 0.0046 |
| Jupiter | 42788-12-04 02:24 G | 17349393.52 | 17349393.60 | 17349393.69 | 0.0499 | 0.0464 |
| Jupiter | 42794-05-17 02:53 G | 17351383.39 | 17351383.62 | 17351383.85 | 0.0524 | 0.0162 |
| Saturn | 42797-05-01 11:02 G | 17352463.72 | 17352463.96 | 17352464.20 | 0.0292 | 0.0011 |
| Jupiter | 42799-11-06 22:19 G | 17353383.34 | 17353383.43 | 17353383.54 | 0.0504 | 0.0453 |
| Pluto | 42806-01-30 18:58 G | 17355660.09 | 17355660.29 | 17355660.53 | 0.0078 | 0.0044 |
| Jupiter | 42806-05-21 22:05 G | 17355771.19 | 17355771.42 | 17355771.64 | 0.0524 | 0.0046 |
| Saturn | 42810-11-02 22:05 G | 17357397.21 | 17357397.42 | 17357397.64 | 0.0269 | 0.0117 |
| Jupiter | 42811-11-11 22:48 G | 17357771.25 | 17357771.45 | 17357771.65 | 0.0503 | 0.0265 |
| Neptune | 42813-10-24 20:10 G | 17358484.23 | 17358484.34 | 17358484.46 | 0.0088 | 0.0078 |
| Neptune | 42814-10-27 05:02 G | 17358851.55 | 17358851.71 | 17358851.92 | 0.0088 | 0.0063 |
| Neptune | 42815-10-29 21:50 G | 17359219.18 | 17359219.41 | 17359219.65 | 0.0088 | 0.0031 |
| Neptune | 42816-10-31 03:36 G | 17359586.39 | 17359586.65 | 17359586.91 | 0.0088 | 0.0015 |
| Uranus | 42816-12-09 12:14 G | 17359625.78 | 17359626.01 | 17359626.25 | 0.0144 | 0.0063 |
| Neptune | 42817-11-02 22:19 G | 17359954.17 | 17359954.43 | 17359954.68 | 0.0088 | 0.0016 |
| Uranus | 42817-12-14 07:41 G | 17359995.57 | 17359995.82 | 17359996.07 | 0.0144 | 0.0012 |
| Jupiter | 42818-05-27 00:29 G | 17360159.30 | 17360159.52 | 17360159.73 | 0.0525 | 0.0204 |
| Neptune | 42818-11-05 02:38 G | 17360321.38 | 17360321.61 | 17360321.86 | 0.0088 | 0.0032 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 42818-12-19 14:53 G | 17360365.95 | 17360366.12 | 17360366.30 | 0.0144 | 0.0104 |
| Neptune | 42819-11-07 20:10 G | 17360689.18 | 17360689.34 | 17360689.55 | 0.0088 | 0.0063 |
| Neptune | 42820-11-09 03:22 G | 17361056.55 | 17361056.64 | 17361056.76 | 0.0088 | 0.0079 |
| Jupiter | 42823-11-16 09:22 G | 17362158.66 | 17362158.89 | 17362159.13 | 0.0502 | 0.0116 |
| Saturn | 42826-04-25 11:46 G | 17363049.87 | 17363049.99 | 17363050.10 | 0.0290 | 0.0257 |
| Jupiter | 42830-05-31 17:31 G | 17364547.05 | 17364547.23 | 17364547.41 | 0.0526 | 0.0328 |
| Jupiter | 42835-11-20 23:46 G | 17366546.27 | 17366546.49 | 17366546.72 | 0.0501 | 0.0021 |
| Saturn | 42839-10-28 22:05 G | 17367984.18 | 17367984.42 | 17367984.65 | 0.0272 | 0.0097 |
| Jupiter | 42842-06-06 01:55 G | 17368935.51 | 17368935.58 | 17368935.65 | 0.0527 | 0.0497 |
| Jupiter | 42847-11-25 15:50 G | 17370933.93 | 17370934.16 | 17370934.40 | 0.0500 | 0.0118 |
| Jupiter | 42853-05-06 20:24 G | 17372923.25 | 17372923.35 | 17372923.45 | 0.0522 | 0.0464 |
| Saturn | 42856-05-02 08:10 G | 17374014.61 | 17374014.84 | 17374015.07 | 0.0292 | 0.0056 |
| Uranus | 42859-06-08 01:55 G | 17375146.39 | 17375146.58 | 17375146.80 | 0.0134 | 0.0078 |
| Jupiter | 42859-11-30 01:12 G | 17375321.37 | 17375321.55 | 17375321.74 | 0.0500 | 0.0297 |
| Uranus | 42860-06-11 16:05 G | 17375515.92 | 17375516.17 | 17375516.42 | 0.0134 | 0.0022 |
| Uranus | 42861-06-15 16:05 G | 17375884.96 | 17375885.17 | 17375885.40 | 0.0134 | 0.0060 |
| Mars | 42862-03-27 19:41 G | 17376170.24 | 17376170.32 | 17376170.41 | 0.1597 | 0.1388 |
| Uranus | 42862-06-20 06:29 G | 17376254.66 | 17376254.77 | 17376254.91 | 0.0134 | 0.0117 |
| Jupiter | 42865-05-11 15:50 G | 17377310.99 | 17377311.16 | 17377311.35 | 0.0523 | 0.0343 |
| Saturn | 42869-11-03 20:24 G | 17378948.17 | 17378948.35 | 17378948.55 | 0.0269 | 0.0159 |
| Jupiter | 42871-12-04 23:17 G | 17379709.39 | 17379709.47 | 17379709.57 | 0.0500 | 0.0457 |
| Jupiter | 42877-05-16 09:36 G | 17381698.70 | 17381698.90 | 17381699.12 | 0.0524 | 0.0174 |
| Jupiter | 42882-11-06 19:26 G | 17383699.22 | 17383699.31 | 17383699.41 | 0.0504 | 0.0459 |
| Saturn | 42885-04-26 01:12 G | 17384600.39 | 17384600.55 | 17384600.73 | 0.0290 | 0.0211 |
| Jupiter | 42889-05-21 14:24 G | 17386086.87 | 17386087.10 | 17386087.34 | 0.0525 | 0.0042 |
| Jupiter | 42894-11-11 03:07 G | 17388086.43 | 17388086.63 | 17388086.83 | 0.0502 | 0.0282 |
| Neptune | 42897-04-26 12:14 G | 17388983.88 | 17388984.01 | 17388984.15 | 0.0089 | 0.0076 |
| Neptune | 42898-04-28 16:48 G | 17389350.99 | 17389351.20 | 17389351.43 | 0.0089 | 0.0045 |
| Saturn | 42898-10-29 11:46 G | 17389534.74 | 17389534.99 | 17389535.24 | 0.0272 | 0.0052 |
| Neptune | 42899-05-01 11:17 G | 17389718.72 | 17389718.97 | 17389719.22 | 0.0089 | 0.0027 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 42900-05-03 17:17 G | 17390085.97 | 17390086.22 | 17390086.47 | 0.0089 | 0.0005 |
| Uranus | 42900-12-10 17:31 G | 17390307.02 | 17390307.23 | 17390307.46 | 0.0144 | 0.0077 |
| Neptune | 42901-05-06 08:38 G | 17390453.62 | 17390453.86 | 17390454.13 | 0.0089 | 0.0023 |
| Jupiter | 42901-05-27 06:58 G | 17390474.58 | 17390474.79 | 17390475.01 | 0.0526 | 0.0191 |
| Uranus | 42901-12-15 13:55 G | 17390676.84 | 17390677.08 | 17390677.33 | 0.0144 | 0.0024 |
| Neptune | 42902-05-08 19:12 G | 17390821.12 | 17390821.30 | 17390821.52 | 0.0089 | 0.0054 |
| Uranus | 42902-12-20 19:55 G | 17391047.17 | 17391047.33 | 17391047.53 | 0.0144 | 0.0102 |
| Neptune | 42903-05-11 06:00 G | 17391188.61 | 17391188.75 | 17391188.94 | 0.0089 | 0.0071 |
| Jupiter | 42906-11-16 21:22 G | 17392474.17 | 17392474.39 | 17392474.60 | 0.0501 | 0.0142 |
| Jupiter | 42913-06-01 13:26 G | 17394862.89 | 17394863.06 | 17394863.25 | 0.0526 | 0.0315 |
| Saturn | 42915-05-05 04:05 G | 17395565.44 | 17395565.67 | 17395565.90 | 0.0292 | 0.0102 |
| Jupiter | 42918-11-21 12:58 G | 17396861.80 | 17396862.04 | 17396862.29 | 0.0501 | 0.0040 |
| Jupiter | 42925-06-06 07:41 G | 17399250.74 | 17399250.82 | 17399250.92 | 0.0526 | 0.0486 |
| Saturn | 42928-11-05 18:00 G | 17400499.09 | 17400499.25 | 17400499.41 | 0.0270 | 0.0201 |
| Jupiter | 42930-11-25 23:31 G | 17401249.25 | 17401249.48 | 17401249.70 | 0.0501 | 0.0109 |
| Jupiter | 42936-05-07 03:07 G | 17403238.55 | 17403238.63 | 17403238.72 | 0.0522 | 0.0482 |
| Jupiter | 42942-11-30 21:22 G | 17405637.20 | 17405637.39 | 17405637.58 | 0.0500 | 0.0294 |
| Uranus | 42943-06-09 11:31 G | 17405827.79 | 17405827.98 | 17405828.18 | 0.0134 | 0.0085 |
| Saturn | 42944-04-27 21:22 G | 17406151.21 | 17406151.39 | 17406151.60 | 0.0290 | 0.0162 |
| Uranus | 42944-06-13 00:58 G | 17406197.28 | 17406197.54 | 17406197.80 | 0.0134 | 0.0006 |
| Uranus | 42945-06-17 01:26 G | 17406566.33 | 17406566.56 | 17406566.80 | 0.0134 | 0.0049 |
| Uranus | 42946-06-21 15:36 G | 17406936.10 | 17406936.15 | 17406936.21 | 0.0134 | 0.0131 |
| Jupiter | 42948-05-11 23:31 G | 17407626.32 | 17407626.48 | 17407626.64 | 0.0523 | 0.0363 |
| Jupiter | 42954-12-05 00:29 G | 17410024.41 | 17410024.52 | 17410024.64 | 0.0499 | 0.0437 |
| Saturn | 42957-10-31 04:19 G | 17411085.43 | 17411085.68 | 17411085.92 | 0.0272 | 0.0008 |
| Jupiter | 42960-05-17 02:24 G | 17412014.38 | 17412014.60 | 17412014.83 | 0.0524 | 0.0179 |
| Jupiter | 42965-11-06 22:48 G | 17414014.38 | 17414014.45 | 17414014.53 | 0.0503 | 0.0475 |
| Pluto | 42966-07-31 21:36 G | 17414281.18 | 17414281.40 | 17414281.67 | 0.0066 | 0.0027 |
| Jupiter | 42972-05-21 18:00 G | 17416402.02 | 17416402.25 | 17416402.49 | 0.0525 | 0.0025 |
| Saturn | 42974-05-05 23:02 G | 17417116.26 | 17417116.46 | 17417116.68 | 0.0292 | 0.0159 |

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|---------|---------------------|-------------|-------------|-------------|--------|---------|
| Jupiter | 42977-11-11 16:34 G | 17418402.01 | 17418402.19 | 17418402.37 | 0.0503 | 0.0297 |
| Neptune | 42978-10-27 20:38 G | 17418752.20 | 17418752.36 | 17418752.51 | 0.0088 | 0.0070 |
| Neptune | 42979-10-30 01:26 G | 17419119.35 | 17419119.56 | 17419119.79 | 0.0088 | 0.0048 |
| Neptune | 42980-10-31 20:10 G | 17419487.10 | 17419487.34 | 17419487.61 | 0.0088 | 0.0021 |
| Neptune | 42981-11-03 01:12 G | 17419854.30 | 17419854.55 | 17419854.81 | 0.0088 | 0.0002 |
| Neptune | 42982-11-05 18:00 G | 17420222.00 | 17420222.25 | 17420222.51 | 0.0088 | 0.0026 |
| Neptune | 42983-11-08 02:10 G | 17420589.37 | 17420589.59 | 17420589.80 | 0.0088 | 0.0045 |
| Jupiter | 42984-05-26 23:31 G | 17420790.26 | 17420790.48 | 17420790.69 | 0.0525 | 0.0171 |
| Neptune | 42984-11-09 14:10 G | 17420956.96 | 17420957.09 | 17420957.26 | 0.0088 | 0.0073 |
| Uranus | 42984-12-10 21:36 G | 17420988.17 | 17420988.40 | 17420988.65 | 0.0144 | 0.0063 |
| Uranus | 42985-12-15 19:41 G | 17421358.08 | 17421358.32 | 17421358.57 | 0.0144 | 0.0011 |
| Saturn | 42986-10-26 01:12 G | 17421672.42 | 17421672.55 | 17421672.69 | 0.0274 | 0.0228 |
| Uranus | 42986-12-21 00:43 G | 17421728.37 | 17421728.53 | 17421728.72 | 0.0144 | 0.0107 |
| Saturn | 42987-11-07 11:17 G | 17422049.87 | 17422049.97 | 17422050.08 | 0.0270 | 0.0244 |
| Mars | 42988-03-24 20:10 G | 17422188.30 | 17422188.34 | 17422188.38 | 0.1594 | 0.1549 |
| Jupiter | 42989-11-16 08:53 G | 17422789.64 | 17422789.87 | 17422790.10 | 0.0502 | 0.0164 |
| Jupiter | 42996-05-31 14:24 G | 17425177.91 | 17425178.10 | 17425178.30 | 0.0526 | 0.0295s |

44TH MILLENNIUM CE

This is a list of transits of Moon in the 44th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Jupiter | 43001-11-21 19:26 G | 17427177.08 | 17427177.31 | 17427177.54 | 0.0501 | 0.0056 | | |
| Saturn | 43003-05-01 03:22 G | 17427702.43 | 17427702.64 | 17427702.87 | 0.0290 | 0.0101 | | |

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| Jupiter | 43008-06-06 15:36 G | 17429566.06 | 17429566.15 | 17429566.24 | 0.0526 | 0.0483 |
| Jupiter | 43013-11-26 14:53 G | 17431564.89 | 17431565.12 | 17431565.35 | 0.0500 | 0.0092 |
| Saturn | 43016-11-02 05:31 G | 17432636.49 | 17432636.73 | 17432636.97 | 0.0272 | 0.0040 |
| Jupiter | 43019-05-08 09:50 G | 17433553.88 | 17433553.91 | 17433553.95 | 0.0522 | 0.0515 |
| Jupiter | 43025-11-30 20:38 G | 17435952.17 | 17435952.36 | 17435952.56 | 0.0499 | 0.0274 |
| Uranus | 43027-06-10 20:10 G | 17436509.15 | 17436509.34 | 17436509.56 | 0.0134 | 0.0075 |
| Uranus | 43028-06-14 09:22 G | 17436878.63 | 17436878.89 | 17436879.14 | 0.0134 | 0.0017 |
| Uranus | 43029-06-18 10:34 G | 17437247.73 | 17437247.94 | 17437248.17 | 0.0134 | 0.0065 |
| Uranus | 43030-06-23 00:14 G | 17437617.41 | 17437617.51 | 17437617.63 | 0.0134 | 0.0120 |
| Jupiter | 43031-05-13 12:14 G | 17437941.86 | 17437942.01 | 17437942.17 | 0.0523 | 0.0388 |
| Saturn | 43033-05-07 23:46 G | 17438667.34 | 17438667.49 | 17438667.65 | 0.0292 | 0.0223 |
| Jupiter | 43037-12-05 15:36 G | 17440340.04 | 17440340.15 | 17440340.28 | 0.0499 | 0.0419 |
| Jupiter | 43043-05-18 02:38 G | 17442329.40 | 17442329.61 | 17442329.83 | 0.0524 | 0.0196 |
| Saturn | 43045-10-27 20:24 G | 17443223.17 | 17443223.35 | 17443223.55 | 0.0274 | 0.0178 |
| Jupiter | 43048-11-07 09:22 G | 17444329.85 | 17444329.89 | 17444329.94 | 0.0504 | 0.0491 |
| Pluto | 43054-02-02 20:53 G | 17446243.15 | 17446243.37 | 17446243.63 | 0.0078 | 0.0028 |
| Jupiter | 43055-05-23 05:31 G | 17446717.50 | 17446717.73 | 17446717.96 | 0.0524 | 0.0005 |
| Jupiter | 43060-11-12 01:55 G | 17448717.39 | 17448717.58 | 17448717.77 | 0.0503 | 0.0309 |
| Neptune | 43061-04-27 16:19 G | 17448884.15 | 17448884.18 | 17448884.24 | 0.0089 | 0.0088 |
| Neptune | 43062-04-30 10:05 G | 17449251.74 | 17449251.92 | 17449252.14 | 0.0089 | 0.0056 |
| Saturn | 43062-05-02 12:00 G | 17449253.75 | 17449254.00 | 17449254.24 | 0.0290 | 0.0033 |
| Neptune | 43063-05-02 17:17 G | 17449619.01 | 17449619.22 | 17449619.46 | 0.0089 | 0.0039 |
| Neptune | 43064-05-04 07:41 G | 17449986.56 | 17449986.82 | 17449987.09 | 0.0089 | 0.0008 |
| Neptune | 43065-05-06 18:58 G | 17450354.05 | 17450354.29 | 17450354.54 | 0.0089 | 0.0011 |
| Neptune | 43066-05-09 04:05 G | 17450721.45 | 17450721.67 | 17450721.92 | 0.0089 | 0.0042 |
| Mars | 43067-03-28 21:07 G | 17451045.20 | 17451045.38 | 17451045.56 | 0.1595 | 0.0659 |
| Neptune | 43067-05-11 20:24 G | 17451089.17 | 17451089.35 | 17451089.54 | 0.0089 | 0.0060 |
| Jupiter | 43067-05-27 21:36 G | 17451105.18 | 17451105.40 | 17451105.63 | 0.0525 | 0.0146 |
| Uranus | 43068-12-12 05:02 G | 17451669.50 | 17451669.71 | 17451669.95 | 0.0144 | 0.0076 |
| Uranus | 43069-12-17 04:34 G | 17452039.45 | 17452039.69 | 17452039.94 | 0.0144 | 0.0026 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 43070-12-22 07:55 G | 17452409.66 | 17452409.83 | 17452410.03 | 0.0144 | 0.0101 |
| Jupiter | 43072-11-16 11:46 G | 17453104.77 | 17453104.99 | 17453105.20 | 0.0501 | 0.0190 |
| Saturn | 43075-11-04 10:48 G | 17454187.72 | 17454187.95 | 17454188.18 | 0.0272 | 0.0091 |
| Jupiter | 43079-06-01 21:50 G | 17455493.22 | 17455493.41 | 17455493.60 | 0.0526 | 0.0273 |
| Jupiter | 43084-11-21 08:38 G | 17457492.62 | 17457492.86 | 17457493.09 | 0.0501 | 0.0079 |
| Saturn | 43091-04-26 13:41 G | 17459840.02 | 17459840.07 | 17459840.14 | 0.0287 | 0.0277 |
| Jupiter | 43091-06-06 23:46 G | 17459881.39 | 17459881.49 | 17459881.61 | 0.0527 | 0.0465 |
| Jupiter | 43096-11-25 12:58 G | 17461879.80 | 17461880.04 | 17461880.27 | 0.0500 | 0.0074 |
| Saturn | 43104-10-29 20:24 G | 17464774.14 | 17464774.35 | 17464774.58 | 0.0274 | 0.0125 |
| Jupiter | 43108-12-01 08:53 G | 17466267.68 | 17466267.87 | 17466268.07 | 0.0500 | 0.0263 |
| Uranus | 43111-06-12 05:31 G | 17467190.55 | 17467190.73 | 17467190.95 | 0.0134 | 0.0080 |
| Uranus | 43112-06-15 17:46 G | 17467559.98 | 17467560.24 | 17467560.50 | 0.0134 | 0.0003 |
| Uranus | 43113-06-19 19:55 G | 17467929.11 | 17467929.33 | 17467929.57 | 0.0134 | 0.0054 |
| Jupiter | 43114-05-13 07:26 G | 17468256.68 | 17468256.81 | 17468256.95 | 0.0522 | 0.0418 |
| Jupiter | 43120-12-05 18:14 G | 17470655.12 | 17470655.26 | 17470655.41 | 0.0499 | 0.0397 |
| Saturn | 43121-05-04 19:41 G | 17470805.07 | 17470805.32 | 17470805.57 | 0.0290 | 0.0041 |
| Jupiter | 43126-05-18 11:17 G | 17472644.76 | 17472644.97 | 17472645.18 | 0.0524 | 0.0221 |
| Jupiter | 43131-11-08 15:50 G | 17474645.14 | 17474645.16 | 17474645.18 | 0.0503 | 0.0502 |
| Jupiter | 43132-12-10 06:43 G | 17475042.77 | 17475042.78 | 17475042.81 | 0.0498 | 0.0496 |
| Saturn | 43134-11-06 13:26 G | 17475738.85 | 17475739.06 | 17475739.28 | 0.0272 | 0.0145 |
| Jupiter | 43138-05-23 00:00 G | 17477032.26 | 17477032.50 | 17477032.74 | 0.0525 | 0.0031 |
| Neptune | 43142-10-28 23:02 G | 17478652.37 | 17478652.46 | 17478652.61 | 0.0088 | 0.0078 |
| Neptune | 43143-10-31 18:14 G | 17479020.09 | 17479020.26 | 17479020.46 | 0.0088 | 0.0063 |
| Jupiter | 43143-11-13 02:38 G | 17479032.44 | 17479032.61 | 17479032.78 | 0.0502 | 0.0332 |
| Neptune | 43144-11-02 00:00 G | 17479387.27 | 17479387.50 | 17479387.75 | 0.0088 | 0.0031 |
| Neptune | 43145-11-04 16:19 G | 17479754.93 | 17479755.18 | 17479755.46 | 0.0088 | 0.0016 |
| Neptune | 43146-11-07 02:10 G | 17480122.35 | 17480122.59 | 17480122.84 | 0.0088 | 0.0017 |
| Neptune | 43147-11-09 13:41 G | 17480489.82 | 17480490.07 | 17480490.32 | 0.0088 | 0.0032 |
| Neptune | 43148-11-11 03:07 G | 17480857.48 | 17480857.63 | 17480857.82 | 0.0088 | 0.0065 |
| Neptune | 43149-11-13 09:50 G | 17481224.81 | 17481224.91 | 17481225.03 | 0.0088 | 0.0079 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 43150-04-29 06:29 G | 17481391.61 | 17481391.77 | 17481391.94 | 0.0287 | 0.0204 |
| Jupiter | 43150-05-28 02:10 G | 17481420.38 | 17481420.59 | 17481420.81 | 0.0525 | 0.0110 |
| Uranus | 43152-12-13 14:38 G | 17482350.87 | 17482351.11 | 17482351.36 | 0.0144 | 0.0057 |
| Uranus | 43153-12-18 15:36 G | 17482720.91 | 17482721.15 | 17482721.40 | 0.0144 | 0.0016 |
| Uranus | 43154-12-23 18:00 G | 17483091.09 | 17483091.25 | 17483091.42 | 0.0144 | 0.0113 |
| Jupiter | 43155-11-17 20:53 G | 17483420.16 | 17483420.37 | 17483420.59 | 0.0502 | 0.0214 |
| Jupiter | 43162-06-02 01:41 G | 17485808.36 | 17485808.57 | 17485808.78 | 0.0526 | 0.0244 |
| Saturn | 43163-11-01 06:29 G | 17486325.54 | 17486325.77 | 17486326.00 | 0.0274 | 0.0065 |
| Jupiter | 43167-11-22 02:38 G | 17487807.38 | 17487807.61 | 17487807.84 | 0.0501 | 0.0103 |
| Jupiter | 43174-06-06 16:05 G | 17490196.05 | 17490196.17 | 17490196.30 | 0.0526 | 0.0435 |
| Jupiter | 43179-11-26 23:31 G | 17492195.25 | 17492195.48 | 17492195.71 | 0.0501 | 0.0062 |
| Saturn | 43180-05-06 08:38 G | 17492356.64 | 17492356.86 | 17492357.09 | 0.0291 | 0.0124 |
| Jupiter | 43191-12-01 07:55 G | 17496582.62 | 17496582.83 | 17496583.05 | 0.0500 | 0.0241 |
| Saturn | 43192-10-26 06:29 G | 17496912.77 | 17496912.77 | 17496912.78 | 0.0276 | 0.0276 |
| Saturn | 43193-11-07 18:14 G | 17497290.10 | 17497290.26 | 17497290.43 | 0.0271 | 0.0204 |
| Uranus | 43195-06-12 15:22 G | 17497871.93 | 17497872.14 | 17497872.35 | 0.0134 | 0.0071 |
| Uranus | 43196-06-16 02:10 G | 17498241.33 | 17498241.59 | 17498241.85 | 0.0134 | 0.0011 |
| Jupiter | 43197-05-12 12:00 G | 17498571.90 | 17498572.00 | 17498572.12 | 0.0523 | 0.0454 |
| Uranus | 43197-06-20 05:46 G | 17498610.54 | 17498610.74 | 17498610.96 | 0.0134 | 0.0070 |
| Uranus | 43198-06-24 17:46 G | 17498980.16 | 17498980.24 | 17498980.34 | 0.0134 | 0.0125 |
| Jupiter | 43203-12-05 21:36 G | 17500970.26 | 17500970.40 | 17500970.56 | 0.0499 | 0.0374 |
| Saturn | 43209-05-01 02:53 G | 17502943.42 | 17502943.62 | 17502943.85 | 0.0288 | 0.0124 |
| Jupiter | 43209-05-17 02:24 G | 17502959.40 | 17502959.60 | 17502959.81 | 0.0524 | 0.0259 |
| Pluto | 43214-08-04 01:41 G | 17504864.54 | 17504864.57 | 17504864.67 | 0.0066 | 0.0064 |
| Pluto | 43215-08-05 09:36 G | 17505230.68 | 17505230.90 | 17505231.16 | 0.0066 | 0.0026 |
| Jupiter | 43215-12-10 09:22 G | 17505357.81 | 17505357.89 | 17505357.97 | 0.0499 | 0.0470 |
| Jupiter | 43221-05-22 05:02 G | 17507347.49 | 17507347.71 | 17507347.94 | 0.0524 | 0.0061 |
| Saturn | 43222-11-02 21:50 G | 17507877.17 | 17507877.41 | 17507877.65 | 0.0273 | 0.0004 |
| Neptune | 43226-04-30 17:02 G | 17509152.09 | 17509152.21 | 17509152.36 | 0.0089 | 0.0075 |
| Jupiter | 43226-11-12 07:12 G | 17509347.64 | 17509347.80 | 17509347.98 | 0.0503 | 0.0358 |

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| Neptune | 43227-05-03 06:00 G | 17509519.53 | 17509519.75 | 17509519.98 | 0.0089 | 0.0046 |
| Neptune | 43228-05-04 18:43 G | 17509887.05 | 17509887.28 | 17509887.52 | 0.0089 | 0.0025 |
| Neptune | 43229-05-07 03:07 G | 17510254.37 | 17510254.63 | 17510254.90 | 0.0089 | 0.0004 |
| Neptune | 43230-05-09 19:55 G | 17510622.10 | 17510622.33 | 17510622.59 | 0.0089 | 0.0025 |
| Neptune | 43231-05-12 00:58 G | 17510989.35 | 17510989.54 | 17510989.77 | 0.0089 | 0.0054 |
| Neptune | 43232-05-13 19:41 G | 17511357.20 | 17511357.32 | 17511357.50 | 0.0089 | 0.0073 |
| Jupiter | 43233-05-26 23:46 G | 17511735.25 | 17511735.49 | 17511735.73 | 0.0525 | 0.0070 |
| Uranus | 43235-12-10 02:53 G | 17512662.61 | 17512662.62 | 17512662.67 | 0.0144 | 0.0143 |
| Uranus | 43236-12-14 01:55 G | 17513032.36 | 17513032.58 | 17513032.83 | 0.0144 | 0.0066 |
| Uranus | 43237-12-19 04:19 G | 17513402.45 | 17513402.68 | 17513402.92 | 0.0144 | 0.0035 |
| Jupiter | 43238-11-16 13:55 G | 17513734.88 | 17513735.08 | 17513735.29 | 0.0502 | 0.0241 |
| Uranus | 43238-12-24 05:02 G | 17513772.55 | 17513772.71 | 17513772.89 | 0.0144 | 0.0108 |
| Saturn | 43239-05-09 04:34 G | 17513908.53 | 17513908.69 | 17513908.87 | 0.0291 | 0.0208 |
| Jupiter | 43245-05-31 16:05 G | 17516122.97 | 17516123.17 | 17516123.38 | 0.0526 | 0.0208 |
| Jupiter | 43250-11-21 12:14 G | 17518122.79 | 17518123.01 | 17518123.23 | 0.0501 | 0.0128 |
| Saturn | 43251-10-28 15:50 G | 17518464.00 | 17518464.16 | 17518464.34 | 0.0275 | 0.0204 |
| Saturn | 43252-11-09 06:14 G | 17518841.76 | 17518841.76 | 17518841.77 | 0.0271 | 0.0271 |
| Jupiter | 43257-06-05 18:29 G | 17520511.13 | 17520511.27 | 17520511.43 | 0.0527 | 0.0402 |
| Jupiter | 43262-11-25 20:10 G | 17522510.10 | 17522510.34 | 17522510.58 | 0.0500 | 0.0041 |
| Saturn | 43268-05-02 22:34 G | 17524495.19 | 17524495.44 | 17524495.69 | 0.0289 | 0.0041 |
| Mars | 43272-03-28 14:24 G | 17525920.94 | 17525921.10 | 17525921.27 | 0.1594 | 0.0581 |
| Jupiter | 43274-11-30 08:10 G | 17526897.64 | 17526897.84 | 17526898.04 | 0.0500 | 0.0218 |
| Uranus | 43279-06-13 00:43 G | 17528553.34 | 17528553.53 | 17528553.75 | 0.0134 | 0.0073 |
| Jupiter | 43280-05-11 05:02 G | 17528886.63 | 17528886.71 | 17528886.81 | 0.0522 | 0.0481 |
| Uranus | 43280-06-16 10:05 G | 17528922.66 | 17528922.92 | 17528923.19 | 0.0134 | 0.0002 |
| Uranus | 43281-06-20 15:07 G | 17529291.92 | 17529292.13 | 17529292.36 | 0.0134 | 0.0060 |
| Saturn | 43281-11-04 13:26 G | 17529428.82 | 17529429.06 | 17529429.31 | 0.0273 | 0.0073 |
| Jupiter | 43286-12-04 20:53 G | 17531285.20 | 17531285.37 | 17531285.55 | 0.0500 | 0.0346 |
| Jupiter | 43292-05-16 05:17 G | 17533274.54 | 17533274.72 | 17533274.91 | 0.0523 | 0.0289 |
| Mars | 43295-09-27 10:34 G | 17534503.72 | 17534503.94 | 17534504.16 | 0.1939 | 0.0382 |

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| Saturn | 43297-04-27 06:29 G | 17535081.73 | 17535081.77 | 17535081.84 | 0.0287 | 0.0278 |
| Jupiter | 43298-12-09 06:00 G | 17535672.66 | 17535672.75 | 17535672.85 | 0.0499 | 0.0449 |
| Pluto | 43303-02-07 18:14 G | 17537193.12 | 17537193.26 | 17537193.42 | 0.0078 | 0.0063 |
| Jupiter | 43304-05-21 22:19 G | 17537662.19 | 17537662.43 | 17537662.67 | 0.0524 | 0.0098 |
| Neptune | 43307-10-31 23:17 G | 17538920.33 | 17538920.47 | 17538920.63 | 0.0088 | 0.0071 |
| Neptune | 43308-11-02 14:10 G | 17539287.88 | 17539288.09 | 17539288.33 | 0.0088 | 0.0048 |
| Neptune | 43309-11-05 01:12 G | 17539655.30 | 17539655.55 | 17539655.79 | 0.0088 | 0.0022 |
| Jupiter | 43309-11-12 00:58 G | 17539662.40 | 17539662.54 | 17539662.70 | 0.0503 | 0.0388 |
| Saturn | 43310-10-31 06:14 G | 17540015.55 | 17540015.76 | 17540015.98 | 0.0274 | 0.0132 |
| Neptune | 43310-11-07 11:17 G | 17540022.70 | 17540022.97 | 17540023.24 | 0.0088 | 0.0002 |
| Neptune | 43311-11-10 02:38 G | 17540390.38 | 17540390.61 | 17540390.86 | 0.0088 | 0.0026 |
| Neptune | 43312-11-11 08:38 G | 17540757.65 | 17540757.86 | 17540758.09 | 0.0088 | 0.0048 |
| Neptune | 43313-11-14 03:07 G | 17541125.50 | 17541125.63 | 17541125.79 | 0.0088 | 0.0073 |
| Jupiter | 43316-05-26 14:10 G | 17542049.87 | 17542050.09 | 17542050.31 | 0.0525 | 0.0031 |
| Uranus | 43319-12-11 13:26 G | 17543344.06 | 17543344.06 | 17543344.08 | 0.0144 | 0.0144 |
| Uranus | 43320-12-15 11:17 G | 17543713.73 | 17543713.97 | 17543714.22 | 0.0144 | 0.0049 |
| Jupiter | 43321-11-16 23:02 G | 17544050.26 | 17544050.46 | 17544050.65 | 0.0502 | 0.0271 |
| Uranus | 43321-12-20 15:07 G | 17544083.89 | 17544084.13 | 17544084.38 | 0.0144 | 0.0025 |
| Uranus | 43322-12-25 14:38 G | 17544454.00 | 17544454.11 | 17544454.26 | 0.0144 | 0.0124 |
| Saturn | 43327-05-06 13:26 G | 17546046.82 | 17546047.06 | 17546047.31 | 0.0289 | 0.0046 |
| Jupiter | 43328-05-31 18:14 G | 17546438.04 | 17546438.26 | 17546438.49 | 0.0526 | 0.0173 |
| Jupiter | 43333-11-21 02:53 G | 17548437.40 | 17548437.62 | 17548437.86 | 0.0502 | 0.0159 |
| Jupiter | 43340-06-05 10:19 G | 17550825.77 | 17550825.93 | 17550826.10 | 0.0526 | 0.0374 |
| Saturn | 43340-11-07 01:41 G | 17550980.36 | 17550980.57 | 17550980.79 | 0.0272 | 0.0143 |
| Jupiter | 43345-11-25 18:58 G | 17552825.06 | 17552825.29 | 17552825.51 | 0.0501 | 0.0018 |
| Mars | 43351-04-01 06:43 G | 17554777.73 | 17554777.78 | 17554777.84 | 0.1595 | 0.1501 |
| Saturn | 43356-04-30 04:34 G | 17556633.53 | 17556633.69 | 17556633.88 | 0.0288 | 0.0197 |
| Jupiter | 43357-11-30 08:24 G | 17557212.62 | 17557212.85 | 17557213.07 | 0.0500 | 0.0192 |
| Uranus | 43362-06-10 02:38 G | 17558865.60 | 17558865.61 | 17558865.66 | 0.0134 | 0.0133 |
| Jupiter | 43363-05-12 06:58 G | 17559201.76 | 17559201.79 | 17559201.83 | 0.0522 | 0.0515 |

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| Uranus | 43363-06-14 09:50 G | 17559234.71 | 17559234.91 | 17559235.13 | 0.0134 | 0.0068 |
| Uranus | 43364-06-17 18:00 G | 17559603.99 | 17559604.25 | 17559604.52 | 0.0134 | 0.0005 |
| Uranus | 43365-06-22 00:43 G | 17559973.33 | 17559973.53 | 17559973.74 | 0.0134 | 0.0073 |
| Uranus | 43366-06-26 09:22 G | 17560342.84 | 17560342.89 | 17560342.98 | 0.0134 | 0.0130 |
| Saturn | 43369-11-02 02:24 G | 17561567.37 | 17561567.60 | 17561567.83 | 0.0274 | 0.0060 |
| Jupiter | 43369-12-04 19:26 G | 17561600.14 | 17561600.31 | 17561600.49 | 0.0500 | 0.0322 |
| Jupiter | 43375-05-16 19:55 G | 17563589.15 | 17563589.33 | 17563589.53 | 0.0523 | 0.0322 |
| Jupiter | 43381-12-09 13:41 G | 17565987.95 | 17565988.07 | 17565988.20 | 0.0499 | 0.0423 |
| Saturn | 43386-05-08 04:48 G | 17567598.49 | 17567598.70 | 17567598.93 | 0.0290 | 0.0131 |
| Jupiter | 43387-05-21 17:02 G | 17567977.00 | 17567977.21 | 17567977.43 | 0.0524 | 0.0131 |
| Neptune | 43390-05-01 05:17 G | 17569052.71 | 17569052.72 | 17569052.80 | 0.0089 | 0.0089 |
| Neptune | 43391-05-03 19:26 G | 17569420.13 | 17569420.31 | 17569420.52 | 0.0089 | 0.0056 |
| Neptune | 43392-05-05 02:24 G | 17569787.38 | 17569787.60 | 17569787.85 | 0.0089 | 0.0039 |
| Jupiter | 43392-11-11 04:48 G | 17569977.58 | 17569977.70 | 17569977.83 | 0.0503 | 0.0420 |
| Neptune | 43393-05-07 20:10 G | 17570155.09 | 17570155.34 | 17570155.60 | 0.0089 | 0.0006 |
| Neptune | 43394-05-10 00:43 G | 17570522.29 | 17570522.53 | 17570522.79 | 0.0089 | 0.0010 |
| Neptune | 43395-05-12 18:58 G | 17570890.09 | 17570890.29 | 17570890.54 | 0.0089 | 0.0044 |
| Neptune | 43396-05-14 00:29 G | 17571257.36 | 17571257.52 | 17571257.73 | 0.0089 | 0.0061 |
| Saturn | 43398-10-28 00:00 G | 17572154.46 | 17572154.50 | 17572154.56 | 0.0276 | 0.0270 |
| Jupiter | 43399-05-26 21:07 G | 17572365.14 | 17572365.38 | 17572365.61 | 0.0525 | 0.0011 |
| Saturn | 43399-11-09 12:43 G | 17572531.88 | 17572532.03 | 17572532.19 | 0.0271 | 0.0212 |
| Uranus | 43403-12-12 21:36 G | 17574025.35 | 17574025.40 | 17574025.48 | 0.0144 | 0.0139 |
| Jupiter | 43404-11-16 12:14 G | 17574364.82 | 17574365.01 | 17574365.20 | 0.0503 | 0.0306 |
| Uranus | 43404-12-16 18:14 G | 17574395.04 | 17574395.26 | 17574395.52 | 0.0144 | 0.0059 |
| Uranus | 43405-12-22 00:00 G | 17574765.26 | 17574765.50 | 17574765.74 | 0.0144 | 0.0041 |
| Uranus | 43406-12-26 21:36 G | 17575135.25 | 17575135.40 | 17575135.58 | 0.0144 | 0.0113 |
| Jupiter | 43411-06-01 10:05 G | 17576752.70 | 17576752.92 | 17576753.14 | 0.0525 | 0.0143 |
| Saturn | 43415-05-03 21:07 G | 17578185.15 | 17578185.38 | 17578185.60 | 0.0288 | 0.0119 |
| Jupiter | 43416-11-21 06:14 G | 17578752.56 | 17578752.76 | 17578752.98 | 0.0502 | 0.0187 |
| Jupiter | 43423-06-06 13:12 G | 17581140.89 | 17581141.05 | 17581141.23 | 0.0526 | 0.0348 |

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| Saturn | 43428-11-04 20:10 G | 17583119.09 | 17583119.34 | 17583119.58 | 0.0273 | 0.0010 |
| Jupiter | 43428-11-25 21:22 G | 17583140.15 | 17583140.39 | 17583140.64 | 0.0501 | 0.0013 |
| Jupiter | 43440-11-30 08:53 G | 17587527.66 | 17587527.87 | 17587528.09 | 0.0500 | 0.0172 |
| Saturn | 43445-05-10 21:22 G | 17589150.23 | 17589150.39 | 17589150.56 | 0.0291 | 0.0205 |
| Uranus | 43447-06-15 19:26 G | 17589916.11 | 17589916.31 | 17589916.53 | 0.0134 | 0.0066 |
| Uranus | 43448-06-19 01:26 G | 17590285.30 | 17590285.56 | 17590285.83 | 0.0134 | 0.0005 |
| Uranus | 43449-06-23 09:22 G | 17590654.69 | 17590654.89 | 17590655.12 | 0.0134 | 0.0065 |
| Jupiter | 43452-12-04 23:02 G | 17591915.27 | 17591915.46 | 17591915.66 | 0.0500 | 0.0288 |
| Saturn | 43457-10-30 10:48 G | 17593705.79 | 17593705.95 | 17593706.13 | 0.0275 | 0.0200 |
| Jupiter | 43458-05-17 00:00 G | 17593904.34 | 17593904.50 | 17593904.68 | 0.0523 | 0.0339 |
| Pluto | 43463-08-08 14:24 G | 17595813.88 | 17595814.10 | 17595814.37 | 0.0066 | 0.0024 |
| Jupiter | 43464-12-09 04:19 G | 17596302.55 | 17596302.68 | 17596302.83 | 0.0499 | 0.0397 |
| Jupiter | 43470-05-22 00:00 G | 17598292.27 | 17598292.50 | 17598292.73 | 0.0523 | 0.0155 |
| Neptune | 43471-11-01 11:31 G | 17598820.88 | 17598820.98 | 17598821.13 | 0.0088 | 0.0078 |
| Neptune | 43472-11-03 00:00 G | 17599188.35 | 17599188.50 | 17599188.70 | 0.0088 | 0.0063 |
| Neptune | 43473-11-05 09:22 G | 17599555.65 | 17599555.89 | 17599556.16 | 0.0088 | 0.0030 |
| Saturn | 43474-05-05 04:19 G | 17599736.44 | 17599736.68 | 17599736.93 | 0.0289 | 0.0050 |
| Neptune | 43474-11-08 02:24 G | 17599923.35 | 17599923.60 | 17599923.85 | 0.0088 | 0.0015 |
| Neptune | 43475-11-10 07:26 G | 17600290.56 | 17600290.81 | 17600291.07 | 0.0088 | 0.0018 |
| Jupiter | 43475-11-11 23:02 G | 17600292.36 | 17600292.46 | 17600292.58 | 0.0504 | 0.0449 |
| Neptune | 43476-11-12 02:10 G | 17600658.36 | 17600658.59 | 17600658.84 | 0.0088 | 0.0033 |
| Mars | 43477-03-29 17:17 G | 17600796.11 | 17600796.22 | 17600796.33 | 0.1593 | 0.1319 |
| Neptune | 43477-11-14 07:12 G | 17601025.64 | 17601025.80 | 17601025.97 | 0.0088 | 0.0066 |
| Neptune | 43478-11-17 00:14 G | 17601393.42 | 17601393.51 | 17601393.63 | 0.0088 | 0.0081 |
| Jupiter | 43482-05-26 13:12 G | 17602679.82 | 17602680.05 | 17602680.28 | 0.0524 | 0.0026 |
| Saturn | 43487-11-07 05:46 G | 17604670.50 | 17604670.74 | 17604670.99 | 0.0272 | 0.0074 |
| Jupiter | 43487-11-16 20:24 G | 17604680.19 | 17604680.35 | 17604680.52 | 0.0503 | 0.0338 |
| Uranus | 43487-12-13 03:07 G | 17604706.59 | 17604706.63 | 17604706.71 | 0.0144 | 0.0141 |
| Uranus | 43488-12-16 23:02 G | 17605076.22 | 17605076.46 | 17605076.71 | 0.0144 | 0.0048 |
| Uranus | 43489-12-22 06:00 G | 17605446.50 | 17605446.75 | 17605446.99 | 0.0144 | 0.0027 |

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| Uranus | 43490-12-27 02:24 G | 17605816.49 | 17605816.60 | 17605816.73 | 0.0144 | 0.0127 |
| Jupiter | 43494-05-31 15:07 G | 17607067.91 | 17607068.13 | 17607068.36 | 0.0525 | 0.0116 |
| Jupiter | 43499-11-21 10:48 G | 17609067.73 | 17609067.95 | 17609068.18 | 0.0502 | 0.0206 |
| Saturn | 43504-05-13 09:22 G | 17610701.82 | 17610701.89 | 17610701.98 | 0.0291 | 0.0273 |
| Jupiter | 43506-06-06 08:24 G | 17611455.67 | 17611455.85 | 17611456.04 | 0.0526 | 0.0327 |
| Jupiter | 43511-11-26 19:12 G | 17613455.07 | 17613455.30 | 17613455.53 | 0.0501 | 0.0034 |
| Saturn | 43516-11-01 21:36 G | 17615257.20 | 17615257.40 | 17615257.62 | 0.0275 | 0.0136 |
| Jupiter | 43523-12-01 13:41 G | 17617842.84 | 17617843.07 | 17617843.30 | 0.0501 | 0.0147 |
| Uranus | 43530-06-12 18:29 G | 17620228.21 | 17620228.27 | 17620228.37 | 0.0134 | 0.0127 |
| Uranus | 43531-06-17 04:34 G | 17620597.49 | 17620597.69 | 17620597.91 | 0.0134 | 0.0066 |
| Uranus | 43532-06-20 09:22 G | 17620966.63 | 17620966.89 | 17620967.16 | 0.0134 | 0.0003 |
| Saturn | 43533-05-07 05:31 G | 17621287.49 | 17621287.73 | 17621287.98 | 0.0289 | 0.0012 |
| Uranus | 43533-06-24 18:58 G | 17621336.10 | 17621336.29 | 17621336.50 | 0.0134 | 0.0076 |
| Uranus | 43534-06-29 00:14 G | 17621705.51 | 17621705.51 | 17621705.55 | 0.0134 | 0.0134 |
| Jupiter | 43535-12-05 20:38 G | 17622230.16 | 17622230.36 | 17622230.56 | 0.0500 | 0.0265 |
| Jupiter | 43541-05-17 06:43 G | 17624219.60 | 17624219.78 | 17624219.95 | 0.0522 | 0.0358 |
| Saturn | 43546-11-09 08:38 G | 17626221.64 | 17626221.86 | 17626222.09 | 0.0272 | 0.0131 |
| Jupiter | 43547-12-10 19:26 G | 17626618.16 | 17626618.31 | 17626618.46 | 0.0500 | 0.0382 |
| Pluto | 43551-02-10 06:29 G | 17627775.55 | 17627775.77 | 17627776.03 | 0.0078 | 0.0022 |
| Jupiter | 43553-05-21 18:58 G | 17628607.08 | 17628607.29 | 17628607.50 | 0.0523 | 0.0183 |
| Neptune | 43555-05-05 01:26 G | 17629320.43 | 17629320.56 | 17629320.73 | 0.0089 | 0.0072 |
| Mars | 43556-04-01 23:02 G | 17629653.27 | 17629653.46 | 17629653.66 | 0.1594 | 0.0225 |
| Neptune | 43556-05-06 19:55 G | 17629688.12 | 17629688.33 | 17629688.56 | 0.0089 | 0.0047 |
| Neptune | 43557-05-09 00:43 G | 17630055.28 | 17630055.53 | 17630055.78 | 0.0089 | 0.0024 |
| Neptune | 43558-05-11 18:58 G | 17630423.03 | 17630423.29 | 17630423.55 | 0.0089 | 0.0004 |
| Jupiter | 43558-11-12 11:17 G | 17630607.90 | 17630607.97 | 17630608.05 | 0.0504 | 0.0472 |
| Neptune | 43559-05-14 01:26 G | 17630790.33 | 17630790.56 | 17630790.80 | 0.0089 | 0.0026 |
| Neptune | 43560-05-15 15:50 G | 17631157.98 | 17631158.16 | 17631158.40 | 0.0089 | 0.0055 |
| Neptune | 43561-05-18 02:38 G | 17631525.49 | 17631525.61 | 17631525.75 | 0.0089 | 0.0076 |
| Saturn | 43562-05-01 18:00 G | 17631874.13 | 17631874.25 | 17631874.38 | 0.0287 | 0.0243 |

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| Jupiter | 43565-05-27 00:29 G | 17632995.29 | 17632995.52 | 17632995.75 | 0.0524 | 0.0053 |
| Jupiter | 43570-11-16 21:36 G | 17634995.24 | 17634995.40 | 17634995.57 | 0.0503 | 0.0364 |
| Uranus | 43571-12-14 09:36 G | 17635387.87 | 17635387.90 | 17635387.98 | 0.0144 | 0.0141 |
| Uranus | 43572-12-18 04:48 G | 17635757.48 | 17635757.70 | 17635757.95 | 0.0144 | 0.0056 |
| Uranus | 43573-12-23 12:43 G | 17636127.79 | 17636128.03 | 17636128.27 | 0.0144 | 0.0041 |
| Uranus | 43574-12-28 07:26 G | 17636497.67 | 17636497.81 | 17636497.99 | 0.0144 | 0.0113 |
| Saturn | 43575-11-04 07:26 G | 17636808.58 | 17636808.81 | 17636809.04 | 0.0275 | 0.0078 |
| Jupiter | 43577-05-31 18:29 G | 17637383.04 | 17637383.27 | 17637383.50 | 0.0525 | 0.0103 |
| Jupiter | 43582-11-21 11:17 G | 17639382.77 | 17639382.97 | 17639383.17 | 0.0502 | 0.0231 |
| Jupiter | 43589-06-05 20:24 G | 17641771.18 | 17641771.35 | 17641771.53 | 0.0525 | 0.0318 |
| Saturn | 43592-05-08 06:58 G | 17642838.56 | 17642838.79 | 17642839.02 | 0.0289 | 0.0064 |
| Jupiter | 43594-11-26 06:43 G | 17643770.54 | 17643770.78 | 17643771.02 | 0.0502 | 0.0043 |
| Jupiter | 43601-06-10 17:31 G | 17646159.16 | 17646159.23 | 17646159.30 | 0.0526 | 0.0501 |
| Saturn | 43605-11-10 09:22 G | 17647772.72 | 17647772.89 | 17647773.08 | 0.0272 | 0.0183 |
| Jupiter | 43606-11-30 16:05 G | 17648157.94 | 17648158.17 | 17648158.39 | 0.0501 | 0.0132 |
| Uranus | 43615-06-17 13:55 G | 17651278.87 | 17651279.08 | 17651279.31 | 0.0134 | 0.0061 |
| Uranus | 43616-06-20 17:02 G | 17651647.95 | 17651648.21 | 17651648.47 | 0.0134 | 0.0006 |
| Uranus | 43617-06-25 03:50 G | 17652017.46 | 17652017.66 | 17652017.88 | 0.0134 | 0.0070 |
| Jupiter | 43618-12-05 14:24 G | 17652545.91 | 17652546.10 | 17652546.31 | 0.0500 | 0.0250 |
| Saturn | 43621-05-02 14:24 G | 17653424.92 | 17653425.10 | 17653425.29 | 0.0287 | 0.0193 |
| Jupiter | 43624-05-16 07:41 G | 17654534.67 | 17654534.82 | 17654534.98 | 0.0522 | 0.0380 |
| Jupiter | 43630-12-09 17:31 G | 17656933.06 | 17656933.23 | 17656933.40 | 0.0500 | 0.0362 |
| Saturn | 43634-11-05 09:36 G | 17658359.65 | 17658359.90 | 17658360.15 | 0.0275 | 0.0028 |
| Jupiter | 43636-05-21 13:55 G | 17658922.87 | 17658923.08 | 17658923.30 | 0.0523 | 0.0202 |
| Neptune | 43636-11-03 07:12 G | 17659088.67 | 17659088.80 | 17659088.97 | 0.0088 | 0.0072 |
| Neptune | 43637-11-06 00:43 G | 17659456.33 | 17659456.53 | 17659456.77 | 0.0088 | 0.0046 |
| Neptune | 43638-11-08 05:31 G | 17659823.50 | 17659823.73 | 17659824.00 | 0.0088 | 0.0024 |
| Neptune | 43639-11-11 00:58 G | 17660191.27 | 17660191.54 | 17660191.80 | 0.0088 | 0.0003 |
| Neptune | 43640-11-12 06:00 G | 17660558.52 | 17660558.75 | 17660559.01 | 0.0088 | 0.0026 |
| Jupiter | 43641-11-11 14:38 G | 17660923.07 | 17660923.11 | 17660923.16 | 0.0504 | 0.0494 |

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| Neptune | 43641-11-14 22:48 G | 17660926.25 | 17660926.45 | 17660926.69 | 0.0088 | 0.0051 |
| Neptune | 43642-11-17 07:41 G | 17661293.71 | 17661293.82 | 17661293.97 | 0.0088 | 0.0074 |
| Jupiter | 43648-05-26 05:17 G | 17663310.48 | 17663310.72 | 17663310.95 | 0.0524 | 0.0077 |
| Saturn | 43651-05-10 07:41 G | 17664389.60 | 17664389.82 | 17664390.04 | 0.0289 | 0.0112 |
| Jupiter | 43653-11-16 05:17 G | 17665310.58 | 17665310.72 | 17665310.87 | 0.0503 | 0.0387 |
| Uranus | 43655-12-14 18:43 G | 17666069.21 | 17666069.28 | 17666069.38 | 0.0144 | 0.0136 |
| Uranus | 43656-12-18 13:12 G | 17666438.82 | 17666439.05 | 17666439.30 | 0.0144 | 0.0048 |
| Uranus | 43657-12-23 21:22 G | 17666809.14 | 17666809.39 | 17666809.64 | 0.0144 | 0.0030 |
| Uranus | 43658-12-28 15:07 G | 17667179.04 | 17667179.13 | 17667179.27 | 0.0144 | 0.0130 |
| Jupiter | 43660-05-31 06:58 G | 17667698.57 | 17667698.79 | 17667699.01 | 0.0525 | 0.0089 |
| Saturn | 43663-10-30 13:26 G | 17668945.98 | 17668946.06 | 17668946.15 | 0.0277 | 0.0258 |
| Saturn | 43664-11-11 11:46 G | 17669323.87 | 17669323.99 | 17669324.13 | 0.0272 | 0.0226 |
| Jupiter | 43665-11-21 02:24 G | 17669698.39 | 17669698.60 | 17669698.81 | 0.0503 | 0.0241 |
| Jupiter | 43672-06-05 01:55 G | 17672086.38 | 17672086.58 | 17672086.77 | 0.0525 | 0.0300 |
| Jupiter | 43677-11-25 12:00 G | 17674085.77 | 17674086.00 | 17674086.24 | 0.0502 | 0.0048 |
| Saturn | 43680-05-03 04:05 G | 17674975.46 | 17674975.67 | 17674975.89 | 0.0287 | 0.0148 |
| Jupiter | 43684-06-10 00:00 G | 17676474.43 | 17676474.50 | 17676474.59 | 0.0526 | 0.0488 |
| Jupiter | 43689-11-30 06:43 G | 17678473.56 | 17678473.78 | 17678474.01 | 0.0501 | 0.0114 |
| Saturn | 43693-11-06 01:26 G | 17679910.31 | 17679910.56 | 17679910.82 | 0.0275 | 0.0012 |
| Uranus | 43698-06-13 10:34 G | 17681590.85 | 17681590.94 | 17681591.06 | 0.0134 | 0.0122 |
| Uranus | 43699-06-17 22:48 G | 17681960.25 | 17681960.45 | 17681960.69 | 0.0134 | 0.0064 |
| Uranus | 43700-06-22 01:12 G | 17682329.29 | 17682329.55 | 17682329.81 | 0.0134 | 0.0007 |
| Uranus | 43701-06-26 13:26 G | 17682698.87 | 17682699.06 | 17682699.27 | 0.0134 | 0.0079 |
| Jupiter | 43701-12-05 14:38 G | 17682860.90 | 17682861.11 | 17682861.33 | 0.0500 | 0.0230 |
| Jupiter | 43707-05-18 03:50 G | 17684850.51 | 17684850.66 | 17684850.82 | 0.0522 | 0.0390 |
| Saturn | 43710-05-12 01:55 G | 17685940.38 | 17685940.58 | 17685940.80 | 0.0289 | 0.0154 |
| Pluto | 43711-08-11 07:55 G | 17686396.78 | 17686396.83 | 17686396.88 | 0.0066 | 0.0064 |
| Pluto | 43712-08-11 23:46 G | 17686763.27 | 17686763.49 | 17686763.76 | 0.0066 | 0.0025 |
| Jupiter | 43713-12-10 09:22 G | 17687248.73 | 17687248.89 | 17687249.05 | 0.0500 | 0.0356 |
| Neptune | 43719-05-05 20:10 G | 17689221.32 | 17689221.34 | 17689221.37 | 0.0089 | 0.0089 |

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| Jupiter | 43719-05-22 17:46 G | 17689238.04 | 17689238.24 | 17689238.46 | 0.0523 | 0.0224 |
| Neptune | 43720-05-07 00:43 G | 17689588.34 | 17689588.53 | 17689588.74 | 0.0089 | 0.0055 |
| Neptune | 43721-05-09 18:14 G | 17689956.03 | 17689956.26 | 17689956.50 | 0.0089 | 0.0039 |
| Neptune | 43722-05-12 01:26 G | 17690323.31 | 17690323.56 | 17690323.81 | 0.0089 | 0.0005 |
| Saturn | 43722-11-01 12:58 G | 17690496.90 | 17690497.04 | 17690497.19 | 0.0277 | 0.0221 |
| Neptune | 43723-05-14 14:53 G | 17690690.86 | 17690691.12 | 17690691.39 | 0.0089 | 0.0011 |
| Saturn | 43723-11-14 10:05 G | 17690874.87 | 17690874.92 | 17690874.99 | 0.0272 | 0.0262 |
| Neptune | 43724-05-16 02:53 G | 17691058.41 | 17691058.62 | 17691058.84 | 0.0089 | 0.0045 |
| Neptune | 43725-05-18 11:46 G | 17691425.81 | 17691425.99 | 17691426.20 | 0.0089 | 0.0061 |
| Jupiter | 43731-05-27 18:29 G | 17693626.05 | 17693626.27 | 17693626.49 | 0.0524 | 0.0102 |
| Jupiter | 43736-11-16 22:34 G | 17695626.31 | 17695626.44 | 17695626.60 | 0.0504 | 0.0403 |
| Saturn | 43739-05-05 21:22 G | 17696526.17 | 17696526.39 | 17696526.61 | 0.0287 | 0.0109 |
| Uranus | 43739-12-16 06:29 G | 17696750.69 | 17696750.77 | 17696750.87 | 0.0144 | 0.0134 |
| Uranus | 43740-12-20 00:58 G | 17697120.30 | 17697120.54 | 17697120.79 | 0.0144 | 0.0048 |
| Uranus | 43741-12-25 09:07 G | 17697490.65 | 17697490.88 | 17697491.13 | 0.0144 | 0.0047 |
| Uranus | 43742-12-30 02:24 G | 17697860.47 | 17697860.60 | 17697860.76 | 0.0144 | 0.0119 |
| Jupiter | 43743-06-01 16:05 G | 17698013.93 | 17698014.17 | 17698014.40 | 0.0525 | 0.0077 |
| Jupiter | 43748-11-21 05:31 G | 17700013.53 | 17700013.73 | 17700013.93 | 0.0502 | 0.0256 |
| Saturn | 43752-11-07 17:02 G | 17701460.97 | 17701461.21 | 17701461.46 | 0.0275 | 0.0046 |
| Jupiter | 43755-06-06 14:38 G | 17702401.93 | 17702402.11 | 17702402.30 | 0.0526 | 0.0296 |
| Jupiter | 43760-11-26 04:19 G | 17704401.45 | 17704401.68 | 17704401.91 | 0.0501 | 0.0058 |
| Mars | 43761-04-02 01:41 G | 17704528.40 | 17704528.57 | 17704528.74 | 0.1594 | 0.0509 |
| Jupiter | 43767-06-11 19:41 G | 17706790.22 | 17706790.32 | 17706790.43 | 0.0526 | 0.0468 |
| Saturn | 43769-05-12 13:55 G | 17707490.90 | 17707491.08 | 17707491.28 | 0.0289 | 0.0189 |
| Jupiter | 43772-11-30 12:14 G | 17708788.78 | 17708789.01 | 17708789.25 | 0.0501 | 0.0100 |
| Saturn | 43781-11-02 08:10 G | 17712047.66 | 17712047.84 | 17712048.03 | 0.0277 | 0.0185 |
| Uranus | 43782-06-14 19:26 G | 17712272.29 | 17712272.31 | 17712272.39 | 0.0134 | 0.0131 |
| Uranus | 43783-06-19 08:53 G | 17712641.65 | 17712641.87 | 17712642.10 | 0.0134 | 0.0054 |
| Uranus | 43784-06-22 09:36 G | 17713010.65 | 17713010.90 | 17713011.16 | 0.0134 | 0.0009 |
| Jupiter | 43784-12-05 08:24 G | 17713176.65 | 17713176.85 | 17713177.06 | 0.0501 | 0.0216 |

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| Uranus | 43785-06-26 22:34 G | 17713380.25 | 17713380.44 | 17713380.66 | 0.0134 | 0.0077 |
| Jupiter | 43790-05-17 06:14 G | 17715165.62 | 17715165.76 | 17715165.91 | 0.0522 | 0.0406 |
| Jupiter | 43796-12-09 23:17 G | 17717564.30 | 17717564.47 | 17717564.65 | 0.0500 | 0.0351 |
| Saturn | 43798-05-06 19:26 G | 17718077.08 | 17718077.31 | 17718077.54 | 0.0287 | 0.0072 |
| Pluto | 43800-02-14 05:46 G | 17718725.61 | 17718725.74 | 17718725.91 | 0.0078 | 0.0062 |
| Neptune | 43800-11-04 23:31 G | 17718989.40 | 17718989.48 | 17718989.63 | 0.0088 | 0.0079 |
| Neptune | 43801-11-07 04:34 G | 17719356.52 | 17719356.69 | 17719356.88 | 0.0088 | 0.0063 |
| Jupiter | 43802-05-23 09:36 G | 17719553.70 | 17719553.90 | 17719554.10 | 0.0523 | 0.0249 |
| Neptune | 43802-11-09 23:31 G | 17719724.23 | 17719724.48 | 17719724.73 | 0.0088 | 0.0029 |
| Neptune | 43803-11-12 05:17 G | 17720091.48 | 17720091.72 | 17720091.98 | 0.0088 | 0.0014 |
| Neptune | 43804-11-13 20:38 G | 17720459.11 | 17720459.36 | 17720459.64 | 0.0088 | 0.0019 |
| Neptune | 43805-11-16 06:29 G | 17720826.55 | 17720826.77 | 17720827.02 | 0.0088 | 0.0035 |
| Neptune | 43806-11-18 16:48 G | 17721194.05 | 17721194.20 | 17721194.40 | 0.0088 | 0.0067 |
| Neptune | 43807-11-21 08:10 G | 17721561.77 | 17721561.84 | 17721561.93 | 0.0088 | 0.0083 |
| Saturn | 43811-11-10 13:41 G | 17723011.85 | 17723012.07 | 17723012.30 | 0.0275 | 0.0080 |
| Jupiter | 43814-05-28 06:00 G | 17723941.51 | 17723941.75 | 17723941.98 | 0.0524 | 0.0119 |
| Jupiter | 43819-11-18 02:24 G | 17725941.49 | 17725941.60 | 17725941.73 | 0.0503 | 0.0427 |
| Uranus | 43823-12-17 18:29 G | 17727432.14 | 17727432.27 | 17727432.41 | 0.0144 | 0.0124 |
| Uranus | 43824-12-21 12:58 G | 17727801.80 | 17727802.04 | 17727802.29 | 0.0144 | 0.0039 |
| Uranus | 43825-12-26 20:53 G | 17728172.13 | 17728172.37 | 17728172.62 | 0.0144 | 0.0041 |
| Jupiter | 43826-06-02 04:05 G | 17728329.45 | 17728329.67 | 17728329.89 | 0.0525 | 0.0067 |
| Uranus | 43826-12-31 14:24 G | 17728542.05 | 17728542.10 | 17728542.17 | 0.0144 | 0.0139 |
| Saturn | 43828-05-14 05:46 G | 17729041.60 | 17729041.74 | 17729041.90 | 0.0289 | 0.0226 |
| Jupiter | 43831-11-23 00:43 G | 17730329.34 | 17730329.53 | 17730329.73 | 0.0502 | 0.0264 |
| Jupiter | 43838-06-07 07:12 G | 17732717.60 | 17732717.80 | 17732718.00 | 0.0525 | 0.0288 |
| Mars | 43840-04-04 22:34 G | 17733385.29 | 17733385.44 | 17733385.60 | 0.1594 | 0.0923 |
| Saturn | 43840-11-03 21:36 G | 17733598.20 | 17733598.40 | 17733598.63 | 0.0277 | 0.0151 |
| Jupiter | 43843-11-27 10:05 G | 17734716.68 | 17734716.92 | 17734717.16 | 0.0502 | 0.0070 |
| Jupiter | 43850-06-11 20:38 G | 17737105.25 | 17737105.36 | 17737105.49 | 0.0526 | 0.0447 |
| Jupiter | 43855-12-02 06:14 G | 17739104.54 | 17739104.76 | 17739104.98 | 0.0501 | 0.0085 |

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| Saturn | 43857-05-08 15:07 G | 17739627.89 | 17739628.13 | 17739628.38 | 0.0287 | 0.0032 |
| Uranus | 43866-06-16 04:19 G | 17742953.55 | 17742953.68 | 17742953.81 | 0.0134 | 0.0115 |
| Uranus | 43867-06-20 17:31 G | 17743323.02 | 17743323.23 | 17743323.47 | 0.0134 | 0.0060 |
| Jupiter | 43867-12-06 18:14 G | 17743492.03 | 17743492.26 | 17743492.48 | 0.0500 | 0.0190 |
| Uranus | 43868-06-23 18:14 G | 17743692.00 | 17743692.26 | 17743692.51 | 0.0134 | 0.0014 |
| Uranus | 43869-06-28 07:55 G | 17744061.64 | 17744061.83 | 17744062.04 | 0.0134 | 0.0082 |
| Saturn | 43870-11-11 10:48 G | 17744562.73 | 17744562.95 | 17744563.18 | 0.0275 | 0.0115 |
| Jupiter | 43873-05-17 22:48 G | 17745481.32 | 17745481.45 | 17745481.58 | 0.0523 | 0.0423 |
| Jupiter | 43879-12-11 04:34 G | 17747879.53 | 17747879.69 | 17747879.86 | 0.0499 | 0.0338 |
| Neptune | 43884-05-07 16:48 G | 17749489.04 | 17749489.20 | 17749489.36 | 0.0089 | 0.0071 |
| Neptune | 43885-05-10 01:12 G | 17749856.35 | 17749856.55 | 17749856.77 | 0.0089 | 0.0047 |
| Jupiter | 43885-05-22 18:58 G | 17749869.08 | 17749869.29 | 17749869.49 | 0.0523 | 0.0271 |
| Saturn | 43886-05-02 15:22 G | 17750214.10 | 17750214.14 | 17750214.20 | 0.0284 | 0.0276 |
| Neptune | 43886-05-12 14:10 G | 17750223.84 | 17750224.09 | 17750224.35 | 0.0089 | 0.0022 |
| Neptune | 43887-05-15 03:22 G | 17750591.40 | 17750591.64 | 17750591.89 | 0.0089 | 0.0004 |
| Saturn | 43887-05-16 07:12 G | 17750592.72 | 17750592.80 | 17750592.89 | 0.0289 | 0.0268 |
| Neptune | 43888-05-16 10:34 G | 17750958.71 | 17750958.94 | 17750959.21 | 0.0089 | 0.0030 |
| Neptune | 43889-05-19 03:50 G | 17751326.48 | 17751326.66 | 17751326.87 | 0.0089 | 0.0055 |
| Neptune | 43890-05-21 08:38 G | 17751693.77 | 17751693.86 | 17751694.00 | 0.0089 | 0.0080 |
| Jupiter | 43897-05-27 16:05 G | 17754256.95 | 17754257.17 | 17754257.38 | 0.0524 | 0.0137 |
| Saturn | 43899-11-05 12:43 G | 17755148.81 | 17755149.03 | 17755149.26 | 0.0277 | 0.0115 |
| Jupiter | 43902-11-18 20:10 G | 17756257.24 | 17756257.34 | 17756257.45 | 0.0503 | 0.0448 |
| Uranus | 43907-12-19 04:34 G | 17758113.57 | 17758113.69 | 17758113.82 | 0.0144 | 0.0126 |
| Uranus | 43908-12-22 23:46 G | 17758483.25 | 17758483.49 | 17758483.74 | 0.0144 | 0.0037 |
| Jupiter | 43909-06-02 16:05 G | 17758644.94 | 17758645.17 | 17758645.41 | 0.0525 | 0.0056 |
| Uranus | 43909-12-28 07:41 G | 17758853.60 | 17758853.82 | 17758854.07 | 0.0144 | 0.0057 |
| Uranus | 43911-01-02 01:12 G | 17759223.46 | 17759223.55 | 17759223.68 | 0.0144 | 0.0129 |
| Jupiter | 43914-11-23 06:00 G | 17760644.55 | 17760644.75 | 17760644.95 | 0.0503 | 0.0276 |
| Saturn | 43916-05-10 09:07 G | 17761178.62 | 17761178.88 | 17761179.13 | 0.0287 | 0.0013 |
| Jupiter | 43921-06-07 07:55 G | 17763032.64 | 17763032.83 | 17763033.03 | 0.0525 | 0.0273 |

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| Jupiter | 43926-11-28 00:58 G | 17765032.31 | 17765032.54 | 17765032.76 | 0.0501 | 0.0088 |
| Saturn | 43929-11-13 04:48 G | 17766113.49 | 17766113.70 | 17766113.91 | 0.0275 | 0.0156 |
| Jupiter | 43933-06-12 14:10 G | 17767420.96 | 17767421.09 | 17767421.22 | 0.0527 | 0.0428 |
| Jupiter | 43938-12-02 14:38 G | 17769419.87 | 17769420.11 | 17769420.35 | 0.0500 | 0.0058 |
| Mars | 43942-10-04 10:34 G | 17770821.77 | 17770821.94 | 17770822.12 | 0.1939 | 0.0653 |
| Saturn | 43945-05-04 20:10 G | 17771765.20 | 17771765.34 | 17771765.48 | 0.0284 | 0.0227 |
| Uranus | 43950-06-17 13:12 G | 17773634.99 | 17773635.05 | 17773635.16 | 0.0134 | 0.0126 |
| Jupiter | 43950-12-07 00:14 G | 17773807.30 | 17773807.51 | 17773807.73 | 0.0500 | 0.0170 |
| Uranus | 43951-06-22 03:07 G | 17774004.40 | 17774004.63 | 17774004.87 | 0.0134 | 0.0047 |
| Uranus | 43952-06-25 02:53 G | 17774373.37 | 17774373.62 | 17774373.88 | 0.0134 | 0.0012 |
| Uranus | 43953-06-29 17:02 G | 17774743.01 | 17774743.21 | 17774743.41 | 0.0134 | 0.0083 |
| Jupiter | 43956-05-18 05:46 G | 17775796.61 | 17775796.74 | 17775796.87 | 0.0522 | 0.0437 |
| Saturn | 43958-11-07 12:43 G | 17776699.81 | 17776700.03 | 17776700.27 | 0.0277 | 0.0071 |
| Pluto | 43960-08-14 21:36 G | 17777346.20 | 17777346.40 | 17777346.65 | 0.0066 | 0.0028 |
| Jupiter | 43962-12-11 20:38 G | 17778195.18 | 17778195.36 | 17778195.54 | 0.0500 | 0.0326 |
| Neptune | 43965-11-07 21:07 G | 17779257.25 | 17779257.38 | 17779257.55 | 0.0088 | 0.0073 |
| Neptune | 43966-11-10 03:50 G | 17779624.46 | 17779624.66 | 17779624.90 | 0.0088 | 0.0044 |
| Neptune | 43967-11-12 18:29 G | 17779992.02 | 17779992.27 | 17779992.54 | 0.0088 | 0.0024 |
| Jupiter | 43968-05-23 00:43 G | 17780184.35 | 17780184.53 | 17780184.71 | 0.0523 | 0.0299 |
| Neptune | 43968-11-14 06:14 G | 17780359.51 | 17780359.76 | 17780360.01 | 0.0088 | 0.0005 |
| Neptune | 43969-11-16 15:36 G | 17780726.90 | 17780727.15 | 17780727.42 | 0.0088 | 0.0025 |
| Neptune | 43970-11-19 07:41 G | 17781094.63 | 17781094.82 | 17781095.03 | 0.0088 | 0.0054 |
| Neptune | 43971-11-21 12:43 G | 17781461.92 | 17781462.03 | 17781462.21 | 0.0088 | 0.0074 |
| Saturn | 43975-05-12 10:19 G | 17782729.70 | 17782729.93 | 17782730.17 | 0.0287 | 0.0069 |
| Jupiter | 43980-05-28 01:12 G | 17784572.32 | 17784572.55 | 17784572.78 | 0.0524 | 0.0161 |
| Jupiter | 43985-11-17 23:02 G | 17786572.37 | 17786572.46 | 17786572.55 | 0.0503 | 0.0467 |
| Saturn | 43988-11-13 23:46 G | 17787664.33 | 17787664.49 | 17787664.67 | 0.0275 | 0.0200 |
| Uranus | 43991-12-19 11:02 G | 17788794.83 | 17788794.96 | 17788795.14 | 0.0144 | 0.0117 |
| Jupiter | 43992-06-01 15:07 G | 17788959.90 | 17788960.13 | 17788960.36 | 0.0525 | 0.0036 |
| Uranus | 43992-12-23 07:26 G | 17789164.58 | 17789164.81 | 17789165.06 | 0.0144 | 0.0035 |

Uranus 43993-12-28 14:53 G 17789534.88 17789535.12 17789535.37 0.0144 0.0049

Jupiter 43997-11-22 19:12 G 17790960.11 17790960.30 17790960.48 0.0502 0.0292

45TH MILLENNIUM CE

This is a list of transits of Moon in the 45th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 44004-05-06 04:05 | G | 17793316.48 | 17793316.67 | 17793316.87 | 0.0284 | 0.0167 | |
| Jupiter | 44004-06-06 21:36 | G | 17793348.21 | 17793348.40 | 17793348.61 | 0.0526 | 0.0254 | |
| Jupiter | 44009-11-27 06:29 | G | 17795347.53 | 17795347.77 | 17795348.01 | 0.0502 | 0.0104 | |
| Jupiter | 44016-06-11 14:10 | G | 17797735.94 | 17797736.09 | 17797736.24 | 0.0526 | 0.0405 | |
| Saturn | 44017-11-08 19:12 | G | 17798251.05 | 17798251.30 | 17798251.54 | 0.0277 | 0.0022 | |
| Jupiter | 44021-12-01 17:46 | G | 17799735.01 | 17799735.24 | 17799735.47 | 0.0501 | 0.0033 | |
| Jupiter | 44033-12-06 14:10 | G | 17804122.87 | 17804123.09 | 17804123.32 | 0.0500 | 0.0149 | |
| Saturn | 44034-05-13 20:53 | G | 17804281.17 | 17804281.37 | 17804281.58 | 0.0287 | 0.0134 | |
| Uranus | 44034-06-17 21:50 | G | 17804316.29 | 17804316.41 | 17804316.57 | 0.0134 | 0.0110 | |
| Uranus | 44035-06-22 11:46 | G | 17804685.76 | 17804685.99 | 17804686.22 | 0.0134 | 0.0055 | |
| Uranus | 44036-06-25 11:31 | G | 17805054.73 | 17805054.98 | 17805055.23 | 0.0134 | 0.0021 | |
| Uranus | 44037-06-30 01:41 | G | 17805424.38 | 17805424.57 | 17805424.77 | 0.0134 | 0.0085 | |
| Jupiter | 44039-05-18 08:38 | G | 17806111.77 | 17806111.86 | 17806111.96 | 0.0522 | 0.0469 | |
| Mars | 44045-04-05 20:24 | G | 17808261.18 | 17808261.35 | 17808261.52 | 0.1594 | 0.0516 | |
| Jupiter | 44045-12-10 19:26 | G | 17808510.13 | 17808510.31 | 17808510.50 | 0.0499 | 0.0303 | |
| Saturn | 44046-11-03 02:38 | G | 17808837.51 | 17808837.61 | 17808837.74 | 0.0279 | 0.0248 | |
| Saturn | 44047-11-16 03:36 | G | 17809215.57 | 17809215.65 | 17809215.75 | 0.0274 | 0.0254 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 44048-02-16 13:55 G | 17809307.83 | 17809308.08 | 17809308.32 | 0.0078 | 0.0026 |
| Neptune | 44048-05-08 00:43 G | 17809389.53 | 17809389.53 | 17809389.57 | 0.0089 | 0.0089 |
| Neptune | 44049-05-10 11:31 G | 17809756.79 | 17809756.98 | 17809757.20 | 0.0089 | 0.0055 |
| Neptune | 44050-05-13 02:10 G | 17810124.37 | 17810124.59 | 17810124.82 | 0.0089 | 0.0039 |
| Neptune | 44051-05-15 09:07 G | 17810491.62 | 17810491.88 | 17810492.14 | 0.0089 | 0.0004 |
| Jupiter | 44051-05-23 05:02 G | 17810499.53 | 17810499.71 | 17810499.89 | 0.0523 | 0.0334 |
| Neptune | 44052-05-17 03:22 G | 17810859.39 | 17810859.64 | 17810859.89 | 0.0089 | 0.0012 |
| Neptune | 44053-05-19 07:41 G | 17811226.62 | 17811226.82 | 17811227.06 | 0.0089 | 0.0047 |
| Neptune | 44054-05-22 02:24 G | 17811594.42 | 17811594.60 | 17811594.80 | 0.0089 | 0.0062 |
| Jupiter | 44057-12-15 15:50 G | 17812898.13 | 17812898.16 | 17812898.18 | 0.0499 | 0.0495 |
| Saturn | 44063-05-08 12:29 G | 17814867.79 | 17814868.02 | 17814868.26 | 0.0284 | 0.0102 |
| Jupiter | 44063-05-27 21:36 G | 17814887.19 | 17814887.40 | 17814887.61 | 0.0524 | 0.0193 |
| Jupiter | 44068-11-17 07:26 G | 17816887.78 | 17816887.81 | 17816887.87 | 0.0503 | 0.0493 |
| Jupiter | 44075-06-02 02:53 G | 17819275.39 | 17819275.62 | 17819275.85 | 0.0525 | 0.0020 |
| Uranus | 44075-12-19 16:34 G | 17819476.07 | 17819476.19 | 17819476.33 | 0.0145 | 0.0125 |
| Saturn | 44076-11-10 01:26 G | 17819802.31 | 17819802.56 | 17819802.81 | 0.0277 | 0.0034 |
| Uranus | 44076-12-23 14:24 G | 17819845.86 | 17819846.10 | 17819846.34 | 0.0144 | 0.0032 |
| Uranus | 44077-12-28 20:53 G | 17820216.14 | 17820216.37 | 17820216.62 | 0.0144 | 0.0057 |
| Uranus | 44079-01-02 15:50 G | 17820586.08 | 17820586.16 | 17820586.27 | 0.0144 | 0.0133 |
| Jupiter | 44080-11-21 19:55 G | 17821275.14 | 17821275.33 | 17821275.52 | 0.0503 | 0.0311 |
| Jupiter | 44087-06-06 15:22 G | 17823662.93 | 17823663.14 | 17823663.36 | 0.0525 | 0.0221 |
| Jupiter | 44092-11-26 08:24 G | 17825662.63 | 17825662.85 | 17825663.07 | 0.0502 | 0.0126 |
| Saturn | 44093-05-15 14:10 G | 17825832.94 | 17825833.09 | 17825833.27 | 0.0288 | 0.0208 |
| Jupiter | 44099-06-11 16:48 G | 17828051.05 | 17828051.20 | 17828051.37 | 0.0526 | 0.0373 |
| Jupiter | 44104-12-02 04:48 G | 17830050.47 | 17830050.70 | 17830050.94 | 0.0501 | 0.0012 |
| Saturn | 44105-11-05 12:29 G | 17830388.86 | 17830389.02 | 17830389.21 | 0.0279 | 0.0188 |
| Jupiter | 44111-06-17 13:12 G | 17832438.99 | 17832439.05 | 17832439.12 | 0.0527 | 0.0506 |
| Jupiter | 44116-12-06 10:34 G | 17834437.72 | 17834437.94 | 17834438.17 | 0.0500 | 0.0125 |
| Uranus | 44118-06-19 07:55 G | 17834997.74 | 17834997.83 | 17834997.95 | 0.0134 | 0.0121 |
| Uranus | 44119-06-23 21:22 G | 17835367.15 | 17835367.39 | 17835367.64 | 0.0134 | 0.0041 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 44120-06-26 21:22 G | 17835736.14 | 17835736.39 | 17835736.64 | 0.0134 | 0.0016 |
| Uranus | 44121-07-01 10:48 G | 17836105.78 | 17836105.95 | 17836106.15 | 0.0134 | 0.0089 |
| Saturn | 44122-05-10 23:17 G | 17836419.22 | 17836419.47 | 17836419.72 | 0.0285 | 0.0031 |
| Jupiter | 44122-05-18 09:50 G | 17836426.85 | 17836426.91 | 17836426.98 | 0.0522 | 0.0500 |
| Jupiter | 44128-12-11 04:48 G | 17838825.51 | 17838825.70 | 17838825.89 | 0.0500 | 0.0286 |
| Neptune | 44129-11-08 02:38 G | 17839157.53 | 17839157.61 | 17839157.73 | 0.0088 | 0.0080 |
| Neptune | 44130-11-10 15:36 G | 17839524.98 | 17839525.15 | 17839525.37 | 0.0088 | 0.0062 |
| Neptune | 44131-11-13 04:34 G | 17839892.47 | 17839892.69 | 17839892.95 | 0.0088 | 0.0031 |
| Neptune | 44132-11-14 12:43 G | 17840259.77 | 17840260.03 | 17840260.30 | 0.0088 | 0.0012 |
| Neptune | 44133-11-17 05:31 G | 17840627.49 | 17840627.73 | 17840627.99 | 0.0088 | 0.0019 |
| Jupiter | 44134-05-23 02:24 G | 17840814.44 | 17840814.60 | 17840814.76 | 0.0523 | 0.0368 |
| Neptune | 44134-11-19 10:34 G | 17840994.72 | 17840994.94 | 17840995.19 | 0.0088 | 0.0036 |
| Saturn | 44135-11-13 07:26 G | 17841353.57 | 17841353.81 | 17841354.05 | 0.0276 | 0.0097 |
| Neptune | 44135-11-22 05:02 G | 17841362.57 | 17841362.71 | 17841362.90 | 0.0088 | 0.0068 |
| Neptune | 44136-11-23 10:34 G | 17841729.87 | 17841729.94 | 17841730.01 | 0.0088 | 0.0084 |
| Jupiter | 44140-12-15 10:34 G | 17843212.88 | 17843212.94 | 17843213.03 | 0.0499 | 0.0474 |
| Jupiter | 44146-05-28 04:05 G | 17845202.47 | 17845202.67 | 17845202.88 | 0.0523 | 0.0226 |
| Saturn | 44151-05-05 22:48 G | 17847006.36 | 17847006.45 | 17847006.55 | 0.0283 | 0.0257 |
| Saturn | 44152-05-18 08:10 G | 17847384.83 | 17847384.84 | 17847384.88 | 0.0288 | 0.0287 |
| Jupiter | 44158-06-01 16:19 G | 17849589.94 | 17849590.18 | 17849590.41 | 0.0524 | 0.0023 |
| Uranus | 44159-12-20 22:48 G | 17850157.29 | 17850157.45 | 17850157.62 | 0.0145 | 0.0113 |
| Uranus | 44160-12-24 21:36 G | 17850527.17 | 17850527.40 | 17850527.65 | 0.0144 | 0.0036 |
| Uranus | 44161-12-30 02:53 G | 17850897.39 | 17850897.62 | 17850897.88 | 0.0144 | 0.0053 |
| Jupiter | 44163-11-22 21:22 G | 17851590.23 | 17851590.39 | 17851590.57 | 0.0503 | 0.0332 |
| Saturn | 44164-11-07 06:14 G | 17851940.55 | 17851940.76 | 17851940.98 | 0.0278 | 0.0118 |
| Jupiter | 44170-06-06 16:05 G | 17853977.96 | 17853978.17 | 17853978.38 | 0.0526 | 0.0183 |
| Jupiter | 44175-11-27 17:02 G | 17855977.98 | 17855978.21 | 17855978.44 | 0.0502 | 0.0146 |
| Saturn | 44181-05-12 18:00 G | 17857971.02 | 17857971.25 | 17857971.49 | 0.0285 | 0.0049 |
| Jupiter | 44182-06-11 12:58 G | 17858365.85 | 17858366.04 | 17858366.23 | 0.0526 | 0.0331 |
| Jupiter | 44187-12-01 20:10 G | 17860365.10 | 17860365.34 | 17860365.57 | 0.0501 | 0.0021 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 44194-06-16 09:22 G | 17862753.80 | 17862753.89 | 17862753.99 | 0.0527 | 0.0478 |
| Saturn | 44194-11-14 19:26 G | 17862905.13 | 17862905.31 | 17862905.52 | 0.0276 | 0.0168 |
| Jupiter | 44199-12-06 16:19 G | 17864752.95 | 17864753.18 | 17864753.41 | 0.0500 | 0.0098 |
| Uranus | 44202-06-20 16:48 G | 17865679.06 | 17865679.20 | 17865679.36 | 0.0134 | 0.0105 |
| Uranus | 44203-06-25 05:31 G | 17866048.50 | 17866048.73 | 17866048.97 | 0.0134 | 0.0051 |
| Uranus | 44204-06-28 06:14 G | 17866417.52 | 17866417.76 | 17866418.01 | 0.0134 | 0.0027 |
| Uranus | 44205-07-02 20:10 G | 17866787.14 | 17866787.34 | 17866787.53 | 0.0134 | 0.0089 |
| Pluto | 44209-08-19 11:46 G | 17868295.76 | 17868295.99 | 17868296.25 | 0.0066 | 0.0020 |
| Saturn | 44210-05-08 16:05 G | 17868557.98 | 17868558.17 | 17868558.37 | 0.0284 | 0.0178 |
| Jupiter | 44211-12-11 22:48 G | 17869140.25 | 17869140.45 | 17869140.66 | 0.0500 | 0.0263 |
| Neptune | 44213-05-12 01:26 G | 17869657.43 | 17869657.56 | 17869657.74 | 0.0089 | 0.0070 |
| Neptune | 44214-05-14 07:41 G | 17870024.61 | 17870024.82 | 17870025.04 | 0.0089 | 0.0049 |
| Neptune | 44215-05-17 01:55 G | 17870392.34 | 17870392.58 | 17870392.84 | 0.0089 | 0.0020 |
| Neptune | 44216-05-18 06:58 G | 17870759.54 | 17870759.79 | 17870760.04 | 0.0089 | 0.0001 |
| Neptune | 44217-05-21 00:43 G | 17871127.29 | 17871127.53 | 17871127.78 | 0.0089 | 0.0030 |
| Jupiter | 44217-05-23 05:02 G | 17871129.57 | 17871129.71 | 17871129.86 | 0.0522 | 0.0411 |
| Neptune | 44218-05-23 06:58 G | 17871494.62 | 17871494.79 | 17871495.02 | 0.0089 | 0.0054 |
| Neptune | 44219-05-25 21:36 G | 17871862.30 | 17871862.40 | 17871862.53 | 0.0089 | 0.0081 |
| Saturn | 44223-11-10 23:46 G | 17873492.25 | 17873492.49 | 17873492.74 | 0.0277 | 0.0044 |
| Jupiter | 44223-12-16 16:19 G | 17873528.09 | 17873528.18 | 17873528.27 | 0.0499 | 0.0456 |
| Mars | 44226-10-05 09:36 G | 17874551.84 | 17874551.90 | 17874551.96 | 0.1938 | 0.1861 |
| Jupiter | 44229-05-27 13:55 G | 17875516.88 | 17875517.08 | 17875517.28 | 0.0524 | 0.0269 |
| Saturn | 44240-05-15 17:02 G | 17879523.00 | 17879523.21 | 17879523.42 | 0.0286 | 0.0130 |
| Jupiter | 44241-06-01 18:00 G | 17879905.03 | 17879905.25 | 17879905.47 | 0.0524 | 0.0057 |
| Uranus | 44243-12-22 07:55 G | 17880838.70 | 17880838.83 | 17880838.99 | 0.0145 | 0.0122 |
| Uranus | 44244-12-26 08:53 G | 17881208.63 | 17881208.87 | 17881209.11 | 0.0144 | 0.0026 |
| Uranus | 44245-12-31 12:58 G | 17881578.81 | 17881579.04 | 17881579.29 | 0.0144 | 0.0059 |
| Jupiter | 44246-11-22 23:02 G | 17881905.30 | 17881905.46 | 17881905.63 | 0.0503 | 0.0357 |
| Uranus | 44247-01-05 09:50 G | 17881948.87 | 17881948.91 | 17881949.00 | 0.0144 | 0.0139 |
| Mars | 44250-04-06 18:14 G | 17883136.12 | 17883136.26 | 17883136.41 | 0.1594 | 0.1047 |

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| Saturn | 44252-11-04 11:02 G | 17884078.88 | 17884078.96 | 17884079.04 | 0.0280 | 0.0263 |
| Jupiter | 44253-06-06 13:26 G | 17884292.84 | 17884293.06 | 17884293.30 | 0.0525 | 0.0152 |
| Saturn | 44253-11-17 14:53 G | 17884457.01 | 17884457.12 | 17884457.23 | 0.0275 | 0.0243 |
| Jupiter | 44258-11-27 05:17 G | 17886292.51 | 17886292.72 | 17886292.95 | 0.0502 | 0.0181 |
| Jupiter | 44265-06-11 08:10 G | 17888680.65 | 17888680.84 | 17888681.02 | 0.0525 | 0.0293 |
| Saturn | 44269-05-10 06:14 G | 17890109.53 | 17890109.76 | 17890110.00 | 0.0285 | 0.0101 |
| Jupiter | 44270-12-02 03:07 G | 17890680.39 | 17890680.63 | 17890680.86 | 0.0502 | 0.0052 |
| Jupiter | 44277-06-16 09:22 G | 17893068.76 | 17893068.89 | 17893069.02 | 0.0526 | 0.0438 |
| Saturn | 44282-11-12 14:10 G | 17895043.83 | 17895044.09 | 17895044.34 | 0.0277 | 0.0032 |
| Jupiter | 44282-12-06 11:02 G | 17895067.73 | 17895067.96 | 17895068.20 | 0.0501 | 0.0072 |
| Uranus | 44286-06-21 04:05 G | 17896360.55 | 17896360.67 | 17896360.79 | 0.0134 | 0.0115 |
| Uranus | 44287-06-25 15:50 G | 17896729.92 | 17896730.16 | 17896730.42 | 0.0134 | 0.0035 |
| Uranus | 44288-06-28 17:17 G | 17897098.99 | 17897099.22 | 17897099.47 | 0.0134 | 0.0021 |
| Uranus | 44289-07-03 05:31 G | 17897468.58 | 17897468.73 | 17897468.94 | 0.0134 | 0.0097 |
| Neptune | 44294-11-11 02:38 G | 17899425.48 | 17899425.61 | 17899425.74 | 0.0088 | 0.0074 |
| Jupiter | 44294-12-11 04:48 G | 17899455.50 | 17899455.70 | 17899455.90 | 0.0500 | 0.0249 |
| Neptune | 44295-11-13 09:22 G | 17899792.68 | 17899792.89 | 17899793.14 | 0.0088 | 0.0043 |
| Neptune | 44296-11-15 03:36 G | 17900160.42 | 17900160.65 | 17900160.91 | 0.0088 | 0.0026 |
| Pluto | 44297-02-20 10:34 G | 17900257.79 | 17900257.94 | 17900258.14 | 0.0077 | 0.0056 |
| Neptune | 44297-11-17 08:53 G | 17900527.61 | 17900527.87 | 17900528.13 | 0.0088 | 0.0006 |
| Neptune | 44298-11-20 03:22 G | 17900895.39 | 17900895.64 | 17900895.90 | 0.0088 | 0.0024 |
| Saturn | 44299-05-18 12:58 G | 17901074.88 | 17901075.04 | 17901075.21 | 0.0287 | 0.0211 |
| Neptune | 44299-11-22 08:38 G | 17901262.69 | 17901262.86 | 17901263.08 | 0.0088 | 0.0056 |
| Jupiter | 44300-05-22 16:48 G | 17901444.09 | 17901444.20 | 17901444.33 | 0.0522 | 0.0447 |
| Neptune | 44300-11-25 00:14 G | 17901630.40 | 17901630.51 | 17901630.69 | 0.0088 | 0.0074 |
| Jupiter | 44306-12-16 12:29 G | 17903842.90 | 17903843.02 | 17903843.15 | 0.0499 | 0.0427 |
| Saturn | 44311-11-08 06:29 G | 17905630.61 | 17905630.77 | 17905630.96 | 0.0279 | 0.0187 |
| Jupiter | 44312-05-27 22:19 G | 17905832.24 | 17905832.43 | 17905832.62 | 0.0523 | 0.0295 |
| Jupiter | 44324-06-01 13:12 G | 17910219.81 | 17910220.05 | 17910220.28 | 0.0524 | 0.0088 |
| Uranus | 44327-12-23 19:55 G | 17911520.15 | 17911520.33 | 17911520.52 | 0.0145 | 0.0103 |

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| Saturn | 44328-05-12 18:58 G | 17911661.05 | 17911661.29 | 17911661.53 | 0.0285 | 0.0026 |
| Uranus | 44328-12-27 21:50 G | 17911890.17 | 17911890.41 | 17911890.65 | 0.0144 | 0.0027 |
| Mars | 44329-04-10 00:14 G | 17911993.39 | 17911993.51 | 17911993.63 | 0.1594 | 0.1263 |
| Jupiter | 44329-11-22 14:38 G | 17912219.98 | 17912220.11 | 17912220.26 | 0.0504 | 0.0394 |
| Uranus | 44330-01-02 00:14 G | 17912260.29 | 17912260.51 | 17912260.77 | 0.0144 | 0.0063 |
| Jupiter | 44336-06-06 08:53 G | 17914607.66 | 17914607.87 | 17914608.09 | 0.0525 | 0.0115 |
| Saturn | 44341-11-15 01:55 G | 17916595.35 | 17916595.58 | 17916595.82 | 0.0276 | 0.0104 |
| Jupiter | 44341-11-27 14:53 G | 17916607.91 | 17916608.12 | 17916608.33 | 0.0503 | 0.0207 |
| Jupiter | 44348-06-11 06:43 G | 17918995.58 | 17918995.78 | 17918995.99 | 0.0526 | 0.0253 |
| Jupiter | 44353-12-01 22:19 G | 17920995.20 | 17920995.43 | 17920995.67 | 0.0502 | 0.0079 |
| Saturn | 44357-05-07 18:14 G | 17922248.17 | 17922248.26 | 17922248.38 | 0.0283 | 0.0254 |
| Saturn | 44358-05-21 01:41 G | 17922626.57 | 17922626.57 | 17922626.59 | 0.0288 | 0.0288 |
| Jupiter | 44360-06-15 23:02 G | 17923383.33 | 17923383.46 | 17923383.62 | 0.0526 | 0.0408 |
| Jupiter | 44365-12-06 13:12 G | 17925382.82 | 17925383.05 | 17925383.27 | 0.0501 | 0.0041 |
| Uranus | 44370-06-22 13:41 G | 17927041.92 | 17927042.07 | 17927042.25 | 0.0134 | 0.0099 |
| Saturn | 44370-11-10 02:38 G | 17927182.40 | 17927182.61 | 17927182.84 | 0.0278 | 0.0114 |
| Uranus | 44371-06-27 00:43 G | 17927411.29 | 17927411.53 | 17927411.78 | 0.0134 | 0.0045 |
| Uranus | 44372-06-30 03:22 G | 17927780.41 | 17927780.64 | 17927780.89 | 0.0134 | 0.0035 |
| Uranus | 44373-07-04 15:22 G | 17928149.96 | 17928150.14 | 17928150.33 | 0.0134 | 0.0094 |
| Neptune | 44377-05-12 04:48 G | 17929557.70 | 17929557.70 | 17929557.74 | 0.0089 | 0.0089 |
| Jupiter | 44377-12-11 00:14 G | 17929770.29 | 17929770.51 | 17929770.73 | 0.0500 | 0.0218 |
| Neptune | 44378-05-14 23:31 G | 17929925.29 | 17929925.48 | 17929925.69 | 0.0089 | 0.0057 |
| Neptune | 44379-05-17 04:19 G | 17930292.47 | 17930292.68 | 17930292.92 | 0.0089 | 0.0039 |
| Neptune | 44380-05-18 21:36 G | 17930660.14 | 17930660.40 | 17930660.66 | 0.0089 | 0.0006 |
| Neptune | 44381-05-21 05:31 G | 17931027.50 | 17931027.73 | 17931027.99 | 0.0089 | 0.0013 |
| Neptune | 44382-05-23 18:43 G | 17931395.07 | 17931395.28 | 17931395.52 | 0.0089 | 0.0046 |
| Jupiter | 44383-05-23 02:38 G | 17931759.52 | 17931759.61 | 17931759.70 | 0.0522 | 0.0478 |
| Neptune | 44383-05-26 07:12 G | 17931762.65 | 17931762.80 | 17931763.00 | 0.0089 | 0.0064 |
| Saturn | 44387-05-15 08:38 G | 17933212.62 | 17933212.86 | 17933213.09 | 0.0286 | 0.0043 |
| Jupiter | 44389-12-15 12:29 G | 17934157.89 | 17934158.02 | 17934158.15 | 0.0500 | 0.0406 |

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| Jupiter | 44395-05-27 15:36 G | 17936146.97 | 17936147.15 | 17936147.34 | 0.0523 | 0.0327 |
| Saturn | 44400-11-16 14:38 G | 17938146.93 | 17938147.11 | 17938147.30 | 0.0275 | 0.0172 |
| Jupiter | 44407-06-01 10:48 G | 17940534.74 | 17940534.95 | 17940535.17 | 0.0524 | 0.0119 |
| Uranus | 44411-12-24 07:41 G | 17942201.67 | 17942201.82 | 17942202.01 | 0.0145 | 0.0111 |
| Jupiter | 44412-11-22 02:24 G | 17942535.48 | 17942535.60 | 17942535.74 | 0.0504 | 0.0413 |
| Uranus | 44412-12-28 11:46 G | 17942571.75 | 17942571.99 | 17942572.24 | 0.0144 | 0.0013 |
| Uranus | 44414-01-02 13:41 G | 17942941.84 | 17942942.07 | 17942942.31 | 0.0144 | 0.0070 |
| Saturn | 44416-05-09 00:14 G | 17943799.34 | 17943799.51 | 17943799.70 | 0.0283 | 0.0194 |
| Jupiter | 44419-06-06 11:46 G | 17944922.75 | 17944922.99 | 17944923.22 | 0.0525 | 0.0086 |
| Jupiter | 44424-11-26 06:14 G | 17946922.55 | 17946922.76 | 17946922.97 | 0.0503 | 0.0241 |
| Saturn | 44429-11-11 15:22 G | 17948733.89 | 17948734.14 | 17948734.39 | 0.0278 | 0.0044 |
| Jupiter | 44431-06-11 05:46 G | 17949310.54 | 17949310.74 | 17949310.94 | 0.0525 | 0.0232 |
| Jupiter | 44436-12-01 01:55 G | 17951310.36 | 17951310.58 | 17951310.81 | 0.0502 | 0.0118 |
| Jupiter | 44443-06-16 10:34 G | 17953698.79 | 17953698.94 | 17953699.10 | 0.0526 | 0.0384 |
| Saturn | 44446-05-16 19:41 G | 17954764.10 | 17954764.32 | 17954764.55 | 0.0286 | 0.0102 |
| Jupiter | 44448-12-05 13:55 G | 17955697.83 | 17955698.08 | 17955698.32 | 0.0501 | 0.0014 |
| Uranus | 44454-06-23 01:55 G | 17957723.45 | 17957723.58 | 17957723.74 | 0.0134 | 0.0107 |
| Mars | 44455-04-07 15:07 G | 17958012.07 | 17958012.13 | 17958012.19 | 0.1595 | 0.1495 |
| Uranus | 44455-06-27 11:46 G | 17958092.73 | 17958092.99 | 17958093.25 | 0.0134 | 0.0027 |
| Uranus | 44456-06-30 15:36 G | 17958461.91 | 17958462.15 | 17958462.39 | 0.0134 | 0.0027 |
| Uranus | 44457-07-05 01:26 G | 17958831.41 | 17958831.56 | 17958831.74 | 0.0134 | 0.0104 |
| Pluto | 44457-08-21 01:55 G | 17958878.37 | 17958878.58 | 17958878.81 | 0.0066 | 0.0032 |
| Pluto | 44458-08-22 20:38 G | 17959245.33 | 17959245.36 | 17959245.44 | 0.0066 | 0.0065 |
| Saturn | 44458-11-05 22:48 G | 17959320.41 | 17959320.45 | 17959320.49 | 0.0280 | 0.0275 |
| Neptune | 44458-11-11 05:17 G | 17959325.66 | 17959325.72 | 17959325.84 | 0.0088 | 0.0083 |
| Neptune | 44459-11-14 00:14 G | 17959693.35 | 17959693.51 | 17959693.71 | 0.0088 | 0.0062 |
| Saturn | 44459-11-19 04:34 G | 17959698.57 | 17959698.69 | 17959698.81 | 0.0275 | 0.0236 |
| Neptune | 44460-11-15 05:17 G | 17960060.49 | 17960060.72 | 17960060.97 | 0.0088 | 0.0033 |
| Jupiter | 44460-12-10 04:48 G | 17960085.49 | 17960085.70 | 17960085.91 | 0.0501 | 0.0202 |
| Neptune | 44461-11-17 23:31 G | 17960428.23 | 17960428.48 | 17960428.76 | 0.0088 | 0.0013 |

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| Neptune | 44462-11-20 06:00 G | 17960795.52 | 17960795.75 | 17960796.01 | 0.0088 | 0.0018 |
| Neptune | 44463-11-22 20:53 G | 17961163.13 | 17961163.37 | 17961163.62 | 0.0088 | 0.0037 |
| Neptune | 44464-11-24 07:26 G | 17961530.68 | 17961530.81 | 17961531.00 | 0.0088 | 0.0067 |
| Neptune | 44465-11-26 17:31 G | 17961898.20 | 17961898.23 | 17961898.32 | 0.0088 | 0.0086 |
| Jupiter | 44466-05-21 20:10 G | 17962074.29 | 17962074.34 | 17962074.40 | 0.0521 | 0.0507 |
| Jupiter | 44472-12-14 22:48 G | 17964473.31 | 17964473.45 | 17964473.61 | 0.0500 | 0.0390 |
| Saturn | 44475-05-11 00:00 G | 17965350.29 | 17965350.50 | 17965350.72 | 0.0284 | 0.0144 |
| Jupiter | 44478-05-26 20:24 G | 17966462.18 | 17966462.35 | 17966462.51 | 0.0522 | 0.0352 |
| Saturn | 44488-11-12 18:29 G | 17970285.01 | 17970285.27 | 17970285.52 | 0.0278 | 0.0018 |
| Jupiter | 44490-05-31 21:07 G | 17970850.15 | 17970850.38 | 17970850.62 | 0.0524 | 0.0129 |
| Jupiter | 44495-11-21 19:55 G | 17972850.22 | 17972850.33 | 17972850.44 | 0.0504 | 0.0444 |
| Uranus | 44495-12-24 18:14 G | 17972883.07 | 17972883.26 | 17972883.48 | 0.0145 | 0.0092 |
| Uranus | 44496-12-28 23:17 G | 17973253.23 | 17973253.47 | 17973253.73 | 0.0144 | 0.0018 |
| Uranus | 44498-01-03 00:00 G | 17973623.27 | 17973623.50 | 17973623.72 | 0.0144 | 0.0076 |
| Jupiter | 44502-06-06 13:26 G | 17975237.83 | 17975238.06 | 17975238.28 | 0.0524 | 0.0064 |
| Saturn | 44505-05-18 21:07 G | 17976315.18 | 17976315.38 | 17976315.60 | 0.0286 | 0.0153 |
| Jupiter | 44507-11-27 17:02 G | 17977238.02 | 17977238.21 | 17977238.40 | 0.0503 | 0.0269 |
| Jupiter | 44514-06-11 17:17 G | 17979626.01 | 17979626.22 | 17979626.44 | 0.0525 | 0.0204 |
| Saturn | 44517-11-08 08:24 G | 17980871.71 | 17980871.85 | 17980872.01 | 0.0280 | 0.0216 |
| Jupiter | 44519-12-02 06:43 G | 17981625.55 | 17981625.78 | 17981626.02 | 0.0502 | 0.0143 |
| Jupiter | 44526-06-16 05:31 G | 17984013.56 | 17984013.73 | 17984013.90 | 0.0526 | 0.0359 |
| Jupiter | 44531-12-06 22:05 G | 17986013.19 | 17986013.42 | 17986013.65 | 0.0502 | 0.0003 |
| Mars | 44534-04-10 08:53 G | 17986868.69 | 17986868.87 | 17986869.04 | 0.1595 | 0.0119 |
| Saturn | 44534-05-13 00:43 G | 17986901.31 | 17986901.53 | 17986901.75 | 0.0284 | 0.0096 |
| Uranus | 44538-06-24 12:43 G | 17988404.85 | 17988405.03 | 17988405.21 | 0.0133 | 0.0091 |
| Uranus | 44539-06-28 20:38 G | 17988774.11 | 17988774.36 | 17988774.62 | 0.0134 | 0.0037 |
| Uranus | 44540-07-02 01:26 G | 17989143.34 | 17989143.56 | 17989143.80 | 0.0134 | 0.0043 |
| Uranus | 44541-07-06 10:34 G | 17989512.77 | 17989512.94 | 17989513.12 | 0.0134 | 0.0099 |
| Neptune | 44542-05-15 02:53 G | 17989825.48 | 17989825.62 | 17989825.78 | 0.0089 | 0.0071 |
| Neptune | 44543-05-17 19:12 G | 17990193.09 | 17990193.30 | 17990193.52 | 0.0089 | 0.0051 |

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| Jupiter | 44543-12-11 12:14 G | 17990400.79 | 17990401.01 | 17990401.24 | 0.0500 | 0.0181 |
| Neptune | 44544-05-19 03:50 G | 17990560.43 | 17990560.66 | 17990560.91 | 0.0089 | 0.0020 |
| Pluto | 44545-02-23 03:22 G | 17990840.40 | 17990840.64 | 17990840.89 | 0.0078 | 0.0030 |
| Neptune | 44545-05-21 15:22 G | 17990927.87 | 17990928.14 | 17990928.40 | 0.0089 | 0.0001 |
| Neptune | 44546-05-24 05:02 G | 17991295.48 | 17991295.71 | 17991295.95 | 0.0089 | 0.0031 |
| Neptune | 44547-05-26 12:00 G | 17991662.80 | 17991663.00 | 17991663.23 | 0.0089 | 0.0051 |
| Saturn | 44547-11-15 19:55 G | 17991836.10 | 17991836.33 | 17991836.57 | 0.0277 | 0.0073 |
| Neptune | 44548-05-28 06:14 G | 17992030.66 | 17992030.76 | 17992030.86 | 0.0089 | 0.0082 |
| Jupiter | 44555-12-15 20:24 G | 17994788.20 | 17994788.35 | 17994788.51 | 0.0500 | 0.0367 |
| Jupiter | 44561-05-27 07:55 G | 17996777.67 | 17996777.83 | 17996778.01 | 0.0523 | 0.0367 |
| Saturn | 44564-05-19 14:38 G | 17997865.94 | 17997866.11 | 17997866.30 | 0.0286 | 0.0198 |
| Jupiter | 44567-12-20 17:46 G | 17999176.20 | 17999176.24 | 17999176.28 | 0.0500 | 0.0491 |
| Jupiter | 44573-05-31 23:46 G | 18001165.28 | 18001165.49 | 18001165.71 | 0.0523 | 0.0149 |
| Saturn | 44576-11-09 11:02 G | 18002422.77 | 18002422.96 | 18002423.17 | 0.0280 | 0.0165 |
| Jupiter | 44578-11-22 10:34 G | 18003165.86 | 18003165.94 | 18003166.05 | 0.0504 | 0.0457 |
| Uranus | 44579-12-26 01:55 G | 18003564.41 | 18003564.58 | 18003564.78 | 0.0145 | 0.0104 |
| Uranus | 44580-12-30 08:53 G | 18003934.63 | 18003934.87 | 18003935.12 | 0.0145 | 0.0005 |
| Uranus | 44582-01-04 07:55 G | 18004304.62 | 18004304.83 | 18004305.07 | 0.0144 | 0.0076 |
| Jupiter | 44585-06-06 01:41 G | 18005553.34 | 18005553.57 | 18005553.81 | 0.0524 | 0.0041 |
| Jupiter | 44590-11-27 00:58 G | 18007553.34 | 18007553.54 | 18007553.74 | 0.0503 | 0.0286 |
| Saturn | 44593-05-14 01:12 G | 18008452.32 | 18008452.55 | 18008452.78 | 0.0284 | 0.0053 |
| Jupiter | 44597-06-10 17:17 G | 18009941.01 | 18009941.22 | 18009941.45 | 0.0525 | 0.0181 |
| Jupiter | 44602-12-02 13:26 G | 18011940.85 | 18011941.06 | 18011941.27 | 0.0502 | 0.0170 |
| Saturn | 44606-11-17 22:05 G | 18013387.22 | 18013387.42 | 18013387.64 | 0.0277 | 0.0126 |
| Jupiter | 44609-06-16 23:17 G | 18014329.31 | 18014329.47 | 18014329.64 | 0.0526 | 0.0355 |
| Jupiter | 44614-12-07 07:55 G | 18016328.59 | 18016328.83 | 18016329.07 | 0.0501 | 0.0023 |
| Uranus | 44622-06-26 00:58 G | 18019086.40 | 18019086.54 | 18019086.73 | 0.0133 | 0.0099 |
| Saturn | 44623-05-22 08:38 G | 18019416.74 | 18019416.86 | 18019417.00 | 0.0286 | 0.0240 |
| Uranus | 44623-06-30 07:55 G | 18019455.57 | 18019455.83 | 18019456.09 | 0.0134 | 0.0019 |
| Neptune | 44623-11-15 00:58 G | 18019593.44 | 18019593.54 | 18019593.68 | 0.0088 | 0.0077 |

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| Uranus | 44624-07-03 13:55 G | 18019824.85 | 18019825.08 | 18019825.32 | 0.0134 | 0.0034 |
| Neptune | 44624-11-16 18:29 G | 18019961.06 | 18019961.27 | 18019961.53 | 0.0088 | 0.0044 |
| Uranus | 44625-07-07 20:38 G | 18020194.24 | 18020194.36 | 18020194.52 | 0.0134 | 0.0113 |
| Neptune | 44625-11-19 03:07 G | 18020328.40 | 18020328.63 | 18020328.87 | 0.0088 | 0.0027 |
| Neptune | 44626-11-21 16:34 G | 18020695.92 | 18020696.19 | 18020696.46 | 0.0088 | 0.0006 |
| Jupiter | 44626-12-11 16:34 G | 18020715.97 | 18020716.19 | 18020716.41 | 0.0501 | 0.0173 |
| Neptune | 44627-11-24 05:02 G | 18021063.47 | 18021063.71 | 18021063.96 | 0.0088 | 0.0022 |
| Neptune | 44628-11-25 12:58 G | 18021430.85 | 18021431.04 | 18021431.27 | 0.0088 | 0.0055 |
| Neptune | 44629-11-28 05:31 G | 18021798.61 | 18021798.73 | 18021798.90 | 0.0088 | 0.0072 |
| Saturn | 44635-11-12 05:17 G | 18023973.49 | 18023973.72 | 18023973.95 | 0.0280 | 0.0118 |
| Jupiter | 44638-12-16 15:22 G | 18025103.99 | 18025104.14 | 18025104.31 | 0.0500 | 0.0356 |
| Jupiter | 44644-05-27 11:17 G | 18027092.83 | 18027092.97 | 18027093.12 | 0.0522 | 0.0390 |
| Jupiter | 44650-12-20 23:46 G | 18029491.42 | 18029491.49 | 18029491.56 | 0.0500 | 0.0478 |
| Saturn | 44652-05-15 20:38 G | 18030003.11 | 18030003.36 | 18030003.61 | 0.0284 | 0.0012 |
| Jupiter | 44656-06-01 16:05 G | 18031480.95 | 18031481.17 | 18031481.39 | 0.0523 | 0.0163 |
| Jupiter | 44661-11-22 17:17 G | 18033481.14 | 18033481.22 | 18033481.31 | 0.0504 | 0.0469 |
| Uranus | 44663-12-27 08:53 G | 18034245.68 | 18034245.87 | 18034246.09 | 0.0145 | 0.0088 |
| Uranus | 44664-12-31 16:48 G | 18034615.95 | 18034616.20 | 18034616.45 | 0.0145 | 0.0014 |
| Saturn | 44665-11-18 22:05 G | 18034938.22 | 18034938.42 | 18034938.61 | 0.0277 | 0.0169 |
| Uranus | 44666-01-05 14:10 G | 18034985.88 | 18034986.09 | 18034986.32 | 0.0144 | 0.0082 |
| Jupiter | 44668-06-06 07:26 G | 18035868.57 | 18035868.81 | 18035869.04 | 0.0525 | 0.0021 |
| Jupiter | 44673-11-27 09:50 G | 18037868.73 | 18037868.91 | 18037869.09 | 0.0503 | 0.0310 |
| Jupiter | 44680-06-11 12:29 G | 18040256.81 | 18040257.02 | 18040257.24 | 0.0525 | 0.0157 |
| Saturn | 44681-05-09 21:07 G | 18040589.29 | 18040589.38 | 18040589.48 | 0.0281 | 0.0256 |
| Saturn | 44682-05-23 06:14 G | 18040967.75 | 18040967.76 | 18040967.80 | 0.0286 | 0.0284 |
| Jupiter | 44685-12-02 03:50 G | 18042256.44 | 18042256.66 | 18042256.89 | 0.0502 | 0.0188 |
| Jupiter | 44692-06-16 08:38 G | 18044644.68 | 18044644.86 | 18044645.04 | 0.0526 | 0.0340 |
| Saturn | 44694-11-12 19:41 G | 18045524.08 | 18045524.32 | 18045524.56 | 0.0280 | 0.0078 |
| Jupiter | 44697-12-06 14:24 G | 18046643.87 | 18046644.10 | 18046644.33 | 0.0502 | 0.0032 |
| Uranus | 44706-06-27 12:00 G | 18049767.83 | 18049768.00 | 18049768.21 | 0.0133 | 0.0085 |

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| Pluto | 44706-08-26 17:02 G | 18049827.98 | 18049828.21 | 18049828.47 | 0.0066 | 0.0015 |
| Neptune | 44707-05-19 00:29 G | 18050093.36 | 18050093.52 | 18050093.73 | 0.0089 | 0.0061 |
| Uranus | 44707-07-01 17:17 G | 18050136.97 | 18050137.22 | 18050137.48 | 0.0134 | 0.0029 |
| Neptune | 44708-05-20 11:17 G | 18050460.73 | 18050460.97 | 18050461.20 | 0.0089 | 0.0040 |
| Uranus | 44708-07-05 00:43 G | 18050506.31 | 18050506.53 | 18050506.76 | 0.0134 | 0.0051 |
| Neptune | 44709-05-23 02:38 G | 18050828.37 | 18050828.61 | 18050828.86 | 0.0089 | 0.0009 |
| Uranus | 44709-07-09 06:14 G | 18050875.63 | 18050875.76 | 18050875.95 | 0.0134 | 0.0106 |
| Jupiter | 44709-12-12 13:26 G | 18051031.84 | 18051032.06 | 18051032.28 | 0.0501 | 0.0175 |
| Neptune | 44710-05-25 08:38 G | 18051195.61 | 18051195.86 | 18051196.12 | 0.0089 | 0.0011 |
| Saturn | 44711-05-18 10:05 G | 18051553.67 | 18051553.92 | 18051554.17 | 0.0284 | 0.0028 |
| Neptune | 44711-05-28 02:38 G | 18051563.40 | 18051563.61 | 18051563.84 | 0.0089 | 0.0043 |
| Neptune | 44712-05-29 07:26 G | 18051930.64 | 18051930.81 | 18051931.00 | 0.0089 | 0.0063 |
| Jupiter | 44721-12-16 18:29 G | 18055419.10 | 18055419.27 | 18055419.46 | 0.0500 | 0.0337 |
| Saturn | 44724-11-20 13:55 G | 18056488.93 | 18056489.08 | 18056489.26 | 0.0277 | 0.0212 |
| Jupiter | 44727-05-29 06:14 G | 18057408.61 | 18057408.76 | 18057408.91 | 0.0523 | 0.0404 |
| Jupiter | 44733-12-21 13:55 G | 18059807.01 | 18059807.08 | 18059807.18 | 0.0499 | 0.0460 |
| Mars | 44739-04-11 19:55 G | 18061744.15 | 18061744.33 | 18061744.51 | 0.1596 | 0.0728 |
| Jupiter | 44739-06-02 21:36 G | 18061796.19 | 18061796.40 | 18061796.62 | 0.0524 | 0.0181 |
| Saturn | 44740-05-11 19:55 G | 18062140.19 | 18062140.33 | 18062140.48 | 0.0281 | 0.0218 |
| Jupiter | 44744-11-23 05:02 G | 18063796.65 | 18063796.71 | 18063796.78 | 0.0504 | 0.0483 |
| Uranus | 44747-12-28 17:17 G | 18064927.04 | 18064927.22 | 18064927.41 | 0.0145 | 0.0100 |
| Uranus | 44749-01-02 02:10 G | 18065297.34 | 18065297.59 | 18065297.84 | 0.0145 | 0.0002 |
| Uranus | 44750-01-06 22:19 G | 18065667.23 | 18065667.43 | 18065667.67 | 0.0144 | 0.0078 |
| Jupiter | 44751-06-08 01:41 G | 18066184.34 | 18066184.57 | 18066184.79 | 0.0524 | 0.0005 |
| Saturn | 44753-11-14 15:36 G | 18067074.91 | 18067075.15 | 18067075.39 | 0.0280 | 0.0035 |
| Jupiter | 44756-11-28 00:43 G | 18068184.34 | 18068184.53 | 18068184.71 | 0.0503 | 0.0326 |
| Jupiter | 44763-06-12 18:58 G | 18070572.06 | 18070572.29 | 18070572.52 | 0.0525 | 0.0132 |
| Jupiter | 44768-12-02 11:31 G | 18072571.77 | 18072571.98 | 18072572.20 | 0.0502 | 0.0206 |
| Saturn | 44770-05-19 02:10 G | 18073104.36 | 18073104.59 | 18073104.83 | 0.0284 | 0.0070 |
| Jupiter | 44775-06-17 17:17 G | 18074960.05 | 18074960.22 | 18074960.39 | 0.0526 | 0.0328 |

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| Jupiter | 44780-12-07 08:53 G | 18076959.64 | 18076959.87 | 18076960.10 | 0.0501 | 0.0042 |
| Saturn | 44782-11-08 21:36 G | 18077661.40 | 18077661.40 | 18077661.44 | 0.0283 | 0.0282 |
| Saturn | 44783-11-22 02:24 G | 18078039.50 | 18078039.60 | 18078039.70 | 0.0278 | 0.0255 |
| Neptune | 44787-11-15 14:10 G | 18079494.03 | 18079494.09 | 18079494.15 | 0.0088 | 0.0086 |
| Neptune | 44788-11-16 23:02 G | 18079861.29 | 18079861.46 | 18079861.65 | 0.0088 | 0.0063 |
| Neptune | 44789-11-19 10:19 G | 18080228.70 | 18080228.93 | 18080229.19 | 0.0088 | 0.0037 |
| Uranus | 44790-06-28 01:12 G | 18080449.38 | 18080449.55 | 18080449.74 | 0.0134 | 0.0090 |
| Neptune | 44790-11-22 00:43 G | 18080596.29 | 18080596.53 | 18080596.79 | 0.0088 | 0.0013 |
| Uranus | 44791-07-02 04:48 G | 18080818.45 | 18080818.70 | 18080818.97 | 0.0134 | 0.0013 |
| Neptune | 44791-11-24 08:10 G | 18080963.59 | 18080963.84 | 18080964.12 | 0.0088 | 0.0014 |
| Uranus | 44792-07-05 13:26 G | 18081187.84 | 18081188.06 | 18081188.30 | 0.0134 | 0.0042 |
| Neptune | 44792-11-26 02:10 G | 18081331.37 | 18081331.59 | 18081331.84 | 0.0088 | 0.0038 |
| Jupiter | 44792-12-11 16:48 G | 18081346.98 | 18081347.20 | 18081347.43 | 0.0500 | 0.0160 |
| Uranus | 44793-07-09 17:46 G | 18081557.14 | 18081557.24 | 18081557.36 | 0.0134 | 0.0121 |
| Neptune | 44793-11-28 06:58 G | 18081698.63 | 18081698.79 | 18081698.98 | 0.0088 | 0.0064 |
| Pluto | 44794-02-27 20:38 G | 18081790.17 | 18081790.36 | 18081790.57 | 0.0077 | 0.0051 |
| Neptune | 44794-12-01 01:26 G | 18082066.53 | 18082066.56 | 18082066.64 | 0.0088 | 0.0086 |
| Saturn | 44799-05-13 18:43 G | 18083691.09 | 18083691.28 | 18083691.47 | 0.0281 | 0.0175 |
| Jupiter | 44804-12-16 11:46 G | 18085734.82 | 18085734.99 | 18085735.16 | 0.0500 | 0.0324 |
| Jupiter | 44810-05-28 10:48 G | 18087723.82 | 18087723.95 | 18087724.10 | 0.0522 | 0.0417 |
| Saturn | 44812-11-15 13:55 G | 18088625.84 | 18088626.08 | 18088626.32 | 0.0280 | 0.0010 |
| Jupiter | 44816-12-21 00:00 G | 18090122.39 | 18090122.50 | 18090122.61 | 0.0500 | 0.0442 |
| Mars | 44818-04-14 00:14 G | 18090601.35 | 18090601.51 | 18090601.67 | 0.1596 | 0.0842 |
| Jupiter | 44822-06-02 12:58 G | 18092111.83 | 18092112.04 | 18092112.25 | 0.0523 | 0.0197 |
| Jupiter | 44827-11-23 19:55 G | 18094112.29 | 18094112.33 | 18094112.39 | 0.0504 | 0.0494 |
| Saturn | 44829-05-20 02:38 G | 18094655.40 | 18094655.61 | 18094655.83 | 0.0284 | 0.0119 |
| Uranus | 44831-12-29 05:31 G | 18095608.53 | 18095608.73 | 18095608.96 | 0.0145 | 0.0081 |
| Uranus | 44833-01-02 14:38 G | 18095978.86 | 18095979.11 | 18095979.36 | 0.0145 | 0.0008 |
| Uranus | 44834-01-07 10:05 G | 18096348.72 | 18096348.92 | 18096349.12 | 0.0144 | 0.0091 |
| Jupiter | 44834-06-07 06:58 G | 18096499.55 | 18096499.79 | 18096500.03 | 0.0524 | 0.0033 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 44839-11-28 06:43 G | 18098499.62 | 18098499.78 | 18098499.95 | 0.0503 | 0.0352 |
| Saturn | 44841-11-09 12:43 G | 18099211.90 | 18099212.03 | 18099212.17 | 0.0283 | 0.0236 |
| Jupiter | 44846-06-12 04:05 G | 18100887.45 | 18100887.67 | 18100887.89 | 0.0526 | 0.0111 |
| Jupiter | 44851-12-03 05:31 G | 18102887.52 | 18102887.73 | 18102887.94 | 0.0502 | 0.0228 |
| Saturn | 44858-05-14 13:55 G | 18105241.86 | 18105242.08 | 18105242.31 | 0.0281 | 0.0124 |
| Jupiter | 44858-06-17 07:26 G | 18105275.62 | 18105275.81 | 18105276.00 | 0.0526 | 0.0315 |
| Jupiter | 44863-12-07 12:00 G | 18107274.76 | 18107275.00 | 18107275.24 | 0.0501 | 0.0056 |
| Neptune | 44871-05-18 05:46 G | 18109993.62 | 18109993.74 | 18109993.91 | 0.0089 | 0.0074 |
| Saturn | 44871-11-17 08:10 G | 18110176.59 | 18110176.84 | 18110177.09 | 0.0280 | 0.0058 |
| Neptune | 44872-05-19 22:34 G | 18110361.25 | 18110361.44 | 18110361.64 | 0.0089 | 0.0056 |
| Neptune | 44873-05-22 03:36 G | 18110728.41 | 18110728.65 | 18110728.91 | 0.0089 | 0.0022 |
| Mars | 44873-10-10 04:05 G | 18110869.51 | 18110869.67 | 18110869.84 | 0.1935 | 0.0891 |
| Neptune | 44874-05-24 22:19 G | 18111096.17 | 18111096.43 | 18111096.68 | 0.0089 | 0.0004 |
| Uranus | 44874-06-28 13:12 G | 18111130.85 | 18111131.05 | 18111131.25 | 0.0134 | 0.0076 |
| Neptune | 44875-05-27 02:53 G | 18111463.39 | 18111463.62 | 18111463.87 | 0.0089 | 0.0030 |
| Uranus | 44875-07-02 15:22 G | 18111499.89 | 18111500.14 | 18111500.40 | 0.0134 | 0.0020 |
| Jupiter | 44875-12-12 07:55 G | 18111662.61 | 18111662.83 | 18111663.05 | 0.0501 | 0.0148 |
| Neptune | 44876-05-28 19:41 G | 18111831.12 | 18111831.32 | 18111831.57 | 0.0089 | 0.0048 |
| Uranus | 44876-07-06 01:12 G | 18111869.35 | 18111869.55 | 18111869.78 | 0.0134 | 0.0060 |
| Neptune | 44877-05-31 03:36 G | 18112198.57 | 18112198.65 | 18112198.78 | 0.0089 | 0.0081 |
| Uranus | 44877-07-10 04:34 G | 18112238.57 | 18112238.69 | 18112238.84 | 0.0134 | 0.0113 |
| Jupiter | 44887-12-16 20:24 G | 18116050.16 | 18116050.35 | 18116050.55 | 0.0500 | 0.0304 |
| Saturn | 44888-05-21 07:55 G | 18116206.64 | 18116206.83 | 18116207.02 | 0.0284 | 0.0174 |
| Jupiter | 44893-05-28 00:00 G | 18118039.38 | 18118039.50 | 18118039.63 | 0.0522 | 0.0432 |
| Jupiter | 44899-12-21 07:55 G | 18120437.71 | 18120437.83 | 18120437.96 | 0.0499 | 0.0419 |
| Saturn | 44900-11-11 12:29 G | 18120762.84 | 18120763.02 | 18120763.20 | 0.0282 | 0.0187 |
| Jupiter | 44905-06-02 14:24 G | 18122426.89 | 18122427.10 | 18122427.32 | 0.0524 | 0.0222 |
| Uranus | 44915-12-30 18:58 G | 18126290.10 | 18126290.29 | 18126290.51 | 0.0145 | 0.0088 |
| Uranus | 44917-01-04 04:48 G | 18126660.45 | 18126660.70 | 18126660.95 | 0.0145 | 0.0014 |
| Saturn | 44917-05-16 13:41 G | 18126792.84 | 18126793.07 | 18126793.31 | 0.0281 | 0.0067 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 44917-06-07 14:10 G | 18126814.87 | 18126815.09 | 18126815.31 | 0.0525 | 0.0060 |
| Uranus | 44918-01-09 00:00 G | 18127030.30 | 18127030.50 | 18127030.71 | 0.0145 | 0.0088 |
| Jupiter | 44922-11-28 21:22 G | 18128815.24 | 18128815.39 | 18128815.55 | 0.0503 | 0.0380 |
| Jupiter | 44929-06-12 15:36 G | 18131202.91 | 18131203.15 | 18131203.38 | 0.0525 | 0.0090 |
| Saturn | 44930-11-19 03:07 G | 18131727.40 | 18131727.63 | 18131727.87 | 0.0280 | 0.0114 |
| Jupiter | 44934-12-03 05:02 G | 18133202.51 | 18133202.71 | 18133202.92 | 0.0502 | 0.0252 |
| Jupiter | 44941-06-17 05:46 G | 18135590.55 | 18135590.74 | 18135590.93 | 0.0526 | 0.0295 |
| Jupiter | 44946-12-08 01:41 G | 18137590.35 | 18137590.57 | 18137590.80 | 0.0502 | 0.0071 |
| Saturn | 44947-05-24 11:31 G | 18137757.86 | 18137757.98 | 18137758.12 | 0.0284 | 0.0239 |
| Neptune | 44952-11-17 04:48 G | 18139761.61 | 18139761.70 | 18139761.83 | 0.0088 | 0.0080 |
| Jupiter | 44953-06-22 10:48 G | 18139978.92 | 18139978.95 | 18139978.98 | 0.0526 | 0.0522 |
| Neptune | 44953-11-19 20:24 G | 18140129.15 | 18140129.35 | 18140129.58 | 0.0088 | 0.0047 |
| Pluto | 44954-08-28 11:17 G | 18140410.77 | 18140410.97 | 18140411.22 | 0.0066 | 0.0035 |
| Neptune | 44954-11-22 02:38 G | 18140496.37 | 18140496.61 | 18140496.86 | 0.0088 | 0.0030 |
| Pluto | 44955-08-30 06:14 G | 18140777.68 | 18140777.76 | 18140777.88 | 0.0066 | 0.0061 |
| Neptune | 44955-11-24 21:07 G | 18140864.13 | 18140864.38 | 18140864.64 | 0.0088 | 0.0004 |
| Neptune | 44956-11-26 01:41 G | 18141231.33 | 18141231.57 | 18141231.83 | 0.0088 | 0.0020 |
| Neptune | 44957-11-28 19:55 G | 18141599.12 | 18141599.33 | 18141599.54 | 0.0088 | 0.0053 |
| Uranus | 44958-06-30 02:38 G | 18141812.43 | 18141812.61 | 18141812.83 | 0.0134 | 0.0079 |
| Neptune | 44958-12-01 01:55 G | 18141966.45 | 18141966.58 | 18141966.75 | 0.0088 | 0.0070 |
| Jupiter | 44958-12-12 13:26 G | 18141977.83 | 18141978.06 | 18141978.30 | 0.0500 | 0.0127 |
| Uranus | 44959-07-04 04:19 G | 18142181.42 | 18142181.68 | 18142181.94 | 0.0134 | 0.0003 |
| Saturn | 44959-11-13 18:29 G | 18142314.06 | 18142314.27 | 18142314.49 | 0.0282 | 0.0130 |
| Uranus | 44960-07-07 15:07 G | 18142550.91 | 18142551.13 | 18142551.37 | 0.0134 | 0.0052 |
| Uranus | 44961-07-11 17:17 G | 18142920.17 | 18142920.22 | 18142920.27 | 0.0134 | 0.0131 |
| Jupiter | 44970-12-17 02:38 G | 18146365.42 | 18146365.61 | 18146365.80 | 0.0499 | 0.0278 |
| Saturn | 44976-05-18 00:00 G | 18148344.27 | 18148344.50 | 18148344.74 | 0.0281 | 0.0005 |
| Jupiter | 44976-05-27 22:34 G | 18148354.33 | 18148354.44 | 18148354.56 | 0.0523 | 0.0455 |
| Jupiter | 44982-12-21 18:43 G | 18150753.14 | 18150753.28 | 18150753.43 | 0.0499 | 0.0393 |
| Jupiter | 44988-06-01 22:05 G | 18152742.22 | 18152742.42 | 18152742.62 | 0.0523 | 0.0243 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 44989-11-20 06:58 G | 18153278.61 | 18153278.79 | 18153278.99 | 0.0280 | 0.0173 |
| Uranus | 44999-12-31 10:05 G | 18156971.70 | 18156971.92 | 18156972.15 | 0.0145 | 0.0066 |
| Jupiter | 45000-06-07 19:12 G | 18157130.06 | 18157130.30 | 18157130.54 | 0.0524 | 0.0091 |

46TH MILLENNIUM CE

This is a list of transits of Moon in the 46th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Uranus | 45001-01-05 19:26 G | | 18157342.06 | 18157342.31 | 18157342.57 | 0.0145 | 0.0007 | |
| Uranus | 45002-01-10 13:55 G | | 18157711.92 | 18157712.08 | 18157712.27 | 0.0145 | 0.0107 | |
| Saturn | 45005-05-13 20:38 G | | 18158931.23 | 18158931.36 | 18158931.51 | 0.0279 | 0.0232 | |
| Jupiter | 45005-11-28 18:58 G | | 18159130.16 | 18159130.29 | 18159130.44 | 0.0503 | 0.0409 | |
| Jupiter | 45012-06-12 10:34 G | | 18161517.71 | 18161517.94 | 18161518.16 | 0.0525 | 0.0058 | |
| Jupiter | 45017-12-03 17:02 G | | 18163518.03 | 18163518.21 | 18163518.41 | 0.0502 | 0.0277 | |
| Saturn | 45018-11-16 02:24 G | | 18163865.36 | 18163865.60 | 18163865.85 | 0.0282 | 0.0068 | |
| Mars | 45023-04-14 20:53 G | | 18165476.18 | 18165476.37 | 18165476.55 | 0.1598 | 0.0019 | |
| Jupiter | 45024-06-17 12:14 G | | 18165905.81 | 18165906.01 | 18165906.21 | 0.0526 | 0.0270 | |
| Jupiter | 45029-12-08 04:34 G | | 18167905.45 | 18167905.69 | 18167905.94 | 0.0501 | 0.0090 | |
| Saturn | 45035-05-21 16:05 G | | 18169895.95 | 18169896.17 | 18169896.41 | 0.0282 | 0.0073 | |
| Neptune | 45036-05-20 22:05 G | | 18170261.26 | 18170261.42 | 18170261.61 | 0.0089 | 0.0065 | |
| Jupiter | 45036-06-22 04:34 G | | 18170293.61 | 18170293.69 | 18170293.77 | 0.0527 | 0.0491 | |
| Neptune | 45037-05-23 16:48 G | | 18170628.99 | 18170629.20 | 18170629.44 | 0.0089 | 0.0042 | |
| Neptune | 45038-05-25 22:34 G | | 18170996.20 | 18170996.44 | 18170996.70 | 0.0089 | 0.0014 | |
| Neptune | 45039-05-28 14:53 G | | 18171363.86 | 18171364.12 | 18171364.39 | 0.0089 | 0.0009 | |

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| Neptune | 45040-05-29 23:31 G | 18171731.27 | 18171731.48 | 18171731.72 | 0.0089 | 0.0038 |
| Neptune | 45041-06-01 10:34 G | 18172098.78 | 18172098.94 | 18172099.16 | 0.0089 | 0.0062 |
| Jupiter | 45041-12-12 15:36 G | 18172292.93 | 18172293.15 | 18172293.37 | 0.0501 | 0.0105 |
| Pluto | 45042-03-02 17:31 G | 18172373.01 | 18172373.23 | 18172373.48 | 0.0078 | 0.0031 |
| Uranus | 45042-07-01 15:22 G | 18172493.94 | 18172494.14 | 18172494.37 | 0.0133 | 0.0066 |
| Uranus | 45043-07-05 15:50 G | 18172862.91 | 18172863.16 | 18172863.42 | 0.0134 | 0.0008 |
| Uranus | 45044-07-09 03:22 G | 18173232.45 | 18173232.64 | 18173232.87 | 0.0134 | 0.0071 |
| Uranus | 45045-07-13 04:48 G | 18173601.60 | 18173601.70 | 18173601.80 | 0.0134 | 0.0123 |
| Saturn | 45048-11-22 19:41 G | 18174830.21 | 18174830.32 | 18174830.46 | 0.0279 | 0.0239 |
| Jupiter | 45053-12-17 08:24 G | 18176680.64 | 18176680.85 | 18176681.06 | 0.0500 | 0.0247 |
| Jupiter | 45059-05-29 02:10 G | 18178669.51 | 18178669.59 | 18178669.67 | 0.0522 | 0.0485 |
| Saturn | 45064-05-15 06:29 G | 18180482.56 | 18180482.77 | 18180482.97 | 0.0280 | 0.0160 |
| Jupiter | 45065-12-21 14:53 G | 18181067.96 | 18181068.12 | 18181068.27 | 0.0500 | 0.0369 |
| Jupiter | 45071-06-02 21:36 G | 18183057.20 | 18183057.40 | 18183057.60 | 0.0523 | 0.0278 |
| Saturn | 45077-11-17 10:19 G | 18185416.68 | 18185416.93 | 18185417.19 | 0.0281 | 0.0006 |
| Jupiter | 45083-06-07 10:19 G | 18187444.72 | 18187444.93 | 18187445.15 | 0.0524 | 0.0134 |
| Uranus | 45084-01-01 21:07 G | 18187653.16 | 18187653.38 | 18187653.60 | 0.0145 | 0.0074 |
| Uranus | 45085-01-06 06:43 G | 18188023.53 | 18188023.78 | 18188024.03 | 0.0145 | 0.0027 |
| Uranus | 45086-01-11 01:55 G | 18188393.40 | 18188393.58 | 18188393.76 | 0.0145 | 0.0100 |
| Jupiter | 45088-11-28 05:31 G | 18189445.62 | 18189445.73 | 18189445.84 | 0.0503 | 0.0437 |
| Saturn | 45094-05-23 08:38 G | 18191447.65 | 18191447.86 | 18191448.07 | 0.0282 | 0.0147 |
| Jupiter | 45095-06-12 14:38 G | 18191832.88 | 18191833.11 | 18191833.34 | 0.0525 | 0.0022 |
| Jupiter | 45100-12-03 12:58 G | 18193832.85 | 18193833.04 | 18193833.24 | 0.0502 | 0.0304 |
| Mars | 45102-04-17 22:34 G | 18194333.42 | 18194333.44 | 18194333.45 | 0.1597 | 0.1588 |
| Saturn | 45106-11-13 00:14 G | 18196003.40 | 18196003.51 | 18196003.66 | 0.0284 | 0.0238 |
| Jupiter | 45107-06-18 06:14 G | 18196220.56 | 18196220.76 | 18196220.98 | 0.0526 | 0.0242 |
| Jupiter | 45112-12-08 02:53 G | 18198220.40 | 18198220.62 | 18198220.84 | 0.0502 | 0.0117 |
| Neptune | 45117-11-20 20:38 G | 18200029.19 | 18200029.36 | 18200029.55 | 0.0088 | 0.0063 |
| Neptune | 45118-11-23 15:36 G | 18200396.93 | 18200397.15 | 18200397.39 | 0.0088 | 0.0041 |
| Jupiter | 45119-06-23 08:10 G | 18200608.73 | 18200608.84 | 18200608.95 | 0.0526 | 0.0458 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 45119-11-25 20:38 G | 18200764.11 | 18200764.36 | 18200764.62 | 0.0088 | 0.0014 |
| Neptune | 45120-11-27 13:55 G | 18201131.82 | 18201132.08 | 18201132.35 | 0.0088 | 0.0009 |
| Neptune | 45121-11-29 21:50 G | 18201499.19 | 18201499.41 | 18201499.65 | 0.0088 | 0.0036 |
| Neptune | 45122-12-02 11:02 G | 18201866.78 | 18201866.96 | 18201867.17 | 0.0088 | 0.0060 |
| Saturn | 45123-05-18 21:07 G | 18202034.15 | 18202034.38 | 18202034.61 | 0.0281 | 0.0084 |
| Neptune | 45123-12-04 23:31 G | 18202234.44 | 18202234.48 | 18202234.53 | 0.0088 | 0.0086 |
| Jupiter | 45124-12-12 19:55 G | 18202608.10 | 18202608.33 | 18202608.57 | 0.0501 | 0.0080 |
| Uranus | 45125-06-28 17:02 G | 18202806.18 | 18202806.21 | 18202806.30 | 0.0133 | 0.0130 |
| Uranus | 45126-07-03 05:31 G | 18203175.53 | 18203175.73 | 18203175.96 | 0.0133 | 0.0066 |
| Uranus | 45127-07-07 05:17 G | 18203544.46 | 18203544.72 | 18203544.98 | 0.0133 | 0.0008 |
| Uranus | 45128-07-10 17:31 G | 18203914.02 | 18203914.23 | 18203914.45 | 0.0134 | 0.0063 |
| Saturn | 45136-11-19 23:02 G | 18206968.23 | 18206968.46 | 18206968.70 | 0.0280 | 0.0084 |
| Jupiter | 45136-12-17 04:05 G | 18206995.47 | 18206995.67 | 18206995.89 | 0.0500 | 0.0222 |
| Jupiter | 45148-12-22 00:58 G | 18211383.38 | 18211383.54 | 18211383.72 | 0.0499 | 0.0346 |
| Saturn | 45153-05-25 23:31 G | 18212999.34 | 18212999.48 | 18212999.63 | 0.0283 | 0.0230 |
| Jupiter | 45154-06-02 13:41 G | 18213371.90 | 18213372.07 | 18213372.25 | 0.0523 | 0.0321 |
| Saturn | 45165-11-14 21:36 G | 18217555.20 | 18217555.40 | 18217555.61 | 0.0283 | 0.0152 |
| Jupiter | 45166-06-07 17:46 G | 18217760.02 | 18217760.24 | 18217760.46 | 0.0524 | 0.0171 |
| Uranus | 45168-01-03 07:55 G | 18218334.60 | 18218334.83 | 18218335.06 | 0.0145 | 0.0058 |
| Uranus | 45169-01-07 17:02 G | 18218704.96 | 18218705.21 | 18218705.47 | 0.0145 | 0.0015 |
| Uranus | 45170-01-12 12:00 G | 18219074.87 | 18219075.00 | 18219075.16 | 0.0145 | 0.0117 |
| Jupiter | 45171-11-28 20:53 G | 18219760.29 | 18219760.37 | 18219760.46 | 0.0504 | 0.0470 |
| Jupiter | 45178-06-12 05:46 G | 18222147.50 | 18222147.74 | 18222147.97 | 0.0524 | 0.0019 |
| Saturn | 45182-05-20 17:31 G | 18223586.00 | 18223586.23 | 18223586.47 | 0.0281 | 0.0004 |
| Jupiter | 45183-12-03 12:43 G | 18224147.87 | 18224148.03 | 18224148.20 | 0.0503 | 0.0337 |
| Jupiter | 45190-06-17 07:41 G | 18226535.61 | 18226535.82 | 18226536.03 | 0.0525 | 0.0202 |
| Saturn | 45195-11-22 19:12 G | 18228520.11 | 18228520.30 | 18228520.50 | 0.0280 | 0.0166 |
| Jupiter | 45195-12-08 07:12 G | 18228535.57 | 18228535.80 | 18228536.04 | 0.0502 | 0.0137 |
| Neptune | 45200-05-21 09:22 G | 18230161.80 | 18230161.89 | 18230162.05 | 0.0089 | 0.0079 |
| Neptune | 45201-05-23 16:05 G | 18230529.01 | 18230529.17 | 18230529.37 | 0.0089 | 0.0062 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 45202-05-26 06:43 G | 18230896.54 | 18230896.78 | 18230897.05 | 0.0089 | 0.0027 |
| Jupiter | 45202-06-21 20:53 G | 18230923.22 | 18230923.37 | 18230923.51 | 0.0526 | 0.0413 |
| Neptune | 45203-05-28 17:46 G | 18231264.00 | 18231264.24 | 18231264.49 | 0.0089 | 0.0009 |
| Pluto | 45203-09-01 22:19 G | 18231360.19 | 18231360.43 | 18231360.70 | 0.0066 | 0.0012 |
| Neptune | 45204-05-30 04:05 G | 18231631.42 | 18231631.67 | 18231631.93 | 0.0089 | 0.0026 |
| Neptune | 45205-06-01 19:41 G | 18231999.10 | 18231999.32 | 18231999.54 | 0.0089 | 0.0043 |
| Neptune | 45206-06-04 01:12 G | 18232366.44 | 18232366.55 | 18232366.70 | 0.0089 | 0.0078 |
| Jupiter | 45207-12-12 15:36 G | 18232922.92 | 18232923.15 | 18232923.38 | 0.0501 | 0.0056 |
| Uranus | 45209-06-29 06:43 G | 18233487.68 | 18233487.78 | 18233487.88 | 0.0133 | 0.0122 |
| Uranus | 45210-07-03 18:43 G | 18233857.06 | 18233857.28 | 18233857.52 | 0.0133 | 0.0055 |
| Saturn | 45211-05-15 15:22 G | 18234173.00 | 18234173.14 | 18234173.29 | 0.0279 | 0.0227 |
| Uranus | 45211-07-07 18:00 G | 18234225.99 | 18234226.25 | 18234226.50 | 0.0133 | 0.0005 |
| Uranus | 45212-07-11 06:29 G | 18234595.59 | 18234595.77 | 18234595.98 | 0.0133 | 0.0082 |
| Jupiter | 45219-12-17 08:53 G | 18237310.65 | 18237310.87 | 18237311.09 | 0.0500 | 0.0190 |
| Saturn | 45224-11-16 14:38 G | 18239106.86 | 18239107.11 | 18239107.36 | 0.0282 | 0.0067 |
| Mars | 45228-04-14 17:02 G | 18240352.10 | 18240352.21 | 18240352.33 | 0.1600 | 0.1248 |
| Jupiter | 45231-12-21 13:26 G | 18241697.88 | 18241698.06 | 18241698.25 | 0.0500 | 0.0315 |
| Jupiter | 45237-06-01 18:58 G | 18243687.12 | 18243687.29 | 18243687.47 | 0.0522 | 0.0355 |
| Saturn | 45241-05-22 13:12 G | 18245137.82 | 18245138.05 | 18245138.28 | 0.0282 | 0.0077 |
| Jupiter | 45243-12-26 07:55 G | 18246085.79 | 18246085.83 | 18246085.88 | 0.0499 | 0.0488 |
| Jupiter | 45249-06-06 06:14 G | 18248074.55 | 18248074.76 | 18248074.98 | 0.0523 | 0.0214 |
| Uranus | 45252-01-03 15:36 G | 18249015.94 | 18249016.15 | 18249016.38 | 0.0145 | 0.0068 |
| Uranus | 45253-01-08 00:14 G | 18249386.26 | 18249386.51 | 18249386.77 | 0.0145 | 0.0033 |
| Uranus | 45254-01-12 20:10 G | 18249756.18 | 18249756.34 | 18249756.53 | 0.0145 | 0.0106 |
| Saturn | 45254-11-24 17:17 G | 18250072.12 | 18250072.22 | 18250072.34 | 0.0279 | 0.0248 |
| Jupiter | 45261-06-11 06:00 G | 18252462.53 | 18252462.75 | 18252462.98 | 0.0524 | 0.0059 |
| Jupiter | 45266-12-02 16:48 G | 18254463.04 | 18254463.20 | 18254463.38 | 0.0503 | 0.0362 |
| Saturn | 45270-05-17 02:10 G | 18255724.39 | 18255724.59 | 18255724.80 | 0.0280 | 0.0153 |
| Jupiter | 45273-06-15 22:19 G | 18256850.20 | 18256850.43 | 18256850.66 | 0.0525 | 0.0162 |
| Jupiter | 45278-12-06 22:19 G | 18258850.22 | 18258850.43 | 18258850.65 | 0.0502 | 0.0172 |

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| Neptune | 45281-11-20 09:22 G | 18259929.84 | 18259929.89 | 18259929.99 | 0.0088 | 0.0084 |
| Neptune | 45282-11-22 15:07 G | 18260296.95 | 18260297.13 | 18260297.36 | 0.0088 | 0.0051 |
| Saturn | 45283-11-19 04:34 G | 18260658.44 | 18260658.69 | 18260658.94 | 0.0281 | 0.0017 |
| Neptune | 45283-11-25 07:26 G | 18260664.57 | 18260664.81 | 18260665.07 | 0.0088 | 0.0033 |
| Neptune | 45284-11-26 16:34 G | 18261031.94 | 18261032.19 | 18261032.44 | 0.0088 | 0.0000 |
| Jupiter | 45285-06-21 00:00 G | 18261238.35 | 18261238.50 | 18261238.65 | 0.0526 | 0.0386 |
| Neptune | 45285-11-29 03:50 G | 18261399.40 | 18261399.66 | 18261399.93 | 0.0088 | 0.0017 |
| Neptune | 45286-12-01 18:00 G | 18261767.05 | 18261767.25 | 18261767.46 | 0.0088 | 0.0050 |
| Neptune | 45287-12-04 00:43 G | 18262134.38 | 18262134.53 | 18262134.72 | 0.0088 | 0.0067 |
| Jupiter | 45290-12-11 19:12 G | 18263238.07 | 18263238.30 | 18263238.54 | 0.0501 | 0.0024 |
| Pluto | 45291-03-06 12:14 G | 18263322.82 | 18263323.01 | 18263323.23 | 0.0077 | 0.0050 |
| Uranus | 45293-06-29 19:41 G | 18264169.23 | 18264169.32 | 18264169.45 | 0.0133 | 0.0120 |
| Uranus | 45294-07-04 08:53 G | 18264538.64 | 18264538.87 | 18264539.11 | 0.0133 | 0.0054 |
| Uranus | 45295-07-08 07:41 G | 18264907.58 | 18264907.82 | 18264908.08 | 0.0133 | 0.0019 |
| Uranus | 45296-07-11 20:53 G | 18265277.17 | 18265277.37 | 18265277.59 | 0.0134 | 0.0074 |
| Saturn | 45300-05-25 00:00 G | 18266689.29 | 18266689.50 | 18266689.71 | 0.0283 | 0.0152 |
| Jupiter | 45302-12-17 00:43 G | 18267625.31 | 18267625.53 | 18267625.76 | 0.0501 | 0.0161 |
| Mars | 45307-04-18 13:12 G | 18269208.91 | 18269209.05 | 18269209.19 | 0.1599 | 0.0944 |
| Saturn | 45312-11-13 22:34 G | 18271245.30 | 18271245.44 | 18271245.59 | 0.0283 | 0.0227 |
| Jupiter | 45314-12-21 22:34 G | 18272013.25 | 18272013.44 | 18272013.62 | 0.0500 | 0.0291 |
| Jupiter | 45320-06-01 07:41 G | 18274001.67 | 18274001.82 | 18274001.97 | 0.0522 | 0.0396 |
| Jupiter | 45326-12-26 08:38 G | 18276400.79 | 18276400.86 | 18276400.95 | 0.0499 | 0.0471 |
| Saturn | 45329-05-19 14:10 G | 18277275.87 | 18277276.09 | 18277276.32 | 0.0280 | 0.0085 |
| Jupiter | 45332-06-06 11:31 G | 18278389.78 | 18278389.98 | 18278390.18 | 0.0523 | 0.0252 |
| Uranus | 45334-12-31 04:48 G | 18279327.69 | 18279327.70 | 18279327.74 | 0.0145 | 0.0144 |
| Uranus | 45336-01-05 04:19 G | 18279697.46 | 18279697.68 | 18279697.92 | 0.0145 | 0.0053 |
| Uranus | 45337-01-09 12:00 G | 18280067.75 | 18280068.00 | 18280068.27 | 0.0145 | 0.0023 |
| Uranus | 45338-01-14 08:38 G | 18280437.74 | 18280437.86 | 18280437.99 | 0.0145 | 0.0124 |
| Saturn | 45342-11-21 18:58 G | 18282210.06 | 18282210.29 | 18282210.52 | 0.0281 | 0.0093 |
| Jupiter | 45344-06-11 04:05 G | 18282777.44 | 18282777.67 | 18282777.91 | 0.0524 | 0.0086 |

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| Jupiter | 45349-12-02 09:22 G | 18284777.76 | 18284777.89 | 18284778.03 | 0.0503 | 0.0401 |
| Jupiter | 45356-06-16 04:34 G | 18287165.47 | 18287165.69 | 18287165.90 | 0.0525 | 0.0140 |
| Saturn | 45359-05-27 04:34 G | 18288240.54 | 18288240.69 | 18288240.84 | 0.0283 | 0.0223 |
| Jupiter | 45361-12-07 06:58 G | 18289165.57 | 18289165.79 | 18289166.01 | 0.0503 | 0.0198 |
| Neptune | 45365-05-23 23:46 G | 18290429.34 | 18290429.49 | 18290429.65 | 0.0089 | 0.0073 |
| Neptune | 45366-05-26 12:00 G | 18290796.80 | 18290797.00 | 18290797.22 | 0.0089 | 0.0046 |
| Neptune | 45367-05-28 20:24 G | 18291164.10 | 18291164.35 | 18291164.61 | 0.0089 | 0.0021 |
| Neptune | 45368-05-30 13:12 G | 18291531.80 | 18291532.05 | 18291532.30 | 0.0089 | 0.0006 |
| Jupiter | 45368-06-21 02:10 G | 18291553.41 | 18291553.59 | 18291553.77 | 0.0525 | 0.0351 |
| Neptune | 45369-06-01 18:14 G | 18291899.02 | 18291899.26 | 18291899.51 | 0.0089 | 0.0031 |
| Neptune | 45370-06-04 12:29 G | 18292266.84 | 18292267.02 | 18292267.23 | 0.0089 | 0.0058 |
| Neptune | 45371-06-06 17:02 G | 18292634.16 | 18292634.21 | 18292634.33 | 0.0089 | 0.0085 |
| Saturn | 45371-11-16 12:00 G | 18292796.80 | 18292797.00 | 18292797.22 | 0.0283 | 0.0154 |
| Jupiter | 45373-12-11 15:07 G | 18293552.89 | 18293553.13 | 18293553.37 | 0.0502 | 0.0006 |
| Uranus | 45377-07-01 09:50 G | 18294850.78 | 18294850.91 | 18294851.06 | 0.0133 | 0.0110 |
| Uranus | 45378-07-05 22:34 G | 18295220.21 | 18295220.44 | 18295220.68 | 0.0133 | 0.0044 |
| Uranus | 45379-07-09 21:22 G | 18295589.14 | 18295589.39 | 18295589.64 | 0.0133 | 0.0016 |
| Jupiter | 45380-06-25 15:22 G | 18295941.08 | 18295941.14 | 18295941.21 | 0.0526 | 0.0501 |
| Uranus | 45380-07-13 10:19 G | 18295958.77 | 18295958.93 | 18295959.13 | 0.0134 | 0.0093 |
| Jupiter | 45385-12-16 12:58 G | 18297940.82 | 18297941.04 | 18297941.26 | 0.0501 | 0.0133 |
| Saturn | 45388-05-21 00:14 G | 18298827.27 | 18298827.51 | 18298827.75 | 0.0281 | 0.0021 |
| Jupiter | 45397-12-20 19:12 G | 18302328.09 | 18302328.30 | 18302328.51 | 0.0500 | 0.0258 |
| Saturn | 45401-11-24 08:24 G | 18303761.66 | 18303761.85 | 18303762.05 | 0.0280 | 0.0164 |
| Jupiter | 45403-06-02 21:07 G | 18304317.25 | 18304317.38 | 18304317.52 | 0.0522 | 0.0424 |
| Jupiter | 45409-12-26 08:53 G | 18306715.78 | 18306715.87 | 18306715.98 | 0.0499 | 0.0448 |
| Jupiter | 45415-06-07 11:31 G | 18308704.79 | 18308704.98 | 18308705.19 | 0.0523 | 0.0279 |
| Saturn | 45417-05-16 09:22 G | 18309413.82 | 18309413.89 | 18309414.00 | 0.0278 | 0.0258 |
| Saturn | 45418-05-29 07:26 G | 18309791.80 | 18309791.81 | 18309791.83 | 0.0283 | 0.0283 |
| Uranus | 45419-01-01 16:48 G | 18310009.14 | 18310009.20 | 18310009.29 | 0.0145 | 0.0138 |
| Uranus | 45420-01-06 17:31 G | 18310379.00 | 18310379.23 | 18310379.46 | 0.0145 | 0.0056 |

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| Uranus | 45421-01-11 00:00 G | 18310749.26 | 18310749.50 | 18310749.76 | 0.0145 | 0.0043 |
| Uranus | 45422-01-15 21:36 G | 18311119.27 | 18311119.40 | 18311119.56 | 0.0145 | 0.0116 |
| Jupiter | 45427-06-12 11:46 G | 18313092.77 | 18313092.99 | 18313093.20 | 0.0524 | 0.0110 |
| Saturn | 45430-11-18 15:50 G | 18314347.92 | 18314348.16 | 18314348.41 | 0.0283 | 0.0084 |
| Jupiter | 45432-12-02 21:36 G | 18315093.28 | 18315093.40 | 18315093.53 | 0.0504 | 0.0425 |
| Jupiter | 45439-06-17 06:14 G | 18317480.53 | 18317480.76 | 18317481.00 | 0.0524 | 0.0116 |
| Jupiter | 45444-12-07 06:14 G | 18319480.55 | 18319480.76 | 18319480.97 | 0.0503 | 0.0221 |
| Neptune | 45446-11-23 23:31 G | 18320197.32 | 18320197.48 | 18320197.67 | 0.0088 | 0.0066 |
| Saturn | 45447-05-24 03:07 G | 18320378.39 | 18320378.63 | 18320378.88 | 0.0281 | 0.0035 |
| Neptune | 45447-11-26 10:34 G | 18320564.75 | 18320564.94 | 18320565.18 | 0.0088 | 0.0047 |
| Neptune | 45448-11-27 21:07 G | 18320932.13 | 18320932.38 | 18320932.65 | 0.0088 | 0.0016 |
| Neptune | 45449-11-30 12:58 G | 18321299.79 | 18321300.04 | 18321300.29 | 0.0088 | 0.0004 |
| Neptune | 45450-12-02 18:43 G | 18321667.04 | 18321667.28 | 18321667.52 | 0.0088 | 0.0034 |
| Jupiter | 45451-06-22 00:14 G | 18321868.34 | 18321868.51 | 18321868.69 | 0.0525 | 0.0327 |
| Pluto | 45451-09-05 00:58 G | 18321943.35 | 18321943.54 | 18321943.78 | 0.0066 | 0.0038 |
| Neptune | 45451-12-05 12:29 G | 18322034.84 | 18322035.02 | 18322035.24 | 0.0088 | 0.0055 |
| Pluto | 45452-09-05 10:19 G | 18322309.81 | 18322309.93 | 18322310.06 | 0.0066 | 0.0057 |
| Neptune | 45452-12-06 17:02 G | 18322402.17 | 18322402.21 | 18322402.29 | 0.0088 | 0.0085 |
| Jupiter | 45456-12-12 01:26 G | 18323868.33 | 18323868.56 | 18323868.79 | 0.0502 | 0.0037 |
| Saturn | 45460-11-25 16:48 G | 18325313.07 | 18325313.20 | 18325313.35 | 0.0280 | 0.0227 |
| Uranus | 45461-07-03 00:14 G | 18325532.37 | 18325532.51 | 18325532.66 | 0.0133 | 0.0108 |
| Uranus | 45462-07-07 12:58 G | 18325901.81 | 18325902.04 | 18325902.30 | 0.0133 | 0.0041 |
| Jupiter | 45463-06-27 08:10 G | 18326256.75 | 18326256.84 | 18326256.94 | 0.0526 | 0.0479 |
| Uranus | 45463-07-11 12:14 G | 18326270.78 | 18326271.01 | 18326271.27 | 0.0133 | 0.0031 |
| Uranus | 45464-07-15 01:26 G | 18326640.38 | 18326640.56 | 18326640.77 | 0.0134 | 0.0087 |
| Jupiter | 45468-12-16 11:46 G | 18328255.75 | 18328255.99 | 18328256.23 | 0.0501 | 0.0097 |
| Saturn | 45476-05-17 07:55 G | 18330964.68 | 18330964.83 | 18330965.00 | 0.0278 | 0.0206 |
| Jupiter | 45480-12-21 02:38 G | 18332643.42 | 18332643.61 | 18332643.81 | 0.0500 | 0.0239 |
| Jupiter | 45486-06-01 21:50 G | 18334632.29 | 18334632.41 | 18334632.53 | 0.0521 | 0.0447 |
| Saturn | 45489-11-19 14:53 G | 18335898.88 | 18335899.12 | 18335899.37 | 0.0283 | 0.0023 |

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| Jupiter | 45492-12-25 20:38 G | 18337031.25 | 18337031.36 | 18337031.48 | 0.0500 | 0.0433 |
| Jupiter | 45498-06-06 20:38 G | 18339020.19 | 18339020.36 | 18339020.54 | 0.0522 | 0.0310 |
| Uranus | 45503-01-03 08:53 G | 18340690.77 | 18340690.87 | 18340691.02 | 0.0145 | 0.0128 |
| Uranus | 45504-01-08 11:02 G | 18341060.73 | 18341060.96 | 18341061.21 | 0.0145 | 0.0039 |
| Uranus | 45505-01-12 17:17 G | 18341430.97 | 18341431.22 | 18341431.48 | 0.0145 | 0.0038 |
| Uranus | 45506-01-17 15:22 G | 18341801.08 | 18341801.14 | 18341801.22 | 0.0145 | 0.0139 |
| Saturn | 45506-05-25 19:55 G | 18341929.09 | 18341929.33 | 18341929.57 | 0.0281 | 0.0088 |
| Jupiter | 45510-06-12 17:31 G | 18343408.00 | 18343408.23 | 18343408.46 | 0.0523 | 0.0130 |
| Mars | 45512-04-18 15:50 G | 18344083.97 | 18344084.16 | 18344084.35 | 0.1602 | 0.0553 |
| Jupiter | 45515-12-03 20:10 G | 18345408.25 | 18345408.34 | 18345408.45 | 0.0504 | 0.0454 |
| Saturn | 45518-11-15 03:22 G | 18346485.59 | 18346485.64 | 18346485.72 | 0.0285 | 0.0275 |
| Mars | 45520-10-17 14:10 G | 18347187.88 | 18347188.09 | 18347188.30 | 0.1931 | 0.0792 |
| Jupiter | 45522-06-17 12:43 G | 18347795.81 | 18347796.03 | 18347796.26 | 0.0525 | 0.0104 |
| Jupiter | 45527-12-08 19:41 G | 18349796.12 | 18349796.32 | 18349796.52 | 0.0503 | 0.0242 |
| Neptune | 45529-05-25 04:48 G | 18350329.64 | 18350329.70 | 18350329.79 | 0.0089 | 0.0085 |
| Neptune | 45530-05-27 11:17 G | 18350696.83 | 18350696.97 | 18350697.17 | 0.0089 | 0.0068 |
| Neptune | 45531-05-30 05:46 G | 18351064.51 | 18351064.74 | 18351064.98 | 0.0089 | 0.0033 |
| Neptune | 45532-05-31 10:19 G | 18351431.69 | 18351431.93 | 18351432.19 | 0.0089 | 0.0016 |
| Neptune | 45533-06-03 04:48 G | 18351799.46 | 18351799.70 | 18351799.96 | 0.0089 | 0.0021 |
| Neptune | 45534-06-05 11:02 G | 18352166.74 | 18352166.96 | 18352167.19 | 0.0089 | 0.0038 |
| Jupiter | 45534-06-22 18:58 G | 18352184.10 | 18352184.29 | 18352184.48 | 0.0526 | 0.0308 |
| Saturn | 45535-05-20 08:53 G | 18352515.68 | 18352515.87 | 18352516.07 | 0.0278 | 0.0155 |
| Neptune | 45535-06-08 02:38 G | 18352534.48 | 18352534.61 | 18352534.79 | 0.0089 | 0.0073 |
| Pluto | 45539-03-10 00:43 G | 18353905.31 | 18353905.53 | 18353905.77 | 0.0078 | 0.0030 |
| Jupiter | 45539-12-13 05:46 G | 18354183.50 | 18354183.74 | 18354183.98 | 0.0502 | 0.0059 |
| Uranus | 45545-07-04 15:36 G | 18356213.99 | 18356214.15 | 18356214.33 | 0.0133 | 0.0096 |
| Jupiter | 45546-06-27 09:07 G | 18356571.78 | 18356571.88 | 18356572.00 | 0.0526 | 0.0459 |
| Uranus | 45546-07-09 04:05 G | 18356583.43 | 18356583.67 | 18356583.92 | 0.0133 | 0.0032 |
| Uranus | 45547-07-13 03:22 G | 18356952.40 | 18356952.64 | 18356952.89 | 0.0133 | 0.0031 |
| Uranus | 45548-07-16 16:19 G | 18357322.02 | 18357322.18 | 18357322.33 | 0.0134 | 0.0105 |

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| Saturn | 45548-11-21 16:05 G | 18357449.94 | 18357450.17 | 18357450.41 | 0.0283 | 0.0030 |
| Jupiter | 45551-12-17 22:48 G | 18358571.23 | 18358571.45 | 18358571.68 | 0.0501 | 0.0075 |
| Jupiter | 45563-12-22 17:02 G | 18362959.00 | 18362959.21 | 18362959.43 | 0.0501 | 0.0226 |
| Saturn | 45565-05-26 11:31 G | 18363479.78 | 18363479.98 | 18363480.20 | 0.0281 | 0.0138 |
| Jupiter | 45569-06-02 11:02 G | 18364947.88 | 18364947.96 | 18364948.05 | 0.0521 | 0.0477 |
| Jupiter | 45575-12-26 23:46 G | 18367346.37 | 18367346.49 | 18367346.62 | 0.0499 | 0.0417 |
| Saturn | 45577-11-15 20:10 G | 18368036.19 | 18368036.34 | 18368036.50 | 0.0285 | 0.0227 |
| Jupiter | 45581-06-07 06:43 G | 18369335.60 | 18369335.78 | 18369335.97 | 0.0523 | 0.0337 |
| Uranus | 45587-01-03 21:50 G | 18371372.29 | 18371372.41 | 18371372.56 | 0.0145 | 0.0123 |
| Uranus | 45588-01-09 01:12 G | 18371742.31 | 18371742.55 | 18371742.79 | 0.0145 | 0.0038 |
| Uranus | 45589-01-13 06:00 G | 18372112.51 | 18372112.75 | 18372112.99 | 0.0145 | 0.0058 |
| Uranus | 45590-01-18 05:17 G | 18372482.64 | 18372482.72 | 18372482.84 | 0.0145 | 0.0132 |
| Jupiter | 45593-06-12 02:38 G | 18373723.40 | 18373723.61 | 18373723.83 | 0.0524 | 0.0146 |
| Saturn | 45594-05-21 05:02 G | 18374066.49 | 18374066.71 | 18374066.94 | 0.0278 | 0.0108 |
| Jupiter | 45598-12-03 14:10 G | 18375724.01 | 18375724.09 | 18375724.18 | 0.0504 | 0.0465 |
| Jupiter | 45605-06-17 07:12 G | 18378111.56 | 18378111.80 | 18378112.02 | 0.0524 | 0.0094 |
| Saturn | 45607-11-23 15:07 G | 18379000.90 | 18379001.13 | 18379001.37 | 0.0283 | 0.0076 |
| Neptune | 45610-11-24 04:48 G | 18380097.69 | 18380097.70 | 18380097.75 | 0.0088 | 0.0087 |
| Jupiter | 45610-12-08 01:41 G | 18380111.37 | 18380111.57 | 18380111.79 | 0.0503 | 0.0252 |
| Neptune | 45611-11-26 12:58 G | 18380464.86 | 18380465.04 | 18380465.27 | 0.0088 | 0.0057 |
| Neptune | 45612-11-28 06:14 G | 18380832.54 | 18380832.76 | 18380833.01 | 0.0088 | 0.0037 |
| Neptune | 45613-11-30 11:46 G | 18381199.73 | 18381199.99 | 18381200.26 | 0.0088 | 0.0005 |
| Neptune | 45614-12-03 06:14 G | 18381567.51 | 18381567.76 | 18381568.03 | 0.0088 | 0.0015 |
| Neptune | 45615-12-05 11:17 G | 18381934.76 | 18381934.97 | 18381935.19 | 0.0088 | 0.0046 |
| Neptune | 45616-12-07 04:05 G | 18382302.52 | 18382302.67 | 18382302.88 | 0.0088 | 0.0065 |
| Jupiter | 45617-06-21 19:26 G | 18382499.11 | 18382499.31 | 18382499.50 | 0.0525 | 0.0286 |
| Jupiter | 45622-12-12 19:41 G | 18384499.10 | 18384499.32 | 18384499.55 | 0.0502 | 0.0076 |
| Saturn | 45624-05-27 09:07 G | 18385030.70 | 18385030.88 | 18385031.06 | 0.0281 | 0.0183 |
| Jupiter | 45629-06-27 00:58 G | 18386887.42 | 18386887.54 | 18386887.67 | 0.0526 | 0.0436 |
| Uranus | 45629-07-05 06:29 G | 18386895.60 | 18386895.77 | 18386895.95 | 0.0133 | 0.0094 |

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| Uranus | 45630-07-09 18:29 G | 18387265.02 | 18387265.27 | 18387265.53 | 0.0133 | 0.0025 |
| Uranus | 45631-07-13 18:14 G | 18387634.04 | 18387634.26 | 18387634.51 | 0.0133 | 0.0043 |
| Uranus | 45632-07-17 06:29 G | 18388003.62 | 18388003.77 | 18388003.95 | 0.0133 | 0.0101 |
| Jupiter | 45634-12-17 12:00 G | 18388886.76 | 18388887.00 | 18388887.24 | 0.0501 | 0.0050 |
| Saturn | 45636-11-16 10:19 G | 18389586.75 | 18389586.93 | 18389587.14 | 0.0285 | 0.0183 |
| Jupiter | 45646-12-21 22:05 G | 18393274.22 | 18393274.42 | 18393274.63 | 0.0500 | 0.0210 |
| Jupiter | 45652-06-01 21:50 G | 18395263.36 | 18395263.41 | 18395263.48 | 0.0522 | 0.0504 |
| Saturn | 45653-05-21 19:12 G | 18395617.06 | 18395617.30 | 18395617.55 | 0.0278 | 0.0063 |
| Jupiter | 45658-12-26 18:43 G | 18397662.16 | 18397662.28 | 18397662.41 | 0.0500 | 0.0416 |
| Jupiter | 45664-06-06 17:02 G | 18399651.05 | 18399651.21 | 18399651.37 | 0.0523 | 0.0361 |
| Saturn | 45666-11-24 06:29 G | 18400551.54 | 18400551.77 | 18400552.01 | 0.0283 | 0.0115 |
| Uranus | 45671-01-04 10:48 G | 18402053.80 | 18402053.95 | 18402054.13 | 0.0145 | 0.0113 |
| Uranus | 45672-01-09 15:50 G | 18402423.92 | 18402424.16 | 18402424.40 | 0.0145 | 0.0026 |
| Uranus | 45673-01-13 19:26 G | 18402794.07 | 18402794.31 | 18402794.57 | 0.0145 | 0.0052 |
| Jupiter | 45676-06-11 18:43 G | 18404039.06 | 18404039.28 | 18404039.51 | 0.0523 | 0.0162 |
| Jupiter | 45681-12-02 22:05 G | 18406039.34 | 18406039.42 | 18406039.50 | 0.0504 | 0.0471 |
| Saturn | 45683-05-29 06:14 G | 18406581.63 | 18406581.76 | 18406581.91 | 0.0281 | 0.0228 |
| Jupiter | 45688-06-16 08:53 G | 18408426.64 | 18408426.87 | 18408427.10 | 0.0524 | 0.0072 |
| Jupiter | 45693-12-07 15:36 G | 18410426.96 | 18410427.15 | 18410427.34 | 0.0503 | 0.0263 |
| Neptune | 45694-05-26 22:48 G | 18410597.37 | 18410597.45 | 18410597.57 | 0.0089 | 0.0081 |
| Neptune | 45695-05-29 03:07 G | 18410964.45 | 18410964.63 | 18410964.86 | 0.0089 | 0.0050 |
| Saturn | 45695-11-18 05:31 G | 18411137.53 | 18411137.73 | 18411137.94 | 0.0285 | 0.0143 |
| Neptune | 45696-05-30 21:07 G | 18411332.14 | 18411332.38 | 18411332.64 | 0.0089 | 0.0028 |
| Neptune | 45697-06-02 03:50 G | 18411699.41 | 18411699.66 | 18411699.91 | 0.0089 | 0.0002 |
| Neptune | 45698-06-04 17:46 G | 18412067.00 | 18412067.24 | 18412067.51 | 0.0089 | 0.0024 |
| Neptune | 45699-06-07 05:02 G | 18412434.52 | 18412434.71 | 18412434.91 | 0.0089 | 0.0054 |
| Neptune | 45700-06-09 14:24 G | 18412801.99 | 18412802.10 | 18412802.27 | 0.0089 | 0.0077 |
| Jupiter | 45700-06-22 13:41 G | 18412814.88 | 18412815.07 | 18412815.27 | 0.0526 | 0.0262 |
| Pluto | 45700-09-08 10:34 G | 18412892.69 | 18412892.94 | 18412893.22 | 0.0066 | 0.0009 |
| Jupiter | 45705-12-13 09:50 G | 18414814.68 | 18414814.91 | 18414815.16 | 0.0502 | 0.0096 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 45712-05-23 11:02 G | 18417167.72 | 18417167.96 | 18417168.21 | 0.0278 | 0.0017 |
| Jupiter | 45712-06-27 10:05 G | 18417202.78 | 18417202.92 | 18417203.08 | 0.0527 | 0.0412 |
| Uranus | 45713-07-06 22:05 G | 18417577.24 | 18417577.42 | 18417577.63 | 0.0133 | 0.0082 |
| Uranus | 45714-07-11 09:22 G | 18417946.64 | 18417946.89 | 18417947.15 | 0.0133 | 0.0019 |
| Uranus | 45715-07-15 09:22 G | 18418315.66 | 18418315.89 | 18418316.13 | 0.0133 | 0.0045 |
| Uranus | 45716-07-18 20:24 G | 18418685.24 | 18418685.35 | 18418685.49 | 0.0133 | 0.0117 |
| Mars | 45717-04-19 04:48 G | 18418959.59 | 18418959.70 | 18418959.81 | 0.1605 | 0.1247 |
| Jupiter | 45717-12-17 18:58 G | 18419202.06 | 18419202.29 | 18419202.52 | 0.0501 | 0.0036 |
| Saturn | 45725-11-25 19:26 G | 18422102.11 | 18422102.31 | 18422102.53 | 0.0283 | 0.0155 |
| Jupiter | 45729-12-22 16:34 G | 18423589.98 | 18423590.19 | 18423590.41 | 0.0500 | 0.0204 |
| Saturn | 45741-05-18 09:07 G | 18427754.80 | 18427754.88 | 18427754.99 | 0.0276 | 0.0253 |
| Jupiter | 45741-12-27 00:43 G | 18427977.40 | 18427977.53 | 18427977.67 | 0.0500 | 0.0411 |
| Saturn | 45742-05-31 00:00 G | 18428132.45 | 18428132.50 | 18428132.56 | 0.0281 | 0.0272 |
| Jupiter | 45747-06-08 08:10 G | 18429966.68 | 18429966.84 | 18429966.99 | 0.0522 | 0.0386 |
| Saturn | 45754-11-20 03:50 G | 18432688.44 | 18432688.66 | 18432688.89 | 0.0285 | 0.0100 |
| Uranus | 45755-01-05 18:29 G | 18432735.12 | 18432735.27 | 18432735.43 | 0.0145 | 0.0116 |
| Uranus | 45756-01-11 00:29 G | 18433105.28 | 18433105.52 | 18433105.77 | 0.0145 | 0.0028 |
| Uranus | 45757-01-15 02:24 G | 18433475.37 | 18433475.60 | 18433475.84 | 0.0145 | 0.0066 |
| Uranus | 45758-01-20 04:19 G | 18433845.65 | 18433845.68 | 18433845.76 | 0.0145 | 0.0141 |
| Jupiter | 45759-06-12 19:55 G | 18434354.12 | 18434354.33 | 18434354.55 | 0.0524 | 0.0187 |
| Jupiter | 45764-12-03 12:00 G | 18436354.95 | 18436355.00 | 18436355.08 | 0.0504 | 0.0481 |
| Saturn | 45771-05-25 11:17 G | 18438718.73 | 18438718.97 | 18438719.20 | 0.0278 | 0.0030 |
| Jupiter | 45771-06-18 02:38 G | 18438742.38 | 18438742.61 | 18438742.83 | 0.0525 | 0.0056 |
| Neptune | 45775-11-26 23:02 G | 18440365.33 | 18440365.46 | 18440365.64 | 0.0088 | 0.0070 |
| Neptune | 45776-11-28 04:34 G | 18440732.49 | 18440732.69 | 18440732.90 | 0.0088 | 0.0052 |
| Jupiter | 45776-12-08 04:34 G | 18440742.49 | 18440742.69 | 18440742.90 | 0.0503 | 0.0273 |
| Neptune | 45777-11-30 23:17 G | 18441100.22 | 18441100.47 | 18441100.73 | 0.0088 | 0.0019 |
| Neptune | 45778-12-03 05:17 G | 18441467.47 | 18441467.72 | 18441467.98 | 0.0088 | 0.0002 |
| Neptune | 45779-12-05 21:22 G | 18441835.15 | 18441835.39 | 18441835.65 | 0.0088 | 0.0031 |
| Neptune | 45780-12-07 06:14 G | 18442202.57 | 18442202.76 | 18442202.98 | 0.0088 | 0.0050 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 45781-12-09 17:46 G | 18442570.15 | 18442570.24 | 18442570.33 | 0.0088 | 0.0082 |
| Jupiter | 45783-06-22 21:07 G | 18443130.16 | 18443130.38 | 18443130.59 | 0.0525 | 0.0237 |
| Saturn | 45784-11-26 14:38 G | 18443652.94 | 18443653.11 | 18443653.29 | 0.0283 | 0.0197 |
| Pluto | 45788-03-12 23:31 G | 18444855.30 | 18444855.48 | 18444855.69 | 0.0077 | 0.0050 |
| Jupiter | 45788-12-12 14:53 G | 18445129.90 | 18445130.12 | 18445130.35 | 0.0502 | 0.0115 |
| Jupiter | 45795-06-27 18:00 G | 18447518.11 | 18447518.25 | 18447518.41 | 0.0526 | 0.0388 |
| Mars | 45796-04-20 22:05 G | 18447816.25 | 18447816.42 | 18447816.60 | 0.1604 | 0.0268 |
| Uranus | 45797-07-07 12:29 G | 18448258.84 | 18448259.02 | 18448259.23 | 0.0133 | 0.0083 |
| Uranus | 45798-07-11 22:48 G | 18448628.20 | 18448628.45 | 18448628.71 | 0.0133 | 0.0012 |
| Uranus | 45799-07-16 00:00 G | 18448997.28 | 18448997.50 | 18448997.73 | 0.0133 | 0.0055 |
| Saturn | 45800-05-20 06:14 G | 18449305.60 | 18449305.76 | 18449305.94 | 0.0276 | 0.0202 |
| Uranus | 45800-07-20 10:19 G | 18449366.82 | 18449366.93 | 18449367.09 | 0.0133 | 0.0114 |
| Jupiter | 45800-12-18 13:12 G | 18449517.82 | 18449518.05 | 18449518.29 | 0.0501 | 0.0017 |
| Jupiter | 45812-12-22 20:38 G | 18453905.14 | 18453905.36 | 18453905.58 | 0.0500 | 0.0190 |
| Saturn | 45813-11-22 00:29 G | 18454239.28 | 18454239.52 | 18454239.77 | 0.0285 | 0.0055 |
| Jupiter | 45824-12-27 16:48 G | 18458293.07 | 18458293.20 | 18458293.34 | 0.0499 | 0.0402 |
| Saturn | 45830-05-27 16:48 G | 18460269.98 | 18460270.20 | 18460270.43 | 0.0278 | 0.0085 |
| Jupiter | 45830-06-08 07:55 G | 18460281.69 | 18460281.83 | 18460281.97 | 0.0523 | 0.0413 |
| Uranus | 45839-01-07 04:19 G | 18463416.51 | 18463416.68 | 18463416.87 | 0.0145 | 0.0106 |
| Uranus | 45840-01-12 11:46 G | 18463786.75 | 18463786.99 | 18463787.24 | 0.0145 | 0.0023 |
| Uranus | 45841-01-16 12:14 G | 18464156.78 | 18464157.01 | 18464157.26 | 0.0145 | 0.0059 |
| Jupiter | 45842-06-13 13:26 G | 18464669.86 | 18464670.06 | 18464670.28 | 0.0524 | 0.0197 |
| Saturn | 45843-11-29 17:31 G | 18465204.11 | 18465204.23 | 18465204.35 | 0.0283 | 0.0243 |
| Jupiter | 45847-12-04 21:36 G | 18466670.36 | 18466670.40 | 18466670.45 | 0.0504 | 0.0494 |
| Jupiter | 45854-06-18 04:05 G | 18469057.43 | 18469057.67 | 18469057.91 | 0.0524 | 0.0033 |
| Saturn | 45859-05-22 05:02 G | 18470856.50 | 18470856.71 | 18470856.93 | 0.0276 | 0.0144 |
| Neptune | 45859-05-30 13:26 G | 18470864.92 | 18470865.06 | 18470865.23 | 0.0089 | 0.0072 |
| Jupiter | 45859-12-09 08:38 G | 18471057.68 | 18471057.86 | 18471058.05 | 0.0503 | 0.0295 |
| Neptune | 45860-05-31 21:50 G | 18471232.19 | 18471232.41 | 18471232.63 | 0.0089 | 0.0040 |
| Neptune | 45861-06-03 10:19 G | 18471599.69 | 18471599.93 | 18471600.20 | 0.0089 | 0.0020 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 45862-06-05 23:17 G | 18471967.23 | 18471967.47 | 18471967.72 | 0.0089 | 0.0013 |
| Neptune | 45863-06-08 06:43 G | 18472334.55 | 18472334.78 | 18472335.04 | 0.0089 | 0.0034 |
| Neptune | 45864-06-09 23:46 G | 18472702.33 | 18472702.49 | 18472702.66 | 0.0089 | 0.0067 |
| Neptune | 45865-06-12 04:48 G | 18473069.64 | 18473069.70 | 18473069.78 | 0.0089 | 0.0086 |
| Jupiter | 45866-06-23 02:38 G | 18473445.41 | 18473445.61 | 18473445.82 | 0.0525 | 0.0205 |
| Jupiter | 45871-12-14 07:26 G | 18475445.59 | 18475445.81 | 18475446.04 | 0.0502 | 0.0141 |
| Saturn | 45872-11-22 19:41 G | 18475790.07 | 18475790.32 | 18475790.58 | 0.0285 | 0.0008 |
| Jupiter | 45878-06-28 00:29 G | 18477833.35 | 18477833.52 | 18477833.70 | 0.0527 | 0.0357 |
| Uranus | 45881-07-09 03:22 G | 18478940.45 | 18478940.64 | 18478940.87 | 0.0133 | 0.0070 |
| Uranus | 45882-07-13 12:43 G | 18479309.77 | 18479310.03 | 18479310.29 | 0.0133 | 0.0009 |
| Uranus | 45883-07-17 14:24 G | 18479678.89 | 18479679.10 | 18479679.33 | 0.0133 | 0.0057 |
| Jupiter | 45883-12-18 15:36 G | 18479832.91 | 18479833.15 | 18479833.39 | 0.0501 | 0.0007 |
| Uranus | 45884-07-20 23:46 G | 18480048.43 | 18480048.49 | 18480048.57 | 0.0134 | 0.0128 |
| Saturn | 45889-05-28 22:34 G | 18481821.24 | 18481821.44 | 18481821.66 | 0.0278 | 0.0146 |
| Jupiter | 45895-12-23 09:22 G | 18484220.68 | 18484220.89 | 18484221.11 | 0.0500 | 0.0178 |
| Saturn | 45901-11-18 01:55 G | 18486376.51 | 18486376.58 | 18486376.65 | 0.0288 | 0.0274 |
| Jupiter | 45907-12-28 18:58 G | 18488608.13 | 18488608.29 | 18488608.44 | 0.0500 | 0.0380 |
| Jupiter | 45913-06-08 20:24 G | 18490597.24 | 18490597.35 | 18490597.48 | 0.0522 | 0.0439 |
| Saturn | 45918-05-24 12:43 G | 18492407.81 | 18492408.03 | 18492408.27 | 0.0277 | 0.0082 |
| Uranus | 45923-01-08 13:41 G | 18494097.92 | 18494098.07 | 18494098.26 | 0.0145 | 0.0112 |
| Uranus | 45924-01-13 22:05 G | 18494468.18 | 18494468.42 | 18494468.67 | 0.0145 | 0.0020 |
| Uranus | 45925-01-17 20:38 G | 18494838.14 | 18494838.36 | 18494838.60 | 0.0145 | 0.0071 |
| Jupiter | 45925-06-13 09:50 G | 18494984.70 | 18494984.91 | 18494985.13 | 0.0523 | 0.0223 |
| Saturn | 45931-11-26 00:00 G | 18497341.26 | 18497341.50 | 18497341.74 | 0.0285 | 0.0049 |
| Jupiter | 45937-06-18 06:00 G | 18499372.52 | 18499372.75 | 18499372.97 | 0.0525 | 0.0010 |
| Neptune | 45940-11-29 15:22 G | 18500632.97 | 18500633.14 | 18500633.34 | 0.0088 | 0.0062 |
| Neptune | 45941-12-01 22:05 G | 18501000.22 | 18501000.42 | 18501000.67 | 0.0088 | 0.0040 |
| Neptune | 45942-12-04 13:12 G | 18501367.79 | 18501368.05 | 18501368.32 | 0.0088 | 0.0011 |
| Jupiter | 45942-12-09 23:02 G | 18501373.28 | 18501373.46 | 18501373.65 | 0.0503 | 0.0313 |
| Neptune | 45943-12-07 00:58 G | 18501735.29 | 18501735.54 | 18501735.79 | 0.0088 | 0.0012 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 45944-12-08 10:34 G | 18502102.72 | 18502102.94 | 18502103.20 | 0.0088 | 0.0041 |
| Neptune | 45945-12-11 02:53 G | 18502470.45 | 18502470.62 | 18502470.80 | 0.0088 | 0.0063 |
| Saturn | 45948-05-31 04:19 G | 18503372.52 | 18503372.68 | 18503372.85 | 0.0279 | 0.0212 |
| Pluto | 45948-09-11 09:07 G | 18503475.69 | 18503475.88 | 18503476.11 | 0.0066 | 0.0037 |
| Jupiter | 45949-06-23 05:46 G | 18503760.52 | 18503760.74 | 18503760.97 | 0.0526 | 0.0172 |
| Pluto | 45949-09-12 18:14 G | 18503842.13 | 18503842.26 | 18503842.41 | 0.0066 | 0.0056 |
| Jupiter | 45954-12-14 03:50 G | 18505760.44 | 18505760.66 | 18505760.89 | 0.0502 | 0.0172 |
| Saturn | 45960-11-19 10:34 G | 18507927.78 | 18507927.94 | 18507928.12 | 0.0287 | 0.0210 |
| Jupiter | 45961-06-28 00:29 G | 18508148.36 | 18508148.52 | 18508148.70 | 0.0526 | 0.0335 |
| Uranus | 45964-07-06 13:26 G | 18509253.01 | 18509253.06 | 18509253.16 | 0.0133 | 0.0128 |
| Uranus | 45965-07-10 17:02 G | 18509622.02 | 18509622.21 | 18509622.43 | 0.0133 | 0.0073 |
| Uranus | 45966-07-15 01:12 G | 18509991.29 | 18509991.55 | 18509991.82 | 0.0133 | 0.0002 |
| Jupiter | 45966-12-18 23:46 G | 18510148.26 | 18510148.49 | 18510148.72 | 0.0501 | 0.0036 |
| Uranus | 45967-07-19 04:34 G | 18510360.48 | 18510360.69 | 18510360.91 | 0.0133 | 0.0065 |
| Uranus | 45968-07-22 12:58 G | 18510729.98 | 18510730.04 | 18510730.15 | 0.0134 | 0.0126 |
| Saturn | 45977-05-26 04:34 G | 18513959.45 | 18513959.69 | 18513959.93 | 0.0277 | 0.0013 |
| Jupiter | 45978-12-23 09:22 G | 18514535.66 | 18514535.89 | 18514536.12 | 0.0501 | 0.0152 |
| Saturn | 45990-11-27 13:55 G | 18518892.87 | 18518893.08 | 18518893.31 | 0.0284 | 0.0113 |
| Jupiter | 45990-12-28 01:26 G | 18518923.41 | 18518923.56 | 18518923.72 | 0.0500 | 0.0361 |
| Jupiter | 45996-06-07 10:05 G | 18520911.83 | 18520911.92 | 18520912.02 | 0.0522 | 0.0478 |

47TH MILLENNIUM CE

This is a list of transits of Moon in the 47th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|------|---|-------|-----|-----|--------|-------|---|
| TRANSIT | | | | | | | | |

TIME

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Mars | 46001-04-22 14:53 G | 18522691.93 | 18522692.12 | 18522692.31 | 0.1607 | 0.0358 |
| Saturn | 46006-05-21 02:38 G | 18524546.49 | 18524546.61 | 18524546.76 | 0.0275 | 0.0231 |
| Uranus | 46007-01-09 04:48 G | 18524779.51 | 18524779.70 | 18524779.91 | 0.0145 | 0.0093 |
| Uranus | 46008-01-14 13:41 G | 18525149.83 | 18525150.07 | 18525150.32 | 0.0145 | 0.0013 |
| Jupiter | 46008-06-12 11:02 G | 18525299.77 | 18525299.96 | 18525300.16 | 0.0523 | 0.0255 |
| Uranus | 46009-01-18 11:31 G | 18525519.76 | 18525519.98 | 18525520.22 | 0.0145 | 0.0071 |
| Saturn | 46019-11-21 20:38 G | 18529479.14 | 18529479.36 | 18529479.59 | 0.0287 | 0.0138 |
| Jupiter | 46020-06-17 09:36 G | 18529687.66 | 18529687.90 | 18529688.14 | 0.0524 | 0.0027 |
| Neptune | 46023-05-30 16:34 G | 18530765.17 | 18530765.19 | 18530765.21 | 0.0089 | 0.0089 |
| Neptune | 46024-06-01 02:53 G | 18531132.42 | 18531132.62 | 18531132.84 | 0.0089 | 0.0055 |
| Neptune | 46025-06-03 17:02 G | 18531499.99 | 18531500.21 | 18531500.44 | 0.0089 | 0.0036 |
| Jupiter | 46025-12-08 14:24 G | 18531687.93 | 18531688.10 | 18531688.27 | 0.0503 | 0.0347 |
| Neptune | 46026-06-05 23:46 G | 18531867.23 | 18531867.49 | 18531867.75 | 0.0089 | 0.0002 |
| Neptune | 46027-06-08 17:17 G | 18532234.98 | 18532235.22 | 18532235.48 | 0.0089 | 0.0018 |
| Neptune | 46028-06-09 21:50 G | 18532602.22 | 18532602.41 | 18532602.64 | 0.0089 | 0.0051 |
| Neptune | 46029-06-12 16:19 G | 18532970.03 | 18532970.18 | 18532970.36 | 0.0089 | 0.0070 |
| Jupiter | 46032-06-22 01:55 G | 18534075.36 | 18534075.58 | 18534075.80 | 0.0525 | 0.0137 |
| Pluto | 46036-03-15 08:38 G | 18535437.63 | 18535437.86 | 18535438.11 | 0.0078 | 0.0027 |
| Saturn | 46036-05-27 20:38 G | 18535511.12 | 18535511.36 | 18535511.60 | 0.0278 | 0.0061 |
| Jupiter | 46037-12-13 11:02 G | 18536075.76 | 18536075.96 | 18536076.17 | 0.0503 | 0.0210 |
| Jupiter | 46044-06-27 03:36 G | 18538463.46 | 18538463.65 | 18538463.84 | 0.0526 | 0.0295 |
| Uranus | 46049-07-11 08:10 G | 18540303.63 | 18540303.84 | 18540304.07 | 0.0133 | 0.0057 |
| Saturn | 46049-11-29 07:12 G | 18540444.63 | 18540444.80 | 18540445.00 | 0.0283 | 0.0187 |
| Jupiter | 46049-12-17 22:19 G | 18540463.19 | 18540463.43 | 18540463.68 | 0.0502 | 0.0064 |
| Uranus | 46050-07-15 15:07 G | 18540672.87 | 18540673.13 | 18540673.39 | 0.0133 | 0.0002 |
| Uranus | 46051-07-19 19:26 G | 18541042.10 | 18541042.31 | 18541042.51 | 0.0134 | 0.0070 |
| Jupiter | 46056-07-01 14:10 G | 18542851.04 | 18542851.09 | 18542851.14 | 0.0527 | 0.0512 |
| Jupiter | 46061-12-22 14:24 G | 18544850.88 | 18544851.10 | 18544851.32 | 0.0500 | 0.0133 |
| Saturn | 46065-05-22 15:36 G | 18546097.95 | 18546098.15 | 18546098.35 | 0.0275 | 0.0158 |

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| Jupiter | 46073-12-27 02:24 G | 18549238.41 | 18549238.60 | 18549238.78 | 0.0500 | 0.0331 |
| Saturn | 46078-11-23 11:17 G | 18551030.73 | 18551030.97 | 18551031.22 | 0.0286 | 0.0056 |
| Jupiter | 46079-06-07 16:19 G | 18551227.15 | 18551227.18 | 18551227.24 | 0.0522 | 0.0511 |
| Mars | 46080-04-24 16:19 G | 18551549.08 | 18551549.18 | 18551549.28 | 0.1606 | 0.1343 |
| Jupiter | 46085-12-31 09:07 G | 18553625.82 | 18553625.88 | 18553625.94 | 0.0499 | 0.0481 |
| Uranus | 46091-01-09 18:14 G | 18555461.07 | 18555461.26 | 18555461.45 | 0.0145 | 0.0097 |
| Jupiter | 46091-06-12 10:19 G | 18555614.74 | 18555614.93 | 18555615.14 | 0.0523 | 0.0287 |
| Uranus | 46092-01-15 03:22 G | 18555831.39 | 18555831.64 | 18555831.89 | 0.0145 | 0.0005 |
| Uranus | 46093-01-19 00:00 G | 18556201.30 | 18556201.50 | 18556201.73 | 0.0145 | 0.0084 |
| Saturn | 46095-05-30 09:07 G | 18557062.66 | 18557062.88 | 18557063.10 | 0.0278 | 0.0135 |
| Jupiter | 46103-06-18 02:53 G | 18560002.39 | 18560002.62 | 18560002.84 | 0.0524 | 0.0071 |
| Neptune | 46104-11-29 16:05 G | 18560533.06 | 18560533.17 | 18560533.32 | 0.0088 | 0.0075 |
| Neptune | 46105-12-02 05:17 G | 18560900.53 | 18560900.72 | 18560900.94 | 0.0088 | 0.0057 |
| Neptune | 46106-12-04 18:29 G | 18561268.04 | 18561268.27 | 18561268.53 | 0.0088 | 0.0023 |
| Neptune | 46107-12-07 02:38 G | 18561635.35 | 18561635.61 | 18561635.89 | 0.0088 | 0.0006 |
| Saturn | 46108-12-02 00:00 G | 18561996.42 | 18561996.50 | 18561996.58 | 0.0283 | 0.0267 |
| Neptune | 46108-12-08 19:41 G | 18562003.09 | 18562003.32 | 18562003.57 | 0.0088 | 0.0029 |
| Jupiter | 46108-12-08 22:05 G | 18562003.27 | 18562003.42 | 18562003.57 | 0.0504 | 0.0380 * |
| Neptune | 46109-12-11 01:12 G | 18562370.33 | 18562370.55 | 18562370.78 | 0.0088 | 0.0045 |
| Neptune | 46110-12-13 19:55 G | 18562738.24 | 18562738.33 | 18562738.46 | 0.0088 | 0.0080 |
| Jupiter | 46115-06-23 00:00 G | 18564390.27 | 18564390.50 | 18564390.73 | 0.0525 | 0.0088 |
| Jupiter | 46120-12-13 08:24 G | 18566390.64 | 18566390.85 | 18566391.07 | 0.0503 | 0.0237 |
| Saturn | 46124-05-25 08:38 G | 18567649.64 | 18567649.86 | 18567650.09 | 0.0276 | 0.0085 |
| Jupiter | 46127-06-27 14:53 G | 18568777.92 | 18568778.12 | 18568778.33 | 0.0526 | 0.0253 |
| Uranus | 46132-07-08 16:05 G | 18570616.04 | 18570616.17 | 18570616.31 | 0.0133 | 0.0115 |
| Jupiter | 46132-12-17 21:50 G | 18570778.19 | 18570778.41 | 18570778.63 | 0.0502 | 0.0098 |
| Uranus | 46133-07-12 21:36 G | 18570985.20 | 18570985.40 | 18570985.63 | 0.0133 | 0.0061 |
| Uranus | 46134-07-17 03:22 G | 18571354.39 | 18571354.64 | 18571354.91 | 0.0133 | 0.0014 |
| Uranus | 46135-07-21 09:07 G | 18571723.69 | 18571723.88 | 18571724.09 | 0.0134 | 0.0076 |
| Saturn | 46137-11-26 08:24 G | 18572582.61 | 18572582.85 | 18572583.08 | 0.0285 | 0.0031 |

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| Jupiter | 46139-07-02 21:22 G | 18573166.31 | 18573166.39 | 18573166.47 | 0.0527 | 0.0489 |
| Jupiter | 46144-12-22 11:31 G | 18575165.75 | 18575165.98 | 18575166.23 | 0.0501 | 0.0101 |
| Saturn | 46154-06-01 20:53 G | 18578614.22 | 18578614.37 | 18578614.54 | 0.0279 | 0.0212 |
| Jupiter | 46156-12-26 19:55 G | 18579553.15 | 18579553.33 | 18579553.52 | 0.0500 | 0.0303 |
| Saturn | 46166-11-21 00:00 G | 18583169.34 | 18583169.50 | 18583169.68 | 0.0287 | 0.0214 |
| Mars | 46167-10-23 22:05 G | 18583506.40 | 18583506.42 | 18583506.45 | 0.1924 | 0.1900 |
| Jupiter | 46168-12-31 18:00 G | 18583941.15 | 18583941.25 | 18583941.35 | 0.0500 | 0.0452 |
| Jupiter | 46174-06-12 01:55 G | 18585929.41 | 18585929.58 | 18585929.75 | 0.0522 | 0.0337 |
| Uranus | 46175-01-11 08:10 G | 18586142.63 | 18586142.84 | 18586143.06 | 0.0145 | 0.0078 |
| Uranus | 46176-01-16 18:00 G | 18586513.00 | 18586513.25 | 18586513.50 | 0.0145 | 0.0001 |
| Uranus | 46177-01-20 14:38 G | 18586882.90 | 18586883.11 | 18586883.32 | 0.0145 | 0.0085 |
| Saturn | 46183-05-28 02:24 G | 18589201.37 | 18589201.60 | 18589201.84 | 0.0277 | 0.0010 |
| Jupiter | 46186-06-17 02:24 G | 18590317.36 | 18590317.60 | 18590317.83 | 0.0523 | 0.0113 |
| Neptune | 46188-06-01 13:12 G | 18591032.92 | 18591033.05 | 18591033.19 | 0.0089 | 0.0075 |
| Neptune | 46189-06-03 18:29 G | 18591400.06 | 18591400.27 | 18591400.51 | 0.0089 | 0.0046 |
| Neptune | 46190-06-06 12:29 G | 18591767.79 | 18591768.02 | 18591768.28 | 0.0089 | 0.0024 |
| Neptune | 46191-06-08 17:17 G | 18592134.97 | 18592135.22 | 18592135.48 | 0.0089 | 0.0007 |
| Jupiter | 46191-12-08 13:26 G | 18592317.93 | 18592318.06 | 18592318.19 | 0.0504 | 0.0417 |
| Neptune | 46192-06-10 10:48 G | 18592502.71 | 18592502.95 | 18592503.20 | 0.0089 | 0.0029 |
| Neptune | 46193-06-12 16:48 G | 18592870.05 | 18592870.20 | 18592870.41 | 0.0089 | 0.0062 |
| Neptune | 46194-06-15 07:12 G | 18593237.71 | 18593237.80 | 18593237.90 | 0.0089 | 0.0083 |
| Saturn | 46196-11-28 08:10 G | 18594134.63 | 18594134.84 | 18594135.06 | 0.0284 | 0.0117 |
| Pluto | 46197-09-15 01:26 G | 18594425.32 | 18594425.56 | 18594425.83 | 0.0066 | 0.0014 |
| Jupiter | 46198-06-21 18:29 G | 18594705.04 | 18594705.27 | 18594705.50 | 0.0525 | 0.0050 |
| Jupiter | 46203-12-14 07:12 G | 18596705.61 | 18596705.80 | 18596705.99 | 0.0503 | 0.0278 |
| Jupiter | 46210-06-27 22:19 G | 18599093.22 | 18599093.43 | 18599093.64 | 0.0525 | 0.0218 |
| Saturn | 46212-05-22 18:43 G | 18599788.16 | 18599788.28 | 18599788.43 | 0.0275 | 0.0229 |
| Jupiter | 46215-12-18 20:38 G | 18601093.13 | 18601093.36 | 18601093.60 | 0.0502 | 0.0131 |
| Uranus | 46216-07-10 05:46 G | 18601297.64 | 18601297.74 | 18601297.84 | 0.0133 | 0.0122 |
| Uranus | 46217-07-14 12:14 G | 18601666.79 | 18601667.01 | 18601667.25 | 0.0133 | 0.0045 |

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| Uranus | 46218-07-18 16:48 G | 18602035.94 | 18602036.20 | 18602036.46 | 0.0133 | 0.0012 |
| Uranus | 46219-07-22 23:31 G | 18602405.29 | 18602405.48 | 18602405.67 | 0.0133 | 0.0083 |
| Jupiter | 46222-07-02 12:00 G | 18603480.88 | 18603481.00 | 18603481.14 | 0.0526 | 0.0443 |
| Saturn | 46225-11-23 14:24 G | 18604720.88 | 18604721.10 | 18604721.34 | 0.0286 | 0.0132 |
| Jupiter | 46227-12-23 08:38 G | 18605480.64 | 18605480.86 | 18605481.09 | 0.0501 | 0.0077 |
| Jupiter | 46239-12-28 05:46 G | 18609868.55 | 18609868.74 | 18609868.94 | 0.0501 | 0.0280 |
| Saturn | 46242-05-30 14:38 G | 18610752.87 | 18610753.11 | 18610753.35 | 0.0277 | 0.0062 |
| Jupiter | 46252-01-01 07:26 G | 18614255.69 | 18614255.81 | 18614255.94 | 0.0500 | 0.0421 |
| Saturn | 46255-12-02 03:36 G | 18615686.47 | 18615686.65 | 18615686.83 | 0.0284 | 0.0197 |
| Jupiter | 46257-06-12 08:10 G | 18616244.68 | 18616244.84 | 18616245.02 | 0.0522 | 0.0364 |
| Uranus | 46259-01-12 17:31 G | 18616824.04 | 18616824.23 | 18616824.45 | 0.0145 | 0.0088 |
| Uranus | 46260-01-18 03:50 G | 18617194.40 | 18617194.66 | 18617194.91 | 0.0145 | 0.0008 |
| Uranus | 46261-01-21 23:31 G | 18617564.28 | 18617564.48 | 18617564.68 | 0.0145 | 0.0093 |
| Jupiter | 46269-06-16 22:48 G | 18620632.24 | 18620632.45 | 18620632.67 | 0.0523 | 0.0149 |
| Neptune | 46269-12-02 12:43 G | 18620800.88 | 18620801.03 | 18620801.19 | 0.0088 | 0.0069 |
| Neptune | 46270-12-04 19:41 G | 18621168.09 | 18621168.32 | 18621168.56 | 0.0088 | 0.0041 |
| Saturn | 46271-05-25 03:50 G | 18621339.48 | 18621339.66 | 18621339.86 | 0.0275 | 0.0165 |
| Neptune | 46271-12-07 13:55 G | 18621535.84 | 18621536.08 | 18621536.34 | 0.0088 | 0.0017 |
| Neptune | 46272-12-08 18:43 G | 18621903.03 | 18621903.28 | 18621903.55 | 0.0088 | 0.0010 |
| Neptune | 46273-12-11 13:26 G | 18622270.84 | 18622271.06 | 18622271.32 | 0.0088 | 0.0036 |
| Jupiter | 46274-12-08 16:48 G | 18622633.11 | 18622633.20 | 18622633.30 | 0.0504 | 0.0456 |
| Neptune | 46274-12-13 19:26 G | 18622638.16 | 18622638.31 | 18622638.51 | 0.0088 | 0.0062 |
| Neptune | 46275-12-16 11:31 G | 18623005.98 | 18623005.98 | 18623006.02 | 0.0088 | 0.0088 |
| Jupiter | 46281-06-22 01:26 G | 18625020.33 | 18625020.56 | 18625020.78 | 0.0524 | 0.0011 |
| Saturn | 46284-11-25 05:02 G | 18626272.48 | 18626272.71 | 18626272.96 | 0.0286 | 0.0054 |
| Pluto | 46285-03-20 07:12 G | 18626387.65 | 18626387.80 | 18626387.99 | 0.0077 | 0.0058 |
| Mars | 46285-04-25 12:00 G | 18626423.81 | 18626424.00 | 18626424.19 | 0.1610 | 0.0265 |
| Jupiter | 46286-12-13 08:24 G | 18627020.66 | 18627020.85 | 18627021.04 | 0.0504 | 0.0312 |
| Jupiter | 46293-06-26 12:14 G | 18629407.79 | 18629408.01 | 18629408.24 | 0.0525 | 0.0176 |
| Jupiter | 46298-12-17 21:07 G | 18631408.17 | 18631408.38 | 18631408.60 | 0.0503 | 0.0158 |

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| Uranus | 46300-07-11 17:02 G | 18631979.05 | 18631979.21 | 18631979.38 | 0.0133 | 0.0104 |
| Saturn | 46301-06-01 17:02 G | 18632304.00 | 18632304.21 | 18632304.45 | 0.0278 | 0.0125 |
| Uranus | 46301-07-16 00:58 G | 18632348.33 | 18632348.54 | 18632348.78 | 0.0133 | 0.0051 |
| Uranus | 46302-07-20 04:19 G | 18632717.43 | 18632717.68 | 18632717.94 | 0.0133 | 0.0026 |
| Uranus | 46303-07-24 12:29 G | 18633086.85 | 18633087.02 | 18633087.22 | 0.0133 | 0.0085 |
| Jupiter | 46305-07-02 14:24 G | 18633795.97 | 18633796.10 | 18633796.24 | 0.0526 | 0.0413 |
| Jupiter | 46310-12-23 15:07 G | 18635795.89 | 18635796.13 | 18635796.37 | 0.0501 | 0.0047 |
| Saturn | 46314-12-04 13:26 G | 18637238.00 | 18637238.06 | 18637238.15 | 0.0283 | 0.0269 |
| Jupiter | 46322-12-27 21:07 G | 18640183.18 | 18640183.38 | 18640183.59 | 0.0500 | 0.0245 |
| Saturn | 46330-05-27 14:10 G | 18642890.87 | 18642891.09 | 18642891.31 | 0.0275 | 0.0105 |
| Jupiter | 46335-01-01 18:00 G | 18644571.12 | 18644571.25 | 18644571.40 | 0.0500 | 0.0393 |
| Jupiter | 46340-06-12 05:46 G | 18646559.60 | 18646559.74 | 18646559.89 | 0.0522 | 0.0393 |
| Uranus | 46343-01-14 02:24 G | 18647505.38 | 18647505.60 | 18647505.82 | 0.0145 | 0.0071 |
| Saturn | 46343-11-28 19:55 G | 18647824.09 | 18647824.33 | 18647824.56 | 0.0286 | 0.0018 |
| Uranus | 46344-01-19 12:29 G | 18647875.77 | 18647876.02 | 18647876.28 | 0.0145 | 0.0005 |
| Uranus | 46345-01-23 08:10 G | 18648245.65 | 18648245.84 | 18648246.05 | 0.0145 | 0.0093 |
| Jupiter | 46352-06-17 06:00 G | 18650947.54 | 18650947.75 | 18650947.97 | 0.0523 | 0.0186 |
| Neptune | 46353-06-05 07:26 G | 18651300.63 | 18651300.81 | 18651301.02 | 0.0089 | 0.0058 |
| Neptune | 46354-06-07 12:29 G | 18651667.81 | 18651668.02 | 18651668.25 | 0.0089 | 0.0041 |
| Neptune | 46355-06-10 05:17 G | 18652035.47 | 18652035.72 | 18652035.99 | 0.0089 | 0.0006 |
| Neptune | 46356-06-11 13:26 G | 18652402.82 | 18652403.06 | 18652403.31 | 0.0089 | 0.0013 |
| Neptune | 46357-06-14 01:41 G | 18652770.38 | 18652770.57 | 18652770.82 | 0.0089 | 0.0049 |
| Jupiter | 46357-12-08 20:53 G | 18652948.31 | 18652948.37 | 18652948.45 | 0.0505 | 0.0484 |
| Neptune | 46358-06-16 14:24 G | 18653137.96 | 18653138.10 | 18653138.29 | 0.0089 | 0.0067 |
| Saturn | 46360-06-02 18:29 G | 18653855.10 | 18653855.27 | 18653855.46 | 0.0278 | 0.0182 |
| Jupiter | 46364-06-21 20:10 G | 18655335.11 | 18655335.34 | 18655335.58 | 0.0524 | 0.0027 |
| Jupiter | 46369-12-13 08:38 G | 18657335.70 | 18657335.86 | 18657336.02 | 0.0503 | 0.0355 |
| Saturn | 46372-11-22 00:29 G | 18658410.38 | 18658410.52 | 18658410.68 | 0.0288 | 0.0236 |
| Jupiter | 46376-06-27 00:14 G | 18659723.29 | 18659723.51 | 18659723.72 | 0.0525 | 0.0155 |
| Jupiter | 46381-12-18 05:46 G | 18661723.53 | 18661723.74 | 18661723.97 | 0.0502 | 0.0190 |

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| Uranus | 46384-07-12 05:17 G | 18662660.60 | 18662660.72 | 18662660.87 | 0.0133 | 0.0113 |
| Uranus | 46385-07-16 14:53 G | 18663029.88 | 18663030.12 | 18663030.36 | 0.0133 | 0.0034 |
| Uranus | 46386-07-20 16:34 G | 18663398.95 | 18663399.19 | 18663399.46 | 0.0133 | 0.0022 |
| Uranus | 46387-07-25 01:55 G | 18663768.42 | 18663768.58 | 18663768.76 | 0.0133 | 0.0094 |
| Jupiter | 46388-07-01 21:50 G | 18664111.25 | 18664111.41 | 18664111.57 | 0.0526 | 0.0394 |
| Saturn | 46389-05-28 17:31 G | 18664441.99 | 18664442.23 | 18664442.47 | 0.0275 | 0.0051 |
| Jupiter | 46393-12-22 12:29 G | 18666110.78 | 18666111.02 | 18666111.25 | 0.0502 | 0.0021 |
| Saturn | 46402-11-30 04:34 G | 18669375.46 | 18669375.69 | 18669375.93 | 0.0285 | 0.0079 |
| Jupiter | 46405-12-27 11:31 G | 18670498.78 | 18670498.98 | 18670499.19 | 0.0501 | 0.0224 |
| Jupiter | 46417-12-31 21:22 G | 18674886.23 | 18674886.39 | 18674886.55 | 0.0500 | 0.0367 |
| Saturn | 46418-05-23 06:29 G | 18675028.76 | 18675028.77 | 18675028.79 | 0.0274 | 0.0273 |
| Saturn | 46419-06-04 21:50 G | 18675406.29 | 18675406.41 | 18675406.55 | 0.0278 | 0.0230 |
| Jupiter | 46423-06-12 17:17 G | 18676875.09 | 18676875.22 | 18676875.37 | 0.0521 | 0.0414 |
| Uranus | 46427-01-14 10:19 G | 18678186.73 | 18678186.93 | 18678187.14 | 0.0145 | 0.0084 |
| Uranus | 46428-01-19 19:55 G | 18678557.08 | 18678557.33 | 18678557.59 | 0.0145 | 0.0013 |
| Uranus | 46429-01-23 15:07 G | 18678926.96 | 18678927.13 | 18678927.34 | 0.0145 | 0.0096 |
| Saturn | 46431-11-24 00:58 G | 18679961.35 | 18679961.54 | 18679961.74 | 0.0288 | 0.0179 |
| Neptune | 46433-12-02 13:55 G | 18680700.96 | 18680701.08 | 18680701.20 | 0.0088 | 0.0079 |
| Neptune | 46434-12-05 08:24 G | 18681068.67 | 18681068.85 | 18681069.04 | 0.0088 | 0.0061 |
| Jupiter | 46435-06-17 07:26 G | 18681262.60 | 18681262.81 | 18681263.03 | 0.0523 | 0.0214 |
| Neptune | 46435-12-07 13:26 G | 18681435.82 | 18681436.06 | 18681436.31 | 0.0088 | 0.0027 |
| Neptune | 46436-12-09 07:26 G | 18681803.55 | 18681803.81 | 18681804.08 | 0.0088 | 0.0009 |
| Neptune | 46437-12-11 14:10 G | 18682170.86 | 18682171.09 | 18682171.34 | 0.0088 | 0.0026 |
| Neptune | 46438-12-14 04:34 G | 18682538.47 | 18682538.69 | 18682538.94 | 0.0088 | 0.0043 |
| Neptune | 46439-12-16 16:19 G | 18682906.08 | 18682906.18 | 18682906.31 | 0.0088 | 0.0077 |
| Pluto | 46445-09-17 18:43 G | 18685008.04 | 18685008.28 | 18685008.52 | 0.0066 | 0.0023 |
| Jupiter | 46447-06-22 11:31 G | 18685650.76 | 18685650.98 | 18685651.20 | 0.0524 | 0.0053 |
| Saturn | 46448-05-29 12:58 G | 18685992.78 | 18685993.04 | 18685993.29 | 0.0275 | 0.0006 |
| Mars | 46451-10-25 02:24 G | 18687236.38 | 18687236.60 | 18687236.82 | 0.1919 | 0.0083 |
| Jupiter | 46452-12-12 21:36 G | 18687651.26 | 18687651.40 | 18687651.56 | 0.0504 | 0.0385 |

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| Jupiter | 46459-06-27 07:12 G | 18690038.57 | 18690038.80 | 18690039.04 | 0.0525 | 0.0136 |
| Saturn | 46461-12-01 03:07 G | 18690926.41 | 18690926.63 | 18690926.86 | 0.0286 | 0.0131 |
| Jupiter | 46464-12-17 06:29 G | 18692038.56 | 18692038.77 | 18692038.99 | 0.0503 | 0.0213 |
| Uranus | 46468-07-12 15:22 G | 18693341.97 | 18693342.14 | 18693342.33 | 0.0133 | 0.0096 |
| Uranus | 46469-07-17 01:55 G | 18693711.36 | 18693711.58 | 18693711.82 | 0.0133 | 0.0043 |
| Uranus | 46470-07-21 03:07 G | 18694080.39 | 18694080.63 | 18694080.89 | 0.0133 | 0.0036 |
| Jupiter | 46471-07-02 00:14 G | 18694426.36 | 18694426.51 | 18694426.67 | 0.0525 | 0.0377 |
| Uranus | 46471-07-25 13:55 G | 18694449.92 | 18694450.08 | 18694450.27 | 0.0134 | 0.0093 |
| Jupiter | 46476-12-22 06:43 G | 18696426.54 | 18696426.78 | 18696427.01 | 0.0502 | 0.0010 |
| Saturn | 46477-05-24 06:00 G | 18696579.63 | 18696579.75 | 18696579.88 | 0.0273 | 0.0230 |
| Saturn | 46478-06-05 21:22 G | 18696957.36 | 18696957.39 | 18696957.45 | 0.0278 | 0.0274 |
| Jupiter | 46488-12-26 13:41 G | 18700813.85 | 18700814.07 | 18700814.30 | 0.0501 | 0.0196 |
| Mars | 46490-04-26 05:17 G | 18701299.58 | 18701299.72 | 18701299.86 | 0.1614 | 0.1017 |
| Saturn | 46490-11-25 01:26 G | 18701512.35 | 18701512.56 | 18701512.77 | 0.0288 | 0.0132 |
| Jupiter | 46501-01-01 07:12 G | 18705201.64 | 18705201.80 | 18705201.98 | 0.0500 | 0.0337 |
| Jupiter | 46506-06-12 21:22 G | 18707190.27 | 18707190.39 | 18707190.53 | 0.0522 | 0.0433 |
| Saturn | 46507-06-01 04:48 G | 18707543.46 | 18707543.70 | 18707543.95 | 0.0275 | 0.0037 |
| Uranus | 46511-01-15 21:22 G | 18708868.17 | 18708868.39 | 18708868.62 | 0.0145 | 0.0065 |
| Uranus | 46512-01-21 06:29 G | 18709238.51 | 18709238.77 | 18709239.03 | 0.0145 | 0.0009 |
| Jupiter | 46513-01-05 22:34 G | 18709589.39 | 18709589.44 | 18709589.50 | 0.0499 | 0.0485 |
| Uranus | 46513-01-25 02:24 G | 18709608.43 | 18709608.60 | 18709608.79 | 0.0145 | 0.0100 |
| Neptune | 46517-06-05 09:22 G | 18711200.80 | 18711200.89 | 18711201.05 | 0.0089 | 0.0078 |
| Neptune | 46518-06-08 01:41 G | 18711568.36 | 18711568.57 | 18711568.80 | 0.0089 | 0.0050 |
| Jupiter | 46518-06-18 00:29 G | 18711578.32 | 18711578.52 | 18711578.72 | 0.0523 | 0.0235 |
| Neptune | 46519-06-10 10:48 G | 18711935.72 | 18711935.95 | 18711936.20 | 0.0089 | 0.0024 |
| Neptune | 46520-06-11 21:36 G | 18712303.14 | 18712303.40 | 18712303.67 | 0.0089 | 0.0004 |
| Saturn | 46520-12-02 18:58 G | 18712477.09 | 18712477.29 | 18712477.50 | 0.0286 | 0.0172 |
| Neptune | 46521-06-14 11:46 G | 18712670.75 | 18712670.99 | 18712671.22 | 0.0089 | 0.0029 |
| Neptune | 46522-06-16 17:46 G | 18713038.07 | 18713038.24 | 18713038.47 | 0.0089 | 0.0057 |
| Neptune | 46523-06-19 11:46 G | 18713405.92 | 18713405.99 | 18713406.11 | 0.0089 | 0.0083 |

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| Jupiter | 46530-06-22 17:17 G | 18715965.99 | 18715966.22 | 18715966.46 | 0.0523 | 0.0080 |
| Pluto | 46533-03-23 05:17 G | 18716970.46 | 18716970.72 | 18716970.99 | 0.0078 | 0.0006 |
| Jupiter | 46535-12-14 01:41 G | 18717966.44 | 18717966.57 | 18717966.71 | 0.0504 | 0.0406 |
| Saturn | 46536-05-26 05:02 G | 18718130.55 | 18718130.71 | 18718130.90 | 0.0273 | 0.0188 |
| Jupiter | 46542-06-27 13:41 G | 18720353.85 | 18720354.07 | 18720354.28 | 0.0525 | 0.0119 |
| Jupiter | 46547-12-19 00:58 G | 18722354.34 | 18722354.54 | 18722354.75 | 0.0502 | 0.0230 |
| Saturn | 46549-11-27 00:29 G | 18723063.29 | 18723063.52 | 18723063.75 | 0.0288 | 0.0094 |
| Uranus | 46552-07-14 02:53 G | 18724023.47 | 18724023.62 | 18724023.79 | 0.0134 | 0.0105 |
| Uranus | 46553-07-18 14:53 G | 18724392.88 | 18724393.12 | 18724393.36 | 0.0134 | 0.0025 |
| Jupiter | 46554-07-02 17:46 G | 18724742.07 | 18724742.24 | 18724742.41 | 0.0526 | 0.0367 |
| Uranus | 46554-07-22 15:07 G | 18724761.88 | 18724762.13 | 18724762.39 | 0.0134 | 0.0028 |
| Uranus | 46555-07-27 02:24 G | 18725131.47 | 18725131.60 | 18725131.78 | 0.0134 | 0.0104 |
| Jupiter | 46559-12-23 11:02 G | 18726741.72 | 18726741.96 | 18726742.21 | 0.0501 | 0.0011 |
| Saturn | 46566-06-02 00:58 G | 18729094.32 | 18729094.54 | 18729094.77 | 0.0275 | 0.0075 |
| Mars | 46569-04-28 23:46 G | 18730156.37 | 18730156.49 | 18730156.62 | 0.1612 | 0.1127 |
| Jupiter | 46571-12-28 04:05 G | 18731129.46 | 18731129.67 | 18731129.88 | 0.0501 | 0.0178 |
| Saturn | 46579-12-04 12:00 G | 18734027.85 | 18734028.00 | 18734028.17 | 0.0286 | 0.0210 |
| Jupiter | 46584-01-01 20:24 G | 18735517.17 | 18735517.35 | 18735517.55 | 0.0500 | 0.0315 |
| Jupiter | 46589-06-12 13:41 G | 18737505.96 | 18737506.07 | 18737506.18 | 0.0521 | 0.0453 |
| Uranus | 46594-01-11 12:29 G | 18739180.01 | 18739180.02 | 18739180.06 | 0.0145 | 0.0144 |
| Uranus | 46595-01-16 10:48 G | 18739549.75 | 18739549.95 | 18739550.18 | 0.0145 | 0.0074 |
| Saturn | 46595-05-27 21:22 G | 18739681.18 | 18739681.39 | 18739681.60 | 0.0273 | 0.0151 |
| Jupiter | 46596-01-06 07:12 G | 18739904.75 | 18739904.80 | 18739904.88 | 0.0500 | 0.0478 |
| Uranus | 46596-01-21 18:58 G | 18739920.04 | 18739920.29 | 18739920.55 | 0.0145 | 0.0025 |
| Uranus | 46597-01-25 14:53 G | 18740289.96 | 18740290.12 | 18740290.31 | 0.0145 | 0.0104 |
| Neptune | 46598-12-05 07:55 G | 18740968.71 | 18740968.83 | 18740968.99 | 0.0088 | 0.0073 |
| Neptune | 46599-12-08 01:12 G | 18741336.34 | 18741336.55 | 18741336.81 | 0.0088 | 0.0044 |
| Neptune | 46600-12-10 10:05 G | 18741703.69 | 18741703.92 | 18741704.18 | 0.0088 | 0.0022 |
| Jupiter | 46601-06-18 06:58 G | 18741893.59 | 18741893.79 | 18741894.00 | 0.0523 | 0.0261 |
| Neptune | 46601-12-12 23:31 G | 18742071.21 | 18742071.48 | 18742071.75 | 0.0088 | 0.0009 |

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| Neptune | 46602-12-15 12:00 G | 18742438.78 | 18742439.00 | 18742439.25 | 0.0088 | 0.0032 |
| Neptune | 46603-12-17 19:55 G | 18742806.16 | 18742806.33 | 18742806.54 | 0.0088 | 0.0062 |
| Neptune | 46604-12-19 13:12 G | 18743174.00 | 18743174.05 | 18743174.14 | 0.0088 | 0.0084 |
| Saturn | 46608-11-28 16:34 G | 18744613.95 | 18744614.19 | 18744614.45 | 0.0288 | 0.0059 |
| Jupiter | 46613-06-23 02:10 G | 18746281.38 | 18746281.59 | 18746281.81 | 0.0524 | 0.0111 |
| Jupiter | 46618-12-14 22:19 G | 18748282.31 | 18748282.43 | 18748282.56 | 0.0503 | 0.0424 |
| Saturn | 46625-06-04 00:29 G | 18750645.31 | 18750645.52 | 18750645.74 | 0.0275 | 0.0112 |
| Jupiter | 46625-06-28 07:12 G | 18750669.57 | 18750669.80 | 18750670.03 | 0.0525 | 0.0108 |
| Jupiter | 46630-12-19 06:43 G | 18752669.57 | 18752669.78 | 18752669.99 | 0.0503 | 0.0239 |
| Uranus | 46636-07-15 13:12 G | 18754704.87 | 18754705.05 | 18754705.26 | 0.0134 | 0.0088 |
| Jupiter | 46637-07-02 22:48 G | 18755057.28 | 18755057.45 | 18755057.62 | 0.0526 | 0.0354 |
| Uranus | 46637-07-20 01:55 G | 18755074.35 | 18755074.58 | 18755074.83 | 0.0134 | 0.0035 |
| Uranus | 46638-07-24 01:55 G | 18755443.34 | 18755443.58 | 18755443.82 | 0.0134 | 0.0045 |
| Saturn | 46638-12-06 09:50 G | 18755578.79 | 18755578.91 | 18755579.03 | 0.0286 | 0.0246 |
| Uranus | 46639-07-28 14:24 G | 18755812.94 | 18755813.10 | 18755813.27 | 0.0134 | 0.0100 |
| Jupiter | 46642-12-24 01:12 G | 18757057.32 | 18757057.55 | 18757057.78 | 0.0502 | 0.0016 |
| Saturn | 46654-05-29 11:31 G | 18761231.77 | 18761231.98 | 18761232.21 | 0.0273 | 0.0117 |
| Jupiter | 46654-12-28 18:14 G | 18761445.03 | 18761445.26 | 18761445.50 | 0.0501 | 0.0160 |
| Jupiter | 46667-01-02 04:19 G | 18765832.50 | 18765832.68 | 18765832.87 | 0.0500 | 0.0297 |
| Saturn | 46667-11-30 03:50 G | 18766164.41 | 18766164.66 | 18766164.92 | 0.0288 | 0.0025 |
| Jupiter | 46672-06-12 18:00 G | 18767821.17 | 18767821.25 | 18767821.35 | 0.0522 | 0.0477 |
| Jupiter | 46679-01-07 01:26 G | 18770220.48 | 18770220.56 | 18770220.65 | 0.0499 | 0.0465 |
| Uranus | 46679-01-18 00:29 G | 18770231.29 | 18770231.52 | 18770231.75 | 0.0145 | 0.0052 |
| Uranus | 46680-01-23 07:55 G | 18770601.57 | 18770601.83 | 18770602.09 | 0.0145 | 0.0021 |
| Uranus | 46681-01-27 04:48 G | 18770971.56 | 18770971.70 | 18770971.87 | 0.0145 | 0.0114 |
| Neptune | 46682-06-08 07:55 G | 18771468.67 | 18771468.83 | 18771469.03 | 0.0089 | 0.0061 |
| Neptune | 46683-06-10 17:46 G | 18771836.03 | 18771836.24 | 18771836.49 | 0.0089 | 0.0043 |
| Saturn | 46684-06-04 20:10 G | 18772196.14 | 18772196.34 | 18772196.56 | 0.0275 | 0.0149 |
| Neptune | 46684-06-12 09:50 G | 18772203.66 | 18772203.91 | 18772204.16 | 0.0089 | 0.0007 |
| Jupiter | 46684-06-17 16:34 G | 18772209.01 | 18772209.19 | 18772209.38 | 0.0523 | 0.0294 |

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| Neptune | 46685-06-14 15:36 G | 18772570.90 | 18772571.15 | 18772571.41 | 0.0089 | 0.0011 |
| Neptune | 46686-06-17 09:36 G | 18772938.70 | 18772938.90 | 18772939.13 | 0.0089 | 0.0047 |
| Neptune | 46687-06-19 14:10 G | 18773305.93 | 18773306.09 | 18773306.28 | 0.0089 | 0.0064 |
| Pluto | 46693-09-21 03:07 G | 18775591.48 | 18775591.63 | 18775591.84 | 0.0066 | 0.0049 |
| Pluto | 46694-09-22 15:07 G | 18775957.95 | 18775958.13 | 18775958.36 | 0.0066 | 0.0039 |
| Jupiter | 46696-06-22 19:55 G | 18776597.11 | 18776597.33 | 18776597.56 | 0.0524 | 0.0131 |
| Saturn | 46697-12-07 05:02 G | 18777129.70 | 18777129.71 | 18777129.73 | 0.0286 | 0.0285 |
| Jupiter | 46701-12-15 01:41 G | 18778597.46 | 18778597.57 | 18778597.69 | 0.0504 | 0.0441 |
| Jupiter | 46708-06-28 08:53 G | 18780984.64 | 18780984.87 | 18780985.10 | 0.0525 | 0.0085 |
| Saturn | 46713-05-31 10:05 G | 18782782.69 | 18782782.92 | 18782783.15 | 0.0273 | 0.0077 |
| Jupiter | 46713-12-19 21:22 G | 18782985.20 | 18782985.39 | 18782985.59 | 0.0503 | 0.0247 |
| Jupiter | 46720-07-03 14:10 G | 18785372.92 | 18785373.09 | 18785373.27 | 0.0526 | 0.0333 |
| Uranus | 46720-07-17 00:58 G | 18785386.38 | 18785386.54 | 18785386.74 | 0.0134 | 0.0096 |
| Uranus | 46721-07-21 14:24 G | 18785755.86 | 18785756.10 | 18785756.36 | 0.0134 | 0.0016 |
| Uranus | 46722-07-25 13:41 G | 18786124.83 | 18786125.07 | 18786125.32 | 0.0134 | 0.0037 |
| Uranus | 46723-07-30 02:10 G | 18786494.48 | 18786494.59 | 18786494.74 | 0.0134 | 0.0114 |
| Jupiter | 46725-12-24 14:38 G | 18787372.87 | 18787373.11 | 18787373.36 | 0.0502 | 0.0027 |
| Saturn | 46726-12-01 23:02 G | 18787715.22 | 18787715.46 | 18787715.70 | 0.0288 | 0.0018 |
| Jupiter | 46732-07-08 05:02 G | 18789760.68 | 18789760.71 | 18789760.74 | 0.0527 | 0.0522 |
| Jupiter | 46737-12-29 01:55 G | 18791760.36 | 18791760.58 | 18791760.80 | 0.0500 | 0.0144 |
| Saturn | 46743-06-07 14:38 G | 18793746.94 | 18793747.11 | 18793747.30 | 0.0275 | 0.0192 |
| Jupiter | 46750-01-02 21:07 G | 18796148.18 | 18796148.38 | 18796148.58 | 0.0500 | 0.0279 |
| Jupiter | 46755-06-14 06:00 G | 18798136.69 | 18798136.75 | 18798136.82 | 0.0522 | 0.0494 |
| Saturn | 46755-11-25 21:22 G | 18798301.31 | 18798301.39 | 18798301.50 | 0.0291 | 0.0267 |
| Jupiter | 46762-01-07 03:36 G | 18800535.55 | 18800535.65 | 18800535.74 | 0.0499 | 0.0454 |
| Uranus | 46762-01-14 12:00 G | 18800542.92 | 18800543.00 | 18800543.13 | 0.0145 | 0.0133 |
| Neptune | 46762-12-06 20:10 G | 18800869.28 | 18800869.34 | 18800869.47 | 0.0088 | 0.0083 |
| Uranus | 46763-01-19 12:58 G | 18800912.83 | 18800913.04 | 18800913.28 | 0.0145 | 0.0062 |
| Neptune | 46763-12-09 06:14 G | 18801236.60 | 18801236.76 | 18801236.95 | 0.0088 | 0.0063 |
| Uranus | 46764-01-24 19:12 G | 18801283.06 | 18801283.30 | 18801283.57 | 0.0145 | 0.0038 |

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| Neptune | 46764-12-10 17:46 G | 18801604.00 | 18801604.24 | 18801604.51 | 0.0088 | 0.0030 |
| Uranus | 46765-01-28 16:48 G | 18801653.07 | 18801653.20 | 18801653.37 | 0.0145 | 0.0115 |
| Neptune | 46765-12-13 08:38 G | 18801971.61 | 18801971.86 | 18801972.11 | 0.0088 | 0.0010 |
| Neptune | 46766-12-15 15:50 G | 18802338.91 | 18802339.16 | 18802339.42 | 0.0088 | 0.0023 |
| Jupiter | 46767-06-19 05:46 G | 18802524.55 | 18802524.74 | 18802524.92 | 0.0522 | 0.0325 |
| Neptune | 46767-12-18 10:05 G | 18802706.70 | 18802706.92 | 18802707.15 | 0.0088 | 0.0042 |
| Neptune | 46768-12-19 14:24 G | 18803074.00 | 18803074.10 | 18803074.26 | 0.0088 | 0.0076 |
| Saturn | 46772-06-01 14:53 G | 18804333.88 | 18804334.12 | 18804334.35 | 0.0274 | 0.0031 |
| Mars | 46774-04-30 07:55 G | 18805031.63 | 18805031.83 | 18805032.03 | 0.1617 | 0.0239 |
| Jupiter | 46779-06-23 18:43 G | 18806912.06 | 18806912.28 | 18806912.50 | 0.0524 | 0.0161 |
| Pluto | 46781-03-26 05:46 G | 18807553.58 | 18807553.74 | 18807553.96 | 0.0078 | 0.0050 |
| Jupiter | 46784-12-14 16:19 G | 18808913.10 | 18808913.18 | 18808913.27 | 0.0504 | 0.0463 |
| Saturn | 46785-12-03 02:10 G | 18809266.36 | 18809266.59 | 18809266.83 | 0.0288 | 0.0070 |
| Jupiter | 46791-06-28 20:38 G | 18811300.13 | 18811300.36 | 18811300.58 | 0.0525 | 0.0059 |
| Jupiter | 46796-12-19 09:50 G | 18813300.70 | 18813300.91 | 18813301.13 | 0.0503 | 0.0252 |
| Saturn | 46801-05-27 11:31 G | 18814920.87 | 18814920.98 | 18814921.10 | 0.0271 | 0.0241 |
| Saturn | 46802-06-08 17:02 G | 18815298.11 | 18815298.21 | 18815298.32 | 0.0275 | 0.0245 |
| Jupiter | 46803-07-03 13:26 G | 18815687.88 | 18815688.06 | 18815688.26 | 0.0526 | 0.0307 |
| Uranus | 46804-07-17 12:00 G | 18816067.80 | 18816068.00 | 18816068.21 | 0.0133 | 0.0079 |
| Uranus | 46805-07-22 01:12 G | 18816437.30 | 18816437.55 | 18816437.80 | 0.0133 | 0.0026 |
| Uranus | 46806-07-25 23:46 G | 18816806.28 | 18816806.49 | 18816806.74 | 0.0134 | 0.0055 |
| Uranus | 46807-07-30 12:58 G | 18817175.91 | 18817176.04 | 18817176.20 | 0.0134 | 0.0108 |
| Jupiter | 46808-12-23 18:29 G | 18817688.04 | 18817688.27 | 18817688.50 | 0.0502 | 0.0044 |
| Saturn | 46814-11-26 18:43 G | 18819852.12 | 18819852.28 | 18819852.47 | 0.0290 | 0.0212 |
| Jupiter | 46815-07-08 16:05 G | 18820076.10 | 18820076.17 | 18820076.24 | 0.0527 | 0.0497 |
| Jupiter | 46820-12-28 14:53 G | 18822075.88 | 18822076.12 | 18822076.35 | 0.0501 | 0.0120 |
| Saturn | 46831-06-03 20:53 G | 18825885.13 | 18825885.37 | 18825885.62 | 0.0274 | 0.0026 |
| Jupiter | 46833-01-01 21:36 G | 18826463.20 | 18826463.40 | 18826463.60 | 0.0500 | 0.0257 |
| Jupiter | 46838-06-13 13:41 G | 18828452.07 | 18828452.07 | 18828452.09 | 0.0521 | 0.0520 |
| Saturn | 46844-12-04 07:12 G | 18830817.59 | 18830817.80 | 18830818.03 | 0.0287 | 0.0128 |

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| Jupiter | 46845-01-06 18:58 G | 18830851.19 | 18830851.29 | 18830851.39 | 0.0499 | 0.0447 |
| Uranus | 46846-01-14 19:55 G | 18831224.27 | 18831224.33 | 18831224.39 | 0.0145 | 0.0140 |
| Neptune | 46846-06-08 15:22 G | 18831369.03 | 18831369.14 | 18831369.29 | 0.0089 | 0.0077 |
| Uranus | 46847-01-19 22:19 G | 18831594.20 | 18831594.43 | 18831594.67 | 0.0145 | 0.0044 |
| Neptune | 46847-06-11 07:41 G | 18831736.63 | 18831736.82 | 18831737.03 | 0.0089 | 0.0053 |
| Uranus | 46848-01-25 03:22 G | 18831964.38 | 18831964.64 | 18831964.90 | 0.0145 | 0.0028 |
| Neptune | 46848-06-12 12:43 G | 18832103.79 | 18832104.03 | 18832104.29 | 0.0089 | 0.0024 |
| Uranus | 46849-01-29 02:24 G | 18832334.48 | 18832334.60 | 18832334.73 | 0.0145 | 0.0123 |
| Neptune | 46849-06-15 07:26 G | 18832471.55 | 18832471.81 | 18832472.06 | 0.0089 | 0.0001 |
| Neptune | 46850-06-17 11:46 G | 18832838.77 | 18832838.99 | 18832839.24 | 0.0089 | 0.0029 |
| Jupiter | 46850-06-17 22:48 G | 18832839.30 | 18832839.45 | 18832839.62 | 0.0523 | 0.0363 |
| Neptune | 46851-06-20 05:17 G | 18833206.51 | 18833206.72 | 18833206.93 | 0.0089 | 0.0054 |
| Neptune | 46852-06-21 12:43 G | 18833573.95 | 18833574.03 | 18833574.14 | 0.0089 | 0.0083 |
| Saturn | 46860-05-28 16:05 G | 18836472.00 | 18836472.17 | 18836472.35 | 0.0272 | 0.0185 |
| Jupiter | 46862-06-23 04:34 G | 18837227.48 | 18837227.69 | 18837227.91 | 0.0524 | 0.0192 |
| Jupiter | 46867-12-14 22:05 G | 18839228.36 | 18839228.42 | 18839228.48 | 0.0504 | 0.0487 |
| Saturn | 46873-11-28 00:29 G | 18841403.31 | 18841403.52 | 18841403.73 | 0.0290 | 0.0148 |
| Jupiter | 46874-06-27 20:24 G | 18841615.11 | 18841615.35 | 18841615.59 | 0.0525 | 0.0037 |
| Jupiter | 46879-12-19 08:38 G | 18843615.68 | 18843615.86 | 18843616.06 | 0.0503 | 0.0282 |
| Jupiter | 46886-07-02 20:24 G | 18846003.17 | 18846003.35 | 18846003.55 | 0.0525 | 0.0281 |
| Uranus | 46888-07-17 23:17 G | 18846749.29 | 18846749.47 | 18846749.67 | 0.0133 | 0.0087 |
| Uranus | 46889-07-22 12:29 G | 18847118.77 | 18847119.02 | 18847119.28 | 0.0133 | 0.0008 |
| Saturn | 46890-06-05 01:55 G | 18847436.35 | 18847436.58 | 18847436.83 | 0.0274 | 0.0088 |
| Uranus | 46890-07-26 11:02 G | 18847487.74 | 18847487.96 | 18847488.21 | 0.0134 | 0.0045 |
| Uranus | 46891-07-31 00:14 G | 18847857.42 | 18847857.51 | 18847857.62 | 0.0134 | 0.0122 |
| Jupiter | 46891-12-24 05:17 G | 18848003.48 | 18848003.72 | 18848003.96 | 0.0502 | 0.0069 |
| Jupiter | 46898-07-07 17:02 G | 18850391.11 | 18850391.21 | 18850391.34 | 0.0526 | 0.0457 |
| Saturn | 46903-12-07 13:26 G | 18852368.88 | 18852369.06 | 18852369.26 | 0.0287 | 0.0196 |
| Jupiter | 46903-12-29 14:10 G | 18852390.85 | 18852391.09 | 18852391.32 | 0.0501 | 0.0092 |
| Jupiter | 46916-01-03 11:02 G | 18856778.76 | 18856778.96 | 18856779.16 | 0.0500 | 0.0234 |

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| Saturn | 46919-06-01 05:46 G | 18858023.53 | 18858023.74 | 18858023.95 | 0.0272 | 0.0123 |
| Neptune | 46927-12-09 13:26 G | 18861136.94 | 18861137.06 | 18861137.20 | 0.0088 | 0.0077 |
| Jupiter | 46928-01-07 16:48 G | 18861166.08 | 18861166.20 | 18861166.34 | 0.0499 | 0.0420 |
| Neptune | 46928-12-11 05:31 G | 18861504.52 | 18861504.73 | 18861504.96 | 0.0088 | 0.0043 |
| Neptune | 46929-12-13 11:31 G | 18861871.74 | 18861871.98 | 18861872.25 | 0.0088 | 0.0024 |
| Uranus | 46930-01-16 02:24 G | 18861905.50 | 18861905.60 | 18861905.73 | 0.0145 | 0.0130 |
| Neptune | 46930-12-16 06:29 G | 18862239.52 | 18862239.77 | 18862240.04 | 0.0088 | 0.0009 |
| Uranus | 46931-01-21 06:29 G | 18862275.56 | 18862275.77 | 18862276.01 | 0.0145 | 0.0057 |
| Neptune | 46931-12-18 11:02 G | 18862606.74 | 18862606.96 | 18862607.23 | 0.0088 | 0.0030 |
| Uranus | 46932-01-26 09:22 G | 18862645.64 | 18862645.89 | 18862646.15 | 0.0145 | 0.0043 |
| Saturn | 46932-11-30 16:19 G | 18862954.95 | 18862955.18 | 18862955.42 | 0.0289 | 0.0072 |
| Neptune | 46932-12-20 05:17 G | 18862974.55 | 18862974.72 | 18862974.93 | 0.0088 | 0.0061 |
| Uranus | 46933-01-30 09:50 G | 18863015.77 | 18863015.91 | 18863016.06 | 0.0145 | 0.0117 |
| Jupiter | 46933-06-18 11:31 G | 18863154.83 | 18863154.98 | 18863155.13 | 0.0522 | 0.0391 |
| Neptune | 46933-12-22 11:46 G | 18863341.92 | 18863341.99 | 18863342.10 | 0.0088 | 0.0082 |
| Pluto | 46942-09-25 18:14 G | 18866541.00 | 18866541.26 | 18866541.53 | 0.0066 | 0.0014 |
| Jupiter | 46945-06-22 23:31 G | 18867542.27 | 18867542.48 | 18867542.69 | 0.0523 | 0.0225 |
| Saturn | 46949-06-07 10:34 G | 18868987.75 | 18868987.94 | 18868988.15 | 0.0275 | 0.0155 |
| Jupiter | 46957-06-27 23:17 G | 18871930.25 | 18871930.47 | 18871930.70 | 0.0524 | 0.0011 |
| Saturn | 46962-12-08 23:17 G | 18873920.39 | 18873920.47 | 18873920.55 | 0.0286 | 0.0271 |
| Jupiter | 46962-12-19 18:14 G | 18873931.08 | 18873931.26 | 18873931.46 | 0.0503 | 0.0307 |
| Jupiter | 46969-07-02 14:38 G | 18876317.90 | 18876318.11 | 18876318.33 | 0.0525 | 0.0237 |
| Uranus | 46972-07-19 08:53 G | 18877430.68 | 18877430.87 | 18877431.10 | 0.0134 | 0.0074 |
| Uranus | 46973-07-23 21:50 G | 18877800.15 | 18877800.41 | 18877800.66 | 0.0134 | 0.0019 |
| Uranus | 46974-07-27 20:38 G | 18878169.15 | 18878169.36 | 18878169.59 | 0.0134 | 0.0061 |
| Jupiter | 46974-12-24 02:38 G | 18878318.38 | 18878318.61 | 18878318.84 | 0.0502 | 0.0095 |
| Uranus | 46975-08-01 09:22 G | 18878538.77 | 18878538.89 | 18878539.04 | 0.0134 | 0.0113 |
| Saturn | 46978-06-02 22:19 G | 18879575.19 | 18879575.43 | 18879575.67 | 0.0273 | 0.0055 |
| Mars | 46979-04-30 08:53 G | 18879906.77 | 18879906.87 | 18879906.97 | 0.1622 | 0.1316 |
| Jupiter | 46981-07-07 10:19 G | 18880705.80 | 18880705.93 | 18880706.07 | 0.0526 | 0.0421 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 46986-12-28 20:53 G | 18882706.14 | 18882706.37 | 18882706.60 | 0.0501 | 0.0053 |
| Saturn | 46991-12-03 13:12 G | 18884506.81 | 18884507.05 | 18884507.30 | 0.0289 | 0.0013 |
| Jupiter | 46999-01-02 04:05 G | 18887093.45 | 18887093.67 | 18887093.90 | 0.0500 | 0.0198 |

48TH MILLENNIUM CE

This is a list of transits of Moon in the 48th millennium CE.

| | FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 47007-05-29 18:14 G | | | 18890162.21 | 18890162.26 | 18890162.32 | 0.0271 | 0.0264 | |
| Saturn | 47008-06-10 02:10 G | | | 18890539.48 | 18890539.59 | 18890539.73 | 0.0276 | 0.0230 | |
| Jupiter | 47011-01-07 19:41 G | | | 18891481.19 | 18891481.32 | 18891481.46 | 0.0500 | 0.0394 | |
| Neptune | 47011-06-12 11:46 G | | | 18891636.82 | 18891636.99 | 18891637.19 | 0.0089 | 0.0062 | |
| Neptune | 47012-06-14 06:00 G | | | 18892004.54 | 18892004.75 | 18892004.99 | 0.0089 | 0.0044 | |
| Neptune | 47013-06-16 11:31 G | | | 18892371.74 | 18892371.98 | 18892372.23 | 0.0089 | 0.0008 | |
| Uranus | 47014-01-17 08:10 G | | | 18892586.78 | 18892586.84 | 18892586.95 | 0.0145 | 0.0136 | |
| Neptune | 47014-06-19 03:50 G | | | 18892739.40 | 18892739.66 | 18892739.92 | 0.0089 | 0.0010 | |
| Uranus | 47015-01-22 14:10 G | | | 18892956.86 | 18892957.09 | 18892957.33 | 0.0145 | 0.0042 | |
| Neptune | 47015-06-21 12:00 G | | | 18893106.81 | 18893107.00 | 18893107.23 | 0.0089 | 0.0046 | |
| Uranus | 47016-01-27 15:07 G | | | 18893326.88 | 18893327.13 | 18893327.40 | 0.0145 | 0.0030 | |
| Jupiter | 47016-06-18 00:58 G | | | 18893469.42 | 18893469.54 | 18893469.68 | 0.0521 | 0.0432 | |
| Neptune | 47016-06-22 23:46 G | | | 18893474.31 | 18893474.49 | 18893474.67 | 0.0089 | 0.0065 | |
| Uranus | 47017-01-31 17:17 G | | | 18893697.12 | 18893697.22 | 18893697.35 | 0.0145 | 0.0127 | |
| Saturn | 47020-11-27 13:26 G | | | 18895092.94 | 18895093.06 | 18895093.19 | 0.0290 | 0.0250 | |
| Jupiter | 47028-06-22 22:19 G | | | 18897857.24 | 18897857.43 | 18897857.62 | 0.0523 | 0.0272 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 47030-03-31 11:46 G | 18898503.83 | 18898503.99 | 18898504.18 | 0.0077 | 0.0057 |
| Saturn | 47037-06-05 11:31 G | 18901126.73 | 18901126.98 | 18901127.23 | 0.0274 | 0.0017 |
| Jupiter | 47040-06-27 16:19 G | 18902244.94 | 18902245.18 | 18902245.42 | 0.0524 | 0.0034 |
| Jupiter | 47045-12-19 09:07 G | 18904245.71 | 18904245.88 | 18904246.05 | 0.0504 | 0.0347 |
| Saturn | 47050-12-06 07:41 G | 18906058.58 | 18906058.82 | 18906059.06 | 0.0288 | 0.0102 |
| Jupiter | 47052-07-02 13:55 G | 18906632.87 | 18906633.08 | 18906633.28 | 0.0525 | 0.0206 |
| Uranus | 47056-07-20 18:58 G | 18908112.10 | 18908112.29 | 18908112.49 | 0.0134 | 0.0080 |
| Uranus | 47057-07-25 07:12 G | 18908481.54 | 18908481.80 | 18908482.06 | 0.0134 | 0.0003 |
| Jupiter | 47057-12-24 06:00 G | 18908633.52 | 18908633.75 | 18908633.97 | 0.0503 | 0.0136 |
| Mars | 47058-05-03 05:31 G | 18908763.55 | 18908763.73 | 18908763.90 | 0.1620 | 0.0506 |
| Uranus | 47058-07-29 06:58 G | 18908850.57 | 18908850.79 | 18908851.03 | 0.0134 | 0.0050 |
| Uranus | 47059-08-02 19:12 G | 18909220.24 | 18909220.30 | 18909220.38 | 0.0134 | 0.0128 |
| Jupiter | 47064-07-07 14:53 G | 18911020.96 | 18911021.12 | 18911021.29 | 0.0526 | 0.0380 |
| Saturn | 47066-05-31 09:07 G | 18911713.72 | 18911713.88 | 18911714.06 | 0.0272 | 0.0193 |
| Jupiter | 47069-12-28 13:26 G | 18913020.82 | 18913021.06 | 18913021.30 | 0.0502 | 0.0014 |
| Saturn | 47079-11-30 12:00 G | 18916644.81 | 18916645.00 | 18916645.21 | 0.0290 | 0.0158 |
| Jupiter | 47082-01-02 08:10 G | 18917408.63 | 18917408.84 | 18917409.06 | 0.0501 | 0.0169 |
| Neptune | 47091-12-10 02:10 G | 18921037.54 | 18921037.59 | 18921037.68 | 0.0088 | 0.0085 |
| Neptune | 47092-12-11 07:55 G | 18921404.66 | 18921404.83 | 18921405.03 | 0.0088 | 0.0063 |
| Neptune | 47093-12-14 03:22 G | 18921772.40 | 18921772.64 | 18921772.89 | 0.0088 | 0.0032 |
| Jupiter | 47094-01-06 21:50 G | 18921796.25 | 18921796.41 | 18921796.58 | 0.0500 | 0.0369 |
| Neptune | 47094-12-16 08:53 G | 18922139.61 | 18922139.87 | 18922140.12 | 0.0088 | 0.0011 |
| Neptune | 47095-12-19 02:10 G | 18922507.35 | 18922507.59 | 18922507.87 | 0.0088 | 0.0022 |
| Saturn | 47096-06-06 20:53 G | 18922678.13 | 18922678.37 | 18922678.61 | 0.0274 | 0.0089 |
| Neptune | 47096-12-20 10:19 G | 18922874.73 | 18922874.93 | 18922875.16 | 0.0088 | 0.0043 |
| Neptune | 47097-12-22 23:31 G | 18923242.37 | 18923242.48 | 18923242.65 | 0.0088 | 0.0075 |
| Uranus | 47098-01-17 18:29 G | 18923268.16 | 18923268.27 | 18923268.41 | 0.0144 | 0.0126 |
| Mars | 47098-10-31 04:34 G | 18923554.52 | 18923554.69 | 18923554.85 | 0.1911 | 0.0871 |
| Uranus | 47099-01-23 01:12 G | 18923638.32 | 18923638.55 | 18923638.78 | 0.0145 | 0.0051 |
| Jupiter | 47099-06-18 02:24 G | 18923784.52 | 18923784.60 | 18923784.69 | 0.0521 | 0.0483 |

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| Uranus | 47100-01-28 00:14 G | 18924008.26 | 18924008.51 | 18924008.77 | 0.0145 | 0.0047 |
| Uranus | 47101-02-02 03:22 G | 18924378.52 | 18924378.64 | 18924378.79 | 0.0144 | 0.0120 |
| Saturn | 47109-12-09 00:00 G | 18927610.32 | 18927610.50 | 18927610.70 | 0.0287 | 0.0196 |
| Jupiter | 47111-06-23 19:55 G | 18928172.15 | 18928172.33 | 18928172.53 | 0.0523 | 0.0308 |
| Jupiter | 47123-06-28 16:05 G | 18932559.95 | 18932560.17 | 18932560.40 | 0.0524 | 0.0071 |
| Saturn | 47125-06-03 01:26 G | 18933265.36 | 18933265.56 | 18933265.78 | 0.0272 | 0.0124 |
| Jupiter | 47128-12-19 13:41 G | 18934560.93 | 18934561.07 | 18934561.23 | 0.0504 | 0.0379 |
| Jupiter | 47135-07-03 14:53 G | 18936947.89 | 18936948.12 | 18936948.34 | 0.0524 | 0.0162 |
| Saturn | 47138-12-03 11:46 G | 18938196.76 | 18938196.99 | 18938197.22 | 0.0289 | 0.0066 |
| Uranus | 47140-07-22 04:05 G | 18938793.48 | 18938793.67 | 18938793.90 | 0.0134 | 0.0070 |
| Jupiter | 47140-12-23 23:46 G | 18938948.27 | 18938948.49 | 18938948.72 | 0.0503 | 0.0171 |
| Uranus | 47141-07-26 15:22 G | 18939162.88 | 18939163.14 | 18939163.40 | 0.0134 | 0.0013 |
| Uranus | 47142-07-30 15:50 G | 18939531.96 | 18939532.16 | 18939532.38 | 0.0134 | 0.0066 |
| Uranus | 47143-08-04 03:07 G | 18939901.53 | 18939901.63 | 18939901.77 | 0.0134 | 0.0118 |
| Jupiter | 47147-07-08 01:26 G | 18941335.39 | 18941335.56 | 18941335.74 | 0.0525 | 0.0332 |
| Jupiter | 47152-12-28 18:58 G | 18943336.07 | 18943336.29 | 18943336.52 | 0.0502 | 0.0022 |
| Saturn | 47155-06-10 07:41 G | 18944229.63 | 18944229.82 | 18944230.02 | 0.0275 | 0.0160 |
| Jupiter | 47159-07-13 06:14 G | 18945723.71 | 18945723.76 | 18945723.82 | 0.0526 | 0.0508 |
| Jupiter | 47165-01-02 04:48 G | 18947723.47 | 18947723.70 | 18947723.94 | 0.0501 | 0.0129 |
| Saturn | 47168-12-10 17:17 G | 18949162.19 | 18949162.22 | 18949162.26 | 0.0287 | 0.0283 |
| Neptune | 47175-06-13 04:48 G | 18951537.60 | 18951537.70 | 18951537.85 | 0.0089 | 0.0078 |
| Neptune | 47176-06-14 10:34 G | 18951904.77 | 18951904.94 | 18951905.16 | 0.0089 | 0.0056 |
| Jupiter | 47177-01-06 15:50 G | 18952111.00 | 18952111.16 | 18952111.33 | 0.0500 | 0.0336 |
| Neptune | 47177-06-17 01:26 G | 18952272.32 | 18952272.56 | 18952272.83 | 0.0089 | 0.0023 |
| Neptune | 47178-06-19 11:46 G | 18952639.74 | 18952639.99 | 18952640.23 | 0.0089 | 0.0001 |
| Neptune | 47179-06-21 22:05 G | 18953007.17 | 18953007.42 | 18953007.67 | 0.0089 | 0.0031 |
| Neptune | 47180-06-23 12:43 G | 18953374.85 | 18953375.03 | 18953375.25 | 0.0089 | 0.0053 |
| Neptune | 47181-06-25 18:43 G | 18953742.22 | 18953742.28 | 18953742.39 | 0.0089 | 0.0085 |
| Uranus | 47182-01-19 04:48 G | 18953949.58 | 18953949.70 | 18953949.84 | 0.0144 | 0.0125 |
| Uranus | 47183-01-24 12:14 G | 18954319.78 | 18954320.01 | 18954320.26 | 0.0144 | 0.0034 |

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| Uranus | 47184-01-29 10:34 G | 18954689.69 | 18954689.94 | 18954690.20 | 0.0144 | 0.0038 |
| Saturn | 47184-06-04 13:26 G | 18954816.82 | 18954817.06 | 18954817.30 | 0.0273 | 0.0056 |
| Uranus | 47185-02-02 14:53 G | 18955060.07 | 18955060.12 | 18955060.23 | 0.0144 | 0.0137 |
| Pluto | 47190-09-29 06:58 G | 18957124.53 | 18957124.79 | 18957125.04 | 0.0066 | 0.0001 |
| Jupiter | 47194-06-22 19:55 G | 18958487.17 | 18958487.33 | 18958487.50 | 0.0522 | 0.0349 |
| Saturn | 47197-12-05 06:58 G | 18959748.54 | 18959748.79 | 18959749.03 | 0.0289 | 0.0018 |
| Jupiter | 47206-06-27 15:07 G | 18962874.89 | 18962875.13 | 18962875.36 | 0.0523 | 0.0115 |
| Jupiter | 47211-12-19 09:36 G | 18964875.77 | 18964875.90 | 18964876.05 | 0.0505 | 0.0407 |
| Saturn | 47213-05-30 09:36 G | 18965403.86 | 18965403.90 | 18965403.97 | 0.0271 | 0.0263 |
| Saturn | 47214-06-11 19:12 G | 18965781.19 | 18965781.30 | 18965781.45 | 0.0275 | 0.0229 |
| Jupiter | 47218-07-02 06:14 G | 18967262.54 | 18967262.76 | 18967262.98 | 0.0524 | 0.0119 |
| Jupiter | 47223-12-24 03:22 G | 18969263.44 | 18969263.64 | 18969263.85 | 0.0503 | 0.0212 |
| Uranus | 47224-07-22 13:55 G | 18969474.89 | 18969475.08 | 18969475.30 | 0.0134 | 0.0073 |
| Uranus | 47225-07-27 00:14 G | 18969844.26 | 18969844.51 | 18969844.77 | 0.0134 | 0.0003 |
| Uranus | 47226-07-31 02:24 G | 18970213.38 | 18970213.60 | 18970213.83 | 0.0134 | 0.0056 |
| Saturn | 47226-11-29 04:34 G | 18970334.58 | 18970334.69 | 18970334.83 | 0.0291 | 0.0248 |
| Jupiter | 47230-07-07 12:14 G | 18971650.82 | 18971651.01 | 18971651.20 | 0.0526 | 0.0291 |
| Jupiter | 47235-12-28 16:19 G | 18973650.94 | 18973651.18 | 18973651.42 | 0.0502 | 0.0059 |
| Jupiter | 47242-07-12 03:50 G | 18976038.56 | 18976038.66 | 18976038.76 | 0.0526 | 0.0473 |
| Saturn | 47243-06-06 17:17 G | 18976367.97 | 18976368.22 | 18976368.47 | 0.0273 | 0.0004 |
| Jupiter | 47248-01-02 04:34 G | 18978038.46 | 18978038.69 | 18978038.91 | 0.0501 | 0.0099 |
| Saturn | 47256-12-06 16:34 G | 18981299.96 | 18981300.19 | 18981300.44 | 0.0288 | 0.0097 |
| Neptune | 47256-12-12 00:00 G | 18981305.41 | 18981305.50 | 18981305.65 | 0.0088 | 0.0079 |
| Neptune | 47257-12-14 06:14 G | 18981672.56 | 18981672.76 | 18981673.00 | 0.0088 | 0.0044 |
| Neptune | 47258-12-16 23:17 G | 18982040.22 | 18982040.47 | 18982040.74 | 0.0088 | 0.0024 |
| Neptune | 47259-12-19 08:24 G | 18982407.60 | 18982407.85 | 18982408.11 | 0.0088 | 0.0010 |
| Jupiter | 47260-01-07 00:43 G | 18982426.35 | 18982426.53 | 18982426.71 | 0.0501 | 0.0318 |
| Neptune | 47260-12-20 20:24 G | 18982775.10 | 18982775.35 | 18982775.61 | 0.0088 | 0.0029 |
| Neptune | 47261-12-23 10:19 G | 18983142.78 | 18983142.93 | 18983143.13 | 0.0088 | 0.0063 |
| Neptune | 47262-12-25 18:00 G | 18983510.17 | 18983510.25 | 18983510.37 | 0.0088 | 0.0081 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Mars | 47263-05-03 20:53 G | 18983639.19 | 18983639.37 | 18983639.55 | 0.1625 | 0.0431 |
| Uranus | 47266-01-19 16:19 G | 18984631.05 | 18984631.18 | 18984631.35 | 0.0144 | 0.0117 |
| Uranus | 47267-01-25 00:43 G | 18985001.30 | 18985001.53 | 18985001.79 | 0.0144 | 0.0040 |
| Uranus | 47268-01-29 21:36 G | 18985371.17 | 18985371.40 | 18985371.66 | 0.0144 | 0.0058 |
| Uranus | 47269-02-03 03:22 G | 18985741.55 | 18985741.64 | 18985741.77 | 0.0144 | 0.0130 |
| Saturn | 47272-05-31 17:17 G | 18986955.08 | 18986955.22 | 18986955.37 | 0.0271 | 0.0209 |
| Jupiter | 47277-06-21 22:19 G | 18988802.28 | 18988802.43 | 18988802.60 | 0.0522 | 0.0387 |
| Pluto | 47278-04-02 11:31 G | 18989086.76 | 18989086.98 | 18989087.22 | 0.0078 | 0.0035 |
| Saturn | 47285-11-30 19:41 G | 18991886.14 | 18991886.32 | 18991886.53 | 0.0291 | 0.0170 |
| Jupiter | 47289-06-26 15:07 G | 18993189.91 | 18993190.13 | 18993190.35 | 0.0523 | 0.0147 |
| Jupiter | 47294-12-18 16:34 G | 18995191.09 | 18995191.19 | 18995191.31 | 0.0504 | 0.0440 |
| Jupiter | 47301-07-02 19:55 G | 18997578.10 | 18997578.33 | 18997578.55 | 0.0524 | 0.0088 |
| Saturn | 47302-06-08 15:50 G | 18997918.92 | 18997919.16 | 18997919.41 | 0.0273 | 0.0055 |
| Jupiter | 47306-12-24 04:48 G | 18999578.49 | 18999578.70 | 18999578.92 | 0.0504 | 0.0242 |
| Uranus | 47307-07-20 20:24 G | 18999787.31 | 18999787.35 | 18999787.40 | 0.0134 | 0.0131 |
| Uranus | 47308-07-23 23:46 G | 19000156.29 | 19000156.49 | 19000156.72 | 0.0134 | 0.0065 |
| Uranus | 47309-07-28 08:24 G | 19000525.59 | 19000525.85 | 19000526.11 | 0.0134 | 0.0005 |
| Uranus | 47310-08-01 11:31 G | 19000894.78 | 19000894.98 | 19000895.19 | 0.0134 | 0.0072 |
| Uranus | 47311-08-05 20:24 G | 19001264.27 | 19001264.35 | 19001264.47 | 0.0134 | 0.0124 |
| Jupiter | 47313-07-07 09:50 G | 19001965.71 | 19001965.91 | 19001966.12 | 0.0525 | 0.0255 |
| Saturn | 47315-12-09 20:24 G | 19002851.15 | 19002851.35 | 19002851.55 | 0.0288 | 0.0168 |
| Jupiter | 47318-12-28 19:55 G | 19003966.11 | 19003966.33 | 19003966.56 | 0.0503 | 0.0092 |
| Jupiter | 47325-07-12 09:36 G | 19006353.79 | 19006353.90 | 19006354.03 | 0.0526 | 0.0442 |
| Jupiter | 47331-01-02 16:34 G | 19008353.95 | 19008354.19 | 19008354.43 | 0.0502 | 0.0077 |
| Saturn | 47331-06-03 22:19 G | 19008506.24 | 19008506.43 | 19008506.63 | 0.0271 | 0.0161 |
| Neptune | 47340-06-15 01:12 G | 19011805.39 | 19011805.55 | 19011805.77 | 0.0089 | 0.0062 |
| Neptune | 47341-06-17 12:29 G | 19012172.82 | 19012173.02 | 19012173.26 | 0.0089 | 0.0042 |
| Mars | 47342-05-06 19:26 G | 19012496.23 | 19012496.31 | 19012496.38 | 0.1623 | 0.1468 |
| Neptune | 47342-06-19 21:36 G | 19012540.14 | 19012540.40 | 19012540.67 | 0.0089 | 0.0009 |
| Jupiter | 47343-01-06 21:36 G | 19012741.21 | 19012741.40 | 19012741.60 | 0.0500 | 0.0289 |

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| Neptune | 47343-06-22 13:12 G | 19012907.80 | 19012908.05 | 19012908.30 | 0.0089 | 0.0012 |
| Neptune | 47344-06-23 18:14 G | 19013275.05 | 19013275.26 | 19013275.49 | 0.0089 | 0.0046 |
| Saturn | 47344-12-03 05:17 G | 19013437.49 | 19013437.72 | 19013437.95 | 0.0291 | 0.0101 |
| Neptune | 47345-06-26 12:29 G | 19013642.86 | 19013643.02 | 19013643.20 | 0.0089 | 0.0066 |
| Uranus | 47350-01-21 01:41 G | 19015312.41 | 19015312.57 | 19015312.72 | 0.0144 | 0.0114 |
| Uranus | 47351-01-26 10:19 G | 19015682.69 | 19015682.93 | 19015683.19 | 0.0144 | 0.0025 |
| Uranus | 47352-01-31 06:29 G | 19016052.54 | 19016052.77 | 19016053.03 | 0.0144 | 0.0048 |
| Jupiter | 47355-01-11 19:55 G | 19017129.32 | 19017129.33 | 19017129.36 | 0.0499 | 0.0497 |
| Jupiter | 47360-06-22 02:38 G | 19019117.48 | 19019117.61 | 19019117.75 | 0.0522 | 0.0415 |
| Saturn | 47361-06-09 17:02 G | 19019469.99 | 19019470.21 | 19019470.43 | 0.0273 | 0.0104 |
| Jupiter | 47372-06-27 06:00 G | 19023505.53 | 19023505.75 | 19023505.97 | 0.0523 | 0.0161 |
| Saturn | 47374-12-11 00:14 G | 19024402.38 | 19024402.51 | 19024402.66 | 0.0288 | 0.0234 |
| Jupiter | 47377-12-18 20:24 G | 19025506.26 | 19025506.35 | 19025506.45 | 0.0505 | 0.0463 |
| Mars | 47382-11-01 19:55 G | 19027285.13 | 19027285.33 | 19027285.53 | 0.1904 | 0.0346 |
| Jupiter | 47384-07-01 17:31 G | 19027893.00 | 19027893.23 | 19027893.47 | 0.0524 | 0.0054 |
| Jupiter | 47389-12-23 12:58 G | 19029893.85 | 19029894.04 | 19029894.24 | 0.0504 | 0.0271 |
| Saturn | 47390-06-04 18:14 G | 19030057.03 | 19030057.26 | 19030057.49 | 0.0271 | 0.0115 |
| Uranus | 47391-07-21 04:34 G | 19030468.65 | 19030468.69 | 19030468.77 | 0.0134 | 0.0130 |
| Uranus | 47392-07-24 09:50 G | 19030837.70 | 19030837.91 | 19030838.13 | 0.0134 | 0.0065 |
| Uranus | 47393-07-28 17:17 G | 19031206.96 | 19031207.22 | 19031207.48 | 0.0134 | 0.0007 |
| Uranus | 47394-08-01 22:05 G | 19031576.22 | 19031576.42 | 19031576.64 | 0.0134 | 0.0063 |
| Jupiter | 47396-07-06 20:38 G | 19032281.16 | 19032281.36 | 19032281.57 | 0.0525 | 0.0225 |
| Jupiter | 47401-12-29 08:10 G | 19034281.61 | 19034281.84 | 19034282.07 | 0.0502 | 0.0127 |
| Saturn | 47403-12-06 03:50 G | 19034988.41 | 19034988.66 | 19034988.91 | 0.0291 | 0.0040 |
| Jupiter | 47408-07-12 16:34 G | 19036669.05 | 19036669.19 | 19036669.33 | 0.0526 | 0.0419 |
| Jupiter | 47414-01-02 17:17 G | 19038668.98 | 19038669.22 | 19038669.45 | 0.0501 | 0.0052 |
| Saturn | 47420-06-11 19:12 G | 19041021.10 | 19041021.30 | 19041021.49 | 0.0273 | 0.0150 |
| Neptune | 47420-12-13 03:50 G | 19041205.63 | 19041205.66 | 19041205.74 | 0.0088 | 0.0086 |
| Neptune | 47421-12-15 19:26 G | 19041573.14 | 19041573.31 | 19041573.53 | 0.0088 | 0.0061 |
| Neptune | 47422-12-18 06:29 G | 19041940.55 | 19041940.77 | 19041941.02 | 0.0088 | 0.0033 |

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| Neptune | 47423-12-20 17:46 G | 19042307.98 | 19042308.24 | 19042308.51 | 0.0088 | 0.0009 |
| Neptune | 47424-12-22 09:36 G | 19042675.65 | 19042675.90 | 19042676.14 | 0.0088 | 0.0020 |
| Neptune | 47425-12-24 15:36 G | 19043042.94 | 19043043.15 | 19043043.40 | 0.0088 | 0.0045 |
| Jupiter | 47426-01-07 14:53 G | 19043056.93 | 19043057.12 | 19043057.31 | 0.0501 | 0.0275 |
| Neptune | 47426-12-27 10:05 G | 19043410.81 | 19043410.92 | 19043411.08 | 0.0088 | 0.0075 |
| Uranus | 47434-01-22 08:38 G | 19045993.71 | 19045993.86 | 19045994.03 | 0.0144 | 0.0113 |
| Uranus | 47435-01-27 18:14 G | 19046364.02 | 19046364.26 | 19046364.52 | 0.0144 | 0.0032 |
| Uranus | 47436-02-01 13:41 G | 19046733.85 | 19046734.07 | 19046734.31 | 0.0144 | 0.0064 |
| Uranus | 47437-02-05 21:50 G | 19047104.34 | 19047104.41 | 19047104.52 | 0.0144 | 0.0134 |
| Jupiter | 47438-01-11 22:48 G | 19047444.39 | 19047444.45 | 19047444.53 | 0.0500 | 0.0477 |
| Pluto | 47438-10-02 09:22 G | 19047707.65 | 19047707.89 | 19047708.16 | 0.0066 | 0.0017 |
| Jupiter | 47443-06-23 17:02 G | 19049433.09 | 19049433.21 | 19049433.34 | 0.0521 | 0.0433 |
| Saturn | 47449-06-06 09:22 G | 19051607.65 | 19051607.89 | 19051608.13 | 0.0271 | 0.0074 |
| Jupiter | 47455-06-28 06:14 G | 19053820.55 | 19053820.76 | 19053820.99 | 0.0523 | 0.0184 |
| Jupiter | 47460-12-19 06:43 G | 19055821.73 | 19055821.78 | 19055821.85 | 0.0505 | 0.0486 |
| Saturn | 47462-12-06 19:41 G | 19056539.07 | 19056539.32 | 19056539.57 | 0.0291 | 0.0014 |
| Jupiter | 47467-07-03 08:38 G | 19058208.64 | 19058208.86 | 19058209.09 | 0.0524 | 0.0029 |
| Jupiter | 47472-12-24 04:05 G | 19060209.48 | 19060209.67 | 19060209.87 | 0.0503 | 0.0297 |
| Uranus | 47475-07-22 12:58 G | 19061149.96 | 19061150.04 | 19061150.15 | 0.0134 | 0.0124 |
| Uranus | 47476-07-25 19:26 G | 19061519.10 | 19061519.31 | 19061519.54 | 0.0134 | 0.0061 |
| Uranus | 47477-07-30 00:58 G | 19061888.28 | 19061888.54 | 19061888.81 | 0.0134 | 0.0003 |
| Uranus | 47478-08-03 06:58 G | 19062257.61 | 19062257.79 | 19062258.00 | 0.0134 | 0.0077 |
| Saturn | 47479-06-13 13:41 G | 19062571.91 | 19062572.07 | 19062572.26 | 0.0273 | 0.0194 |
| Jupiter | 47479-07-08 05:17 G | 19062596.50 | 19062596.72 | 19062596.94 | 0.0525 | 0.0201 |
| Uranus | 47479-08-07 13:26 G | 19062627.00 | 19062627.06 | 19062627.13 | 0.0134 | 0.0129 |
| Jupiter | 47484-12-28 12:00 G | 19064596.78 | 19064597.00 | 19064597.23 | 0.0502 | 0.0151 |
| Jupiter | 47491-07-13 03:36 G | 19066984.52 | 19066984.65 | 19066984.80 | 0.0526 | 0.0412 |
| Saturn | 47491-11-30 14:10 G | 19067125.07 | 19067125.09 | 19067125.13 | 0.0293 | 0.0291 |
| Jupiter | 47497-01-02 11:31 G | 19068984.74 | 19068984.98 | 19068985.21 | 0.0502 | 0.0038 |
| Neptune | 47504-06-16 12:14 G | 19071705.91 | 19071706.01 | 19071706.16 | 0.0089 | 0.0076 |

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| Neptune | 47505-06-18 20:10 G | 19072073.16 | 19072073.34 | 19072073.57 | 0.0089 | 0.0056 |
| Neptune | 47506-06-21 13:26 G | 19072440.82 | 19072441.06 | 19072441.31 | 0.0089 | 0.0021 |
| Neptune | 47507-06-23 18:29 G | 19072808.01 | 19072808.27 | 19072808.53 | 0.0089 | 0.0001 |
| Saturn | 47508-06-08 04:48 G | 19073158.46 | 19073158.70 | 19073158.94 | 0.0271 | 0.0032 |
| Neptune | 47508-06-25 12:29 G | 19073175.80 | 19073176.02 | 19073176.27 | 0.0089 | 0.0034 |
| Jupiter | 47509-01-07 20:10 G | 19073372.14 | 19073372.34 | 19073372.55 | 0.0501 | 0.0261 |
| Neptune | 47509-06-27 17:31 G | 19073543.04 | 19073543.23 | 19073543.44 | 0.0089 | 0.0054 |
| Neptune | 47510-06-30 09:50 G | 19073910.87 | 19073910.91 | 19073911.00 | 0.0089 | 0.0087 |
| Uranus | 47518-01-23 13:41 G | 19076674.93 | 19076675.07 | 19076675.26 | 0.0144 | 0.0111 |
| Uranus | 47519-01-28 23:31 G | 19077045.23 | 19077045.48 | 19077045.74 | 0.0144 | 0.0025 |
| Uranus | 47520-02-02 18:43 G | 19077415.05 | 19077415.28 | 19077415.53 | 0.0144 | 0.0050 |
| Jupiter | 47521-01-12 14:38 G | 19077760.02 | 19077760.11 | 19077760.20 | 0.0499 | 0.0456 |
| Saturn | 47521-12-08 14:24 G | 19078089.87 | 19078090.10 | 19078090.34 | 0.0291 | 0.0059 |
| Pluto | 47526-04-07 02:38 G | 19079670.36 | 19079670.61 | 19079670.88 | 0.0078 | 0.0015 |
| Jupiter | 47526-06-23 18:29 G | 19079748.15 | 19079748.27 | 19079748.38 | 0.0522 | 0.0456 |
| Saturn | 47537-06-03 08:24 G | 19083745.78 | 19083745.85 | 19083745.95 | 0.0268 | 0.0252 |
| Saturn | 47538-06-15 04:34 G | 19084122.58 | 19084122.69 | 19084122.81 | 0.0273 | 0.0239 |
| Jupiter | 47538-06-28 23:31 G | 19084136.27 | 19084136.48 | 19084136.69 | 0.0523 | 0.0199 |
| Jupiter | 47543-12-20 22:19 G | 19086137.39 | 19086137.43 | 19086137.48 | 0.0505 | 0.0493 |
| Mars | 47547-05-07 15:22 G | 19087370.94 | 19087371.14 | 19087371.34 | 0.1629 | 0.0038 |
| Jupiter | 47550-07-03 18:29 G | 19088524.03 | 19088524.27 | 19088524.51 | 0.0524 | 0.0012 |
| Saturn | 47550-12-02 06:00 G | 19088675.63 | 19088675.75 | 19088675.90 | 0.0293 | 0.0247 |
| Jupiter | 47555-12-25 07:55 G | 19090524.65 | 19090524.83 | 19090525.01 | 0.0504 | 0.0320 |
| Uranus | 47559-07-23 20:10 G | 19091831.29 | 19091831.34 | 19091831.44 | 0.0134 | 0.0128 |
| Uranus | 47560-07-27 04:34 G | 19092200.48 | 19092200.69 | 19092200.92 | 0.0134 | 0.0059 |
| Uranus | 47561-07-31 09:22 G | 19092569.63 | 19092569.89 | 19092570.15 | 0.0134 | 0.0010 |
| Jupiter | 47562-07-08 15:07 G | 19092911.92 | 19092912.13 | 19092912.34 | 0.0525 | 0.0177 |
| Uranus | 47562-08-04 17:17 G | 19092939.02 | 19092939.22 | 19092939.44 | 0.0134 | 0.0069 |
| Saturn | 47567-06-10 04:19 G | 19094709.44 | 19094709.68 | 19094709.91 | 0.0271 | 0.0010 |
| Jupiter | 47567-12-30 07:55 G | 19094912.61 | 19094912.83 | 19094913.05 | 0.0503 | 0.0171 |

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| Jupiter | 47574-07-13 16:48 G | 19097300.06 | 19097300.20 | 19097300.36 | 0.0526 | 0.0396 |
| Jupiter | 47580-01-03 17:02 G | 19099299.97 | 19099300.21 | 19099300.46 | 0.0501 | 0.0024 |
| Saturn | 47580-12-09 12:00 G | 19099640.78 | 19099641.00 | 19099641.22 | 0.0291 | 0.0105 |
| Neptune | 47585-12-16 05:31 G | 19101473.64 | 19101473.73 | 19101473.87 | 0.0088 | 0.0079 |
| Neptune | 47586-12-18 14:53 G | 19101840.90 | 19101841.12 | 19101841.37 | 0.0088 | 0.0043 |
| Neptune | 47587-12-21 07:41 G | 19102208.58 | 19102208.82 | 19102209.07 | 0.0088 | 0.0024 |
| Neptune | 47588-12-22 13:26 G | 19102575.81 | 19102576.06 | 19102576.33 | 0.0088 | 0.0012 |
| Neptune | 47589-12-25 08:38 G | 19102943.62 | 19102943.86 | 19102944.11 | 0.0088 | 0.0029 |
| Neptune | 47590-12-27 12:58 G | 19103310.90 | 19103311.04 | 19103311.25 | 0.0088 | 0.0066 |
| Neptune | 47591-12-30 07:26 G | 19103678.74 | 19103678.81 | 19103678.93 | 0.0088 | 0.0082 |
| Jupiter | 47592-01-08 13:26 G | 19103687.87 | 19103688.06 | 19103688.26 | 0.0500 | 0.0255 |
| Saturn | 47596-06-04 00:29 G | 19105296.37 | 19105296.52 | 19105296.68 | 0.0269 | 0.0211 |
| Uranus | 47602-01-23 21:07 G | 19107356.24 | 19107356.38 | 19107356.55 | 0.0144 | 0.0114 |
| Uranus | 47603-01-29 06:43 G | 19107726.53 | 19107726.78 | 19107727.04 | 0.0144 | 0.0029 |
| Jupiter | 47604-01-13 02:24 G | 19108075.49 | 19108075.60 | 19108075.73 | 0.0500 | 0.0437 |
| Uranus | 47604-02-03 01:55 G | 19108096.36 | 19108096.58 | 19108096.82 | 0.0144 | 0.0063 |
| Uranus | 47605-02-07 11:02 G | 19108466.88 | 19108466.96 | 19108467.06 | 0.0144 | 0.0134 |
| Jupiter | 47609-06-23 14:10 G | 19110063.99 | 19110064.09 | 19110064.19 | 0.0522 | 0.0464 |
| Saturn | 47609-12-02 19:12 G | 19110226.13 | 19110226.30 | 19110226.50 | 0.0293 | 0.0199 |
| Jupiter | 47621-06-28 05:46 G | 19114451.53 | 19114451.74 | 19114451.96 | 0.0522 | 0.0219 |
| Saturn | 47626-06-11 03:07 G | 19116260.40 | 19116260.63 | 19116260.88 | 0.0271 | 0.0055 |
| Jupiter | 47633-07-03 03:22 G | 19118839.42 | 19118839.64 | 19118839.86 | 0.0524 | 0.0021 |
| Jupiter | 47638-12-25 04:19 G | 19120840.51 | 19120840.68 | 19120840.86 | 0.0504 | 0.0341 |
| Saturn | 47639-12-11 07:26 G | 19121191.60 | 19121191.81 | 19121192.03 | 0.0291 | 0.0149 |
| Uranus | 47643-07-24 03:36 G | 19122512.54 | 19122512.65 | 19122512.78 | 0.0134 | 0.0118 |
| Uranus | 47644-07-27 13:12 G | 19122881.85 | 19122882.05 | 19122882.29 | 0.0134 | 0.0059 |
| Jupiter | 47645-07-08 01:26 G | 19123227.33 | 19123227.56 | 19123227.79 | 0.0525 | 0.0144 |
| Uranus | 47645-07-31 16:19 G | 19123250.92 | 19123251.18 | 19123251.44 | 0.0134 | 0.0008 |
| Uranus | 47646-08-05 01:41 G | 19123620.38 | 19123620.57 | 19123620.77 | 0.0134 | 0.0079 |
| Uranus | 47647-08-09 04:48 G | 19123989.70 | 19123989.70 | 19123989.73 | 0.0134 | 0.0134 |

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| Jupiter | 47650-12-29 14:24 G | 19125227.88 | 19125228.10 | 19125228.33 | 0.0502 | 0.0184 |
| Saturn | 47655-06-05 20:38 G | 19126847.17 | 19126847.36 | 19126847.55 | 0.0269 | 0.0167 |
| Jupiter | 47657-07-12 18:58 G | 19127615.13 | 19127615.29 | 19127615.45 | 0.0526 | 0.0377 |
| Jupiter | 47663-01-03 08:38 G | 19129615.63 | 19129615.86 | 19129616.09 | 0.0501 | 0.0017 |
| Saturn | 47668-12-03 14:38 G | 19131776.91 | 19131777.11 | 19131777.32 | 0.0293 | 0.0150 |
| Neptune | 47669-06-18 14:10 G | 19131973.91 | 19131974.09 | 19131974.27 | 0.0089 | 0.0063 |
| Neptune | 47670-06-20 18:43 G | 19132341.05 | 19132341.28 | 19132341.51 | 0.0089 | 0.0040 |
| Neptune | 47671-06-23 12:58 G | 19132708.78 | 19132709.04 | 19132709.29 | 0.0089 | 0.0008 |
| Neptune | 47672-06-24 17:46 G | 19133076.00 | 19133076.24 | 19133076.50 | 0.0089 | 0.0014 |
| Neptune | 47673-06-27 09:07 G | 19133443.67 | 19133443.88 | 19133444.12 | 0.0089 | 0.0046 |
| Neptune | 47674-06-29 18:14 G | 19133811.12 | 19133811.26 | 19133811.44 | 0.0089 | 0.0069 |
| Jupiter | 47675-01-07 22:19 G | 19134003.22 | 19134003.43 | 19134003.65 | 0.0501 | 0.0244 |
| Saturn | 47685-06-11 22:48 G | 19137811.22 | 19137811.45 | 19137811.69 | 0.0271 | 0.0105 |
| Uranus | 47686-01-24 06:58 G | 19138037.63 | 19138037.79 | 19138037.97 | 0.0144 | 0.0104 |
| Pluto | 47686-10-05 04:34 G | 19138291.46 | 19138291.69 | 19138291.95 | 0.0066 | 0.0023 |
| Jupiter | 47687-01-12 09:36 G | 19138390.78 | 19138390.90 | 19138391.02 | 0.0500 | 0.0421 |
| Uranus | 47687-01-29 15:36 G | 19138407.89 | 19138408.15 | 19138408.41 | 0.0144 | 0.0022 |
| Uranus | 47688-02-03 11:02 G | 19138777.73 | 19138777.96 | 19138778.20 | 0.0144 | 0.0055 |
| Jupiter | 47692-06-22 17:02 G | 19140379.13 | 19140379.21 | 19140379.29 | 0.0521 | 0.0487 |
| Saturn | 47698-12-12 00:29 G | 19142742.35 | 19142742.52 | 19142742.72 | 0.0290 | 0.0199 |
| Jupiter | 47704-06-28 11:02 G | 19144766.76 | 19144766.96 | 19144767.15 | 0.0523 | 0.0252 |
| Saturn | 47714-06-08 01:55 G | 19148398.36 | 19148398.58 | 19148398.79 | 0.0269 | 0.0114 |
| Jupiter | 47716-07-03 12:00 G | 19149154.76 | 19149155.00 | 19149155.24 | 0.0524 | 0.0057 |
| Jupiter | 47721-12-25 06:14 G | 19151155.60 | 19151155.76 | 19151155.93 | 0.0504 | 0.0360 |
| Uranus | 47727-07-25 10:48 G | 19153193.88 | 19153193.95 | 19153194.06 | 0.0134 | 0.0125 |
| Saturn | 47727-12-06 18:58 G | 19153328.07 | 19153328.29 | 19153328.53 | 0.0293 | 0.0095 |
| Jupiter | 47728-07-08 05:02 G | 19153542.49 | 19153542.71 | 19153542.94 | 0.0525 | 0.0122 |
| Uranus | 47728-07-28 22:34 G | 19153563.22 | 19153563.44 | 19153563.67 | 0.0134 | 0.0052 |
| Uranus | 47729-08-02 00:29 G | 19153932.26 | 19153932.52 | 19153932.78 | 0.0134 | 0.0012 |
| Uranus | 47730-08-06 11:31 G | 19154301.78 | 19154301.98 | 19154302.19 | 0.0134 | 0.0074 |

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| Jupiter | 47733-12-30 02:10 G | 19155543.38 | 19155543.59 | 19155543.80 | 0.0503 | 0.0206 |
| Jupiter | 47740-07-13 09:36 G | 19157930.74 | 19157930.90 | 19157931.07 | 0.0526 | 0.0355 |
| Saturn | 47744-06-13 22:05 G | 19159362.23 | 19159362.42 | 19159362.62 | 0.0272 | 0.0163 |
| Jupiter | 47746-01-03 16:05 G | 19159930.92 | 19159931.17 | 19159931.41 | 0.0502 | 0.0009 |
| Neptune | 47749-12-16 12:14 G | 19161374.00 | 19161374.01 | 19161374.08 | 0.0088 | 0.0087 |
| Neptune | 47750-12-19 06:43 G | 19161741.59 | 19161741.78 | 19161741.97 | 0.0088 | 0.0059 |
| Neptune | 47751-12-21 12:00 G | 19162108.76 | 19162109.00 | 19162109.24 | 0.0088 | 0.0033 |
| Mars | 47752-05-06 23:46 G | 19162246.38 | 19162246.49 | 19162246.60 | 0.1636 | 0.1284 |
| Neptune | 47752-12-23 06:58 G | 19162476.54 | 19162476.79 | 19162477.06 | 0.0088 | 0.0007 |
| Neptune | 47753-12-25 12:29 G | 19162843.77 | 19162844.02 | 19162844.27 | 0.0088 | 0.0021 |
| Neptune | 47754-12-28 05:02 G | 19163211.51 | 19163211.71 | 19163211.97 | 0.0088 | 0.0048 |
| Neptune | 47755-12-30 13:26 G | 19163578.96 | 19163579.06 | 19163579.22 | 0.0088 | 0.0075 |
| Saturn | 47757-12-13 22:48 G | 19164293.35 | 19164293.45 | 19164293.57 | 0.0290 | 0.0256 |
| Jupiter | 47758-01-08 05:02 G | 19164318.51 | 19164318.71 | 19164318.92 | 0.0501 | 0.0230 |
| Jupiter | 47770-01-13 01:55 G | 19168706.44 | 19168706.58 | 19168706.72 | 0.0500 | 0.0402 |
| Uranus | 47770-01-25 18:14 G | 19168719.11 | 19168719.26 | 19168719.45 | 0.0144 | 0.0107 |
| Uranus | 47771-01-31 02:38 G | 19169089.35 | 19169089.61 | 19169089.87 | 0.0144 | 0.0019 |
| Uranus | 47772-02-04 22:48 G | 19169459.24 | 19169459.45 | 19169459.68 | 0.0144 | 0.0070 |
| Uranus | 47773-02-09 07:41 G | 19169829.78 | 19169829.82 | 19169829.87 | 0.0144 | 0.0142 |
| Saturn | 47773-06-09 09:22 G | 19169949.65 | 19169949.89 | 19169950.13 | 0.0269 | 0.0056 |
| Pluto | 47774-04-09 10:34 G | 19170253.69 | 19170253.94 | 19170254.19 | 0.0078 | 0.0004 |
| Jupiter | 47775-06-23 21:36 G | 19170694.39 | 19170694.40 | 19170694.41 | 0.0521 | 0.0521 |
| Saturn | 47786-12-08 02:24 G | 19174879.35 | 19174879.60 | 19174879.85 | 0.0293 | 0.0030 |
| Jupiter | 47787-06-28 21:07 G | 19175082.18 | 19175082.38 | 19175082.59 | 0.0523 | 0.0272 |
| Jupiter | 47799-07-03 11:46 G | 19179469.77 | 19179469.99 | 19179470.22 | 0.0523 | 0.0093 |
| Saturn | 47803-06-17 07:12 G | 19180913.68 | 19180913.80 | 19180913.93 | 0.0272 | 0.0227 |
| Jupiter | 47804-12-25 16:19 G | 19181471.05 | 19181471.18 | 19181471.33 | 0.0504 | 0.0396 |
| Jupiter | 47811-07-09 14:53 G | 19183857.89 | 19183858.12 | 19183858.34 | 0.0525 | 0.0086 |
| Uranus | 47811-07-26 18:58 G | 19183875.18 | 19183875.29 | 19183875.46 | 0.0134 | 0.0112 |
| Uranus | 47812-07-30 07:26 G | 19184244.60 | 19184244.81 | 19184245.05 | 0.0134 | 0.0055 |

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| Uranus | 47813-08-03 08:10 G | 19184613.59 | 19184613.84 | 19184614.10 | 0.0134 | 0.0015 |
| Uranus | 47814-08-07 19:41 G | 19184983.14 | 19184983.32 | 19184983.53 | 0.0134 | 0.0083 |
| Jupiter | 47816-12-30 08:10 G | 19185858.63 | 19185858.84 | 19185859.06 | 0.0503 | 0.0230 |
| Jupiter | 47823-07-14 00:00 G | 19188245.32 | 19188245.50 | 19188245.69 | 0.0526 | 0.0312 |
| Jupiter | 47829-01-03 21:22 G | 19190246.16 | 19190246.39 | 19190246.62 | 0.0502 | 0.0012 |
| Mars | 47831-05-10 19:12 G | 19191103.14 | 19191103.30 | 19191103.46 | 0.1633 | 0.0794 |
| Saturn | 47832-06-11 15:07 G | 19191500.88 | 19191501.13 | 19191501.38 | 0.0270 | 0.0009 |
| Neptune | 47833-06-19 17:46 G | 19191874.12 | 19191874.24 | 19191874.41 | 0.0089 | 0.0074 |
| Neptune | 47834-06-22 12:00 G | 19192241.81 | 19192242.00 | 19192242.22 | 0.0089 | 0.0055 |
| Neptune | 47835-06-24 18:29 G | 19192609.03 | 19192609.27 | 19192609.52 | 0.0089 | 0.0020 |
| Neptune | 47836-06-26 09:36 G | 19192976.64 | 19192976.90 | 19192977.16 | 0.0089 | 0.0000 |
| Neptune | 47837-06-28 19:55 G | 19193344.11 | 19193344.33 | 19193344.57 | 0.0089 | 0.0035 |
| Neptune | 47838-07-01 05:31 G | 19193711.53 | 19193711.73 | 19193711.95 | 0.0089 | 0.0055 |
| Jupiter | 47841-01-08 14:53 G | 19194633.90 | 19194634.12 | 19194634.34 | 0.0501 | 0.0206 |
| Saturn | 47845-12-10 08:38 G | 19196430.61 | 19196430.86 | 19196431.12 | 0.0292 | 0.0041 |
| Jupiter | 47853-01-12 20:24 G | 19199021.20 | 19199021.35 | 19199021.51 | 0.0500 | 0.0373 |
| Uranus | 47854-01-27 06:14 G | 19199400.57 | 19199400.76 | 19199400.95 | 0.0144 | 0.0092 |
| Uranus | 47855-02-01 12:58 G | 19199770.78 | 19199771.04 | 19199771.31 | 0.0144 | 0.0014 |
| Uranus | 47856-02-06 09:50 G | 19200140.69 | 19200140.91 | 19200141.13 | 0.0144 | 0.0066 |
| Saturn | 47861-06-06 15:22 G | 19202088.00 | 19202088.14 | 19202088.29 | 0.0269 | 0.0208 |
| Jupiter | 47870-06-28 16:19 G | 19205397.01 | 19205397.18 | 19205397.37 | 0.0522 | 0.0312 |
| Saturn | 47874-12-04 11:46 G | 19207016.87 | 19207016.99 | 19207017.14 | 0.0293 | 0.0239 |
| Jupiter | 47882-07-03 14:38 G | 19209784.89 | 19209785.11 | 19209785.33 | 0.0523 | 0.0139 |
| Jupiter | 47887-12-25 20:10 G | 19211786.21 | 19211786.34 | 19211786.47 | 0.0505 | 0.0427 |
| Saturn | 47891-06-13 21:50 G | 19213052.17 | 19213052.41 | 19213052.65 | 0.0271 | 0.0079 |
| Jupiter | 47894-07-08 03:50 G | 19214172.43 | 19214172.66 | 19214172.90 | 0.0525 | 0.0044 |
| Uranus | 47895-07-27 04:19 G | 19214556.58 | 19214556.68 | 19214556.79 | 0.0134 | 0.0120 |
| Uranus | 47896-07-30 17:02 G | 19214925.99 | 19214926.21 | 19214926.46 | 0.0134 | 0.0045 |
| Uranus | 47897-08-03 17:02 G | 19215294.96 | 19215295.21 | 19215295.47 | 0.0134 | 0.0016 |
| Uranus | 47898-08-08 05:46 G | 19215664.55 | 19215664.74 | 19215664.95 | 0.0134 | 0.0081 |

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| Jupiter | 47899-12-30 06:58 G | 19216173.60 | 19216173.79 | 19216173.99 | 0.0503 | 0.0267 |
| Saturn | 47904-12-12 21:36 G | 19217982.17 | 19217982.40 | 19217982.63 | 0.0291 | 0.0124 |
| Jupiter | 47906-07-14 09:22 G | 19218560.70 | 19218560.89 | 19218561.08 | 0.0526 | 0.0290 |
| Jupiter | 47912-01-05 01:55 G | 19220561.34 | 19220561.58 | 19220561.82 | 0.0502 | 0.0045 |
| Neptune | 47914-12-20 09:50 G | 19221641.81 | 19221641.91 | 19221642.06 | 0.0088 | 0.0077 |
| Neptune | 47915-12-23 05:02 G | 19222009.49 | 19222009.71 | 19222009.96 | 0.0088 | 0.0041 |
| Neptune | 47916-12-24 11:02 G | 19222376.72 | 19222376.96 | 19222377.21 | 0.0088 | 0.0023 |
| Neptune | 47917-12-27 03:22 G | 19222744.37 | 19222744.64 | 19222744.90 | 0.0088 | 0.0013 |
| Neptune | 47918-12-29 12:58 G | 19223111.82 | 19223112.04 | 19223112.29 | 0.0088 | 0.0032 |
| Neptune | 47920-01-01 00:43 G | 19223479.37 | 19223479.53 | 19223479.72 | 0.0088 | 0.0066 |
| Saturn | 47920-06-09 06:43 G | 19223639.58 | 19223639.78 | 19223639.98 | 0.0269 | 0.0139 |
| Neptune | 47921-01-02 15:22 G | 19223847.09 | 19223847.14 | 19223847.23 | 0.0088 | 0.0085 |
| Jupiter | 47924-01-09 07:55 G | 19224948.62 | 19224948.83 | 19224949.05 | 0.0501 | 0.0171 |
| Saturn | 47933-12-07 08:53 G | 19228568.66 | 19228568.87 | 19228569.08 | 0.0293 | 0.0149 |
| Pluto | 47934-10-09 11:31 G | 19228874.75 | 19228874.98 | 19228875.24 | 0.0066 | 0.0020 |
| Jupiter | 47936-01-14 06:43 G | 19229336.61 | 19229336.78 | 19229336.95 | 0.0500 | 0.0339 |
| Uranus | 47938-01-28 15:36 G | 19230081.99 | 19230082.15 | 19230082.35 | 0.0144 | 0.0100 |
| Uranus | 47939-02-02 21:50 G | 19230452.15 | 19230452.41 | 19230452.67 | 0.0144 | 0.0009 |
| Uranus | 47940-02-07 19:41 G | 19230822.12 | 19230822.32 | 19230822.54 | 0.0144 | 0.0077 |
| Jupiter | 47948-01-18 14:38 G | 19233724.06 | 19233724.11 | 19233724.17 | 0.0499 | 0.0486 |
| Saturn | 47950-06-16 09:36 G | 19234603.71 | 19234603.90 | 19234604.11 | 0.0271 | 0.0150 |
| Jupiter | 47953-06-28 18:29 G | 19235712.10 | 19235712.27 | 19235712.44 | 0.0521 | 0.0355 |
| Saturn | 47963-12-15 18:14 G | 19239534.10 | 19239534.26 | 19239534.43 | 0.0291 | 0.0215 |
| Jupiter | 47965-07-03 08:24 G | 19240099.63 | 19240099.85 | 19240100.07 | 0.0523 | 0.0174 |
| Jupiter | 47970-12-25 15:22 G | 19242101.08 | 19242101.14 | 19242101.22 | 0.0505 | 0.0479 |
| Jupiter | 47977-07-08 11:17 G | 19244487.75 | 19244487.97 | 19244488.20 | 0.0524 | 0.0013 |
| Saturn | 47979-06-11 20:38 G | 19245191.12 | 19245191.36 | 19245191.60 | 0.0270 | 0.0068 |
| Uranus | 47979-07-28 13:12 G | 19245237.91 | 19245238.05 | 19245238.22 | 0.0134 | 0.0105 |
| Uranus | 47980-08-01 02:24 G | 19245607.38 | 19245607.60 | 19245607.85 | 0.0134 | 0.0051 |
| Uranus | 47981-08-05 01:41 G | 19245976.32 | 19245976.57 | 19245976.82 | 0.0134 | 0.0022 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 47982-08-09 14:10 G | 19246345.91 | 19246346.09 | 19246346.29 | 0.0134 | 0.0087 |
| Jupiter | 47982-12-30 09:50 G | 19246488.72 | 19246488.91 | 19246489.11 | 0.0504 | 0.0308 |
| Jupiter | 47989-07-13 02:24 G | 19248875.39 | 19248875.60 | 19248875.82 | 0.0525 | 0.0248 |
| Saturn | 47992-12-09 05:31 G | 19250120.48 | 19250120.73 | 19250120.97 | 0.0292 | 0.0055 |
| Jupiter | 47995-01-03 19:12 G | 19250876.08 | 19250876.30 | 19250876.54 | 0.0503 | 0.0084 |
| Neptune | 47998-06-22 18:29 G | 19252142.12 | 19252142.27 | 19252142.47 | 0.0089 | 0.0064 |
| Neptune | 47999-06-25 07:41 G | 19252509.60 | 19252509.82 | 19252510.08 | 0.0089 | 0.0038 |
| Neptune | 48000-06-26 19:41 G | 19252877.08 | 19252877.32 | 19252877.57 | 0.0089 | 0.0008 |

49TH MILLENNIUM CE

This is a list of transits of Moon in the 49th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Neptune | 48001-06-29 04:05 G | | 19253244.43 | 19253244.67 | 19253244.94 | 0.0089 | 0.0018 | |
| Jupiter | 48001-07-17 18:29 G | | 19253263.21 | 19253263.27 | 19253263.36 | 0.0526 | 0.0492 | |
| Neptune | 48002-07-01 20:38 G | | 19253612.16 | 19253612.36 | 19253612.59 | 0.0089 | 0.0047 | |
| Neptune | 48003-07-04 01:55 G | | 19253979.43 | 19253979.58 | 19253979.75 | 0.0089 | 0.0071 | |
| Jupiter | 48007-01-08 17:46 G | | 19255264.02 | 19255264.24 | 19255264.47 | 0.0502 | 0.0140 | |
| Saturn | 48009-06-18 02:53 G | | 19256155.49 | 19256155.62 | 19256155.75 | 0.0272 | 0.0227 | |
| Jupiter | 48019-01-12 21:50 G | | 19259651.22 | 19259651.41 | 19259651.61 | 0.0500 | 0.0294 | |
| Uranus | 48022-01-28 23:46 G | | 19260763.30 | 19260763.49 | 19260763.70 | 0.0144 | 0.0087 | |
| Pluto | 48022-04-13 04:05 G | | 19260837.41 | 19260837.67 | 19260837.94 | 0.0078 | 0.0013 | |
| Uranus | 48023-02-03 03:50 G | | 19261133.39 | 19261133.66 | 19261133.92 | 0.0144 | 0.0011 | |
| Uranus | 48024-02-08 02:53 G | | 19261503.42 | 19261503.62 | 19261503.84 | 0.0144 | 0.0073 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Mars | 48029-11-07 23:02 G | 19263603.28 | 19263603.46 | 19263603.64 | 0.1893 | 0.0739 |
| Jupiter | 48031-01-17 14:38 G | 19264039.02 | 19264039.11 | 19264039.22 | 0.0500 | 0.0449 |
| Mars | 48036-05-10 05:02 G | 19265978.52 | 19265978.71 | 19265978.90 | 0.1640 | 0.0420 |
| Jupiter | 48036-06-27 11:46 G | 19266026.84 | 19266026.99 | 19266027.14 | 0.0521 | 0.0395 |
| Saturn | 48038-06-13 05:17 G | 19266742.47 | 19266742.72 | 19266742.97 | 0.0270 | 0.0007 |
| Jupiter | 48048-07-02 13:26 G | 19270414.86 | 19270415.06 | 19270415.27 | 0.0522 | 0.0220 |
| Saturn | 48051-12-11 22:19 G | 19271672.18 | 19271672.43 | 19271672.68 | 0.0292 | 0.0040 |
| Jupiter | 48060-07-06 23:46 G | 19274802.25 | 19274802.49 | 19274802.73 | 0.0523 | 0.0044 |
| Uranus | 48063-07-28 22:19 G | 19275919.33 | 19275919.43 | 19275919.58 | 0.0134 | 0.0116 |
| Uranus | 48064-08-01 11:46 G | 19276288.76 | 19276288.99 | 19276289.24 | 0.0134 | 0.0039 |
| Uranus | 48065-08-05 10:48 G | 19276657.70 | 19276657.95 | 19276658.20 | 0.0134 | 0.0019 |
| Jupiter | 48065-12-29 04:19 G | 19276803.52 | 19276803.68 | 19276803.85 | 0.0505 | 0.0346 |
| Uranus | 48066-08-09 23:46 G | 19277027.31 | 19277027.49 | 19277027.69 | 0.0134 | 0.0087 |
| Saturn | 48067-06-08 13:41 G | 19277329.93 | 19277330.07 | 19277330.24 | 0.0269 | 0.0200 |
| Jupiter | 48072-07-11 21:36 G | 19279190.20 | 19279190.40 | 19279190.61 | 0.0525 | 0.0205 |
| Jupiter | 48078-01-03 00:29 G | 19281191.29 | 19281191.52 | 19281191.74 | 0.0503 | 0.0122 |
| Neptune | 48078-12-20 02:38 G | 19281542.59 | 19281542.61 | 19281542.65 | 0.0088 | 0.0088 |
| Neptune | 48079-12-22 09:36 G | 19281909.73 | 19281909.90 | 19281910.11 | 0.0088 | 0.0058 |
| Saturn | 48080-12-05 06:43 G | 19282258.64 | 19282258.78 | 19282258.94 | 0.0294 | 0.0231 |
| Neptune | 48080-12-24 01:12 G | 19282277.30 | 19282277.55 | 19282277.80 | 0.0088 | 0.0033 |
| Neptune | 48081-12-26 12:29 G | 19282644.77 | 19282645.02 | 19282645.27 | 0.0088 | 0.0003 |
| Neptune | 48082-12-28 22:05 G | 19283012.17 | 19283012.42 | 19283012.69 | 0.0088 | 0.0021 |
| Neptune | 48083-12-31 13:55 G | 19283379.88 | 19283380.08 | 19283380.30 | 0.0088 | 0.0050 |
| Jupiter | 48084-07-16 23:17 G | 19283578.36 | 19283578.47 | 19283578.59 | 0.0526 | 0.0455 |
| Neptune | 48085-01-01 19:55 G | 19283747.20 | 19283747.33 | 19283747.48 | 0.0088 | 0.0074 |
| Jupiter | 48090-01-07 07:26 G | 19285578.58 | 19285578.81 | 19285579.05 | 0.0502 | 0.0096 |
| Saturn | 48097-06-14 12:43 G | 19288293.80 | 19288294.03 | 19288294.27 | 0.0271 | 0.0081 |
| Jupiter | 48102-01-13 01:12 G | 19289966.36 | 19289966.55 | 19289966.75 | 0.0501 | 0.0255 |
| Uranus | 48106-01-30 06:29 G | 19291444.60 | 19291444.77 | 19291444.96 | 0.0144 | 0.0099 |
| Uranus | 48107-02-04 08:53 G | 19291814.61 | 19291814.87 | 19291815.14 | 0.0144 | 0.0005 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 48108-02-09 10:05 G | 19292184.72 | 19292184.92 | 19292185.14 | 0.0144 | 0.0077 |
| Saturn | 48110-12-14 15:36 G | 19293223.94 | 19293224.15 | 19293224.38 | 0.0291 | 0.0132 |
| Jupiter | 48114-01-17 13:55 G | 19294353.96 | 19294354.08 | 19294354.23 | 0.0500 | 0.0414 |
| Jupiter | 48119-06-28 15:07 G | 19296342.02 | 19296342.13 | 19296342.25 | 0.0520 | 0.0445 |
| Saturn | 48126-06-11 02:38 G | 19298881.40 | 19298881.61 | 19298881.82 | 0.0269 | 0.0130 |
| Jupiter | 48131-07-03 04:05 G | 19300729.46 | 19300729.67 | 19300729.87 | 0.0522 | 0.0269 |
| Saturn | 48139-12-09 02:53 G | 19303810.41 | 19303810.62 | 19303810.84 | 0.0294 | 0.0139 |
| Jupiter | 48143-07-08 03:50 G | 19305117.44 | 19305117.66 | 19305117.88 | 0.0524 | 0.0083 |
| Uranus | 48147-07-30 07:26 G | 19306600.65 | 19306600.81 | 19306600.98 | 0.0134 | 0.0100 |
| Uranus | 48148-08-02 20:24 G | 19306970.12 | 19306970.35 | 19306970.59 | 0.0134 | 0.0047 |
| Jupiter | 48148-12-29 10:19 G | 19307118.78 | 19307118.93 | 19307119.08 | 0.0504 | 0.0385 |
| Uranus | 48149-08-06 19:12 G | 19307339.07 | 19307339.30 | 19307339.56 | 0.0134 | 0.0028 |
| Uranus | 48150-08-11 07:55 G | 19307708.65 | 19307708.83 | 19307709.03 | 0.0134 | 0.0089 |
| Jupiter | 48155-07-13 03:07 G | 19309505.41 | 19309505.63 | 19309505.86 | 0.0524 | 0.0173 |
| Saturn | 48156-06-16 23:17 G | 19309845.27 | 19309845.47 | 19309845.67 | 0.0271 | 0.0149 |
| Jupiter | 48161-01-02 17:02 G | 19311505.98 | 19311506.21 | 19311506.44 | 0.0503 | 0.0157 |
| Neptune | 48162-06-23 06:58 G | 19312042.67 | 19312042.79 | 19312042.97 | 0.0089 | 0.0073 |
| Neptune | 48163-06-25 20:38 G | 19312410.17 | 19312410.36 | 19312410.56 | 0.0089 | 0.0055 |
| Neptune | 48164-06-27 04:05 G | 19312777.42 | 19312777.67 | 19312777.93 | 0.0089 | 0.0018 |
| Neptune | 48165-06-29 21:07 G | 19313145.13 | 19313145.38 | 19313145.63 | 0.0089 | 0.0001 |
| Neptune | 48166-07-02 01:12 G | 19313512.34 | 19313512.55 | 19313512.81 | 0.0089 | 0.0038 |
| Neptune | 48167-07-04 19:55 G | 19313880.14 | 19313880.33 | 19313880.54 | 0.0089 | 0.0055 |
| Jupiter | 48167-07-17 18:43 G | 19313893.14 | 19313893.28 | 19313893.41 | 0.0525 | 0.0417 |
| Saturn | 48169-12-16 10:05 G | 19314775.78 | 19314775.92 | 19314776.09 | 0.0291 | 0.0216 |
| Jupiter | 48173-01-07 13:55 G | 19315893.86 | 19315894.08 | 19315894.31 | 0.0502 | 0.0064 |
| Pluto | 48182-10-12 10:34 G | 19319458.67 | 19319458.94 | 19319459.20 | 0.0066 | 0.0004 |
| Jupiter | 48185-01-12 02:53 G | 19320281.40 | 19320281.62 | 19320281.84 | 0.0502 | 0.0221 |
| Saturn | 48185-06-12 07:26 G | 19320432.57 | 19320432.81 | 19320433.06 | 0.0269 | 0.0069 |
| Uranus | 48190-01-30 14:53 G | 19322125.93 | 19322126.12 | 19322126.33 | 0.0144 | 0.0083 |
| Uranus | 48191-02-04 15:22 G | 19322495.87 | 19322496.14 | 19322496.41 | 0.0144 | 0.0011 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 48192-02-09 17:31 G | 19322866.04 | 19322866.23 | 19322866.45 | 0.0144 | 0.0078 |
| Jupiter | 48197-01-16 14:10 G | 19324668.95 | 19324669.09 | 19324669.24 | 0.0500 | 0.0381 |
| Saturn | 48198-12-10 13:55 G | 19325361.83 | 19325362.08 | 19325362.33 | 0.0293 | 0.0059 |
| Jupiter | 48202-06-28 11:31 G | 19326656.91 | 19326656.98 | 19326657.07 | 0.0521 | 0.0487 |
| Jupiter | 48214-07-03 12:29 G | 19331044.84 | 19331045.02 | 19331045.19 | 0.0522 | 0.0314 |
| Saturn | 48215-06-20 08:10 G | 19331396.70 | 19331396.84 | 19331396.99 | 0.0271 | 0.0212 |
| Jupiter | 48226-07-08 09:22 G | 19335432.66 | 19335432.89 | 19335433.13 | 0.0523 | 0.0116 |
| Saturn | 48228-12-19 00:00 G | 19336327.47 | 19336327.50 | 19336327.54 | 0.0291 | 0.0287 |
| Uranus | 48231-07-31 15:50 G | 19337282.05 | 19337282.16 | 19337282.32 | 0.0134 | 0.0112 |
| Jupiter | 48231-12-30 05:46 G | 19337433.61 | 19337433.74 | 19337433.87 | 0.0505 | 0.0417 |
| Uranus | 48232-08-04 04:48 G | 19337651.45 | 19337651.70 | 19337651.95 | 0.0134 | 0.0033 |
| Uranus | 48233-08-08 04:05 G | 19338020.43 | 19338020.67 | 19338020.92 | 0.0134 | 0.0022 |
| Uranus | 48234-08-12 16:19 G | 19338390.02 | 19338390.18 | 19338390.39 | 0.0134 | 0.0093 |
| Jupiter | 48238-07-12 23:17 G | 19339820.25 | 19339820.47 | 19339820.69 | 0.0524 | 0.0132 |
| Neptune | 48243-12-23 21:07 G | 19341810.26 | 19341810.38 | 19341810.54 | 0.0088 | 0.0075 |
| Jupiter | 48244-01-04 03:50 G | 19341821.45 | 19341821.66 | 19341821.88 | 0.0504 | 0.0179 |
| Saturn | 48244-06-14 06:00 G | 19341983.50 | 19341983.75 | 19341984.00 | 0.0269 | 0.0009 |
| Neptune | 48244-12-25 10:19 G | 19342177.72 | 19342177.93 | 19342178.16 | 0.0088 | 0.0041 |
| Neptune | 48245-12-27 19:12 G | 19342545.06 | 19342545.30 | 19342545.58 | 0.0088 | 0.0023 |
| Neptune | 48246-12-30 12:43 G | 19342912.79 | 19342913.03 | 19342913.29 | 0.0088 | 0.0013 |
| Neptune | 48248-01-01 18:00 G | 19343280.02 | 19343280.25 | 19343280.51 | 0.0088 | 0.0032 |
| Neptune | 48249-01-03 12:43 G | 19343647.89 | 19343648.03 | 19343648.22 | 0.0088 | 0.0068 |
| Neptune | 48250-01-05 18:14 G | 19344015.23 | 19344015.26 | 19344015.32 | 0.0088 | 0.0086 |
| Jupiter | 48250-07-18 02:24 G | 19344208.45 | 19344208.60 | 19344208.77 | 0.0525 | 0.0378 |
| Jupiter | 48256-01-08 15:07 G | 19346208.88 | 19346209.13 | 19346209.37 | 0.0502 | 0.0027 |
| Saturn | 48257-12-12 18:14 G | 19346913.01 | 19346913.26 | 19346913.51 | 0.0293 | 0.0011 |
| Jupiter | 48268-01-13 06:43 G | 19350596.57 | 19350596.78 | 19350596.99 | 0.0501 | 0.0188 |
| Pluto | 48270-04-16 22:34 G | 19351421.24 | 19351421.44 | 19351421.68 | 0.0078 | 0.0036 |
| Saturn | 48273-06-09 10:48 G | 19352570.84 | 19352570.95 | 19352571.07 | 0.0267 | 0.0231 |
| Uranus | 48274-02-01 01:41 G | 19352807.39 | 19352807.57 | 19352807.77 | 0.0144 | 0.0093 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 48274-06-21 09:36 G | 19352947.86 | 19352947.90 | 19352947.96 | 0.0271 | 0.0265 |
| Uranus | 48275-02-06 00:43 G | 19353177.27 | 19353177.53 | 19353177.80 | 0.0144 | 0.0003 |
| Uranus | 48276-02-11 05:02 G | 19353547.51 | 19353547.71 | 19353547.92 | 0.0144 | 0.0080 |
| Jupiter | 48280-01-17 23:31 G | 19354984.31 | 19354984.48 | 19354984.65 | 0.0500 | 0.0356 |
| Jupiter | 48285-06-27 23:31 G | 19356972.48 | 19356972.48 | 19356972.49 | 0.0520 | 0.0520 |
| Saturn | 48286-12-06 15:07 G | 19357499.11 | 19357499.13 | 19357499.18 | 0.0295 | 0.0292 |
| Jupiter | 48297-07-02 17:17 G | 19361360.05 | 19361360.22 | 19361360.40 | 0.0521 | 0.0353 |
| Saturn | 48303-06-17 04:19 G | 19363534.44 | 19363534.68 | 19363534.92 | 0.0269 | 0.0043 |
| Jupiter | 48309-07-08 09:50 G | 19365747.70 | 19365747.91 | 19365748.13 | 0.0523 | 0.0153 |
| Mars | 48313-11-10 23:17 G | 19367334.28 | 19367334.47 | 19367334.66 | 0.1886 | 0.0036 |
| Jupiter | 48314-12-30 18:43 G | 19367749.18 | 19367749.28 | 19367749.39 | 0.0505 | 0.0443 |
| Uranus | 48315-08-02 01:26 G | 19367963.40 | 19367963.56 | 19367963.75 | 0.0134 | 0.0095 |
| Uranus | 48316-08-05 13:12 G | 19368332.81 | 19368333.05 | 19368333.30 | 0.0134 | 0.0043 |
| Saturn | 48316-12-14 21:22 G | 19368464.16 | 19368464.39 | 19368464.63 | 0.0293 | 0.0070 |
| Uranus | 48317-08-09 13:26 G | 19368701.83 | 19368702.06 | 19368702.31 | 0.0134 | 0.0034 |
| Uranus | 48318-08-14 01:12 G | 19369071.37 | 19369071.55 | 19369071.74 | 0.0134 | 0.0092 |
| Mars | 48320-05-13 21:50 G | 19369710.22 | 19369710.41 | 19369710.60 | 0.1645 | 0.0184 |
| Jupiter | 48321-07-13 12:29 G | 19370135.79 | 19370136.02 | 19370136.25 | 0.0524 | 0.0108 |
| Jupiter | 48327-01-04 08:53 G | 19372136.65 | 19372136.87 | 19372137.09 | 0.0503 | 0.0200 |
| Neptune | 48327-06-27 02:10 G | 19372310.44 | 19372310.59 | 19372310.79 | 0.0089 | 0.0065 |
| Neptune | 48328-06-28 20:24 G | 19372678.12 | 19372678.35 | 19372678.58 | 0.0089 | 0.0036 |
| Neptune | 48329-07-01 00:29 G | 19373045.28 | 19373045.52 | 19373045.78 | 0.0089 | 0.0009 |
| Neptune | 48330-07-03 18:29 G | 19373413.03 | 19373413.27 | 19373413.54 | 0.0089 | 0.0020 |
| Neptune | 48331-07-06 00:14 G | 19373780.32 | 19373780.51 | 19373780.74 | 0.0089 | 0.0047 |
| Saturn | 48332-06-11 10:48 G | 19374121.78 | 19374121.95 | 19374122.14 | 0.0267 | 0.0180 |
| Neptune | 48332-07-07 15:50 G | 19374148.03 | 19374148.16 | 19374148.33 | 0.0089 | 0.0073 |
| Jupiter | 48333-07-18 05:02 G | 19374523.54 | 19374523.71 | 19374523.88 | 0.0526 | 0.0351 |
| Jupiter | 48339-01-08 23:31 G | 19376524.26 | 19376524.48 | 19376524.71 | 0.0502 | 0.0007 |
| Saturn | 48345-12-08 12:43 G | 19379049.89 | 19379050.03 | 19379050.18 | 0.0295 | 0.0239 |
| Jupiter | 48351-01-13 18:00 G | 19380912.02 | 19380912.25 | 19380912.48 | 0.0502 | 0.0160 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 48358-02-02 13:41 G | 19383488.87 | 19383489.07 | 19383489.30 | 0.0144 | 0.0073 |
| Uranus | 48359-02-07 11:31 G | 19383858.72 | 19383858.98 | 19383859.25 | 0.0144 | 0.0004 |
| Uranus | 48360-02-12 16:48 G | 19384229.02 | 19384229.20 | 19384229.41 | 0.0144 | 0.0088 |
| Saturn | 48362-06-18 05:02 G | 19385085.49 | 19385085.71 | 19385085.93 | 0.0269 | 0.0092 |
| Jupiter | 48363-01-18 03:22 G | 19385299.47 | 19385299.64 | 19385299.82 | 0.0501 | 0.0339 |
| Saturn | 48375-12-17 00:00 G | 19390015.28 | 19390015.50 | 19390015.72 | 0.0293 | 0.0118 |
| Jupiter | 48380-07-02 21:22 G | 19391675.25 | 19391675.39 | 19391675.55 | 0.0522 | 0.0388 |
| Saturn | 48391-06-13 02:38 G | 19395672.39 | 19395672.61 | 19395672.83 | 0.0267 | 0.0130 |
| Jupiter | 48392-07-08 01:55 G | 19396063.36 | 19396063.58 | 19396063.81 | 0.0523 | 0.0171 |
| Jupiter | 48397-12-30 01:41 G | 19398064.47 | 19398064.57 | 19398064.68 | 0.0505 | 0.0457 |
| Uranus | 48399-08-02 11:31 G | 19398644.84 | 19398644.98 | 19398645.14 | 0.0134 | 0.0105 |
| Uranus | 48400-08-05 22:05 G | 19399014.17 | 19399014.42 | 19399014.68 | 0.0134 | 0.0027 |
| Uranus | 48401-08-09 23:17 G | 19399383.24 | 19399383.47 | 19399383.72 | 0.0134 | 0.0027 |
| Uranus | 48402-08-14 10:05 G | 19399752.77 | 19399752.92 | 19399753.11 | 0.0134 | 0.0100 |
| Jupiter | 48404-07-12 17:17 G | 19400450.99 | 19400451.22 | 19400451.45 | 0.0524 | 0.0096 |
| Saturn | 48404-12-09 03:36 G | 19400600.47 | 19400600.65 | 19400600.84 | 0.0295 | 0.0197 |
| Neptune | 48408-12-25 16:05 G | 19402077.98 | 19402078.17 | 19402078.39 | 0.0088 | 0.0056 |
| Neptune | 48409-12-28 10:19 G | 19402445.71 | 19402445.93 | 19402446.18 | 0.0088 | 0.0034 |
| Jupiter | 48410-01-03 18:43 G | 19402452.07 | 19402452.28 | 19402452.48 | 0.0504 | 0.0220 |
| Neptune | 48410-12-30 15:36 G | 19402812.89 | 19402813.15 | 19402813.41 | 0.0088 | 0.0001 |
| Neptune | 48412-01-02 10:19 G | 19403180.69 | 19403180.93 | 19403181.20 | 0.0088 | 0.0022 |
| Neptune | 48413-01-03 15:50 G | 19403547.98 | 19403548.16 | 19403548.38 | 0.0088 | 0.0053 |
| Neptune | 48414-01-06 08:53 G | 19403915.73 | 19403915.87 | 19403916.01 | 0.0088 | 0.0075 |
| Jupiter | 48416-07-17 19:41 G | 19404839.15 | 19404839.32 | 19404839.50 | 0.0525 | 0.0324 |
| Saturn | 48421-06-19 03:07 G | 19406636.42 | 19406636.63 | 19406636.84 | 0.0269 | 0.0138 |
| Jupiter | 48422-01-08 13:41 G | 19406839.83 | 19406840.07 | 19406840.31 | 0.0503 | 0.0021 |
| Jupiter | 48428-07-22 13:41 G | 19409227.00 | 19409227.07 | 19409227.14 | 0.0526 | 0.0501 |
| Pluto | 48430-10-16 01:55 G | 19410042.34 | 19410042.58 | 19410042.83 | 0.0066 | 0.0011 |
| Jupiter | 48434-01-12 23:46 G | 19411227.26 | 19411227.49 | 19411227.71 | 0.0501 | 0.0133 |
| Saturn | 48434-12-17 19:12 G | 19411566.09 | 19411566.30 | 19411566.51 | 0.0293 | 0.0157 |

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| Uranus | 48442-02-03 01:26 G | 19414170.36 | 19414170.56 | 19414170.77 | 0.0144 | 0.0083 |
| Uranus | 48443-02-07 22:34 G | 19414540.18 | 19414540.44 | 19414540.70 | 0.0144 | 0.0014 |
| Uranus | 48444-02-13 05:17 G | 19414910.54 | 19414910.72 | 19414910.93 | 0.0144 | 0.0089 |
| Jupiter | 48446-01-17 23:02 G | 19415615.29 | 19415615.46 | 19415615.64 | 0.0500 | 0.0327 |
| Saturn | 48450-06-13 19:26 G | 19417223.08 | 19417223.31 | 19417223.54 | 0.0267 | 0.0085 |
| Jupiter | 48463-07-03 16:34 G | 19421991.04 | 19421991.19 | 19421991.34 | 0.0522 | 0.0404 |
| Saturn | 48463-12-10 22:19 G | 19422151.24 | 19422151.43 | 19422151.64 | 0.0295 | 0.0161 |
| Jupiter | 48475-07-08 05:31 G | 19426378.52 | 19426378.73 | 19426378.95 | 0.0522 | 0.0189 |
| Saturn | 48480-06-19 18:00 G | 19428187.06 | 19428187.25 | 19428187.43 | 0.0269 | 0.0181 |
| Jupiter | 48480-12-29 13:41 G | 19428380.00 | 19428380.07 | 19428380.15 | 0.0505 | 0.0476 |
| Uranus | 48483-08-02 22:05 G | 19429326.26 | 19429326.42 | 19429326.62 | 0.0134 | 0.0089 |
| Uranus | 48484-08-06 07:26 G | 19429695.57 | 19429695.81 | 19429696.07 | 0.0134 | 0.0037 |
| Uranus | 48485-08-10 10:05 G | 19430064.69 | 19430064.92 | 19430065.16 | 0.0134 | 0.0041 |
| Uranus | 48486-08-14 19:41 G | 19430434.15 | 19430434.32 | 19430434.50 | 0.0134 | 0.0097 |
| Jupiter | 48487-07-13 08:38 G | 19430766.64 | 19430766.86 | 19430767.09 | 0.0524 | 0.0081 |
| Neptune | 48491-06-26 19:41 G | 19432211.20 | 19432211.32 | 19432211.49 | 0.0089 | 0.0073 |
| Neptune | 48492-06-28 00:29 G | 19432578.32 | 19432578.52 | 19432578.72 | 0.0089 | 0.0055 |
| Jupiter | 48493-01-03 10:05 G | 19432767.71 | 19432767.92 | 19432768.14 | 0.0504 | 0.0232 |
| Neptune | 48493-06-30 18:00 G | 19432946.00 | 19432946.25 | 19432946.51 | 0.0089 | 0.0018 |
| Saturn | 48493-12-18 07:12 G | 19433116.61 | 19433116.80 | 19433117.00 | 0.0293 | 0.0190 |
| Neptune | 48494-07-03 00:29 G | 19433313.28 | 19433313.52 | 19433313.77 | 0.0089 | 0.0001 |
| Neptune | 48495-07-05 14:10 G | 19433680.85 | 19433681.09 | 19433681.34 | 0.0089 | 0.0037 |
| Neptune | 48496-07-07 00:29 G | 19434048.35 | 19434048.52 | 19434048.74 | 0.0089 | 0.0057 |
| Jupiter | 48499-07-17 23:31 G | 19435154.29 | 19435154.48 | 19435154.68 | 0.0526 | 0.0296 |
| Jupiter | 48505-01-08 21:50 G | 19437155.18 | 19437155.41 | 19437155.65 | 0.0502 | 0.0042 |
| Saturn | 48509-06-15 18:58 G | 19438774.06 | 19438774.29 | 19438774.52 | 0.0267 | 0.0042 |
| Jupiter | 48511-07-24 01:26 G | 19439542.48 | 19439542.56 | 19439542.65 | 0.0527 | 0.0484 |
| Jupiter | 48517-01-13 19:26 G | 19441543.08 | 19441543.31 | 19441543.54 | 0.0501 | 0.0114 |
| Pluto | 48518-04-20 19:41 G | 19442005.22 | 19442005.32 | 19442005.45 | 0.0077 | 0.0070 |
| Saturn | 48522-12-12 20:24 G | 19443702.14 | 19443702.35 | 19443702.57 | 0.0295 | 0.0127 |

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| Mars | 48525-05-14 09:07 G | 19444585.77 | 19444585.88 | 19444586.00 | 0.1652 | 0.1292 |
| Uranus | 48526-02-04 11:02 G | 19444851.75 | 19444851.96 | 19444852.20 | 0.0145 | 0.0065 |
| Uranus | 48527-02-09 07:26 G | 19445221.55 | 19445221.81 | 19445222.08 | 0.0145 | 0.0006 |
| Uranus | 48528-02-14 15:22 G | 19445591.97 | 19445592.14 | 19445592.34 | 0.0144 | 0.0099 |
| Jupiter | 48529-01-18 02:38 G | 19445930.43 | 19445930.61 | 19445930.80 | 0.0501 | 0.0311 |
| Saturn | 48538-06-10 19:55 G | 19449361.30 | 19449361.33 | 19449361.39 | 0.0266 | 0.0261 |
| Saturn | 48539-06-22 10:05 G | 19449737.79 | 19449737.92 | 19449738.06 | 0.0269 | 0.0226 |
| Jupiter | 48546-07-03 18:29 G | 19452306.15 | 19452306.27 | 19452306.41 | 0.0521 | 0.0433 |
| Saturn | 48552-12-19 23:02 G | 19454667.32 | 19454667.46 | 19454667.63 | 0.0293 | 0.0226 |
| Jupiter | 48558-07-08 18:29 G | 19456694.06 | 19456694.27 | 19456694.48 | 0.0523 | 0.0210 |
| Jupiter | 48563-12-31 06:58 G | 19458695.72 | 19458695.79 | 19458695.87 | 0.0505 | 0.0477 |
| Uranus | 48567-08-04 09:36 G | 19460007.74 | 19460007.90 | 19460008.07 | 0.0134 | 0.0097 |
| Saturn | 48568-06-16 19:26 G | 19460325.06 | 19460325.31 | 19460325.55 | 0.0267 | 0.0006 |
| Uranus | 48568-08-07 17:17 G | 19460376.97 | 19460377.22 | 19460377.48 | 0.0134 | 0.0019 |
| Uranus | 48569-08-11 20:53 G | 19460746.15 | 19460746.37 | 19460746.62 | 0.0134 | 0.0034 |
| Jupiter | 48570-07-13 12:29 G | 19461081.79 | 19461082.02 | 19461082.26 | 0.0524 | 0.0060 |
| Uranus | 48570-08-16 05:17 G | 19461115.58 | 19461115.72 | 19461115.88 | 0.0134 | 0.0108 |
| Neptune | 48572-12-26 06:29 G | 19461978.67 | 19461978.77 | 19461978.93 | 0.0088 | 0.0076 |
| Neptune | 48573-12-28 11:31 G | 19462345.78 | 19462345.98 | 19462346.23 | 0.0088 | 0.0043 |
| Neptune | 48574-12-31 06:43 G | 19462713.53 | 19462713.78 | 19462714.04 | 0.0088 | 0.0021 |
| Neptune | 48576-01-02 13:41 G | 19463080.82 | 19463081.07 | 19463081.33 | 0.0088 | 0.0012 |
| Jupiter | 48576-01-04 16:19 G | 19463082.98 | 19463083.18 | 19463083.38 | 0.0504 | 0.0246 |
| Neptune | 48577-01-04 05:17 G | 19463448.48 | 19463448.72 | 19463448.98 | 0.0088 | 0.0033 |
| Neptune | 48578-01-06 15:50 G | 19463816.02 | 19463816.16 | 19463816.34 | 0.0088 | 0.0067 |
| Neptune | 48579-01-09 02:10 G | 19464183.59 | 19464183.59 | 19464183.62 | 0.0088 | 0.0088 |
| Saturn | 48581-12-13 16:05 G | 19465252.93 | 19465253.17 | 19465253.41 | 0.0295 | 0.0085 |
| Jupiter | 48582-07-18 14:10 G | 19465469.90 | 19465470.09 | 19465470.28 | 0.0525 | 0.0279 |
| Jupiter | 48588-01-09 14:53 G | 19467470.89 | 19467471.12 | 19467471.35 | 0.0503 | 0.0066 |
| Jupiter | 48594-07-23 13:12 G | 19469857.94 | 19469858.05 | 19469858.17 | 0.0526 | 0.0455 |
| Saturn | 48597-06-11 13:55 G | 19470911.95 | 19470912.08 | 19470912.24 | 0.0266 | 0.0214 |

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| Mars | 48597-11-10 21:36 G | 19471064.28 | 19471064.40 | 19471064.54 | 0.1877 | 0.1496 |
| Jupiter | 48600-01-13 22:48 G | 19471858.21 | 19471858.45 | 19471858.68 | 0.0502 | 0.0094 |
| Mars | 48604-05-17 06:43 G | 19473442.65 | 19473442.78 | 19473442.91 | 0.1649 | 0.1087 |
| Uranus | 48610-02-05 18:43 G | 19475533.08 | 19475533.28 | 19475533.51 | 0.0145 | 0.0077 |
| Uranus | 48611-02-10 14:53 G | 19475902.87 | 19475903.12 | 19475903.38 | 0.0145 | 0.0021 |
| Saturn | 48611-12-22 23:46 G | 19476218.40 | 19476218.49 | 19476218.59 | 0.0293 | 0.0269 |
| Jupiter | 48612-01-19 20:38 G | 19476246.18 | 19476246.36 | 19476246.54 | 0.0500 | 0.0305 |
| Uranus | 48612-02-16 00:00 G | 19476273.33 | 19476273.50 | 19476273.71 | 0.0145 | 0.0094 |
| Saturn | 48627-06-19 17:02 G | 19481875.97 | 19481876.21 | 19481876.46 | 0.0267 | 0.0052 |
| Jupiter | 48629-07-04 07:26 G | 19482621.71 | 19482621.81 | 19482621.91 | 0.0521 | 0.0466 |
| Saturn | 48640-12-15 09:50 G | 19486803.66 | 19486803.91 | 19486804.17 | 0.0295 | 0.0038 |
| Jupiter | 48641-07-09 00:43 G | 19487009.32 | 19487009.53 | 19487009.75 | 0.0523 | 0.0223 |
| Jupiter | 48646-12-31 09:07 G | 19489010.85 | 19489010.88 | 19489010.92 | 0.0505 | 0.0497 |
| Uranus | 48651-08-05 20:53 G | 19490689.19 | 19490689.37 | 19490689.57 | 0.0134 | 0.0082 |
| Uranus | 48652-08-09 03:22 G | 19491058.39 | 19491058.64 | 19491058.90 | 0.0134 | 0.0029 |
| Jupiter | 48653-07-13 23:46 G | 19491397.27 | 19491397.49 | 19491397.71 | 0.0524 | 0.0037 |
| Uranus | 48653-08-13 08:38 G | 19491427.64 | 19491427.86 | 19491428.09 | 0.0134 | 0.0049 |
| Uranus | 48654-08-17 15:22 G | 19491796.98 | 19491797.14 | 19491797.31 | 0.0134 | 0.0102 |
| Saturn | 48656-06-13 15:50 G | 19492462.99 | 19492463.16 | 19492463.36 | 0.0266 | 0.0164 |
| Neptune | 48656-06-29 15:22 G | 19492478.98 | 19492479.14 | 19492479.33 | 0.0089 | 0.0066 |
| Neptune | 48657-07-01 22:48 G | 19492846.24 | 19492846.45 | 19492846.70 | 0.0089 | 0.0036 |
| Neptune | 48658-07-04 12:00 G | 19493213.74 | 19493214.00 | 19493214.27 | 0.0089 | 0.0011 |
| Jupiter | 48659-01-05 07:41 G | 19493398.63 | 19493398.82 | 19493399.02 | 0.0504 | 0.0265 |
| Neptune | 48659-07-07 00:43 G | 19493581.29 | 19493581.53 | 19493581.77 | 0.0089 | 0.0021 |
| Neptune | 48660-07-08 08:10 G | 19493948.63 | 19493948.84 | 19493949.09 | 0.0089 | 0.0046 |
| Neptune | 48661-07-11 01:12 G | 19494316.42 | 19494316.55 | 19494316.68 | 0.0089 | 0.0076 |
| Jupiter | 48665-07-18 21:07 G | 19495785.17 | 19495785.38 | 19495785.59 | 0.0525 | 0.0242 |
| Jupiter | 48671-01-09 18:00 G | 19497786.02 | 19497786.25 | 19497786.49 | 0.0503 | 0.0087 |
| Jupiter | 48677-07-23 09:50 G | 19500172.78 | 19500172.91 | 19500173.05 | 0.0526 | 0.0419 |
| Pluto | 48677-10-18 10:19 G | 19500259.79 | 19500259.93 | 19500260.10 | 0.0066 | 0.0052 |

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| Pluto | 48678-10-20 03:07 G | 19500626.41 | 19500626.63 | 19500626.85 | 0.0066 | 0.0038 |
| Jupiter | 48683-01-14 16:05 G | 19502173.95 | 19502174.17 | 19502174.40 | 0.0502 | 0.0082 |
| Saturn | 48686-06-20 15:36 G | 19503426.92 | 19503427.15 | 19503427.38 | 0.0268 | 0.0107 |
| Uranus | 48694-02-06 02:24 G | 19506214.37 | 19506214.60 | 19506214.83 | 0.0145 | 0.0061 |
| Jupiter | 48695-01-19 02:10 G | 19506561.39 | 19506561.59 | 19506561.79 | 0.0501 | 0.0290 |
| Uranus | 48695-02-10 22:05 G | 19506584.16 | 19506584.42 | 19506584.68 | 0.0145 | 0.0008 |
| Uranus | 48696-02-16 07:26 G | 19506954.65 | 19506954.81 | 19506955.00 | 0.0145 | 0.0104 |
| Saturn | 48699-12-17 11:31 G | 19508354.74 | 19508354.98 | 19508355.23 | 0.0295 | 0.0021 |
| Jupiter | 48712-07-04 09:36 G | 19512936.83 | 19512936.90 | 19512936.98 | 0.0521 | 0.0494 |
| Saturn | 48715-06-17 00:43 G | 19514014.31 | 19514014.53 | 19514014.75 | 0.0266 | 0.0106 |
| Jupiter | 48724-07-09 07:26 G | 19517324.62 | 19517324.81 | 19517325.01 | 0.0522 | 0.0255 |
| Saturn | 48728-12-11 14:38 G | 19518941.03 | 19518941.11 | 19518941.22 | 0.0296 | 0.0273 |
| Uranus | 48735-08-07 07:41 G | 19521370.65 | 19521370.82 | 19521371.01 | 0.0134 | 0.0090 |
| Jupiter | 48736-07-13 23:02 G | 19521712.22 | 19521712.46 | 19521712.70 | 0.0523 | 0.0007 |
| Uranus | 48736-08-10 12:58 G | 19521739.78 | 19521740.04 | 19521740.30 | 0.0134 | 0.0013 |
| Uranus | 48737-08-14 19:26 G | 19522109.09 | 19522109.31 | 19522109.55 | 0.0134 | 0.0040 |
| Neptune | 48737-12-30 03:07 G | 19522246.43 | 19522246.63 | 19522246.84 | 0.0088 | 0.0056 |
| Uranus | 48738-08-19 00:58 G | 19522478.42 | 19522478.54 | 19522478.68 | 0.0134 | 0.0115 |
| Neptune | 48739-01-01 10:19 G | 19522613.72 | 19522613.93 | 19522614.18 | 0.0088 | 0.0036 |
| Neptune | 48740-01-04 00:43 G | 19522981.26 | 19522981.53 | 19522981.80 | 0.0088 | 0.0002 |
| Neptune | 48741-01-05 12:29 G | 19523348.79 | 19523349.02 | 19523349.28 | 0.0088 | 0.0021 |
| Jupiter | 48742-01-05 09:50 G | 19523713.72 | 19523713.91 | 19523714.11 | 0.0504 | 0.0285 |
| Neptune | 48742-01-07 21:36 G | 19523716.22 | 19523716.40 | 19523716.64 | 0.0088 | 0.0055 |
| Neptune | 48743-01-10 14:38 G | 19524084.00 | 19524084.11 | 19524084.27 | 0.0088 | 0.0074 |
| Saturn | 48745-06-22 21:22 G | 19524978.20 | 19524978.39 | 19524978.57 | 0.0268 | 0.0167 |
| Jupiter | 48748-07-18 17:02 G | 19526100.01 | 19526100.21 | 19526100.43 | 0.0525 | 0.0201 |
| Jupiter | 48754-01-10 05:17 G | 19528101.50 | 19528101.72 | 19528101.95 | 0.0503 | 0.0117 |
| Saturn | 48758-12-19 23:02 G | 19529906.24 | 19529906.46 | 19529906.69 | 0.0294 | 0.0092 |
| Jupiter | 48760-07-23 23:31 G | 19530488.33 | 19530488.48 | 19530488.64 | 0.0526 | 0.0390 |
| Pluto | 48765-04-22 21:22 G | 19532222.18 | 19532222.39 | 19532222.65 | 0.0078 | 0.0038 |

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| Jupiter | 48766-01-14 16:05 G | 19532488.92 | 19532489.17 | 19532489.41 | 0.0502 | 0.0050 |
| Saturn | 48774-06-18 08:24 G | 19535565.60 | 19535565.85 | 19535566.09 | 0.0267 | 0.0044 |
| Jupiter | 48778-01-19 04:34 G | 19536876.51 | 19536876.69 | 19536876.89 | 0.0501 | 0.0270 |
| Uranus | 48778-02-07 11:17 G | 19536895.75 | 19536895.97 | 19536896.20 | 0.0145 | 0.0072 |
| Uranus | 48779-02-12 07:26 G | 19537265.56 | 19537265.81 | 19537266.06 | 0.0145 | 0.0026 |
| Uranus | 48780-02-17 17:17 G | 19537636.04 | 19537636.22 | 19537636.42 | 0.0145 | 0.0096 |
| Saturn | 48787-12-13 23:17 G | 19540492.29 | 19540492.47 | 19540492.67 | 0.0296 | 0.0198 |
| Saturn | 48803-06-13 12:29 G | 19546152.94 | 19546153.02 | 19546153.11 | 0.0266 | 0.0246 |
| Saturn | 48804-06-24 10:34 G | 19546529.83 | 19546529.94 | 19546530.06 | 0.0269 | 0.0233 |
| Jupiter | 48807-07-09 04:34 G | 19547639.50 | 19547639.69 | 19547639.89 | 0.0522 | 0.0297 |
| Mars | 48809-05-17 03:36 G | 19548317.47 | 19548317.65 | 19548317.83 | 0.1657 | 0.0769 |
| Saturn | 48817-12-21 16:48 G | 19551458.01 | 19551458.20 | 19551458.40 | 0.0294 | 0.0171 |
| Jupiter | 48819-07-14 00:14 G | 19552027.29 | 19552027.51 | 19552027.73 | 0.0523 | 0.0038 |
| Uranus | 48819-08-07 18:58 G | 19552052.10 | 19552052.29 | 19552052.50 | 0.0134 | 0.0076 |
| Neptune | 48820-06-29 21:36 G | 19552379.30 | 19552379.40 | 19552379.55 | 0.0089 | 0.0076 |
| Uranus | 48820-08-10 23:02 G | 19552421.20 | 19552421.46 | 19552421.72 | 0.0134 | 0.0022 |
| Neptune | 48821-07-02 08:38 G | 19552746.68 | 19552746.86 | 19552747.10 | 0.0089 | 0.0056 |
| Uranus | 48821-08-15 06:58 G | 19552790.57 | 19552790.79 | 19552791.02 | 0.0134 | 0.0056 |
| Neptune | 48822-07-04 22:48 G | 19553114.21 | 19553114.45 | 19553114.69 | 0.0089 | 0.0020 |
| Uranus | 48822-08-19 10:34 G | 19553159.80 | 19553159.94 | 19553160.11 | 0.0134 | 0.0108 |
| Neptune | 48823-07-07 05:17 G | 19553481.46 | 19553481.72 | 19553481.98 | 0.0089 | 0.0001 |
| Neptune | 48824-07-08 22:34 G | 19553849.22 | 19553849.44 | 19553849.68 | 0.0089 | 0.0036 |
| Jupiter | 48825-01-04 16:19 G | 19554029.00 | 19554029.18 | 19554029.35 | 0.0505 | 0.0325 |
| Neptune | 48825-07-11 02:53 G | 19554216.44 | 19554216.62 | 19554216.84 | 0.0089 | 0.0056 |
| Jupiter | 48831-07-19 02:38 G | 19556415.39 | 19556415.61 | 19556415.83 | 0.0524 | 0.0157 |
| Saturn | 48833-06-19 13:41 G | 19557116.82 | 19557117.07 | 19557117.32 | 0.0267 | 0.0021 |
| Jupiter | 48837-01-09 02:10 G | 19558416.36 | 19558416.59 | 19558416.83 | 0.0504 | 0.0156 |
| Jupiter | 48843-07-23 14:10 G | 19560802.93 | 19560803.09 | 19560803.27 | 0.0525 | 0.0346 |
| Saturn | 48846-12-15 11:46 G | 19562043.76 | 19562043.99 | 19562044.22 | 0.0295 | 0.0115 |
| Jupiter | 48849-01-13 18:43 G | 19562804.05 | 19562804.28 | 19562804.50 | 0.0503 | 0.0020 |

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| Jupiter | 48861-01-18 14:10 G | 19567191.88 | 19567192.09 | 19567192.30 | 0.0501 | 0.0249 |
| Uranus | 48862-02-07 23:02 G | 19567577.22 | 19567577.46 | 19567577.71 | 0.0145 | 0.0053 |
| Saturn | 48862-06-15 02:24 G | 19567704.43 | 19567704.60 | 19567704.77 | 0.0266 | 0.0180 |
| Uranus | 48863-02-12 19:26 G | 19567947.06 | 19567947.31 | 19567947.56 | 0.0145 | 0.0016 |
| Uranus | 48864-02-18 04:48 G | 19568317.56 | 19568317.70 | 19568317.87 | 0.0145 | 0.0113 |
| Jupiter | 48873-01-22 18:00 G | 19571579.18 | 19571579.25 | 19571579.34 | 0.0500 | 0.0468 |
| Saturn | 48876-12-23 11:46 G | 19573009.88 | 19573009.99 | 19573010.11 | 0.0293 | 0.0259 |
| Jupiter | 48890-07-08 04:48 G | 19577954.53 | 19577954.70 | 19577954.87 | 0.0521 | 0.0332 |
| Saturn | 48892-06-20 22:34 G | 19578668.22 | 19578668.44 | 19578668.67 | 0.0268 | 0.0090 |
| Neptune | 48901-12-30 06:29 G | 19582146.67 | 19582146.77 | 19582146.92 | 0.0088 | 0.0076 |
| Jupiter | 48902-07-14 04:19 G | 19582342.45 | 19582342.68 | 19582342.91 | 0.0522 | 0.0080 |
| Neptune | 48903-01-01 19:41 G | 19582514.10 | 19582514.32 | 19582514.56 | 0.0088 | 0.0044 |
| Uranus | 48903-08-09 06:29 G | 19582733.59 | 19582733.77 | 19582733.98 | 0.0134 | 0.0081 |
| Neptune | 48904-01-04 09:36 G | 19582881.66 | 19582881.90 | 19582882.16 | 0.0088 | 0.0020 |
| Uranus | 48904-08-12 09:07 G | 19583102.62 | 19583102.88 | 19583103.14 | 0.0134 | 0.0005 |
| Neptune | 48905-01-05 17:17 G | 19583248.96 | 19583249.22 | 19583249.49 | 0.0088 | 0.0010 |
| Uranus | 48905-08-16 18:29 G | 19583472.05 | 19583472.27 | 19583472.50 | 0.0134 | 0.0047 |
| Saturn | 48905-12-18 09:07 G | 19583595.64 | 19583595.88 | 19583596.12 | 0.0295 | 0.0022 |
| Neptune | 48906-01-08 10:34 G | 19583616.73 | 19583616.94 | 19583617.20 | 0.0088 | 0.0035 |
| Uranus | 48906-08-20 20:53 G | 19583841.29 | 19583841.37 | 19583841.48 | 0.0134 | 0.0124 |
| Neptune | 48907-01-10 15:36 G | 19583984.00 | 19583984.15 | 19583984.35 | 0.0088 | 0.0065 |
| Jupiter | 48908-01-05 11:46 G | 19584343.83 | 19584343.99 | 19584344.16 | 0.0506 | 0.0365 |
| Neptune | 48908-01-13 11:02 G | 19584351.96 | 19584351.96 | 19584351.99 | 0.0088 | 0.0088 |
| Jupiter | 48914-07-18 11:46 G | 19586729.77 | 19586729.99 | 19586730.22 | 0.0524 | 0.0106 |
| Jupiter | 48920-01-10 05:02 G | 19588731.51 | 19588731.71 | 19588731.92 | 0.0504 | 0.0199 |
| Saturn | 48921-06-17 16:34 G | 19589255.98 | 19589256.19 | 19589256.42 | 0.0267 | 0.0110 |
| Pluto | 48925-10-22 16:05 G | 19590843.92 | 19590844.17 | 19590844.45 | 0.0066 | 0.0012 |
| Jupiter | 48926-07-23 15:50 G | 19591117.98 | 19591118.16 | 19591118.35 | 0.0525 | 0.0298 |
| Jupiter | 48932-01-14 20:53 G | 19593119.13 | 19593119.37 | 19593119.61 | 0.0503 | 0.0025 |
| Jupiter | 48944-01-19 04:19 G | 19597506.47 | 19597506.68 | 19597506.89 | 0.0501 | 0.0202 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 48945-02-04 02:53 G | 19597888.55 | 19597888.62 | 19597888.72 | 0.0145 | 0.0135 |
| Uranus | 48946-02-09 11:17 G | 19598258.74 | 19598258.97 | 19598259.22 | 0.0145 | 0.0059 |
| Uranus | 48947-02-14 08:24 G | 19598628.61 | 19598628.85 | 19598629.10 | 0.0145 | 0.0038 |
| Uranus | 48948-02-19 17:46 G | 19598999.08 | 19598999.24 | 19598999.43 | 0.0145 | 0.0107 |
| Saturn | 48951-06-24 12:29 G | 19600219.84 | 19600220.02 | 19600220.21 | 0.0268 | 0.0160 |
| Jupiter | 48956-01-24 00:14 G | 19601894.39 | 19601894.51 | 19601894.63 | 0.0501 | 0.0429 |
| Mars | 48960-11-16 09:50 G | 19603652.84 | 19603652.91 | 19603652.99 | 0.1874 | 0.1736 |
| Saturn | 48964-12-20 10:48 G | 19605147.72 | 19605147.95 | 19605148.18 | 0.0294 | 0.0077 |
| Jupiter | 48973-07-08 03:22 G | 19608269.49 | 19608269.64 | 19608269.81 | 0.0520 | 0.0378 |
| Saturn | 48980-06-19 02:24 G | 19610807.36 | 19610807.60 | 19610807.85 | 0.0267 | 0.0040 |
| Neptune | 48985-07-02 19:41 G | 19612647.19 | 19612647.32 | 19612647.50 | 0.0089 | 0.0070 |
| Jupiter | 48985-07-12 15:22 G | 19612656.92 | 19612657.14 | 19612657.36 | 0.0522 | 0.0132 |
| Neptune | 48986-07-05 01:41 G | 19613014.36 | 19613014.57 | 19613014.83 | 0.0089 | 0.0037 |
| Neptune | 48987-07-07 20:10 G | 19613382.10 | 19613382.34 | 19613382.60 | 0.0089 | 0.0015 |
| Uranus | 48987-08-09 18:58 G | 19613415.10 | 19613415.29 | 19613415.52 | 0.0134 | 0.0068 |
| Neptune | 48988-07-09 00:43 G | 19613749.29 | 19613749.53 | 19613749.78 | 0.0089 | 0.0020 |
| Uranus | 48988-08-12 20:38 G | 19613784.10 | 19613784.36 | 19613784.62 | 0.0134 | 0.0012 |
| Neptune | 48989-07-11 18:14 G | 19614117.05 | 19614117.26 | 19614117.51 | 0.0089 | 0.0043 |
| Uranus | 48989-08-17 06:58 G | 19614153.57 | 19614153.79 | 19614154.00 | 0.0134 | 0.0065 |
| Neptune | 48990-07-14 00:29 G | 19614484.41 | 19614484.52 | 19614484.67 | 0.0089 | 0.0076 |
| Uranus | 48990-08-21 07:26 G | 19614522.71 | 19614522.81 | 19614522.96 | 0.0134 | 0.0116 |
| Jupiter | 48991-01-04 11:17 G | 19614658.85 | 19614658.97 | 19614659.10 | 0.0506 | 0.0418 |
| Saturn | 48993-12-14 09:07 G | 19615733.71 | 19615733.88 | 19615734.07 | 0.0296 | 0.0203 |
| Jupiter | 48997-07-17 20:24 G | 19617045.12 | 19617045.35 | 19617045.57 | 0.0524 | 0.0064 |

50TH MILLENNIUM CE

This is a list of transits of Moon in the 50th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 49003-01-10 04:48 | G | 19619046.50 | 19619046.70 | 19619046.92 | 0.0504 | 0.0251 | |
| Saturn | 49009-06-15 04:34 | G | 19621394.61 | 19621394.69 | 19621394.78 | 0.0265 | 0.0247 | |
| Jupiter | 49009-07-23 11:02 | G | 19621432.75 | 19621432.96 | 19621433.17 | 0.0525 | 0.0257 | |
| Saturn | 49010-06-27 03:07 | G | 19621771.53 | 19621771.63 | 19621771.77 | 0.0269 | 0.0231 | |
| Pluto | 49013-04-27 10:19 | G | 19622806.73 | 19622806.93 | 19622807.17 | 0.0078 | 0.0038 | |
| Jupiter | 49015-01-14 12:43 | G | 19623433.80 | 19623434.03 | 19623434.26 | 0.0503 | 0.0070 | |
| Jupiter | 49021-07-28 09:36 | G | 19625820.87 | 19625820.90 | 19625820.95 | 0.0526 | 0.0514 | |
| Saturn | 49023-12-24 08:38 | G | 19626699.67 | 19626699.86 | 19626700.07 | 0.0294 | 0.0171 | |
| Jupiter | 49027-01-19 11:17 | G | 19627821.75 | 19627821.97 | 19627822.20 | 0.0502 | 0.0167 | |
| Uranus | 49029-02-05 15:50 | G | 19628570.07 | 19628570.16 | 19628570.27 | 0.0145 | 0.0132 | |
| Uranus | 49030-02-10 23:17 | G | 19628940.22 | 19628940.47 | 19628940.73 | 0.0145 | 0.0042 | |
| Uranus | 49031-02-15 20:53 | G | 19629310.13 | 19629310.37 | 19629310.62 | 0.0145 | 0.0029 | |
| Uranus | 49032-02-21 05:31 | G | 19629680.63 | 19629680.73 | 19629680.88 | 0.0145 | 0.0126 | |
| Jupiter | 49039-01-23 18:43 | G | 19632209.13 | 19632209.28 | 19632209.43 | 0.0501 | 0.0393 | |
| Saturn | 49039-06-22 07:26 | G | 19632358.56 | 19632358.81 | 19632359.06 | 0.0267 | 0.0029 | |
| Saturn | 49052-12-17 04:34 | G | 19637285.47 | 19637285.69 | 19637285.92 | 0.0295 | 0.0107 | |
| Jupiter | 49056-07-07 21:22 | G | 19638584.26 | 19638584.39 | 19638584.53 | 0.0521 | 0.0421 | |
| Neptune | 49067-01-02 05:31 | G | 19642414.54 | 19642414.73 | 19642414.93 | 0.0088 | 0.0057 | |
| Neptune | 49068-01-04 11:46 | G | 19642781.77 | 19642781.99 | 19642782.25 | 0.0088 | 0.0039 | |
| Saturn | 49068-06-16 17:17 | G | 19642946.06 | 19642946.22 | 19642946.41 | 0.0266 | 0.0182 | |
| Jupiter | 49068-07-13 01:41 | G | 19642972.35 | 19642972.57 | 19642972.79 | 0.0522 | 0.0171 | |
| Neptune | 49069-01-06 06:43 | G | 19643149.52 | 19643149.78 | 19643150.04 | 0.0088 | 0.0002 | |
| Neptune | 49070-01-08 11:31 | G | 19643516.73 | 19643516.98 | 19643517.24 | 0.0088 | 0.0017 | |
| Uranus | 49070-08-06 20:38 | G | 19643727.31 | 19643727.36 | 19643727.44 | 0.0134 | 0.0129 | |
| Neptune | 49071-01-11 06:00 | G | 19643884.55 | 19643884.75 | 19643884.97 | 0.0088 | 0.0054 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 49071-08-11 07:55 G | 19644096.63 | 19644096.83 | 19644097.05 | 0.0133 | 0.0070 |
| Neptune | 49072-01-13 12:29 G | 19644251.89 | 19644252.02 | 19644252.17 | 0.0088 | 0.0072 |
| Uranus | 49072-08-14 08:10 G | 19644465.58 | 19644465.84 | 19644466.10 | 0.0133 | 0.0004 |
| Uranus | 49073-08-18 18:58 G | 19644835.08 | 19644835.29 | 19644835.52 | 0.0133 | 0.0057 |
| Jupiter | 49074-01-04 11:46 G | 19644973.89 | 19644973.99 | 19644974.09 | 0.0506 | 0.0459 |
| Uranus | 49074-08-22 19:12 G | 19645204.30 | 19645204.30 | 19645204.32 | 0.0134 | 0.0133 |
| Jupiter | 49080-07-17 13:55 G | 19647359.84 | 19647360.08 | 19647360.32 | 0.0523 | 0.0022 |
| Saturn | 49082-12-26 00:00 G | 19648251.40 | 19648251.50 | 19648251.63 | 0.0293 | 0.0261 |
| Jupiter | 49086-01-08 23:02 G | 19649361.28 | 19649361.46 | 19649361.65 | 0.0505 | 0.0294 |
| Jupiter | 49092-07-22 11:17 G | 19651747.77 | 19651747.97 | 19651748.18 | 0.0524 | 0.0211 |
| Mars | 49093-05-19 22:34 G | 19652049.26 | 19652049.44 | 19652049.62 | 0.1663 | 0.0287 |
| Jupiter | 49098-01-13 22:05 G | 19653749.19 | 19653749.42 | 19653749.66 | 0.0504 | 0.0106 |
| Saturn | 49098-06-23 13:41 G | 19653909.85 | 19653910.07 | 19653910.30 | 0.0268 | 0.0092 |
| Jupiter | 49104-07-28 07:41 G | 19656135.72 | 19656135.82 | 19656135.93 | 0.0525 | 0.0469 |
| Jupiter | 49110-01-19 03:50 G | 19658136.43 | 19658136.66 | 19658136.90 | 0.0502 | 0.0124 |
| Saturn | 49111-12-20 23:46 G | 19658837.26 | 19658837.49 | 19658837.73 | 0.0295 | 0.0020 |
| Uranus | 49113-02-07 02:24 G | 19659251.50 | 19659251.60 | 19659251.74 | 0.0145 | 0.0127 |
| Uranus | 49114-02-12 08:38 G | 19659621.62 | 19659621.86 | 19659622.12 | 0.0145 | 0.0048 |
| Uranus | 49115-02-17 07:41 G | 19659991.59 | 19659991.82 | 19659992.07 | 0.0145 | 0.0048 |
| Uranus | 49116-02-22 16:05 G | 19660362.02 | 19660362.17 | 19660362.33 | 0.0145 | 0.0116 |
| Jupiter | 49122-01-24 00:58 G | 19662524.38 | 19662524.54 | 19662524.70 | 0.0501 | 0.0355 |
| Saturn | 49127-06-20 00:14 G | 19664497.29 | 19664497.51 | 19664497.74 | 0.0266 | 0.0120 |
| Jupiter | 49139-07-09 08:53 G | 19668899.76 | 19668899.87 | 19668899.99 | 0.0520 | 0.0452 |
| Neptune | 49149-07-03 20:53 G | 19672547.28 | 19672547.37 | 19672547.50 | 0.0089 | 0.0081 |
| Neptune | 49150-07-06 15:07 G | 19672914.96 | 19672915.13 | 19672915.35 | 0.0089 | 0.0058 |
| Neptune | 49151-07-08 20:10 G | 19673282.11 | 19673282.34 | 19673282.59 | 0.0089 | 0.0024 |
| Jupiter | 49151-07-13 18:29 G | 19673287.06 | 19673287.27 | 19673287.49 | 0.0521 | 0.0217 |
| Neptune | 49152-07-10 13:12 G | 19673649.79 | 19673650.05 | 19673650.32 | 0.0089 | 0.0002 |
| Neptune | 49153-07-12 20:24 G | 19674017.14 | 19674017.35 | 19674017.60 | 0.0089 | 0.0034 |
| Neptune | 49154-07-15 09:36 G | 19674384.70 | 19674384.90 | 19674385.12 | 0.0089 | 0.0054 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 49154-08-08 08:53 G | 19674408.79 | 19674408.87 | 19674408.98 | 0.0133 | 0.0124 |
| Neptune | 49155-07-17 21:50 G | 19674752.40 | 19674752.41 | 19674752.47 | 0.0089 | 0.0089 |
| Uranus | 49155-08-12 21:22 G | 19674778.17 | 19674778.39 | 19674778.62 | 0.0133 | 0.0058 |
| Uranus | 49156-08-15 20:38 G | 19675147.11 | 19675147.36 | 19675147.62 | 0.0133 | 0.0002 |
| Jupiter | 49157-01-04 10:05 G | 19675288.90 | 19675288.92 | 19675288.96 | 0.0507 | 0.0500 |
| Saturn | 49157-06-25 22:05 G | 19675461.23 | 19675461.42 | 19675461.62 | 0.0268 | 0.0148 |
| Uranus | 49157-08-20 07:55 G | 19675516.64 | 19675516.83 | 19675517.05 | 0.0133 | 0.0075 |
| Uranus | 49158-08-24 06:58 G | 19675885.72 | 19675885.79 | 19675885.90 | 0.0133 | 0.0124 |
| Jupiter | 49163-07-18 18:58 G | 19677675.07 | 19677675.29 | 19677675.52 | 0.0522 | 0.0030 |
| Jupiter | 49169-01-09 08:53 G | 19679676.70 | 19679676.87 | 19679677.05 | 0.0505 | 0.0333 |
| Saturn | 49170-12-22 15:22 G | 19680388.90 | 19680389.14 | 19680389.37 | 0.0295 | 0.0057 |
| Pluto | 49172-10-25 10:19 G | 19681061.82 | 19681061.93 | 19681062.13 | 0.0066 | 0.0055 |
| Pluto | 49173-10-26 22:05 G | 19681428.24 | 19681428.42 | 19681428.63 | 0.0066 | 0.0041 |
| Jupiter | 49175-07-23 14:38 G | 19682062.88 | 19682063.11 | 19682063.34 | 0.0524 | 0.0173 |
| Jupiter | 49181-01-13 18:00 G | 19684064.03 | 19684064.25 | 19684064.48 | 0.0504 | 0.0141 |
| Saturn | 49186-06-20 23:31 G | 19686048.23 | 19686048.48 | 19686048.72 | 0.0266 | 0.0066 |
| Jupiter | 49187-07-28 10:19 G | 19686450.82 | 19686450.93 | 19686451.06 | 0.0526 | 0.0444 |
| Jupiter | 49193-01-18 14:38 G | 19688451.89 | 19688452.11 | 19688452.34 | 0.0502 | 0.0105 |
| Uranus | 49197-02-07 11:31 G | 19689932.87 | 19689932.98 | 19689933.13 | 0.0145 | 0.0124 |
| Uranus | 49198-02-12 16:34 G | 19690302.94 | 19690303.19 | 19690303.45 | 0.0145 | 0.0037 |
| Uranus | 49199-02-17 16:34 G | 19690672.96 | 19690673.19 | 19690673.44 | 0.0145 | 0.0036 |
| Saturn | 49199-12-15 20:38 G | 19690974.25 | 19690974.36 | 19690974.50 | 0.0297 | 0.0256 |
| Uranus | 49200-02-22 23:17 G | 19691043.39 | 19691043.47 | 19691043.60 | 0.0145 | 0.0133 |
| Jupiter | 49205-01-23 01:55 G | 19692839.39 | 19692839.58 | 19692839.76 | 0.0502 | 0.0325 |
| Saturn | 49216-06-27 01:55 G | 19697012.42 | 19697012.58 | 19697012.75 | 0.0268 | 0.0198 |
| Jupiter | 49217-01-27 17:31 G | 19697227.21 | 19697227.23 | 19697227.28 | 0.0501 | 0.0494 |
| Jupiter | 49222-07-08 04:34 G | 19699214.63 | 19699214.69 | 19699214.77 | 0.0519 | 0.0494 |
| Saturn | 49229-12-23 19:12 G | 19701940.08 | 19701940.30 | 19701940.54 | 0.0295 | 0.0123 |
| Neptune | 49231-01-02 06:14 G | 19702314.66 | 19702314.76 | 19702314.93 | 0.0088 | 0.0077 |
| Neptune | 49232-01-05 01:55 G | 19702682.37 | 19702682.58 | 19702682.80 | 0.0088 | 0.0048 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 49233-01-06 06:58 G | 19703049.55 | 19703049.79 | 19703050.04 | 0.0088 | 0.0021 |
| Neptune | 49234-01-09 00:58 G | 19703417.28 | 19703417.54 | 19703417.81 | 0.0088 | 0.0008 |
| Jupiter | 49234-07-13 04:48 G | 19703602.50 | 19703602.70 | 19703602.89 | 0.0522 | 0.0257 |
| Neptune | 49235-01-11 07:55 G | 19703784.61 | 19703784.83 | 19703785.08 | 0.0088 | 0.0034 |
| Neptune | 49236-01-13 21:50 G | 19704152.22 | 19704152.41 | 19704152.61 | 0.0088 | 0.0062 |
| Uranus | 49238-08-08 22:05 G | 19705090.32 | 19705090.42 | 19705090.54 | 0.0134 | 0.0120 |
| Uranus | 49239-08-13 10:05 G | 19705459.71 | 19705459.92 | 19705460.16 | 0.0133 | 0.0059 |
| Uranus | 49240-08-16 08:38 G | 19705828.61 | 19705828.86 | 19705829.12 | 0.0133 | 0.0013 |
| Uranus | 49241-08-20 20:53 G | 19706198.15 | 19706198.37 | 19706198.59 | 0.0133 | 0.0066 |
| Mars | 49244-11-18 09:22 G | 19707383.73 | 19707383.89 | 19707384.05 | 0.1866 | 0.0951 |
| Saturn | 49245-06-21 21:07 G | 19707599.14 | 19707599.38 | 19707599.63 | 0.0265 | 0.0018 |
| Jupiter | 49246-07-18 01:12 G | 19707990.31 | 19707990.55 | 19707990.79 | 0.0523 | 0.0066 |
| Jupiter | 49252-01-09 08:10 G | 19709991.68 | 19709991.84 | 19709992.01 | 0.0505 | 0.0361 |
| Jupiter | 49258-07-22 20:38 G | 19712378.14 | 19712378.36 | 19712378.57 | 0.0524 | 0.0149 |
| Saturn | 49258-12-17 02:10 G | 19712525.42 | 19712525.59 | 19712525.78 | 0.0297 | 0.0193 |
| Pluto | 49260-04-28 21:36 G | 19713024.19 | 19713024.40 | 19713024.64 | 0.0078 | 0.0036 |
| Jupiter | 49264-01-14 07:12 G | 19714379.58 | 19714379.80 | 19714380.02 | 0.0504 | 0.0161 |
| Jupiter | 49270-07-27 21:50 G | 19716766.27 | 19716766.41 | 19716766.55 | 0.0525 | 0.0413 |
| Saturn | 49274-06-17 08:24 G | 19718186.74 | 19718186.85 | 19718186.99 | 0.0265 | 0.0224 |
| Saturn | 49275-06-28 20:53 G | 19718563.28 | 19718563.37 | 19718563.49 | 0.0268 | 0.0241 |
| Jupiter | 49276-01-18 18:58 G | 19718767.05 | 19718767.29 | 19718767.53 | 0.0503 | 0.0085 |
| Uranus | 49281-02-07 21:22 G | 19720614.27 | 19720614.39 | 19720614.52 | 0.0145 | 0.0123 |
| Uranus | 49282-02-13 00:00 G | 19720984.26 | 19720984.50 | 19720984.77 | 0.0145 | 0.0041 |
| Uranus | 49283-02-18 01:55 G | 19721354.36 | 19721354.58 | 19721354.82 | 0.0145 | 0.0052 |
| Uranus | 49284-02-23 07:41 G | 19721724.69 | 19721724.82 | 19721724.98 | 0.0145 | 0.0121 |
| Jupiter | 49288-01-23 11:17 G | 19723154.79 | 19723154.97 | 19723155.16 | 0.0501 | 0.0301 |
| Saturn | 49288-12-24 14:38 G | 19723490.92 | 19723491.11 | 19723491.32 | 0.0295 | 0.0182 |
| Mars | 49298-05-20 03:07 G | 19726924.56 | 19726924.63 | 19726924.69 | 0.1671 | 0.1561 |
| Jupiter | 49300-01-28 05:17 G | 19727542.64 | 19727542.72 | 19727542.81 | 0.0500 | 0.0465 |
| Saturn | 49304-06-23 21:50 G | 19729150.18 | 19729150.41 | 19729150.65 | 0.0265 | 0.0028 |

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|---------|---------------------|-------------|-------------|-------------|--------|----------|
| Jupiter | 49305-07-08 19:12 G | 19729530.28 | 19729530.30 | 19729530.32 | 0.0520 | 0.0517 |
| Neptune | 49314-07-06 15:36 G | 19732815.03 | 19732815.15 | 19732815.30 | 0.0089 | 0.0075 |
| Neptune | 49315-07-09 07:55 G | 19733182.60 | 19733182.83 | 19733183.07 | 0.0089 | 0.0038 |
| Neptune | 49316-07-10 16:48 G | 19733549.97 | 19733550.20 | 19733550.46 | 0.0089 | 0.0019 |
| Neptune | 49317-07-13 04:05 G | 19733917.42 | 19733917.67 | 19733917.94 | 0.0089 | 0.0017 |
| Jupiter | 49317-07-13 13:55 G | 19733917.88 | 19733918.08 | 19733918.28 | 0.0521 | 0.0281 * |
| Saturn | 49317-12-19 03:50 G | 19734076.45 | 19734076.66 | 19734076.88 | 0.0297 | 0.0140 |
| Neptune | 49318-07-15 17:31 G | 19734285.02 | 19734285.23 | 19734285.47 | 0.0089 | 0.0038 |
| Neptune | 49319-07-18 00:00 G | 19734652.39 | 19734652.50 | 19734652.68 | 0.0089 | 0.0074 |
| Uranus | 49322-08-10 09:50 G | 19735771.79 | 19735771.91 | 19735772.05 | 0.0134 | 0.0113 |
| Uranus | 49323-08-14 22:48 G | 19736141.21 | 19736141.45 | 19736141.68 | 0.0134 | 0.0049 |
| Uranus | 49324-08-17 21:07 G | 19736510.13 | 19736510.38 | 19736510.63 | 0.0133 | 0.0009 |
| Uranus | 49325-08-22 09:07 G | 19736879.70 | 19736879.88 | 19736880.09 | 0.0133 | 0.0084 |
| Uranus | 49326-08-26 07:41 G | 19737248.82 | 19737248.82 | 19737248.84 | 0.0133 | 0.0133 |
| Jupiter | 49329-07-18 07:55 G | 19738305.61 | 19738305.83 | 19738306.05 | 0.0522 | 0.0100 |
| Saturn | 49333-06-19 03:36 G | 19739737.47 | 19739737.65 | 19739737.84 | 0.0265 | 0.0181 |
| Jupiter | 49335-01-10 00:43 G | 19740307.39 | 19740307.53 | 19740307.68 | 0.0506 | 0.0391 |
| Jupiter | 49341-07-23 09:07 G | 19742693.66 | 19742693.88 | 19742694.12 | 0.0524 | 0.0121 |
| Jupiter | 49347-01-14 13:41 G | 19744694.85 | 19744695.07 | 19744695.30 | 0.0504 | 0.0178 |
| Saturn | 49347-12-27 10:19 G | 19745041.78 | 19745041.93 | 19745042.08 | 0.0295 | 0.0232 |
| Jupiter | 49353-07-27 22:05 G | 19747081.26 | 19747081.42 | 19747081.57 | 0.0526 | 0.0388 |
| Jupiter | 49359-01-19 08:24 G | 19749082.63 | 19749082.85 | 19749083.08 | 0.0503 | 0.0075 |
| Saturn | 49363-06-25 22:34 G | 19750701.21 | 19750701.44 | 19750701.67 | 0.0265 | 0.0069 |
| Uranus | 49365-02-09 08:53 G | 19751295.72 | 19751295.87 | 19751296.02 | 0.0145 | 0.0114 |
| Uranus | 49366-02-14 10:05 G | 19751665.67 | 19751665.92 | 19751666.19 | 0.0145 | 0.0032 |
| Uranus | 49367-02-19 13:12 G | 19752035.82 | 19752036.05 | 19752036.29 | 0.0145 | 0.0044 |
| Uranus | 49368-02-24 17:31 G | 19752406.17 | 19752406.23 | 19752406.31 | 0.0145 | 0.0139 |
| Jupiter | 49371-01-24 00:43 G | 19753470.33 | 19753470.53 | 19753470.73 | 0.0501 | 0.0281 |
| Saturn | 49376-12-19 22:34 G | 19755627.20 | 19755627.44 | 19755627.68 | 0.0297 | 0.0092 |
| Mars | 49377-05-23 08:53 G | 19755781.70 | 19755781.87 | 19755782.04 | 0.1667 | 0.0529 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 49383-01-28 10:19 G | 19757857.84 | 19757857.93 | 19757858.05 | 0.0501 | 0.0445 |
| Saturn | 49392-06-19 18:29 G | 19761288.07 | 19761288.27 | 19761288.49 | 0.0264 | 0.0143 |
| Neptune | 49396-01-05 00:58 G | 19762582.36 | 19762582.54 | 19762582.74 | 0.0088 | 0.0059 |
| Neptune | 49397-01-06 18:00 G | 19762950.02 | 19762950.25 | 19762950.49 | 0.0088 | 0.0041 |
| Neptune | 49398-01-09 03:07 G | 19763317.39 | 19763317.63 | 19763317.89 | 0.0088 | 0.0005 |
| Neptune | 49399-01-11 15:50 G | 19763684.89 | 19763685.16 | 19763685.43 | 0.0088 | 0.0014 |
| Neptune | 49400-01-14 05:02 G | 19764052.53 | 19764052.71 | 19764052.94 | 0.0088 | 0.0051 |
| Jupiter | 49400-07-13 21:22 G | 19764233.22 | 19764233.39 | 19764233.57 | 0.0521 | 0.0313 |
| Neptune | 49401-01-16 13:12 G | 19764419.89 | 19764420.05 | 19764420.22 | 0.0088 | 0.0069 |
| Uranus | 49406-08-11 22:48 G | 19766453.32 | 19766453.45 | 19766453.60 | 0.0134 | 0.0111 |
| Saturn | 49406-12-29 08:10 G | 19766592.77 | 19766592.84 | 19766592.92 | 0.0295 | 0.0279 |
| Uranus | 49407-08-16 11:17 G | 19766822.75 | 19766822.97 | 19766823.22 | 0.0134 | 0.0048 |
| Uranus | 49408-08-19 09:36 G | 19767191.66 | 19767191.90 | 19767192.15 | 0.0134 | 0.0022 |
| Uranus | 49409-08-23 21:50 G | 19767561.22 | 19767561.41 | 19767561.63 | 0.0133 | 0.0076 |
| Jupiter | 49412-07-18 19:12 G | 19768621.07 | 19768621.30 | 19768621.53 | 0.0523 | 0.0132 |
| Jupiter | 49418-01-10 10:34 G | 19770622.80 | 19770622.94 | 19770623.09 | 0.0505 | 0.0408 |
| Pluto | 49420-10-29 18:14 G | 19771646.03 | 19771646.26 | 19771646.52 | 0.0066 | 0.0016 |
| Saturn | 49422-06-27 18:00 G | 19772252.02 | 19772252.25 | 19772252.48 | 0.0265 | 0.0106 |
| Jupiter | 49424-07-23 11:46 G | 19773008.77 | 19773008.99 | 19773009.22 | 0.0524 | 0.0099 |
| Jupiter | 49430-01-15 03:22 G | 19775010.43 | 19775010.64 | 19775010.85 | 0.0504 | 0.0189 |
| Saturn | 49435-12-22 11:17 G | 19777177.72 | 19777177.97 | 19777178.22 | 0.0297 | 0.0045 |
| Jupiter | 49436-07-28 18:14 G | 19777397.11 | 19777397.26 | 19777397.42 | 0.0525 | 0.0386 |
| Jupiter | 49442-01-19 20:38 G | 19779398.12 | 19779398.36 | 19779398.60 | 0.0503 | 0.0059 |
| Uranus | 49449-02-10 22:34 G | 19781977.30 | 19781977.44 | 19781977.61 | 0.0145 | 0.0113 |
| Uranus | 49450-02-15 22:48 G | 19782347.19 | 19782347.45 | 19782347.72 | 0.0145 | 0.0028 |
| Uranus | 49451-02-21 03:22 G | 19782717.42 | 19782717.64 | 19782717.87 | 0.0145 | 0.0062 |
| Saturn | 49451-06-22 15:22 G | 19782838.93 | 19782839.14 | 19782839.37 | 0.0264 | 0.0107 |
| Uranus | 49452-02-26 06:29 G | 19783087.68 | 19783087.77 | 19783087.90 | 0.0145 | 0.0132 |
| Jupiter | 49454-01-24 07:26 G | 19783785.61 | 19783785.81 | 19783786.00 | 0.0502 | 0.0260 |
| Jupiter | 49466-01-29 06:29 G | 19788173.65 | 19788173.77 | 19788173.90 | 0.0500 | 0.0422 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 49478-07-07 00:29 G | 19792715.48 | 19792715.52 | 19792715.62 | 0.0089 | 0.0086 |
| Neptune | 49479-07-09 10:48 G | 19793082.80 | 19793082.95 | 19793083.16 | 0.0089 | 0.0061 |
| Neptune | 49480-07-10 20:53 G | 19793450.13 | 19793450.37 | 19793450.62 | 0.0089 | 0.0030 |
| Saturn | 49481-06-28 09:36 G | 19793802.70 | 19793802.90 | 19793803.12 | 0.0266 | 0.0142 |
| Neptune | 49481-07-13 12:29 G | 19793817.77 | 19793818.02 | 19793818.27 | 0.0089 | 0.0004 |
| Neptune | 49482-07-15 18:00 G | 19794185.02 | 19794185.25 | 19794185.52 | 0.0089 | 0.0027 |
| Jupiter | 49483-07-14 09:36 G | 19794548.73 | 19794548.90 | 19794549.09 | 0.0521 | 0.0339 |
| Neptune | 49483-07-18 12:14 G | 19794552.82 | 19794553.01 | 19794553.23 | 0.0089 | 0.0052 |
| Neptune | 49484-07-19 16:34 G | 19794920.13 | 19794920.19 | 19794920.31 | 0.0089 | 0.0084 |
| Uranus | 49490-08-12 11:31 G | 19797134.84 | 19797134.98 | 19797135.16 | 0.0134 | 0.0101 |
| Uranus | 49491-08-17 00:14 G | 19797504.27 | 19797504.51 | 19797504.76 | 0.0134 | 0.0039 |
| Uranus | 49492-08-19 23:02 G | 19797873.21 | 19797873.46 | 19797873.71 | 0.0133 | 0.0021 |
| Uranus | 49493-08-24 11:02 G | 19798242.80 | 19798242.96 | 19798243.16 | 0.0133 | 0.0095 |
| Saturn | 49494-12-23 04:19 G | 19798728.44 | 19798728.68 | 19798728.92 | 0.0297 | 0.0001 |
| Jupiter | 49495-07-19 01:55 G | 19798936.36 | 19798936.58 | 19798936.80 | 0.0522 | 0.0150 |
| Jupiter | 49501-01-10 21:36 G | 19800938.29 | 19800938.40 | 19800938.52 | 0.0506 | 0.0434 |
| Pluto | 49507-05-03 16:05 G | 19803242.17 | 19803242.17 | 19803242.21 | 0.0078 | 0.0078 |
| Jupiter | 49507-07-25 05:46 G | 19803324.52 | 19803324.74 | 19803324.97 | 0.0523 | 0.0087 |
| Saturn | 49510-06-24 17:17 G | 19804389.99 | 19804390.22 | 19804390.46 | 0.0265 | 0.0069 |
| Jupiter | 49513-01-15 15:22 G | 19805325.92 | 19805326.14 | 19805326.36 | 0.0505 | 0.0205 |
| Jupiter | 49519-07-29 20:38 G | 19807712.19 | 19807712.36 | 19807712.53 | 0.0525 | 0.0362 |
| Jupiter | 49525-01-20 04:34 G | 19809713.46 | 19809713.69 | 19809713.92 | 0.0503 | 0.0046 |
| Mars | 49528-11-21 01:55 G | 19811114.36 | 19811114.58 | 19811114.79 | 0.1857 | 0.0037 |
| Uranus | 49533-02-12 12:29 G | 19812658.85 | 19812659.02 | 19812659.21 | 0.0145 | 0.0099 |
| Uranus | 49534-02-17 12:00 G | 19813028.74 | 19813029.00 | 19813029.26 | 0.0145 | 0.0019 |
| Uranus | 49535-02-22 17:31 G | 19813399.02 | 19813399.23 | 19813399.47 | 0.0145 | 0.0059 |
| Jupiter | 49537-01-25 04:19 G | 19814101.48 | 19814101.68 | 19814101.89 | 0.0502 | 0.0240 |
| Saturn | 49540-06-30 07:41 G | 19815353.65 | 19815353.82 | 19815353.99 | 0.0266 | 0.0183 |
| Jupiter | 49549-01-29 10:05 G | 19818488.78 | 19818488.92 | 19818489.07 | 0.0500 | 0.0402 |
| Saturn | 49553-12-25 06:00 G | 19820279.52 | 19820279.75 | 19820279.99 | 0.0297 | 0.0057 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 49560-01-06 10:48 G | 19822482.86 | 19822482.95 | 19822483.11 | 0.0088 | 0.0079 |
| Neptune | 49561-01-07 21:50 G | 19822850.23 | 19822850.41 | 19822850.62 | 0.0088 | 0.0054 |
| Neptune | 49562-01-10 08:24 G | 19823217.60 | 19823217.85 | 19823218.12 | 0.0088 | 0.0023 |
| Neptune | 49563-01-12 23:46 G | 19823585.24 | 19823585.49 | 19823585.75 | 0.0088 | 0.0003 |
| Neptune | 49564-01-15 06:14 G | 19823952.53 | 19823952.76 | 19823953.02 | 0.0088 | 0.0033 |
| Neptune | 49565-01-17 00:58 G | 19824320.35 | 19824320.54 | 19824320.74 | 0.0088 | 0.0057 |
| Neptune | 49566-01-19 05:17 G | 19824687.71 | 19824687.72 | 19824687.78 | 0.0088 | 0.0087 |
| Jupiter | 49566-07-14 13:41 G | 19824863.92 | 19824864.07 | 19824864.24 | 0.0520 | 0.0366 |
| Saturn | 49569-06-25 16:48 G | 19825940.95 | 19825941.20 | 19825941.45 | 0.0265 | 0.0026 |
| Uranus | 49574-08-14 02:38 G | 19827816.45 | 19827816.61 | 19827816.78 | 0.0134 | 0.0099 |
| Uranus | 49575-08-18 14:24 G | 19828185.86 | 19828186.10 | 19828186.35 | 0.0133 | 0.0034 |
| Uranus | 49576-08-21 13:12 G | 19828554.82 | 19828555.05 | 19828555.30 | 0.0133 | 0.0034 |
| Uranus | 49577-08-26 01:12 G | 19828924.36 | 19828924.55 | 19828924.74 | 0.0133 | 0.0089 |
| Jupiter | 49578-07-19 16:05 G | 19829251.96 | 19829252.17 | 19829252.39 | 0.0522 | 0.0182 |
| Mars | 49582-05-23 12:58 G | 19830655.91 | 19830656.04 | 19830656.18 | 0.1678 | 0.1179 |
| Saturn | 49582-12-18 18:29 G | 19830865.15 | 19830865.27 | 19830865.42 | 0.0298 | 0.0252 |
| Jupiter | 49584-01-11 09:50 G | 19831253.81 | 19831253.91 | 19831254.03 | 0.0506 | 0.0453 |
| Jupiter | 49590-07-24 01:41 G | 19833639.33 | 19833639.57 | 19833639.81 | 0.0524 | 0.0054 |
| Jupiter | 49596-01-15 23:46 G | 19835641.28 | 19835641.49 | 19835641.70 | 0.0505 | 0.0215 |
| Saturn | 49598-06-20 18:43 G | 19836528.17 | 19836528.28 | 19836528.42 | 0.0264 | 0.0223 |
| Saturn | 49599-07-02 12:58 G | 19836904.94 | 19836905.04 | 19836905.17 | 0.0266 | 0.0232 |
| Jupiter | 49602-07-29 03:50 G | 19838027.50 | 19838027.66 | 19838027.84 | 0.0525 | 0.0337 |
| Jupiter | 49608-01-20 20:24 G | 19840029.12 | 19840029.35 | 19840029.59 | 0.0503 | 0.0030 |
| Saturn | 49612-12-26 10:34 G | 19841830.72 | 19841830.94 | 19841831.17 | 0.0296 | 0.0120 |
| Uranus | 49617-02-13 02:38 G | 19843340.44 | 19843340.61 | 19843340.80 | 0.0145 | 0.0100 |
| Uranus | 49618-02-18 01:12 G | 19843710.28 | 19843710.55 | 19843710.81 | 0.0145 | 0.0012 |
| Uranus | 49619-02-23 08:24 G | 19844080.64 | 19844080.85 | 19844081.06 | 0.0145 | 0.0075 |
| Jupiter | 49620-01-25 03:22 G | 19844416.43 | 19844416.64 | 19844416.86 | 0.0502 | 0.0211 |
| Saturn | 49628-06-26 14:10 G | 19847491.84 | 19847492.09 | 19847492.34 | 0.0265 | 0.0021 |
| Jupiter | 49632-01-29 23:31 G | 19848804.34 | 19848804.48 | 19848804.63 | 0.0501 | 0.0380 |

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| Saturn | 49641-12-19 21:22 G | 19852416.21 | 19852416.39 | 19852416.59 | 0.0297 | 0.0184 |
| Neptune | 49643-07-09 14:10 G | 19852983.00 | 19852983.09 | 19852983.23 | 0.0089 | 0.0081 |
| Neptune | 49644-07-11 06:43 G | 19853350.57 | 19853350.78 | 19853351.01 | 0.0089 | 0.0043 |
| Neptune | 49645-07-13 11:31 G | 19853717.74 | 19853717.98 | 19853718.23 | 0.0089 | 0.0024 |
| Neptune | 49646-07-16 05:46 G | 19854085.49 | 19854085.74 | 19854086.00 | 0.0089 | 0.0013 |
| Neptune | 49647-07-18 10:05 G | 19854452.71 | 19854452.92 | 19854453.18 | 0.0089 | 0.0033 |
| Neptune | 49648-07-20 02:38 G | 19854820.47 | 19854820.61 | 19854820.80 | 0.0089 | 0.0069 |
| Jupiter | 49649-07-13 20:53 G | 19855179.23 | 19855179.37 | 19855179.51 | 0.0520 | 0.0411 |
| Neptune | 49649-07-22 10:34 G | 19855187.94 | 19855187.94 | 19855187.98 | 0.0089 | 0.0089 |
| Saturn | 49657-06-22 01:26 G | 19858079.39 | 19858079.56 | 19858079.75 | 0.0264 | 0.0173 |
| Uranus | 49658-08-14 16:48 G | 19858498.03 | 19858498.20 | 19858498.40 | 0.0133 | 0.0087 |
| Uranus | 49659-08-19 04:19 G | 19858867.43 | 19858867.68 | 19858867.94 | 0.0133 | 0.0026 |
| Uranus | 49660-08-22 03:50 G | 19859236.43 | 19859236.66 | 19859236.91 | 0.0133 | 0.0035 |
| Mars | 49661-05-26 04:05 G | 19859513.52 | 19859513.67 | 19859513.82 | 0.1673 | 0.1089 |
| Jupiter | 49661-07-18 10:34 G | 19859566.73 | 19859566.94 | 19859567.16 | 0.0522 | 0.0223 |
| Uranus | 49661-08-26 15:07 G | 19859606.00 | 19859606.13 | 19859606.31 | 0.0133 | 0.0107 |
| Jupiter | 49667-01-10 12:29 G | 19861568.96 | 19861569.02 | 19861569.09 | 0.0506 | 0.0484 |
| Pluto | 49667-11-01 19:55 G | 19861864.08 | 19861864.33 | 19861864.59 | 0.0066 | 0.0004 |
| Saturn | 49671-12-28 14:38 G | 19863381.92 | 19863382.11 | 19863382.31 | 0.0296 | 0.0192 |
| Jupiter | 49673-07-23 13:41 G | 19863954.84 | 19863955.07 | 19863955.29 | 0.0523 | 0.0035 |
| Jupiter | 49679-01-15 10:05 G | 19865956.71 | 19865956.92 | 19865957.13 | 0.0505 | 0.0237 |
| Jupiter | 49685-07-28 09:22 G | 19868342.70 | 19868342.89 | 19868343.09 | 0.0524 | 0.0305 |
| Saturn | 49687-06-28 17:02 G | 19869042.98 | 19869043.21 | 19869043.45 | 0.0265 | 0.0077 |
| Jupiter | 49691-01-19 17:02 G | 19870343.97 | 19870344.21 | 19870344.45 | 0.0504 | 0.0006 |
| Jupiter | 49697-08-02 02:38 G | 19872730.61 | 19872730.61 | 19872730.64 | 0.0526 | 0.0524 |
| Saturn | 49700-12-22 11:02 G | 19873967.75 | 19873967.96 | 19873968.19 | 0.0297 | 0.0108 |
| Uranus | 49701-02-14 13:26 G | 19874021.87 | 19874022.06 | 19874022.27 | 0.0145 | 0.0087 |
| Uranus | 49702-02-19 11:17 G | 19874391.71 | 19874391.97 | 19874392.24 | 0.0145 | 0.0009 |
| Jupiter | 49703-01-25 16:05 G | 19874731.96 | 19874732.17 | 19874732.39 | 0.0502 | 0.0185 |
| Uranus | 49703-02-24 19:41 G | 19874762.11 | 19874762.32 | 19874762.54 | 0.0145 | 0.0071 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 49715-01-30 03:36 G | 19879119.49 | 19879119.65 | 19879119.83 | 0.0501 | 0.0358 |
| Saturn | 49716-06-24 11:02 G | 19879630.75 | 19879630.96 | 19879631.19 | 0.0264 | 0.0114 |
| Neptune | 49725-01-08 00:00 G | 19882750.34 | 19882750.50 | 19882750.70 | 0.0088 | 0.0065 |
| Neptune | 49726-01-10 17:31 G | 19883118.01 | 19883118.23 | 19883118.46 | 0.0088 | 0.0044 |
| Neptune | 49727-01-12 23:31 G | 19883485.22 | 19883485.48 | 19883485.74 | 0.0088 | 0.0009 |
| Neptune | 49728-01-15 18:29 G | 19883853.02 | 19883853.27 | 19883853.53 | 0.0088 | 0.0011 |
| Neptune | 49729-01-16 23:17 G | 19884220.27 | 19884220.47 | 19884220.70 | 0.0088 | 0.0047 |
| Neptune | 49730-01-19 17:31 G | 19884588.06 | 19884588.23 | 19884588.40 | 0.0088 | 0.0067 |
| Saturn | 49730-12-30 23:02 G | 19884933.39 | 19884933.46 | 19884933.56 | 0.0296 | 0.0276 |
| Jupiter | 49732-07-13 19:12 G | 19885494.20 | 19885494.30 | 19885494.43 | 0.0520 | 0.0452 |
| Uranus | 49742-08-16 08:53 G | 19889179.69 | 19889179.87 | 19889180.06 | 0.0133 | 0.0087 |
| Uranus | 49743-08-20 19:26 G | 19889549.06 | 19889549.31 | 19889549.57 | 0.0133 | 0.0020 |
| Jupiter | 49744-07-18 20:10 G | 19889882.15 | 19889882.34 | 19889882.53 | 0.0521 | 0.0261 |
| Uranus | 49744-08-23 19:26 G | 19889918.08 | 19889918.31 | 19889918.54 | 0.0133 | 0.0046 |
| Uranus | 49745-08-28 05:31 G | 19890287.59 | 19890287.73 | 19890287.92 | 0.0133 | 0.0103 |
| Saturn | 49746-07-01 03:22 G | 19890594.44 | 19890594.64 | 19890594.84 | 0.0266 | 0.0140 |
| Pluto | 49755-05-07 18:43 G | 19893827.12 | 19893827.28 | 19893827.51 | 0.0078 | 0.0054 |
| Jupiter | 49756-07-23 12:43 G | 19894269.79 | 19894270.03 | 19894270.27 | 0.0522 | 0.0009 |
| Saturn | 49759-12-25 05:31 G | 19895519.49 | 19895519.73 | 19895519.97 | 0.0297 | 0.0020 |
| Jupiter | 49762-01-15 05:31 G | 19896271.53 | 19896271.73 | 19896271.93 | 0.0506 | 0.0269 |
| Jupiter | 49768-07-28 02:38 G | 19898657.41 | 19898657.61 | 19898657.80 | 0.0524 | 0.0253 |
| Jupiter | 49774-01-20 04:48 G | 19900659.48 | 19900659.70 | 19900659.93 | 0.0504 | 0.0033 |
| Saturn | 49775-06-26 18:14 G | 19901182.02 | 19901182.26 | 19901182.51 | 0.0265 | 0.0053 |
| Jupiter | 49780-08-02 04:05 G | 19903045.57 | 19903045.67 | 19903045.78 | 0.0525 | 0.0468 |
| Uranus | 49785-02-15 00:29 G | 19904703.33 | 19904703.52 | 19904703.72 | 0.0145 | 0.0093 |
| Jupiter | 49786-01-24 12:58 G | 19905046.80 | 19905047.04 | 19905047.27 | 0.0503 | 0.0145 |
| Uranus | 49786-02-19 21:22 G | 19905073.13 | 19905073.39 | 19905073.65 | 0.0145 | 0.0002 |
| Uranus | 49787-02-25 06:58 G | 19905443.58 | 19905443.79 | 19905443.99 | 0.0145 | 0.0082 |
| Jupiter | 49798-01-29 04:05 G | 19909434.50 | 19909434.67 | 19909434.85 | 0.0501 | 0.0321 |
| Saturn | 49804-06-21 22:48 G | 19911769.40 | 19911769.45 | 19911769.52 | 0.0264 | 0.0254 |

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| Saturn | 49805-07-03 17:31 G | 19912146.09 | 19912146.23 | 19912146.39 | 0.0266 | 0.0206 |
| Neptune | 49808-07-12 04:34 G | 19913250.53 | 19913250.69 | 19913250.89 | 0.0089 | 0.0064 |
| Neptune | 49809-07-14 22:48 G | 19913618.23 | 19913618.45 | 19913618.70 | 0.0089 | 0.0038 |
| Neptune | 49810-07-17 04:34 G | 19913985.45 | 19913985.69 | 19913985.94 | 0.0089 | 0.0009 |
| Neptune | 49811-07-19 20:24 G | 19914353.09 | 19914353.35 | 19914353.60 | 0.0089 | 0.0020 |
| Neptune | 49812-07-21 05:17 G | 19914720.53 | 19914720.72 | 19914720.95 | 0.0089 | 0.0049 |
| Mars | 49812-11-22 06:29 G | 19914844.62 | 19914844.77 | 19914844.92 | 0.1847 | 0.1127 |
| Neptune | 49813-07-23 15:50 G | 19915088.05 | 19915088.16 | 19915088.33 | 0.0089 | 0.0076 |
| Jupiter | 49815-07-15 00:43 G | 19915809.49 | 19915809.53 | 19915809.59 | 0.0519 | 0.0503 |
| Saturn | 49818-12-27 23:17 G | 19917071.23 | 19917071.47 | 19917071.72 | 0.0296 | 0.0072 |
| Uranus | 49826-08-17 22:48 G | 19919861.26 | 19919861.45 | 19919861.67 | 0.0133 | 0.0074 |
| Jupiter | 49827-07-19 11:46 G | 19920196.80 | 19920196.99 | 19920197.18 | 0.0520 | 0.0316 |
| Uranus | 49827-08-22 08:53 G | 19920230.61 | 19920230.87 | 19920231.13 | 0.0133 | 0.0015 |
| Uranus | 49828-08-25 10:05 G | 19920599.70 | 19920599.92 | 19920600.15 | 0.0133 | 0.0048 |
| Uranus | 49829-08-29 19:55 G | 19920969.23 | 19920969.33 | 19920969.47 | 0.0133 | 0.0117 |
| Saturn | 49834-06-29 00:14 G | 19922733.26 | 19922733.51 | 19922733.76 | 0.0265 | 0.0011 |
| Jupiter | 49839-07-24 06:58 G | 19924584.57 | 19924584.79 | 19924585.01 | 0.0522 | 0.0062 |
| Jupiter | 49845-01-15 11:46 G | 19926586.81 | 19926586.99 | 19926587.18 | 0.0506 | 0.0312 |
| Saturn | 49847-12-21 18:43 G | 19927657.12 | 19927657.28 | 19927657.44 | 0.0298 | 0.0220 |
| Jupiter | 49851-07-29 08:10 G | 19928972.62 | 19928972.84 | 19928973.06 | 0.0524 | 0.0213 |
| Jupiter | 49857-01-19 21:22 G | 19930974.15 | 19930974.39 | 19930974.63 | 0.0504 | 0.0079 |
| Saturn | 49863-06-24 13:41 G | 19933320.92 | 19933321.07 | 19933321.25 | 0.0264 | 0.0189 |
| Jupiter | 49863-08-02 22:34 G | 19933360.31 | 19933360.44 | 19933360.58 | 0.0525 | 0.0422 |
| Mars | 49866-05-26 16:34 G | 19934388.02 | 19934388.19 | 19934388.36 | 0.1683 | 0.0470 |
| Jupiter | 49869-01-24 13:12 G | 19935361.83 | 19935362.05 | 19935362.27 | 0.0503 | 0.0099 |
| Uranus | 49869-02-16 10:05 G | 19935384.72 | 19935384.92 | 19935385.15 | 0.0145 | 0.0078 |
| Uranus | 49870-02-21 06:43 G | 19935754.52 | 19935754.78 | 19935755.04 | 0.0145 | 0.0004 |
| Uranus | 49871-02-26 16:48 G | 19936125.00 | 19936125.20 | 19936125.42 | 0.0145 | 0.0079 |
| Saturn | 49877-12-29 17:02 G | 19938623.01 | 19938623.21 | 19938623.42 | 0.0296 | 0.0171 |
| Jupiter | 49881-01-29 06:14 G | 19939749.56 | 19939749.76 | 19939749.96 | 0.0502 | 0.0281 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 49889-01-08 10:48 G | 19942650.85 | 19942650.95 | 19942651.05 | 0.0088 | 0.0081 |
| Neptune | 49890-01-10 15:22 G | 19943017.97 | 19943018.14 | 19943018.35 | 0.0088 | 0.0061 |
| Neptune | 49891-01-13 10:48 G | 19943385.71 | 19943385.95 | 19943386.21 | 0.0088 | 0.0026 |
| Neptune | 49892-01-15 16:34 G | 19943752.94 | 19943753.19 | 19943753.45 | 0.0088 | 0.0004 |
| Neptune | 49893-01-17 09:07 G | 19944120.64 | 19944120.88 | 19944121.14 | 0.0088 | 0.0031 |
| Saturn | 49893-06-30 11:31 G | 19944284.75 | 19944284.98 | 19944285.21 | 0.0266 | 0.0079 |
| Neptune | 49894-01-19 18:00 G | 19944488.07 | 19944488.25 | 19944488.47 | 0.0088 | 0.0053 |
| Neptune | 49895-01-22 06:43 G | 19944855.74 | 19944855.78 | 19944855.87 | 0.0088 | 0.0086 |
| Saturn | 49906-12-24 21:22 G | 19949209.18 | 19949209.39 | 19949209.62 | 0.0297 | 0.0117 |
| Uranus | 49909-08-15 11:02 G | 19950173.91 | 19950173.96 | 19950174.05 | 0.0134 | 0.0128 |
| Jupiter | 49910-07-19 12:58 G | 19950511.88 | 19950512.04 | 19950512.20 | 0.0520 | 0.0363 |
| Uranus | 49910-08-19 13:55 G | 19950542.89 | 19950543.08 | 19950543.29 | 0.0134 | 0.0076 |
| Uranus | 49911-08-23 23:02 G | 19950912.20 | 19950912.46 | 19950912.72 | 0.0133 | 0.0007 |
| Uranus | 49912-08-27 00:58 G | 19951281.33 | 19951281.54 | 19951281.77 | 0.0133 | 0.0057 |
| Uranus | 49913-08-31 09:22 G | 19951650.78 | 19951650.89 | 19951651.05 | 0.0133 | 0.0115 |
| Pluto | 49914-11-06 01:12 G | 19952082.30 | 19952082.55 | 19952082.81 | 0.0066 | 0.0005 |
| Saturn | 49922-06-27 00:58 G | 19954872.33 | 19954872.54 | 19954872.77 | 0.0264 | 0.0120 |
| Jupiter | 49922-07-24 11:31 G | 19954899.75 | 19954899.98 | 19954900.22 | 0.0522 | 0.0098 |
| Jupiter | 49928-01-16 03:07 G | 19956901.47 | 19956901.63 | 19956901.81 | 0.0506 | 0.0360 |
| Jupiter | 49934-07-29 00:29 G | 19959287.31 | 19959287.52 | 19959287.74 | 0.0523 | 0.0168 |
| Saturn | 49937-01-01 11:46 G | 19960174.90 | 19960174.99 | 19960175.09 | 0.0296 | 0.0271 |
| Jupiter | 49940-01-20 23:02 G | 19961289.24 | 19961289.46 | 19961289.68 | 0.0505 | 0.0126 |
| Mars | 49945-05-29 18:00 G | 19963245.19 | 19963245.25 | 19963245.31 | 0.1680 | 0.1580 |
| Jupiter | 49946-08-03 00:14 G | 19963675.35 | 19963675.51 | 19963675.68 | 0.0524 | 0.0366 |
| Jupiter | 49952-01-25 15:22 G | 19965676.89 | 19965677.14 | 19965677.38 | 0.0504 | 0.0051 |
| Saturn | 49952-07-03 01:26 G | 19965836.37 | 19965836.56 | 19965836.76 | 0.0266 | 0.0147 |
| Uranus | 49953-02-17 23:46 G | 19966066.30 | 19966066.49 | 19966066.72 | 0.0145 | 0.0084 |
| Uranus | 49954-02-22 20:10 G | 19966436.09 | 19966436.34 | 19966436.60 | 0.0145 | 0.0009 |
| Uranus | 49955-02-28 06:29 G | 19966806.58 | 19966806.77 | 19966806.97 | 0.0145 | 0.0090 |
| Jupiter | 49964-01-29 23:46 G | 19970064.29 | 19970064.49 | 19970064.70 | 0.0502 | 0.0235 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 49965-12-26 21:22 G | 19970761.14 | 19970761.39 | 19970761.64 | 0.0297 | 0.0014 |
| Neptune | 49972-07-12 16:05 G | 19973151.13 | 19973151.17 | 19973151.25 | 0.0089 | 0.0086 |
| Neptune | 49973-07-14 22:19 G | 19973518.25 | 19973518.43 | 19973518.66 | 0.0089 | 0.0050 |
| Neptune | 49974-07-17 12:29 G | 19973885.77 | 19973886.02 | 19973886.27 | 0.0089 | 0.0029 |
| Neptune | 49975-07-19 23:02 G | 19974253.22 | 19974253.46 | 19974253.71 | 0.0089 | 0.0007 |
| Jupiter | 49976-02-03 20:53 G | 19974452.30 | 19974452.37 | 19974452.45 | 0.0501 | 0.0473 |
| Neptune | 49976-07-21 07:55 G | 19974620.60 | 19974620.83 | 19974621.10 | 0.0089 | 0.0027 |
| Neptune | 49977-07-23 23:46 G | 19974988.33 | 19974988.49 | 19974988.68 | 0.0089 | 0.0064 |
| Neptune | 49978-07-26 04:48 G | 19975355.64 | 19975355.70 | 19975355.83 | 0.0089 | 0.0084 |
| Saturn | 49981-06-28 06:58 G | 19976423.54 | 19976423.79 | 19976424.04 | 0.0264 | 0.0056 |
| Jupiter | 49993-07-18 15:50 G | 19980827.01 | 19980827.16 | 19980827.31 | 0.0520 | 0.0401 |
| Uranus | 49993-08-16 00:00 G | 19980855.50 | 19980855.50 | 19980855.53 | 0.0134 | 0.0133 |
| Uranus | 49994-08-20 03:50 G | 19981224.45 | 19981224.66 | 19981224.89 | 0.0134 | 0.0061 |
| Uranus | 49995-08-24 12:00 G | 19981593.74 | 19981594.00 | 19981594.26 | 0.0133 | 0.0004 |
| Uranus | 49996-08-27 15:07 G | 19981962.93 | 19981963.13 | 19981963.36 | 0.0133 | 0.0061 |
| Uranus | 49997-08-31 23:02 G | 19982332.41 | 19982332.46 | 19982332.55 | 0.0133 | 0.0128 |

51ST MILLENNIUM CE

This is a list of transits of Moon in the 51st millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|-------------|-------------|-------------|--------|--------|-------|---|
| Pluto | 50002-05-11 04:05 G | 19984045.53 | 19984045.67 | 19984045.85 | 0.0078 | 0.0062 | | |
| Jupiter | 50005-07-23 02:53 G | 19985214.41 | 19985214.62 | 19985214.84 | 0.0521 | 0.0147 | | |
| Saturn | 50010-06-23 18:29 G | 19987011.20 | 19987011.27 | 19987011.36 | 0.0264 | 0.0247 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 50011-01-15 07:55 G | 19987216.70 | 19987216.83 | 19987216.97 | 0.0507 | 0.0403 |
| Saturn | 50011-07-05 11:46 G | 19987387.86 | 19987387.99 | 19987388.15 | 0.0266 | 0.0211 |
| Jupiter | 50017-07-28 04:48 G | 19989602.48 | 19989602.70 | 19989602.93 | 0.0522 | 0.0119 |
| Jupiter | 50023-01-19 22:48 G | 19991604.22 | 19991604.45 | 19991604.68 | 0.0505 | 0.0174 |
| Saturn | 50024-12-28 11:31 G | 19992312.74 | 19992312.98 | 19992313.23 | 0.0297 | 0.0078 |
| Jupiter | 50029-08-01 18:00 G | 19993990.07 | 19993990.25 | 19993990.44 | 0.0524 | 0.0325 |
| Jupiter | 50035-01-24 11:31 G | 19995991.75 | 19995991.98 | 19995992.20 | 0.0504 | 0.0011 |
| Uranus | 50037-02-18 13:12 G | 19996747.83 | 19996748.05 | 19996748.29 | 0.0145 | 0.0064 |
| Uranus | 50038-02-23 09:36 G | 19997117.65 | 19997117.90 | 19997118.16 | 0.0145 | 0.0009 |
| Uranus | 50039-02-28 20:10 G | 19997488.15 | 19997488.34 | 19997488.54 | 0.0145 | 0.0093 |
| Saturn | 50040-06-29 10:48 G | 19997974.70 | 19997974.95 | 19997975.20 | 0.0264 | 0.0003 |
| Jupiter | 50047-01-29 07:26 G | 20000379.60 | 20000379.81 | 20000380.04 | 0.0503 | 0.0197 |
| Saturn | 50053-12-22 02:53 G | 20002898.49 | 20002898.62 | 20002898.78 | 0.0298 | 0.0236 |
| Neptune | 50054-01-11 02:24 G | 20002918.46 | 20002918.60 | 20002918.78 | 0.0088 | 0.0071 |
| Neptune | 50055-01-13 09:22 G | 20003285.70 | 20003285.89 | 20003286.12 | 0.0088 | 0.0047 |
| Neptune | 50056-01-16 00:58 G | 20003653.29 | 20003653.54 | 20003653.82 | 0.0088 | 0.0015 |
| Neptune | 50057-01-17 12:00 G | 20004020.76 | 20004021.00 | 20004021.26 | 0.0088 | 0.0009 |
| Neptune | 50058-01-19 22:19 G | 20004388.20 | 20004388.43 | 20004388.68 | 0.0088 | 0.0041 |
| Neptune | 50059-01-22 13:41 G | 20004755.92 | 20004756.07 | 20004756.26 | 0.0088 | 0.0065 |
| Jupiter | 50059-02-02 14:24 G | 20004766.99 | 20004767.10 | 20004767.22 | 0.0502 | 0.0436 |
| Saturn | 50069-06-25 03:50 G | 20008562.49 | 20008562.66 | 20008562.83 | 0.0264 | 0.0191 |
| Jupiter | 50076-07-17 10:48 G | 20011141.85 | 20011141.95 | 20011142.07 | 0.0519 | 0.0450 |
| Uranus | 50077-08-16 13:41 G | 20011536.97 | 20011537.07 | 20011537.23 | 0.0134 | 0.0115 |
| Uranus | 50078-08-20 19:12 G | 20011906.10 | 20011906.30 | 20011906.52 | 0.0134 | 0.0064 |
| Uranus | 50079-08-25 02:10 G | 20012275.33 | 20012275.59 | 20012275.86 | 0.0134 | 0.0007 |
| Uranus | 50080-08-28 06:14 G | 20012644.56 | 20012644.76 | 20012644.98 | 0.0133 | 0.0069 |
| Uranus | 50081-09-01 12:43 G | 20013013.97 | 20013014.03 | 20013014.12 | 0.0133 | 0.0128 |
| Saturn | 50083-12-30 20:38 G | 20013864.16 | 20013864.36 | 20013864.58 | 0.0297 | 0.0161 |
| Jupiter | 50088-07-22 12:00 G | 20015529.79 | 20015530.00 | 20015530.22 | 0.0521 | 0.0182 |
| Jupiter | 50094-01-14 10:34 G | 20017531.82 | 20017531.94 | 20017532.07 | 0.0507 | 0.0432 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Mars | 50096-11-23 17:02 G | 20018576.06 | 20018576.21 | 20018576.35 | 0.1839 | 0.1095 |
| Saturn | 50099-07-01 17:02 G | 20019525.98 | 20019526.21 | 20019526.44 | 0.0264 | 0.0058 |
| Jupiter | 50100-07-28 01:55 G | 20019917.35 | 20019917.58 | 20019917.82 | 0.0523 | 0.0082 |
| Jupiter | 50106-01-19 22:48 G | 20021919.24 | 20021919.45 | 20021919.66 | 0.0505 | 0.0212 |
| Jupiter | 50112-08-02 05:17 G | 20024305.54 | 20024305.72 | 20024305.91 | 0.0524 | 0.0289 |
| Saturn | 50112-12-24 15:36 G | 20024449.95 | 20024450.15 | 20024450.36 | 0.0298 | 0.0159 |
| Jupiter | 50118-01-24 20:53 G | 20026307.13 | 20026307.37 | 20026307.61 | 0.0504 | 0.0035 |
| Uranus | 50120-02-15 19:26 G | 20027059.25 | 20027059.31 | 20027059.40 | 0.0145 | 0.0138 |
| Uranus | 50121-02-20 04:48 G | 20027429.48 | 20027429.70 | 20027429.94 | 0.0145 | 0.0069 |
| Uranus | 50122-02-25 01:12 G | 20027799.30 | 20027799.55 | 20027799.81 | 0.0145 | 0.0025 |
| Uranus | 50123-03-02 11:17 G | 20028169.81 | 20028169.97 | 20028170.16 | 0.0145 | 0.0104 |
| Jupiter | 50124-08-06 21:07 G | 20028693.30 | 20028693.38 | 20028693.47 | 0.0525 | 0.0490 |
| Saturn | 50128-06-27 03:50 G | 20030113.46 | 20030113.66 | 20030113.88 | 0.0264 | 0.0143 |
| Jupiter | 50130-01-29 04:34 G | 20030694.47 | 20030694.69 | 20030694.92 | 0.0503 | 0.0163 |
| Neptune | 50137-07-15 05:02 G | 20033418.57 | 20033418.71 | 20033418.91 | 0.0089 | 0.0068 |
| Neptune | 50138-07-17 18:14 G | 20033786.06 | 20033786.26 | 20033786.49 | 0.0089 | 0.0045 |
| Neptune | 50139-07-20 01:55 G | 20034153.33 | 20034153.58 | 20034153.85 | 0.0089 | 0.0012 |
| Neptune | 50140-07-21 18:43 G | 20034521.03 | 20034521.28 | 20034521.53 | 0.0089 | 0.0012 |
| Neptune | 50141-07-23 23:02 G | 20034888.25 | 20034888.46 | 20034888.69 | 0.0089 | 0.0046 |
| Jupiter | 50142-02-03 02:38 G | 20035082.48 | 20035082.61 | 20035082.74 | 0.0502 | 0.0411 |
| Neptune | 50142-07-26 17:17 G | 20035256.07 | 20035256.22 | 20035256.38 | 0.0089 | 0.0070 |
| Saturn | 50143-01-02 05:17 G | 20035415.58 | 20035415.72 | 20035415.87 | 0.0296 | 0.0231 |
| Mars | 50150-05-29 21:22 G | 20038120.20 | 20038120.39 | 20038120.58 | 0.1689 | 0.0269 |
| Saturn | 50158-07-03 22:48 G | 20041077.24 | 20041077.45 | 20041077.68 | 0.0264 | 0.0106 |
| Jupiter | 50159-07-18 23:31 G | 20041457.40 | 20041457.48 | 20041457.57 | 0.0520 | 0.0481 |
| Uranus | 50161-08-18 03:36 G | 20042218.56 | 20042218.65 | 20042218.78 | 0.0134 | 0.0121 |
| Pluto | 50161-11-08 11:02 G | 20042300.71 | 20042300.96 | 20042301.22 | 0.0066 | 0.0010 |
| Uranus | 50162-08-22 10:05 G | 20042587.69 | 20042587.92 | 20042588.15 | 0.0134 | 0.0047 |
| Uranus | 50163-08-26 15:36 G | 20042956.89 | 20042957.15 | 20042957.41 | 0.0133 | 0.0008 |
| Uranus | 50164-08-29 20:53 G | 20043326.19 | 20043326.37 | 20043326.59 | 0.0133 | 0.0075 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 50171-07-23 12:29 G | 20045844.81 | 20045845.02 | 20045845.24 | 0.0521 | 0.0210 |
| Saturn | 50171-12-26 18:43 G | 20046001.04 | 20046001.28 | 20046001.53 | 0.0298 | 0.0093 |
| Jupiter | 50177-01-14 12:43 G | 20047846.94 | 20047847.03 | 20047847.13 | 0.0507 | 0.0462 |
| Jupiter | 50183-07-28 14:10 G | 20050232.86 | 20050233.09 | 20050233.31 | 0.0522 | 0.0045 |
| Saturn | 50187-06-28 23:02 G | 20051664.23 | 20051664.46 | 20051664.69 | 0.0264 | 0.0100 |
| Jupiter | 50189-01-19 11:02 G | 20052234.76 | 20052234.96 | 20052235.18 | 0.0506 | 0.0243 |
| Jupiter | 50195-08-02 06:14 G | 20054620.55 | 20054620.76 | 20054620.98 | 0.0523 | 0.0245 |
| Jupiter | 50201-01-24 20:38 G | 20056622.13 | 20056622.36 | 20056622.59 | 0.0504 | 0.0064 |
| Saturn | 50202-01-04 11:17 G | 20056966.93 | 20056966.97 | 20056967.02 | 0.0296 | 0.0291 |
| Uranus | 50205-02-21 16:48 G | 20058110.96 | 20058111.20 | 20058111.45 | 0.0145 | 0.0050 |
| Uranus | 50206-02-26 13:41 G | 20058480.83 | 20058481.07 | 20058481.33 | 0.0145 | 0.0022 |
| Uranus | 50207-03-03 23:46 G | 20058851.33 | 20058851.49 | 20058851.68 | 0.0145 | 0.0108 |
| Jupiter | 50207-08-08 01:12 G | 20059008.45 | 20059008.55 | 20059008.66 | 0.0525 | 0.0461 |
| Jupiter | 50213-01-29 21:22 G | 20061010.17 | 20061010.39 | 20061010.62 | 0.0503 | 0.0147 |
| Saturn | 50217-07-05 21:07 G | 20062628.19 | 20062628.38 | 20062628.60 | 0.0264 | 0.0151 |
| Neptune | 50218-01-12 02:38 G | 20062818.56 | 20062818.61 | 20062818.69 | 0.0088 | 0.0085 |
| Neptune | 50219-01-14 15:36 G | 20063186.00 | 20063186.15 | 20063186.37 | 0.0088 | 0.0066 |
| Neptune | 50220-01-17 04:48 G | 20063553.47 | 20063553.70 | 20063553.95 | 0.0088 | 0.0029 |
| Neptune | 50221-01-18 13:55 G | 20063920.82 | 20063921.08 | 20063921.36 | 0.0088 | 0.0010 |
| Neptune | 50222-01-21 07:12 G | 20064288.56 | 20064288.80 | 20064289.05 | 0.0088 | 0.0028 |
| Neptune | 50223-01-23 12:43 G | 20064655.82 | 20064656.03 | 20064656.26 | 0.0088 | 0.0047 |
| Neptune | 50224-01-26 07:26 G | 20065023.75 | 20065023.81 | 20065023.92 | 0.0088 | 0.0084 |
| Jupiter | 50225-02-03 06:14 G | 20065397.61 | 20065397.76 | 20065397.91 | 0.0502 | 0.0395 |
| Saturn | 50230-12-28 13:41 G | 20067551.83 | 20067552.07 | 20067552.33 | 0.0298 | 0.0037 |
| Jupiter | 50242-07-19 00:43 G | 20071772.50 | 20071772.53 | 20071772.57 | 0.0519 | 0.0511 |
| Uranus | 50245-08-19 18:00 G | 20072900.10 | 20072900.25 | 20072900.44 | 0.0134 | 0.0102 |
| Saturn | 50246-06-30 20:53 G | 20073215.14 | 20073215.37 | 20073215.60 | 0.0264 | 0.0058 |
| Uranus | 50246-08-24 01:26 G | 20073269.35 | 20073269.56 | 20073269.80 | 0.0134 | 0.0052 |
| Uranus | 50247-08-28 06:00 G | 20073638.49 | 20073638.75 | 20073639.01 | 0.0133 | 0.0021 |
| Uranus | 50248-08-31 12:14 G | 20074007.82 | 20074008.01 | 20074008.21 | 0.0133 | 0.0080 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 50254-07-24 02:38 G | 20076160.41 | 20076160.61 | 20076160.81 | 0.0520 | 0.0238 |
| Jupiter | 50260-01-16 04:19 G | 20078162.61 | 20078162.68 | 20078162.77 | 0.0507 | 0.0477 |
| Jupiter | 50266-07-28 15:22 G | 20080547.90 | 20080548.14 | 20080548.38 | 0.0522 | 0.0008 |
| Jupiter | 50272-01-20 16:05 G | 20082549.97 | 20082550.17 | 20082550.37 | 0.0506 | 0.0261 |
| Saturn | 50275-06-26 08:24 G | 20083802.83 | 20083802.85 | 20083802.90 | 0.0262 | 0.0259 |
| Saturn | 50276-07-06 13:55 G | 20084178.91 | 20084179.08 | 20084179.25 | 0.0264 | 0.0194 |
| Jupiter | 50278-08-02 14:38 G | 20084935.91 | 20084936.11 | 20084936.31 | 0.0524 | 0.0212 |
| Jupiter | 50284-01-25 15:07 G | 20086937.90 | 20086938.13 | 20086938.36 | 0.0504 | 0.0085 |
| Uranus | 50288-02-17 20:38 G | 20088422.26 | 20088422.36 | 20088422.48 | 0.0145 | 0.0128 |
| Uranus | 50289-02-22 04:05 G | 20088792.44 | 20088792.67 | 20088792.92 | 0.0145 | 0.0059 |
| Saturn | 50289-12-29 09:50 G | 20089102.67 | 20089102.91 | 20089103.15 | 0.0298 | 0.0012 |
| Uranus | 50290-02-27 01:26 G | 20089162.33 | 20089162.56 | 20089162.81 | 0.0145 | 0.0036 |
| Jupiter | 50290-08-07 18:00 G | 20089324.13 | 20089324.25 | 20089324.38 | 0.0525 | 0.0443 |
| Uranus | 50291-03-04 10:34 G | 20089532.80 | 20089532.94 | 20089533.12 | 0.0145 | 0.0113 |
| Jupiter | 50296-01-30 00:58 G | 20091325.30 | 20091325.54 | 20091325.78 | 0.0503 | 0.0129 |
| Neptune | 50302-07-18 18:58 G | 20093686.10 | 20093686.29 | 20093686.50 | 0.0089 | 0.0056 |
| Neptune | 50303-07-21 12:29 G | 20094053.80 | 20094054.02 | 20094054.27 | 0.0089 | 0.0034 |
| Neptune | 50304-07-22 17:17 G | 20094420.97 | 20094421.22 | 20094421.48 | 0.0089 | 0.0002 |
| Saturn | 50305-07-02 21:36 G | 20094766.16 | 20094766.40 | 20094766.63 | 0.0264 | 0.0018 |
| Neptune | 50305-07-25 11:02 G | 20094788.72 | 20094788.96 | 20094789.22 | 0.0089 | 0.0023 |
| Neptune | 50306-07-27 16:48 G | 20095156.02 | 20095156.20 | 20095156.40 | 0.0089 | 0.0058 |
| Neptune | 50307-07-30 07:55 G | 20095523.73 | 20095523.83 | 20095523.97 | 0.0089 | 0.0079 |
| Jupiter | 50308-02-04 18:29 G | 20095713.13 | 20095713.27 | 20095713.42 | 0.0502 | 0.0386 |
| Uranus | 50329-08-21 07:26 G | 20103581.68 | 20103581.81 | 20103581.98 | 0.0134 | 0.0109 |
| Uranus | 50330-08-25 16:05 G | 20103950.93 | 20103951.17 | 20103951.40 | 0.0134 | 0.0034 |
| Uranus | 50331-08-29 19:12 G | 20104320.04 | 20104320.30 | 20104320.55 | 0.0134 | 0.0019 |
| Uranus | 50332-09-02 02:38 G | 20104689.44 | 20104689.61 | 20104689.80 | 0.0133 | 0.0088 |
| Saturn | 50334-06-28 00:58 G | 20105353.41 | 20105353.54 | 20105353.67 | 0.0262 | 0.0221 |
| Saturn | 50335-07-09 09:36 G | 20105729.80 | 20105729.90 | 20105730.01 | 0.0264 | 0.0238 |
| Jupiter | 50337-07-24 05:46 G | 20106475.54 | 20106475.74 | 20106475.95 | 0.0521 | 0.0262 |

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| Jupiter | 50343-01-16 09:07 G | 20108477.84 | 20108477.88 | 20108477.93 | 0.0507 | 0.0496 |
| Saturn | 50348-12-31 09:22 G | 20110653.66 | 20110653.89 | 20110654.13 | 0.0298 | 0.0055 |
| Jupiter | 50349-07-29 05:17 G | 20110863.50 | 20110863.72 | 20110863.94 | 0.0522 | 0.0015 |
| Jupiter | 50355-01-21 09:22 G | 20112865.70 | 20112865.89 | 20112866.08 | 0.0506 | 0.0288 |
| Jupiter | 50361-08-03 05:31 G | 20115251.51 | 20115251.73 | 20115251.96 | 0.0523 | 0.0182 |
| Saturn | 50364-07-03 19:12 G | 20116317.06 | 20116317.30 | 20116317.55 | 0.0264 | 0.0023 |
| Jupiter | 50367-01-25 19:26 G | 20117253.08 | 20117253.31 | 20117253.55 | 0.0505 | 0.0111 |
| Uranus | 50372-02-19 05:31 G | 20119103.68 | 20119103.73 | 20119103.81 | 0.0145 | 0.0139 |
| Uranus | 50373-02-23 12:00 G | 20119473.75 | 20119474.00 | 20119474.26 | 0.0145 | 0.0042 |
| Jupiter | 50373-08-07 19:41 G | 20119639.19 | 20119639.32 | 20119639.46 | 0.0525 | 0.0416 |
| Uranus | 50374-02-28 10:19 G | 20119843.69 | 20119843.93 | 20119844.18 | 0.0145 | 0.0028 |
| Uranus | 50375-03-05 18:58 G | 20120214.15 | 20120214.29 | 20120214.46 | 0.0145 | 0.0116 |
| Saturn | 50377-12-24 16:34 G | 20121239.09 | 20121239.19 | 20121239.30 | 0.0299 | 0.0269 |
| Jupiter | 50379-01-30 15:50 G | 20121640.94 | 20121641.16 | 20121641.38 | 0.0503 | 0.0122 |
| Mars | 50380-11-26 09:07 G | 20122306.81 | 20122306.88 | 20122306.96 | 0.1830 | 0.1708 |
| Neptune | 50383-01-14 22:48 G | 20123086.35 | 20123086.45 | 20123086.59 | 0.0088 | 0.0078 |
| Neptune | 50384-01-17 06:00 G | 20123453.55 | 20123453.75 | 20123453.99 | 0.0088 | 0.0050 |
| Neptune | 50385-01-19 00:29 G | 20123821.28 | 20123821.52 | 20123821.78 | 0.0088 | 0.0020 |
| Neptune | 50386-01-21 05:31 G | 20124188.48 | 20124188.73 | 20124189.00 | 0.0088 | 0.0007 |
| Neptune | 50387-01-24 00:00 G | 20124556.28 | 20124556.50 | 20124556.76 | 0.0088 | 0.0037 |
| Neptune | 50388-01-26 05:46 G | 20124923.58 | 20124923.74 | 20124923.94 | 0.0088 | 0.0062 |
| Jupiter | 50391-02-04 10:34 G | 20126028.79 | 20126028.94 | 20126029.11 | 0.0502 | 0.0380 |
| Saturn | 50393-06-28 18:58 G | 20126904.13 | 20126904.29 | 20126904.47 | 0.0262 | 0.0184 |
| Saturn | 50408-01-02 05:17 G | 20132204.48 | 20132204.72 | 20132204.96 | 0.0298 | 0.0094 |
| Pluto | 50408-11-12 00:43 G | 20132519.29 | 20132519.53 | 20132519.79 | 0.0066 | 0.0023 |
| Uranus | 50413-08-21 19:55 G | 20134263.16 | 20134263.33 | 20134263.54 | 0.0134 | 0.0091 |
| Uranus | 50414-08-26 05:31 G | 20134632.51 | 20134632.73 | 20134632.98 | 0.0134 | 0.0042 |
| Uranus | 50415-08-30 07:26 G | 20135001.57 | 20135001.81 | 20135002.08 | 0.0134 | 0.0033 |
| Uranus | 50416-09-02 16:05 G | 20135371.01 | 20135371.17 | 20135371.37 | 0.0134 | 0.0090 |
| Jupiter | 50420-07-23 18:58 G | 20136791.11 | 20136791.29 | 20136791.48 | 0.0520 | 0.0276 |

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| Saturn | 50423-07-05 12:29 G | 20137867.77 | 20137868.02 | 20137868.26 | 0.0264 | 0.0066 |
| Jupiter | 50432-07-28 17:31 G | 20141178.99 | 20141179.23 | 20141179.47 | 0.0522 | 0.0044 |
| Mars | 50434-06-01 05:31 G | 20141851.54 | 20141851.73 | 20141851.92 | 0.1696 | 0.0447 |
| Saturn | 50436-12-25 12:14 G | 20142789.87 | 20142790.01 | 20142790.17 | 0.0299 | 0.0228 |
| Jupiter | 50438-01-20 15:22 G | 20143180.95 | 20143181.14 | 20143181.33 | 0.0506 | 0.0313 |
| Jupiter | 50444-08-02 03:22 G | 20145566.43 | 20145566.64 | 20145566.86 | 0.0523 | 0.0148 |
| Jupiter | 50450-01-25 12:58 G | 20147568.82 | 20147569.04 | 20147569.26 | 0.0505 | 0.0127 |
| Saturn | 50452-06-29 20:24 G | 20148455.16 | 20148455.35 | 20148455.56 | 0.0262 | 0.0141 |
| Uranus | 50456-02-19 17:46 G | 20149785.12 | 20149785.24 | 20149785.38 | 0.0144 | 0.0122 |
| Jupiter | 50456-08-07 09:50 G | 20149954.76 | 20149954.91 | 20149955.06 | 0.0525 | 0.0395 |
| Uranus | 50457-02-23 22:05 G | 20150155.18 | 20150155.42 | 20150155.68 | 0.0145 | 0.0053 |
| Uranus | 50458-02-28 21:36 G | 20150525.16 | 20150525.40 | 20150525.64 | 0.0145 | 0.0043 |
| Uranus | 50459-03-06 04:34 G | 20150895.56 | 20150895.69 | 20150895.86 | 0.0145 | 0.0117 |
| Jupiter | 50462-01-30 05:02 G | 20151956.47 | 20151956.71 | 20151956.95 | 0.0503 | 0.0109 |
| Neptune | 50466-07-18 07:55 G | 20153586.70 | 20153586.83 | 20153587.00 | 0.0089 | 0.0071 |
| Saturn | 50467-01-02 21:36 G | 20153755.18 | 20153755.40 | 20153755.63 | 0.0298 | 0.0137 |
| Neptune | 50467-07-20 12:58 G | 20153953.83 | 20153954.04 | 20153954.24 | 0.0089 | 0.0050 |
| Neptune | 50468-07-22 06:14 G | 20154321.51 | 20154321.76 | 20154322.02 | 0.0089 | 0.0015 |
| Neptune | 50469-07-24 12:58 G | 20154688.79 | 20154689.04 | 20154689.29 | 0.0089 | 0.0006 |
| Neptune | 50470-07-27 01:55 G | 20155056.37 | 20155056.58 | 20155056.84 | 0.0089 | 0.0042 |
| Neptune | 50471-07-29 12:43 G | 20155423.88 | 20155424.03 | 20155424.22 | 0.0089 | 0.0065 |
| Jupiter | 50474-02-03 15:50 G | 20156344.00 | 20156344.16 | 20156344.32 | 0.0502 | 0.0361 |
| Saturn | 50482-07-06 07:41 G | 20159418.60 | 20159418.82 | 20159419.04 | 0.0264 | 0.0111 |
| Pluto | 50495-05-16 01:41 G | 20164115.37 | 20164115.57 | 20164115.83 | 0.0078 | 0.0038 |
| Saturn | 50495-12-27 14:24 G | 20164340.92 | 20164341.10 | 20164341.30 | 0.0299 | 0.0181 |
| Uranus | 50497-08-22 07:26 G | 20164944.65 | 20164944.81 | 20164944.99 | 0.0134 | 0.0099 |
| Uranus | 50498-08-26 18:00 G | 20165314.02 | 20165314.25 | 20165314.50 | 0.0134 | 0.0024 |
| Uranus | 50499-08-30 18:58 G | 20165683.05 | 20165683.29 | 20165683.55 | 0.0134 | 0.0028 |
| Uranus | 50500-09-04 05:02 G | 20166052.56 | 20166052.71 | 20166052.89 | 0.0134 | 0.0099 |
| Jupiter | 50503-07-25 00:14 G | 20167106.32 | 20167106.51 | 20167106.70 | 0.0520 | 0.0307 |

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| Saturn | 50511-07-03 00:14 G | 20170006.28 | 20170006.51 | 20170006.73 | 0.0263 | 0.0094 |
| Jupiter | 50515-07-29 15:36 G | 20171493.93 | 20171494.15 | 20171494.38 | 0.0522 | 0.0080 |
| Jupiter | 50521-01-21 04:34 G | 20173496.53 | 20173496.69 | 20173496.86 | 0.0506 | 0.0348 |
| Saturn | 50526-01-04 19:41 G | 20175306.13 | 20175306.32 | 20175306.51 | 0.0298 | 0.0189 |
| Jupiter | 50527-08-03 21:50 G | 20175882.18 | 20175882.41 | 20175882.63 | 0.0523 | 0.0125 |
| Jupiter | 50533-01-25 21:22 G | 20177884.16 | 20177884.39 | 20177884.62 | 0.0505 | 0.0155 |
| Jupiter | 50539-08-08 11:46 G | 20180269.84 | 20180269.99 | 20180270.16 | 0.0524 | 0.0375 |
| Uranus | 50540-02-21 05:17 G | 20180466.63 | 20180466.72 | 20180466.86 | 0.0144 | 0.0128 |
| Uranus | 50541-02-25 08:53 G | 20180836.61 | 20180836.87 | 20180837.13 | 0.0144 | 0.0033 |
| Saturn | 50541-07-08 10:48 G | 20180969.77 | 20180969.95 | 20180970.14 | 0.0264 | 0.0164 |
| Uranus | 50542-03-02 09:36 G | 20181206.66 | 20181206.90 | 20181207.14 | 0.0145 | 0.0036 |
| Uranus | 50543-03-07 15:36 G | 20181577.04 | 20181577.15 | 20181577.30 | 0.0145 | 0.0126 |
| Jupiter | 50545-01-30 08:10 G | 20182271.61 | 20182271.84 | 20182272.06 | 0.0504 | 0.0085 |
| Neptune | 50548-01-17 17:17 G | 20183354.08 | 20183354.22 | 20183354.39 | 0.0088 | 0.0070 |
| Neptune | 50549-01-18 22:34 G | 20183721.21 | 20183721.44 | 20183721.69 | 0.0088 | 0.0033 |
| Neptune | 50550-01-21 17:17 G | 20184088.96 | 20184089.22 | 20184089.48 | 0.0088 | 0.0013 |
| Neptune | 50551-01-24 00:14 G | 20184456.27 | 20184456.51 | 20184456.76 | 0.0088 | 0.0024 |
| Neptune | 50552-01-26 15:22 G | 20184823.92 | 20184824.14 | 20184824.39 | 0.0088 | 0.0043 |
| Neptune | 50553-01-28 02:24 G | 20185191.51 | 20185191.60 | 20185191.71 | 0.0088 | 0.0080 |
| Saturn | 50554-12-29 19:12 G | 20185892.08 | 20185892.30 | 20185892.53 | 0.0299 | 0.0119 |
| Jupiter | 50557-02-04 07:26 G | 20186659.64 | 20186659.81 | 20186659.99 | 0.0503 | 0.0345 |
| Saturn | 50570-07-03 23:46 G | 20191557.24 | 20191557.49 | 20191557.74 | 0.0263 | 0.0040 |
| Uranus | 50581-08-23 18:29 G | 20195626.08 | 20195626.27 | 20195626.49 | 0.0134 | 0.0081 |
| Uranus | 50582-08-28 06:29 G | 20195995.53 | 20195995.77 | 20195996.01 | 0.0134 | 0.0032 |
| Uranus | 50583-09-01 06:43 G | 20196364.53 | 20196364.78 | 20196365.02 | 0.0134 | 0.0043 |
| Uranus | 50584-09-04 17:31 G | 20196734.08 | 20196734.23 | 20196734.41 | 0.0134 | 0.0098 |
| Saturn | 50585-01-06 03:36 G | 20196857.53 | 20196857.65 | 20196857.77 | 0.0297 | 0.0256 |
| Jupiter | 50586-07-24 03:50 G | 20197421.48 | 20197421.66 | 20197421.83 | 0.0520 | 0.0334 |
| Jupiter | 50598-07-29 06:58 G | 20201809.56 | 20201809.79 | 20201810.01 | 0.0521 | 0.0111 |
| Saturn | 50599-06-29 03:07 G | 20202144.56 | 20202144.63 | 20202144.70 | 0.0262 | 0.0249 |

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| Saturn | 50600-07-10 18:58 G | 20202521.16 | 20202521.29 | 20202521.42 | 0.0264 | 0.0223 |
| Jupiter | 50604-01-22 09:22 G | 20203811.73 | 20203811.89 | 20203812.05 | 0.0507 | 0.0384 |
| Jupiter | 50610-08-03 18:14 G | 20206197.03 | 20206197.26 | 20206197.50 | 0.0522 | 0.0087 |
| Saturn | 50613-12-31 23:46 G | 20207443.24 | 20207443.49 | 20207443.74 | 0.0298 | 0.0051 |
| Jupiter | 50616-01-27 00:00 G | 20208199.29 | 20208199.50 | 20208199.71 | 0.0506 | 0.0186 |
| Jupiter | 50622-08-08 14:53 G | 20210584.95 | 20210585.12 | 20210585.30 | 0.0524 | 0.0335 |
| Uranus | 50624-02-22 20:24 G | 20211148.19 | 20211148.35 | 20211148.51 | 0.0144 | 0.0110 |
| Uranus | 50625-02-26 21:50 G | 20211518.16 | 20211518.41 | 20211518.67 | 0.0144 | 0.0040 |
| Uranus | 50626-03-03 23:31 G | 20211888.26 | 20211888.48 | 20211888.72 | 0.0145 | 0.0056 |
| Uranus | 50627-03-09 04:34 G | 20212258.58 | 20212258.69 | 20212258.83 | 0.0145 | 0.0127 |
| Jupiter | 50628-01-31 23:17 G | 20212587.23 | 20212587.47 | 20212587.70 | 0.0504 | 0.0070 |
| Saturn | 50629-07-06 00:00 G | 20213108.25 | 20213108.50 | 20213108.75 | 0.0264 | 0.0021 |
| Neptune | 50631-07-22 00:29 G | 20213854.36 | 20213854.52 | 20213854.74 | 0.0089 | 0.0061 |
| Neptune | 50632-07-23 08:53 G | 20214221.65 | 20214221.87 | 20214222.10 | 0.0089 | 0.0036 |
| Neptune | 50633-07-25 21:22 G | 20214589.13 | 20214589.39 | 20214589.66 | 0.0089 | 0.0004 |
| Neptune | 50634-07-28 10:05 G | 20214956.70 | 20214956.92 | 20214957.18 | 0.0089 | 0.0022 |
| Neptune | 50635-07-30 17:31 G | 20215324.05 | 20215324.23 | 20215324.47 | 0.0089 | 0.0054 |
| Neptune | 50636-08-01 10:05 G | 20215691.83 | 20215691.92 | 20215692.07 | 0.0089 | 0.0078 |
| Jupiter | 50640-02-05 05:17 G | 20216974.54 | 20216974.72 | 20216974.91 | 0.0503 | 0.0313 |
| Pluto | 50654-11-15 05:31 G | 20222371.56 | 20222371.73 | 20222371.95 | 0.0066 | 0.0041 |
| Pluto | 50655-11-16 18:58 G | 20222738.17 | 20222738.29 | 20222738.43 | 0.0067 | 0.0058 |
| Saturn | 50658-07-01 12:29 G | 20223695.86 | 20223696.02 | 20223696.19 | 0.0263 | 0.0190 |
| Uranus | 50665-08-25 06:14 G | 20226307.58 | 20226307.76 | 20226307.96 | 0.0134 | 0.0089 |
| Uranus | 50666-08-29 18:43 G | 20226677.03 | 20226677.28 | 20226677.52 | 0.0134 | 0.0013 |
| Uranus | 50667-09-02 18:00 G | 20227046.01 | 20227046.25 | 20227046.51 | 0.0134 | 0.0037 |
| Uranus | 50668-09-06 06:00 G | 20227415.63 | 20227415.75 | 20227415.90 | 0.0134 | 0.0110 |
| Jupiter | 50669-07-24 13:12 G | 20227736.89 | 20227737.05 | 20227737.22 | 0.0519 | 0.0371 |
| Saturn | 50673-01-02 08:53 G | 20228994.62 | 20228994.87 | 20228995.12 | 0.0298 | 0.0028 |
| Jupiter | 50681-07-28 19:41 G | 20232124.10 | 20232124.32 | 20232124.54 | 0.0520 | 0.0166 |
| Jupiter | 50687-01-21 11:31 G | 20234126.86 | 20234126.98 | 20234127.11 | 0.0508 | 0.0423 |

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| Saturn | 50688-07-07 07:41 G | 20234659.60 | 20234659.82 | 20234660.05 | 0.0264 | 0.0085 |
| Jupiter | 50693-08-02 21:07 G | 20236512.16 | 20236512.38 | 20236512.61 | 0.0522 | 0.0035 |
| Jupiter | 50699-01-26 07:55 G | 20238514.62 | 20238514.83 | 20238515.05 | 0.0506 | 0.0224 |
| Saturn | 50701-12-28 10:48 G | 20239580.87 | 20239580.95 | 20239581.05 | 0.0299 | 0.0276 |
| Jupiter | 50705-08-08 16:05 G | 20240899.97 | 20240900.17 | 20240900.37 | 0.0524 | 0.0298 |
| Uranus | 50708-02-24 09:07 G | 20241829.74 | 20241829.88 | 20241830.04 | 0.0144 | 0.0113 |
| Uranus | 50709-02-28 09:50 G | 20242199.65 | 20242199.91 | 20242200.18 | 0.0144 | 0.0019 |
| Uranus | 50710-03-05 13:12 G | 20242569.82 | 20242570.05 | 20242570.29 | 0.0144 | 0.0049 |
| Jupiter | 50711-01-31 16:05 G | 20242901.94 | 20242902.17 | 20242902.41 | 0.0504 | 0.0031 |
| Uranus | 50711-03-10 17:02 G | 20242940.17 | 20242940.21 | 20242940.30 | 0.0145 | 0.0140 |
| Neptune | 50712-01-18 17:17 G | 20243254.13 | 20243254.22 | 20243254.30 | 0.0088 | 0.0083 |
| Neptune | 50713-01-20 10:19 G | 20243621.74 | 20243621.93 | 20243622.17 | 0.0088 | 0.0053 |
| Neptune | 50714-01-22 18:43 G | 20243989.04 | 20243989.28 | 20243989.53 | 0.0088 | 0.0026 |
| Neptune | 50715-01-25 08:10 G | 20244356.58 | 20244356.84 | 20244357.12 | 0.0088 | 0.0006 |
| Neptune | 50716-01-27 20:38 G | 20244724.15 | 20244724.36 | 20244724.61 | 0.0088 | 0.0033 |
| Neptune | 50717-01-29 05:31 G | 20245091.56 | 20245091.73 | 20245091.95 | 0.0088 | 0.0062 |
| Saturn | 50717-07-03 20:53 G | 20245247.16 | 20245247.37 | 20245247.60 | 0.0263 | 0.0127 |
| Neptune | 50718-01-31 23:02 G | 20245459.44 | 20245459.46 | 20245459.50 | 0.0088 | 0.0088 |
| Mars | 50718-06-05 02:38 G | 20245583.47 | 20245583.61 | 20245583.76 | 0.1703 | 0.0969 |
| Jupiter | 50723-02-05 12:29 G | 20247289.82 | 20247290.02 | 20247290.21 | 0.0503 | 0.0277 |
| Saturn | 50732-01-06 03:22 G | 20250546.42 | 20250546.64 | 20250546.86 | 0.0298 | 0.0119 |
| Jupiter | 50735-02-09 22:48 G | 20251677.36 | 20251677.45 | 20251677.54 | 0.0502 | 0.0465 |
| Pluto | 50742-05-21 00:00 G | 20254334.23 | 20254334.50 | 20254334.76 | 0.0078 | 0.0004 |
| Mars | 50743-12-03 00:29 G | 20254895.38 | 20254895.52 | 20254895.67 | 0.1827 | 0.1313 |
| Saturn | 50747-07-10 20:38 G | 20256211.17 | 20256211.36 | 20256211.55 | 0.0265 | 0.0154 |
| Uranus | 50749-08-26 17:46 G | 20256989.04 | 20256989.24 | 20256989.47 | 0.0134 | 0.0071 |
| Uranus | 50750-08-31 06:58 G | 20257358.55 | 20257358.79 | 20257359.04 | 0.0134 | 0.0022 |
| Uranus | 50751-09-04 06:00 G | 20257727.52 | 20257727.75 | 20257727.99 | 0.0134 | 0.0054 |
| Jupiter | 50752-07-24 01:41 G | 20258051.45 | 20258051.57 | 20258051.70 | 0.0518 | 0.0430 |
| Uranus | 50752-09-07 18:29 G | 20258097.13 | 20258097.27 | 20258097.43 | 0.0134 | 0.0107 |

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| Saturn | 50760-12-30 06:00 G | 20261132.56 | 20261132.75 | 20261132.97 | 0.0298 | 0.0178 |
| Jupiter | 50764-07-29 04:05 G | 20262439.46 | 20262439.67 | 20262439.87 | 0.0520 | 0.0219 |
| Jupiter | 50770-01-21 15:22 G | 20264442.06 | 20264442.14 | 20264442.23 | 0.0508 | 0.0470 |
| Saturn | 50776-07-05 03:07 G | 20266798.38 | 20266798.63 | 20266798.87 | 0.0263 | 0.0059 |
| Jupiter | 50776-08-02 19:55 G | 20266827.09 | 20266827.33 | 20266827.57 | 0.0522 | 0.0013 |
| Jupiter | 50782-01-25 23:02 G | 20268829.26 | 20268829.46 | 20268829.66 | 0.0506 | 0.0271 |
| Jupiter | 50788-08-07 15:22 G | 20271214.95 | 20271215.14 | 20271215.34 | 0.0523 | 0.0254 |
| Saturn | 50791-01-08 03:50 G | 20272098.51 | 20272098.66 | 20272098.84 | 0.0297 | 0.0216 |
| Uranus | 50792-02-24 21:36 G | 20272511.24 | 20272511.40 | 20272511.60 | 0.0144 | 0.0099 |
| Uranus | 50793-02-28 20:53 G | 20272881.11 | 20272881.37 | 20272881.63 | 0.0144 | 0.0028 |
| Jupiter | 50794-01-30 22:19 G | 20273217.20 | 20273217.43 | 20273217.67 | 0.0505 | 0.0010 |
| Uranus | 50794-03-06 01:26 G | 20273251.35 | 20273251.56 | 20273251.78 | 0.0144 | 0.0068 |
| Uranus | 50795-03-11 03:36 G | 20273621.59 | 20273621.65 | 20273621.76 | 0.0145 | 0.0137 |
| Neptune | 50795-07-22 06:29 G | 20273754.66 | 20273754.77 | 20273754.93 | 0.0089 | 0.0074 |
| Neptune | 50796-07-23 17:31 G | 20274122.02 | 20274122.23 | 20274122.44 | 0.0089 | 0.0053 |
| Neptune | 50797-07-26 06:58 G | 20274489.56 | 20274489.79 | 20274490.05 | 0.0089 | 0.0017 |
| Neptune | 50798-07-28 13:26 G | 20274856.80 | 20274857.06 | 20274857.32 | 0.0089 | 0.0003 |
| Neptune | 50799-07-31 06:58 G | 20275224.57 | 20275224.79 | 20275225.02 | 0.0089 | 0.0040 |
| Neptune | 50800-08-01 11:17 G | 20275591.79 | 20275591.97 | 20275592.17 | 0.0089 | 0.0060 |
| Jupiter | 50800-08-12 09:07 G | 20275602.88 | 20275602.88 | 20275602.89 | 0.0524 | 0.0524 |
| Saturn | 50805-06-30 18:00 G | 20277386.19 | 20277386.25 | 20277386.31 | 0.0263 | 0.0253 |
| Jupiter | 50806-02-04 08:24 G | 20277604.64 | 20277604.85 | 20277605.07 | 0.0504 | 0.0236 |
| Saturn | 50806-07-12 08:53 G | 20277762.75 | 20277762.87 | 20277763.02 | 0.0265 | 0.0222 |
| Jupiter | 50818-02-09 00:43 G | 20281992.42 | 20281992.53 | 20281992.66 | 0.0502 | 0.0421 |
| Saturn | 50820-01-02 00:43 G | 20282684.29 | 20282684.53 | 20282684.78 | 0.0298 | 0.0077 |
| Uranus | 50832-08-23 06:58 G | 20287301.76 | 20287301.79 | 20287301.86 | 0.0134 | 0.0131 |
| Uranus | 50833-08-27 06:14 G | 20287670.57 | 20287670.76 | 20287670.97 | 0.0134 | 0.0079 |
| Uranus | 50834-08-31 19:26 G | 20288040.06 | 20288040.31 | 20288040.56 | 0.0134 | 0.0003 |
| Saturn | 50835-07-07 09:50 G | 20288349.67 | 20288349.91 | 20288350.16 | 0.0263 | 0.0012 |
| Jupiter | 50835-07-24 10:19 G | 20288366.85 | 20288366.93 | 20288367.02 | 0.0518 | 0.0474 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 50835-09-04 18:00 G | 20288409.02 | 20288409.25 | 20288409.50 | 0.0134 | 0.0046 |
| Uranus | 50836-09-08 07:12 G | 20288778.70 | 20288778.80 | 20288778.91 | 0.0134 | 0.0120 |
| Jupiter | 50847-07-28 23:02 G | 20292754.26 | 20292754.46 | 20292754.66 | 0.0519 | 0.0268 |
| Jupiter | 50859-08-02 16:19 G | 20297141.96 | 20297142.18 | 20297142.41 | 0.0521 | 0.0072 |
| Saturn | 50864-07-02 07:12 G | 20298937.64 | 20298937.80 | 20298937.98 | 0.0263 | 0.0185 |
| Jupiter | 50865-01-25 06:00 G | 20299144.57 | 20299144.75 | 20299144.93 | 0.0507 | 0.0315 |
| Jupiter | 50871-08-07 11:46 G | 20301529.78 | 20301529.99 | 20301530.22 | 0.0522 | 0.0196 |
| Uranus | 50876-02-25 07:12 G | 20303192.63 | 20303192.80 | 20303192.98 | 0.0144 | 0.0103 |
| Neptune | 50877-01-19 12:58 G | 20303521.92 | 20303522.04 | 20303522.21 | 0.0088 | 0.0073 |
| Jupiter | 50877-01-29 14:38 G | 20303531.88 | 20303532.11 | 20303532.36 | 0.0506 | 0.0058 |
| Uranus | 50877-03-01 05:17 G | 20303562.46 | 20303562.72 | 20303562.99 | 0.0144 | 0.0012 |
| Neptune | 50878-01-22 01:55 G | 20303889.34 | 20303889.58 | 20303889.83 | 0.0088 | 0.0036 |
| Uranus | 50878-03-06 11:31 G | 20303932.76 | 20303932.98 | 20303933.21 | 0.0144 | 0.0056 |
| Saturn | 50879-01-03 22:19 G | 20304236.18 | 20304236.43 | 20304236.67 | 0.0298 | 0.0026 |
| Neptune | 50879-01-24 16:34 G | 20304256.95 | 20304257.19 | 20304257.45 | 0.0088 | 0.0016 |
| Neptune | 50880-01-27 00:14 G | 20304624.25 | 20304624.51 | 20304624.77 | 0.0088 | 0.0021 |
| Neptune | 50881-01-28 18:14 G | 20304992.03 | 20304992.26 | 20304992.49 | 0.0088 | 0.0041 |
| Neptune | 50882-01-30 23:17 G | 20305359.35 | 20305359.47 | 20305359.59 | 0.0088 | 0.0078 |
| Jupiter | 50883-08-12 04:19 G | 20305917.59 | 20305917.68 | 20305917.77 | 0.0524 | 0.0480 |
| Jupiter | 50889-02-03 10:34 G | 20307919.73 | 20307919.94 | 20307920.15 | 0.0504 | 0.0190 |
| Saturn | 50894-07-08 22:19 G | 20309901.21 | 20309901.43 | 20309901.66 | 0.0264 | 0.0081 |
| Jupiter | 50901-02-08 22:48 G | 20312307.29 | 20312307.45 | 20312307.62 | 0.0503 | 0.0372 |
| Pluto | 50901-11-18 23:17 G | 20312590.22 | 20312590.47 | 20312590.72 | 0.0066 | 0.0002 |
| Saturn | 50907-12-29 22:34 G | 20314822.37 | 20314822.44 | 20314822.53 | 0.0299 | 0.0282 |
| Uranus | 50917-08-28 17:02 G | 20318352.00 | 20318352.21 | 20318352.44 | 0.0134 | 0.0063 |
| Uranus | 50918-09-02 06:29 G | 20318721.53 | 20318721.77 | 20318722.03 | 0.0134 | 0.0014 |
| Uranus | 50919-09-06 05:46 G | 20319090.52 | 20319090.74 | 20319090.96 | 0.0134 | 0.0063 |
| Uranus | 50920-09-09 18:43 G | 20319460.16 | 20319460.28 | 20319460.42 | 0.0134 | 0.0114 |
| Mars | 50923-06-04 13:26 G | 20320457.97 | 20320458.06 | 20320458.15 | 0.1714 | 0.1543 |
| Saturn | 50923-07-05 13:55 G | 20320488.86 | 20320489.08 | 20320489.31 | 0.0263 | 0.0118 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 50930-07-28 22:34 G | 20323069.27 | 20323069.44 | 20323069.61 | 0.0519 | 0.0327 |
| Saturn | 50938-01-06 20:24 G | 20325788.14 | 20325788.35 | 20325788.57 | 0.0298 | 0.0124 |
| Jupiter | 50942-08-02 16:48 G | 20327456.97 | 20327457.20 | 20327457.44 | 0.0521 | 0.0118 |
| Jupiter | 50948-01-25 23:46 G | 20329459.32 | 20329459.49 | 20329459.66 | 0.0507 | 0.0360 |
| Saturn | 50953-07-11 11:02 G | 20331452.76 | 20331452.96 | 20331453.16 | 0.0264 | 0.0149 |
| Jupiter | 50954-08-07 10:19 G | 20331844.72 | 20331844.93 | 20331845.15 | 0.0522 | 0.0159 |
| Jupiter | 50960-01-30 19:26 G | 20333847.08 | 20333847.31 | 20333847.53 | 0.0506 | 0.0098 |
| Uranus | 50960-02-26 16:34 G | 20333874.01 | 20333874.19 | 20333874.38 | 0.0144 | 0.0095 |
| Neptune | 50960-07-24 06:00 G | 20334022.58 | 20334022.75 | 20334022.92 | 0.0089 | 0.0064 |
| Uranus | 50961-03-02 13:12 G | 20334243.79 | 20334244.05 | 20334244.31 | 0.0144 | 0.0021 |
| Neptune | 50961-07-26 11:31 G | 20334389.74 | 20334389.98 | 20334390.22 | 0.0089 | 0.0036 |
| Uranus | 50962-03-07 20:10 G | 20334614.14 | 20334614.34 | 20334614.57 | 0.0144 | 0.0073 |
| Neptune | 50962-07-29 05:17 G | 20334757.47 | 20334757.72 | 20334757.98 | 0.0089 | 0.0007 |
| Uranus | 50963-03-12 19:26 G | 20334984.26 | 20334984.31 | 20334984.39 | 0.0144 | 0.0140 |
| Neptune | 50963-07-31 09:22 G | 20335124.66 | 20335124.89 | 20335125.15 | 0.0089 | 0.0021 |
| Neptune | 50964-08-02 03:07 G | 20335492.42 | 20335492.63 | 20335492.85 | 0.0089 | 0.0051 |
| Neptune | 50965-08-04 09:22 G | 20335859.79 | 20335859.89 | 20335860.02 | 0.0089 | 0.0078 |
| Jupiter | 50966-08-12 12:58 G | 20336232.92 | 20336233.04 | 20336233.16 | 0.0524 | 0.0442 |
| Saturn | 50966-12-31 12:43 G | 20336373.84 | 20336374.03 | 20336374.23 | 0.0299 | 0.0193 |
| Jupiter | 50972-02-04 08:53 G | 20338234.64 | 20338234.87 | 20338235.11 | 0.0505 | 0.0144 |
| Saturn | 50982-07-06 16:34 G | 20342039.95 | 20342040.19 | 20342040.44 | 0.0263 | 0.0054 |
| Jupiter | 50984-02-08 22:19 G | 20342622.26 | 20342622.43 | 20342622.60 | 0.0504 | 0.0329 |
| Pluto | 50989-05-24 03:22 G | 20344553.58 | 20344553.64 | 20344553.73 | 0.0078 | 0.0074 |
| Saturn | 50997-01-08 15:07 G | 20347339.97 | 20347340.13 | 20347340.31 | 0.0298 | 0.0208 |
| Uranus | 51000-08-26 04:19 G | 20348664.61 | 20348664.68 | 20348664.79 | 0.0134 | 0.0125 |

52ND MILLENNIUM CE

This is a list of transits of Moon in the 52nd millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Uranus | 51001-08-30 04:34 | G | 20349033.48 | 20349033.69 | 20349033.90 | 0.0134 | 0.0070 | |
| Mars | 51002-06-08 05:17 | G | 20349315.64 | 20349315.72 | 20349315.81 | 0.1709 | 0.1505 | |
| Uranus | 51002-09-03 17:31 | G | 20349402.97 | 20349403.23 | 20349403.48 | 0.0134 | 0.0005 | |
| Uranus | 51003-09-07 16:48 | G | 20349771.97 | 20349772.20 | 20349772.43 | 0.0134 | 0.0053 | |
| Uranus | 51004-09-11 05:31 | G | 20350141.67 | 20350141.73 | 20350141.81 | 0.0134 | 0.0128 | |
| Saturn | 51012-07-13 16:19 | G | 20353004.04 | 20353004.18 | 20353004.34 | 0.0264 | 0.0211 | |
| Jupiter | 51013-07-29 01:26 | G | 20353384.40 | 20353384.56 | 20353384.73 | 0.0519 | 0.0367 | |
| Jupiter | 51025-08-02 18:43 | G | 20357772.07 | 20357772.28 | 20357772.49 | 0.0520 | 0.0153 | |
| Saturn | 51026-01-02 20:53 | G | 20357925.14 | 20357925.37 | 20357925.60 | 0.0299 | 0.0117 | |
| Mars | 51027-12-05 02:53 | G | 20358626.48 | 20358626.62 | 20358626.77 | 0.1818 | 0.1004 | |
| Jupiter | 51031-01-26 06:00 | G | 20359774.62 | 20359774.75 | 20359774.90 | 0.0508 | 0.0401 | |
| Jupiter | 51037-08-07 18:14 | G | 20362160.04 | 20362160.26 | 20362160.49 | 0.0521 | 0.0124 | |
| Neptune | 51041-01-20 19:12 | G | 20363422.27 | 20363422.30 | 20363422.38 | 0.0088 | 0.0087 | |
| Saturn | 51041-07-08 20:10 | G | 20363591.10 | 20363591.34 | 20363591.58 | 0.0263 | 0.0005 | |
| Neptune | 51042-01-23 11:46 | G | 20363789.79 | 20363789.99 | 20363790.19 | 0.0088 | 0.0053 | |
| Neptune | 51043-01-25 18:29 | G | 20364157.02 | 20364157.27 | 20364157.52 | 0.0088 | 0.0030 | |
| Jupiter | 51043-01-30 19:55 | G | 20364162.09 | 20364162.33 | 20364162.57 | 0.0507 | 0.0135 | |
| Neptune | 51044-01-28 13:26 | G | 20364524.80 | 20364525.06 | 20364525.32 | 0.0088 | 0.0004 | |
| Uranus | 51044-02-28 02:10 | G | 20364555.40 | 20364555.59 | 20364555.78 | 0.0144 | 0.0094 | |
| Neptune | 51045-01-29 18:14 | G | 20364892.03 | 20364892.26 | 20364892.52 | 0.0088 | 0.0029 | |
| Uranus | 51045-03-03 22:05 | G | 20364925.16 | 20364925.42 | 20364925.68 | 0.0144 | 0.0007 | |
| Neptune | 51046-02-01 12:43 | G | 20365259.87 | 20365260.03 | 20365260.25 | 0.0088 | 0.0062 | |

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| Uranus | 51046-03-09 06:29 G | 20365295.54 | 20365295.77 | 20365296.00 | 0.0144 | 0.0061 |
| Neptune | 51047-02-03 19:41 G | 20365627.28 | 20365627.32 | 20365627.40 | 0.0088 | 0.0086 |
| Jupiter | 51049-08-12 06:00 G | 20366547.60 | 20366547.75 | 20366547.90 | 0.0523 | 0.0396 |
| Jupiter | 51055-02-04 11:17 G | 20368549.75 | 20368549.97 | 20368550.19 | 0.0505 | 0.0104 |
| Saturn | 51056-01-12 01:26 G | 20368891.49 | 20368891.56 | 20368891.65 | 0.0297 | 0.0280 |
| Jupiter | 51067-02-09 09:22 G | 20372937.70 | 20372937.89 | 20372938.09 | 0.0503 | 0.0290 |
| Saturn | 51070-07-04 10:34 G | 20374178.80 | 20374178.94 | 20374179.10 | 0.0262 | 0.0210 |
| Jupiter | 51079-02-13 15:36 G | 20377325.11 | 20377325.15 | 20377325.20 | 0.0502 | 0.0492 |
| Uranus | 51084-08-26 12:29 G | 20379345.96 | 20379346.02 | 20379346.13 | 0.0134 | 0.0128 |
| Saturn | 51085-01-04 05:02 G | 20379476.48 | 20379476.71 | 20379476.95 | 0.0299 | 0.0052 |
| Uranus | 51085-08-30 13:26 G | 20379714.85 | 20379715.06 | 20379715.30 | 0.0134 | 0.0057 |
| Uranus | 51086-09-04 02:38 G | 20380084.35 | 20380084.61 | 20380084.86 | 0.0134 | 0.0006 |
| Uranus | 51087-09-08 02:53 G | 20380453.41 | 20380453.62 | 20380453.83 | 0.0134 | 0.0070 |
| Uranus | 51088-09-11 14:53 G | 20380823.02 | 20380823.12 | 20380823.25 | 0.0134 | 0.0120 |
| Jupiter | 51096-07-28 04:48 G | 20383699.57 | 20383699.70 | 20383699.84 | 0.0518 | 0.0409 |
| Saturn | 51100-07-11 01:26 G | 20385142.33 | 20385142.56 | 20385142.79 | 0.0263 | 0.0056 |
| Jupiter | 51108-08-03 04:19 G | 20388087.46 | 20388087.68 | 20388087.90 | 0.0520 | 0.0190 |
| Jupiter | 51114-01-26 09:36 G | 20390089.77 | 20390089.90 | 20390090.03 | 0.0508 | 0.0429 |
| Jupiter | 51120-08-07 13:55 G | 20392474.85 | 20392475.08 | 20392475.31 | 0.0522 | 0.0087 |
| Neptune | 51124-07-25 08:53 G | 20393922.77 | 20393922.87 | 20393923.04 | 0.0089 | 0.0075 |
| Neptune | 51125-07-28 03:22 G | 20394290.45 | 20394290.64 | 20394290.85 | 0.0089 | 0.0055 |
| Jupiter | 51126-01-31 04:05 G | 20394477.46 | 20394477.67 | 20394477.89 | 0.0506 | 0.0155 |
| Neptune | 51126-07-30 07:55 G | 20394657.59 | 20394657.83 | 20394658.08 | 0.0089 | 0.0017 |
| Neptune | 51127-08-02 00:29 G | 20395025.26 | 20395025.52 | 20395025.79 | 0.0089 | 0.0003 |
| Uranus | 51128-02-29 13:26 G | 20395236.87 | 20395237.06 | 20395237.28 | 0.0144 | 0.0087 |
| Neptune | 51128-08-03 07:41 G | 20395392.61 | 20395392.82 | 20395393.06 | 0.0089 | 0.0040 |
| Uranus | 51129-03-05 08:53 G | 20395606.61 | 20395606.87 | 20395607.13 | 0.0144 | 0.0011 |
| Saturn | 51129-07-06 07:12 G | 20395729.60 | 20395729.80 | 20395730.01 | 0.0262 | 0.0157 |
| Neptune | 51129-08-05 20:24 G | 20395760.17 | 20395760.35 | 20395760.56 | 0.0089 | 0.0060 |
| Uranus | 51130-03-10 17:17 G | 20395977.03 | 20395977.22 | 20395977.44 | 0.0144 | 0.0081 |

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| Jupiter | 51132-08-12 19:41 G | 20396863.16 | 20396863.32 | 20396863.48 | 0.0523 | 0.0368 |
| Jupiter | 51138-02-05 00:14 G | 20398865.28 | 20398865.51 | 20398865.75 | 0.0505 | 0.0076 |
| Saturn | 51144-01-07 11:46 G | 20401027.75 | 20401027.99 | 20401028.23 | 0.0299 | 0.0007 |
| Pluto | 51147-11-22 14:38 G | 20402442.96 | 20402443.11 | 20402443.32 | 0.0066 | 0.0047 |
| Pluto | 51148-11-22 21:50 G | 20402809.30 | 20402809.41 | 20402809.57 | 0.0067 | 0.0057 |
| Jupiter | 51150-02-09 08:24 G | 20403252.66 | 20403252.85 | 20403253.06 | 0.0504 | 0.0261 |
| Saturn | 51159-07-13 03:07 G | 20406693.41 | 20406693.63 | 20406693.86 | 0.0263 | 0.0104 |
| Jupiter | 51162-02-14 07:26 G | 20407640.73 | 20407640.81 | 20407640.89 | 0.0503 | 0.0471 |
| Uranus | 51168-08-27 22:48 G | 20410027.34 | 20410027.45 | 20410027.58 | 0.0134 | 0.0119 |
| Uranus | 51169-09-01 00:29 G | 20410396.31 | 20410396.52 | 20410396.74 | 0.0134 | 0.0062 |
| Uranus | 51170-09-05 12:14 G | 20410765.75 | 20410766.01 | 20410766.27 | 0.0134 | 0.0011 |
| Uranus | 51171-09-09 12:58 G | 20411134.82 | 20411135.04 | 20411135.26 | 0.0134 | 0.0060 |
| Jupiter | 51179-07-29 13:41 G | 20414014.96 | 20414015.07 | 20414015.18 | 0.0518 | 0.0453 |
| Saturn | 51188-07-07 02:38 G | 20417280.39 | 20417280.61 | 20417280.84 | 0.0262 | 0.0108 |
| Jupiter | 51191-08-03 03:50 G | 20418402.45 | 20418402.66 | 20418402.87 | 0.0520 | 0.0222 |
| Jupiter | 51197-01-25 19:26 G | 20420405.22 | 20420405.31 | 20420405.43 | 0.0508 | 0.0447 |
| Saturn | 51203-01-08 08:53 G | 20422578.63 | 20422578.87 | 20422579.12 | 0.0299 | 0.0057 |
| Jupiter | 51203-08-08 09:07 G | 20422790.65 | 20422790.88 | 20422791.10 | 0.0522 | 0.0073 |
| Neptune | 51206-01-23 13:26 G | 20423689.95 | 20423690.06 | 20423690.24 | 0.0088 | 0.0074 |
| Neptune | 51207-01-26 09:22 G | 20424057.66 | 20424057.89 | 20424058.13 | 0.0088 | 0.0038 |
| Mars | 51207-06-06 20:10 G | 20424189.23 | 20424189.34 | 20424189.45 | 0.1722 | 0.1375 |
| Neptune | 51208-01-28 14:53 G | 20424424.87 | 20424425.12 | 20424425.37 | 0.0088 | 0.0016 |
| Neptune | 51209-01-30 08:53 G | 20424792.61 | 20424792.87 | 20424793.13 | 0.0088 | 0.0019 |
| Jupiter | 51209-01-30 16:34 G | 20424792.97 | 20424793.19 | 20424793.42 | 0.0507 | 0.0172 * |
| Neptune | 51210-02-01 16:19 G | 20425159.98 | 20425160.18 | 20425160.43 | 0.0088 | 0.0042 |
| Neptune | 51211-02-04 06:29 G | 20425527.64 | 20425527.77 | 20425527.91 | 0.0088 | 0.0076 |
| Uranus | 51212-03-01 01:41 G | 20425918.37 | 20425918.57 | 20425918.79 | 0.0144 | 0.0081 |
| Uranus | 51213-03-05 20:38 G | 20426288.11 | 20426288.36 | 20426288.62 | 0.0144 | 0.0004 |
| Uranus | 51214-03-11 06:00 G | 20426658.53 | 20426658.75 | 20426658.97 | 0.0144 | 0.0072 |
| Jupiter | 51215-08-12 23:31 G | 20427178.31 | 20427178.48 | 20427178.67 | 0.0523 | 0.0337 |

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| Saturn | 51218-07-13 20:38 G | 20428244.16 | 20428244.36 | 20428244.57 | 0.0263 | 0.0152 |
| Jupiter | 51221-02-04 01:41 G | 20429180.34 | 20429180.57 | 20429180.80 | 0.0505 | 0.0049 |
| Saturn | 51232-01-01 16:48 G | 20433164.11 | 20433164.20 | 20433164.32 | 0.0300 | 0.0267 |
| Jupiter | 51233-02-09 03:22 G | 20433568.44 | 20433568.64 | 20433568.85 | 0.0504 | 0.0240 |
| Pluto | 51235-05-27 04:05 G | 20434405.42 | 20434405.67 | 20434405.93 | 0.0078 | 0.0004 |
| Jupiter | 51245-02-13 14:10 G | 20437956.00 | 20437956.09 | 20437956.19 | 0.0502 | 0.0460 |
| Saturn | 51247-07-09 03:07 G | 20438831.39 | 20438831.63 | 20438831.86 | 0.0262 | 0.0061 |
| Uranus | 51252-08-28 07:12 G | 20440708.68 | 20440708.80 | 20440708.93 | 0.0134 | 0.0118 |
| Uranus | 51253-09-01 09:50 G | 20441077.70 | 20441077.91 | 20441078.15 | 0.0134 | 0.0051 |
| Uranus | 51254-09-05 20:53 G | 20441447.11 | 20441447.37 | 20441447.63 | 0.0134 | 0.0002 |
| Uranus | 51255-09-09 23:02 G | 20441816.26 | 20441816.46 | 20441816.66 | 0.0134 | 0.0077 |
| Uranus | 51256-09-13 09:22 G | 20442185.82 | 20442185.89 | 20442185.99 | 0.0134 | 0.0126 |
| Saturn | 51262-01-08 23:31 G | 20444129.25 | 20444129.48 | 20444129.73 | 0.0299 | 0.0105 |
| Jupiter | 51262-07-28 19:41 G | 20444330.24 | 20444330.32 | 20444330.41 | 0.0518 | 0.0480 |
| Jupiter | 51274-08-02 22:48 G | 20448718.25 | 20448718.45 | 20448718.65 | 0.0519 | 0.0241 |
| Saturn | 51277-07-14 12:29 G | 20449794.87 | 20449795.02 | 20449795.19 | 0.0263 | 0.0200 |
| Jupiter | 51280-01-26 08:38 G | 20450720.77 | 20450720.86 | 20450720.97 | 0.0509 | 0.0461 |
| Mars | 51286-06-09 10:05 G | 20453046.82 | 20453046.92 | 20453047.02 | 0.1717 | 0.1496 |
| Jupiter | 51286-08-07 11:46 G | 20453105.76 | 20453105.99 | 20453106.23 | 0.0521 | 0.0045 |
| Neptune | 51289-07-27 07:26 G | 20454190.66 | 20454190.81 | 20454191.00 | 0.0089 | 0.0066 |
| Neptune | 51290-07-29 23:46 G | 20454558.25 | 20454558.49 | 20454558.73 | 0.0089 | 0.0035 |
| Saturn | 51291-01-02 15:50 G | 20454715.01 | 20454715.16 | 20454715.32 | 0.0299 | 0.0221 |
| Neptune | 51291-08-01 08:24 G | 20454925.61 | 20454925.85 | 20454926.10 | 0.0089 | 0.0009 |
| Jupiter | 51292-01-30 21:22 G | 20455108.17 | 20455108.39 | 20455108.61 | 0.0507 | 0.0189 |
| Neptune | 51292-08-02 19:12 G | 20455293.06 | 20455293.30 | 20455293.57 | 0.0089 | 0.0022 |
| Neptune | 51293-08-05 08:38 G | 20455660.65 | 20455660.86 | 20455661.07 | 0.0089 | 0.0049 |
| Neptune | 51294-08-07 14:38 G | 20456028.02 | 20456028.11 | 20456028.24 | 0.0089 | 0.0080 |
| Uranus | 51296-03-01 12:58 G | 20456599.84 | 20456600.04 | 20456600.28 | 0.0144 | 0.0077 |
| Uranus | 51297-03-06 08:10 G | 20456969.59 | 20456969.84 | 20456970.10 | 0.0144 | 0.0003 |
| Uranus | 51298-03-11 17:02 G | 20457340.03 | 20457340.21 | 20457340.42 | 0.0144 | 0.0092 |

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| Jupiter | 51298-08-12 06:58 G | 20457493.62 | 20457493.79 | 20457493.98 | 0.0523 | 0.0301 |
| Jupiter | 51304-02-06 00:29 G | 20459496.29 | 20459496.52 | 20459496.75 | 0.0505 | 0.0035 |
| Saturn | 51306-07-11 03:07 G | 20460382.39 | 20460382.63 | 20460382.88 | 0.0262 | 0.0014 |
| Jupiter | 51310-08-18 07:41 G | 20461881.78 | 20461881.82 | 20461881.88 | 0.0525 | 0.0512 |
| Mars | 51311-12-07 12:58 G | 20462357.87 | 20462358.04 | 20462358.21 | 0.1809 | 0.0934 |
| Jupiter | 51316-02-10 08:38 G | 20463883.65 | 20463883.86 | 20463884.08 | 0.0504 | 0.0222 |
| Saturn | 51321-01-10 16:48 G | 20465680.00 | 20465680.20 | 20465680.42 | 0.0299 | 0.0151 |
| Jupiter | 51328-02-15 03:50 G | 20468271.57 | 20468271.66 | 20468271.76 | 0.0502 | 0.0452 |
| Saturn | 51335-07-06 00:29 G | 20470969.41 | 20470969.52 | 20470969.64 | 0.0261 | 0.0232 |
| Saturn | 51336-07-16 11:17 G | 20471345.90 | 20471345.97 | 20471346.06 | 0.0263 | 0.0245 |
| Uranus | 51336-08-29 18:00 G | 20471390.11 | 20471390.25 | 20471390.39 | 0.0134 | 0.0113 |
| Uranus | 51337-09-02 21:50 G | 20471759.19 | 20471759.41 | 20471759.63 | 0.0134 | 0.0054 |
| Uranus | 51338-09-07 06:58 G | 20472128.53 | 20472128.79 | 20472129.05 | 0.0134 | 0.0017 |
| Uranus | 51339-09-11 09:36 G | 20472497.70 | 20472497.90 | 20472498.12 | 0.0134 | 0.0068 |
| Jupiter | 51345-07-29 12:43 G | 20474646.00 | 20474646.03 | 20474646.07 | 0.0517 | 0.0510 |
| Saturn | 51350-01-04 12:14 G | 20476265.81 | 20476266.01 | 20476266.22 | 0.0299 | 0.0174 |
| Jupiter | 51357-08-02 20:24 G | 20479033.15 | 20479033.35 | 20479033.55 | 0.0519 | 0.0277 |
| Jupiter | 51363-01-26 16:48 G | 20481036.12 | 20481036.20 | 20481036.29 | 0.0509 | 0.0472 |
| Saturn | 51365-07-11 22:34 G | 20481933.19 | 20481933.44 | 20481933.69 | 0.0262 | 0.0032 |
| Jupiter | 51369-08-07 21:22 G | 20483421.17 | 20483421.39 | 20483421.61 | 0.0521 | 0.0018 |
| Neptune | 51370-01-24 05:31 G | 20483590.71 | 20483590.73 | 20483590.76 | 0.0088 | 0.0088 |
| Neptune | 51371-01-26 10:48 G | 20483957.77 | 20483957.95 | 20483958.18 | 0.0088 | 0.0053 |
| Neptune | 51372-01-29 03:36 G | 20484325.42 | 20484325.65 | 20484325.92 | 0.0088 | 0.0032 |
| Neptune | 51373-01-30 13:41 G | 20484692.82 | 20484693.07 | 20484693.32 | 0.0088 | 0.0005 |
| Neptune | 51374-02-02 02:24 G | 20485060.35 | 20485060.60 | 20485060.86 | 0.0088 | 0.0027 |
| Jupiter | 51375-01-31 17:31 G | 20485424.02 | 20485424.23 | 20485424.44 | 0.0507 | 0.0204 |
| Neptune | 51375-02-04 16:19 G | 20485428.02 | 20485428.18 | 20485428.37 | 0.0088 | 0.0063 |
| Neptune | 51376-02-07 00:14 G | 20485795.44 | 20485795.51 | 20485795.60 | 0.0088 | 0.0084 |
| Saturn | 51380-01-12 16:19 G | 20487231.02 | 20487231.18 | 20487231.36 | 0.0299 | 0.0204 |
| Uranus | 51380-03-02 22:19 G | 20487281.22 | 20487281.43 | 20487281.68 | 0.0144 | 0.0071 |

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| Uranus | 51381-03-07 18:00 G | 20487650.99 | 20487651.25 | 20487651.50 | 0.0144 | 0.0012 |
| Jupiter | 51381-08-12 21:07 G | 20487809.18 | 20487809.38 | 20487809.59 | 0.0523 | 0.0276 |
| Uranus | 51382-03-13 02:53 G | 20488021.43 | 20488021.62 | 20488021.85 | 0.0144 | 0.0082 |
| Jupiter | 51387-02-05 02:38 G | 20489811.37 | 20489811.61 | 20489811.85 | 0.0505 | 0.0010 |
| Jupiter | 51393-08-17 13:41 G | 20492196.99 | 20492197.07 | 20492197.15 | 0.0524 | 0.0486 |
| Saturn | 51394-07-06 22:19 G | 20492520.28 | 20492520.43 | 20492520.61 | 0.0262 | 0.0188 |
| Pluto | 51394-11-25 15:50 G | 20492661.93 | 20492662.16 | 20492662.41 | 0.0066 | 0.0020 |
| Jupiter | 51399-02-09 22:05 G | 20494199.21 | 20494199.42 | 20494199.63 | 0.0504 | 0.0196 |
| Saturn | 51409-01-06 05:02 G | 20497816.48 | 20497816.71 | 20497816.95 | 0.0299 | 0.0120 |
| Jupiter | 51411-02-15 15:36 G | 20498587.04 | 20498587.15 | 20498587.27 | 0.0503 | 0.0441 |
| Uranus | 51420-08-31 01:55 G | 20502071.45 | 20502071.58 | 20502071.75 | 0.0134 | 0.0109 |
| Uranus | 51421-09-04 07:55 G | 20502440.60 | 20502440.83 | 20502441.06 | 0.0134 | 0.0046 |
| Uranus | 51422-09-08 15:36 G | 20502809.90 | 20502810.15 | 20502810.42 | 0.0134 | 0.0011 |
| Uranus | 51423-09-12 20:24 G | 20503179.16 | 20503179.35 | 20503179.54 | 0.0134 | 0.0083 |
| Saturn | 51424-07-13 16:34 G | 20503483.96 | 20503484.19 | 20503484.43 | 0.0262 | 0.0082 |
| Uranus | 51424-09-16 03:50 G | 20503548.64 | 20503548.66 | 20503548.72 | 0.0134 | 0.0132 |
| Saturn | 51439-01-14 19:41 G | 20508782.21 | 20508782.32 | 20508782.45 | 0.0298 | 0.0261 |
| Jupiter | 51440-08-03 12:00 G | 20509348.82 | 20509349.00 | 20509349.19 | 0.0519 | 0.0293 |
| Jupiter | 51446-01-27 08:38 G | 20511351.82 | 20511351.86 | 20511351.92 | 0.0509 | 0.0496 |
| Jupiter | 51452-08-08 08:38 G | 20513736.62 | 20513736.86 | 20513737.10 | 0.0521 | 0.0002 |
| Saturn | 51453-07-09 01:55 G | 20514071.38 | 20514071.58 | 20514071.79 | 0.0262 | 0.0136 |
| Neptune | 51453-07-28 21:50 G | 20514091.29 | 20514091.41 | 20514091.57 | 0.0089 | 0.0075 |
| Neptune | 51454-07-31 07:41 G | 20514458.65 | 20514458.82 | 20514459.03 | 0.0089 | 0.0055 |
| Neptune | 51455-08-02 18:00 G | 20514825.99 | 20514826.25 | 20514826.51 | 0.0089 | 0.0017 |
| Neptune | 51456-08-04 08:53 G | 20515193.63 | 20515193.87 | 20515194.12 | 0.0089 | 0.0004 |
| Neptune | 51457-08-06 14:24 G | 20515560.89 | 20515561.10 | 20515561.35 | 0.0089 | 0.0041 |
| Jupiter | 51458-01-31 17:02 G | 20515739.00 | 20515739.21 | 20515739.43 | 0.0508 | 0.0236 |
| Neptune | 51458-08-09 08:38 G | 20515928.68 | 20515928.86 | 20515929.05 | 0.0089 | 0.0060 |
| Uranus | 51463-02-27 23:02 G | 20517592.46 | 20517592.46 | 20517592.48 | 0.0144 | 0.0144 |
| Uranus | 51464-03-04 06:00 G | 20517962.53 | 20517962.75 | 20517962.99 | 0.0144 | 0.0072 |

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| Jupiter | 51464-08-12 23:17 G | 20518124.27 | 20518124.47 | 20518124.67 | 0.0522 | 0.0243 |
| Uranus | 51465-03-09 02:10 G | 20518332.34 | 20518332.59 | 20518332.84 | 0.0144 | 0.0008 |
| Uranus | 51466-03-14 10:34 G | 20518702.76 | 20518702.94 | 20518703.14 | 0.0144 | 0.0096 |
| Saturn | 51468-01-08 03:22 G | 20519367.41 | 20519367.64 | 20519367.89 | 0.0299 | 0.0059 |
| Jupiter | 51470-02-05 16:48 G | 20520126.97 | 20520127.20 | 20520127.42 | 0.0506 | 0.0027 |
| Jupiter | 51476-08-17 21:22 G | 20522512.28 | 20522512.39 | 20522512.52 | 0.0524 | 0.0443 |
| Pluto | 51481-05-29 18:43 G | 20524258.15 | 20524258.28 | 20524258.46 | 0.0078 | 0.0061 |
| Jupiter | 51482-02-10 10:05 G | 20524514.70 | 20524514.92 | 20524515.16 | 0.0505 | 0.0176 |
| Saturn | 51483-07-15 17:02 G | 20525035.01 | 20525035.21 | 20525035.42 | 0.0263 | 0.0135 |
| Mars | 51491-06-09 23:02 G | 20527921.29 | 20527921.46 | 20527921.63 | 0.1729 | 0.0645 |
| Jupiter | 51494-02-14 21:22 G | 20528902.27 | 20528902.39 | 20528902.51 | 0.0503 | 0.0421 |
| Uranus | 51504-09-01 12:00 G | 20532752.86 | 20532753.00 | 20532753.16 | 0.0134 | 0.0109 |
| Uranus | 51505-09-05 18:43 G | 20533122.06 | 20533122.28 | 20533122.52 | 0.0134 | 0.0046 |
| Uranus | 51506-09-10 01:12 G | 20533491.29 | 20533491.55 | 20533491.80 | 0.0134 | 0.0022 |
| Uranus | 51507-09-14 06:29 G | 20533860.58 | 20533860.77 | 20533860.99 | 0.0134 | 0.0075 |
| Saturn | 51512-07-11 04:48 G | 20535622.47 | 20535622.70 | 20535622.94 | 0.0262 | 0.0081 |
| Jupiter | 51523-08-04 17:46 G | 20539664.05 | 20539664.24 | 20539664.43 | 0.0518 | 0.0317 |
| Saturn | 51527-01-10 13:12 G | 20540918.81 | 20540919.05 | 20540919.28 | 0.0299 | 0.0017 |
| Neptune | 51535-01-28 01:26 G | 20543858.41 | 20543858.56 | 20543858.72 | 0.0088 | 0.0072 |
| Jupiter | 51535-08-09 04:05 G | 20544051.44 | 20544051.67 | 20544051.89 | 0.0520 | 0.0044 |
| Neptune | 51536-01-30 12:00 G | 20544225.78 | 20544226.00 | 20544226.23 | 0.0088 | 0.0040 |
| Neptune | 51537-01-31 22:34 G | 20544593.18 | 20544593.44 | 20544593.72 | 0.0088 | 0.0014 |
| Neptune | 51538-02-03 13:55 G | 20544960.84 | 20544961.08 | 20544961.33 | 0.0088 | 0.0019 |
| Neptune | 51539-02-05 20:53 G | 20545328.14 | 20545328.37 | 20545328.60 | 0.0088 | 0.0043 |
| Neptune | 51540-02-08 15:36 G | 20545696.03 | 20545696.15 | 20545696.29 | 0.0088 | 0.0076 |
| Jupiter | 51541-02-01 07:41 G | 20546054.63 | 20546054.82 | 20546055.01 | 0.0508 | 0.0264 |
| Saturn | 51542-07-18 00:14 G | 20546586.36 | 20546586.51 | 20546586.68 | 0.0263 | 0.0194 |
| Jupiter | 51547-08-14 06:14 G | 20548439.54 | 20548439.76 | 20548439.98 | 0.0522 | 0.0197 |
| Uranus | 51548-03-05 12:29 G | 20548643.80 | 20548644.02 | 20548644.27 | 0.0144 | 0.0065 |
| Uranus | 51549-03-10 09:22 G | 20549013.64 | 20549013.89 | 20549014.14 | 0.0144 | 0.0013 |

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| Uranus | 51550-03-15 17:02 G | 20549384.01 | 20549384.21 | 20549384.43 | 0.0144 | 0.0087 |
| Jupiter | 51553-02-05 22:19 G | 20550442.19 | 20550442.43 | 20550442.67 | 0.0506 | 0.0066 |
| Saturn | 51556-01-04 02:24 G | 20551504.59 | 20551504.60 | 20551504.63 | 0.0299 | 0.0299 |
| Jupiter | 51559-08-18 20:53 G | 20552827.24 | 20552827.37 | 20552827.52 | 0.0523 | 0.0412 |
| Jupiter | 51565-02-10 11:02 G | 20554829.74 | 20554829.96 | 20554830.18 | 0.0505 | 0.0138 |
| Saturn | 51571-07-13 04:48 G | 20557173.45 | 20557173.70 | 20557173.96 | 0.0262 | 0.0019 |
| Jupiter | 51577-02-15 06:14 G | 20559217.61 | 20559217.76 | 20559217.92 | 0.0503 | 0.0389 |
| Saturn | 51586-01-12 03:36 G | 20562470.42 | 20562470.65 | 20562470.88 | 0.0299 | 0.0100 |
| Uranus | 51588-09-01 18:43 G | 20563434.12 | 20563434.28 | 20563434.46 | 0.0134 | 0.0102 |
| Uranus | 51589-09-06 03:22 G | 20563803.41 | 20563803.64 | 20563803.88 | 0.0134 | 0.0042 |
| Uranus | 51590-09-10 08:10 G | 20564172.59 | 20564172.84 | 20564173.11 | 0.0134 | 0.0017 |
| Uranus | 51591-09-14 16:05 G | 20564541.99 | 20564542.17 | 20564542.36 | 0.0134 | 0.0088 |
| Mars | 51595-12-09 01:26 G | 20566088.37 | 20566088.56 | 20566088.76 | 0.1800 | 0.0427 |
| Saturn | 51600-07-07 19:55 G | 20567761.21 | 20567761.33 | 20567761.47 | 0.0262 | 0.0219 |
| Saturn | 51601-07-19 09:22 G | 20568137.84 | 20568137.89 | 20568137.94 | 0.0263 | 0.0257 |
| Jupiter | 51606-08-03 12:58 G | 20569978.89 | 20569979.04 | 20569979.20 | 0.0518 | 0.0367 |
| Saturn | 51615-01-05 14:38 G | 20573055.94 | 20573056.11 | 20573056.29 | 0.0299 | 0.0209 |
| Neptune | 51618-07-31 17:31 G | 20574359.06 | 20574359.23 | 20574359.41 | 0.0089 | 0.0066 |
| Jupiter | 51618-08-08 15:07 G | 20574366.89 | 20574367.13 | 20574367.36 | 0.0520 | 0.0079 |
| Neptune | 51619-08-03 09:07 G | 20574726.66 | 20574726.88 | 20574727.12 | 0.0089 | 0.0033 |
| Neptune | 51620-08-04 14:10 G | 20575093.84 | 20575094.09 | 20575094.35 | 0.0089 | 0.0010 |
| Neptune | 51621-08-07 08:10 G | 20575461.60 | 20575461.84 | 20575462.10 | 0.0089 | 0.0024 |
| Neptune | 51622-08-09 12:14 G | 20575828.82 | 20575829.01 | 20575829.24 | 0.0089 | 0.0049 |
| Neptune | 51623-08-12 05:02 G | 20576196.63 | 20576196.71 | 20576196.84 | 0.0089 | 0.0082 |
| Jupiter | 51624-02-01 07:41 G | 20576369.62 | 20576369.82 | 20576370.01 | 0.0508 | 0.0308 |
| Saturn | 51630-07-14 08:53 G | 20578724.63 | 20578724.87 | 20578725.12 | 0.0263 | 0.0046 |
| Jupiter | 51630-08-13 03:22 G | 20578754.43 | 20578754.64 | 20578754.87 | 0.0521 | 0.0160 |
| Uranus | 51631-03-01 16:34 G | 20578955.12 | 20578955.19 | 20578955.26 | 0.0144 | 0.0137 |
| Uranus | 51632-03-05 20:24 G | 20579325.13 | 20579325.35 | 20579325.59 | 0.0144 | 0.0069 |
| Uranus | 51633-03-10 18:29 G | 20579695.03 | 20579695.27 | 20579695.52 | 0.0144 | 0.0015 |

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| Uranus | 51634-03-16 01:12 G | 20580065.37 | 20580065.55 | 20580065.75 | 0.0144 | 0.0099 |
| Jupiter | 51636-02-05 20:24 G | 20580757.13 | 20580757.35 | 20580757.57 | 0.0507 | 0.0113 |
| Pluto | 51640-11-28 09:07 G | 20582514.62 | 20582514.88 | 20582515.15 | 0.0066 | 0.0004 |
| Jupiter | 51642-08-18 05:17 G | 20583142.56 | 20583142.72 | 20583142.88 | 0.0523 | 0.0367 |
| Saturn | 51645-01-13 18:43 G | 20584022.09 | 20584022.28 | 20584022.48 | 0.0298 | 0.0190 |
| Jupiter | 51648-02-10 18:14 G | 20585145.02 | 20585145.26 | 20585145.50 | 0.0506 | 0.0099 |
| Saturn | 51659-07-10 06:43 G | 20589312.58 | 20589312.78 | 20589312.98 | 0.0263 | 0.0152 |
| Jupiter | 51660-02-15 03:50 G | 20589532.50 | 20589532.66 | 20589532.82 | 0.0504 | 0.0357 |
| Uranus | 51672-09-02 02:38 G | 20594115.47 | 20594115.61 | 20594115.79 | 0.0135 | 0.0106 |
| Uranus | 51673-09-06 12:43 G | 20594484.80 | 20594485.03 | 20594485.27 | 0.0134 | 0.0039 |
| Saturn | 51674-01-07 11:31 G | 20594607.76 | 20594607.98 | 20594608.20 | 0.0299 | 0.0115 |
| Uranus | 51674-09-10 16:05 G | 20594853.92 | 20594854.17 | 20594854.43 | 0.0134 | 0.0025 |
| Uranus | 51675-09-15 00:58 G | 20595223.35 | 20595223.54 | 20595223.74 | 0.0134 | 0.0080 |
| Saturn | 51689-07-15 20:38 G | 20600276.16 | 20600276.36 | 20600276.58 | 0.0263 | 0.0112 |
| Jupiter | 51689-08-02 22:05 G | 20600294.28 | 20600294.42 | 20600294.57 | 0.0517 | 0.0404 |
| Neptune | 51699-01-27 09:36 G | 20603758.90 | 20603758.90 | 20603758.94 | 0.0088 | 0.0088 |
| Neptune | 51700-01-29 19:26 G | 20604126.11 | 20604126.31 | 20604126.55 | 0.0088 | 0.0051 |
| Neptune | 51701-02-01 12:29 G | 20604493.79 | 20604494.02 | 20604494.27 | 0.0088 | 0.0031 |
| Jupiter | 51701-08-08 08:24 G | 20604681.63 | 20604681.85 | 20604682.07 | 0.0519 | 0.0127 |
| Neptune | 51702-02-03 18:29 G | 20604861.01 | 20604861.27 | 20604861.54 | 0.0088 | 0.0007 |
| Neptune | 51703-02-06 13:26 G | 20605228.82 | 20605229.06 | 20605229.32 | 0.0088 | 0.0027 |
| Saturn | 51704-01-17 10:05 G | 20605573.86 | 20605573.92 | 20605573.99 | 0.0298 | 0.0287 |
| Neptune | 51704-02-08 18:29 G | 20605596.11 | 20605596.27 | 20605596.46 | 0.0088 | 0.0064 |
| Neptune | 51705-02-10 12:43 G | 20605963.97 | 20605964.03 | 20605964.12 | 0.0088 | 0.0085 |
| Jupiter | 51707-02-01 04:48 G | 20606684.55 | 20606684.70 | 20606684.87 | 0.0509 | 0.0358 |
| Jupiter | 51713-08-13 06:14 G | 20609069.53 | 20609069.76 | 20609069.98 | 0.0520 | 0.0096 |
| Uranus | 51716-03-07 05:31 G | 20610006.49 | 20610006.73 | 20610006.98 | 0.0144 | 0.0055 |
| Uranus | 51717-03-12 04:34 G | 20610376.45 | 20610376.69 | 20610376.94 | 0.0144 | 0.0019 |
| Uranus | 51718-03-17 10:19 G | 20610746.74 | 20610746.93 | 20610747.14 | 0.0144 | 0.0095 |
| Saturn | 51718-07-12 13:41 G | 20610863.84 | 20610864.07 | 20610864.32 | 0.0263 | 0.0087 |

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| Jupiter | 51719-02-06 02:10 G | 20611072.37 | 20611072.59 | 20611072.83 | 0.0508 | 0.0159 |
| Jupiter | 51725-08-17 18:58 G | 20613457.10 | 20613457.29 | 20613457.48 | 0.0522 | 0.0303 |
| Pluto | 51728-06-03 08:38 G | 20614477.74 | 20614477.86 | 20614478.00 | 0.0078 | 0.0066 |
| Jupiter | 51731-02-10 11:02 G | 20615459.73 | 20615459.96 | 20615460.20 | 0.0506 | 0.0051 |
| Saturn | 51733-01-10 13:41 G | 20616159.83 | 20616160.07 | 20616160.30 | 0.0299 | 0.0012 |
| Jupiter | 51743-02-15 09:36 G | 20619847.73 | 20619847.90 | 20619848.09 | 0.0504 | 0.0319 |
| Saturn | 51748-07-18 10:05 G | 20621827.76 | 20621827.92 | 20621828.10 | 0.0263 | 0.0180 |
| Uranus | 51756-09-03 09:22 G | 20624796.71 | 20624796.89 | 20624797.08 | 0.0134 | 0.0095 |
| Uranus | 51757-09-07 20:53 G | 20625166.14 | 20625166.37 | 20625166.61 | 0.0134 | 0.0039 |
| Uranus | 51758-09-11 23:02 G | 20625535.21 | 20625535.46 | 20625535.72 | 0.0134 | 0.0024 |
| Uranus | 51759-09-16 09:50 G | 20625904.74 | 20625904.91 | 20625905.10 | 0.0134 | 0.0092 |
| Jupiter | 51772-08-02 11:31 G | 20630608.89 | 20630608.98 | 20630609.08 | 0.0516 | 0.0467 |
| Mars | 51775-06-12 10:48 G | 20631652.75 | 20631652.95 | 20631653.16 | 0.1736 | 0.0344 |
| Saturn | 51777-07-13 19:12 G | 20632415.05 | 20632415.30 | 20632415.56 | 0.0263 | 0.0017 |
| Neptune | 51782-08-01 08:38 G | 20634259.75 | 20634259.86 | 20634260.02 | 0.0089 | 0.0075 |
| Neptune | 51783-08-03 13:41 G | 20634626.88 | 20634627.07 | 20634627.29 | 0.0089 | 0.0053 |
| Neptune | 51784-08-05 08:10 G | 20634994.59 | 20634994.84 | 20634995.10 | 0.0089 | 0.0017 |
| Jupiter | 51784-08-07 11:31 G | 20634996.77 | 20634996.98 | 20634997.20 | 0.0518 | 0.0186 |
| Neptune | 51785-08-07 13:12 G | 20635361.80 | 20635362.05 | 20635362.31 | 0.0089 | 0.0005 |
| Neptune | 51786-08-10 05:31 G | 20635729.52 | 20635729.73 | 20635729.98 | 0.0089 | 0.0042 |
| Neptune | 51787-08-12 13:41 G | 20636096.91 | 20636097.07 | 20636097.26 | 0.0089 | 0.0064 |
| Jupiter | 51790-01-31 07:12 G | 20636999.66 | 20636999.80 | 20636999.95 | 0.0510 | 0.0409 |
| Saturn | 51792-01-13 13:26 G | 20637711.83 | 20637712.06 | 20637712.30 | 0.0298 | 0.0091 |
| Jupiter | 51796-08-11 23:31 G | 20639384.24 | 20639384.48 | 20639384.72 | 0.0520 | 0.0039 |
| Uranus | 51799-03-03 14:24 G | 20640318.00 | 20640318.10 | 20640318.22 | 0.0144 | 0.0127 |
| Uranus | 51800-03-08 15:50 G | 20640687.92 | 20640688.16 | 20640688.40 | 0.0144 | 0.0060 |
| Uranus | 51801-03-13 16:34 G | 20641057.95 | 20641058.19 | 20641058.44 | 0.0144 | 0.0026 |
| Jupiter | 51802-02-05 18:58 G | 20641387.08 | 20641387.29 | 20641387.50 | 0.0508 | 0.0209 |
| Uranus | 51802-03-18 20:53 G | 20641428.21 | 20641428.37 | 20641428.56 | 0.0144 | 0.0107 |
| Saturn | 51806-07-10 08:38 G | 20643002.75 | 20643002.86 | 20643002.98 | 0.0262 | 0.0227 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 51807-07-21 19:41 G | 20643379.24 | 20643379.32 | 20643379.41 | 0.0263 | 0.0246 |
| Jupiter | 51808-08-17 23:17 G | 20643772.28 | 20643772.47 | 20643772.67 | 0.0522 | 0.0258 |
| Jupiter | 51814-02-10 16:34 G | 20645774.95 | 20645775.19 | 20645775.42 | 0.0506 | 0.0006 |
| Saturn | 51821-01-06 23:46 G | 20648297.34 | 20648297.49 | 20648297.66 | 0.0299 | 0.0222 |
| Jupiter | 51826-02-15 01:12 G | 20650162.36 | 20650162.55 | 20650162.76 | 0.0505 | 0.0275 |
| Saturn | 51836-07-16 03:07 G | 20653966.39 | 20653966.63 | 20653966.87 | 0.0263 | 0.0050 |
| Uranus | 51840-09-04 18:00 G | 20655478.10 | 20655478.25 | 20655478.44 | 0.0134 | 0.0102 |
| Uranus | 51841-09-09 06:43 G | 20655847.54 | 20655847.78 | 20655848.02 | 0.0134 | 0.0032 |
| Uranus | 51842-09-13 07:41 G | 20656216.57 | 20656216.82 | 20656217.07 | 0.0134 | 0.0028 |
| Uranus | 51843-09-17 18:58 G | 20656586.12 | 20656586.29 | 20656586.49 | 0.0134 | 0.0087 |
| Saturn | 51851-01-16 06:58 G | 20659263.60 | 20659263.79 | 20659263.99 | 0.0298 | 0.0191 |
| Jupiter | 51855-08-03 18:00 G | 20660924.24 | 20660924.25 | 20660924.28 | 0.0516 | 0.0515 |
| Neptune | 51864-01-31 10:48 G | 20664026.81 | 20664026.95 | 20664027.12 | 0.0088 | 0.0070 |
| Neptune | 51865-02-01 16:05 G | 20664393.96 | 20664394.17 | 20664394.42 | 0.0088 | 0.0040 |
| Saturn | 51865-07-11 18:58 G | 20664554.10 | 20664554.29 | 20664554.50 | 0.0262 | 0.0159 |
| Neptune | 51866-02-04 11:31 G | 20664761.72 | 20664761.98 | 20664762.24 | 0.0088 | 0.0012 |
| Neptune | 51867-02-06 17:02 G | 20665128.96 | 20665129.21 | 20665129.46 | 0.0088 | 0.0019 |
| Jupiter | 51867-08-08 06:29 G | 20665311.56 | 20665311.77 | 20665311.98 | 0.0518 | 0.0233 |
| Neptune | 51868-02-09 09:50 G | 20665496.70 | 20665496.91 | 20665497.16 | 0.0088 | 0.0046 |
| Neptune | 51869-02-10 18:29 G | 20665864.16 | 20665864.27 | 20665864.41 | 0.0088 | 0.0077 |
| Jupiter | 51873-01-31 00:43 G | 20667314.44 | 20667314.53 | 20667314.64 | 0.0510 | 0.0459 |
| Jupiter | 51879-08-13 05:31 G | 20669699.51 | 20669699.73 | 20669699.96 | 0.0520 | 0.0014 |
| Mars | 51879-12-11 14:38 G | 20669819.94 | 20669820.11 | 20669820.27 | 0.1792 | 0.0644 |
| Saturn | 51880-01-09 21:36 G | 20669849.19 | 20669849.40 | 20669849.62 | 0.0299 | 0.0127 |
| Uranus | 51883-03-05 00:58 G | 20670999.48 | 20670999.54 | 20670999.62 | 0.0144 | 0.0137 |
| Uranus | 51884-03-09 00:29 G | 20671369.28 | 20671369.52 | 20671369.79 | 0.0144 | 0.0045 |
| Jupiter | 51885-02-05 00:29 G | 20671702.32 | 20671702.52 | 20671702.72 | 0.0508 | 0.0261 |
| Uranus | 51885-03-14 02:53 G | 20671739.38 | 20671739.62 | 20671739.87 | 0.0144 | 0.0027 |
| Uranus | 51886-03-19 06:00 G | 20672109.59 | 20672109.75 | 20672109.95 | 0.0144 | 0.0106 |
| Pluto | 51886-12-01 21:22 G | 20672367.17 | 20672367.39 | 20672367.65 | 0.0066 | 0.0026 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 51891-08-17 21:22 G | 20674087.17 | 20674087.39 | 20674087.61 | 0.0521 | 0.0202 |
| Saturn | 51895-07-18 14:10 G | 20675517.88 | 20675518.09 | 20675518.31 | 0.0263 | 0.0114 |
| Jupiter | 51897-02-09 09:36 G | 20676089.67 | 20676089.90 | 20676090.14 | 0.0507 | 0.0043 |
| Jupiter | 51903-08-23 13:41 G | 20678474.99 | 20678475.07 | 20678475.16 | 0.0522 | 0.0479 |
| Jupiter | 51909-02-15 07:12 G | 20680477.60 | 20680477.80 | 20680478.00 | 0.0505 | 0.0235 |
| Saturn | 51910-01-18 19:26 G | 20680815.25 | 20680815.31 | 20680815.39 | 0.0298 | 0.0285 |
| Jupiter | 51921-02-19 21:07 G | 20684865.32 | 20684865.38 | 20684865.45 | 0.0504 | 0.0484 |
| Saturn | 51924-07-13 21:36 G | 20686105.17 | 20686105.40 | 20686105.65 | 0.0262 | 0.0096 |
| Uranus | 51924-09-06 02:24 G | 20686159.42 | 20686159.60 | 20686159.80 | 0.0134 | 0.0088 |
| Uranus | 51925-09-10 15:36 G | 20686528.92 | 20686529.15 | 20686529.40 | 0.0134 | 0.0035 |
| Uranus | 51926-09-14 16:05 G | 20686897.93 | 20686898.17 | 20686898.42 | 0.0134 | 0.0031 |
| Uranus | 51927-09-19 04:34 G | 20687267.54 | 20687267.69 | 20687267.88 | 0.0134 | 0.0096 |
| Saturn | 51939-01-12 14:53 G | 20691400.88 | 20691401.12 | 20691401.37 | 0.0299 | 0.0039 |
| Neptune | 51946-08-02 14:10 G | 20694160.07 | 20694160.09 | 20694160.12 | 0.0089 | 0.0088 |
| Neptune | 51947-08-05 07:55 G | 20694527.67 | 20694527.83 | 20694528.01 | 0.0089 | 0.0066 |
| Neptune | 51948-08-06 13:12 G | 20694894.83 | 20694895.05 | 20694895.30 | 0.0089 | 0.0031 |
| Neptune | 51949-08-09 04:48 G | 20695262.44 | 20695262.70 | 20695262.97 | 0.0089 | 0.0008 |
| Jupiter | 51950-08-08 13:12 G | 20695626.86 | 20695627.05 | 20695627.24 | 0.0517 | 0.0278 |
| Neptune | 51950-08-11 13:26 G | 20695629.84 | 20695630.06 | 20695630.31 | 0.0089 | 0.0027 |
| Neptune | 51951-08-14 00:29 G | 20695997.31 | 20695997.52 | 20695997.75 | 0.0089 | 0.0049 |
| Neptune | 51952-08-15 14:24 G | 20696365.06 | 20696365.10 | 20696365.20 | 0.0089 | 0.0086 |
| Saturn | 51954-07-20 22:34 G | 20697069.26 | 20697069.44 | 20697069.63 | 0.0263 | 0.0173 |
| Jupiter | 51956-02-01 08:24 G | 20697629.84 | 20697629.85 | 20697629.88 | 0.0511 | 0.0508 |
| Jupiter | 51962-08-13 04:48 G | 20700014.46 | 20700014.70 | 20700014.94 | 0.0519 | 0.0062 |
| Uranus | 51967-03-06 10:05 G | 20701680.80 | 20701680.92 | 20701681.07 | 0.0144 | 0.0120 |
| Jupiter | 51968-02-05 19:41 G | 20702017.14 | 20702017.32 | 20702017.52 | 0.0509 | 0.0310 |
| Uranus | 51968-03-10 09:07 G | 20702050.63 | 20702050.88 | 20702051.12 | 0.0144 | 0.0054 |
| Uranus | 51969-03-15 12:58 G | 20702420.80 | 20702421.04 | 20702421.28 | 0.0144 | 0.0035 |
| Uranus | 51970-03-20 14:38 G | 20702790.96 | 20702791.11 | 20702791.29 | 0.0144 | 0.0112 |
| Pluto | 51974-06-07 03:22 G | 20704330.42 | 20704330.64 | 20704330.89 | 0.0078 | 0.0037 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 51974-08-17 20:24 G | 20704402.14 | 20704402.35 | 20704402.56 | 0.0521 | 0.0158 |
| Jupiter | 51980-02-10 20:38 G | 20706405.13 | 20706405.36 | 20706405.58 | 0.0507 | 0.0072 |
| Saturn | 51983-07-15 23:31 G | 20707656.24 | 20707656.48 | 20707656.72 | 0.0262 | 0.0037 |
| Jupiter | 51986-08-22 22:48 G | 20708790.33 | 20708790.45 | 20708790.57 | 0.0523 | 0.0450 |
| Jupiter | 51992-02-15 08:24 G | 20710792.63 | 20710792.85 | 20710793.08 | 0.0505 | 0.0200 |
| Saturn | 51998-01-13 22:19 G | 20712952.17 | 20712952.43 | 20712952.68 | 0.0299 | 0.0036 |

53RD MILLENNIUM CE

This is a list of transits of Moon in the 53rd millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 52004-02-19 23:46 G | | 20715180.40 | 20715180.49 | 20715180.60 | 0.0504 | 0.0450 | |
| Uranus | 52008-09-06 12:14 G | | 20716840.85 | 20716841.01 | 20716841.20 | 0.0134 | 0.0097 | |
| Uranus | 52009-09-11 02:10 G | | 20717210.35 | 20717210.59 | 20717210.84 | 0.0134 | 0.0024 | |
| Uranus | 52010-09-15 01:55 G | | 20717579.33 | 20717579.58 | 20717579.83 | 0.0134 | 0.0032 | |
| Uranus | 52011-09-19 14:53 G | | 20717948.95 | 20717949.12 | 20717949.31 | 0.0134 | 0.0093 | |
| Saturn | 52012-07-10 15:07 G | | 20718244.06 | 20718244.13 | 20718244.22 | 0.0262 | 0.0247 | |
| Saturn | 52013-07-21 21:50 G | | 20718620.29 | 20718620.41 | 20718620.55 | 0.0263 | 0.0224 | |
| Saturn | 52027-01-07 12:58 G | | 20723537.96 | 20723538.04 | 20723538.12 | 0.0299 | 0.0281 | |
| Neptune | 52028-01-31 13:41 G | | 20723927.06 | 20723927.07 | 20723927.14 | 0.0088 | 0.0088 | |
| Neptune | 52029-02-02 09:22 G | | 20724294.68 | 20724294.89 | 20724295.11 | 0.0088 | 0.0049 | |
| Neptune | 52030-02-04 15:36 G | | 20724661.92 | 20724662.15 | 20724662.40 | 0.0088 | 0.0029 | |
| Neptune | 52031-02-07 08:24 G | | 20725029.59 | 20725029.85 | 20725030.12 | 0.0088 | 0.0009 | |
| Neptune | 52032-02-09 18:00 G | | 20725397.02 | 20725397.25 | 20725397.50 | 0.0088 | 0.0029 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 52033-02-11 05:31 G | 20725764.56 | 20725764.73 | 20725764.92 | 0.0088 | 0.0066 |
| Jupiter | 52033-08-07 12:29 G | 20725941.84 | 20725942.02 | 20725942.22 | 0.0517 | 0.0321 |
| Neptune | 52034-02-13 19:41 G | 20726132.29 | 20726132.32 | 20726132.40 | 0.0088 | 0.0087 |
| Saturn | 52042-07-17 04:19 G | 20729207.45 | 20729207.68 | 20729207.92 | 0.0262 | 0.0014 |
| Jupiter | 52045-08-12 08:24 G | 20730329.63 | 20730329.85 | 20730330.07 | 0.0519 | 0.0101 |
| Jupiter | 52051-02-05 09:07 G | 20732332.71 | 20732332.88 | 20732333.04 | 0.0509 | 0.0345 |
| Uranus | 52051-03-06 17:17 G | 20732362.15 | 20732362.22 | 20732362.34 | 0.0144 | 0.0133 |
| Uranus | 52052-03-10 14:53 G | 20732731.86 | 20732732.12 | 20732732.37 | 0.0144 | 0.0039 |
| Uranus | 52053-03-15 20:10 G | 20733102.10 | 20733102.34 | 20733102.58 | 0.0144 | 0.0029 |
| Uranus | 52054-03-20 20:10 G | 20733472.19 | 20733472.34 | 20733472.52 | 0.0144 | 0.0112 |
| Saturn | 52057-01-14 21:50 G | 20734503.17 | 20734503.41 | 20734503.65 | 0.0299 | 0.0104 |
| Jupiter | 52057-08-17 09:36 G | 20734717.67 | 20734717.90 | 20734718.13 | 0.0521 | 0.0132 |
| Mars | 52059-06-14 13:55 G | 20735383.90 | 20735384.08 | 20735384.27 | 0.1744 | 0.0332 |
| Jupiter | 52063-02-09 22:19 G | 20736720.19 | 20736720.43 | 20736720.67 | 0.0507 | 0.0105 |
| Jupiter | 52069-08-21 22:19 G | 20739105.30 | 20739105.43 | 20739105.57 | 0.0522 | 0.0422 |
| Saturn | 52071-07-12 14:24 G | 20739794.95 | 20739795.10 | 20739795.28 | 0.0262 | 0.0197 |
| Jupiter | 52075-02-14 14:38 G | 20741107.90 | 20741108.11 | 20741108.32 | 0.0506 | 0.0173 |
| Saturn | 52086-01-08 18:43 G | 20745089.12 | 20745089.28 | 20745089.45 | 0.0300 | 0.0218 |
| Jupiter | 52087-02-19 11:31 G | 20745495.85 | 20745495.98 | 20745496.12 | 0.0504 | 0.0417 |
| Uranus | 52092-09-06 20:38 G | 20747522.18 | 20747522.36 | 20747522.57 | 0.0134 | 0.0082 |
| Uranus | 52093-09-11 10:48 G | 20747891.71 | 20747891.95 | 20747892.20 | 0.0134 | 0.0030 |
| Uranus | 52094-09-15 10:19 G | 20748260.69 | 20748260.93 | 20748261.18 | 0.0134 | 0.0038 |
| Uranus | 52095-09-19 23:46 G | 20748630.34 | 20748630.49 | 20748630.67 | 0.0134 | 0.0099 |
| Saturn | 52101-07-19 08:24 G | 20750758.62 | 20750758.85 | 20750759.09 | 0.0262 | 0.0064 |
| Neptune | 52111-08-05 13:41 G | 20754427.95 | 20754428.07 | 20754428.22 | 0.0089 | 0.0074 |
| Neptune | 52112-08-07 04:19 G | 20754795.47 | 20754795.68 | 20754795.91 | 0.0089 | 0.0050 |
| Neptune | 52113-08-09 14:53 G | 20755162.89 | 20755163.12 | 20755163.37 | 0.0089 | 0.0017 |
| Neptune | 52114-08-12 00:43 G | 20755530.27 | 20755530.53 | 20755530.79 | 0.0089 | 0.0007 |
| Neptune | 52115-08-14 15:22 G | 20755897.94 | 20755898.14 | 20755898.38 | 0.0089 | 0.0042 |
| Saturn | 52116-01-17 20:24 G | 20756054.15 | 20756054.35 | 20756054.56 | 0.0299 | 0.0162 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 52116-08-07 23:02 G | 20756257.30 | 20756257.46 | 20756257.63 | 0.0517 | 0.0347 |
| Neptune | 52116-08-15 20:38 G | 20756265.21 | 20756265.36 | 20756265.56 | 0.0089 | 0.0066 |
| Jupiter | 52128-08-12 22:05 G | 20760645.19 | 20760645.42 | 20760645.65 | 0.0519 | 0.0134 |
| Saturn | 52130-07-14 08:24 G | 20761345.66 | 20761345.85 | 20761346.07 | 0.0262 | 0.0148 |
| Pluto | 52132-12-04 22:34 G | 20762220.26 | 20762220.44 | 20762220.67 | 0.0066 | 0.0037 |
| Pluto | 52133-12-06 09:50 G | 20762586.85 | 20762586.91 | 20762586.99 | 0.0067 | 0.0064 |
| Jupiter | 52134-02-05 12:00 G | 20762647.84 | 20762648.00 | 20762648.17 | 0.0510 | 0.0377 |
| Uranus | 52135-03-08 01:12 G | 20763043.43 | 20763043.55 | 20763043.72 | 0.0144 | 0.0117 |
| Uranus | 52136-03-11 21:36 G | 20763413.16 | 20763413.40 | 20763413.65 | 0.0144 | 0.0052 |
| Uranus | 52137-03-17 04:19 G | 20763783.45 | 20763783.68 | 20763783.93 | 0.0144 | 0.0040 |
| Uranus | 52138-03-22 02:53 G | 20764153.47 | 20764153.62 | 20764153.79 | 0.0144 | 0.0112 |
| Jupiter | 52140-08-17 10:05 G | 20765032.70 | 20765032.92 | 20765033.15 | 0.0520 | 0.0100 |
| Saturn | 52145-01-10 17:17 G | 20766640.01 | 20766640.22 | 20766640.44 | 0.0299 | 0.0161 |
| Jupiter | 52146-02-10 08:24 G | 20767035.64 | 20767035.85 | 20767036.08 | 0.0508 | 0.0125 |
| Jupiter | 52152-08-22 09:36 G | 20769420.75 | 20769420.90 | 20769421.05 | 0.0522 | 0.0394 |
| Jupiter | 52158-02-15 07:12 G | 20771423.57 | 20771423.80 | 20771424.03 | 0.0506 | 0.0166 |
| Saturn | 52160-07-20 06:43 G | 20772309.56 | 20772309.78 | 20772310.02 | 0.0262 | 0.0110 |
| Mars | 52163-12-14 05:31 G | 20773551.56 | 20773551.73 | 20773551.91 | 0.1784 | 0.0866 |
| Jupiter | 52170-02-19 16:19 G | 20775811.04 | 20775811.18 | 20775811.33 | 0.0504 | 0.0394 |
| Saturn | 52175-01-18 21:07 G | 20777605.23 | 20777605.38 | 20777605.55 | 0.0299 | 0.0216 |
| Uranus | 52176-09-08 06:00 G | 20778203.57 | 20778203.75 | 20778203.93 | 0.0134 | 0.0092 |
| Uranus | 52177-09-12 19:41 G | 20778573.08 | 20778573.32 | 20778573.58 | 0.0134 | 0.0019 |
| Uranus | 52178-09-16 19:26 G | 20778942.07 | 20778942.31 | 20778942.56 | 0.0134 | 0.0036 |
| Uranus | 52179-09-21 08:38 G | 20779311.71 | 20779311.86 | 20779312.04 | 0.0134 | 0.0099 |
| Saturn | 52189-07-15 05:31 G | 20782896.52 | 20782896.73 | 20782896.96 | 0.0261 | 0.0103 |
| Neptune | 52193-02-02 13:41 G | 20784194.92 | 20784195.07 | 20784195.24 | 0.0088 | 0.0067 |
| Neptune | 52194-02-05 04:48 G | 20784562.47 | 20784562.70 | 20784562.96 | 0.0088 | 0.0040 |
| Neptune | 52195-02-07 16:19 G | 20784929.93 | 20784930.18 | 20784930.43 | 0.0088 | 0.0010 |
| Neptune | 52196-02-10 02:53 G | 20785297.36 | 20785297.62 | 20785297.89 | 0.0088 | 0.0019 |
| Neptune | 52197-02-11 18:43 G | 20785665.09 | 20785665.28 | 20785665.51 | 0.0088 | 0.0050 |

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| Neptune | 52198-02-14 00:58 G | 20786032.44 | 20786032.54 | 20786032.69 | 0.0088 | 0.0078 |
| Jupiter | 52199-08-08 11:46 G | 20786572.83 | 20786572.99 | 20786573.15 | 0.0517 | 0.0376 |
| Saturn | 52204-01-13 07:55 G | 20788190.59 | 20788190.83 | 20788191.06 | 0.0299 | 0.0110 |
| Jupiter | 52211-08-13 19:41 G | 20790960.11 | 20790960.32 | 20790960.54 | 0.0518 | 0.0180 |
| Jupiter | 52217-02-06 03:36 G | 20792963.51 | 20792963.65 | 20792963.79 | 0.0510 | 0.0395 |
| Uranus | 52219-03-09 09:50 G | 20793724.81 | 20793724.91 | 20793725.05 | 0.0144 | 0.0127 |
| Saturn | 52219-07-22 23:31 G | 20793860.28 | 20793860.48 | 20793860.69 | 0.0262 | 0.0151 |
| Uranus | 52220-03-13 05:02 G | 20794094.46 | 20794094.71 | 20794094.97 | 0.0144 | 0.0034 |
| Pluto | 52220-06-09 17:17 G | 20794182.98 | 20794183.22 | 20794183.49 | 0.0078 | 0.0018 |
| Uranus | 52221-03-18 12:43 G | 20794464.79 | 20794465.03 | 20794465.27 | 0.0144 | 0.0032 |
| Uranus | 52222-03-23 09:36 G | 20794834.76 | 20794834.90 | 20794835.06 | 0.0144 | 0.0118 |
| Jupiter | 52223-08-18 23:46 G | 20795348.27 | 20795348.49 | 20795348.72 | 0.0520 | 0.0073 |
| Jupiter | 52229-02-10 23:46 G | 20797351.26 | 20797351.49 | 20797351.73 | 0.0508 | 0.0133 |
| Saturn | 52234-01-20 20:10 G | 20799156.24 | 20799156.34 | 20799156.46 | 0.0299 | 0.0266 |
| Jupiter | 52235-08-23 16:05 G | 20799736.01 | 20799736.17 | 20799736.33 | 0.0522 | 0.0375 |
| Jupiter | 52241-02-15 10:19 G | 20801738.71 | 20801738.93 | 20801739.16 | 0.0506 | 0.0147 |
| Saturn | 52248-07-17 06:58 G | 20804447.56 | 20804447.79 | 20804448.03 | 0.0262 | 0.0061 |
| Jupiter | 52253-02-20 09:22 G | 20806126.74 | 20806126.89 | 20806127.05 | 0.0505 | 0.0370 |
| Uranus | 52260-09-09 13:41 G | 20808884.87 | 20808885.07 | 20808885.28 | 0.0134 | 0.0076 |
| Uranus | 52261-09-14 03:07 G | 20809254.39 | 20809254.63 | 20809254.89 | 0.0134 | 0.0026 |
| Uranus | 52262-09-18 03:07 G | 20809623.40 | 20809623.63 | 20809623.87 | 0.0134 | 0.0044 |
| Saturn | 52263-01-14 01:55 G | 20809741.34 | 20809741.58 | 20809741.82 | 0.0299 | 0.0062 |
| Uranus | 52263-09-22 15:50 G | 20809993.02 | 20809993.16 | 20809993.34 | 0.0134 | 0.0103 |
| Neptune | 52275-08-06 03:36 G | 20814328.62 | 20814328.65 | 20814328.74 | 0.0089 | 0.0087 |
| Neptune | 52276-08-07 15:07 G | 20814695.98 | 20814696.13 | 20814696.31 | 0.0089 | 0.0066 |
| Neptune | 52277-08-09 23:31 G | 20815063.24 | 20815063.48 | 20815063.74 | 0.0089 | 0.0028 |
| Saturn | 52278-07-23 19:12 G | 20815411.14 | 20815411.30 | 20815411.47 | 0.0262 | 0.0194 |
| Neptune | 52278-08-12 15:36 G | 20815430.90 | 20815431.15 | 20815431.40 | 0.0089 | 0.0007 |
| Neptune | 52279-08-14 20:24 G | 20815798.12 | 20815798.35 | 20815798.61 | 0.0089 | 0.0030 |
| Neptune | 52280-08-16 14:53 G | 20816165.92 | 20816166.12 | 20816166.34 | 0.0089 | 0.0051 |

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| Neptune | 52281-08-18 19:12 G | 20816533.27 | 20816533.30 | 20816533.36 | 0.0089 | 0.0087 |
| Jupiter | 52282-08-08 11:17 G | 20816887.85 | 20816887.97 | 20816888.11 | 0.0516 | 0.0419 |
| Jupiter | 52294-08-13 15:50 G | 20821275.95 | 20821276.16 | 20821276.37 | 0.0518 | 0.0208 |
| Jupiter | 52300-02-06 15:22 G | 20823279.01 | 20823279.14 | 20823279.28 | 0.0510 | 0.0421 |
| Uranus | 52303-03-10 20:24 G | 20824406.19 | 20824406.35 | 20824406.52 | 0.0144 | 0.0109 |
| Uranus | 52304-03-14 14:53 G | 20824775.89 | 20824776.12 | 20824776.38 | 0.0144 | 0.0045 |
| Uranus | 52305-03-19 23:17 G | 20825146.25 | 20825146.47 | 20825146.72 | 0.0144 | 0.0049 |
| Uranus | 52306-03-24 19:41 G | 20825516.17 | 20825516.32 | 20825516.47 | 0.0144 | 0.0117 |
| Jupiter | 52306-08-19 05:17 G | 20825663.48 | 20825663.72 | 20825663.96 | 0.0520 | 0.0050 |
| Saturn | 52307-07-20 05:46 G | 20825998.50 | 20825998.74 | 20825998.99 | 0.0262 | 0.0019 |
| Jupiter | 52312-02-12 01:55 G | 20827666.36 | 20827666.58 | 20827666.80 | 0.0508 | 0.0155 |
| Jupiter | 52318-08-24 04:48 G | 20830051.54 | 20830051.70 | 20830051.87 | 0.0521 | 0.0353 |
| Saturn | 52322-01-16 03:36 G | 20831292.41 | 20831292.65 | 20831292.89 | 0.0299 | 0.0013 |
| Jupiter | 52324-02-17 04:48 G | 20832054.47 | 20832054.70 | 20832054.92 | 0.0507 | 0.0131 |
| Jupiter | 52336-02-21 16:05 G | 20836442.01 | 20836442.17 | 20836442.35 | 0.0505 | 0.0354 |
| Saturn | 52336-07-14 08:38 G | 20836585.74 | 20836585.86 | 20836586.00 | 0.0262 | 0.0220 |
| Saturn | 52337-07-25 21:36 G | 20836962.30 | 20836962.40 | 20836962.51 | 0.0262 | 0.0236 |
| Mars | 52343-06-18 13:26 G | 20839115.88 | 20839116.06 | 20839116.24 | 0.1751 | 0.0133 |
| Uranus | 52344-09-10 22:48 G | 20839566.27 | 20839566.45 | 20839566.65 | 0.0134 | 0.0087 |
| Uranus | 52345-09-15 11:46 G | 20839935.74 | 20839935.99 | 20839936.25 | 0.0134 | 0.0012 |
| Uranus | 52346-09-19 12:14 G | 20840304.79 | 20840305.01 | 20840305.26 | 0.0134 | 0.0040 |
| Uranus | 52347-09-24 00:58 G | 20840674.38 | 20840674.54 | 20840674.70 | 0.0134 | 0.0106 |
| Neptune | 52357-02-04 01:55 G | 20844095.54 | 20844095.58 | 20844095.67 | 0.0088 | 0.0086 |
| Neptune | 52358-02-06 14:53 G | 20844462.93 | 20844463.12 | 20844463.35 | 0.0088 | 0.0049 |
| Neptune | 52359-02-09 00:14 G | 20844830.26 | 20844830.51 | 20844830.77 | 0.0088 | 0.0027 |
| Neptune | 52360-02-11 17:17 G | 20845197.97 | 20845198.22 | 20845198.48 | 0.0088 | 0.0011 |
| Neptune | 52361-02-12 23:02 G | 20845565.22 | 20845565.46 | 20845565.71 | 0.0088 | 0.0031 |
| Neptune | 52362-02-15 17:46 G | 20845933.10 | 20845933.24 | 20845933.43 | 0.0088 | 0.0069 |
| Neptune | 52363-02-17 23:17 G | 20846300.45 | 20846300.47 | 20846300.50 | 0.0088 | 0.0088 |
| Jupiter | 52365-08-09 06:14 G | 20847203.66 | 20847203.76 | 20847203.88 | 0.0516 | 0.0449 |

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| Saturn | 52366-07-20 23:46 G | 20847549.24 | 20847549.49 | 20847549.75 | 0.0262 | 0.0024 |
| Jupiter | 52377-08-13 17:02 G | 20851591.00 | 20851591.21 | 20851591.42 | 0.0518 | 0.0239 |
| Pluto | 52378-12-08 21:50 G | 20852073.26 | 20852073.41 | 20852073.63 | 0.0066 | 0.0048 |
| Pluto | 52379-12-10 06:58 G | 20852439.69 | 20852439.79 | 20852439.95 | 0.0067 | 0.0057 |
| Saturn | 52381-01-17 05:46 G | 20852843.49 | 20852843.74 | 20852843.98 | 0.0299 | 0.0043 |
| Jupiter | 52383-02-06 18:14 G | 20853594.17 | 20853594.26 | 20853594.37 | 0.0511 | 0.0453 |
| Uranus | 52387-03-11 06:29 G | 20855087.64 | 20855087.77 | 20855087.94 | 0.0144 | 0.0117 |
| Uranus | 52388-03-15 00:58 G | 20855457.29 | 20855457.54 | 20855457.80 | 0.0144 | 0.0025 |
| Uranus | 52389-03-20 09:36 G | 20855827.66 | 20855827.90 | 20855828.15 | 0.0144 | 0.0040 |
| Jupiter | 52389-08-18 12:00 G | 20855978.77 | 20855979.00 | 20855979.22 | 0.0519 | 0.0009 |
| Uranus | 52390-03-25 04:48 G | 20856197.59 | 20856197.70 | 20856197.82 | 0.0144 | 0.0129 |
| Jupiter | 52395-02-11 21:50 G | 20857982.19 | 20857982.41 | 20857982.63 | 0.0509 | 0.0167 |
| Saturn | 52395-07-16 11:02 G | 20858136.80 | 20858136.96 | 20858137.15 | 0.0262 | 0.0174 |
| Jupiter | 52401-08-23 06:14 G | 20860366.57 | 20860366.76 | 20860366.95 | 0.0521 | 0.0313 |
| Jupiter | 52407-02-16 06:58 G | 20862369.56 | 20862369.79 | 20862370.03 | 0.0507 | 0.0102 |
| Saturn | 52410-01-10 08:53 G | 20863428.80 | 20863428.87 | 20863428.95 | 0.0299 | 0.0285 |
| Jupiter | 52419-02-21 04:34 G | 20866757.52 | 20866757.69 | 20866757.87 | 0.0505 | 0.0319 |
| Saturn | 52425-07-21 21:07 G | 20869100.15 | 20869100.38 | 20869100.62 | 0.0262 | 0.0071 |
| Uranus | 52428-09-11 08:24 G | 20870247.64 | 20870247.85 | 20870248.06 | 0.0134 | 0.0070 |
| Uranus | 52429-09-15 19:41 G | 20870617.07 | 20870617.32 | 20870617.58 | 0.0134 | 0.0021 |
| Uranus | 52430-09-19 20:53 G | 20870986.16 | 20870986.37 | 20870986.61 | 0.0134 | 0.0052 |
| Uranus | 52431-09-24 08:24 G | 20871355.70 | 20871355.85 | 20871356.01 | 0.0134 | 0.0105 |
| Saturn | 52440-01-19 07:26 G | 20874394.57 | 20874394.81 | 20874395.05 | 0.0299 | 0.0107 |
| Neptune | 52440-08-07 23:17 G | 20874596.35 | 20874596.47 | 20874596.63 | 0.0089 | 0.0074 |
| Neptune | 52441-08-10 15:50 G | 20874963.97 | 20874964.16 | 20874964.40 | 0.0089 | 0.0048 |
| Neptune | 52442-08-12 20:53 G | 20875331.12 | 20875331.37 | 20875331.62 | 0.0089 | 0.0016 |
| Neptune | 52443-08-15 15:07 G | 20875698.87 | 20875699.13 | 20875699.39 | 0.0089 | 0.0009 |
| Neptune | 52444-08-16 19:41 G | 20876066.11 | 20876066.32 | 20876066.55 | 0.0089 | 0.0042 |
| Neptune | 52445-08-19 11:17 G | 20876433.82 | 20876433.97 | 20876434.16 | 0.0089 | 0.0068 |
| Mars | 52447-12-15 23:46 G | 20877282.30 | 20877282.49 | 20877282.67 | 0.1775 | 0.0537 |

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| Jupiter | 52448-08-08 00:14 G | 20877518.45 | 20877518.51 | 20877518.57 | 0.0515 | 0.0496 |
| Saturn | 52454-07-17 16:05 G | 20879687.96 | 20879688.17 | 20879688.39 | 0.0262 | 0.0120 |
| Jupiter | 52460-08-12 23:31 G | 20881906.30 | 20881906.48 | 20881906.68 | 0.0517 | 0.0287 |
| Jupiter | 52466-02-06 09:07 G | 20883909.82 | 20883909.88 | 20883909.96 | 0.0511 | 0.0487 |
| Pluto | 52466-06-12 17:02 G | 20884035.96 | 20884036.21 | 20884036.46 | 0.0078 | 0.0005 |
| Saturn | 52469-01-11 19:55 G | 20884980.17 | 20884980.33 | 20884980.50 | 0.0299 | 0.0212 |
| Uranus | 52471-03-11 16:05 G | 20885769.00 | 20885769.17 | 20885769.37 | 0.0144 | 0.0102 |
| Uranus | 52472-03-15 11:02 G | 20886138.71 | 20886138.96 | 20886139.21 | 0.0144 | 0.0036 |
| Jupiter | 52472-08-17 17:31 G | 20886293.99 | 20886294.23 | 20886294.48 | 0.0519 | 0.0020 |
| Uranus | 52473-03-20 19:41 G | 20886509.10 | 20886509.32 | 20886509.57 | 0.0144 | 0.0058 |
| Uranus | 52474-03-25 14:53 G | 20886879.00 | 20886879.12 | 20886879.26 | 0.0144 | 0.0124 |
| Jupiter | 52478-02-10 18:58 G | 20888297.08 | 20888297.29 | 20888297.51 | 0.0509 | 0.0207 |
| Saturn | 52484-07-23 02:24 G | 20890651.39 | 20890651.60 | 20890651.81 | 0.0262 | 0.0125 |
| Jupiter | 52484-08-22 12:00 G | 20890681.82 | 20890682.00 | 20890682.19 | 0.0521 | 0.0289 |
| Jupiter | 52490-02-15 16:19 G | 20892684.96 | 20892685.18 | 20892685.41 | 0.0508 | 0.0064 |
| Saturn | 52499-01-20 12:29 G | 20895945.83 | 20895946.02 | 20895946.23 | 0.0299 | 0.0183 |
| Jupiter | 52502-02-21 07:12 G | 20897072.60 | 20897072.80 | 20897073.01 | 0.0506 | 0.0277 |
| Uranus | 52511-09-09 15:07 G | 20900560.08 | 20900560.13 | 20900560.22 | 0.0135 | 0.0130 |
| Uranus | 52512-09-12 18:43 G | 20900929.10 | 20900929.28 | 20900929.49 | 0.0134 | 0.0081 |
| Saturn | 52513-07-19 18:43 G | 20901239.04 | 20901239.28 | 20901239.53 | 0.0263 | 0.0064 |
| Uranus | 52513-09-17 05:46 G | 20901298.48 | 20901298.74 | 20901298.99 | 0.0134 | 0.0005 |
| Jupiter | 52514-02-25 22:34 G | 20901460.40 | 20901460.44 | 20901460.50 | 0.0505 | 0.0489 |
| Uranus | 52514-09-21 07:55 G | 20901667.61 | 20901667.83 | 20901668.07 | 0.0134 | 0.0045 |
| Uranus | 52515-09-25 17:46 G | 20902037.13 | 20902037.24 | 20902037.40 | 0.0134 | 0.0113 |
| Neptune | 52522-02-06 20:24 G | 20904363.18 | 20904363.35 | 20904363.55 | 0.0088 | 0.0064 |
| Neptune | 52523-02-09 14:38 G | 20904730.89 | 20904731.11 | 20904731.35 | 0.0088 | 0.0040 |
| Neptune | 52524-02-11 20:10 G | 20905098.08 | 20905098.34 | 20905098.60 | 0.0088 | 0.0007 |
| Neptune | 52525-02-13 15:36 G | 20905465.89 | 20905466.15 | 20905466.41 | 0.0088 | 0.0019 |
| Neptune | 52526-02-15 20:53 G | 20905833.19 | 20905833.37 | 20905833.60 | 0.0088 | 0.0052 |
| Neptune | 52527-02-18 14:24 G | 20906200.99 | 20906201.10 | 20906201.24 | 0.0088 | 0.0078 |

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| Saturn | 52528-01-15 13:12 G | 20906531.83 | 20906532.05 | 20906532.27 | 0.0299 | 0.0126 |
| Saturn | 52543-07-26 11:46 G | 20912202.82 | 20912202.99 | 20912203.16 | 0.0263 | 0.0183 |
| Jupiter | 52543-08-14 02:53 G | 20912221.43 | 20912221.62 | 20912221.81 | 0.0517 | 0.0323 |
| Uranus | 52555-03-13 00:14 G | 20916450.35 | 20916450.51 | 20916450.69 | 0.0144 | 0.0109 |
| Jupiter | 52555-08-18 19:41 G | 20916609.10 | 20916609.32 | 20916609.54 | 0.0518 | 0.0053 |
| Uranus | 52556-03-16 19:12 G | 20916820.05 | 20916820.30 | 20916820.56 | 0.0144 | 0.0019 |
| Uranus | 52557-03-22 04:05 G | 20917190.43 | 20917190.67 | 20917190.91 | 0.0144 | 0.0045 |
| Saturn | 52558-01-23 02:53 G | 20917497.52 | 20917497.62 | 20917497.72 | 0.0298 | 0.0270 |
| Uranus | 52558-03-26 22:34 G | 20917560.37 | 20917560.44 | 20917560.53 | 0.0144 | 0.0136 |
| Jupiter | 52561-02-11 02:53 G | 20918612.43 | 20918612.62 | 20918612.82 | 0.0510 | 0.0248 |
| Jupiter | 52567-08-23 14:10 G | 20920996.88 | 20920997.09 | 20920997.31 | 0.0520 | 0.0235 |
| Saturn | 52572-07-20 20:24 G | 20922790.09 | 20922790.35 | 20922790.60 | 0.0263 | 0.0007 |
| Jupiter | 52573-02-15 17:31 G | 20922999.98 | 20923000.23 | 20923000.47 | 0.0508 | 0.0021 |
| Jupiter | 52579-08-28 01:55 G | 20925384.50 | 20925384.58 | 20925384.66 | 0.0522 | 0.0484 |
| Jupiter | 52585-02-20 08:24 G | 20927387.65 | 20927387.85 | 20927388.05 | 0.0506 | 0.0227 |
| Saturn | 52587-01-17 06:00 G | 20928083.50 | 20928083.75 | 20928084.00 | 0.0299 | 0.0034 |
| Uranus | 52596-09-13 05:31 G | 20931610.52 | 20931610.73 | 20931610.95 | 0.0134 | 0.0064 |
| Jupiter | 52597-02-25 04:34 G | 20931775.58 | 20931775.69 | 20931775.81 | 0.0505 | 0.0441 |
| Uranus | 52597-09-17 14:10 G | 20931979.84 | 20931980.09 | 20931980.36 | 0.0134 | 0.0016 |
| Uranus | 52598-09-21 17:31 G | 20932349.03 | 20932349.23 | 20932349.47 | 0.0134 | 0.0059 |
| Uranus | 52599-09-26 02:10 G | 20932718.46 | 20932718.59 | 20932718.76 | 0.0134 | 0.0110 |
| Saturn | 52601-07-17 08:38 G | 20933377.72 | 20933377.86 | 20933378.00 | 0.0262 | 0.0212 |
| Saturn | 52602-07-28 19:55 G | 20933754.24 | 20933754.33 | 20933754.42 | 0.0263 | 0.0245 |
| Neptune | 52604-08-09 15:36 G | 20934497.10 | 20934497.15 | 20934497.24 | 0.0089 | 0.0085 |
| Neptune | 52605-08-11 20:24 G | 20934864.18 | 20934864.35 | 20934864.52 | 0.0089 | 0.0065 |
| Neptune | 52606-08-14 14:10 G | 20935231.85 | 20935232.09 | 20935232.35 | 0.0089 | 0.0027 |
| Neptune | 52607-08-16 19:41 G | 20935599.07 | 20935599.32 | 20935599.57 | 0.0089 | 0.0007 |
| Neptune | 52608-08-18 11:02 G | 20935966.71 | 20935966.96 | 20935967.21 | 0.0089 | 0.0031 |
| Neptune | 52609-08-20 20:24 G | 20936334.16 | 20936334.35 | 20936334.56 | 0.0089 | 0.0052 |
| Pluto | 52624-12-11 18:00 G | 20941926.07 | 20941926.25 | 20941926.46 | 0.0066 | 0.0045 |

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| Pluto | 52625-12-13 13:41 G | 20942292.99 | 20942293.07 | 20942293.20 | 0.0067 | 0.0061 |
| Jupiter | 52626-08-14 00:14 G | 20942536.36 | 20942536.51 | 20942536.65 | 0.0515 | 0.0384 |
| Mars | 52627-06-20 20:38 G | 20942847.15 | 20942847.36 | 20942847.56 | 0.1759 | 0.0089 |
| Saturn | 52631-07-24 03:50 G | 20944341.43 | 20944341.66 | 20944341.90 | 0.0263 | 0.0056 |
| Jupiter | 52638-08-18 20:24 G | 20946924.12 | 20946924.35 | 20946924.59 | 0.0517 | 0.0108 |
| Uranus | 52639-03-14 06:29 G | 20947131.59 | 20947131.77 | 20947131.97 | 0.0144 | 0.0099 |
| Uranus | 52640-03-18 02:38 G | 20947501.36 | 20947501.61 | 20947501.85 | 0.0144 | 0.0031 |
| Uranus | 52641-03-23 10:48 G | 20947871.73 | 20947871.95 | 20947872.20 | 0.0144 | 0.0062 |
| Uranus | 52642-03-28 05:46 G | 20948241.65 | 20948241.74 | 20948241.88 | 0.0144 | 0.0128 |
| Jupiter | 52644-02-11 22:48 G | 20948927.26 | 20948927.45 | 20948927.65 | 0.0510 | 0.0296 |
| Saturn | 52646-01-19 22:19 G | 20949635.18 | 20949635.43 | 20949635.68 | 0.0298 | 0.0062 |
| Jupiter | 52650-08-23 08:24 G | 20951311.63 | 20951311.85 | 20951312.06 | 0.0520 | 0.0187 |
| Jupiter | 52656-02-16 16:48 G | 20953314.98 | 20953315.20 | 20953315.43 | 0.0508 | 0.0031 |
| Saturn | 52660-07-18 18:29 G | 20954929.07 | 20954929.27 | 20954929.48 | 0.0262 | 0.0148 |
| Jupiter | 52662-08-28 12:14 G | 20955699.88 | 20955700.01 | 20955700.13 | 0.0521 | 0.0439 |
| Jupiter | 52668-02-21 11:02 G | 20957702.74 | 20957702.96 | 20957703.19 | 0.0507 | 0.0176 |
| Saturn | 52675-01-13 21:36 G | 20960221.28 | 20960221.40 | 20960221.53 | 0.0299 | 0.0252 |
| Uranus | 52679-09-11 09:50 G | 20961922.83 | 20961922.91 | 20961923.03 | 0.0135 | 0.0124 |
| Jupiter | 52680-02-25 20:53 G | 20962090.23 | 20962090.37 | 20962090.51 | 0.0506 | 0.0395 |
| Uranus | 52680-09-14 16:05 G | 20962291.98 | 20962292.17 | 20962292.38 | 0.0134 | 0.0073 |
| Uranus | 52681-09-19 00:00 G | 20962661.24 | 20962661.50 | 20962661.76 | 0.0134 | 0.0002 |
| Uranus | 52682-09-23 04:48 G | 20963030.49 | 20963030.70 | 20963030.94 | 0.0134 | 0.0050 |
| Uranus | 52683-09-27 12:00 G | 20963399.91 | 20963400.00 | 20963400.14 | 0.0134 | 0.0120 |
| Neptune | 52686-02-07 12:14 G | 20964263.96 | 20964264.01 | 20964264.11 | 0.0089 | 0.0085 |
| Neptune | 52687-02-09 17:31 G | 20964631.03 | 20964631.23 | 20964631.46 | 0.0088 | 0.0049 |
| Neptune | 52688-02-12 12:43 G | 20964998.78 | 20964999.03 | 20964999.28 | 0.0088 | 0.0027 |
| Neptune | 52689-02-13 18:58 G | 20965366.04 | 20965366.29 | 20965366.54 | 0.0088 | 0.0011 |
| Neptune | 52690-02-16 10:19 G | 20965733.70 | 20965733.93 | 20965734.20 | 0.0088 | 0.0032 |
| Saturn | 52690-07-25 17:46 G | 20965893.02 | 20965893.24 | 20965893.45 | 0.0263 | 0.0120 |
| Neptune | 52691-02-18 20:24 G | 20966101.23 | 20966101.35 | 20966101.54 | 0.0088 | 0.0070 |

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| Saturn | 52705-01-22 18:43 G | 20971187.08 | 20971187.28 | 20971187.48 | 0.0298 | 0.0163 |
| Jupiter | 52709-08-14 02:53 G | 20972851.50 | 20972851.62 | 20972851.75 | 0.0516 | 0.0437 |
| Pluto | 52712-06-16 22:34 G | 20973889.18 | 20973889.44 | 20973889.70 | 0.0078 | 0.0006 |
| Saturn | 52719-07-22 00:43 G | 20976480.29 | 20976480.53 | 20976480.77 | 0.0262 | 0.0084 |
| Jupiter | 52721-08-18 15:22 G | 20977238.93 | 20977239.14 | 20977239.36 | 0.0517 | 0.0158 |
| Uranus | 52723-03-15 13:55 G | 20977812.91 | 20977813.08 | 20977813.28 | 0.0144 | 0.0103 |
| Uranus | 52724-03-19 10:48 G | 20978182.70 | 20978182.95 | 20978183.20 | 0.0144 | 0.0016 |
| Uranus | 52725-03-24 18:14 G | 20978553.02 | 20978553.26 | 20978553.51 | 0.0144 | 0.0049 |
| Uranus | 52726-03-29 13:26 G | 20978923.03 | 20978923.06 | 20978923.13 | 0.0144 | 0.0142 |
| Jupiter | 52727-02-11 21:50 G | 20979242.25 | 20979242.41 | 20979242.58 | 0.0511 | 0.0344 |
| Mars | 52731-12-19 16:05 G | 20981014.02 | 20981014.17 | 20981014.33 | 0.1767 | 0.0800 |
| Jupiter | 52733-08-23 17:02 G | 20981626.99 | 20981627.21 | 20981627.43 | 0.0519 | 0.0141 |
| Saturn | 52734-01-16 19:41 G | 20981773.10 | 20981773.32 | 20981773.53 | 0.0299 | 0.0149 |
| Jupiter | 52739-02-16 17:31 G | 20983629.99 | 20983630.23 | 20983630.47 | 0.0509 | 0.0081 |
| Jupiter | 52745-08-28 01:26 G | 20986014.40 | 20986014.56 | 20986014.73 | 0.0520 | 0.0375 |
| Saturn | 52749-07-28 05:31 G | 20987444.55 | 20987444.73 | 20987444.90 | 0.0263 | 0.0182 |
| Jupiter | 52751-02-21 04:05 G | 20988017.45 | 20988017.67 | 20988017.90 | 0.0508 | 0.0127 |
| Jupiter | 52763-02-26 03:22 G | 20992405.47 | 20992405.64 | 20992405.81 | 0.0506 | 0.0348 |
| Uranus | 52763-09-12 18:29 G | 20992604.21 | 20992604.27 | 20992604.35 | 0.0135 | 0.0129 |
| Saturn | 52764-01-25 17:31 G | 20992739.13 | 20992739.23 | 20992739.36 | 0.0298 | 0.0262 |
| Uranus | 52764-09-16 01:55 G | 20992973.36 | 20992973.58 | 20992973.80 | 0.0134 | 0.0058 |
| Uranus | 52765-09-20 07:41 G | 20993342.57 | 20993342.82 | 20993343.09 | 0.0134 | 0.0009 |
| Uranus | 52766-09-24 14:10 G | 20993711.89 | 20993712.09 | 20993712.31 | 0.0134 | 0.0065 |
| Uranus | 52767-09-28 20:10 G | 20994081.22 | 20994081.34 | 20994081.49 | 0.0134 | 0.0114 |
| Neptune | 52769-08-12 12:29 G | 20994764.91 | 20994765.02 | 20994765.19 | 0.0089 | 0.0075 |
| Neptune | 52770-08-14 19:12 G | 20995132.10 | 20995132.30 | 20995132.53 | 0.0089 | 0.0046 |
| Neptune | 52771-08-17 09:36 G | 20995499.64 | 20995499.90 | 20995500.16 | 0.0089 | 0.0016 |
| Neptune | 52772-08-18 20:10 G | 20995867.09 | 20995867.34 | 20995867.58 | 0.0089 | 0.0012 |
| Neptune | 52773-08-21 04:48 G | 20996234.47 | 20996234.70 | 20996234.94 | 0.0089 | 0.0041 |
| Neptune | 52774-08-23 20:24 G | 20996602.20 | 20996602.35 | 20996602.50 | 0.0089 | 0.0070 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 52778-07-23 07:26 G | 20998031.57 | 20998031.81 | 20998032.06 | 0.0262 | 0.0020 |
| Jupiter | 52792-08-12 23:31 G | 21003166.41 | 21003166.48 | 21003166.55 | 0.0515 | 0.0485 |
| Saturn | 52793-01-18 11:17 G | 21003324.72 | 21003324.97 | 21003325.22 | 0.0299 | 0.0056 |
| Jupiter | 52804-08-17 22:34 G | 21007554.22 | 21007554.44 | 21007554.65 | 0.0516 | 0.0208 |
| Uranus | 52807-03-15 22:05 G | 21008494.23 | 21008494.42 | 21008494.63 | 0.0144 | 0.0094 |
| Saturn | 52807-07-19 02:10 G | 21008619.46 | 21008619.59 | 21008619.75 | 0.0262 | 0.0212 |
| Uranus | 52808-03-19 20:10 G | 21008864.10 | 21008864.34 | 21008864.59 | 0.0144 | 0.0024 |
| Saturn | 52808-07-29 10:48 G | 21008995.87 | 21008995.95 | 21008996.05 | 0.0263 | 0.0244 |
| Uranus | 52809-03-25 02:53 G | 21009234.40 | 21009234.62 | 21009234.86 | 0.0144 | 0.0068 |
| Jupiter | 52810-02-10 22:19 G | 21009557.28 | 21009557.43 | 21009557.59 | 0.0512 | 0.0391 |
| Uranus | 52810-03-29 23:31 G | 21009604.40 | 21009604.48 | 21009604.59 | 0.0144 | 0.0132 |
| Jupiter | 52816-08-22 07:26 G | 21011941.58 | 21011941.81 | 21011942.04 | 0.0518 | 0.0081 |
| Jupiter | 52822-02-15 12:00 G | 21013944.77 | 21013945.00 | 21013945.22 | 0.0510 | 0.0131 |
| Jupiter | 52828-08-27 06:00 G | 21016329.57 | 21016329.75 | 21016329.93 | 0.0520 | 0.0319 |
| Jupiter | 52834-02-20 13:26 G | 21018332.82 | 21018333.06 | 21018333.29 | 0.0508 | 0.0083 |
| Saturn | 52837-07-24 17:17 G | 21019582.98 | 21019583.22 | 21019583.45 | 0.0262 | 0.0043 |
| Jupiter | 52846-02-24 21:07 G | 21022720.19 | 21022720.38 | 21022720.57 | 0.0506 | 0.0307 |
| Uranus | 52847-09-13 02:38 G | 21023285.51 | 21023285.61 | 21023285.76 | 0.0135 | 0.0119 |
| Uranus | 52848-09-16 12:00 G | 21023654.80 | 21023655.00 | 21023655.23 | 0.0134 | 0.0066 |
| Uranus | 52849-09-20 17:17 G | 21024023.96 | 21024024.22 | 21024024.48 | 0.0134 | 0.0008 |
| Uranus | 52850-09-25 01:12 G | 21024393.33 | 21024393.55 | 21024393.78 | 0.0134 | 0.0056 |
| Neptune | 52851-02-10 08:24 G | 21024531.68 | 21024531.85 | 21024532.06 | 0.0088 | 0.0063 |
| Uranus | 52851-09-29 05:31 G | 21024762.68 | 21024762.73 | 21024762.83 | 0.0134 | 0.0128 |
| Saturn | 52852-01-20 22:19 G | 21024876.18 | 21024876.43 | 21024876.68 | 0.0299 | 0.0029 |
| Neptune | 52852-02-12 16:05 G | 21024898.96 | 21024899.17 | 21024899.41 | 0.0088 | 0.0040 |
| Neptune | 52853-02-14 07:12 G | 21025266.53 | 21025266.80 | 21025267.07 | 0.0088 | 0.0005 |
| Neptune | 52854-02-16 18:58 G | 21025634.05 | 21025634.29 | 21025634.54 | 0.0088 | 0.0019 |
| Neptune | 52855-02-19 04:19 G | 21026001.49 | 21026001.68 | 21026001.92 | 0.0088 | 0.0054 |
| Neptune | 52856-02-21 20:38 G | 21026369.26 | 21026369.36 | 21026369.51 | 0.0088 | 0.0077 |
| Saturn | 52866-07-20 08:10 G | 21030170.64 | 21030170.84 | 21030171.05 | 0.0262 | 0.0154 |

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| Pluto | 52870-12-14 20:38 G | 21031779.19 | 21031779.36 | 21031779.58 | 0.0066 | 0.0042 |
| Pluto | 52871-12-16 10:48 G | 21032145.91 | 21032145.95 | 21032146.08 | 0.0067 | 0.0064 |
| Saturn | 52881-01-14 03:50 G | 21035462.58 | 21035462.66 | 21035462.76 | 0.0299 | 0.0277 |
| Jupiter | 52887-08-17 14:10 G | 21037868.89 | 21037869.09 | 21037869.29 | 0.0516 | 0.0260 |
| Uranus | 52891-03-16 08:53 G | 21039175.67 | 21039175.87 | 21039176.07 | 0.0144 | 0.0091 |
| Uranus | 52892-03-20 08:10 G | 21039545.59 | 21039545.84 | 21039546.09 | 0.0144 | 0.0008 |
| Jupiter | 52893-02-09 22:34 G | 21039872.32 | 21039872.44 | 21039872.57 | 0.0512 | 0.0429 |
| Uranus | 52893-03-25 13:41 G | 21039915.83 | 21039916.07 | 21039916.31 | 0.0144 | 0.0058 |
| Saturn | 52896-07-26 03:22 G | 21041134.42 | 21041134.64 | 21041134.86 | 0.0262 | 0.0099 |
| Jupiter | 52899-08-22 15:50 G | 21042256.94 | 21042257.16 | 21042257.39 | 0.0518 | 0.0042 |
| Jupiter | 52905-02-15 22:19 G | 21044260.20 | 21044260.43 | 21044260.65 | 0.0510 | 0.0170 |
| Saturn | 52911-01-23 09:36 G | 21046427.68 | 21046427.90 | 21046428.13 | 0.0299 | 0.0104 |
| Mars | 52911-06-22 16:05 G | 21046577.99 | 21046578.17 | 21046578.35 | 0.1768 | 0.0481 |
| Jupiter | 52911-08-28 09:07 G | 21046644.68 | 21046644.88 | 21046645.09 | 0.0520 | 0.0276 |
| Jupiter | 52917-02-20 07:41 G | 21048647.58 | 21048647.82 | 21048648.06 | 0.0508 | 0.0036 |
| Jupiter | 52923-09-02 02:53 G | 21051032.58 | 21051032.62 | 21051032.68 | 0.0521 | 0.0506 |
| Saturn | 52925-07-22 07:26 G | 21051721.58 | 21051721.81 | 21051722.04 | 0.0262 | 0.0104 |
| Jupiter | 52929-02-25 05:31 G | 21053035.54 | 21053035.73 | 21053035.92 | 0.0507 | 0.0273 |
| Uranus | 52931-09-14 12:00 G | 21053966.90 | 21053967.00 | 21053967.14 | 0.0134 | 0.0120 |
| Uranus | 52932-09-17 22:19 G | 21054336.22 | 21054336.43 | 21054336.67 | 0.0134 | 0.0052 |
| Neptune | 52933-08-12 17:17 G | 21054665.19 | 21054665.22 | 21054665.32 | 0.0089 | 0.0086 |
| Uranus | 52933-09-22 01:41 G | 21054705.31 | 21054705.57 | 21054705.83 | 0.0134 | 0.0002 |
| Neptune | 52934-08-15 06:14 G | 21055032.60 | 21055032.76 | 21055032.96 | 0.0089 | 0.0065 |
| Uranus | 52934-09-26 11:02 G | 21055074.77 | 21055074.96 | 21055075.18 | 0.0134 | 0.0073 |
| Neptune | 52935-08-17 19:12 G | 21055400.07 | 21055400.30 | 21055400.54 | 0.0089 | 0.0027 |
| Uranus | 52935-09-30 14:38 G | 21055444.00 | 21055444.11 | 21055444.23 | 0.0134 | 0.0120 |
| Neptune | 52936-08-19 03:22 G | 21055767.38 | 21055767.64 | 21055767.91 | 0.0089 | 0.0007 |
| Neptune | 52937-08-21 19:41 G | 21056135.10 | 21056135.32 | 21056135.57 | 0.0089 | 0.0032 |
| Neptune | 52938-08-24 00:14 G | 21056502.32 | 21056502.51 | 21056502.74 | 0.0089 | 0.0052 |
| Saturn | 52940-01-17 10:05 G | 21057013.75 | 21057013.92 | 21057014.11 | 0.0299 | 0.0209 |

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| Saturn | 52955-07-29 07:26 G | 21062685.62 | 21062685.81 | 21062686.03 | 0.0262 | 0.0150 |
| Pluto | 52958-06-19 19:41 G | 21063742.06 | 21063742.32 | 21063742.59 | 0.0078 | 0.0013 |
| Saturn | 52970-01-24 19:41 G | 21067979.12 | 21067979.32 | 21067979.52 | 0.0299 | 0.0167 |
| Jupiter | 52970-08-18 04:48 G | 21068184.52 | 21068184.70 | 21068184.89 | 0.0516 | 0.0280 |
| Uranus | 52975-03-17 18:00 G | 21069857.06 | 21069857.25 | 21069857.48 | 0.0144 | 0.0086 |
| Jupiter | 52976-02-11 08:53 G | 21070187.78 | 21070187.87 | 21070187.97 | 0.0512 | 0.0463 |
| Uranus | 52976-03-21 19:26 G | 21070227.07 | 21070227.31 | 21070227.56 | 0.0144 | 0.0012 |
| Uranus | 52977-03-27 00:00 G | 21070597.29 | 21070597.50 | 21070597.74 | 0.0144 | 0.0078 |
| Uranus | 52978-03-31 22:48 G | 21070967.44 | 21070967.45 | 21070967.51 | 0.0144 | 0.0143 |
| Jupiter | 52982-08-22 19:26 G | 21072572.07 | 21072572.31 | 21072572.55 | 0.0517 | 0.0010 |
| Saturn | 52984-07-23 08:10 G | 21073272.61 | 21073272.84 | 21073273.08 | 0.0262 | 0.0057 |
| Jupiter | 52988-02-15 18:29 G | 21074575.05 | 21074575.27 | 21074575.48 | 0.0511 | 0.0215 |
| Jupiter | 52994-08-27 13:12 G | 21076959.86 | 21076960.05 | 21076960.25 | 0.0519 | 0.0235 |
| Saturn | 52999-01-18 08:53 G | 21078564.66 | 21078564.87 | 21078565.09 | 0.0299 | 0.0153 |
| Jupiter | 53000-02-20 20:24 G | 21078963.12 | 21078963.35 | 21078963.58 | 0.0509 | 0.0003 |

54TH MILLENNIUM CE

This is a list of transits of Moon in the 54th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|------|---|-------|-----|-----|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 53006-09-02 08:10 G | 21081347.74 | 21081347.84 | 21081347.96 | 0.0521 | 0.0462 |
| Jupiter | 53012-02-26 12:00 G | 21083350.79 | 21083351.00 | 21083351.21 | 0.0507 | 0.0251 |
| Saturn | 53013-07-19 23:02 G | 21083860.43 | 21083860.46 | 21083860.52 | 0.0262 | 0.0257 |
| Saturn | 53014-07-31 03:36 G | 21084236.49 | 21084236.65 | 21084236.83 | 0.0262 | 0.0194 |

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| Neptune | 53015-02-11 13:26 G | 21084432.00 | 21084432.06 | 21084432.17 | 0.0088 | 0.0084 |
| Uranus | 53015-09-15 22:34 G | 21084648.32 | 21084648.44 | 21084648.61 | 0.0134 | 0.0112 |
| Mars | 53015-12-22 09:50 G | 21084745.75 | 21084745.91 | 21084746.07 | 0.1759 | 0.1052 |
| Neptune | 53016-02-14 02:24 G | 21084799.40 | 21084799.60 | 21084799.85 | 0.0088 | 0.0050 |
| Uranus | 53016-09-19 10:34 G | 21085017.72 | 21085017.94 | 21085018.17 | 0.0134 | 0.0056 |
| Neptune | 53017-02-15 15:36 G | 21085166.92 | 21085167.15 | 21085167.40 | 0.0088 | 0.0026 |
| Uranus | 53017-09-23 12:58 G | 21085386.78 | 21085387.04 | 21085387.30 | 0.0134 | 0.0016 |
| Neptune | 53018-02-18 00:00 G | 21085534.24 | 21085534.50 | 21085534.77 | 0.0088 | 0.0010 |
| Uranus | 53018-09-27 23:17 G | 21085756.27 | 21085756.47 | 21085756.70 | 0.0134 | 0.0064 |
| Neptune | 53019-02-20 17:31 G | 21085902.01 | 21085902.23 | 21085902.48 | 0.0088 | 0.0034 |
| Neptune | 53020-02-22 22:34 G | 21086269.30 | 21086269.44 | 21086269.63 | 0.0088 | 0.0069 |
| Saturn | 53029-01-26 22:19 G | 21089530.26 | 21089530.43 | 21089530.60 | 0.0299 | 0.0221 |
| Saturn | 53043-07-26 11:46 G | 21094823.76 | 21094823.99 | 21094824.23 | 0.0262 | 0.0014 |
| Jupiter | 53053-08-18 08:10 G | 21098499.65 | 21098499.84 | 21098500.04 | 0.0515 | 0.0305 |
| Saturn | 53058-01-20 08:10 G | 21100115.62 | 21100115.84 | 21100116.07 | 0.0299 | 0.0102 |
| Jupiter | 53059-02-11 09:22 G | 21100502.84 | 21100502.89 | 21100502.95 | 0.0513 | 0.0495 |
| Uranus | 53059-03-19 04:48 G | 21100538.49 | 21100538.70 | 21100538.94 | 0.0144 | 0.0080 |
| Uranus | 53060-03-23 07:26 G | 21100908.57 | 21100908.81 | 21100909.06 | 0.0144 | 0.0003 |
| Uranus | 53061-03-28 10:34 G | 21101278.72 | 21101278.94 | 21101279.19 | 0.0144 | 0.0069 |
| Jupiter | 53065-08-22 22:48 G | 21102887.22 | 21102887.45 | 21102887.67 | 0.0517 | 0.0037 |
| Jupiter | 53071-02-16 13:41 G | 21104890.87 | 21104891.07 | 21104891.27 | 0.0511 | 0.0242 |
| Saturn | 53072-07-20 18:43 G | 21105411.14 | 21105411.28 | 21105411.43 | 0.0262 | 0.0213 |
| Saturn | 53073-08-01 00:43 G | 21105787.43 | 21105787.53 | 21105787.63 | 0.0262 | 0.0237 |
| Jupiter | 53077-08-27 21:36 G | 21107275.18 | 21107275.40 | 21107275.63 | 0.0519 | 0.0196 |
| Jupiter | 53083-02-21 03:22 G | 21109278.39 | 21109278.64 | 21109278.88 | 0.0509 | 0.0031 |
| Saturn | 53088-01-28 15:36 G | 21111081.06 | 21111081.15 | 21111081.28 | 0.0299 | 0.0269 |
| Jupiter | 53089-09-01 14:24 G | 21111662.99 | 21111663.10 | 21111663.22 | 0.0521 | 0.0443 |
| Jupiter | 53095-02-25 21:22 G | 21113666.19 | 21113666.39 | 21113666.59 | 0.0507 | 0.0228 |
| Neptune | 53098-08-15 16:48 G | 21114933.11 | 21114933.20 | 21114933.34 | 0.0089 | 0.0078 |
| Neptune | 53099-08-17 23:31 G | 21115300.27 | 21115300.48 | 21115300.72 | 0.0089 | 0.0045 |

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| Uranus | 53099-09-16 10:34 G | 21115329.79 | 21115329.94 | 21115330.09 | 0.0134 | 0.0109 |
| Neptune | 53100-08-20 17:17 G | 21115667.97 | 21115668.22 | 21115668.47 | 0.0089 | 0.0018 |
| Uranus | 53100-09-20 22:48 G | 21115699.22 | 21115699.45 | 21115699.68 | 0.0134 | 0.0042 |
| Neptune | 53101-08-22 21:36 G | 21116035.15 | 21116035.40 | 21116035.66 | 0.0089 | 0.0014 |
| Uranus | 53101-09-24 23:46 G | 21116068.23 | 21116068.49 | 21116068.75 | 0.0134 | 0.0009 |
| Saturn | 53102-07-28 11:46 G | 21116374.75 | 21116374.99 | 21116375.24 | 0.0262 | 0.0028 |
| Neptune | 53102-08-25 15:50 G | 21116402.94 | 21116403.16 | 21116403.40 | 0.0089 | 0.0040 |
| Uranus | 53102-09-29 11:02 G | 21116437.78 | 21116437.96 | 21116438.17 | 0.0134 | 0.0082 |
| Neptune | 53103-08-27 21:07 G | 21116770.24 | 21116770.38 | 21116770.54 | 0.0089 | 0.0071 |
| Uranus | 53103-10-03 12:00 G | 21116806.95 | 21116807.00 | 21116807.09 | 0.0134 | 0.0128 |
| Pluto | 53116-12-19 06:58 G | 21121632.56 | 21121632.79 | 21121633.04 | 0.0066 | 0.0025 |
| Saturn | 53117-01-22 09:22 G | 21121666.66 | 21121666.89 | 21121667.12 | 0.0299 | 0.0054 |
| Saturn | 53131-07-23 13:12 G | 21126961.88 | 21126962.05 | 21126962.25 | 0.0262 | 0.0172 |
| Jupiter | 53136-08-18 14:53 G | 21128814.95 | 21128815.12 | 21128815.29 | 0.0515 | 0.0338 |
| Jupiter | 53142-02-12 04:34 G | 21130818.69 | 21130818.69 | 21130818.69 | 0.0513 | 0.0513 |
| Uranus | 53143-03-20 12:14 G | 21131219.81 | 21131220.01 | 21131220.25 | 0.0144 | 0.0080 |
| Uranus | 53144-03-24 17:02 G | 21131589.96 | 21131590.21 | 21131590.45 | 0.0144 | 0.0003 |
| Uranus | 53145-03-29 18:58 G | 21131960.08 | 21131960.29 | 21131960.51 | 0.0144 | 0.0085 |
| Jupiter | 53148-08-23 13:41 G | 21133202.84 | 21133203.07 | 21133203.31 | 0.0517 | 0.0059 |
| Jupiter | 53154-02-16 18:29 G | 21135206.07 | 21135206.27 | 21135206.48 | 0.0511 | 0.0274 |
| Jupiter | 53160-08-28 04:34 G | 21137590.48 | 21137590.69 | 21137590.90 | 0.0519 | 0.0168 |
| Saturn | 53161-07-29 05:46 G | 21137925.49 | 21137925.74 | 21137925.99 | 0.0262 | 0.0069 |
| Jupiter | 53166-02-21 12:43 G | 21139593.81 | 21139594.03 | 21139594.26 | 0.0509 | 0.0060 |
| Jupiter | 53172-09-02 06:14 G | 21141978.62 | 21141978.76 | 21141978.89 | 0.0521 | 0.0419 |
| Saturn | 53176-01-24 07:12 G | 21143217.55 | 21143217.80 | 21143218.04 | 0.0299 | 0.0009 |
| Jupiter | 53178-02-26 10:05 G | 21143981.70 | 21143981.92 | 21143982.14 | 0.0508 | 0.0213 |
| Neptune | 53180-02-14 12:43 G | 21144699.87 | 21144700.03 | 21144700.22 | 0.0088 | 0.0063 |
| Neptune | 53181-02-15 19:55 G | 21145067.12 | 21145067.33 | 21145067.59 | 0.0088 | 0.0042 |
| Neptune | 53182-02-18 14:53 G | 21145434.86 | 21145435.12 | 21145435.37 | 0.0088 | 0.0004 |
| Neptune | 53183-02-20 19:26 G | 21145802.06 | 21145802.31 | 21145802.57 | 0.0088 | 0.0017 |

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| Uranus | 53183-09-17 22:34 G | 21146011.28 | 21146011.44 | 21146011.61 | 0.0134 | 0.0103 |
| Neptune | 53184-02-23 14:24 G | 21146169.90 | 21146170.10 | 21146170.31 | 0.0088 | 0.0054 |
| Uranus | 53184-09-21 11:31 G | 21146380.76 | 21146380.98 | 21146381.22 | 0.0134 | 0.0046 |
| Neptune | 53185-02-24 20:10 G | 21146537.22 | 21146537.34 | 21146537.48 | 0.0088 | 0.0076 |
| Uranus | 53185-09-25 12:14 G | 21146749.76 | 21146750.01 | 21146750.27 | 0.0134 | 0.0025 |
| Uranus | 53186-09-30 00:43 G | 21147119.32 | 21147119.53 | 21147119.74 | 0.0134 | 0.0072 |
| Saturn | 53190-07-24 12:58 G | 21148512.84 | 21148513.04 | 21148513.25 | 0.0262 | 0.0131 |
| Mars | 53195-06-25 09:50 G | 21150309.73 | 21150309.91 | 21150310.09 | 0.1776 | 0.0361 |
| Pluto | 53204-06-23 01:26 G | 21153595.34 | 21153595.56 | 21153595.79 | 0.0078 | 0.0037 |
| Jupiter | 53219-08-19 05:46 G | 21159130.57 | 21159130.74 | 21159130.91 | 0.0515 | 0.0352 |
| Saturn | 53220-07-29 22:48 G | 21159476.23 | 21159476.45 | 21159476.68 | 0.0262 | 0.0110 |
| Uranus | 53227-03-20 21:07 G | 21161901.16 | 21161901.38 | 21161901.62 | 0.0144 | 0.0072 |
| Uranus | 53228-03-25 02:53 G | 21162271.37 | 21162271.62 | 21162271.87 | 0.0144 | 0.0005 |
| Uranus | 53229-03-30 03:07 G | 21162641.41 | 21162641.63 | 21162641.86 | 0.0144 | 0.0076 |
| Jupiter | 53231-08-23 18:14 G | 21163518.04 | 21163518.26 | 21163518.49 | 0.0517 | 0.0091 |
| Saturn | 53235-01-25 00:43 G | 21164768.28 | 21164768.53 | 21164768.78 | 0.0299 | 0.0041 |
| Jupiter | 53237-02-16 05:46 G | 21165521.56 | 21165521.74 | 21165521.92 | 0.0512 | 0.0306 |
| Jupiter | 53243-08-28 14:24 G | 21167905.88 | 21167906.10 | 21167906.33 | 0.0518 | 0.0118 |
| Jupiter | 53249-02-21 04:19 G | 21169909.44 | 21169909.68 | 21169909.92 | 0.0510 | 0.0078 |
| Saturn | 53249-07-25 15:07 G | 21170063.91 | 21170064.13 | 21170064.36 | 0.0262 | 0.0089 |
| Jupiter | 53255-09-02 03:50 G | 21172293.50 | 21172293.66 | 21172293.82 | 0.0520 | 0.0379 |
| Jupiter | 53261-02-25 16:48 G | 21174296.99 | 21174297.20 | 21174297.42 | 0.0508 | 0.0200 |
| Neptune | 53262-08-15 20:24 G | 21174833.31 | 21174833.35 | 21174833.40 | 0.0089 | 0.0087 |
| Neptune | 53263-08-18 14:24 G | 21175200.94 | 21175201.10 | 21175201.27 | 0.0089 | 0.0066 |
| Saturn | 53264-01-18 08:24 G | 21175353.84 | 21175353.85 | 21175353.89 | 0.0299 | 0.0297 |
| Neptune | 53264-08-19 18:29 G | 21175568.04 | 21175568.27 | 21175568.52 | 0.0089 | 0.0029 |
| Neptune | 53265-08-22 12:29 G | 21175935.77 | 21175936.02 | 21175936.29 | 0.0089 | 0.0008 |
| Neptune | 53266-08-24 18:29 G | 21176303.05 | 21176303.27 | 21176303.52 | 0.0089 | 0.0030 |
| Neptune | 53267-08-27 09:07 G | 21176670.68 | 21176670.88 | 21176671.11 | 0.0089 | 0.0051 |
| Uranus | 53267-09-18 09:50 G | 21176692.76 | 21176692.91 | 21176693.11 | 0.0134 | 0.0099 |

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| Uranus | 53268-09-21 23:46 G | 21177062.26 | 21177062.49 | 21177062.74 | 0.0134 | 0.0034 |
| Uranus | 53269-09-25 23:31 G | 21177431.23 | 21177431.48 | 21177431.73 | 0.0134 | 0.0018 |
| Uranus | 53270-09-30 11:46 G | 21177800.83 | 21177800.99 | 21177801.19 | 0.0134 | 0.0091 |
| Jupiter | 53273-03-02 16:34 G | 21178685.13 | 21178685.19 | 21178685.25 | 0.0506 | 0.0487 |
| Saturn | 53279-07-31 22:05 G | 21181027.24 | 21181027.42 | 21181027.62 | 0.0262 | 0.0156 |
| Saturn | 53294-01-25 19:55 G | 21186319.10 | 21186319.33 | 21186319.57 | 0.0299 | 0.0094 |
| Mars | 53299-12-23 08:24 G | 21188476.68 | 21188476.85 | 21188477.03 | 0.1750 | 0.0731 |
| Jupiter | 53302-08-19 04:05 G | 21189445.53 | 21189445.67 | 21189445.81 | 0.0514 | 0.0400 |
| Saturn | 53308-07-27 12:58 G | 21191614.80 | 21191615.04 | 21191615.29 | 0.0262 | 0.0044 |
| Uranus | 53310-03-17 08:38 G | 21192212.84 | 21192212.86 | 21192212.94 | 0.0144 | 0.0141 |
| Uranus | 53311-03-22 04:48 G | 21192582.49 | 21192582.70 | 21192582.94 | 0.0144 | 0.0075 |
| Uranus | 53312-03-26 12:00 G | 21192952.75 | 21192953.00 | 21192953.25 | 0.0144 | 0.0006 |
| Uranus | 53313-03-31 10:48 G | 21193322.76 | 21193322.95 | 21193323.17 | 0.0144 | 0.0089 |
| Jupiter | 53314-08-24 04:34 G | 21193833.47 | 21193833.69 | 21193833.91 | 0.0516 | 0.0139 |
| Jupiter | 53320-02-17 17:31 G | 21195837.05 | 21195837.23 | 21195837.41 | 0.0512 | 0.0339 |
| Saturn | 53323-01-20 13:55 G | 21196904.94 | 21196905.08 | 21196905.24 | 0.0299 | 0.0234 |
| Jupiter | 53326-08-28 17:46 G | 21198221.01 | 21198221.24 | 21198221.48 | 0.0518 | 0.0085 |
| Jupiter | 53332-02-22 07:26 G | 21200224.58 | 21200224.81 | 21200225.03 | 0.0510 | 0.0111 |
| Saturn | 53337-07-22 10:48 G | 21202201.94 | 21202201.95 | 21202201.98 | 0.0262 | 0.0261 |
| Saturn | 53338-08-03 02:24 G | 21202578.46 | 21202578.60 | 21202578.76 | 0.0262 | 0.0205 |
| Jupiter | 53338-09-02 19:55 G | 21202609.17 | 21202609.33 | 21202609.49 | 0.0520 | 0.0360 |
| Neptune | 53344-02-14 14:10 G | 21204600.02 | 21204600.09 | 21204600.21 | 0.0088 | 0.0083 |
| Jupiter | 53344-02-27 06:00 G | 21204612.53 | 21204612.75 | 21204612.97 | 0.0508 | 0.0176 |
| Neptune | 53345-02-16 09:22 G | 21204967.70 | 21204967.89 | 21204968.12 | 0.0088 | 0.0052 |
| Neptune | 53346-02-18 14:24 G | 21205334.87 | 21205335.10 | 21205335.36 | 0.0088 | 0.0025 |
| Neptune | 53347-02-21 09:07 G | 21205702.62 | 21205702.88 | 21205703.15 | 0.0088 | 0.0007 |
| Neptune | 53348-02-23 15:50 G | 21206069.94 | 21206070.16 | 21206070.41 | 0.0088 | 0.0034 |
| Neptune | 53349-02-25 06:43 G | 21206437.63 | 21206437.78 | 21206437.98 | 0.0088 | 0.0067 |
| Uranus | 53351-09-19 21:22 G | 21207374.24 | 21207374.39 | 21207374.59 | 0.0134 | 0.0095 |
| Uranus | 53352-09-23 11:46 G | 21207743.75 | 21207743.99 | 21207744.24 | 0.0134 | 0.0035 |

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| Saturn | 53353-01-28 00:43 G | 21207870.33 | 21207870.53 | 21207870.73 | 0.0299 | 0.0159 |
| Uranus | 53353-09-27 11:17 G | 21208112.73 | 21208112.97 | 21208113.22 | 0.0134 | 0.0034 |
| Uranus | 53354-10-02 00:14 G | 21208482.33 | 21208482.51 | 21208482.73 | 0.0134 | 0.0082 |
| Jupiter | 53356-03-02 16:48 G | 21209000.10 | 21209000.20 | 21209000.29 | 0.0507 | 0.0459 |
| Pluto | 53362-12-22 07:41 G | 21211485.55 | 21211485.82 | 21211486.08 | 0.0066 | 0.0009 |
| Saturn | 53367-07-29 08:53 G | 21213165.62 | 21213165.87 | 21213166.12 | 0.0263 | 0.0006 |
| Saturn | 53382-01-21 17:02 G | 21218456.00 | 21218456.21 | 21218456.43 | 0.0298 | 0.0160 |
| Jupiter | 53385-08-18 18:58 G | 21219761.16 | 21219761.29 | 21219761.42 | 0.0514 | 0.0425 |
| Uranus | 53395-03-22 16:19 G | 21223263.96 | 21223264.18 | 21223264.44 | 0.0144 | 0.0061 |
| Uranus | 53396-03-27 00:14 G | 21223634.26 | 21223634.51 | 21223634.76 | 0.0144 | 0.0012 |
| Saturn | 53396-07-23 16:34 G | 21223753.06 | 21223753.19 | 21223753.35 | 0.0262 | 0.0211 |
| Uranus | 53397-03-31 21:36 G | 21224004.20 | 21224004.40 | 21224004.62 | 0.0144 | 0.0086 |
| Saturn | 53397-08-04 04:34 G | 21224129.66 | 21224129.69 | 21224129.75 | 0.0263 | 0.0258 |
| Jupiter | 53397-08-23 06:14 G | 21224148.55 | 21224148.76 | 21224148.99 | 0.0516 | 0.0176 |
| Jupiter | 53403-02-17 16:48 G | 21226152.06 | 21226152.20 | 21226152.36 | 0.0512 | 0.0388 |
| Jupiter | 53409-08-29 06:00 G | 21228536.52 | 21228536.75 | 21228536.97 | 0.0517 | 0.0047 |
| Saturn | 53412-01-31 13:12 G | 21229421.90 | 21229422.05 | 21229422.20 | 0.0298 | 0.0235 |
| Jupiter | 53415-02-22 18:29 G | 21230540.05 | 21230540.27 | 21230540.50 | 0.0511 | 0.0148 |
| Jupiter | 53421-09-02 15:36 G | 21232923.96 | 21232924.15 | 21232924.35 | 0.0519 | 0.0304 |
| Saturn | 53426-07-31 11:17 G | 21234716.73 | 21234716.97 | 21234717.20 | 0.0263 | 0.0060 |
| Jupiter | 53427-02-27 06:00 G | 21234927.52 | 21234927.75 | 21234927.98 | 0.0509 | 0.0143 |
| Neptune | 53427-08-19 14:53 G | 21235101.04 | 21235101.12 | 21235101.23 | 0.0089 | 0.0082 |
| Neptune | 53428-08-21 07:41 G | 21235468.62 | 21235468.82 | 21235469.06 | 0.0089 | 0.0047 |
| Neptune | 53429-08-23 14:53 G | 21235835.88 | 21235836.12 | 21235836.37 | 0.0089 | 0.0022 |
| Neptune | 53430-08-26 03:50 G | 21236203.40 | 21236203.66 | 21236203.93 | 0.0089 | 0.0013 |
| Neptune | 53431-08-28 15:50 G | 21236570.95 | 21236571.16 | 21236571.40 | 0.0089 | 0.0037 |
| Neptune | 53432-08-30 00:00 G | 21236938.37 | 21236938.50 | 21236938.68 | 0.0089 | 0.0071 |
| Uranus | 53435-09-21 09:36 G | 21238055.72 | 21238055.90 | 21238056.10 | 0.0134 | 0.0087 |
| Uranus | 53436-09-24 23:31 G | 21238425.24 | 21238425.48 | 21238425.73 | 0.0134 | 0.0025 |
| Uranus | 53437-09-28 22:48 G | 21238794.21 | 21238794.45 | 21238794.70 | 0.0134 | 0.0029 |

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| Uranus | 53438-10-03 11:46 G | 21239163.83 | 21239163.99 | 21239164.16 | 0.0134 | 0.0100 |
| Jupiter | 53439-03-04 05:02 G | 21239315.59 | 21239315.71 | 21239315.84 | 0.0507 | 0.0424 |
| Saturn | 53441-01-24 00:29 G | 21240007.28 | 21240007.52 | 21240007.76 | 0.0298 | 0.0078 |
| Pluto | 53450-06-27 13:26 G | 21243448.94 | 21243449.06 | 21243449.23 | 0.0078 | 0.0064 |
| Saturn | 53455-07-26 21:50 G | 21245304.21 | 21245304.41 | 21245304.62 | 0.0263 | 0.0152 |
| Jupiter | 53468-08-18 16:48 G | 21250076.10 | 21250076.20 | 21250076.30 | 0.0513 | 0.0462 |
| Uranus | 53478-03-19 08:38 G | 21253575.75 | 21253575.86 | 21253575.98 | 0.0144 | 0.0128 |
| Uranus | 53479-03-24 03:07 G | 21253945.41 | 21253945.63 | 21253945.87 | 0.0144 | 0.0065 |
| Mars | 53479-06-27 11:17 G | 21254040.78 | 21254040.97 | 21254041.16 | 0.1785 | 0.0738 |
| Uranus | 53480-03-28 11:46 G | 21254315.74 | 21254315.99 | 21254316.24 | 0.0144 | 0.0018 |
| Jupiter | 53480-08-23 12:00 G | 21254463.80 | 21254464.00 | 21254464.20 | 0.0515 | 0.0234 |
| Uranus | 53481-04-02 08:10 G | 21254685.67 | 21254685.84 | 21254686.05 | 0.0144 | 0.0099 |
| Saturn | 53485-08-01 20:10 G | 21256268.13 | 21256268.34 | 21256268.55 | 0.0263 | 0.0123 |
| Jupiter | 53486-02-17 02:53 G | 21256467.51 | 21256467.62 | 21256467.75 | 0.0514 | 0.0442 |
| Jupiter | 53492-08-28 00:14 G | 21258851.27 | 21258851.51 | 21258851.75 | 0.0517 | 0.0012 |
| Jupiter | 53498-02-21 13:55 G | 21260854.86 | 21260855.08 | 21260855.30 | 0.0511 | 0.0197 |
| Saturn | 53500-01-26 17:46 G | 21261559.00 | 21261559.24 | 21261559.48 | 0.0298 | 0.0014 |
| Jupiter | 53504-09-02 20:24 G | 21263239.16 | 21263239.35 | 21263239.54 | 0.0519 | 0.0269 |
| Neptune | 53509-02-17 09:36 G | 21264867.75 | 21264867.90 | 21264868.10 | 0.0088 | 0.0065 |
| Neptune | 53510-02-20 03:36 G | 21265235.44 | 21265235.65 | 21265235.90 | 0.0088 | 0.0044 |
| Jupiter | 53510-02-27 14:53 G | 21265242.89 | 21265243.12 | 21265243.34 | 0.0509 | 0.0102 |
| Neptune | 53511-02-22 12:14 G | 21265602.76 | 21265603.01 | 21265603.26 | 0.0088 | 0.0005 |
| Neptune | 53512-02-25 01:26 G | 21265970.30 | 21265970.56 | 21265970.83 | 0.0088 | 0.0016 |
| Neptune | 53513-02-26 13:55 G | 21266337.90 | 21266338.08 | 21266338.29 | 0.0088 | 0.0054 |
| Neptune | 53514-02-28 22:19 G | 21266705.30 | 21266705.43 | 21266705.59 | 0.0088 | 0.0074 |
| Saturn | 53514-07-29 00:29 G | 21266855.29 | 21266855.52 | 21266855.77 | 0.0263 | 0.0092 |
| Uranus | 53519-09-22 22:05 G | 21268737.24 | 21268737.42 | 21268737.62 | 0.0134 | 0.0085 |
| Uranus | 53520-09-26 11:46 G | 21269106.74 | 21269106.99 | 21269107.25 | 0.0134 | 0.0023 |
| Uranus | 53521-09-30 11:17 G | 21269475.74 | 21269475.97 | 21269476.21 | 0.0134 | 0.0043 |
| Jupiter | 53522-03-04 00:58 G | 21269630.38 | 21269630.54 | 21269630.71 | 0.0508 | 0.0374 |

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| Uranus | 53522-10-05 00:14 G | 21269845.34 | 21269845.51 | 21269845.71 | 0.0134 | 0.0092 |
| Saturn | 53544-08-04 05:31 G | 21277819.57 | 21277819.73 | 21277819.91 | 0.0263 | 0.0185 |
| Saturn | 53559-01-29 16:05 G | 21283110.96 | 21283111.17 | 21283111.40 | 0.0298 | 0.0112 |
| Uranus | 53562-03-20 21:36 G | 21284257.34 | 21284257.40 | 21284257.50 | 0.0144 | 0.0137 |
| Uranus | 53563-03-25 16:19 G | 21284626.95 | 21284627.18 | 21284627.44 | 0.0144 | 0.0048 |
| Jupiter | 53563-08-24 08:24 G | 21284778.66 | 21284778.85 | 21284779.06 | 0.0515 | 0.0283 |
| Uranus | 53564-03-30 01:26 G | 21284997.31 | 21284997.56 | 21284997.81 | 0.0144 | 0.0023 |
| Uranus | 53565-04-03 21:07 G | 21285367.20 | 21285367.38 | 21285367.58 | 0.0144 | 0.0099 |
| Jupiter | 53569-02-16 20:10 G | 21286782.29 | 21286782.34 | 21286782.41 | 0.0514 | 0.0494 |
| Saturn | 53573-07-30 05:31 G | 21288406.48 | 21288406.73 | 21288406.98 | 0.0263 | 0.0029 |
| Jupiter | 53575-08-29 05:02 G | 21289166.49 | 21289166.71 | 21289166.93 | 0.0516 | 0.0055 |
| Jupiter | 53581-02-21 19:55 G | 21291170.13 | 21291170.33 | 21291170.53 | 0.0512 | 0.0248 |
| Mars | 53583-12-27 05:02 G | 21292208.57 | 21292208.71 | 21292208.84 | 0.1743 | 0.1153 |
| Jupiter | 53587-09-03 00:43 G | 21293554.32 | 21293554.53 | 21293554.75 | 0.0518 | 0.0229 |
| Saturn | 53588-01-23 08:38 G | 21293696.69 | 21293696.86 | 21293697.05 | 0.0298 | 0.0204 |
| Neptune | 53592-08-21 10:48 G | 21295368.82 | 21295368.95 | 21295369.13 | 0.0089 | 0.0069 |
| Jupiter | 53593-02-26 07:55 G | 21295557.59 | 21295557.83 | 21295558.07 | 0.0510 | 0.0048 |
| Neptune | 53593-08-23 22:48 G | 21295736.21 | 21295736.45 | 21295736.70 | 0.0089 | 0.0033 |
| Neptune | 53594-08-26 12:14 G | 21296103.76 | 21296104.01 | 21296104.26 | 0.0089 | 0.0010 |
| Neptune | 53595-08-28 18:29 G | 21296471.03 | 21296471.27 | 21296471.53 | 0.0089 | 0.0025 |
| Neptune | 53596-08-30 11:46 G | 21296838.79 | 21296838.99 | 21296839.21 | 0.0089 | 0.0048 |
| Neptune | 53597-09-01 15:36 G | 21297206.11 | 21297206.15 | 21297206.26 | 0.0089 | 0.0085 |
| Saturn | 53602-07-26 01:26 G | 21298994.45 | 21298994.56 | 21298994.70 | 0.0263 | 0.0227 |
| Saturn | 53603-08-06 12:00 G | 21299370.94 | 21299371.00 | 21299371.09 | 0.0263 | 0.0251 |
| Uranus | 53603-09-23 12:00 G | 21299418.80 | 21299419.00 | 21299419.21 | 0.0134 | 0.0074 |
| Uranus | 53604-09-27 01:12 G | 21299788.30 | 21299788.55 | 21299788.81 | 0.0134 | 0.0015 |
| Jupiter | 53605-03-03 02:24 G | 21299945.43 | 21299945.60 | 21299945.78 | 0.0509 | 0.0324 |
| Uranus | 53605-10-01 00:43 G | 21300157.30 | 21300157.53 | 21300157.77 | 0.0134 | 0.0041 |
| Uranus | 53606-10-05 12:58 G | 21300526.91 | 21300527.04 | 21300527.20 | 0.0134 | 0.0110 |
| Pluto | 53608-12-25 12:43 G | 21301338.80 | 21301339.03 | 21301339.29 | 0.0066 | 0.0018 |

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| Saturn | 53618-01-31 15:50 G | 21304662.99 | 21304663.16 | 21304663.33 | 0.0298 | 0.0209 |
| Saturn | 53632-07-31 16:48 G | 21309957.96 | 21309958.20 | 21309958.43 | 0.0263 | 0.0038 |
| Uranus | 53646-03-21 08:10 G | 21314938.70 | 21314938.84 | 21314939.00 | 0.0144 | 0.0117 |
| Jupiter | 53646-08-23 13:26 G | 21315093.89 | 21315094.06 | 21315094.23 | 0.0514 | 0.0334 |
| Saturn | 53647-01-25 02:38 G | 21315248.39 | 21315248.61 | 21315248.85 | 0.0298 | 0.0108 |
| Uranus | 53647-03-26 02:38 G | 21315308.38 | 21315308.61 | 21315308.85 | 0.0144 | 0.0055 |
| Uranus | 53648-03-30 11:46 G | 21315678.75 | 21315678.99 | 21315679.25 | 0.0144 | 0.0031 |
| Uranus | 53649-04-04 07:26 G | 21316048.65 | 21316048.81 | 21316048.99 | 0.0144 | 0.0109 |
| Jupiter | 53658-08-28 05:02 G | 21319481.47 | 21319481.71 | 21319481.94 | 0.0515 | 0.0115 |
| Saturn | 53661-07-27 09:07 G | 21320545.69 | 21320545.88 | 21320546.09 | 0.0263 | 0.0161 |
| Jupiter | 53664-02-21 11:31 G | 21321484.79 | 21321484.98 | 21321485.18 | 0.0513 | 0.0306 |
| Jupiter | 53670-09-01 16:05 G | 21323868.96 | 21323869.17 | 21323869.39 | 0.0517 | 0.0169 |
| Neptune | 53673-02-16 20:10 G | 21324768.28 | 21324768.34 | 21324768.44 | 0.0088 | 0.0084 |
| Neptune | 53674-02-19 05:46 G | 21325135.57 | 21325135.74 | 21325135.95 | 0.0088 | 0.0056 |
| Neptune | 53675-02-21 18:00 G | 21325503.01 | 21325503.25 | 21325503.52 | 0.0088 | 0.0026 |
| Neptune | 53676-02-24 09:22 G | 21325870.64 | 21325870.89 | 21325871.14 | 0.0088 | 0.0003 |
| Jupiter | 53676-02-26 09:22 G | 21325872.66 | 21325872.89 | 21325873.11 | 0.0511 | 0.0005 |
| Neptune | 53677-02-25 16:48 G | 21326237.95 | 21326238.20 | 21326238.45 | 0.0088 | 0.0033 |
| Neptune | 53678-02-28 10:34 G | 21326605.78 | 21326605.94 | 21326606.14 | 0.0088 | 0.0063 |
| Jupiter | 53682-09-06 16:19 G | 21328257.09 | 21328257.18 | 21328257.27 | 0.0519 | 0.0477 |
| Uranus | 53686-09-20 01:12 G | 21329731.48 | 21329731.55 | 21329731.64 | 0.0135 | 0.0127 |
| Uranus | 53687-09-24 02:10 G | 21330100.39 | 21330100.59 | 21330100.80 | 0.0134 | 0.0074 |
| Jupiter | 53688-03-02 05:17 G | 21330260.52 | 21330260.72 | 21330260.93 | 0.0509 | 0.0275 |
| Uranus | 53688-09-27 14:38 G | 21330469.86 | 21330470.11 | 21330470.37 | 0.0134 | 0.0011 |
| Uranus | 53689-10-01 14:53 G | 21330838.89 | 21330839.12 | 21330839.35 | 0.0134 | 0.0053 |
| Uranus | 53690-10-06 03:07 G | 21331208.47 | 21331208.63 | 21331208.79 | 0.0134 | 0.0103 |
| Saturn | 53691-08-03 06:43 G | 21331509.57 | 21331509.78 | 21331510.01 | 0.0263 | 0.0105 |
| Pluto | 53695-06-28 17:17 G | 21332935.05 | 21332935.22 | 21332935.43 | 0.0078 | 0.0052 |
| Jupiter | 53700-03-07 15:07 G | 21334648.07 | 21334648.13 | 21334648.18 | 0.0507 | 0.0489 |
| Saturn | 53706-01-28 01:12 G | 21336800.32 | 21336800.55 | 21336800.79 | 0.0298 | 0.0009 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 53720-07-29 13:26 G | 21342096.83 | 21342097.06 | 21342097.30 | 0.0263 | 0.0097 |
| Jupiter | 53729-08-23 12:29 G | 21345408.87 | 21345409.02 | 21345409.18 | 0.0513 | 0.0394 |
| Uranus | 53730-03-22 18:43 G | 21345620.19 | 21345620.28 | 21345620.42 | 0.0144 | 0.0128 |
| Uranus | 53731-03-27 13:55 G | 21345989.84 | 21345990.08 | 21345990.33 | 0.0144 | 0.0038 |
| Uranus | 53732-03-31 23:17 G | 21346360.23 | 21346360.47 | 21346360.73 | 0.0144 | 0.0031 |
| Uranus | 53733-04-05 18:29 G | 21346730.11 | 21346730.27 | 21346730.44 | 0.0144 | 0.0109 |
| Jupiter | 53741-08-27 22:48 G | 21349796.24 | 21349796.45 | 21349796.67 | 0.0515 | 0.0173 |
| Jupiter | 53747-02-21 17:17 G | 21351800.06 | 21351800.22 | 21351800.39 | 0.0513 | 0.0346 |
| Saturn | 53750-08-05 16:19 G | 21353060.99 | 21353061.18 | 21353061.37 | 0.0263 | 0.0170 |
| Jupiter | 53753-09-02 00:14 G | 21354184.29 | 21354184.51 | 21354184.74 | 0.0517 | 0.0126 |
| Neptune | 53756-08-21 16:19 G | 21355269.13 | 21355269.18 | 21355269.24 | 0.0089 | 0.0086 |
| Neptune | 53757-08-24 06:43 G | 21355636.60 | 21355636.78 | 21355637.01 | 0.0089 | 0.0050 |
| Neptune | 53758-08-26 12:58 G | 21356003.80 | 21356004.04 | 21356004.29 | 0.0089 | 0.0028 |
| Jupiter | 53759-02-26 10:48 G | 21356187.71 | 21356187.95 | 21356188.20 | 0.0511 | 0.0042 |
| Neptune | 53759-08-29 06:58 G | 21356371.54 | 21356371.79 | 21356372.05 | 0.0089 | 0.0010 |
| Neptune | 53760-08-30 11:02 G | 21356738.74 | 21356738.96 | 21356739.21 | 0.0089 | 0.0032 |
| Neptune | 53761-09-02 04:34 G | 21357106.55 | 21357106.69 | 21357106.88 | 0.0089 | 0.0069 |
| Mars | 53763-06-29 04:34 G | 21357771.59 | 21357771.69 | 21357771.80 | 0.1794 | 0.1473 |
| Saturn | 53765-01-29 20:53 G | 21358352.15 | 21358352.37 | 21358352.61 | 0.0298 | 0.0084 |
| Jupiter | 53765-09-06 11:46 G | 21358571.86 | 21358571.99 | 21358572.11 | 0.0519 | 0.0431 |
| Uranus | 53770-09-21 15:07 G | 21360413.08 | 21360413.13 | 21360413.19 | 0.0135 | 0.0131 |
| Jupiter | 53771-03-02 23:17 G | 21360575.27 | 21360575.47 | 21360575.68 | 0.0509 | 0.0227 |
| Uranus | 53771-09-25 16:34 G | 21360781.99 | 21360782.19 | 21360782.42 | 0.0134 | 0.0063 |
| Uranus | 53772-09-29 04:48 G | 21361151.44 | 21361151.70 | 21361151.96 | 0.0134 | 0.0004 |
| Uranus | 53773-10-03 05:17 G | 21361520.50 | 21361520.72 | 21361520.96 | 0.0134 | 0.0053 |
| Uranus | 53774-10-07 16:34 G | 21361890.08 | 21361890.19 | 21361890.31 | 0.0134 | 0.0120 |
| Saturn | 53779-07-31 20:38 G | 21363648.12 | 21363648.36 | 21363648.60 | 0.0263 | 0.0035 |
| Jupiter | 53783-03-07 21:50 G | 21364963.30 | 21364963.41 | 21364963.53 | 0.0508 | 0.0440 |
| Mars | 53788-12-25 08:53 G | 21367082.78 | 21367082.87 | 21367082.95 | 0.1731 | 0.1557 |
| Saturn | 53794-01-23 15:50 G | 21368938.00 | 21368938.16 | 21368938.33 | 0.0298 | 0.0221 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 53808-07-27 12:29 G | 21374235.93 | 21374236.02 | 21374236.12 | 0.0263 | 0.0241 |
| Saturn | 53809-08-07 19:12 G | 21374612.20 | 21374612.30 | 21374612.42 | 0.0263 | 0.0235 |
| Jupiter | 53812-08-23 10:19 G | 21375723.82 | 21375723.93 | 21375724.04 | 0.0513 | 0.0450 |
| Uranus | 53814-03-24 03:50 G | 21376301.49 | 21376301.66 | 21376301.83 | 0.0144 | 0.0109 |
| Uranus | 53815-03-28 22:48 G | 21376671.22 | 21376671.45 | 21376671.69 | 0.0144 | 0.0048 |
| Uranus | 53816-04-02 07:26 G | 21377041.57 | 21377041.81 | 21377042.07 | 0.0144 | 0.0039 |
| Uranus | 53817-04-07 02:38 G | 21377411.47 | 21377411.61 | 21377411.78 | 0.0144 | 0.0115 |
| Saturn | 53824-02-02 08:53 G | 21379903.66 | 21379903.87 | 21379904.08 | 0.0298 | 0.0166 |
| Jupiter | 53824-08-28 11:02 G | 21380111.74 | 21380111.96 | 21380112.17 | 0.0515 | 0.0212 |
| Jupiter | 53830-02-21 17:46 G | 21382115.08 | 21382115.24 | 21382115.40 | 0.0513 | 0.0388 |
| Jupiter | 53836-09-01 20:10 G | 21384499.11 | 21384499.34 | 21384499.57 | 0.0516 | 0.0078 |
| Neptune | 53838-02-20 11:02 G | 21385035.81 | 21385035.96 | 21385036.16 | 0.0088 | 0.0068 |
| Saturn | 53838-08-03 05:46 G | 21385199.51 | 21385199.74 | 21385199.98 | 0.0263 | 0.0025 |
| Neptune | 53839-02-23 03:07 G | 21385403.43 | 21385403.63 | 21385403.86 | 0.0088 | 0.0047 |
| Neptune | 53840-02-25 09:22 G | 21385770.63 | 21385770.89 | 21385771.16 | 0.0088 | 0.0009 |
| Neptune | 53841-02-27 04:05 G | 21386138.42 | 21386138.67 | 21386138.93 | 0.0088 | 0.0013 |
| Jupiter | 53842-02-26 06:58 G | 21386502.57 | 21386502.79 | 21386503.02 | 0.0512 | 0.0088 |
| Neptune | 53842-03-01 08:38 G | 21386505.68 | 21386505.86 | 21386506.10 | 0.0088 | 0.0052 |
| Neptune | 53843-03-04 03:07 G | 21386873.51 | 21386873.63 | 21386873.82 | 0.0088 | 0.0072 |
| Jupiter | 53848-09-06 20:10 G | 21388887.19 | 21388887.34 | 21388887.49 | 0.0518 | 0.0384 |
| Saturn | 53853-01-26 02:38 G | 21390489.41 | 21390489.61 | 21390489.82 | 0.0298 | 0.0146 |
| Pluto | 53853-12-28 08:53 G | 21390825.80 | 21390825.87 | 21390826.00 | 0.0066 | 0.0061 |
| Jupiter | 53854-03-03 08:53 G | 21390890.64 | 21390890.87 | 21390891.09 | 0.0510 | 0.0186 |
| Uranus | 53854-09-23 03:36 G | 21391094.54 | 21391094.65 | 21391094.81 | 0.0135 | 0.0115 |
| Pluto | 53854-12-30 00:29 G | 21391192.34 | 21391192.52 | 21391192.75 | 0.0067 | 0.0040 |
| Uranus | 53855-09-27 06:43 G | 21391463.56 | 21391463.78 | 21391464.00 | 0.0134 | 0.0063 |
| Uranus | 53856-09-30 17:31 G | 21391832.97 | 21391833.23 | 21391833.49 | 0.0134 | 0.0003 |
| Uranus | 53857-10-04 18:58 G | 21392202.09 | 21392202.29 | 21392202.52 | 0.0134 | 0.0064 |
| Uranus | 53858-10-09 05:46 G | 21392571.62 | 21392571.74 | 21392571.88 | 0.0134 | 0.0115 |
| Jupiter | 53866-03-07 20:38 G | 21395278.23 | 21395278.36 | 21395278.51 | 0.0508 | 0.0409 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 53867-07-29 14:53 G | 21395786.95 | 21395787.12 | 21395787.31 | 0.0263 | 0.0184 |
| Mars | 53867-12-30 04:34 G | 21395940.61 | 21395940.69 | 21395940.77 | 0.1736 | 0.1569 |
| Saturn | 53883-02-03 12:00 G | 21401454.86 | 21401455.00 | 21401455.15 | 0.0299 | 0.0241 |
| Jupiter | 53895-08-23 23:46 G | 21406039.42 | 21406039.49 | 21406039.55 | 0.0512 | 0.0490 |
| Saturn | 53897-08-04 12:14 G | 21406750.78 | 21406751.01 | 21406751.24 | 0.0263 | 0.0078 |
| Uranus | 53898-03-24 15:07 G | 21406982.99 | 21406983.13 | 21406983.28 | 0.0144 | 0.0118 |
| Uranus | 53899-03-29 11:02 G | 21407352.72 | 21407352.96 | 21407353.22 | 0.0144 | 0.0029 |
| Uranus | 53900-04-03 19:55 G | 21407723.08 | 21407723.33 | 21407723.58 | 0.0144 | 0.0038 |
| Uranus | 53901-04-08 15:07 G | 21408093.00 | 21408093.13 | 21408093.29 | 0.0144 | 0.0119 |
| Jupiter | 53907-08-29 07:26 G | 21410426.62 | 21410426.81 | 21410427.02 | 0.0514 | 0.0255 |
| Saturn | 53912-01-29 12:29 G | 21412040.79 | 21412041.02 | 21412041.25 | 0.0298 | 0.0076 |
| Jupiter | 53913-02-21 18:43 G | 21412430.17 | 21412430.28 | 21412430.41 | 0.0514 | 0.0429 |
| Jupiter | 53919-09-03 04:19 G | 21414814.45 | 21414814.68 | 21414814.91 | 0.0516 | 0.0036 |
| Neptune | 53921-08-25 06:14 G | 21415536.64 | 21415536.76 | 21415536.94 | 0.0089 | 0.0072 |
| Neptune | 53922-08-28 00:43 G | 21415904.32 | 21415904.53 | 21415904.78 | 0.0089 | 0.0039 |
| Neptune | 53923-08-30 05:17 G | 21416271.48 | 21416271.72 | 21416271.98 | 0.0089 | 0.0013 |
| Neptune | 53924-08-31 22:19 G | 21416639.18 | 21416639.43 | 21416639.69 | 0.0089 | 0.0020 |
| Jupiter | 53925-02-26 22:48 G | 21416818.22 | 21416818.45 | 21416818.68 | 0.0512 | 0.0108 |
| Neptune | 53925-09-03 05:02 G | 21417006.51 | 21417006.71 | 21417006.94 | 0.0089 | 0.0046 |
| Saturn | 53926-07-31 13:55 G | 21417337.87 | 21417338.08 | 21417338.30 | 0.0263 | 0.0132 |
| Neptune | 53926-09-05 18:00 G | 21417374.13 | 21417374.25 | 21417374.38 | 0.0089 | 0.0078 |
| Jupiter | 53931-09-07 18:43 G | 21419202.11 | 21419202.28 | 21419202.46 | 0.0518 | 0.0343 |
| Jupiter | 53937-03-03 09:22 G | 21421205.66 | 21421205.89 | 21421206.11 | 0.0510 | 0.0153 |
| Uranus | 53938-09-24 16:19 G | 21421776.08 | 21421776.18 | 21421776.31 | 0.0135 | 0.0120 |
| Uranus | 53939-09-28 20:24 G | 21422145.13 | 21422145.35 | 21422145.58 | 0.0134 | 0.0049 |
| Uranus | 53940-10-02 06:43 G | 21422514.52 | 21422514.78 | 21422515.04 | 0.0134 | 0.0007 |
| Pluto | 53941-07-03 07:41 G | 21422788.59 | 21422788.82 | 21422789.08 | 0.0078 | 0.0019 |
| Uranus | 53941-10-06 09:07 G | 21422883.68 | 21422883.88 | 21422884.11 | 0.0134 | 0.0066 |
| Uranus | 53942-10-10 18:29 G | 21423253.24 | 21423253.27 | 21423253.35 | 0.0134 | 0.0131 |
| Jupiter | 53949-03-08 09:22 G | 21425593.73 | 21425593.89 | 21425594.04 | 0.0508 | 0.0369 |

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| Saturn | 53956-08-06 11:17 G | 21428301.75 | 21428301.97 | 21428302.19 | 0.0263 | 0.0129 |
| Saturn | 53971-01-30 14:53 G | 21433591.88 | 21433592.12 | 21433592.37 | 0.0298 | 0.0017 |
| Uranus | 53982-03-26 02:10 G | 21437664.40 | 21437664.59 | 21437664.79 | 0.0144 | 0.0098 |
| Uranus | 53983-03-30 22:48 G | 21438034.22 | 21438034.45 | 21438034.70 | 0.0144 | 0.0037 |
| Uranus | 53984-04-04 06:29 G | 21438404.53 | 21438404.77 | 21438405.02 | 0.0144 | 0.0051 |
| Uranus | 53985-04-09 02:10 G | 21438774.48 | 21438774.59 | 21438774.74 | 0.0144 | 0.0124 |
| Saturn | 53985-08-01 16:34 G | 21438888.97 | 21438889.19 | 21438889.42 | 0.0263 | 0.0081 |
| Jupiter | 53990-08-28 19:26 G | 21440742.12 | 21440742.31 | 21440742.50 | 0.0514 | 0.0291 |
| Jupiter | 53996-02-22 11:17 G | 21442745.86 | 21442745.97 | 21442746.08 | 0.0514 | 0.0450 |

55TH MILLENNIUM CE

This is a list of transits of Moon in the 55th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Neptune | 54002-02-20 20:38 G | | 21444936.31 | 21444936.36 | 21444936.43 | 0.0089 | 0.0086 | |
| Jupiter | 54002-09-02 09:50 G | | 21445129.67 | 21445129.91 | 21445130.15 | 0.0516 | 0.0019 | |
| Neptune | 54003-02-23 02:10 G | | 21445303.42 | 21445303.59 | 21445303.79 | 0.0088 | 0.0061 | |
| Neptune | 54004-02-25 21:36 G | | 21445671.15 | 21445671.40 | 21445671.65 | 0.0088 | 0.0027 | |
| Neptune | 54005-02-27 02:53 G | | 21446038.37 | 21446038.62 | 21446038.88 | 0.0088 | 0.0002 | |
| Neptune | 54006-03-01 20:24 G | | 21446406.12 | 21446406.35 | 21446406.62 | 0.0088 | 0.0032 | |
| Neptune | 54007-03-04 04:48 G | | 21446773.52 | 21446773.70 | 21446773.90 | 0.0088 | 0.0058 | |
| Jupiter | 54008-02-26 22:34 G | | 21447133.22 | 21447133.44 | 21447133.67 | 0.0512 | 0.0144 | |
| Jupiter | 54014-09-07 06:43 G | | 21449517.61 | 21449517.78 | 21449517.96 | 0.0518 | 0.0319 | |
| Saturn | 54015-08-08 05:02 G | | 21449852.54 | 21449852.71 | 21449852.90 | 0.0262 | 0.0180 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 54020-03-02 22:34 G | 21451521.22 | 21451521.44 | 21451521.66 | 0.0511 | 0.0113 |
| Uranus | 54022-09-25 04:34 G | 21452457.54 | 21452457.69 | 21452457.88 | 0.0135 | 0.0102 |
| Uranus | 54023-09-29 09:50 G | 21452826.69 | 21452826.91 | 21452827.14 | 0.0134 | 0.0052 |
| Uranus | 54024-10-02 18:58 G | 21453196.03 | 21453196.29 | 21453196.55 | 0.0134 | 0.0015 |
| Uranus | 54025-10-06 22:34 G | 21453565.25 | 21453565.44 | 21453565.66 | 0.0134 | 0.0075 |
| Uranus | 54026-10-11 07:26 G | 21453934.76 | 21453934.81 | 21453934.91 | 0.0134 | 0.0128 |
| Saturn | 54030-01-31 08:24 G | 21455142.60 | 21455142.85 | 21455143.11 | 0.0298 | 0.0043 |
| Jupiter | 54032-03-07 12:58 G | 21455908.87 | 21455909.04 | 21455909.23 | 0.0509 | 0.0337 |
| Saturn | 54044-08-02 20:10 G | 21460440.10 | 21460440.34 | 21460440.58 | 0.0263 | 0.0030 |
| Mars | 54047-07-01 19:12 G | 21461503.19 | 21461503.30 | 21461503.40 | 0.1802 | 0.1453 |
| Saturn | 54059-01-24 17:02 G | 21465728.18 | 21465728.21 | 21465728.26 | 0.0298 | 0.0294 |
| Uranus | 54066-03-26 16:05 G | 21468346.00 | 21468346.17 | 21468346.36 | 0.0144 | 0.0104 |
| Uranus | 54067-03-31 14:10 G | 21468715.85 | 21468716.09 | 21468716.34 | 0.0144 | 0.0015 |
| Uranus | 54068-04-04 21:22 G | 21469086.15 | 21469086.39 | 21469086.64 | 0.0144 | 0.0050 |
| Uranus | 54069-04-09 18:00 G | 21469456.17 | 21469456.25 | 21469456.36 | 0.0144 | 0.0133 |
| Mars | 54072-12-27 21:50 G | 21470814.28 | 21470814.41 | 21470814.54 | 0.1724 | 0.1176 |
| Saturn | 54073-07-28 14:38 G | 21471027.06 | 21471027.11 | 21471027.18 | 0.0263 | 0.0255 |
| Jupiter | 54073-08-28 01:55 G | 21471057.39 | 21471057.58 | 21471057.77 | 0.0514 | 0.0311 |
| Saturn | 54074-08-09 03:22 G | 21471403.54 | 21471403.64 | 21471403.76 | 0.0262 | 0.0230 |
| Jupiter | 54079-02-21 10:19 G | 21473060.87 | 21473060.93 | 21473061.01 | 0.0515 | 0.0488 |
| Jupiter | 54085-09-01 21:22 G | 21475445.16 | 21475445.39 | 21475445.61 | 0.0515 | 0.0005 |
| Neptune | 54086-08-26 23:02 G | 21475804.28 | 21475804.46 | 21475804.68 | 0.0089 | 0.0054 |
| Neptune | 54087-08-29 15:36 G | 21476171.90 | 21476172.15 | 21476172.39 | 0.0089 | 0.0033 |
| Neptune | 54088-08-31 00:29 G | 21476539.27 | 21476539.52 | 21476539.77 | 0.0089 | 0.0005 |
| Saturn | 54089-02-01 01:55 G | 21476693.35 | 21476693.58 | 21476693.81 | 0.0298 | 0.0100 |
| Neptune | 54089-09-02 11:31 G | 21476906.74 | 21476906.98 | 21476907.25 | 0.0089 | 0.0026 |
| Neptune | 54090-09-05 00:29 G | 21477274.38 | 21477274.52 | 21477274.72 | 0.0089 | 0.0065 |
| Jupiter | 54091-02-26 14:53 G | 21477448.90 | 21477449.12 | 21477449.34 | 0.0513 | 0.0168 |
| Neptune | 54091-09-07 07:12 G | 21477641.75 | 21477641.80 | 21477641.90 | 0.0089 | 0.0085 |
| Jupiter | 54097-09-06 11:46 G | 21479832.78 | 21479832.99 | 21479833.19 | 0.0517 | 0.0274 |

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| Pluto | 54099-12-31 14:24 G | 21480678.89 | 21480679.10 | 21480679.32 | 0.0066 | 0.0035 |
| Jupiter | 54103-03-04 07:26 G | 21481836.57 | 21481836.81 | 21481837.05 | 0.0511 | 0.0087 |
| Saturn | 54103-08-05 17:17 G | 21481990.97 | 21481991.22 | 21481991.47 | 0.0263 | 0.0019 |
| Uranus | 54106-09-26 18:14 G | 21483139.12 | 21483139.26 | 21483139.43 | 0.0135 | 0.0108 |
| Uranus | 54107-10-01 00:43 G | 21483508.31 | 21483508.53 | 21483508.78 | 0.0134 | 0.0037 |
| Uranus | 54108-10-04 08:53 G | 21483877.61 | 21483877.87 | 21483878.13 | 0.0134 | 0.0018 |
| Jupiter | 54109-09-12 03:36 G | 21484220.64 | 21484220.65 | 21484220.67 | 0.0519 | 0.0518 |
| Uranus | 54109-10-08 13:55 G | 21484246.89 | 21484247.08 | 21484247.29 | 0.0134 | 0.0079 |
| Jupiter | 54115-03-09 03:22 G | 21486224.47 | 21486224.64 | 21486224.82 | 0.0509 | 0.0314 |
| Saturn | 54118-01-26 15:50 G | 21487279.03 | 21487279.16 | 21487279.33 | 0.0298 | 0.0235 |
| Saturn | 54132-07-30 11:46 G | 21492577.85 | 21492577.99 | 21492578.14 | 0.0263 | 0.0210 |
| Saturn | 54148-02-04 01:55 G | 21498244.38 | 21498244.58 | 21498244.78 | 0.0298 | 0.0155 |
| Uranus | 54150-03-28 04:19 G | 21499027.48 | 21499027.68 | 21499027.90 | 0.0144 | 0.0085 |
| Uranus | 54151-04-02 03:22 G | 21499397.40 | 21499397.64 | 21499397.89 | 0.0144 | 0.0024 |
| Mars | 54152-01-01 08:38 G | 21499671.77 | 21499671.86 | 21499671.95 | 0.1728 | 0.1527 |
| Uranus | 54152-04-06 09:22 G | 21499767.66 | 21499767.89 | 21499768.13 | 0.0144 | 0.0065 |
| Uranus | 54153-04-11 06:29 G | 21500137.71 | 21500137.77 | 21500137.87 | 0.0144 | 0.0136 |
| Jupiter | 54156-08-28 08:24 G | 21501372.69 | 21501372.85 | 21501373.02 | 0.0513 | 0.0352 |
| Jupiter | 54162-02-22 06:58 G | 21503376.74 | 21503376.79 | 21503376.84 | 0.0515 | 0.0500 |
| Saturn | 54162-08-06 09:50 G | 21503541.67 | 21503541.91 | 21503542.16 | 0.0263 | 0.0069 |
| Neptune | 54167-02-23 13:41 G | 21505203.94 | 21505204.07 | 21505204.25 | 0.0089 | 0.0072 |
| Neptune | 54168-02-25 19:41 G | 21505571.12 | 21505571.32 | 21505571.54 | 0.0089 | 0.0050 |
| Jupiter | 54168-09-02 03:22 G | 21505760.40 | 21505760.64 | 21505760.88 | 0.0515 | 0.0039 |
| Neptune | 54169-02-27 12:00 G | 21505938.74 | 21505939.00 | 21505939.27 | 0.0088 | 0.0013 |
| Neptune | 54170-03-01 21:36 G | 21506306.16 | 21506306.40 | 21506306.66 | 0.0088 | 0.0010 |
| Neptune | 54171-03-04 09:07 G | 21506673.67 | 21506673.88 | 21506674.13 | 0.0088 | 0.0046 |
| Neptune | 54172-03-06 00:14 G | 21507041.36 | 21507041.51 | 21507041.67 | 0.0088 | 0.0069 |
| Jupiter | 54174-02-26 21:22 G | 21507764.17 | 21507764.39 | 21507764.62 | 0.0513 | 0.0192 |
| Saturn | 54177-01-27 10:34 G | 21508829.74 | 21508829.94 | 21508830.15 | 0.0298 | 0.0176 |
| Jupiter | 54180-09-06 19:41 G | 21510148.12 | 21510148.32 | 21510148.51 | 0.0517 | 0.0249 |

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| Jupiter | 54186-03-03 18:43 G | 21512152.06 | 21512152.28 | 21512152.51 | 0.0511 | 0.0052 |
| Pluto | 54187-07-06 19:26 G | 21512642.07 | 21512642.31 | 21512642.57 | 0.0078 | 0.0025 |
| Uranus | 54190-09-27 08:10 G | 21513820.66 | 21513820.84 | 21513821.05 | 0.0135 | 0.0089 |
| Saturn | 54191-08-01 13:12 G | 21514128.86 | 21514129.05 | 21514129.24 | 0.0263 | 0.0161 |
| Uranus | 54191-10-01 15:36 G | 21514189.92 | 21514190.15 | 21514190.39 | 0.0134 | 0.0040 |
| Jupiter | 54192-09-11 21:50 G | 21514536.34 | 21514536.41 | 21514536.50 | 0.0519 | 0.0486 |
| Uranus | 54192-10-04 22:19 G | 21514559.18 | 21514559.43 | 21514559.69 | 0.0134 | 0.0029 |
| Uranus | 54193-10-09 04:34 G | 21514928.52 | 21514928.69 | 21514928.89 | 0.0134 | 0.0086 |
| Jupiter | 54198-03-08 12:00 G | 21516539.80 | 21516540.00 | 21516540.21 | 0.0509 | 0.0281 |
| Saturn | 54207-02-06 04:34 G | 21519795.52 | 21519795.69 | 21519795.86 | 0.0298 | 0.0215 |
| Saturn | 54221-08-08 06:29 G | 21525092.56 | 21525092.77 | 21525092.99 | 0.0263 | 0.0119 |
| Uranus | 54234-03-29 17:17 G | 21529709.02 | 21529709.22 | 21529709.43 | 0.0144 | 0.0091 |
| Uranus | 54235-04-03 17:46 G | 21530078.99 | 21530079.24 | 21530079.49 | 0.0144 | 0.0003 |
| Saturn | 54236-01-30 09:07 G | 21530380.66 | 21530380.88 | 21530381.11 | 0.0297 | 0.0112 |
| Uranus | 54236-04-07 22:34 G | 21530449.22 | 21530449.44 | 21530449.70 | 0.0144 | 0.0061 |
| Jupiter | 54239-08-29 19:55 G | 21531688.17 | 21531688.33 | 21531688.50 | 0.0513 | 0.0374 |
| Saturn | 54250-08-03 13:41 G | 21535679.86 | 21535680.07 | 21535680.31 | 0.0263 | 0.0112 |
| Neptune | 54250-08-28 07:41 G | 21535704.71 | 21535704.82 | 21535704.99 | 0.0089 | 0.0076 |
| Neptune | 54251-08-30 18:00 G | 21536072.06 | 21536072.25 | 21536072.48 | 0.0089 | 0.0047 |
| Jupiter | 54251-09-03 10:48 G | 21536075.73 | 21536075.95 | 21536076.18 | 0.0515 | 0.0063 |
| Neptune | 54252-09-01 03:50 G | 21536439.40 | 21536439.66 | 21536439.93 | 0.0089 | 0.0016 |
| Neptune | 54253-09-03 18:43 G | 21536807.05 | 21536807.28 | 21536807.54 | 0.0089 | 0.0014 |
| Neptune | 54254-09-06 00:29 G | 21537174.31 | 21537174.52 | 21537174.76 | 0.0089 | 0.0043 |
| Neptune | 54255-09-08 18:29 G | 21537542.14 | 21537542.27 | 21537542.44 | 0.0089 | 0.0072 |
| Jupiter | 54257-02-27 06:00 G | 21538079.55 | 21538079.75 | 21538079.95 | 0.0514 | 0.0229 |
| Jupiter | 54263-09-08 10:05 G | 21540463.71 | 21540463.92 | 21540464.14 | 0.0516 | 0.0213 |
| Saturn | 54266-02-07 04:19 G | 21541346.59 | 21541346.68 | 21541346.78 | 0.0298 | 0.0276 |
| Jupiter | 54269-03-04 02:24 G | 21542467.36 | 21542467.60 | 21542467.85 | 0.0512 | 0.0018 |
| Uranus | 54274-09-28 22:48 G | 21544502.28 | 21544502.45 | 21544502.65 | 0.0135 | 0.0096 |
| Jupiter | 54275-09-12 16:05 G | 21544851.05 | 21544851.17 | 21544851.31 | 0.0518 | 0.0430 |

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| Uranus | 54275-10-03 07:55 G | 21544871.59 | 21544871.83 | 21544872.07 | 0.0134 | 0.0023 |
| Uranus | 54276-10-06 13:26 G | 21545240.82 | 21545241.06 | 21545241.33 | 0.0134 | 0.0030 |
| Uranus | 54277-10-10 20:53 G | 21545610.21 | 21545610.37 | 21545610.56 | 0.0134 | 0.0092 |
| Saturn | 54280-08-09 09:36 G | 21546643.73 | 21546643.90 | 21546644.09 | 0.0263 | 0.0174 |
| Jupiter | 54281-03-08 18:43 G | 21546855.09 | 21546855.28 | 21546855.48 | 0.0510 | 0.0256 |
| Saturn | 54295-01-31 17:02 G | 21551931.97 | 21551932.21 | 21551932.44 | 0.0297 | 0.0044 |
| Saturn | 54309-08-05 10:48 G | 21557230.71 | 21557230.95 | 21557231.20 | 0.0263 | 0.0055 |
| Uranus | 54318-03-31 02:53 G | 21560390.41 | 21560390.62 | 21560390.86 | 0.0144 | 0.0076 |
| Uranus | 54319-04-05 04:34 G | 21560760.45 | 21560760.69 | 21560760.94 | 0.0144 | 0.0014 |
| Uranus | 54320-04-09 07:41 G | 21561130.61 | 21561130.82 | 21561131.06 | 0.0144 | 0.0076 |
| Uranus | 54321-04-14 07:26 G | 21561500.81 | 21561500.81 | 21561500.82 | 0.0144 | 0.0144 |
| Jupiter | 54322-08-30 00:00 G | 21562003.38 | 21562003.50 | 21562003.64 | 0.0512 | 0.0411 |
| Neptune | 54332-02-27 04:19 G | 21565471.51 | 21565471.68 | 21565471.86 | 0.0089 | 0.0066 |
| Neptune | 54333-02-28 15:50 G | 21565838.93 | 21565839.16 | 21565839.40 | 0.0089 | 0.0030 |
| Neptune | 54334-03-03 01:55 G | 21566206.31 | 21566206.58 | 21566206.85 | 0.0088 | 0.0007 |
| Jupiter | 54334-09-03 18:00 G | 21566391.03 | 21566391.25 | 21566391.49 | 0.0513 | 0.0112 |
| Neptune | 54335-03-05 17:31 G | 21566574.00 | 21566574.23 | 21566574.48 | 0.0088 | 0.0029 |
| Neptune | 54336-03-06 23:31 G | 21566941.28 | 21566941.48 | 21566941.71 | 0.0088 | 0.0052 |
| Neptune | 54337-03-09 18:14 G | 21567309.25 | 21567309.26 | 21567309.31 | 0.0088 | 0.0088 |
| Saturn | 54338-07-31 20:38 G | 21567818.36 | 21567818.36 | 21567818.37 | 0.0264 | 0.0264 |
| Saturn | 54339-08-12 14:38 G | 21568195.01 | 21568195.11 | 21568195.24 | 0.0264 | 0.0231 |
| Jupiter | 54340-02-28 13:12 G | 21568394.84 | 21568395.05 | 21568395.26 | 0.0515 | 0.0266 |
| Pluto | 54346-01-05 01:55 G | 21570532.34 | 21570532.58 | 21570532.84 | 0.0066 | 0.0014 |
| Jupiter | 54346-09-08 03:50 G | 21570778.44 | 21570778.66 | 21570778.89 | 0.0516 | 0.0156 |
| Jupiter | 54352-03-04 05:31 G | 21572782.51 | 21572782.73 | 21572782.96 | 0.0512 | 0.0029 |
| Saturn | 54354-02-03 06:14 G | 21573483.53 | 21573483.76 | 21573484.00 | 0.0297 | 0.0037 |
| Mars | 54357-01-01 04:19 G | 21574546.50 | 21574546.68 | 21574546.86 | 0.1718 | 0.0319 |
| Jupiter | 54358-09-13 05:31 G | 21575166.59 | 21575166.73 | 21575166.88 | 0.0518 | 0.0390 |
| Uranus | 54358-09-30 12:43 G | 21575183.82 | 21575184.03 | 21575184.25 | 0.0135 | 0.0076 |
| Uranus | 54359-10-04 22:34 G | 21575553.20 | 21575553.44 | 21575553.68 | 0.0134 | 0.0028 |

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| Uranus | 54360-10-08 03:07 G | 21575922.38 | 21575922.63 | 21575922.88 | 0.0134 | 0.0042 |
| Uranus | 54361-10-12 11:17 G | 21576291.82 | 21576291.97 | 21576292.16 | 0.0134 | 0.0098 |
| Jupiter | 54364-03-09 06:00 G | 21577170.54 | 21577170.75 | 21577170.97 | 0.0510 | 0.0217 |
| Saturn | 54368-08-06 10:05 G | 21578781.68 | 21578781.92 | 21578782.17 | 0.0264 | 0.0008 |
| Saturn | 54383-01-27 19:26 G | 21584069.23 | 21584069.31 | 21584069.41 | 0.0297 | 0.0276 |
| Saturn | 54397-08-02 04:05 G | 21589369.52 | 21589369.67 | 21589369.83 | 0.0264 | 0.0202 |
| Uranus | 54402-03-31 14:10 G | 21591071.88 | 21591072.09 | 21591072.32 | 0.0144 | 0.0081 |
| Uranus | 54403-04-05 17:17 G | 21591441.98 | 21591442.22 | 21591442.47 | 0.0144 | 0.0007 |
| Uranus | 54404-04-09 19:26 G | 21591812.09 | 21591812.31 | 21591812.55 | 0.0144 | 0.0068 |
| Jupiter | 54405-08-29 06:14 G | 21592318.66 | 21592318.76 | 21592318.86 | 0.0511 | 0.0458 |
| Saturn | 54413-02-04 21:07 G | 21595035.16 | 21595035.38 | 21595035.62 | 0.0297 | 0.0125 |
| Neptune | 54415-08-30 20:53 G | 21595972.20 | 21595972.37 | 21595972.59 | 0.0089 | 0.0059 |
| Neptune | 54416-09-01 13:41 G | 21596339.85 | 21596340.07 | 21596340.30 | 0.0089 | 0.0038 |
| Jupiter | 54417-09-02 15:36 G | 21596705.92 | 21596706.15 | 21596706.37 | 0.0513 | 0.0154 |
| Neptune | 54417-09-03 18:29 G | 21596707.02 | 21596707.27 | 21596707.53 | 0.0089 | 0.0001 |
| Neptune | 54418-09-06 12:43 G | 21597074.79 | 21597075.03 | 21597075.29 | 0.0089 | 0.0021 |
| Neptune | 54419-09-08 17:02 G | 21597442.05 | 21597442.21 | 21597442.42 | 0.0089 | 0.0060 |
| Neptune | 54420-09-10 09:50 G | 21597809.81 | 21597809.91 | 21597810.03 | 0.0089 | 0.0080 |
| Jupiter | 54423-02-27 13:26 G | 21598709.89 | 21598710.06 | 21598710.25 | 0.0515 | 0.0316 |
| Saturn | 54427-08-08 18:00 G | 21600333.03 | 21600333.25 | 21600333.49 | 0.0264 | 0.0071 |
| Jupiter | 54429-09-07 16:19 G | 21601093.96 | 21601094.18 | 21601094.40 | 0.0515 | 0.0110 |
| Pluto | 54433-07-09 22:34 G | 21602495.28 | 21602495.44 | 21602495.65 | 0.0078 | 0.0056 |
| Jupiter | 54435-03-04 12:00 G | 21603097.76 | 21603098.00 | 21603098.23 | 0.0513 | 0.0084 |
| Jupiter | 54441-09-12 04:19 G | 21605481.51 | 21605481.68 | 21605481.87 | 0.0517 | 0.0343 |
| Uranus | 54441-09-26 21:36 G | 21605496.36 | 21605496.40 | 21605496.47 | 0.0135 | 0.0131 |
| Saturn | 54442-01-29 10:34 G | 21605620.77 | 21605620.94 | 21605621.14 | 0.0297 | 0.0190 |
| Uranus | 54442-10-01 01:41 G | 21605865.39 | 21605865.57 | 21605865.80 | 0.0135 | 0.0084 |
| Uranus | 54443-10-05 13:12 G | 21606234.81 | 21606235.05 | 21606235.30 | 0.0135 | 0.0011 |
| Uranus | 54444-10-08 16:34 G | 21606603.95 | 21606604.19 | 21606604.45 | 0.0134 | 0.0041 |
| Uranus | 54445-10-13 02:10 G | 21606973.46 | 21606973.59 | 21606973.76 | 0.0134 | 0.0105 |

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| Jupiter | 54447-03-08 23:02 G | 21607485.23 | 21607485.46 | 21607485.68 | 0.0511 | 0.0167 |
| Saturn | 54456-08-03 08:53 G | 21610920.66 | 21610920.87 | 21610921.09 | 0.0264 | 0.0139 |
| Jupiter | 54459-03-13 23:17 G | 21611873.40 | 21611873.47 | 21611873.56 | 0.0510 | 0.0473 |
| Saturn | 54472-02-07 10:19 G | 21616586.77 | 21616586.93 | 21616587.11 | 0.0297 | 0.0217 |
| Uranus | 54486-04-01 01:12 G | 21621753.32 | 21621753.55 | 21621753.79 | 0.0143 | 0.0066 |
| Saturn | 54486-08-10 06:00 G | 21621884.55 | 21621884.75 | 21621884.96 | 0.0264 | 0.0138 |
| Uranus | 54487-04-06 05:02 G | 21622123.46 | 21622123.71 | 21622123.96 | 0.0144 | 0.0003 |
| Uranus | 54488-04-10 05:02 G | 21622493.51 | 21622493.71 | 21622493.94 | 0.0144 | 0.0086 |
| Jupiter | 54488-08-28 02:53 G | 21622633.58 | 21622633.62 | 21622633.66 | 0.0511 | 0.0501 |
| Neptune | 54496-02-26 07:55 G | 21625371.73 | 21625371.83 | 21625371.96 | 0.0089 | 0.0078 |
| Neptune | 54497-02-27 16:34 G | 21625738.99 | 21625739.19 | 21625739.42 | 0.0089 | 0.0052 |
| Neptune | 54498-03-02 10:19 G | 21626106.69 | 21626106.93 | 21626107.19 | 0.0089 | 0.0019 |
| Neptune | 54499-03-04 15:50 G | 21626473.91 | 21626474.16 | 21626474.43 | 0.0088 | 0.0007 |
| Neptune | 54500-03-07 10:48 G | 21626841.74 | 21626841.95 | 21626842.20 | 0.0088 | 0.0041 |
| Jupiter | 54500-09-03 01:41 G | 21627021.36 | 21627021.57 | 21627021.79 | 0.0513 | 0.0193 |
| Saturn | 54501-02-01 09:22 G | 21627172.67 | 21627172.89 | 21627173.12 | 0.0297 | 0.0096 |
| Neptune | 54501-03-09 16:19 G | 21627209.02 | 21627209.18 | 21627209.36 | 0.0088 | 0.0066 |
| Jupiter | 54506-02-27 16:34 G | 21629025.03 | 21629025.19 | 21629025.35 | 0.0515 | 0.0374 |
| Jupiter | 54512-09-07 09:50 G | 21631408.67 | 21631408.91 | 21631409.14 | 0.0514 | 0.0051 |
| Saturn | 54515-08-06 12:43 G | 21632471.79 | 21632472.03 | 21632472.27 | 0.0264 | 0.0071 |
| Jupiter | 54518-03-04 03:36 G | 21633412.43 | 21633412.65 | 21633412.88 | 0.0514 | 0.0147 |
| Jupiter | 54524-09-12 04:48 G | 21635796.51 | 21635796.70 | 21635796.89 | 0.0516 | 0.0284 |
| Uranus | 54526-10-02 13:55 G | 21636546.85 | 21636547.08 | 21636547.31 | 0.0135 | 0.0064 |
| Uranus | 54527-10-07 01:55 G | 21636916.33 | 21636916.58 | 21636916.82 | 0.0135 | 0.0017 |
| Uranus | 54528-10-10 04:05 G | 21637285.45 | 21637285.67 | 21637285.92 | 0.0134 | 0.0055 |
| Uranus | 54529-10-14 14:53 G | 21637654.99 | 21637655.12 | 21637655.28 | 0.0134 | 0.0108 |
| Jupiter | 54530-03-09 06:00 G | 21637800.53 | 21637800.75 | 21637800.97 | 0.0512 | 0.0115 |
| Jupiter | 54542-03-13 18:43 G | 21642188.14 | 21642188.28 | 21642188.42 | 0.0510 | 0.0420 |
| Saturn | 54545-08-12 15:22 G | 21643435.99 | 21643436.14 | 21643436.30 | 0.0264 | 0.0204 |
| Saturn | 54560-02-04 06:00 G | 21648724.51 | 21648724.75 | 21648725.00 | 0.0297 | 0.0004 |

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| Uranus | 54569-03-28 18:14 G | 21652065.20 | 21652065.26 | 21652065.35 | 0.0143 | 0.0136 |
| Uranus | 54570-04-02 14:10 G | 21652434.87 | 21652435.09 | 21652435.33 | 0.0143 | 0.0067 |
| Uranus | 54571-04-07 19:26 G | 21652805.06 | 21652805.31 | 21652805.56 | 0.0144 | 0.0018 |
| Uranus | 54572-04-11 18:29 G | 21653175.06 | 21653175.27 | 21653175.50 | 0.0144 | 0.0079 |
| Saturn | 54574-08-07 20:38 G | 21654023.11 | 21654023.36 | 21654023.60 | 0.0264 | 0.0007 |
| Neptune | 54579-08-31 07:55 G | 21655872.74 | 21655872.83 | 21655872.98 | 0.0089 | 0.0079 |
| Neptune | 54580-09-01 12:43 G | 21656239.83 | 21656240.03 | 21656240.24 | 0.0089 | 0.0053 |
| Neptune | 54581-09-04 06:58 G | 21656607.54 | 21656607.79 | 21656608.04 | 0.0089 | 0.0019 |
| Neptune | 54582-09-06 12:00 G | 21656974.75 | 21656975.00 | 21656975.26 | 0.0089 | 0.0008 |
| Jupiter | 54583-09-02 18:14 G | 21657336.05 | 21657336.26 | 21657336.46 | 0.0512 | 0.0251 |
| Neptune | 54583-09-09 03:50 G | 21657342.43 | 21657342.66 | 21657342.90 | 0.0089 | 0.0040 |
| Neptune | 54584-09-10 12:29 G | 21657709.88 | 21657710.02 | 21657710.21 | 0.0089 | 0.0067 |
| Saturn | 54589-01-28 05:17 G | 21659310.69 | 21659310.72 | 21659310.76 | 0.0296 | 0.0292 |
| Jupiter | 54589-02-26 07:41 G | 21659339.71 | 21659339.82 | 21659339.95 | 0.0516 | 0.0438 |
| Pluto | 54592-01-08 13:12 G | 21660385.81 | 21660386.05 | 21660386.32 | 0.0066 | 0.0018 |
| Jupiter | 54595-09-07 12:29 G | 21661723.79 | 21661724.02 | 21661724.24 | 0.0514 | 0.0009 |
| Jupiter | 54601-03-04 12:00 G | 21663727.79 | 21663728.00 | 21663728.22 | 0.0514 | 0.0200 |
| Saturn | 54603-08-04 10:34 G | 21664610.83 | 21664610.94 | 21664611.08 | 0.0264 | 0.0227 |
| Jupiter | 54607-09-13 05:31 G | 21666111.52 | 21666111.73 | 21666111.94 | 0.0516 | 0.0232 |
| Uranus | 54609-09-29 23:46 G | 21666859.39 | 21666859.49 | 21666859.62 | 0.0135 | 0.0120 |
| Uranus | 54610-10-04 02:10 G | 21667228.39 | 21667228.59 | 21667228.82 | 0.0135 | 0.0073 |
| Uranus | 54611-10-08 15:36 G | 21667597.90 | 21667598.15 | 21667598.40 | 0.0135 | 0.0002 |
| Uranus | 54612-10-11 17:02 G | 21667966.98 | 21667967.21 | 21667967.46 | 0.0134 | 0.0050 |
| Jupiter | 54613-03-08 22:48 G | 21668115.21 | 21668115.45 | 21668115.69 | 0.0512 | 0.0061 |
| Uranus | 54613-10-16 05:02 G | 21668336.59 | 21668336.71 | 21668336.83 | 0.0134 | 0.0117 |
| Saturn | 54619-02-06 22:19 G | 21670276.19 | 21670276.43 | 21670276.67 | 0.0297 | 0.0093 |
| Jupiter | 54625-03-13 19:55 G | 21672503.18 | 21672503.33 | 21672503.48 | 0.0510 | 0.0371 |
| Saturn | 54633-08-10 08:53 G | 21675574.64 | 21675574.87 | 21675575.11 | 0.0264 | 0.0062 |
| Mars | 54641-01-03 18:14 G | 21678278.06 | 21678278.26 | 21678278.46 | 0.1711 | 0.0068 |
| Saturn | 54648-02-01 01:26 G | 21680862.39 | 21680862.56 | 21680862.74 | 0.0296 | 0.0202 |

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| Uranus | 54653-03-30 08:24 G | 21682746.76 | 21682746.85 | 21682746.97 | 0.0143 | 0.0129 |
| Uranus | 54654-04-04 02:53 G | 21683116.39 | 21683116.62 | 21683116.88 | 0.0143 | 0.0054 |
| Uranus | 54655-04-09 08:53 G | 21683486.62 | 21683486.87 | 21683487.12 | 0.0144 | 0.0010 |
| Uranus | 54656-04-13 06:14 G | 21683856.59 | 21683856.76 | 21683856.97 | 0.0144 | 0.0100 |
| Neptune | 54661-03-01 03:36 G | 21685639.50 | 21685639.65 | 21685639.80 | 0.0089 | 0.0072 |
| Neptune | 54662-03-03 08:10 G | 21686006.62 | 21686006.84 | 21686007.10 | 0.0089 | 0.0034 |
| Saturn | 54662-08-05 16:48 G | 21686162.00 | 21686162.20 | 21686162.41 | 0.0264 | 0.0155 |
| Neptune | 54663-03-06 03:50 G | 21686374.40 | 21686374.66 | 21686374.92 | 0.0089 | 0.0012 |
| Neptune | 54664-03-07 09:36 G | 21686741.67 | 21686741.90 | 21686742.15 | 0.0089 | 0.0027 |
| Neptune | 54665-03-10 01:26 G | 21687109.35 | 21687109.56 | 21687109.81 | 0.0088 | 0.0048 |
| Neptune | 54666-03-12 10:48 G | 21687476.92 | 21687476.95 | 21687477.05 | 0.0088 | 0.0086 |
| Jupiter | 54666-09-02 22:48 G | 21687651.28 | 21687651.45 | 21687651.64 | 0.0512 | 0.0303 |
| Jupiter | 54672-02-27 15:36 G | 21689655.09 | 21689655.15 | 21689655.23 | 0.0516 | 0.0491 |
| Saturn | 54678-02-08 11:02 G | 21691827.77 | 21691827.96 | 21691828.16 | 0.0297 | 0.0184 |
| Pluto | 54678-07-12 14:10 G | 21691981.93 | 21691982.09 | 21691982.31 | 0.0078 | 0.0055 |
| Jupiter | 54678-09-07 14:38 G | 21692038.87 | 21692039.11 | 21692039.35 | 0.0514 | 0.0054 |
| Jupiter | 54684-03-03 03:22 G | 21694042.44 | 21694042.64 | 21694042.85 | 0.0515 | 0.0255 |
| Jupiter | 54690-09-12 04:19 G | 21696426.47 | 21696426.68 | 21696426.89 | 0.0515 | 0.0180 |
| Saturn | 54692-08-11 20:24 G | 21697126.15 | 21697126.35 | 21697126.57 | 0.0264 | 0.0129 |
| Uranus | 54693-09-30 12:29 G | 21697540.96 | 21697541.02 | 21697541.13 | 0.0135 | 0.0127 |
| Mars | 54694-07-08 23:02 G | 21697822.32 | 21697822.46 | 21697822.60 | 0.1815 | 0.1325 |
| Uranus | 54694-10-04 14:38 G | 21697909.88 | 21697910.11 | 21697910.34 | 0.0135 | 0.0053 |
| Uranus | 54695-10-09 04:05 G | 21698279.42 | 21698279.67 | 21698279.91 | 0.0135 | 0.0007 |
| Jupiter | 54696-03-08 01:12 G | 21698430.32 | 21698430.55 | 21698430.78 | 0.0513 | 0.0008 |
| Uranus | 54696-10-12 04:48 G | 21698648.49 | 21698648.70 | 21698648.93 | 0.0135 | 0.0066 |
| Uranus | 54697-10-16 17:17 G | 21699018.11 | 21699018.22 | 21699018.35 | 0.0134 | 0.0117 |
| Jupiter | 54702-09-18 02:10 G | 21700814.50 | 21700814.59 | 21700814.67 | 0.0517 | 0.0478 |
| Saturn | 54707-02-03 20:38 G | 21702414.15 | 21702414.36 | 21702414.59 | 0.0296 | 0.0113 |
| Jupiter | 54708-03-13 19:26 G | 21702818.13 | 21702818.31 | 21702818.50 | 0.0511 | 0.0327 |
| Saturn | 54721-08-07 21:50 G | 21707713.17 | 21707713.41 | 21707713.64 | 0.0264 | 0.0086 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 54737-02-10 22:48 G | 21713379.37 | 21713379.45 | 21713379.57 | 0.0297 | 0.0269 |
| Uranus | 54737-03-31 21:36 G | 21713428.29 | 21713428.40 | 21713428.54 | 0.0143 | 0.0124 |
| Uranus | 54738-04-05 16:05 G | 21713797.93 | 21713798.17 | 21713798.42 | 0.0143 | 0.0054 |
| Uranus | 54739-04-10 22:48 G | 21714168.21 | 21714168.45 | 21714168.70 | 0.0144 | 0.0030 |
| Uranus | 54740-04-14 19:41 G | 21714538.13 | 21714538.32 | 21714538.53 | 0.0144 | 0.0091 |
| Neptune | 54744-09-03 01:55 G | 21716140.41 | 21716140.58 | 21716140.78 | 0.0089 | 0.0063 |
| Neptune | 54745-09-05 08:10 G | 21716507.62 | 21716507.84 | 21716508.06 | 0.0089 | 0.0041 |
| Neptune | 54746-09-07 22:48 G | 21716875.18 | 21716875.45 | 21716875.71 | 0.0089 | 0.0004 |
| Neptune | 54747-09-10 08:24 G | 21717242.61 | 21717242.85 | 21717243.10 | 0.0089 | 0.0018 |
| Neptune | 54748-09-11 17:46 G | 21717610.04 | 21717610.24 | 21717610.46 | 0.0089 | 0.0055 |
| Jupiter | 54749-09-03 01:26 G | 21717966.39 | 21717966.56 | 21717966.74 | 0.0511 | 0.0345 |
| Neptune | 54749-09-14 08:53 G | 21717977.75 | 21717977.87 | 21717978.00 | 0.0089 | 0.0077 |
| Saturn | 54751-08-15 00:43 G | 21718677.37 | 21718677.53 | 21718677.71 | 0.0264 | 0.0191 |
| Jupiter | 54761-09-07 14:38 G | 21722353.89 | 21722354.11 | 21722354.33 | 0.0513 | 0.0111 |
| Saturn | 54766-02-05 07:55 G | 21723965.58 | 21723965.83 | 21723966.08 | 0.0297 | 0.0035 |
| Jupiter | 54767-03-04 09:22 G | 21724357.72 | 21724357.89 | 21724358.08 | 0.0515 | 0.0307 |
| Jupiter | 54773-09-12 08:38 G | 21726741.64 | 21726741.86 | 21726742.09 | 0.0515 | 0.0124 |
| Uranus | 54777-10-02 02:24 G | 21728222.47 | 21728222.60 | 21728222.76 | 0.0135 | 0.0110 |
| Uranus | 54778-10-06 03:36 G | 21728591.44 | 21728591.65 | 21728591.89 | 0.0135 | 0.0062 |
| Jupiter | 54779-03-09 06:00 G | 21728745.51 | 21728745.75 | 21728745.99 | 0.0513 | 0.0021 |
| Uranus | 54779-10-10 18:00 G | 21728961.00 | 21728961.25 | 21728961.50 | 0.0135 | 0.0013 |
| Saturn | 54780-08-09 06:14 G | 21729264.52 | 21729264.76 | 21729265.00 | 0.0264 | 0.0024 |
| Uranus | 54780-10-13 18:29 G | 21729330.05 | 21729330.27 | 21729330.51 | 0.0134 | 0.0060 |
| Uranus | 54781-10-18 07:41 G | 21729699.75 | 21729699.82 | 21729699.89 | 0.0134 | 0.0128 |
| Jupiter | 54785-09-16 20:10 G | 21731129.21 | 21731129.34 | 21731129.47 | 0.0517 | 0.0430 |
| Jupiter | 54791-03-13 21:07 G | 21733133.20 | 21733133.38 | 21733133.57 | 0.0511 | 0.0297 |
| Saturn | 54809-08-04 14:38 G | 21739852.04 | 21739852.11 | 21739852.20 | 0.0264 | 0.0250 |
| Saturn | 54810-08-16 00:29 G | 21740228.45 | 21740228.52 | 21740228.60 | 0.0264 | 0.0250 |
| Uranus | 54821-04-01 09:36 G | 21744109.77 | 21744109.90 | 21744110.06 | 0.0143 | 0.0118 |
| Uranus | 54822-04-06 03:22 G | 21744479.40 | 21744479.64 | 21744479.89 | 0.0143 | 0.0043 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 54823-04-11 10:19 G | 21744849.69 | 21744849.93 | 21744850.18 | 0.0144 | 0.0022 |
| Uranus | 54824-04-15 06:00 G | 21745219.60 | 21745219.75 | 21745219.93 | 0.0144 | 0.0111 |
| Saturn | 54825-02-06 09:36 G | 21745516.65 | 21745516.90 | 21745517.16 | 0.0297 | 0.0032 |
| Neptune | 54825-03-01 00:29 G | 21745539.46 | 21745539.52 | 21745539.62 | 0.0089 | 0.0084 |
| Neptune | 54826-03-03 19:26 G | 21745907.11 | 21745907.31 | 21745907.53 | 0.0089 | 0.0055 |
| Neptune | 54827-03-06 02:38 G | 21746274.38 | 21746274.61 | 21746274.87 | 0.0089 | 0.0024 |
| Neptune | 54828-03-07 18:29 G | 21746642.00 | 21746642.27 | 21746642.54 | 0.0089 | 0.0004 |
| Neptune | 54829-03-10 05:46 G | 21747009.52 | 21747009.74 | 21747009.98 | 0.0088 | 0.0036 |
| Neptune | 54830-03-12 15:50 G | 21747377.00 | 21747377.16 | 21747377.37 | 0.0088 | 0.0064 |
| Jupiter | 54832-09-02 00:14 G | 21748281.37 | 21748281.51 | 21748281.65 | 0.0511 | 0.0402 |
| Pluto | 54837-01-10 06:14 G | 21749872.61 | 21749872.76 | 21749872.94 | 0.0066 | 0.0050 |
| Pluto | 54838-01-11 15:07 G | 21750238.96 | 21750239.13 | 21750239.36 | 0.0066 | 0.0044 |
| Saturn | 54839-08-11 14:24 G | 21750815.86 | 21750816.10 | 21750816.34 | 0.0264 | 0.0036 |
| Jupiter | 54844-09-06 22:19 G | 21752669.21 | 21752669.43 | 21752669.65 | 0.0513 | 0.0165 |
| Jupiter | 54850-03-03 14:53 G | 21754672.94 | 21754673.12 | 21754673.30 | 0.0515 | 0.0344 |
| Jupiter | 54856-09-11 09:50 G | 21757056.68 | 21757056.91 | 21757057.14 | 0.0515 | 0.0089 |
| Uranus | 54861-10-02 15:07 G | 21758904.02 | 21758904.13 | 21758904.27 | 0.0135 | 0.0116 |
| Jupiter | 54862-03-08 07:55 G | 21759060.61 | 21759060.83 | 21759061.06 | 0.0514 | 0.0057 |
| Uranus | 54862-10-06 16:19 G | 21759272.94 | 21759273.18 | 21759273.42 | 0.0135 | 0.0043 |
| Uranus | 54863-10-11 06:29 G | 21759642.52 | 21759642.77 | 21759643.02 | 0.0135 | 0.0003 |
| Uranus | 54864-10-14 06:14 G | 21760011.57 | 21760011.76 | 21760011.98 | 0.0135 | 0.0077 |
| Uranus | 54865-10-18 19:41 G | 21760381.25 | 21760381.32 | 21760381.42 | 0.0134 | 0.0126 |
| Saturn | 54868-08-05 12:43 G | 21761402.87 | 21761403.03 | 21761403.21 | 0.0264 | 0.0192 |
| Jupiter | 54868-09-16 11:46 G | 21761444.85 | 21761444.99 | 21761445.13 | 0.0516 | 0.0403 |
| Jupiter | 54874-03-13 06:29 G | 21763448.57 | 21763448.77 | 21763448.98 | 0.0512 | 0.0260 |
| Saturn | 54884-02-08 10:19 G | 21767067.70 | 21767067.93 | 21767068.16 | 0.0297 | 0.0091 |
| Saturn | 54898-08-12 17:17 G | 21772366.99 | 21772367.22 | 21772367.46 | 0.0264 | 0.0090 |
| Uranus | 54905-04-02 19:55 G | 21774791.20 | 21774791.33 | 21774791.50 | 0.0143 | 0.0116 |
| Uranus | 54906-04-07 13:26 G | 21775160.82 | 21775161.06 | 21775161.31 | 0.0143 | 0.0044 |
| Uranus | 54907-04-12 21:07 G | 21775531.14 | 21775531.38 | 21775531.63 | 0.0144 | 0.0039 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 54908-04-16 16:19 G | 21775901.00 | 21775901.18 | 21775901.38 | 0.0144 | 0.0099 |
| Neptune | 54908-09-03 04:34 G | 21776040.60 | 21776040.69 | 21776040.82 | 0.0089 | 0.0080 |
| Neptune | 54909-09-05 17:46 G | 21776408.06 | 21776408.24 | 21776408.46 | 0.0089 | 0.0057 |
| Neptune | 54910-09-08 05:31 G | 21776775.49 | 21776775.73 | 21776775.97 | 0.0089 | 0.0021 |
| Neptune | 54911-09-10 14:10 G | 21777142.83 | 21777143.09 | 21777143.36 | 0.0089 | 0.0003 |
| Neptune | 54912-09-12 06:00 G | 21777510.53 | 21777510.75 | 21777510.98 | 0.0089 | 0.0039 |
| Saturn | 54913-02-02 01:55 G | 21777653.45 | 21777653.58 | 21777653.73 | 0.0296 | 0.0241 |
| Neptune | 54913-09-14 10:34 G | 21777877.78 | 21777877.94 | 21777878.15 | 0.0089 | 0.0063 |
| Jupiter | 54915-09-03 15:07 G | 21778597.01 | 21778597.13 | 21778597.26 | 0.0510 | 0.0430 |
| Pluto | 54924-07-15 19:26 G | 21781835.06 | 21781835.31 | 21781835.58 | 0.0078 | 0.0015 |
| Mars | 54925-01-06 06:00 G | 21782009.57 | 21782009.75 | 21782009.93 | 0.1704 | 0.0392 |
| Saturn | 54927-08-08 11:17 G | 21782953.77 | 21782953.97 | 21782954.18 | 0.0264 | 0.0139 |
| Jupiter | 54927-09-08 01:12 G | 21782984.35 | 21782984.55 | 21782984.77 | 0.0512 | 0.0198 |
| Jupiter | 54933-03-03 17:31 G | 21784988.09 | 21784988.23 | 21784988.38 | 0.0516 | 0.0393 |
| Jupiter | 54939-09-13 01:12 G | 21787372.32 | 21787372.55 | 21787372.78 | 0.0514 | 0.0058 |
| Saturn | 54943-02-10 12:29 G | 21788618.83 | 21788619.02 | 21788619.24 | 0.0297 | 0.0143 |
| Jupiter | 54945-03-08 20:24 G | 21789376.11 | 21789376.35 | 21789376.58 | 0.0514 | 0.0086 |
| Uranus | 54945-10-04 03:50 G | 21789585.49 | 21789585.66 | 21789585.83 | 0.0135 | 0.0100 |
| Uranus | 54946-10-08 04:19 G | 21789954.46 | 21789954.68 | 21789954.92 | 0.0135 | 0.0052 |
| Uranus | 54947-10-12 19:12 G | 21790324.06 | 21790324.30 | 21790324.55 | 0.0135 | 0.0023 |
| Uranus | 54948-10-15 19:12 G | 21790693.09 | 21790693.30 | 21790693.53 | 0.0135 | 0.0069 |
| Jupiter | 54951-09-17 07:12 G | 21791759.63 | 21791759.80 | 21791759.97 | 0.0516 | 0.0356 |
| Jupiter | 54957-03-13 11:02 G | 21793763.76 | 21793763.96 | 21793764.17 | 0.0512 | 0.0239 |
| Saturn | 54957-08-14 13:26 G | 21793917.86 | 21793918.06 | 21793918.29 | 0.0264 | 0.0143 |
| Jupiter | 54969-03-18 13:12 G | 21798152.03 | 21798152.05 | 21798152.09 | 0.0510 | 0.0505 |
| Saturn | 54972-02-03 21:07 G | 21799204.19 | 21799204.38 | 21799204.58 | 0.0296 | 0.0191 |
| Mars | 54978-07-10 23:31 G | 21801553.31 | 21801553.48 | 21801553.64 | 0.1823 | 0.0709 |
| Saturn | 54986-08-09 13:55 G | 21804504.86 | 21804505.08 | 21804505.31 | 0.0264 | 0.0087 |
| Uranus | 54989-04-03 06:29 G | 21805472.63 | 21805472.77 | 21805472.97 | 0.0143 | 0.0107 |
| Neptune | 54990-03-03 20:53 G | 21805807.26 | 21805807.37 | 21805807.51 | 0.0089 | 0.0076 |

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| Uranus | 54990-04-08 00:00 G | 21805842.25 | 21805842.50 | 21805842.75 | 0.0143 | 0.0036 |
| Neptune | 54991-03-06 10:48 G | 21806174.71 | 21806174.95 | 21806175.20 | 0.0089 | 0.0037 |
| Uranus | 54991-04-13 07:26 G | 21806212.57 | 21806212.81 | 21806213.07 | 0.0143 | 0.0031 |
| Neptune | 54992-03-07 23:02 G | 21806542.23 | 21806542.46 | 21806542.72 | 0.0089 | 0.0017 |
| Uranus | 54992-04-17 01:26 G | 21806582.44 | 21806582.56 | 21806582.73 | 0.0144 | 0.0119 |
| Neptune | 54993-03-10 08:10 G | 21806909.60 | 21806909.84 | 21806910.11 | 0.0089 | 0.0024 |
| Neptune | 54994-03-13 01:12 G | 21807277.36 | 21807277.55 | 21807277.80 | 0.0089 | 0.0045 |
| Neptune | 54995-03-15 07:41 G | 21807644.73 | 21807644.82 | 21807644.91 | 0.0088 | 0.0083 |
| Jupiter | 54998-09-02 17:31 G | 21808912.14 | 21808912.23 | 21808912.33 | 0.0510 | 0.0462 |

56TH MILLENNIUM CE

This is a list of transits of Moon in the 56th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 55002-02-12 13:55 G | | 21810169.90 | 21810170.08 | 21810170.27 | 0.0297 | 0.0193 | |
| Jupiter | 55010-09-08 12:29 G | | 21813299.82 | 21813300.02 | 21813300.22 | 0.0511 | 0.0244 | |
| Jupiter | 55016-03-04 11:17 G | | 21815303.84 | 21815303.97 | 21815304.11 | 0.0517 | 0.0420 | |
| Saturn | 55016-08-16 08:53 G | | 21815468.71 | 21815468.87 | 21815469.04 | 0.0264 | 0.0194 | |
| Jupiter | 55022-09-12 23:17 G | | 21817687.23 | 21817687.47 | 21817687.71 | 0.0514 | 0.0017 | |
| Jupiter | 55028-03-09 00:58 G | | 21819691.31 | 21819691.54 | 21819691.77 | 0.0514 | 0.0112 | |
| Uranus | 55029-10-05 13:41 G | | 21820266.93 | 21820267.07 | 21820267.24 | 0.0135 | 0.0106 | |
| Uranus | 55030-10-09 15:07 G | | 21820635.89 | 21820636.13 | 21820636.37 | 0.0135 | 0.0034 | |
| Saturn | 55031-02-05 16:19 G | | 21820754.96 | 21820755.18 | 21820755.39 | 0.0296 | 0.0140 | |
| Uranus | 55031-10-14 05:46 G | | 21821005.49 | 21821005.74 | 21821005.99 | 0.0135 | 0.0012 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 55032-10-17 05:17 G | 21821374.55 | 21821374.72 | 21821374.93 | 0.0135 | 0.0087 |
| Uranus | 55033-10-21 19:26 G | 21821744.30 | 21821744.31 | 21821744.35 | 0.0134 | 0.0134 |
| Jupiter | 55034-09-17 22:34 G | 21822075.28 | 21822075.44 | 21822075.61 | 0.0516 | 0.0347 |
| Jupiter | 55040-03-14 03:50 G | 21824079.45 | 21824079.66 | 21824079.87 | 0.0512 | 0.0212 |
| Saturn | 55045-08-11 15:07 G | 21826055.89 | 21826056.13 | 21826056.38 | 0.0264 | 0.0036 |
| Jupiter | 55052-03-18 14:38 G | 21828467.02 | 21828467.11 | 21828467.22 | 0.0511 | 0.0464 |
| Saturn | 55061-02-13 09:22 G | 21831720.75 | 21831720.89 | 21831721.04 | 0.0297 | 0.0241 |
| Uranus | 55073-04-04 17:17 G | 21836154.07 | 21836154.22 | 21836154.41 | 0.0143 | 0.0107 |
| Neptune | 55073-09-06 03:07 G | 21836308.49 | 21836308.63 | 21836308.82 | 0.0089 | 0.0067 |
| Uranus | 55074-04-09 10:34 G | 21836523.70 | 21836523.94 | 21836524.19 | 0.0143 | 0.0032 |
| Saturn | 55074-08-06 14:24 G | 21836643.03 | 21836643.10 | 21836643.19 | 0.0265 | 0.0250 |
| Neptune | 55074-09-08 10:19 G | 21836675.72 | 21836675.93 | 21836676.18 | 0.0089 | 0.0042 |
| Uranus | 55075-04-14 18:29 G | 21836894.04 | 21836894.27 | 21836894.52 | 0.0143 | 0.0047 |
| Saturn | 55075-08-18 09:36 G | 21837019.81 | 21837019.90 | 21837020.00 | 0.0264 | 0.0242 |
| Neptune | 55075-09-11 03:22 G | 21837043.39 | 21837043.64 | 21837043.89 | 0.0089 | 0.0006 |
| Uranus | 55076-04-18 12:43 G | 21837263.87 | 21837264.03 | 21837264.21 | 0.0144 | 0.0108 |
| Neptune | 55076-09-12 07:26 G | 21837410.57 | 21837410.81 | 21837411.08 | 0.0089 | 0.0018 |
| Neptune | 55077-09-15 01:26 G | 21837778.37 | 21837778.56 | 21837778.78 | 0.0089 | 0.0053 |
| Neptune | 55078-09-17 06:00 G | 21838145.64 | 21838145.75 | 21838145.90 | 0.0089 | 0.0076 |
| Jupiter | 55081-09-03 06:29 G | 21839227.76 | 21839227.77 | 21839227.81 | 0.0509 | 0.0505 |
| Pluto | 55083-01-14 17:02 G | 21839725.97 | 21839726.21 | 21839726.47 | 0.0066 | 0.0019 |
| Saturn | 55090-02-06 18:00 G | 21842306.03 | 21842306.25 | 21842306.48 | 0.0296 | 0.0088 |
| Jupiter | 55093-09-07 17:17 G | 21843615.02 | 21843615.22 | 21843615.42 | 0.0511 | 0.0273 |
| Jupiter | 55099-03-04 13:26 G | 21845618.96 | 21845619.06 | 21845619.17 | 0.0517 | 0.0455 |
| Saturn | 55104-08-13 09:22 G | 21847606.64 | 21847606.89 | 21847607.15 | 0.0264 | 0.0013 |
| Jupiter | 55105-09-13 15:36 G | 21848002.93 | 21848003.15 | 21848003.37 | 0.0513 | 0.0003 |
| Jupiter | 55111-03-10 15:22 G | 21850006.91 | 21850007.14 | 21850007.36 | 0.0515 | 0.0142 |
| Uranus | 55113-10-06 23:31 G | 21850948.31 | 21850948.48 | 21850948.68 | 0.0135 | 0.0092 |
| Uranus | 55114-10-11 01:12 G | 21851317.32 | 21851317.55 | 21851317.80 | 0.0135 | 0.0043 |
| Uranus | 55115-10-15 15:50 G | 21851686.92 | 21851687.16 | 21851687.41 | 0.0135 | 0.0032 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 55116-10-18 16:34 G | 21852056.00 | 21852056.19 | 21852056.40 | 0.0135 | 0.0077 |
| Jupiter | 55117-09-18 08:38 G | 21852390.68 | 21852390.86 | 21852391.05 | 0.0515 | 0.0324 |
| Saturn | 55120-02-16 02:53 G | 21853271.57 | 21853271.62 | 21853271.68 | 0.0297 | 0.0289 |
| Jupiter | 55123-03-15 05:46 G | 21854394.52 | 21854394.74 | 21854394.97 | 0.0513 | 0.0179 |
| Saturn | 55133-08-08 14:53 G | 21858193.98 | 21858194.12 | 21858194.28 | 0.0265 | 0.0203 |
| Jupiter | 55135-03-20 05:17 G | 21858782.61 | 21858782.72 | 21858782.85 | 0.0511 | 0.0435 |
| Saturn | 55149-02-08 23:02 G | 21863857.22 | 21863857.46 | 21863857.70 | 0.0296 | 0.0033 |
| Neptune | 55154-03-05 04:05 G | 21865707.65 | 21865707.67 | 21865707.71 | 0.0089 | 0.0088 |
| Neptune | 55155-03-07 18:43 G | 21866075.09 | 21866075.28 | 21866075.47 | 0.0089 | 0.0056 |
| Neptune | 55156-03-09 02:24 G | 21866442.36 | 21866442.60 | 21866442.87 | 0.0089 | 0.0028 |
| Neptune | 55157-03-11 20:53 G | 21866810.11 | 21866810.37 | 21866810.63 | 0.0089 | 0.0004 |
| Uranus | 55157-04-06 05:46 G | 21866835.55 | 21866835.74 | 21866835.94 | 0.0143 | 0.0093 |
| Neptune | 55158-03-14 02:10 G | 21867177.35 | 21867177.59 | 21867177.84 | 0.0089 | 0.0032 |
| Uranus | 55158-04-10 23:17 G | 21867205.22 | 21867205.47 | 21867205.72 | 0.0143 | 0.0025 |
| Neptune | 55159-03-16 21:22 G | 21867545.21 | 21867545.39 | 21867545.58 | 0.0088 | 0.0062 |
| Uranus | 55159-04-16 06:58 G | 21867575.55 | 21867575.79 | 21867576.04 | 0.0143 | 0.0043 |
| Uranus | 55160-04-20 00:43 G | 21867945.43 | 21867945.53 | 21867945.65 | 0.0143 | 0.0129 |
| Saturn | 55163-08-15 03:36 G | 21869157.41 | 21869157.65 | 21869157.89 | 0.0264 | 0.0060 |
| Pluto | 55170-07-20 12:14 G | 21871688.80 | 21871689.01 | 21871689.24 | 0.0078 | 0.0037 |
| Jupiter | 55176-09-08 07:12 G | 21873930.63 | 21873930.80 | 21873930.98 | 0.0511 | 0.0311 |
| Jupiter | 55182-03-05 02:53 G | 21875934.56 | 21875934.62 | 21875934.70 | 0.0518 | 0.0493 |
| Jupiter | 55188-09-12 18:43 G | 21878318.04 | 21878318.28 | 21878318.52 | 0.0512 | 0.0044 |
| Saturn | 55192-08-09 17:31 G | 21879745.04 | 21879745.23 | 21879745.43 | 0.0265 | 0.0151 |
| Jupiter | 55194-03-09 18:29 G | 21880322.04 | 21880322.27 | 21880322.50 | 0.0516 | 0.0169 |
| Uranus | 55197-10-07 08:53 G | 21881629.70 | 21881629.87 | 21881630.06 | 0.0135 | 0.0096 |
| Uranus | 55198-10-11 11:17 G | 21881998.74 | 21881998.97 | 21881999.22 | 0.0135 | 0.0027 |
| Uranus | 55199-10-16 01:26 G | 21882368.32 | 21882368.56 | 21882368.82 | 0.0135 | 0.0021 |
| Jupiter | 55200-09-17 08:24 G | 21882705.66 | 21882705.85 | 21882706.04 | 0.0514 | 0.0277 |
| Uranus | 55200-10-19 02:24 G | 21882737.44 | 21882737.60 | 21882737.79 | 0.0135 | 0.0095 |
| Jupiter | 55206-03-14 18:14 G | 21884710.05 | 21884710.26 | 21884710.48 | 0.0514 | 0.0148 |

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| Saturn | 55208-02-11 02:24 G | 21885408.35 | 21885408.60 | 21885408.85 | 0.0296 | 0.0030 |
| Mars | 55209-01-09 13:41 G | 21885741.95 | 21885742.07 | 21885742.20 | 0.1698 | 0.1168 |
| Jupiter | 55218-03-19 14:10 G | 21889097.95 | 21889098.09 | 21889098.25 | 0.0511 | 0.0394 |
| Saturn | 55222-08-16 04:48 G | 21890708.48 | 21890708.70 | 21890708.92 | 0.0265 | 0.0110 |
| Saturn | 55237-02-03 17:46 G | 21895994.18 | 21895994.24 | 21895994.30 | 0.0295 | 0.0285 |
| Neptune | 55237-09-06 07:26 G | 21896208.72 | 21896208.81 | 21896208.95 | 0.0089 | 0.0080 |
| Neptune | 55238-09-09 01:12 G | 21896576.38 | 21896576.55 | 21896576.76 | 0.0089 | 0.0059 |
| Neptune | 55239-09-11 05:46 G | 21896943.50 | 21896943.74 | 21896944.00 | 0.0089 | 0.0021 |
| Neptune | 55240-09-12 23:46 G | 21897311.23 | 21897311.49 | 21897311.75 | 0.0089 | 0.0002 |
| Uranus | 55241-04-06 17:31 G | 21897517.04 | 21897517.23 | 21897517.43 | 0.0143 | 0.0095 |
| Neptune | 55241-09-15 04:48 G | 21897678.49 | 21897678.70 | 21897678.94 | 0.0089 | 0.0039 |
| Uranus | 55242-04-11 11:17 G | 21897886.72 | 21897886.97 | 21897887.22 | 0.0143 | 0.0019 |
| Neptune | 55242-09-17 20:10 G | 21898046.17 | 21898046.34 | 21898046.55 | 0.0089 | 0.0061 |
| Uranus | 55243-04-16 18:29 G | 21898257.04 | 21898257.27 | 21898257.52 | 0.0143 | 0.0058 |
| Uranus | 55244-04-20 12:29 G | 21898626.90 | 21898627.02 | 21898627.18 | 0.0143 | 0.0120 |
| Saturn | 55251-08-11 17:46 G | 21901296.01 | 21901296.24 | 21901296.48 | 0.0266 | 0.0098 |
| Jupiter | 55259-09-08 09:22 G | 21904245.73 | 21904245.89 | 21904246.07 | 0.0510 | 0.0365 |
| Mars | 55262-07-13 03:36 G | 21905284.44 | 21905284.65 | 21905284.85 | 0.1831 | 0.0110 |
| Saturn | 55267-02-12 05:46 G | 21906959.51 | 21906959.74 | 21906959.98 | 0.0295 | 0.0100 |
| Jupiter | 55271-09-12 23:02 G | 21908633.24 | 21908633.46 | 21908633.69 | 0.0512 | 0.0081 |
| Jupiter | 55277-03-09 04:05 G | 21910637.46 | 21910637.67 | 21910637.88 | 0.0516 | 0.0199 |
| Saturn | 55281-08-17 10:34 G | 21912259.76 | 21912259.94 | 21912260.14 | 0.0265 | 0.0164 |
| Uranus | 55281-10-07 18:58 G | 21912311.11 | 21912311.29 | 21912311.51 | 0.0135 | 0.0086 |
| Uranus | 55282-10-11 22:34 G | 21912680.20 | 21912680.44 | 21912680.68 | 0.0135 | 0.0033 |
| Jupiter | 55283-09-17 22:19 G | 21913021.23 | 21913021.43 | 21913021.64 | 0.0514 | 0.0248 |
| Uranus | 55283-10-16 11:46 G | 21913049.75 | 21913049.99 | 21913050.24 | 0.0135 | 0.0039 |
| Uranus | 55284-10-19 13:55 G | 21913418.90 | 21913419.08 | 21913419.28 | 0.0135 | 0.0085 |
| Jupiter | 55289-03-13 21:50 G | 21915025.18 | 21915025.41 | 21915025.65 | 0.0514 | 0.0103 |
| Saturn | 55296-02-06 06:43 G | 21917545.62 | 21917545.78 | 21917545.96 | 0.0295 | 0.0210 |
| Jupiter | 55301-03-19 13:41 G | 21919412.91 | 21919413.07 | 21919413.24 | 0.0512 | 0.0351 |

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| Saturn | 55310-08-13 15:50 G | 21922846.91 | 21922847.16 | 21922847.41 | 0.0266 | 0.0042 |
| Neptune | 55319-03-07 20:38 G | 21925975.25 | 21925975.36 | 21925975.51 | 0.0089 | 0.0077 |
| Neptune | 55320-03-09 15:22 G | 21926342.92 | 21926343.14 | 21926343.39 | 0.0089 | 0.0039 |
| Neptune | 55321-03-11 20:38 G | 21926710.12 | 21926710.36 | 21926710.62 | 0.0089 | 0.0018 |
| Neptune | 55322-03-14 15:07 G | 21927077.89 | 21927078.13 | 21927078.40 | 0.0089 | 0.0022 |
| Neptune | 55323-03-16 21:50 G | 21927445.20 | 21927445.41 | 21927445.64 | 0.0089 | 0.0043 |
| Neptune | 55324-03-18 13:26 G | 21927812.99 | 21927813.06 | 21927813.20 | 0.0088 | 0.0082 |
| Uranus | 55325-04-08 04:48 G | 21928198.49 | 21928198.70 | 21928198.92 | 0.0143 | 0.0081 |
| Saturn | 55326-02-14 16:48 G | 21928511.02 | 21928511.20 | 21928511.40 | 0.0295 | 0.0181 |
| Uranus | 55326-04-12 23:31 G | 21928568.24 | 21928568.48 | 21928568.74 | 0.0143 | 0.0015 |
| Uranus | 55327-04-18 06:29 G | 21928938.53 | 21928938.77 | 21928939.01 | 0.0143 | 0.0054 |
| Uranus | 55328-04-22 00:29 G | 21929308.47 | 21929308.52 | 21929308.60 | 0.0143 | 0.0139 |
| Pluto | 55329-01-17 18:43 G | 21929579.02 | 21929579.28 | 21929579.54 | 0.0066 | 0.0002 |
| Saturn | 55340-08-19 16:19 G | 21933811.06 | 21933811.18 | 21933811.32 | 0.0265 | 0.0223 |
| Jupiter | 55342-09-08 12:58 G | 21934560.92 | 21934561.04 | 21934561.18 | 0.0510 | 0.0410 |
| Jupiter | 55354-09-13 10:05 G | 21938948.69 | 21938948.92 | 21938949.15 | 0.0511 | 0.0117 |
| Saturn | 55355-02-08 20:24 G | 21939097.13 | 21939097.35 | 21939097.58 | 0.0295 | 0.0125 |
| Jupiter | 55360-03-09 03:50 G | 21940952.45 | 21940952.66 | 21940952.87 | 0.0517 | 0.0248 |
| Uranus | 55365-10-09 05:02 G | 21942992.53 | 21942992.71 | 21942992.93 | 0.0135 | 0.0087 |
| Jupiter | 55366-09-17 15:50 G | 21943335.95 | 21943336.16 | 21943336.38 | 0.0513 | 0.0191 |
| Uranus | 55366-10-13 09:36 G | 21943361.67 | 21943361.90 | 21943362.15 | 0.0135 | 0.0020 |
| Uranus | 55367-10-17 22:05 G | 21943731.18 | 21943731.42 | 21943731.68 | 0.0135 | 0.0029 |
| Uranus | 55368-10-21 00:43 G | 21944100.39 | 21944100.53 | 21944100.71 | 0.0135 | 0.0103 |
| Saturn | 55369-08-14 18:58 G | 21944398.05 | 21944398.29 | 21944398.54 | 0.0266 | 0.0019 |
| Jupiter | 55372-03-13 20:24 G | 21945340.13 | 21945340.35 | 21945340.58 | 0.0515 | 0.0051 |
| Jupiter | 55378-09-22 14:38 G | 21947724.01 | 21947724.11 | 21947724.21 | 0.0515 | 0.0461 |
| Jupiter | 55384-03-18 21:50 G | 21949728.21 | 21949728.41 | 21949728.60 | 0.0513 | 0.0295 |
| Saturn | 55385-02-16 12:00 G | 21950062.92 | 21950063.00 | 21950063.09 | 0.0295 | 0.0273 |
| Saturn | 55398-08-10 04:19 G | 21954985.53 | 21954985.68 | 21954985.84 | 0.0266 | 0.0206 |
| Neptune | 55402-09-10 03:50 G | 21956476.53 | 21956476.66 | 21956476.85 | 0.0089 | 0.0069 |

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| Neptune | 55403-09-12 21:50 G | 21956844.19 | 21956844.41 | 21956844.65 | 0.0089 | 0.0042 |
| Neptune | 55404-09-14 04:05 G | 21957211.42 | 21957211.67 | 21957211.92 | 0.0089 | 0.0008 |
| Neptune | 55405-09-16 18:00 G | 21957579.00 | 21957579.25 | 21957579.52 | 0.0089 | 0.0019 |
| Neptune | 55406-09-19 04:19 G | 21957946.49 | 21957946.68 | 21957946.89 | 0.0089 | 0.0052 |
| Neptune | 55407-09-21 14:10 G | 21958313.96 | 21958314.09 | 21958314.22 | 0.0089 | 0.0077 |
| Uranus | 55409-04-09 14:10 G | 21958879.88 | 21958880.09 | 21958880.30 | 0.0143 | 0.0087 |
| Uranus | 55410-04-14 09:36 G | 21959249.65 | 21959249.90 | 21959250.15 | 0.0143 | 0.0009 |
| Uranus | 55411-04-19 15:22 G | 21959619.92 | 21959620.14 | 21959620.38 | 0.0143 | 0.0065 |
| Uranus | 55412-04-23 10:05 G | 21959989.83 | 21959989.92 | 21959990.05 | 0.0144 | 0.0129 |
| Mars | 55414-01-09 20:24 G | 21960616.27 | 21960616.35 | 21960616.43 | 0.1688 | 0.1539 |
| Saturn | 55414-02-11 09:22 G | 21960648.64 | 21960648.89 | 21960649.15 | 0.0295 | 0.0038 |
| Pluto | 55416-07-24 00:58 G | 21961542.45 | 21961542.54 | 21961542.67 | 0.0078 | 0.0070 |
| Jupiter | 55425-09-08 19:26 G | 21964876.21 | 21964876.31 | 21964876.41 | 0.0508 | 0.0461 |
| Saturn | 55428-08-17 06:00 G | 21965949.53 | 21965949.75 | 21965949.98 | 0.0266 | 0.0079 |
| Jupiter | 55437-09-13 02:24 G | 21969263.39 | 21969263.60 | 21969263.82 | 0.0510 | 0.0176 |
| Jupiter | 55443-03-10 00:58 G | 21971267.37 | 21971267.54 | 21971267.73 | 0.0518 | 0.0310 |
| Jupiter | 55449-09-17 23:46 G | 21973651.27 | 21973651.49 | 21973651.71 | 0.0513 | 0.0143 |
| Uranus | 55449-10-10 15:36 G | 21973673.95 | 21973674.15 | 21973674.37 | 0.0135 | 0.0079 |
| Uranus | 55450-10-14 21:07 G | 21974043.14 | 21974043.38 | 21974043.62 | 0.0135 | 0.0025 |
| Uranus | 55451-10-19 08:10 G | 21974412.61 | 21974412.84 | 21974413.10 | 0.0135 | 0.0046 |
| Uranus | 55452-10-22 12:29 G | 21974781.85 | 21974782.02 | 21974782.20 | 0.0135 | 0.0092 |
| Jupiter | 55455-03-15 03:07 G | 21975655.39 | 21975655.63 | 21975655.87 | 0.0515 | 0.0008 |
| Saturn | 55457-08-12 09:50 G | 21976536.70 | 21976536.91 | 21976537.14 | 0.0266 | 0.0142 |
| Jupiter | 55461-09-22 11:17 G | 21978038.83 | 21978038.97 | 21978039.12 | 0.0515 | 0.0410 |
| Jupiter | 55467-03-19 13:41 G | 21980042.87 | 21980043.07 | 21980043.29 | 0.0513 | 0.0237 |
| Saturn | 55473-02-13 00:00 G | 21982200.26 | 21982200.50 | 21982200.75 | 0.0295 | 0.0054 |
| Jupiter | 55479-03-24 14:24 G | 21984431.08 | 21984431.10 | 21984431.15 | 0.0512 | 0.0505 |
| Neptune | 55484-03-09 17:31 G | 21986243.04 | 21986243.23 | 21986243.43 | 0.0089 | 0.0056 |
| Neptune | 55485-03-12 11:46 G | 21986610.75 | 21986610.99 | 21986611.25 | 0.0089 | 0.0030 |
| Neptune | 55486-03-14 19:12 G | 21986978.06 | 21986978.30 | 21986978.56 | 0.0089 | 0.0005 |

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| Neptune | 55487-03-17 09:36 G | 21987345.66 | 21987345.90 | 21987346.17 | 0.0089 | 0.0031 |
| Saturn | 55487-08-19 18:00 G | 21987501.06 | 21987501.25 | 21987501.47 | 0.0266 | 0.0143 |
| Neptune | 55488-03-18 21:07 G | 21987713.22 | 21987713.38 | 21987713.57 | 0.0089 | 0.0064 |
| Uranus | 55493-04-09 22:34 G | 21989561.23 | 21989561.44 | 21989561.69 | 0.0143 | 0.0073 |
| Uranus | 55494-04-14 19:41 G | 21989931.08 | 21989931.32 | 21989931.57 | 0.0143 | 0.0010 |
| Uranus | 55495-04-20 00:29 G | 21990301.30 | 21990301.52 | 21990301.77 | 0.0143 | 0.0063 |
| Saturn | 55502-02-08 15:50 G | 21992787.02 | 21992787.16 | 21992787.31 | 0.0294 | 0.0233 |
| Saturn | 55516-08-14 17:02 G | 21998087.98 | 21998088.21 | 21998088.45 | 0.0266 | 0.0075 |
| Jupiter | 55520-09-13 10:34 G | 21999578.73 | 21999578.94 | 21999579.15 | 0.0510 | 0.0216 |
| Jupiter | 55526-03-10 04:48 G | 22001582.53 | 22001582.70 | 22001582.87 | 0.0518 | 0.0360 |
| Saturn | 55532-02-16 18:58 G | 22003752.10 | 22003752.29 | 22003752.51 | 0.0296 | 0.0146 |
| Jupiter | 55532-09-17 20:38 G | 22003966.13 | 22003966.36 | 22003966.59 | 0.0512 | 0.0097 |
| Uranus | 55533-10-12 00:58 G | 22004355.33 | 22004355.54 | 22004355.75 | 0.0135 | 0.0077 |
| Uranus | 55534-10-16 07:41 G | 22004724.58 | 22004724.82 | 22004725.07 | 0.0135 | 0.0014 |
| Uranus | 55535-10-20 17:46 G | 22005094.00 | 22005094.24 | 22005094.50 | 0.0135 | 0.0037 |
| Uranus | 55536-10-23 22:48 G | 22005463.32 | 22005463.45 | 22005463.60 | 0.0135 | 0.0109 |
| Jupiter | 55538-03-14 17:31 G | 22005970.00 | 22005970.23 | 22005970.46 | 0.0516 | 0.0066 |
| Jupiter | 55544-09-22 15:22 G | 22008353.99 | 22008354.14 | 22008354.31 | 0.0514 | 0.0356 |
| Mars | 55546-07-15 05:31 G | 22009014.60 | 22009014.73 | 22009014.86 | 0.1840 | 0.1413 |
| Saturn | 55546-08-22 01:55 G | 22009052.43 | 22009052.58 | 22009052.75 | 0.0265 | 0.0206 |
| Jupiter | 55550-03-19 17:46 G | 22010358.03 | 22010358.24 | 22010358.47 | 0.0515 | 0.0172 |
| Saturn | 55561-02-10 07:55 G | 22014338.62 | 22014338.83 | 22014339.06 | 0.0294 | 0.0143 |
| Jupiter | 55562-03-24 06:58 G | 22014745.68 | 22014745.79 | 22014745.92 | 0.0512 | 0.0447 |
| Neptune | 55566-09-10 19:41 G | 22016377.22 | 22016377.32 | 22016377.45 | 0.0089 | 0.0079 |
| Neptune | 55567-09-13 02:38 G | 22016744.45 | 22016744.61 | 22016744.82 | 0.0089 | 0.0059 |
| Neptune | 55568-09-14 16:34 G | 22017111.94 | 22017112.19 | 22017112.45 | 0.0089 | 0.0020 |
| Neptune | 55569-09-17 04:19 G | 22017479.43 | 22017479.68 | 22017479.93 | 0.0089 | 0.0001 |
| Neptune | 55570-09-19 12:14 G | 22017846.79 | 22017847.01 | 22017847.26 | 0.0089 | 0.0040 |
| Neptune | 55571-09-22 03:50 G | 22018214.50 | 22018214.66 | 22018214.86 | 0.0089 | 0.0061 |
| Pluto | 55575-01-22 02:53 G | 22019432.40 | 22019432.62 | 22019432.86 | 0.0066 | 0.0026 |

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| Saturn | 55575-08-17 04:48 G | 22019639.46 | 22019639.70 | 22019639.94 | 0.0265 | 0.0006 |
| Uranus | 55576-04-06 06:58 G | 22019872.76 | 22019872.79 | 22019872.87 | 0.0142 | 0.0139 |
| Uranus | 55577-04-11 06:43 G | 22020242.58 | 22020242.78 | 22020243.02 | 0.0143 | 0.0081 |
| Uranus | 55578-04-16 04:48 G | 22020612.45 | 22020612.70 | 22020612.95 | 0.0143 | 0.0001 |
| Uranus | 55579-04-21 07:55 G | 22020982.61 | 22020982.83 | 22020983.07 | 0.0143 | 0.0070 |
| Uranus | 55580-04-25 04:19 G | 22021352.62 | 22021352.68 | 22021352.77 | 0.0143 | 0.0136 |
| Saturn | 55591-02-18 16:34 G | 22025304.06 | 22025304.19 | 22025304.34 | 0.0296 | 0.0236 |
| Jupiter | 55603-09-13 06:43 G | 22029893.58 | 22029893.78 | 22029893.99 | 0.0509 | 0.0261 |
| Saturn | 55604-08-11 16:34 G | 22030227.06 | 22030227.19 | 22030227.34 | 0.0266 | 0.0220 |
| Jupiter | 55609-03-08 18:29 G | 22031897.15 | 22031897.27 | 22031897.40 | 0.0519 | 0.0427 |
| Jupiter | 55615-09-18 01:12 G | 22034281.33 | 22034281.55 | 22034281.77 | 0.0511 | 0.0045 |
| Uranus | 55616-10-07 23:46 G | 22034667.42 | 22034667.49 | 22034667.57 | 0.0136 | 0.0129 |
| Uranus | 55617-10-12 08:38 G | 22035036.66 | 22035036.86 | 22035037.10 | 0.0136 | 0.0074 |
| Uranus | 55618-10-16 17:02 G | 22035405.97 | 22035406.21 | 22035406.46 | 0.0135 | 0.0016 |
| Uranus | 55619-10-21 01:55 G | 22035775.34 | 22035775.58 | 22035775.82 | 0.0135 | 0.0051 |
| Saturn | 55620-02-12 18:58 G | 22035890.05 | 22035890.29 | 22035890.55 | 0.0295 | 0.0059 |
| Uranus | 55620-10-24 08:24 G | 22036144.70 | 22036144.85 | 22036145.03 | 0.0135 | 0.0099 |
| Jupiter | 55621-03-13 23:17 G | 22036285.24 | 22036285.47 | 22036285.69 | 0.0517 | 0.0127 |
| Jupiter | 55627-09-22 11:46 G | 22038668.79 | 22038668.99 | 22038669.18 | 0.0513 | 0.0295 |
| Jupiter | 55633-03-18 14:53 G | 22040672.89 | 22040673.12 | 22040673.35 | 0.0515 | 0.0126 |
| Saturn | 55634-08-18 18:43 G | 22041191.05 | 22041191.28 | 22041191.51 | 0.0265 | 0.0061 |
| Jupiter | 55645-03-23 13:26 G | 22045060.93 | 22045061.06 | 22045061.20 | 0.0513 | 0.0406 |
| Neptune | 55648-03-10 07:55 G | 22046143.70 | 22046143.83 | 22046143.97 | 0.0089 | 0.0076 |
| Neptune | 55649-03-12 16:05 G | 22046510.95 | 22046511.17 | 22046511.40 | 0.0089 | 0.0039 |
| Neptune | 55650-03-15 05:17 G | 22046878.47 | 22046878.72 | 22046879.00 | 0.0089 | 0.0017 |
| Neptune | 55651-03-17 18:58 G | 22047246.05 | 22047246.29 | 22047246.54 | 0.0089 | 0.0021 |
| Neptune | 55652-03-19 03:50 G | 22047613.43 | 22047613.66 | 22047613.90 | 0.0089 | 0.0043 |
| Neptune | 55653-03-21 21:07 G | 22047981.28 | 22047981.38 | 22047981.48 | 0.0089 | 0.0081 |
| Uranus | 55661-04-11 16:19 G | 22050923.95 | 22050924.18 | 22050924.43 | 0.0143 | 0.0063 |
| Pluto | 55661-07-25 04:19 G | 22051028.55 | 22051028.68 | 22051028.85 | 0.0078 | 0.0063 |

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| Uranus | 55662-04-16 15:50 G | 22051293.91 | 22051294.16 | 22051294.41 | 0.0143 | 0.0002 |
| Uranus | 55663-04-21 17:46 G | 22051664.02 | 22051664.24 | 22051664.48 | 0.0143 | 0.0072 |
| Saturn | 55663-08-13 20:24 G | 22051778.15 | 22051778.35 | 22051778.56 | 0.0266 | 0.0156 |
| Saturn | 55679-02-14 06:29 G | 22057441.53 | 22057441.77 | 22057442.01 | 0.0295 | 0.0022 |
| Jupiter | 55686-09-12 10:05 G | 22060208.75 | 22060208.92 | 22060209.10 | 0.0509 | 0.0316 |
| Jupiter | 55692-03-08 06:58 G | 22062212.69 | 22062212.79 | 22062212.90 | 0.0519 | 0.0459 |
| Saturn | 55693-08-20 04:48 G | 22062742.48 | 22062742.70 | 22062742.92 | 0.0265 | 0.0124 |
| Mars | 55698-01-11 21:36 G | 22064348.25 | 22064348.40 | 22064348.56 | 0.1683 | 0.0819 |
| Jupiter | 55698-09-16 23:46 G | 22064596.25 | 22064596.49 | 22064596.74 | 0.0511 | 0.0013 |
| Uranus | 55700-10-09 08:24 G | 22065348.82 | 22065348.85 | 22065348.89 | 0.0136 | 0.0134 |
| Uranus | 55701-10-13 16:05 G | 22065717.96 | 22065718.17 | 22065718.41 | 0.0136 | 0.0069 |
| Uranus | 55702-10-18 02:10 G | 22066087.35 | 22066087.59 | 22066087.83 | 0.0135 | 0.0009 |
| Uranus | 55703-10-22 09:36 G | 22066456.65 | 22066456.90 | 22066457.15 | 0.0135 | 0.0044 |
| Jupiter | 55704-03-13 20:38 G | 22066600.14 | 22066600.36 | 22066600.59 | 0.0517 | 0.0172 |
| Uranus | 55704-10-25 17:02 G | 22066826.11 | 22066826.21 | 22066826.36 | 0.0135 | 0.0115 |
| Jupiter | 55710-09-22 16:34 G | 22068984.00 | 22068984.19 | 22068984.39 | 0.0513 | 0.0250 |
| Jupiter | 55716-03-18 21:22 G | 22070988.16 | 22070988.39 | 22070988.61 | 0.0515 | 0.0077 |
| Saturn | 55722-08-16 00:29 G | 22073329.30 | 22073329.52 | 22073329.75 | 0.0266 | 0.0098 |
| Jupiter | 55722-09-27 14:38 G | 22073372.06 | 22073372.11 | 22073372.16 | 0.0515 | 0.0501 |
| Jupiter | 55728-03-23 12:00 G | 22075375.83 | 22075376.00 | 22075376.18 | 0.0513 | 0.0358 |
| Neptune | 55731-09-13 14:53 G | 22076644.96 | 22076645.12 | 22076645.30 | 0.0089 | 0.0068 |
| Neptune | 55732-09-15 03:07 G | 22077012.43 | 22077012.63 | 22077012.87 | 0.0089 | 0.0040 |
| Neptune | 55733-09-17 11:02 G | 22077379.71 | 22077379.96 | 22077380.23 | 0.0089 | 0.0009 |
| Neptune | 55734-09-20 04:05 G | 22077747.43 | 22077747.67 | 22077747.92 | 0.0089 | 0.0021 |
| Neptune | 55735-09-22 08:38 G | 22078114.66 | 22078114.86 | 22078115.08 | 0.0089 | 0.0052 |
| Neptune | 55736-09-24 02:38 G | 22078482.52 | 22078482.61 | 22078482.74 | 0.0089 | 0.0080 |
| Saturn | 55738-02-16 16:48 G | 22078992.98 | 22078993.20 | 22078993.43 | 0.0295 | 0.0094 |
| Uranus | 55744-04-08 04:48 G | 22081235.62 | 22081235.70 | 22081235.83 | 0.0142 | 0.0129 |
| Uranus | 55745-04-13 01:41 G | 22081605.36 | 22081605.57 | 22081605.82 | 0.0143 | 0.0072 |
| Uranus | 55746-04-18 02:24 G | 22081975.35 | 22081975.60 | 22081975.85 | 0.0143 | 0.0011 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 55747-04-23 02:38 G | 22082345.39 | 22082345.61 | 22082345.84 | 0.0143 | 0.0077 |
| Saturn | 55752-08-22 06:29 G | 22084293.59 | 22084293.77 | 22084293.97 | 0.0265 | 0.0180 |
| Saturn | 55767-02-10 06:00 G | 22089578.60 | 22089578.75 | 22089578.91 | 0.0295 | 0.0231 |
| Jupiter | 55769-09-12 15:07 G | 22090523.96 | 22090524.13 | 22090524.31 | 0.0509 | 0.0348 |
| Jupiter | 55775-03-09 03:22 G | 22092527.59 | 22092527.64 | 22092527.70 | 0.0519 | 0.0504 |
| Saturn | 55781-08-17 07:55 G | 22094880.60 | 22094880.83 | 22094881.06 | 0.0265 | 0.0044 |
| Jupiter | 55781-09-17 07:26 G | 22094911.58 | 22094911.81 | 22094912.03 | 0.0511 | 0.0045 |
| Uranus | 55784-10-09 17:31 G | 22096030.15 | 22096030.23 | 22096030.36 | 0.0136 | 0.0122 |
| Uranus | 55785-10-14 00:14 G | 22096399.29 | 22096399.51 | 22096399.73 | 0.0136 | 0.0069 |
| Uranus | 55786-10-18 11:17 G | 22096768.72 | 22096768.97 | 22096769.21 | 0.0135 | 0.0008 |
| Jupiter | 55787-03-14 03:22 G | 22096915.44 | 22096915.64 | 22096915.85 | 0.0518 | 0.0225 |
| Uranus | 55787-10-22 16:48 G | 22097137.97 | 22097138.20 | 22097138.45 | 0.0135 | 0.0056 |
| Uranus | 55788-10-26 02:24 G | 22097507.47 | 22097507.60 | 22097507.77 | 0.0135 | 0.0106 |
| Jupiter | 55793-09-22 02:38 G | 22099299.40 | 22099299.61 | 22099299.83 | 0.0512 | 0.0200 |
| Saturn | 55797-02-18 00:29 G | 22100544.31 | 22100544.52 | 22100544.72 | 0.0295 | 0.0156 |
| Jupiter | 55799-03-18 22:34 G | 22101303.20 | 22101303.44 | 22101303.68 | 0.0516 | 0.0032 |
| Jupiter | 55805-09-27 07:41 G | 22103686.71 | 22103686.82 | 22103686.94 | 0.0514 | 0.0446 |
| Saturn | 55810-08-13 15:07 G | 22105468.07 | 22105468.13 | 22105468.22 | 0.0266 | 0.0255 |
| Jupiter | 55811-03-24 19:41 G | 22105691.16 | 22105691.32 | 22105691.49 | 0.0514 | 0.0340 |
| Saturn | 55811-08-25 05:46 G | 22105844.63 | 22105844.74 | 22105844.87 | 0.0265 | 0.0231 |
| Neptune | 55813-03-14 02:10 G | 22106411.41 | 22106411.59 | 22106411.83 | 0.0089 | 0.0055 |
| Neptune | 55814-03-16 17:02 G | 22106778.98 | 22106779.21 | 22106779.45 | 0.0089 | 0.0031 |
| Neptune | 55815-03-19 00:29 G | 22107146.26 | 22107146.52 | 22107146.79 | 0.0089 | 0.0006 |
| Neptune | 55816-03-20 18:00 G | 22107514.03 | 22107514.25 | 22107514.51 | 0.0089 | 0.0031 |
| Neptune | 55817-03-22 23:31 G | 22107881.31 | 22107881.48 | 22107881.66 | 0.0089 | 0.0066 |
| Pluto | 55820-01-24 17:02 G | 22108919.14 | 22108919.21 | 22108919.36 | 0.0066 | 0.0060 |
| Pluto | 55821-01-25 12:14 G | 22109285.83 | 22109286.01 | 22109286.24 | 0.0066 | 0.0041 |
| Saturn | 55826-02-12 05:02 G | 22111129.52 | 22111129.71 | 22111129.91 | 0.0295 | 0.0173 |
| Uranus | 55828-04-09 15:50 G | 22111917.12 | 22111917.16 | 22111917.25 | 0.0142 | 0.0138 |
| Uranus | 55829-04-14 11:46 G | 22112286.76 | 22112286.99 | 22112287.25 | 0.0143 | 0.0053 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 55830-04-19 13:55 G | 22112656.84 | 22112657.08 | 22112657.33 | 0.0143 | 0.0006 |
| Uranus | 55831-04-24 12:58 G | 22113026.84 | 22113027.04 | 22113027.27 | 0.0143 | 0.0083 |
| Saturn | 55840-08-19 12:29 G | 22116431.77 | 22116432.02 | 22116432.26 | 0.0265 | 0.0007 |
| Jupiter | 55852-09-12 23:02 G | 22120839.31 | 22120839.46 | 22120839.61 | 0.0508 | 0.0378 |
| Saturn | 55856-02-20 23:31 G | 22122095.30 | 22122095.48 | 22122095.65 | 0.0295 | 0.0213 |
| Jupiter | 55864-09-17 13:26 G | 22125226.82 | 22125227.06 | 22125227.29 | 0.0510 | 0.0097 |
| Uranus | 55868-10-11 03:07 G | 22126711.57 | 22126711.63 | 22126711.72 | 0.0136 | 0.0129 |
| Saturn | 55869-08-14 12:14 G | 22127018.85 | 22127019.01 | 22127019.17 | 0.0266 | 0.0203 |
| Uranus | 55869-10-15 08:24 G | 22127080.63 | 22127080.85 | 22127081.09 | 0.0136 | 0.0061 |
| Jupiter | 55870-03-14 11:17 G | 22127230.76 | 22127230.97 | 22127231.18 | 0.0518 | 0.0258 |
| Uranus | 55870-10-19 20:53 G | 22127450.13 | 22127450.37 | 22127450.62 | 0.0135 | 0.0005 |
| Uranus | 55871-10-24 01:26 G | 22127819.32 | 22127819.56 | 22127819.80 | 0.0135 | 0.0052 |
| Uranus | 55872-10-27 12:14 G | 22128188.90 | 22128189.01 | 22128189.12 | 0.0135 | 0.0119 |
| Jupiter | 55876-09-21 23:31 G | 22129614.26 | 22129614.48 | 22129614.70 | 0.0512 | 0.0150 |
| Jupiter | 55882-03-19 08:10 G | 22131618.61 | 22131618.84 | 22131619.06 | 0.0516 | 0.0005 |
| Saturn | 55885-02-13 08:24 G | 22132680.64 | 22132680.85 | 22132681.08 | 0.0295 | 0.0114 |
| Jupiter | 55888-09-27 02:10 G | 22134002.46 | 22134002.59 | 22134002.72 | 0.0514 | 0.0421 |
| Jupiter | 55894-03-24 09:07 G | 22136006.69 | 22136006.88 | 22136007.07 | 0.0514 | 0.0313 |
| Neptune | 55895-09-14 03:22 G | 22136545.55 | 22136545.64 | 22136545.78 | 0.0089 | 0.0079 |
| Neptune | 55896-09-15 10:05 G | 22136912.74 | 22136912.92 | 22136913.14 | 0.0089 | 0.0058 |
| Neptune | 55897-09-18 03:50 G | 22137280.41 | 22137280.66 | 22137280.91 | 0.0089 | 0.0018 |
| Neptune | 55898-09-20 08:10 G | 22137647.59 | 22137647.84 | 22137648.10 | 0.0089 | 0.0002 |
| Saturn | 55899-08-21 09:50 G | 22137982.67 | 22137982.91 | 22137983.16 | 0.0265 | 0.0055 |
| Neptune | 55899-09-23 01:41 G | 22138015.36 | 22138015.57 | 22138015.82 | 0.0089 | 0.0042 |
| Neptune | 55900-09-25 07:12 G | 22138382.64 | 22138382.80 | 22138383.00 | 0.0089 | 0.0062 |
| Pluto | 55907-07-30 14:38 G | 22140881.89 | 22140882.11 | 22140882.33 | 0.0078 | 0.0041 |
| Uranus | 55912-04-11 02:10 G | 22142598.48 | 22142598.59 | 22142598.74 | 0.0142 | 0.0120 |
| Uranus | 55913-04-15 20:38 G | 22142968.13 | 22142968.36 | 22142968.61 | 0.0143 | 0.0064 |
| Uranus | 55914-04-21 00:00 G | 22143338.25 | 22143338.50 | 22143338.74 | 0.0143 | 0.0020 |
| Saturn | 55915-02-22 16:05 G | 22143646.08 | 22143646.17 | 22143646.29 | 0.0295 | 0.0269 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 55915-04-25 21:22 G | 22143708.18 | 22143708.39 | 22143708.61 | 0.0143 | 0.0084 |
| Saturn | 55928-08-16 11:46 G | 22148569.80 | 22148569.99 | 22148570.19 | 0.0266 | 0.0155 |
| Jupiter | 55935-09-14 07:26 G | 22151154.68 | 22151154.81 | 22151154.96 | 0.0508 | 0.0413 |
| Saturn | 55944-02-16 11:31 G | 22154231.74 | 22154231.98 | 22154232.21 | 0.0294 | 0.0056 |
| Jupiter | 55947-09-18 18:00 G | 22155542.03 | 22155542.25 | 22155542.48 | 0.0510 | 0.0127 |
| Uranus | 55952-10-12 13:41 G | 22157392.95 | 22157393.07 | 22157393.22 | 0.0136 | 0.0114 |
| Jupiter | 55953-03-14 19:41 G | 22157546.14 | 22157546.32 | 22157546.51 | 0.0518 | 0.0304 |
| Uranus | 55953-10-16 17:31 G | 22157762.01 | 22157762.23 | 22157762.46 | 0.0136 | 0.0065 |
| Uranus | 55954-10-21 06:43 G | 22158131.54 | 22158131.78 | 22158132.03 | 0.0135 | 0.0003 |
| Uranus | 55955-10-25 09:50 G | 22158500.69 | 22158500.91 | 22158501.16 | 0.0135 | 0.0060 |
| Uranus | 55956-10-28 22:05 G | 22158870.30 | 22158870.42 | 22158870.57 | 0.0135 | 0.0112 |
| Saturn | 55958-08-23 03:22 G | 22159533.41 | 22159533.64 | 22159533.88 | 0.0265 | 0.0097 |
| Jupiter | 55959-09-23 19:26 G | 22159930.09 | 22159930.31 | 22159930.54 | 0.0512 | 0.0122 |
| Jupiter | 55965-03-19 18:58 G | 22161934.06 | 22161934.29 | 22161934.53 | 0.0517 | 0.0045 |
| Jupiter | 55971-09-28 04:34 G | 22164317.55 | 22164317.69 | 22164317.85 | 0.0514 | 0.0391 |
| Neptune | 55977-03-14 14:10 G | 22166311.99 | 22166312.09 | 22166312.26 | 0.0089 | 0.0075 |
| Jupiter | 55977-03-24 09:07 G | 22166321.68 | 22166321.88 | 22166322.07 | 0.0515 | 0.0278 |
| Neptune | 55978-03-16 21:36 G | 22166679.18 | 22166679.40 | 22166679.65 | 0.0089 | 0.0039 |
| Neptune | 55979-03-19 16:48 G | 22167046.95 | 22167047.20 | 22167047.46 | 0.0089 | 0.0014 |
| Neptune | 55980-03-20 21:36 G | 22167414.17 | 22167414.40 | 22167414.67 | 0.0089 | 0.0023 |
| Neptune | 55981-03-23 16:19 G | 22167781.98 | 22167782.18 | 22167782.43 | 0.0089 | 0.0046 |
| Mars | 55982-01-16 07:41 G | 22168080.64 | 22168080.82 | 22168081.01 | 0.1678 | 0.0095 |
| Neptune | 55982-03-25 23:17 G | 22168149.39 | 22168149.47 | 22168149.57 | 0.0089 | 0.0082 |
| Saturn | 55987-08-18 14:10 G | 22170120.87 | 22170121.09 | 22170121.31 | 0.0267 | 0.0111 |
| Uranus | 55996-04-11 11:17 G | 22173279.87 | 22173279.97 | 22173280.07 | 0.0142 | 0.0130 |
| Uranus | 55997-04-16 04:48 G | 22173649.46 | 22173649.70 | 22173649.95 | 0.0143 | 0.0046 |
| Uranus | 55998-04-21 09:22 G | 22174019.65 | 22174019.89 | 22174020.14 | 0.0143 | 0.0011 |
| Uranus | 55999-04-26 06:00 G | 22174389.55 | 22174389.75 | 22174389.96 | 0.0143 | 0.0091 |

57TH MILLENNIUM CE

This is a list of transits of Moon in the 57th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 56003-02-17 08:53 | G | 22175782.62 | 22175782.87 | 22175783.12 | 0.0294 | 0.0004 | |
| Saturn | 56017-08-24 00:14 | G | 22181084.32 | 22181084.51 | 22181084.73 | 0.0266 | 0.0143 | |
| Jupiter | 56018-09-13 13:26 | G | 22181469.95 | 22181470.06 | 22181470.19 | 0.0507 | 0.0434 | |
| Jupiter | 56030-09-18 12:14 | G | 22185857.79 | 22185858.01 | 22185858.23 | 0.0509 | 0.0156 | |
| Jupiter | 56036-03-14 06:43 | G | 22187861.61 | 22187861.78 | 22187861.96 | 0.0519 | 0.0351 | |
| Uranus | 56036-10-12 23:31 | G | 22188074.38 | 22188074.48 | 22188074.59 | 0.0136 | 0.0123 | |
| Uranus | 56037-10-17 02:38 | G | 22188443.37 | 22188443.61 | 22188443.85 | 0.0136 | 0.0053 | |
| Uranus | 56038-10-21 16:48 | G | 22188812.96 | 22188813.20 | 22188813.45 | 0.0135 | 0.0002 | |
| Uranus | 56039-10-25 18:58 | G | 22189182.07 | 22189182.29 | 22189182.54 | 0.0135 | 0.0059 | |
| Uranus | 56040-10-29 07:55 | G | 22189551.75 | 22189551.83 | 22189551.94 | 0.0135 | 0.0124 | |
| Jupiter | 56042-09-22 16:05 | G | 22190244.94 | 22190245.17 | 22190245.41 | 0.0511 | 0.0074 | |
| Saturn | 56046-08-19 12:58 | G | 22191671.79 | 22191672.04 | 22191672.28 | 0.0267 | 0.0067 | |
| Jupiter | 56048-03-18 22:48 | G | 22192249.22 | 22192249.45 | 22192249.68 | 0.0518 | 0.0077 | |
| Jupiter | 56054-09-27 13:55 | G | 22194632.91 | 22194633.08 | 22194633.24 | 0.0513 | 0.0352 | |
| Jupiter | 56060-03-24 04:05 | G | 22196637.48 | 22196637.67 | 22196637.88 | 0.0515 | 0.0257 | |
| Neptune | 56060-09-16 03:07 | G | 22196813.50 | 22196813.63 | 22196813.82 | 0.0089 | 0.0068 | |
| Neptune | 56061-09-18 07:26 | G | 22197180.60 | 22197180.81 | 22197181.07 | 0.0089 | 0.0037 | |
| Saturn | 56062-02-18 05:02 | G | 22197333.47 | 22197333.71 | 22197333.96 | 0.0294 | 0.0067 | |
| Neptune | 56062-09-21 01:41 | G | 22197548.30 | 22197548.57 | 22197548.83 | 0.0089 | 0.0008 | |
| Neptune | 56063-09-23 07:41 | G | 22197915.58 | 22197915.82 | 22197916.06 | 0.0089 | 0.0023 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 56064-09-24 21:50 G | 22198283.22 | 22198283.41 | 22198283.65 | 0.0089 | 0.0053 |
| Neptune | 56065-09-27 08:10 G | 22198650.79 | 22198650.84 | 22198650.95 | 0.0089 | 0.0084 |
| Pluto | 56066-01-26 22:19 G | 22198772.26 | 22198772.43 | 22198772.64 | 0.0066 | 0.0042 |
| Pluto | 56067-01-28 14:53 G | 22199138.98 | 22199139.12 | 22199139.27 | 0.0066 | 0.0056 |
| Saturn | 56076-08-25 02:53 G | 22202635.46 | 22202635.62 | 22202635.80 | 0.0266 | 0.0186 |
| Uranus | 56080-04-11 19:41 G | 22203961.18 | 22203961.32 | 22203961.47 | 0.0142 | 0.0115 |
| Uranus | 56081-04-16 12:14 G | 22204330.77 | 22204331.01 | 22204331.25 | 0.0143 | 0.0058 |
| Uranus | 56082-04-21 17:31 G | 22204700.98 | 22204701.23 | 22204701.48 | 0.0143 | 0.0027 |
| Uranus | 56083-04-26 12:14 G | 22205070.82 | 22205071.01 | 22205071.24 | 0.0143 | 0.0087 |
| Saturn | 56091-02-12 06:14 G | 22207919.64 | 22207919.76 | 22207919.89 | 0.0293 | 0.0248 |
| Jupiter | 56101-09-14 02:24 G | 22211785.53 | 22211785.60 | 22211785.68 | 0.0506 | 0.0474 |
| Saturn | 56105-08-21 06:14 G | 22213222.51 | 22213222.76 | 22213223.01 | 0.0267 | 0.0025 |
| Jupiter | 56113-09-18 09:36 G | 22216172.68 | 22216172.90 | 22216173.11 | 0.0508 | 0.0204 |
| Jupiter | 56119-03-15 09:07 G | 22218176.73 | 22218176.88 | 22218177.03 | 0.0520 | 0.0394 |
| Uranus | 56120-10-14 08:53 G | 22218755.72 | 22218755.87 | 22218756.03 | 0.0136 | 0.0106 |
| Saturn | 56121-02-20 06:58 G | 22218884.59 | 22218884.79 | 22218885.02 | 0.0294 | 0.0131 |
| Uranus | 56121-10-18 10:48 G | 22219124.73 | 22219124.95 | 22219125.19 | 0.0136 | 0.0060 |
| Uranus | 56122-10-23 01:55 G | 22219494.33 | 22219494.58 | 22219494.83 | 0.0135 | 0.0007 |
| Uranus | 56123-10-27 03:36 G | 22219863.43 | 22219863.65 | 22219863.88 | 0.0135 | 0.0064 |
| Uranus | 56124-10-30 17:17 G | 22220233.12 | 22220233.22 | 22220233.35 | 0.0135 | 0.0119 |
| Jupiter | 56125-09-23 07:12 G | 22220560.57 | 22220560.80 | 22220561.02 | 0.0511 | 0.0037 |
| Jupiter | 56131-03-20 14:53 G | 22222564.90 | 22222565.12 | 22222565.35 | 0.0518 | 0.0110 |
| Saturn | 56134-08-16 03:36 G | 22223809.62 | 22223809.65 | 22223809.71 | 0.0267 | 0.0263 |
| Saturn | 56135-08-28 04:34 G | 22224186.58 | 22224186.69 | 22224186.82 | 0.0266 | 0.0232 |
| Jupiter | 56137-09-27 23:31 G | 22224948.30 | 22224948.48 | 22224948.67 | 0.0513 | 0.0329 |
| Neptune | 56142-03-17 14:10 G | 22226579.89 | 22226580.09 | 22226580.31 | 0.0089 | 0.0052 |
| Neptune | 56143-03-19 19:41 G | 22226947.08 | 22226947.32 | 22226947.56 | 0.0089 | 0.0030 |
| Jupiter | 56143-03-25 02:38 G | 22226952.39 | 22226952.61 | 22226952.83 | 0.0516 | 0.0216 |
| Neptune | 56144-03-21 13:55 G | 22227314.82 | 22227315.08 | 22227315.34 | 0.0089 | 0.0008 |
| Neptune | 56145-03-23 20:53 G | 22227682.15 | 22227682.37 | 22227682.62 | 0.0089 | 0.0032 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 56146-03-26 11:17 G | 22228049.83 | 22228049.97 | 22228050.16 | 0.0089 | 0.0069 |
| Saturn | 56150-02-14 10:19 G | 22229470.75 | 22229470.93 | 22229471.14 | 0.0293 | 0.0182 |
| Pluto | 56153-08-01 18:00 G | 22230734.99 | 22230735.25 | 22230735.52 | 0.0078 | 0.0010 |
| Uranus | 56164-04-13 03:50 G | 22234642.54 | 22234642.66 | 22234642.80 | 0.0142 | 0.0122 |
| Saturn | 56164-08-22 03:50 G | 22234773.42 | 22234773.66 | 22234773.91 | 0.0267 | 0.0021 |
| Uranus | 56165-04-17 19:55 G | 22235012.09 | 22235012.33 | 22235012.59 | 0.0143 | 0.0040 |
| Uranus | 56166-04-23 02:24 G | 22235382.35 | 22235382.60 | 22235382.85 | 0.0143 | 0.0016 |
| Uranus | 56167-04-27 20:38 G | 22235752.18 | 22235752.36 | 22235752.56 | 0.0143 | 0.0099 |
| Saturn | 56180-02-22 17:46 G | 22240436.08 | 22240436.24 | 22240436.42 | 0.0294 | 0.0206 |
| Saturn | 56193-08-17 06:58 G | 22245360.65 | 22245360.79 | 22245360.95 | 0.0268 | 0.0210 |
| Jupiter | 56196-09-18 00:00 G | 22246488.30 | 22246488.50 | 22246488.70 | 0.0508 | 0.0246 |
| Jupiter | 56202-03-15 20:38 G | 22248492.24 | 22248492.36 | 22248492.48 | 0.0520 | 0.0442 |
| Uranus | 56204-10-15 16:19 G | 22249437.06 | 22249437.18 | 22249437.31 | 0.0136 | 0.0117 |
| Uranus | 56205-10-19 18:29 G | 22249806.04 | 22249806.27 | 22249806.52 | 0.0136 | 0.0045 |
| Uranus | 56206-10-24 10:19 G | 22250175.68 | 22250175.93 | 22250176.18 | 0.0135 | 0.0005 |
| Uranus | 56207-10-28 11:17 G | 22250544.77 | 22250544.97 | 22250545.21 | 0.0135 | 0.0067 |
| Jupiter | 56208-09-23 13:41 G | 22250875.83 | 22250876.07 | 22250876.31 | 0.0510 | 0.0005 |
| Uranus | 56208-11-01 01:55 G | 22250914.53 | 22250914.58 | 22250914.67 | 0.0135 | 0.0129 |
| Saturn | 56209-02-16 13:12 G | 22251021.82 | 22251022.05 | 22251022.29 | 0.0293 | 0.0104 |
| Jupiter | 56214-03-20 10:19 G | 22252879.71 | 22252879.93 | 22252880.16 | 0.0518 | 0.0159 |
| Jupiter | 56220-09-27 23:31 G | 22255263.29 | 22255263.48 | 22255263.67 | 0.0511 | 0.0279 |
| Saturn | 56223-08-25 09:22 G | 22256324.66 | 22256324.89 | 22256325.12 | 0.0267 | 0.0075 |
| Neptune | 56224-09-17 07:55 G | 22256713.73 | 22256713.83 | 22256713.98 | 0.0089 | 0.0077 |
| Neptune | 56225-09-20 01:12 G | 22257081.37 | 22257081.55 | 22257081.78 | 0.0089 | 0.0056 |
| Jupiter | 56226-03-25 11:17 G | 22257267.76 | 22257267.97 | 22257268.18 | 0.0517 | 0.0183 |
| Neptune | 56226-09-22 08:24 G | 22257448.61 | 22257448.85 | 22257449.10 | 0.0089 | 0.0017 |
| Neptune | 56227-09-24 21:36 G | 22257816.14 | 22257816.40 | 22257816.67 | 0.0089 | 0.0005 |
| Neptune | 56228-09-26 08:24 G | 22258183.65 | 22258183.85 | 22258184.08 | 0.0089 | 0.0044 |
| Neptune | 56229-09-28 17:17 G | 22258551.04 | 22258551.22 | 22258551.40 | 0.0089 | 0.0064 |
| Jupiter | 56238-03-30 07:55 G | 22261655.78 | 22261655.83 | 22261655.90 | 0.0514 | 0.0498 |

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| Saturn | 56239-02-25 07:26 G | 22261987.76 | 22261987.81 | 22261987.87 | 0.0294 | 0.0285 |
| Uranus | 56248-04-14 13:12 G | 22265323.90 | 22265324.05 | 22265324.23 | 0.0142 | 0.0108 |
| Uranus | 56249-04-19 05:02 G | 22265693.48 | 22265693.71 | 22265693.96 | 0.0142 | 0.0050 |
| Uranus | 56250-04-24 11:31 G | 22266063.75 | 22266063.98 | 22266064.24 | 0.0143 | 0.0036 |
| Uranus | 56251-04-29 04:48 G | 22266433.52 | 22266433.70 | 22266433.92 | 0.0143 | 0.0093 |
| Saturn | 56252-08-19 07:55 G | 22266911.62 | 22266911.83 | 22266912.04 | 0.0268 | 0.0155 |
| Mars | 56266-01-19 00:29 G | 22271812.34 | 22271812.52 | 22271812.71 | 0.1672 | 0.0707 |
| Saturn | 56268-02-18 22:05 G | 22272573.18 | 22272573.42 | 22272573.67 | 0.0293 | 0.0021 |
| Jupiter | 56279-09-19 00:58 G | 22276803.35 | 22276803.54 | 22276803.74 | 0.0507 | 0.0303 |
| Saturn | 56282-08-26 16:34 G | 22277875.99 | 22277876.19 | 22277876.41 | 0.0267 | 0.0131 |
| Jupiter | 56285-03-14 13:12 G | 22278807.00 | 22278807.05 | 22278807.12 | 0.0522 | 0.0502 |
| Uranus | 56288-10-16 00:14 G | 22280118.36 | 22280118.51 | 22280118.70 | 0.0136 | 0.0100 |
| Uranus | 56289-10-20 02:24 G | 22280487.38 | 22280487.60 | 22280487.84 | 0.0136 | 0.0055 |
| Uranus | 56290-10-24 18:29 G | 22280857.02 | 22280857.27 | 22280857.52 | 0.0135 | 0.0015 |
| Jupiter | 56291-09-23 12:43 G | 22281190.81 | 22281191.03 | 22281191.26 | 0.0509 | 0.0066 |
| Uranus | 56291-10-28 19:12 G | 22281226.10 | 22281226.30 | 22281226.53 | 0.0135 | 0.0069 |
| Uranus | 56292-11-01 10:34 G | 22281595.85 | 22281595.94 | 22281596.03 | 0.0135 | 0.0125 |
| Jupiter | 56297-03-19 17:31 G | 22283195.02 | 22283195.23 | 22283195.44 | 0.0519 | 0.0207 |
| Jupiter | 56303-09-29 07:55 G | 22285578.63 | 22285578.83 | 22285579.05 | 0.0511 | 0.0234 |
| Neptune | 56306-03-18 17:17 G | 22286480.09 | 22286480.22 | 22286480.39 | 0.0089 | 0.0072 |
| Neptune | 56307-03-21 11:02 G | 22286847.74 | 22286847.96 | 22286848.22 | 0.0089 | 0.0038 |
| Neptune | 56308-03-22 20:10 G | 22287215.09 | 22287215.34 | 22287215.59 | 0.0089 | 0.0011 |
| Neptune | 56309-03-25 09:36 G | 22287582.66 | 22287582.90 | 22287583.17 | 0.0089 | 0.0024 |
| Jupiter | 56309-03-25 14:24 G | 22287582.87 | 22287583.10 | 22287583.34 | 0.0517 | 0.0143 * |
| Neptune | 56310-03-27 22:19 G | 22287950.25 | 22287950.43 | 22287950.66 | 0.0089 | 0.0050 |
| Neptune | 56311-03-30 06:43 G | 22288317.72 | 22288317.78 | 22288317.90 | 0.0089 | 0.0083 |
| Saturn | 56311-08-22 10:05 G | 22288462.69 | 22288462.92 | 22288463.16 | 0.0267 | 0.0097 |
| Pluto | 56312-02-01 06:29 G | 22288625.57 | 22288625.77 | 22288626.02 | 0.0066 | 0.0031 |
| Pluto | 56313-02-01 13:12 G | 22288992.03 | 22288992.05 | 22288992.12 | 0.0066 | 0.0066 |
| Jupiter | 56321-03-30 05:46 G | 22291970.63 | 22291970.74 | 22291970.85 | 0.0515 | 0.0450 |

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| Saturn | 56327-02-21 15:22 G | 22294124.91 | 22294125.14 | 22294125.37 | 0.0293 | 0.0067 |
| Uranus | 56332-04-15 22:34 G | 22296005.29 | 22296005.44 | 22296005.61 | 0.0142 | 0.0111 |
| Uranus | 56333-04-20 14:53 G | 22296374.87 | 22296375.12 | 22296375.37 | 0.0142 | 0.0031 |
| Uranus | 56334-04-25 21:36 G | 22296745.15 | 22296745.40 | 22296745.66 | 0.0143 | 0.0025 |
| Uranus | 56335-04-30 15:07 G | 22297114.96 | 22297115.13 | 22297115.30 | 0.0143 | 0.0108 |
| Saturn | 56341-08-28 21:50 G | 22299427.25 | 22299427.41 | 22299427.60 | 0.0267 | 0.0192 |
| Saturn | 56356-02-16 02:53 G | 22304711.46 | 22304711.62 | 22304711.79 | 0.0292 | 0.0220 |
| Jupiter | 56362-09-19 00:43 G | 22307118.38 | 22307118.53 | 22307118.69 | 0.0507 | 0.0363 |
| Saturn | 56370-08-23 19:12 G | 22310014.06 | 22310014.30 | 22310014.54 | 0.0267 | 0.0033 |
| Uranus | 56372-10-17 08:10 G | 22310799.71 | 22310799.84 | 22310800.00 | 0.0136 | 0.0111 |
| Uranus | 56373-10-21 10:34 G | 22311168.71 | 22311168.94 | 22311169.19 | 0.0136 | 0.0039 |
| Jupiter | 56374-09-23 20:24 G | 22311506.12 | 22311506.35 | 22311506.59 | 0.0509 | 0.0114 |
| Uranus | 56374-10-26 02:38 G | 22311538.36 | 22311538.61 | 22311538.87 | 0.0135 | 0.0009 |
| Uranus | 56375-10-30 03:36 G | 22311907.46 | 22311907.65 | 22311907.88 | 0.0135 | 0.0075 |
| Uranus | 56376-11-02 19:12 G | 22312277.25 | 22312277.30 | 22312277.34 | 0.0135 | 0.0132 |
| Jupiter | 56380-03-19 15:36 G | 22313509.94 | 22313510.15 | 22313510.36 | 0.0519 | 0.0261 |
| Saturn | 56386-02-23 11:46 G | 22315676.79 | 22315676.99 | 22315677.19 | 0.0294 | 0.0160 |
| Jupiter | 56386-09-28 05:17 G | 22315893.51 | 22315893.72 | 22315893.94 | 0.0511 | 0.0189 |
| Neptune | 56389-09-20 07:55 G | 22316981.69 | 22316981.83 | 22316982.02 | 0.0089 | 0.0067 |
| Neptune | 56390-09-22 20:38 G | 22317349.13 | 22317349.36 | 22317349.62 | 0.0089 | 0.0033 |
| Neptune | 56391-09-25 09:36 G | 22317716.66 | 22317716.90 | 22317717.15 | 0.0089 | 0.0007 |
| Jupiter | 56392-03-24 09:50 G | 22317897.69 | 22317897.91 | 22317898.14 | 0.0518 | 0.0083 |
| Neptune | 56392-09-26 17:02 G | 22318083.97 | 22318084.21 | 22318084.48 | 0.0089 | 0.0027 |
| Neptune | 56393-09-29 09:50 G | 22318451.71 | 22318451.91 | 22318452.11 | 0.0089 | 0.0053 |
| Neptune | 56394-10-01 13:55 G | 22318819.05 | 22318819.08 | 22318819.15 | 0.0089 | 0.0087 |
| Pluto | 56399-08-05 18:00 G | 22320587.99 | 22320588.25 | 22320588.50 | 0.0078 | 0.0002 |
| Saturn | 56399-08-19 06:14 G | 22320601.67 | 22320601.76 | 22320601.85 | 0.0268 | 0.0249 |
| Saturn | 56400-08-30 01:41 G | 22320978.50 | 22320978.57 | 22320978.66 | 0.0267 | 0.0253 |
| Jupiter | 56404-03-29 08:24 G | 22322285.70 | 22322285.85 | 22322286.01 | 0.0516 | 0.0388 |
| Saturn | 56415-02-17 16:34 G | 22326262.97 | 22326263.19 | 22326263.42 | 0.0292 | 0.0130 |

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| Uranus | 56416-04-16 08:24 G | 22326686.68 | 22326686.85 | 22326687.05 | 0.0142 | 0.0100 |
| Uranus | 56417-04-21 00:43 G | 22327056.30 | 22327056.53 | 22327056.79 | 0.0143 | 0.0041 |
| Uranus | 56418-04-26 07:41 G | 22327426.58 | 22327426.82 | 22327427.07 | 0.0143 | 0.0044 |
| Uranus | 56419-05-01 00:29 G | 22327796.35 | 22327796.52 | 22327796.71 | 0.0143 | 0.0100 |
| Saturn | 56429-08-25 09:36 G | 22331565.67 | 22331565.90 | 22331566.14 | 0.0267 | 0.0033 |
| Saturn | 56445-02-25 05:17 G | 22337228.60 | 22337228.72 | 22337228.86 | 0.0294 | 0.0249 |
| Jupiter | 56445-09-18 08:53 G | 22337433.74 | 22337433.87 | 22337434.01 | 0.0506 | 0.0410 |
| Uranus | 56456-10-17 18:00 G | 22341481.07 | 22341481.25 | 22341481.44 | 0.0136 | 0.0093 |
| Jupiter | 56457-09-22 16:05 G | 22341820.96 | 22341821.17 | 22341821.39 | 0.0508 | 0.0166 |
| Uranus | 56457-10-21 20:53 G | 22341850.14 | 22341850.37 | 22341850.60 | 0.0136 | 0.0049 |
| Saturn | 56458-08-20 11:17 G | 22342152.79 | 22342152.97 | 22342153.16 | 0.0268 | 0.0185 |
| Uranus | 56458-10-26 12:00 G | 22342219.75 | 22342220.00 | 22342220.25 | 0.0135 | 0.0022 |
| Uranus | 56459-10-30 13:12 G | 22342588.86 | 22342589.05 | 22342589.27 | 0.0135 | 0.0073 |
| Uranus | 56460-11-03 03:50 G | 22342958.62 | 22342958.66 | 22342958.72 | 0.0135 | 0.0132 |
| Jupiter | 56463-03-19 09:36 G | 22343824.73 | 22343824.90 | 22343825.08 | 0.0521 | 0.0334 |
| Jupiter | 56469-09-27 12:14 G | 22346208.79 | 22346209.01 | 22346209.24 | 0.0510 | 0.0139 |
| Neptune | 56470-03-18 08:38 G | 22346380.84 | 22346380.86 | 22346380.92 | 0.0089 | 0.0088 |
| Mars | 56471-01-18 22:05 G | 22346687.28 | 22346687.42 | 22346687.56 | 0.1664 | 0.0987 |
| Neptune | 56471-03-20 18:29 G | 22346748.06 | 22346748.27 | 22346748.47 | 0.0089 | 0.0049 |
| Neptune | 56472-03-22 06:00 G | 22347115.51 | 22347115.75 | 22347116.02 | 0.0089 | 0.0028 |
| Neptune | 56473-03-24 20:38 G | 22347483.11 | 22347483.36 | 22347483.61 | 0.0089 | 0.0011 |
| Saturn | 56474-02-19 10:05 G | 22347814.68 | 22347814.92 | 22347815.16 | 0.0293 | 0.0040 |
| Neptune | 56474-03-27 04:05 G | 22347850.44 | 22347850.67 | 22347850.93 | 0.0089 | 0.0033 |
| Jupiter | 56475-03-24 11:31 G | 22348212.74 | 22348212.98 | 22348213.22 | 0.0519 | 0.0024 |
| Neptune | 56475-03-29 22:19 G | 22348218.30 | 22348218.43 | 22348218.60 | 0.0089 | 0.0072 |
| Mars | 56477-07-23 03:36 G | 22349064.43 | 22349064.65 | 22349064.87 | 0.1859 | 0.0028 |
| Jupiter | 56481-10-01 17:46 G | 22350596.15 | 22350596.24 | 22350596.36 | 0.0512 | 0.0456 |
| Jupiter | 56487-03-29 03:50 G | 22352600.49 | 22352600.66 | 22352600.84 | 0.0516 | 0.0337 |
| Saturn | 56488-08-26 21:50 G | 22353117.19 | 22353117.41 | 22353117.65 | 0.0267 | 0.0100 |
| Uranus | 56500-04-17 16:34 G | 22357368.02 | 22357368.19 | 22357368.39 | 0.0142 | 0.0103 |

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| Uranus | 56501-04-22 09:50 G | 22357737.66 | 22357737.91 | 22357738.16 | 0.0143 | 0.0025 |
| Uranus | 56502-04-27 16:19 G | 22358107.93 | 22358108.18 | 22358108.44 | 0.0143 | 0.0032 |
| Uranus | 56503-05-02 09:36 G | 22358477.76 | 22358477.90 | 22358478.06 | 0.0143 | 0.0117 |
| Saturn | 56517-08-22 19:26 G | 22363704.10 | 22363704.31 | 22363704.54 | 0.0268 | 0.0120 |
| Jupiter | 56528-09-18 03:50 G | 22367748.58 | 22367748.66 | 22367748.76 | 0.0505 | 0.0463 |
| Saturn | 56533-02-22 05:31 G | 22369366.50 | 22369366.73 | 22369366.96 | 0.0293 | 0.0050 |
| Jupiter | 56540-09-22 21:07 G | 22372136.17 | 22372136.38 | 22372136.59 | 0.0507 | 0.0224 |
| Uranus | 56540-10-19 02:53 G | 22372162.46 | 22372162.62 | 22372162.79 | 0.0136 | 0.0104 |
| Uranus | 56541-10-23 06:29 G | 22372531.53 | 22372531.77 | 22372532.01 | 0.0135 | 0.0032 |
| Uranus | 56542-10-27 21:07 G | 22372901.13 | 22372901.38 | 22372901.64 | 0.0135 | 0.0015 |
| Uranus | 56543-10-31 23:02 G | 22373270.28 | 22373270.46 | 22373270.67 | 0.0135 | 0.0081 |
| Jupiter | 56546-03-19 16:05 G | 22374140.01 | 22374140.17 | 22374140.33 | 0.0521 | 0.0378 |
| Saturn | 56547-08-30 05:02 G | 22374668.51 | 22374668.71 | 22374668.91 | 0.0267 | 0.0168 |
| Mars | 56550-01-21 20:53 G | 22375544.27 | 22375544.37 | 22375544.47 | 0.1667 | 0.1352 |
| Jupiter | 56552-09-27 05:31 G | 22376523.50 | 22376523.73 | 22376523.96 | 0.0510 | 0.0088 |
| Neptune | 56553-09-20 20:10 G | 22376882.22 | 22376882.34 | 22376882.51 | 0.0089 | 0.0075 |
| Neptune | 56554-09-23 09:50 G | 22377249.72 | 22377249.91 | 22377250.12 | 0.0089 | 0.0053 |
| Neptune | 56555-09-25 16:48 G | 22377616.94 | 22377617.20 | 22377617.46 | 0.0089 | 0.0015 |
| Neptune | 56556-09-27 09:50 G | 22377984.66 | 22377984.91 | 22377985.17 | 0.0089 | 0.0008 |
| Neptune | 56557-09-29 13:55 G | 22378351.88 | 22378352.08 | 22378352.32 | 0.0089 | 0.0046 |
| Pluto | 56558-02-03 06:43 G | 22378478.55 | 22378478.78 | 22378479.06 | 0.0066 | 0.0021 |
| Jupiter | 56558-03-24 07:26 G | 22378527.58 | 22378527.81 | 22378528.04 | 0.0519 | 0.0030 |
| Neptune | 56558-10-02 08:24 G | 22378719.69 | 22378719.85 | 22378720.02 | 0.0089 | 0.0067 |
| Saturn | 56562-02-15 23:02 G | 22379952.35 | 22379952.46 | 22379952.59 | 0.0292 | 0.0258 |
| Jupiter | 56564-10-02 02:53 G | 22380911.50 | 22380911.62 | 22380911.75 | 0.0512 | 0.0417 |
| Jupiter | 56570-03-29 09:50 G | 22382915.72 | 22382915.91 | 22382916.11 | 0.0517 | 0.0275 |
| Saturn | 56576-08-24 07:26 G | 22385255.58 | 22385255.81 | 22385256.05 | 0.0267 | 0.0053 |
| Uranus | 56584-04-18 00:58 G | 22388049.35 | 22388049.54 | 22388049.74 | 0.0142 | 0.0096 |
| Uranus | 56585-04-22 18:29 G | 22388419.04 | 22388419.27 | 22388419.53 | 0.0143 | 0.0034 |
| Uranus | 56586-04-28 00:14 G | 22388789.28 | 22388789.51 | 22388789.77 | 0.0143 | 0.0050 |

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| Uranus | 56587-05-02 17:31 G | 22389159.08 | 22389159.23 | 22389159.42 | 0.0143 | 0.0105 |
| Saturn | 56592-02-24 21:22 G | 22390918.17 | 22390918.39 | 22390918.61 | 0.0293 | 0.0134 |
| Saturn | 56605-08-20 15:36 G | 22395843.12 | 22395843.15 | 22395843.20 | 0.0268 | 0.0265 |
| Saturn | 56606-09-01 10:34 G | 22396219.83 | 22396219.94 | 22396220.07 | 0.0267 | 0.0234 |
| Saturn | 56621-02-18 07:41 G | 22401503.63 | 22401503.82 | 22401504.02 | 0.0293 | 0.0179 |
| Jupiter | 56623-09-23 19:41 G | 22402451.12 | 22402451.32 | 22402451.52 | 0.0507 | 0.0266 |
| Uranus | 56624-10-20 12:58 G | 22402843.85 | 22402844.04 | 22402844.25 | 0.0136 | 0.0086 |
| Uranus | 56625-10-24 17:17 G | 22403213.00 | 22403213.22 | 22403213.47 | 0.0135 | 0.0042 |
| Uranus | 56626-10-29 06:43 G | 22403582.54 | 22403582.78 | 22403583.04 | 0.0135 | 0.0030 |
| Uranus | 56627-11-02 09:22 G | 22403951.70 | 22403951.89 | 22403952.10 | 0.0135 | 0.0078 |
| Jupiter | 56629-03-19 11:17 G | 22404454.85 | 22404454.97 | 22404455.10 | 0.0521 | 0.0436 |
| Neptune | 56635-03-22 04:05 G | 22406648.51 | 22406648.67 | 22406648.85 | 0.0089 | 0.0068 |
| Saturn | 56635-08-27 18:43 G | 22406807.04 | 22406807.28 | 22406807.53 | 0.0267 | 0.0011 |
| Jupiter | 56635-09-28 16:19 G | 22406838.96 | 22406839.18 | 22406839.41 | 0.0509 | 0.0056 |
| Neptune | 56636-03-23 19:26 G | 22407016.10 | 22407016.31 | 22407016.55 | 0.0089 | 0.0038 |
| Neptune | 56637-03-26 02:24 G | 22407383.34 | 22407383.60 | 22407383.86 | 0.0089 | 0.0008 |
| Neptune | 56638-03-28 20:53 G | 22407751.12 | 22407751.37 | 22407751.62 | 0.0089 | 0.0024 |
| Neptune | 56639-03-31 01:41 G | 22408118.38 | 22408118.57 | 22408118.79 | 0.0089 | 0.0053 |
| Neptune | 56640-04-01 20:10 G | 22408486.29 | 22408486.34 | 22408486.44 | 0.0089 | 0.0085 |
| Jupiter | 56641-03-24 12:29 G | 22408842.79 | 22408843.02 | 22408843.25 | 0.0520 | 0.0083 |
| Pluto | 56645-08-09 02:53 G | 22410441.39 | 22410441.62 | 22410441.88 | 0.0078 | 0.0021 |
| Jupiter | 56647-10-03 03:36 G | 22411226.49 | 22411226.65 | 22411226.82 | 0.0511 | 0.0368 |
| Saturn | 56651-02-27 03:36 G | 22412469.47 | 22412469.65 | 22412469.82 | 0.0293 | 0.0211 |
| Jupiter | 56653-03-29 03:22 G | 22413230.43 | 22413230.64 | 22413230.86 | 0.0518 | 0.0220 |
| Saturn | 56664-08-21 18:43 G | 22417394.13 | 22417394.28 | 22417394.45 | 0.0268 | 0.0205 |
| Jupiter | 56665-04-03 07:41 G | 22417618.75 | 22417618.82 | 22417618.90 | 0.0515 | 0.0486 |
| Uranus | 56668-04-19 07:26 G | 22418730.62 | 22418730.81 | 22418731.01 | 0.0142 | 0.0095 |
| Uranus | 56669-04-24 02:24 G | 22419100.35 | 22419100.60 | 22419100.85 | 0.0143 | 0.0021 |
| Uranus | 56670-04-29 07:12 G | 22419470.55 | 22419470.80 | 22419471.05 | 0.0143 | 0.0037 |
| Uranus | 56671-05-04 00:58 G | 22419840.43 | 22419840.54 | 22419840.69 | 0.0143 | 0.0122 |

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| Saturn | 56680-02-20 18:29 G | 22423055.06 | 22423055.27 | 22423055.50 | 0.0293 | 0.0107 |
| Saturn | 56694-08-28 23:46 G | 22428358.25 | 22428358.49 | 22428358.73 | 0.0267 | 0.0068 |
| Jupiter | 56706-09-24 06:43 G | 22432766.61 | 22432766.78 | 22432766.97 | 0.0506 | 0.0306 |
| Uranus | 56708-10-21 20:53 G | 22433525.20 | 22433525.37 | 22433525.57 | 0.0136 | 0.0096 |
| Uranus | 56709-10-26 02:38 G | 22433894.37 | 22433894.61 | 22433894.85 | 0.0136 | 0.0024 |
| Saturn | 56710-03-01 03:36 G | 22434020.59 | 22434020.65 | 22434020.73 | 0.0294 | 0.0281 |
| Uranus | 56710-10-30 15:07 G | 22434263.88 | 22434264.13 | 22434264.39 | 0.0135 | 0.0021 |
| Uranus | 56711-11-03 18:43 G | 22434633.12 | 22434633.28 | 22434633.48 | 0.0135 | 0.0089 |
| Jupiter | 56712-03-19 19:26 G | 22434770.22 | 22434770.31 | 22434770.40 | 0.0522 | 0.0479 |
| Neptune | 56718-09-24 15:22 G | 22437149.99 | 22437150.14 | 22437150.33 | 0.0089 | 0.0066 |
| Jupiter | 56718-09-28 13:41 G | 22437153.83 | 22437154.07 | 22437154.31 | 0.0508 | 0.0008 |
| Neptune | 56719-09-27 09:22 G | 22437517.66 | 22437517.89 | 22437518.15 | 0.0089 | 0.0030 |
| Neptune | 56720-09-28 14:10 G | 22437884.84 | 22437885.09 | 22437885.35 | 0.0089 | 0.0005 |
| Neptune | 56721-10-01 07:55 G | 22438252.60 | 22438252.83 | 22438253.09 | 0.0089 | 0.0030 |
| Neptune | 56722-10-03 13:26 G | 22438619.89 | 22438620.06 | 22438620.28 | 0.0089 | 0.0055 |
| Saturn | 56723-08-25 00:14 G | 22438945.32 | 22438945.51 | 22438945.72 | 0.0268 | 0.0148 |
| Jupiter | 56724-03-24 13:26 G | 22439157.83 | 22439158.06 | 22439158.30 | 0.0520 | 0.0117 |
| Jupiter | 56730-10-03 05:46 G | 22441541.57 | 22441541.74 | 22441541.92 | 0.0510 | 0.0317 |
| Jupiter | 56736-03-29 17:02 G | 22443546.00 | 22443546.21 | 22443546.43 | 0.0518 | 0.0182 |
| Saturn | 56739-02-23 01:55 G | 22444606.34 | 22444606.58 | 22444606.82 | 0.0293 | 0.0039 |
| Jupiter | 56748-04-03 10:34 G | 22447933.82 | 22447933.94 | 22447934.07 | 0.0516 | 0.0441 |
| Uranus | 56752-04-20 15:36 G | 22449411.95 | 22449412.15 | 22449412.35 | 0.0142 | 0.0091 |
| Uranus | 56753-04-25 11:46 G | 22449781.74 | 22449781.99 | 22449782.23 | 0.0143 | 0.0025 |
| Saturn | 56753-08-30 21:22 G | 22449909.18 | 22449909.39 | 22449909.63 | 0.0267 | 0.0122 |
| Uranus | 56754-04-30 15:07 G | 22450151.90 | 22450152.13 | 22450152.38 | 0.0143 | 0.0055 |
| Mars | 56755-01-23 04:48 G | 22450419.51 | 22450419.70 | 22450419.90 | 0.1660 | 0.0234 |
| Uranus | 56755-05-05 09:50 G | 22450521.77 | 22450521.91 | 22450522.09 | 0.0143 | 0.0111 |
| Mars | 56761-07-25 07:12 G | 22452794.77 | 22452794.80 | 22452794.83 | 0.1867 | 0.1838 |
| Saturn | 56782-08-26 07:12 G | 22460496.59 | 22460496.80 | 22460497.03 | 0.0268 | 0.0094 |
| Jupiter | 56789-09-23 07:12 G | 22463081.64 | 22463081.80 | 22463081.98 | 0.0506 | 0.0353 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 56792-10-22 05:31 G | 22464206.53 | 22464206.73 | 22464206.96 | 0.0136 | 0.0080 |
| Uranus | 56793-10-26 12:29 G | 22464575.79 | 22464576.02 | 22464576.26 | 0.0136 | 0.0035 |
| Uranus | 56794-10-30 23:31 G | 22464945.23 | 22464945.48 | 22464945.74 | 0.0135 | 0.0037 |
| Jupiter | 56795-03-19 22:05 G | 22465085.38 | 22465085.42 | 22465085.47 | 0.0522 | 0.0510 |
| Uranus | 56795-11-04 04:19 G | 22465314.50 | 22465314.68 | 22465314.88 | 0.0135 | 0.0083 |
| Saturn | 56798-02-24 02:10 G | 22466157.34 | 22466157.59 | 22466157.84 | 0.0293 | 0.0021 |
| Neptune | 56799-03-22 17:02 G | 22466549.19 | 22466549.21 | 22466549.29 | 0.0089 | 0.0087 |
| Neptune | 56800-03-23 23:31 G | 22466916.27 | 22466916.48 | 22466916.71 | 0.0089 | 0.0047 |
| Neptune | 56801-03-26 18:29 G | 22467284.03 | 22467284.27 | 22467284.52 | 0.0089 | 0.0026 |
| Jupiter | 56801-09-28 00:00 G | 22467469.27 | 22467469.50 | 22467469.72 | 0.0508 | 0.0028 |
| Neptune | 56802-03-28 23:31 G | 22467651.24 | 22467651.48 | 22467651.74 | 0.0089 | 0.0014 |
| Neptune | 56803-03-31 18:00 G | 22468019.01 | 22468019.25 | 22468019.50 | 0.0089 | 0.0034 |
| Pluto | 56804-02-07 03:22 G | 22468331.40 | 22468331.64 | 22468331.90 | 0.0066 | 0.0016 |
| Neptune | 56804-04-02 00:58 G | 22468386.42 | 22468386.54 | 22468386.70 | 0.0089 | 0.0074 |
| Jupiter | 56807-03-25 02:24 G | 22469473.39 | 22469473.60 | 22469473.82 | 0.0520 | 0.0153 |
| Saturn | 56812-08-31 20:53 G | 22471460.19 | 22471460.37 | 22471460.56 | 0.0267 | 0.0175 |
| Jupiter | 56813-10-02 19:55 G | 22471857.13 | 22471857.33 | 22471857.53 | 0.0510 | 0.0286 |
| Jupiter | 56819-03-29 18:14 G | 22473861.02 | 22473861.26 | 22473861.49 | 0.0518 | 0.0133 |
| Saturn | 56827-02-17 22:34 G | 22476743.39 | 22476743.44 | 22476743.51 | 0.0292 | 0.0282 |
| Jupiter | 56831-04-03 15:36 G | 22478249.01 | 22478249.15 | 22478249.29 | 0.0516 | 0.0403 |
| Uranus | 56836-04-20 23:02 G | 22480093.26 | 22480093.46 | 22480093.68 | 0.0142 | 0.0085 |
| Uranus | 56837-04-25 20:38 G | 22480463.12 | 22480463.36 | 22480463.61 | 0.0143 | 0.0015 |
| Uranus | 56838-04-30 22:48 G | 22480833.21 | 22480833.45 | 22480833.71 | 0.0143 | 0.0046 |
| Uranus | 56839-05-05 18:58 G | 22481203.20 | 22481203.29 | 22481203.41 | 0.0143 | 0.0129 |
| Saturn | 56841-08-27 08:38 G | 22482047.62 | 22482047.86 | 22482048.11 | 0.0268 | 0.0042 |
| Saturn | 56857-02-24 21:36 G | 22487708.17 | 22487708.40 | 22487708.65 | 0.0292 | 0.0082 |
| Saturn | 56871-09-02 23:46 G | 22493011.38 | 22493011.49 | 22493011.63 | 0.0267 | 0.0228 |
| Jupiter | 56872-09-22 19:41 G | 22493397.17 | 22493397.32 | 22493397.47 | 0.0506 | 0.0378 |
| Uranus | 56876-10-22 12:43 G | 22494887.85 | 22494888.03 | 22494888.25 | 0.0136 | 0.0088 |
| Uranus | 56877-10-26 21:07 G | 22495257.14 | 22495257.38 | 22495257.63 | 0.0136 | 0.0018 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 56878-10-31 06:58 G | 22495626.54 | 22495626.79 | 22495627.05 | 0.0135 | 0.0027 |
| Uranus | 56879-11-04 13:26 G | 22495995.91 | 22495996.06 | 22495996.24 | 0.0135 | 0.0096 |
| Neptune | 56882-09-24 08:10 G | 22497050.73 | 22497050.84 | 22497051.01 | 0.0089 | 0.0074 |
| Neptune | 56883-09-26 13:12 G | 22497417.85 | 22497418.05 | 22497418.26 | 0.0089 | 0.0050 |
| Jupiter | 56884-09-27 12:58 G | 22497784.81 | 22497785.04 | 22497785.28 | 0.0507 | 0.0050 |
| Neptune | 56884-09-28 06:43 G | 22497785.52 | 22497785.78 | 22497786.04 | 0.0089 | 0.0014 |
| Neptune | 56885-09-30 13:12 G | 22498152.81 | 22498153.05 | 22498153.31 | 0.0089 | 0.0010 |
| Saturn | 56886-02-19 01:41 G | 22498294.42 | 22498294.57 | 22498294.73 | 0.0292 | 0.0223 |
| Neptune | 56886-10-03 03:07 G | 22498520.41 | 22498520.63 | 22498520.86 | 0.0089 | 0.0046 |
| Neptune | 56887-10-05 14:10 G | 22498887.96 | 22498888.09 | 22498888.26 | 0.0089 | 0.0071 |
| Jupiter | 56890-03-24 04:34 G | 22499788.46 | 22499788.69 | 22499788.91 | 0.0521 | 0.0196 |
| Pluto | 56891-08-12 01:41 G | 22500294.32 | 22500294.57 | 22500294.84 | 0.0078 | 0.0021 |
| Jupiter | 56896-10-01 17:17 G | 22502172.02 | 22502172.22 | 22502172.43 | 0.0509 | 0.0234 |
| Saturn | 56900-08-29 03:22 G | 22503598.38 | 22503598.64 | 22503598.89 | 0.0268 | 0.0009 |
| Jupiter | 56902-03-30 04:48 G | 22504176.48 | 22504176.70 | 22504176.93 | 0.0519 | 0.0095 |
| Jupiter | 56908-10-07 17:02 G | 22506560.15 | 22506560.21 | 22506560.28 | 0.0511 | 0.0487 |
| Jupiter | 56914-04-04 07:55 G | 22508564.66 | 22508564.83 | 22508564.99 | 0.0517 | 0.0370 |
| Saturn | 56916-02-27 19:41 G | 22509259.11 | 22509259.32 | 22509259.53 | 0.0292 | 0.0140 |
| Uranus | 56920-04-22 08:10 G | 22510774.65 | 22510774.84 | 22510775.07 | 0.0142 | 0.0085 |
| Uranus | 56921-04-27 07:41 G | 22511144.57 | 22511144.82 | 22511145.06 | 0.0143 | 0.0015 |
| Uranus | 56922-05-02 08:24 G | 22511514.62 | 22511514.85 | 22511515.10 | 0.0143 | 0.0062 |
| Uranus | 56923-05-07 06:00 G | 22511884.62 | 22511884.75 | 22511884.89 | 0.0143 | 0.0119 |
| Saturn | 56929-08-23 19:12 G | 22514185.20 | 22514185.30 | 22514185.41 | 0.0269 | 0.0240 |
| Saturn | 56945-02-21 00:43 G | 22519845.33 | 22519845.53 | 22519845.74 | 0.0292 | 0.0165 |
| Jupiter | 56955-09-24 03:50 G | 22523712.53 | 22523712.66 | 22523712.80 | 0.0505 | 0.0416 |
| Saturn | 56959-08-30 21:36 G | 22525149.16 | 22525149.40 | 22525149.65 | 0.0268 | 0.0056 |
| Uranus | 56960-10-23 22:19 G | 22525569.22 | 22525569.43 | 22525569.66 | 0.0136 | 0.0074 |
| Uranus | 56961-10-28 07:55 G | 22525938.60 | 22525938.83 | 22525939.08 | 0.0136 | 0.0028 |
| Uranus | 56962-11-01 16:05 G | 22526307.93 | 22526308.17 | 22526308.42 | 0.0135 | 0.0044 |
| Uranus | 56963-11-06 00:00 G | 22526677.31 | 22526677.50 | 22526677.68 | 0.0135 | 0.0089 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 56964-03-24 16:19 G | 22526817.01 | 22526817.18 | 22526817.36 | 0.0089 | 0.0065 |
| Neptune | 56965-03-26 21:50 G | 22527184.18 | 22527184.41 | 22527184.64 | 0.0089 | 0.0037 |
| Neptune | 56966-03-29 15:22 G | 22527551.88 | 22527552.14 | 22527552.41 | 0.0089 | 0.0006 |
| Neptune | 56967-03-31 23:17 G | 22527919.24 | 22527919.47 | 22527919.72 | 0.0089 | 0.0024 |
| Jupiter | 56967-09-28 12:29 G | 22528099.79 | 22528100.02 | 22528100.24 | 0.0507 | 0.0091 |
| Neptune | 56968-04-02 12:29 G | 22528286.81 | 22528287.02 | 22528287.23 | 0.0089 | 0.0055 |
| Neptune | 56969-04-05 01:26 G | 22528654.49 | 22528654.56 | 22528654.62 | 0.0089 | 0.0085 |
| Jupiter | 56973-03-24 15:50 G | 22530103.96 | 22530104.16 | 22530104.36 | 0.0522 | 0.0234 |
| Saturn | 56975-03-01 00:29 G | 22530810.36 | 22530810.52 | 22530810.70 | 0.0292 | 0.0199 |
| Jupiter | 56979-10-03 11:46 G | 22532487.78 | 22532487.99 | 22532488.20 | 0.0509 | 0.0203 |
| Jupiter | 56985-03-29 18:29 G | 22534492.03 | 22534492.27 | 22534492.51 | 0.0519 | 0.0050 |
| Saturn | 56988-08-24 19:55 G | 22535736.18 | 22535736.33 | 22535736.51 | 0.0269 | 0.0195 |
| Jupiter | 56991-10-07 21:36 G | 22536875.30 | 22536875.40 | 22536875.51 | 0.0511 | 0.0459 |
| Jupiter | 56997-04-03 06:29 G | 22538879.60 | 22538879.77 | 22538879.95 | 0.0517 | 0.0327 |

58TH MILLENNIUM CE

This is a list of transits of Moon in the 58th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Saturn | 57004-02-23 19:41 G | 22541396.09 | 22541396.32 | 22541396.56 | 0.0291 | 0.0109 | | |
| Uranus | 57004-04-23 16:48 G | 22541455.99 | 22541456.20 | 22541456.44 | 0.0142 | 0.0075 | | |
| Uranus | 57005-04-28 17:31 G | 22541825.98 | 22541826.23 | 22541826.48 | 0.0143 | 0.0008 | | |
| Uranus | 57006-05-03 17:02 G | 22542195.97 | 22542196.21 | 22542196.46 | 0.0143 | 0.0055 | | |
| Uranus | 57007-05-08 15:50 G | 22542566.11 | 22542566.16 | 22542566.24 | 0.0143 | 0.0137 | | |

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| Saturn | 57018-09-01 21:36 G | 22546700.19 | 22546700.40 | 22546700.62 | 0.0268 | 0.0107 |
| Saturn | 57034-03-03 05:46 G | 22552361.65 | 22552361.74 | 22552361.86 | 0.0292 | 0.0260 |
| Jupiter | 57038-09-24 07:55 G | 22554027.73 | 22554027.83 | 22554027.94 | 0.0504 | 0.0444 |
| Mars | 57039-01-25 20:38 G | 22554151.17 | 22554151.36 | 22554151.55 | 0.1655 | 0.0186 |
| Uranus | 57043-10-22 00:14 G | 22555881.47 | 22555881.51 | 22555881.58 | 0.0136 | 0.0132 |
| Uranus | 57044-10-25 07:12 G | 22556250.61 | 22556250.80 | 22556251.03 | 0.0136 | 0.0079 |
| Uranus | 57045-10-29 18:14 G | 22556620.02 | 22556620.26 | 22556620.50 | 0.0135 | 0.0011 |
| Neptune | 57046-09-25 12:00 G | 22556950.98 | 22556951.00 | 22556951.02 | 0.0089 | 0.0088 |
| Uranus | 57046-11-03 01:12 G | 22556989.30 | 22556989.55 | 22556989.81 | 0.0135 | 0.0033 |
| Saturn | 57047-08-27 16:19 G | 22557286.97 | 22557287.18 | 22557287.41 | 0.0269 | 0.0143 |
| Neptune | 57047-09-28 04:19 G | 22557318.53 | 22557318.68 | 22557318.88 | 0.0089 | 0.0066 |
| Uranus | 57047-11-07 10:05 G | 22557358.79 | 22557358.92 | 22557359.10 | 0.0135 | 0.0104 |
| Neptune | 57048-09-29 12:43 G | 22557685.80 | 22557686.03 | 22557686.27 | 0.0089 | 0.0028 |
| Neptune | 57049-10-02 01:26 G | 22558053.29 | 22558053.56 | 22558053.83 | 0.0089 | 0.0005 |
| Pluto | 57050-02-10 06:58 G | 22558184.56 | 22558184.79 | 22558185.04 | 0.0066 | 0.0019 |
| Jupiter | 57050-09-29 06:43 G | 22558415.55 | 22558415.78 | 22558416.00 | 0.0507 | 0.0112 |
| Neptune | 57050-10-04 13:26 G | 22558420.84 | 22558421.06 | 22558421.30 | 0.0089 | 0.0033 |
| Neptune | 57051-10-06 20:53 G | 22558788.19 | 22558788.37 | 22558788.60 | 0.0089 | 0.0055 |
| Jupiter | 57056-03-25 00:14 G | 22560419.31 | 22560419.51 | 22560419.71 | 0.0522 | 0.0279 |
| Jupiter | 57062-10-03 14:10 G | 22562802.87 | 22562803.09 | 22562803.31 | 0.0508 | 0.0169 |
| Saturn | 57063-02-24 21:07 G | 22562947.14 | 22562947.38 | 22562947.62 | 0.0291 | 0.0047 |
| Jupiter | 57068-03-29 16:05 G | 22564806.93 | 22564807.17 | 22564807.40 | 0.0520 | 0.0009 |
| Jupiter | 57074-10-08 07:12 G | 22567190.68 | 22567190.80 | 22567190.94 | 0.0510 | 0.0410 |
| Saturn | 57077-09-03 00:58 G | 22568251.35 | 22568251.54 | 22568251.74 | 0.0269 | 0.0158 |
| Jupiter | 57080-04-03 21:22 G | 22569195.21 | 22569195.39 | 22569195.59 | 0.0518 | 0.0290 |
| Uranus | 57087-04-20 06:14 G | 22571767.72 | 22571767.76 | 22571767.85 | 0.0142 | 0.0137 |
| Uranus | 57088-04-24 01:41 G | 22572137.35 | 22572137.57 | 22572137.79 | 0.0143 | 0.0079 |
| Uranus | 57089-04-29 03:36 G | 22572507.41 | 22572507.65 | 22572507.90 | 0.0143 | 0.0007 |
| Uranus | 57090-05-04 01:41 G | 22572877.35 | 22572877.57 | 22572877.82 | 0.0143 | 0.0068 |
| Uranus | 57091-05-09 02:10 G | 22573247.49 | 22573247.59 | 22573247.72 | 0.0143 | 0.0126 |

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| Saturn | 57106-08-29 12:00 G | 22578837.77 | 22578838.00 | 22578838.24 | 0.0269 | 0.0089 |
| Jupiter | 57121-09-25 00:29 G | 22584343.45 | 22584343.52 | 22584343.61 | 0.0504 | 0.0469 |
| Saturn | 57122-02-27 06:29 G | 22584498.53 | 22584498.77 | 22584499.00 | 0.0291 | 0.0020 |
| Uranus | 57127-10-23 12:43 G | 22586562.96 | 22586563.03 | 22586563.11 | 0.0136 | 0.0130 |
| Neptune | 57128-03-25 18:29 G | 22586717.23 | 22586717.27 | 22586717.37 | 0.0089 | 0.0086 |
| Uranus | 57128-10-26 18:29 G | 22586932.06 | 22586932.27 | 22586932.51 | 0.0136 | 0.0067 |
| Neptune | 57129-03-28 11:46 G | 22587084.76 | 22587084.99 | 22587085.22 | 0.0089 | 0.0046 |
| Uranus | 57129-10-31 06:29 G | 22587301.53 | 22587301.77 | 22587302.02 | 0.0135 | 0.0019 |
| Neptune | 57130-03-30 21:07 G | 22587452.15 | 22587452.38 | 22587452.63 | 0.0089 | 0.0025 |
| Uranus | 57130-11-04 11:46 G | 22587670.76 | 22587670.99 | 22587671.25 | 0.0135 | 0.0051 |
| Neptune | 57131-04-02 09:36 G | 22587819.64 | 22587819.90 | 22587820.17 | 0.0089 | 0.0015 |
| Uranus | 57131-11-08 21:50 G | 22588040.26 | 22588040.41 | 22588040.60 | 0.0135 | 0.0095 |
| Neptune | 57132-04-03 23:31 G | 22588187.27 | 22588187.48 | 22588187.73 | 0.0089 | 0.0037 |
| Neptune | 57133-04-06 07:12 G | 22588554.68 | 22588554.80 | 22588554.96 | 0.0089 | 0.0075 |
| Jupiter | 57133-09-29 04:05 G | 22588730.44 | 22588730.67 | 22588730.89 | 0.0505 | 0.0161 |
| Saturn | 57136-09-05 01:41 G | 22589802.43 | 22589802.57 | 22589802.73 | 0.0269 | 0.0214 |
| Pluto | 57137-08-15 19:41 G | 22590147.07 | 22590147.32 | 22590147.58 | 0.0078 | 0.0019 |
| Jupiter | 57139-03-25 21:07 G | 22590734.21 | 22590734.38 | 22590734.56 | 0.0523 | 0.0335 |
| Jupiter | 57145-10-03 23:31 G | 22593118.26 | 22593118.48 | 22593118.70 | 0.0507 | 0.0115 |
| Saturn | 57151-02-21 14:24 G | 22595085.01 | 22595085.10 | 22595085.21 | 0.0290 | 0.0264 |
| Jupiter | 57151-03-31 04:48 G | 22595122.47 | 22595122.70 | 22595122.93 | 0.0521 | 0.0052 |
| Jupiter | 57157-10-08 11:02 G | 22597505.79 | 22597505.96 | 22597506.13 | 0.0510 | 0.0363 |
| Jupiter | 57163-04-04 20:24 G | 22599510.14 | 22599510.35 | 22599510.56 | 0.0519 | 0.0248 |
| Saturn | 57165-08-30 15:50 G | 22600388.92 | 22600389.16 | 22600389.40 | 0.0269 | 0.0030 |
| Uranus | 57172-04-25 08:53 G | 22602818.65 | 22602818.87 | 22602819.11 | 0.0143 | 0.0067 |
| Uranus | 57173-04-30 12:29 G | 22603188.77 | 22603189.02 | 22603189.26 | 0.0143 | 0.0004 |
| Uranus | 57174-05-05 09:07 G | 22603558.66 | 22603558.88 | 22603559.13 | 0.0143 | 0.0063 |
| Uranus | 57175-05-10 11:17 G | 22603928.97 | 22603928.97 | 22603929.00 | 0.0143 | 0.0143 |
| Saturn | 57181-02-28 19:26 G | 22606050.08 | 22606050.31 | 22606050.54 | 0.0291 | 0.0096 |
| Saturn | 57194-08-25 23:17 G | 22610976.41 | 22610976.47 | 22610976.55 | 0.0270 | 0.0260 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 57210-02-22 22:34 G | 22616636.26 | 22616636.44 | 22616636.64 | 0.0290 | 0.0186 |
| Neptune | 57211-09-28 10:48 G | 22617218.84 | 22617218.95 | 22617219.10 | 0.0089 | 0.0075 |
| Uranus | 57211-10-23 23:46 G | 22617244.40 | 22617244.49 | 22617244.59 | 0.0136 | 0.0124 |
| Neptune | 57212-09-29 22:05 G | 22617586.21 | 22617586.42 | 22617586.66 | 0.0089 | 0.0048 |
| Uranus | 57212-10-27 04:19 G | 22617613.47 | 22617613.68 | 22617613.92 | 0.0136 | 0.0069 |
| Neptune | 57213-10-02 11:46 G | 22617953.76 | 22617953.99 | 22617954.25 | 0.0089 | 0.0015 |
| Uranus | 57213-10-31 17:31 G | 22617982.99 | 22617983.23 | 22617983.48 | 0.0135 | 0.0003 |
| Neptune | 57214-10-04 18:43 G | 22618321.03 | 22618321.28 | 22618321.55 | 0.0089 | 0.0012 |
| Uranus | 57214-11-04 22:05 G | 22618352.18 | 22618352.42 | 22618352.67 | 0.0135 | 0.0042 |
| Neptune | 57215-10-07 12:14 G | 22618688.81 | 22618689.01 | 22618689.24 | 0.0089 | 0.0046 |
| Uranus | 57215-11-09 09:50 G | 22618721.78 | 22618721.91 | 22618722.05 | 0.0135 | 0.0112 |
| Jupiter | 57216-09-28 14:24 G | 22619045.89 | 22619046.10 | 22619046.31 | 0.0505 | 0.0207 |
| Neptune | 57216-10-08 16:48 G | 22619056.06 | 22619056.20 | 22619056.36 | 0.0089 | 0.0071 |
| Jupiter | 57222-03-25 09:36 G | 22621049.74 | 22621049.90 | 22621050.06 | 0.0523 | 0.0380 |
| Saturn | 57224-09-01 02:10 G | 22621940.35 | 22621940.59 | 22621940.83 | 0.0269 | 0.0036 |
| Jupiter | 57228-10-03 01:55 G | 22623433.34 | 22623433.58 | 22623433.82 | 0.0507 | 0.0065 |
| Jupiter | 57234-03-29 22:34 G | 22625437.21 | 22625437.44 | 22625437.68 | 0.0521 | 0.0106 |
| Saturn | 57240-03-02 07:26 G | 22627601.62 | 22627601.81 | 22627602.02 | 0.0292 | 0.0177 |
| Jupiter | 57240-10-07 15:50 G | 22627820.99 | 22627821.16 | 22627821.34 | 0.0509 | 0.0318 |
| Mars | 57244-01-26 07:41 G | 22629026.69 | 22629026.82 | 22629026.96 | 0.1649 | 0.1077 |
| Jupiter | 57246-04-04 01:12 G | 22629825.34 | 22629825.55 | 22629825.76 | 0.0519 | 0.0197 |
| Saturn | 57253-08-27 01:12 G | 22632527.38 | 22632527.55 | 22632527.73 | 0.0270 | 0.0195 |
| Uranus | 57255-04-22 00:29 G | 22633130.42 | 22633130.52 | 22633130.63 | 0.0142 | 0.0129 |
| Uranus | 57256-04-25 17:02 G | 22633500.00 | 22633500.21 | 22633500.45 | 0.0142 | 0.0074 |
| Uranus | 57257-04-30 21:50 G | 22633870.17 | 22633870.41 | 22633870.67 | 0.0143 | 0.0004 |
| Uranus | 57258-05-05 17:17 G | 22634240.01 | 22634240.22 | 22634240.46 | 0.0143 | 0.0073 |
| Uranus | 57259-05-10 20:38 G | 22634610.30 | 22634610.36 | 22634610.48 | 0.0143 | 0.0134 |
| Saturn | 57269-02-24 14:53 G | 22638187.90 | 22638188.12 | 22638188.35 | 0.0290 | 0.0103 |
| Saturn | 57283-09-03 11:17 G | 22643491.75 | 22643491.97 | 22643492.21 | 0.0269 | 0.0102 |
| Neptune | 57293-03-27 18:43 G | 22646985.11 | 22646985.28 | 22646985.46 | 0.0089 | 0.0063 |

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| Neptune | 57294-03-30 05:31 G | 22647352.48 | 22647352.73 | 22647352.97 | 0.0089 | 0.0037 |
| Neptune | 57295-04-01 20:38 G | 22647720.11 | 22647720.36 | 22647720.61 | 0.0089 | 0.0003 |
| Uranus | 57295-10-24 11:17 G | 22647925.86 | 22647925.97 | 22647926.10 | 0.0136 | 0.0118 |
| Pluto | 57296-02-13 03:50 G | 22648037.45 | 22648037.66 | 22648037.91 | 0.0066 | 0.0031 |
| Neptune | 57296-04-03 03:07 G | 22648087.38 | 22648087.63 | 22648087.89 | 0.0089 | 0.0023 |
| Uranus | 57296-10-27 15:07 G | 22648294.91 | 22648295.13 | 22648295.38 | 0.0136 | 0.0059 |
| Pluto | 57297-02-13 13:26 G | 22648404.06 | 22648404.06 | 22648404.09 | 0.0066 | 0.0066 |
| Neptune | 57297-04-05 21:22 G | 22648455.22 | 22648455.39 | 22648455.61 | 0.0089 | 0.0058 |
| Uranus | 57297-11-01 05:31 G | 22648664.48 | 22648664.73 | 22648664.98 | 0.0135 | 0.0009 |
| Neptune | 57298-04-08 02:10 G | 22648822.54 | 22648822.59 | 22648822.69 | 0.0089 | 0.0085 |
| Uranus | 57298-11-05 08:38 G | 22649033.64 | 22649033.86 | 22649034.11 | 0.0135 | 0.0060 |
| Saturn | 57299-03-04 18:00 G | 22649153.14 | 22649153.25 | 22649153.37 | 0.0292 | 0.0259 |
| Jupiter | 57299-09-28 15:50 G | 22649360.96 | 22649361.16 | 22649361.38 | 0.0505 | 0.0252 |
| Uranus | 57299-11-09 21:07 G | 22649403.24 | 22649403.38 | 22649403.55 | 0.0135 | 0.0103 |
| Jupiter | 57305-03-24 23:17 G | 22651364.35 | 22651364.47 | 22651364.59 | 0.0524 | 0.0446 |
| Jupiter | 57311-10-04 04:19 G | 22653748.46 | 22653748.68 | 22653748.90 | 0.0506 | 0.0006 |
| Saturn | 57312-08-29 07:41 G | 22654078.62 | 22654078.82 | 22654079.05 | 0.0270 | 0.0131 |
| Jupiter | 57317-03-30 01:12 G | 22655752.34 | 22655752.55 | 22655752.77 | 0.0522 | 0.0177 |
| Mars | 57323-01-29 03:36 G | 22657883.52 | 22657883.65 | 22657883.79 | 0.1652 | 0.1038 |
| Jupiter | 57323-10-08 20:53 G | 22658136.17 | 22658136.37 | 22658136.58 | 0.0508 | 0.0257 |
| Saturn | 57328-02-28 11:31 G | 22659739.75 | 22659739.98 | 22659740.22 | 0.0290 | 0.0018 |
| Jupiter | 57329-04-03 21:07 G | 22660140.15 | 22660140.38 | 22660140.62 | 0.0520 | 0.0137 |
| Uranus | 57339-04-23 10:05 G | 22663811.89 | 22663811.92 | 22663811.99 | 0.0142 | 0.0139 |
| Uranus | 57340-04-27 02:24 G | 22664181.36 | 22664181.60 | 22664181.84 | 0.0142 | 0.0057 |
| Jupiter | 57341-04-08 18:43 G | 22664528.23 | 22664528.28 | 22664528.34 | 0.0518 | 0.0502 |
| Uranus | 57341-05-02 07:41 G | 22664551.57 | 22664551.82 | 22664552.07 | 0.0143 | 0.0004 |
| Uranus | 57342-05-07 02:24 G | 22664921.37 | 22664921.60 | 22664921.83 | 0.0143 | 0.0072 |
| Saturn | 57342-09-05 18:00 G | 22665043.07 | 22665043.25 | 22665043.46 | 0.0269 | 0.0172 |
| Saturn | 57371-08-31 20:24 G | 22675630.12 | 22675630.35 | 22675630.59 | 0.0270 | 0.0061 |
| Neptune | 57375-09-28 19:41 G | 22677119.29 | 22677119.32 | 22677119.38 | 0.0089 | 0.0087 |

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| Neptune | 57376-09-30 10:05 G | 22677486.78 | 22677486.92 | 22677487.11 | 0.0089 | 0.0067 |
| Neptune | 57377-10-02 16:05 G | 22677853.93 | 22677854.17 | 22677854.43 | 0.0089 | 0.0028 |
| Neptune | 57378-10-05 10:19 G | 22678221.67 | 22678221.93 | 22678222.18 | 0.0089 | 0.0006 |
| Neptune | 57379-10-07 14:10 G | 22678588.87 | 22678589.09 | 22678589.34 | 0.0089 | 0.0034 |
| Uranus | 57379-10-25 21:07 G | 22678607.28 | 22678607.38 | 22678607.53 | 0.0136 | 0.0116 |
| Neptune | 57380-10-09 07:41 G | 22678956.64 | 22678956.82 | 22678957.05 | 0.0089 | 0.0055 |
| Uranus | 57380-10-29 00:43 G | 22678976.31 | 22678976.53 | 22678976.77 | 0.0136 | 0.0058 |
| Uranus | 57381-11-02 15:50 G | 22679345.92 | 22679346.16 | 22679346.41 | 0.0135 | 0.0006 |
| Jupiter | 57382-09-28 17:31 G | 22679676.06 | 22679676.23 | 22679676.41 | 0.0504 | 0.0305 |
| Uranus | 57382-11-06 18:29 G | 22679715.04 | 22679715.27 | 22679715.52 | 0.0135 | 0.0051 |
| Pluto | 57383-08-18 15:50 G | 22679999.92 | 22680000.16 | 22680000.42 | 0.0078 | 0.0008 |
| Uranus | 57383-11-11 08:10 G | 22680084.76 | 22680084.84 | 22680084.96 | 0.0135 | 0.0122 |
| Saturn | 57387-03-02 05:31 G | 22681291.49 | 22681291.73 | 22681291.97 | 0.0291 | 0.0069 |
| Jupiter | 57388-03-24 02:10 G | 22681679.57 | 22681679.59 | 22681679.63 | 0.0525 | 0.0520 |
| Jupiter | 57394-10-03 06:43 G | 22684063.54 | 22684063.78 | 22684064.02 | 0.0506 | 0.0057 |
| Jupiter | 57400-03-29 23:31 G | 22686067.27 | 22686067.48 | 22686067.70 | 0.0523 | 0.0234 |
| Saturn | 57401-09-08 01:41 G | 22686594.48 | 22686594.57 | 22686594.68 | 0.0269 | 0.0244 |
| Jupiter | 57406-10-08 15:07 G | 22688450.92 | 22688451.13 | 22688451.34 | 0.0508 | 0.0203 |
| Mars | 57408-08-01 17:17 G | 22689114.05 | 22689114.22 | 22689114.38 | 0.1876 | 0.1155 |
| Jupiter | 57412-04-03 21:07 G | 22690455.15 | 22690455.38 | 22690455.60 | 0.0520 | 0.0083 |
| Saturn | 57416-02-24 23:02 G | 22691877.33 | 22691877.46 | 22691877.61 | 0.0290 | 0.0230 |
| Uranus | 57423-04-24 20:10 G | 22694493.21 | 22694493.34 | 22694493.49 | 0.0142 | 0.0118 |
| Jupiter | 57424-04-08 20:53 G | 22694843.25 | 22694843.37 | 22694843.50 | 0.0518 | 0.0440 |
| Uranus | 57424-04-28 12:14 G | 22694862.78 | 22694863.01 | 22694863.24 | 0.0142 | 0.0065 |
| Uranus | 57425-05-03 18:29 G | 22695233.02 | 22695233.27 | 22695233.52 | 0.0143 | 0.0014 |
| Uranus | 57426-05-08 12:14 G | 22695602.80 | 22695603.01 | 22695603.23 | 0.0143 | 0.0080 |
| Uranus | 57427-05-13 18:00 G | 22695973.24 | 22695973.25 | 22695973.28 | 0.0143 | 0.0143 |
| Saturn | 57430-09-03 10:48 G | 22697181.71 | 22697181.95 | 22697182.20 | 0.0269 | 0.0013 |
| Saturn | 57446-03-04 17:46 G | 22702843.04 | 22702843.24 | 22702843.47 | 0.0291 | 0.0153 |
| Neptune | 57457-03-29 00:14 G | 22706885.45 | 22706885.51 | 22706885.61 | 0.0089 | 0.0084 |

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| Neptune | 57458-03-31 17:31 G | 22707253.01 | 22707253.23 | 22707253.44 | 0.0089 | 0.0047 |
| Neptune | 57459-04-02 23:02 G | 22707620.23 | 22707620.46 | 22707620.73 | 0.0089 | 0.0025 |
| Saturn | 57459-08-29 07:55 G | 22707768.69 | 22707768.83 | 22707768.99 | 0.0270 | 0.0216 |
| Neptune | 57460-04-04 18:29 G | 22707988.02 | 22707988.27 | 22707988.53 | 0.0089 | 0.0014 |
| Neptune | 57461-04-06 23:31 G | 22708355.26 | 22708355.48 | 22708355.72 | 0.0089 | 0.0037 |
| Neptune | 57462-04-09 17:46 G | 22708723.11 | 22708723.24 | 22708723.38 | 0.0089 | 0.0075 |
| Uranus | 57463-10-27 09:07 G | 22709288.73 | 22709288.88 | 22709289.04 | 0.0136 | 0.0107 |
| Uranus | 57464-10-30 12:14 G | 22709657.77 | 22709658.01 | 22709658.24 | 0.0136 | 0.0050 |
| Jupiter | 57465-09-28 20:38 G | 22709991.20 | 22709991.36 | 22709991.53 | 0.0503 | 0.0358 |
| Uranus | 57465-11-04 03:50 G | 22710027.41 | 22710027.66 | 22710027.91 | 0.0135 | 0.0002 |
| Uranus | 57466-11-08 05:31 G | 22710396.53 | 22710396.73 | 22710396.97 | 0.0135 | 0.0069 |
| Uranus | 57467-11-12 19:41 G | 22710766.21 | 22710766.32 | 22710766.48 | 0.0135 | 0.0112 |
| Saturn | 57475-02-26 16:05 G | 22713428.97 | 22713429.17 | 22713429.38 | 0.0290 | 0.0149 |
| Jupiter | 57477-10-03 05:02 G | 22714378.49 | 22714378.71 | 22714378.94 | 0.0505 | 0.0104 |
| Jupiter | 57483-03-29 22:34 G | 22716382.26 | 22716382.44 | 22716382.63 | 0.0523 | 0.0305 |
| Saturn | 57489-09-04 19:41 G | 22718733.09 | 22718733.32 | 22718733.57 | 0.0269 | 0.0083 |
| Jupiter | 57489-10-08 02:24 G | 22718766.38 | 22718766.60 | 22718766.83 | 0.0507 | 0.0158 |
| Jupiter | 57495-04-03 19:55 G | 22720770.09 | 22720770.33 | 22720770.57 | 0.0521 | 0.0015 |
| Jupiter | 57501-10-13 08:24 G | 22723153.76 | 22723153.85 | 22723153.94 | 0.0509 | 0.0470 |
| Saturn | 57505-03-07 03:07 G | 22724394.48 | 22724394.63 | 22724394.78 | 0.0291 | 0.0232 |
| Jupiter | 57507-04-09 12:43 G | 22725157.88 | 22725158.03 | 22725158.19 | 0.0519 | 0.0379 |
| Uranus | 57507-04-26 08:10 G | 22725174.74 | 22725174.84 | 22725174.95 | 0.0142 | 0.0128 |
| Uranus | 57508-04-29 23:46 G | 22725544.25 | 22725544.49 | 22725544.73 | 0.0142 | 0.0046 |
| Uranus | 57509-05-05 06:00 G | 22725914.50 | 22725914.75 | 22725915.00 | 0.0143 | 0.0013 |
| Uranus | 57510-05-09 23:02 G | 22726284.26 | 22726284.46 | 22726284.68 | 0.0143 | 0.0084 |
| Saturn | 57518-08-31 19:41 G | 22729320.13 | 22729320.32 | 22729320.53 | 0.0270 | 0.0144 |
| Mars | 57528-01-30 10:19 G | 22732758.73 | 22732758.93 | 22732759.12 | 0.1645 | 0.0263 |
| Saturn | 57534-03-01 06:58 G | 22734980.56 | 22734980.79 | 22734981.02 | 0.0291 | 0.0070 |
| Neptune | 57540-10-01 11:46 G | 22737386.90 | 22737386.99 | 22737387.15 | 0.0089 | 0.0078 |
| Neptune | 57541-10-04 06:29 G | 22737754.57 | 22737754.77 | 22737755.00 | 0.0089 | 0.0048 |

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| Pluto | 57542-02-16 15:07 G | 22737890.01 | 22737890.13 | 22737890.32 | 0.0066 | 0.0053 |
| Neptune | 57542-10-06 11:17 G | 22738121.72 | 22738121.97 | 22738122.22 | 0.0089 | 0.0016 |
| Pluto | 57543-02-18 11:02 G | 22738256.82 | 22738256.96 | 22738257.17 | 0.0066 | 0.0049 |
| Neptune | 57543-10-09 04:34 G | 22738489.43 | 22738489.69 | 22738489.95 | 0.0089 | 0.0012 |
| Neptune | 57544-10-10 11:17 G | 22738856.77 | 22738856.97 | 22738857.20 | 0.0089 | 0.0044 |
| Neptune | 57545-10-13 00:29 G | 22739224.39 | 22739224.52 | 22739224.71 | 0.0089 | 0.0072 |
| Uranus | 57547-10-28 20:38 G | 22739970.22 | 22739970.36 | 22739970.53 | 0.0136 | 0.0107 |
| Saturn | 57548-09-06 23:31 G | 22740284.27 | 22740284.48 | 22740284.69 | 0.0269 | 0.0153 |
| Jupiter | 57548-09-28 20:53 G | 22740306.24 | 22740306.37 | 22740306.51 | 0.0503 | 0.0401 |
| Uranus | 57548-10-31 23:17 G | 22740339.24 | 22740339.47 | 22740339.72 | 0.0136 | 0.0047 |
| Uranus | 57549-11-05 15:22 G | 22740708.90 | 22740709.14 | 22740709.40 | 0.0135 | 0.0016 |
| Uranus | 57550-11-09 17:02 G | 22741077.99 | 22741078.21 | 22741078.45 | 0.0135 | 0.0061 |
| Uranus | 57551-11-14 07:41 G | 22741447.78 | 22741447.82 | 22741447.90 | 0.0135 | 0.0131 |
| Jupiter | 57560-10-03 16:05 G | 22744693.95 | 22744694.17 | 22744694.40 | 0.0505 | 0.0152 |
| Jupiter | 57566-03-29 23:02 G | 22746697.29 | 22746697.46 | 22746697.63 | 0.0524 | 0.0369 |
| Jupiter | 57572-10-07 17:46 G | 22749081.01 | 22749081.24 | 22749081.47 | 0.0506 | 0.0096 |
| Saturn | 57577-09-02 08:24 G | 22750871.62 | 22750871.85 | 22750872.08 | 0.0270 | 0.0073 |
| Jupiter | 57578-04-03 19:55 G | 22751085.10 | 22751085.33 | 22751085.56 | 0.0522 | 0.0031 |
| Jupiter | 57584-10-12 14:24 G | 22753468.99 | 22753469.10 | 22753469.23 | 0.0509 | 0.0427 |
| Jupiter | 57590-04-09 01:12 G | 22755473.38 | 22755473.55 | 22755473.73 | 0.0520 | 0.0341 |
| Uranus | 57591-04-26 17:46 G | 22755856.10 | 22755856.24 | 22755856.43 | 0.0142 | 0.0109 |
| Uranus | 57592-04-30 10:05 G | 22756225.69 | 22756225.92 | 22756226.16 | 0.0143 | 0.0056 |
| Saturn | 57593-03-02 14:10 G | 22756531.84 | 22756532.09 | 22756532.34 | 0.0291 | 0.0002 |
| Uranus | 57593-05-05 16:48 G | 22756595.95 | 22756596.20 | 22756596.45 | 0.0143 | 0.0025 |
| Uranus | 57594-05-10 09:22 G | 22756965.71 | 22756965.89 | 22756966.11 | 0.0143 | 0.0089 |
| Saturn | 57607-09-09 04:19 G | 22761835.55 | 22761835.68 | 22761835.83 | 0.0269 | 0.0219 |
| Saturn | 57622-02-24 18:00 G | 22767118.23 | 22767118.25 | 22767118.30 | 0.0290 | 0.0287 |
| Neptune | 57622-03-31 18:43 G | 22767153.10 | 22767153.28 | 22767153.46 | 0.0089 | 0.0062 |
| Neptune | 57623-04-03 13:12 G | 22767520.84 | 22767521.05 | 22767521.31 | 0.0089 | 0.0039 |
| Neptune | 57624-04-04 18:58 G | 22767888.04 | 22767888.29 | 22767888.55 | 0.0089 | 0.0002 |

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| Neptune | 57625-04-07 12:14 G | 22768255.75 | 22768256.01 | 22768256.27 | 0.0089 | 0.0022 |
| Neptune | 57626-04-09 20:38 G | 22768623.18 | 22768623.36 | 22768623.56 | 0.0089 | 0.0058 |
| Neptune | 57627-04-12 09:36 G | 22768990.83 | 22768990.90 | 22768991.02 | 0.0089 | 0.0083 |
| Pluto | 57629-08-21 08:10 G | 22769852.64 | 22769852.84 | 22769853.08 | 0.0078 | 0.0044 |
| Jupiter | 57631-09-29 04:34 G | 22770621.60 | 22770621.69 | 22770621.79 | 0.0502 | 0.0457 |
| Uranus | 57631-10-29 09:50 G | 22770651.75 | 22770651.91 | 22770652.11 | 0.0136 | 0.0096 |
| Uranus | 57632-11-01 12:43 G | 22771020.79 | 22771021.03 | 22771021.28 | 0.0136 | 0.0041 |
| Uranus | 57633-11-06 05:02 G | 22771390.46 | 22771390.71 | 22771390.96 | 0.0135 | 0.0012 |
| Uranus | 57634-11-10 06:00 G | 22771759.56 | 22771759.75 | 22771759.97 | 0.0135 | 0.0078 |
| Uranus | 57635-11-14 20:53 G | 22772129.28 | 22772129.37 | 22772129.50 | 0.0135 | 0.0121 |
| Saturn | 57636-09-03 16:19 G | 22772422.94 | 22772423.18 | 22772423.43 | 0.0270 | 0.0011 |
| Jupiter | 57643-10-03 10:34 G | 22775008.73 | 22775008.94 | 22775009.15 | 0.0504 | 0.0210 |
| Jupiter | 57649-03-29 02:10 G | 22777012.45 | 22777012.59 | 22777012.72 | 0.0524 | 0.0416 |
| Saturn | 57652-03-03 14:24 G | 22778082.86 | 22778083.10 | 22778083.35 | 0.0291 | 0.0061 |
| Jupiter | 57655-10-08 07:41 G | 22779396.60 | 22779396.82 | 22779397.05 | 0.0506 | 0.0062 |
| Jupiter | 57661-04-03 07:26 G | 22781400.57 | 22781400.81 | 22781401.04 | 0.0522 | 0.0071 |
| Saturn | 57665-08-29 01:41 G | 22783009.52 | 22783009.57 | 22783009.64 | 0.0271 | 0.0262 |
| Jupiter | 57667-10-12 20:10 G | 22783784.19 | 22783784.34 | 22783784.49 | 0.0508 | 0.0395 |
| Jupiter | 57673-04-07 19:12 G | 22785788.11 | 22785788.30 | 22785788.50 | 0.0520 | 0.0288 |
| Uranus | 57675-04-27 05:17 G | 22786537.60 | 22786537.72 | 22786537.87 | 0.0142 | 0.0119 |
| Uranus | 57676-04-30 21:22 G | 22786907.15 | 22786907.39 | 22786907.64 | 0.0143 | 0.0037 |
| Uranus | 57677-05-06 03:36 G | 22787277.40 | 22787277.65 | 22787277.91 | 0.0143 | 0.0020 |
| Uranus | 57678-05-10 20:10 G | 22787647.16 | 22787647.34 | 22787647.55 | 0.0143 | 0.0094 |
| Saturn | 57681-02-26 01:26 G | 22788669.42 | 22788669.56 | 22788669.71 | 0.0290 | 0.0229 |
| Mars | 57692-08-01 06:00 G | 22792843.65 | 22792843.75 | 22792843.85 | 0.1883 | 0.1598 |
| Saturn | 57695-09-05 17:02 G | 22793973.96 | 22793974.21 | 22793974.46 | 0.0270 | 0.0052 |
| Neptune | 57704-10-02 02:38 G | 22797287.61 | 22797287.61 | 22797287.65 | 0.0089 | 0.0089 |
| Neptune | 57705-10-04 07:55 G | 22797654.68 | 22797654.83 | 22797655.00 | 0.0089 | 0.0068 |
| Neptune | 57706-10-07 00:14 G | 22798022.27 | 22798022.51 | 22798022.77 | 0.0089 | 0.0029 |
| Neptune | 57707-10-09 08:10 G | 22798389.60 | 22798389.84 | 22798390.09 | 0.0089 | 0.0008 |

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| Neptune | 57708-10-10 19:41 G | 22798757.09 | 22798757.32 | 22798757.59 | 0.0089 | 0.0032 |
| Neptune | 57709-10-13 08:38 G | 22799124.68 | 22799124.86 | 22799125.08 | 0.0089 | 0.0053 |
| Saturn | 57711-03-06 15:50 G | 22799633.94 | 22799634.16 | 22799634.38 | 0.0291 | 0.0117 |
| Jupiter | 57714-09-29 06:14 G | 22800936.74 | 22800936.76 | 22800936.80 | 0.0502 | 0.0497 |
| Uranus | 57715-10-30 23:31 G | 22801333.31 | 22801333.48 | 22801333.67 | 0.0136 | 0.0096 |
| Uranus | 57716-11-03 02:10 G | 22801702.35 | 22801702.59 | 22801702.83 | 0.0136 | 0.0035 |
| Uranus | 57717-11-07 18:14 G | 22802072.01 | 22802072.26 | 22802072.51 | 0.0135 | 0.0025 |
| Uranus | 57718-11-11 18:58 G | 22802441.09 | 22802441.29 | 22802441.51 | 0.0135 | 0.0072 |
| Saturn | 57724-08-31 06:58 G | 22804560.64 | 22804560.79 | 22804560.95 | 0.0270 | 0.0202 |
| Jupiter | 57726-10-04 03:07 G | 22805324.43 | 22805324.63 | 22805324.83 | 0.0504 | 0.0251 |
| Jupiter | 57732-03-29 11:02 G | 22807327.86 | 22807327.96 | 22807328.07 | 0.0525 | 0.0468 |
| Jupiter | 57738-10-08 13:12 G | 22809711.81 | 22809712.05 | 22809712.29 | 0.0506 | 0.0028 |
| Saturn | 57740-02-29 01:55 G | 22810220.38 | 22810220.58 | 22810220.78 | 0.0290 | 0.0174 |
| Jupiter | 57744-04-03 03:36 G | 22811715.42 | 22811715.65 | 22811715.88 | 0.0523 | 0.0116 |
| Jupiter | 57750-10-12 23:17 G | 22814099.31 | 22814099.47 | 22814099.64 | 0.0507 | 0.0345 |
| Saturn | 57754-09-07 13:41 G | 22815524.84 | 22815525.07 | 22815525.30 | 0.0270 | 0.0111 |
| Jupiter | 57756-04-08 10:34 G | 22816103.75 | 22816103.94 | 22816104.14 | 0.0521 | 0.0260 |
| Uranus | 57759-04-28 13:55 G | 22817218.90 | 22817219.08 | 22817219.27 | 0.0142 | 0.0101 |
| Uranus | 57760-05-02 06:29 G | 22817588.53 | 22817588.77 | 22817589.01 | 0.0143 | 0.0048 |
| Uranus | 57761-05-07 12:43 G | 22817958.78 | 22817959.03 | 22817959.28 | 0.0143 | 0.0033 |
| Uranus | 57762-05-12 05:17 G | 22818328.55 | 22818328.72 | 22818328.93 | 0.0143 | 0.0095 |
| Saturn | 57770-03-07 20:53 G | 22821185.19 | 22821185.37 | 22821185.57 | 0.0290 | 0.0172 |
| Saturn | 57783-09-02 10:34 G | 22826111.74 | 22826111.94 | 22826112.16 | 0.0271 | 0.0145 |
| Neptune | 57786-04-01 08:24 G | 22827053.78 | 22827053.85 | 22827053.94 | 0.0089 | 0.0084 |
| Neptune | 57787-04-03 14:24 G | 22827420.90 | 22827421.10 | 22827421.32 | 0.0089 | 0.0049 |
| Neptune | 57788-04-05 06:43 G | 22827788.54 | 22827788.78 | 22827789.05 | 0.0089 | 0.0025 |
| Pluto | 57789-02-19 21:22 G | 22828109.15 | 22828109.39 | 22828109.65 | 0.0066 | 0.0023 |
| Neptune | 57789-04-07 16:48 G | 22828155.95 | 22828156.20 | 22828156.45 | 0.0089 | 0.0012 |
| Neptune | 57790-04-10 03:50 G | 22828523.44 | 22828523.66 | 22828523.92 | 0.0089 | 0.0037 |
| Neptune | 57791-04-12 18:43 G | 22828891.15 | 22828891.28 | 22828891.43 | 0.0089 | 0.0073 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 57799-03-01 20:10 G | 22831771.11 | 22831771.34 | 22831771.57 | 0.0290 | 0.0125 |
| Uranus | 57799-10-31 12:43 G | 22832014.84 | 22832015.03 | 22832015.24 | 0.0136 | 0.0083 |
| Uranus | 57800-11-04 15:50 G | 22832383.92 | 22832384.16 | 22832384.41 | 0.0136 | 0.0030 |
| Uranus | 57801-11-09 07:41 G | 22832753.57 | 22832753.82 | 22832754.07 | 0.0135 | 0.0025 |
| Uranus | 57802-11-13 08:53 G | 22833122.69 | 22833122.87 | 22833123.07 | 0.0135 | 0.0088 |
| Uranus | 57803-11-17 23:31 G | 22833492.44 | 22833492.48 | 22833492.55 | 0.0135 | 0.0131 |
| Jupiter | 57809-10-04 04:05 G | 22835639.49 | 22835639.67 | 22835639.87 | 0.0503 | 0.0304 |
| Mars | 57812-02-02 06:29 G | 22836490.59 | 22836490.77 | 22836490.95 | 0.1641 | 0.0406 |
| Saturn | 57813-09-09 14:24 G | 22837075.92 | 22837076.10 | 22837076.29 | 0.0270 | 0.0167 |
| Jupiter | 57815-03-30 12:43 G | 22837642.98 | 22837643.03 | 22837643.08 | 0.0526 | 0.0512 |
| Jupiter | 57821-10-08 18:58 G | 22840027.06 | 22840027.29 | 22840027.51 | 0.0505 | 0.0021 |
| Jupiter | 57827-04-04 20:38 G | 22842031.14 | 22842031.36 | 22842031.58 | 0.0524 | 0.0139 |
| Saturn | 57829-03-09 23:02 G | 22842736.32 | 22842736.46 | 22842736.63 | 0.0290 | 0.0226 |
| Jupiter | 57833-10-13 12:29 G | 22844414.84 | 22844415.02 | 22844415.21 | 0.0507 | 0.0321 |
| Jupiter | 57839-04-09 16:34 G | 22846418.98 | 22846419.19 | 22846419.42 | 0.0521 | 0.0224 |
| Saturn | 57842-09-04 06:58 G | 22847662.55 | 22847662.79 | 22847663.03 | 0.0271 | 0.0091 |
| Uranus | 57843-04-30 00:43 G | 22847900.38 | 22847900.53 | 22847900.72 | 0.0142 | 0.0110 |
| Uranus | 57844-05-03 18:14 G | 22848270.02 | 22848270.26 | 22848270.51 | 0.0143 | 0.0028 |
| Uranus | 57845-05-08 23:17 G | 22848640.22 | 22848640.47 | 22848640.73 | 0.0143 | 0.0028 |
| Uranus | 57846-05-13 16:19 G | 22849010.01 | 22849010.18 | 22849010.36 | 0.0143 | 0.0104 |
| Jupiter | 57851-04-14 12:14 G | 22850807.00 | 22850807.01 | 22850807.04 | 0.0519 | 0.0516 |
| Saturn | 57858-03-03 17:02 G | 22853321.98 | 22853322.21 | 22853322.45 | 0.0290 | 0.0073 |
| Neptune | 57869-10-04 18:00 G | 22857555.15 | 22857555.25 | 22857555.36 | 0.0089 | 0.0081 |
| Neptune | 57870-10-07 03:22 G | 22857922.45 | 22857922.64 | 22857922.86 | 0.0089 | 0.0050 |
| Neptune | 57871-10-09 14:24 G | 22858289.86 | 22858290.10 | 22858290.38 | 0.0089 | 0.0021 |
| Saturn | 57872-09-10 17:02 G | 22858627.08 | 22858627.21 | 22858627.36 | 0.0270 | 0.0219 |
| Neptune | 57872-10-11 05:02 G | 22858657.47 | 22858657.71 | 22858657.97 | 0.0089 | 0.0012 |
| Neptune | 57873-10-13 10:48 G | 22859024.74 | 22859024.95 | 22859025.20 | 0.0089 | 0.0040 |
| Neptune | 57874-10-16 04:19 G | 22859392.55 | 22859392.68 | 22859392.86 | 0.0089 | 0.0071 |
| Pluto | 57876-08-25 19:12 G | 22860072.21 | 22860072.30 | 22860072.45 | 0.0078 | 0.0069 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 57882-10-28 09:07 G | 22862326.84 | 22862326.88 | 22862326.94 | 0.0136 | 0.0133 |
| Uranus | 57883-11-02 01:12 G | 22862696.37 | 22862696.55 | 22862696.77 | 0.0136 | 0.0085 |
| Uranus | 57884-11-05 04:48 G | 22863065.46 | 22863065.70 | 22863065.95 | 0.0136 | 0.0022 |
| Uranus | 57885-11-09 19:55 G | 22863435.09 | 22863435.33 | 22863435.58 | 0.0135 | 0.0036 |
| Uranus | 57886-11-13 21:07 G | 22863804.20 | 22863804.38 | 22863804.59 | 0.0135 | 0.0084 |
| Saturn | 57888-03-10 20:24 G | 22864287.30 | 22864287.35 | 22864287.43 | 0.0290 | 0.0281 |
| Jupiter | 57892-10-03 15:36 G | 22865954.99 | 22865955.15 | 22865955.32 | 0.0503 | 0.0340 |
| Saturn | 57901-09-06 00:29 G | 22869213.27 | 22869213.52 | 22869213.77 | 0.0271 | 0.0037 |
| Jupiter | 57904-10-09 09:07 G | 22870342.64 | 22870342.88 | 22870343.12 | 0.0505 | 0.0040 |
| Jupiter | 57910-04-04 22:19 G | 22872346.21 | 22872346.43 | 22872346.66 | 0.0524 | 0.0182 |
| Jupiter | 57916-10-13 18:00 G | 22874730.07 | 22874730.25 | 22874730.44 | 0.0507 | 0.0298 |
| Saturn | 57917-03-05 19:55 G | 22874873.09 | 22874873.33 | 22874873.56 | 0.0289 | 0.0019 |
| Jupiter | 57922-04-09 22:34 G | 22876734.23 | 22876734.44 | 22876734.65 | 0.0522 | 0.0178 |
| Uranus | 57927-05-01 09:50 G | 22878581.72 | 22878581.91 | 22878582.12 | 0.0142 | 0.0091 |
| Uranus | 57928-05-05 04:05 G | 22878951.43 | 22878951.67 | 22878951.91 | 0.0143 | 0.0038 |
| Uranus | 57929-05-10 08:38 G | 22879321.62 | 22879321.86 | 22879322.12 | 0.0143 | 0.0044 |
| Uranus | 57930-05-15 02:10 G | 22879691.44 | 22879691.59 | 22879691.78 | 0.0143 | 0.0104 |
| Saturn | 57931-09-13 14:53 G | 22880178.10 | 22880178.12 | 22880178.15 | 0.0270 | 0.0268 |
| Jupiter | 57934-04-15 00:29 G | 22881122.43 | 22881122.52 | 22881122.63 | 0.0520 | 0.0468 |
| Neptune | 57951-04-05 00:14 G | 22887321.35 | 22887321.51 | 22887321.72 | 0.0089 | 0.0064 |
| Neptune | 57952-04-06 11:17 G | 22887688.77 | 22887688.97 | 22887689.21 | 0.0089 | 0.0042 |
| Neptune | 57953-04-08 21:50 G | 22888056.14 | 22888056.41 | 22888056.68 | 0.0089 | 0.0003 |
| Neptune | 57954-04-11 13:41 G | 22888423.84 | 22888424.07 | 22888424.33 | 0.0089 | 0.0020 |
| Neptune | 57955-04-13 19:41 G | 22888791.14 | 22888791.32 | 22888791.54 | 0.0089 | 0.0058 |
| Neptune | 57956-04-15 14:24 G | 22889159.02 | 22889159.10 | 22889159.24 | 0.0089 | 0.0080 |
| Saturn | 57960-09-06 23:17 G | 22890764.23 | 22890764.47 | 22890764.71 | 0.0271 | 0.0013 |
| Uranus | 57967-11-03 13:26 G | 22893377.84 | 22893378.06 | 22893378.28 | 0.0136 | 0.0070 |
| Uranus | 57968-11-06 17:17 G | 22893746.99 | 22893747.22 | 22893747.48 | 0.0136 | 0.0020 |
| Uranus | 57969-11-11 08:10 G | 22894116.60 | 22894116.84 | 22894117.09 | 0.0135 | 0.0037 |
| Uranus | 57970-11-15 10:48 G | 22894485.78 | 22894485.95 | 22894486.12 | 0.0135 | 0.0099 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 57975-10-05 04:48 G | 22896270.54 | 22896270.70 | 22896270.87 | 0.0502 | 0.0370 |
| Saturn | 57976-03-07 01:41 G | 22896424.33 | 22896424.57 | 22896424.81 | 0.0289 | 0.0039 |
| Jupiter | 57987-10-09 10:05 G | 22900657.69 | 22900657.92 | 22900658.14 | 0.0504 | 0.0081 |
| Saturn | 57989-09-02 04:19 G | 22901351.55 | 22901351.68 | 22901351.83 | 0.0272 | 0.0226 |
| Jupiter | 57993-04-04 05:17 G | 22902661.52 | 22902661.72 | 22902661.92 | 0.0525 | 0.0229 |
| Jupiter | 57999-10-14 06:00 G | 22905045.56 | 22905045.75 | 22905045.95 | 0.0506 | 0.0258 |

59TH MILLENNIUM CE

This is a list of transits of Moon in the 59th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|-------------|-------------|-------------|--------|--------|-------|---|
| Saturn | 58005-03-01 01:41 G | 22907010.46 | 22907010.57 | 22907010.71 | 0.0287 | 0.0248 | | |
| Jupiter | 58005-04-09 08:38 G | 22907049.63 | 22907049.86 | 22907050.10 | 0.0523 | 0.0135 | | |
| Uranus | 58011-05-01 22:19 G | 22909263.26 | 22909263.43 | 22909263.65 | 0.0142 | 0.0098 | | |
| Uranus | 58012-05-05 18:00 G | 22909633.00 | 22909633.25 | 22909633.49 | 0.0142 | 0.0017 | | |
| Uranus | 58013-05-10 21:22 G | 22910003.14 | 22910003.39 | 22910003.65 | 0.0143 | 0.0038 | | |
| Uranus | 58014-05-15 15:36 G | 22910373.01 | 22910373.15 | 22910373.30 | 0.0143 | 0.0115 | | |
| Mars | 58017-02-01 22:34 G | 22911366.30 | 22911366.44 | 22911366.58 | 0.1637 | 0.1068 | | |
| Jupiter | 58017-04-14 02:24 G | 22911437.47 | 22911437.60 | 22911437.74 | 0.0520 | 0.0424 | | |
| Saturn | 58019-09-09 03:07 G | 22912315.40 | 22912315.63 | 22912315.87 | 0.0271 | 0.0066 | | |
| Neptune | 58034-10-07 07:12 G | 22917822.67 | 22917822.80 | 22917822.99 | 0.0089 | 0.0071 | | |
| Pluto | 58035-02-23 09:07 G | 22917961.64 | 22917961.88 | 22917962.13 | 0.0066 | 0.0011 | | |
| Saturn | 58035-03-09 05:31 G | 22917975.49 | 22917975.73 | 22917975.96 | 0.0289 | 0.0103 | | |
| Neptune | 58035-10-09 23:17 G | 22918190.25 | 22918190.47 | 22918190.72 | 0.0089 | 0.0033 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 58036-10-11 05:02 G | 22918557.45 | 22918557.71 | 22918557.97 | 0.0089 | 0.0011 |
| Neptune | 58037-10-13 23:17 G | 22918925.23 | 22918925.47 | 22918925.72 | 0.0089 | 0.0028 |
| Neptune | 58038-10-16 03:36 G | 22919292.44 | 22919292.65 | 22919292.87 | 0.0089 | 0.0049 |
| Neptune | 58039-10-18 20:38 G | 22919660.36 | 22919660.36 | 22919660.41 | 0.0089 | 0.0089 |
| Saturn | 58048-09-03 00:14 G | 22922902.31 | 22922902.51 | 22922902.71 | 0.0272 | 0.0170 |
| Uranus | 58050-10-30 11:46 G | 22923689.87 | 22923689.99 | 22923690.10 | 0.0136 | 0.0121 |
| Uranus | 58051-11-04 02:10 G | 22924059.39 | 22924059.59 | 22924059.82 | 0.0136 | 0.0074 |
| Uranus | 58052-11-07 06:58 G | 22924428.54 | 22924428.79 | 22924429.03 | 0.0136 | 0.0010 |
| Uranus | 58053-11-11 20:38 G | 22924798.12 | 22924798.36 | 22924798.61 | 0.0135 | 0.0046 |
| Uranus | 58054-11-15 23:17 G | 22925167.31 | 22925167.47 | 22925167.66 | 0.0135 | 0.0096 |
| Jupiter | 58058-10-04 05:02 G | 22926585.60 | 22926585.71 | 22926585.84 | 0.0501 | 0.0420 |
| Saturn | 58064-03-02 11:46 G | 22928561.81 | 22928561.99 | 22928562.18 | 0.0287 | 0.0179 |
| Jupiter | 58070-10-08 23:46 G | 22930973.26 | 22930973.49 | 22930973.72 | 0.0503 | 0.0110 |
| Jupiter | 58076-04-03 13:41 G | 22932976.87 | 22932977.07 | 22932977.29 | 0.0525 | 0.0262 |
| Saturn | 58078-09-10 07:12 G | 22933866.59 | 22933866.80 | 22933867.03 | 0.0271 | 0.0123 |
| Jupiter | 58082-10-13 06:43 G | 22935360.57 | 22935360.78 | 22935360.99 | 0.0506 | 0.0222 |
| Jupiter | 58088-04-08 06:29 G | 22937364.54 | 22937364.77 | 22937365.00 | 0.0523 | 0.0081 |
| Saturn | 58094-03-10 08:24 G | 22939526.66 | 22939526.85 | 22939527.06 | 0.0289 | 0.0173 |
| Uranus | 58095-05-02 09:07 G | 22939944.66 | 22939944.88 | 22939945.10 | 0.0142 | 0.0081 |
| Mars | 58096-02-04 19:12 G | 22940223.22 | 22940223.30 | 22940223.39 | 0.1638 | 0.1403 |
| Uranus | 58096-05-06 05:17 G | 22940314.48 | 22940314.72 | 22940314.97 | 0.0142 | 0.0026 |
| Uranus | 58097-05-11 07:41 G | 22940684.59 | 22940684.82 | 22940685.08 | 0.0143 | 0.0056 |
| Uranus | 58098-05-16 03:22 G | 22941054.50 | 22941054.64 | 22941054.80 | 0.0143 | 0.0113 |
| Jupiter | 58100-04-14 11:46 G | 22941752.83 | 22941752.99 | 22941753.16 | 0.0521 | 0.0366 |
| Saturn | 58107-09-06 00:00 G | 22944453.28 | 22944453.50 | 22944453.72 | 0.0272 | 0.0112 |
| Neptune | 58115-04-05 06:14 G | 22947221.71 | 22947221.76 | 22947221.85 | 0.0089 | 0.0085 |
| Neptune | 58116-04-06 14:53 G | 22947588.93 | 22947589.12 | 22947589.36 | 0.0089 | 0.0053 |
| Neptune | 58117-04-09 08:10 G | 22947956.61 | 22947956.84 | 22947957.09 | 0.0089 | 0.0025 |
| Neptune | 58118-04-11 13:26 G | 22948323.81 | 22948324.06 | 22948324.33 | 0.0089 | 0.0008 |
| Neptune | 58119-04-14 08:10 G | 22948691.62 | 22948691.84 | 22948692.09 | 0.0089 | 0.0035 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 58120-04-15 13:26 G | 22949058.91 | 22949059.06 | 22949059.22 | 0.0089 | 0.0069 |
| Pluto | 58122-08-28 22:48 G | 22949924.19 | 22949924.45 | 22949924.73 | 0.0078 | 0.0010 |
| Saturn | 58123-03-06 02:24 G | 22950113.39 | 22950113.60 | 22950113.83 | 0.0288 | 0.0104 |
| Uranus | 58134-11-01 00:43 G | 22954371.48 | 22954371.53 | 22954371.63 | 0.0136 | 0.0130 |
| Uranus | 58135-11-05 14:53 G | 22954740.89 | 22954741.12 | 22954741.36 | 0.0136 | 0.0058 |
| Uranus | 58136-11-08 20:38 G | 22955110.12 | 22955110.36 | 22955110.61 | 0.0136 | 0.0009 |
| Saturn | 58137-09-12 08:53 G | 22955417.68 | 22955417.87 | 22955418.06 | 0.0271 | 0.0181 |
| Uranus | 58137-11-13 09:36 G | 22955479.67 | 22955479.90 | 22955480.16 | 0.0135 | 0.0050 |
| Uranus | 58138-11-17 13:26 G | 22955848.94 | 22955849.06 | 22955849.23 | 0.0135 | 0.0109 |
| Jupiter | 58141-10-04 17:46 G | 22956901.16 | 22956901.24 | 22956901.34 | 0.0501 | 0.0463 |
| Saturn | 58153-03-12 19:26 G | 22961078.20 | 22961078.31 | 22961078.43 | 0.0290 | 0.0252 |
| Jupiter | 58153-10-08 23:31 G | 22961288.25 | 22961288.48 | 22961288.70 | 0.0503 | 0.0149 |
| Jupiter | 58159-04-04 08:24 G | 22963291.68 | 22963291.85 | 22963292.04 | 0.0526 | 0.0323 |
| Jupiter | 58165-10-13 17:31 G | 22965676.02 | 22965676.23 | 22965676.44 | 0.0504 | 0.0176 |
| Saturn | 58166-09-07 08:24 G | 22966004.62 | 22966004.85 | 22966005.09 | 0.0272 | 0.0052 |
| Jupiter | 58171-04-09 12:00 G | 22967679.77 | 22967680.00 | 22967680.24 | 0.0524 | 0.0017 |
| Jupiter | 58177-10-18 01:26 G | 22970063.47 | 22970063.56 | 22970063.68 | 0.0506 | 0.0451 |
| Uranus | 58179-05-03 21:50 G | 22970626.22 | 22970626.41 | 22970626.64 | 0.0142 | 0.0085 |
| Uranus | 58180-05-07 19:41 G | 22970996.07 | 22970996.32 | 22970996.57 | 0.0143 | 0.0006 |
| Uranus | 58181-05-12 21:07 G | 22971366.13 | 22971366.38 | 22971366.63 | 0.0143 | 0.0048 |
| Saturn | 58182-03-07 16:19 G | 22971664.93 | 22971665.18 | 22971665.43 | 0.0288 | 0.0023 |
| Uranus | 58182-05-17 17:02 G | 22971736.11 | 22971736.21 | 22971736.33 | 0.0143 | 0.0127 |
| Jupiter | 58183-04-14 04:05 G | 22972067.49 | 22972067.67 | 22972067.87 | 0.0522 | 0.0309 |
| Saturn | 58196-09-13 11:46 G | 22976968.90 | 22976968.99 | 22976969.11 | 0.0271 | 0.0246 |
| Neptune | 58198-10-07 17:31 G | 22977723.20 | 22977723.23 | 22977723.29 | 0.0088 | 0.0087 |
| Neptune | 58199-10-09 22:19 G | 22978090.24 | 22978090.43 | 22978090.66 | 0.0089 | 0.0052 |
| Neptune | 58200-10-12 17:17 G | 22978457.97 | 22978458.22 | 22978458.47 | 0.0089 | 0.0026 |
| Neptune | 58201-10-14 21:50 G | 22978825.17 | 22978825.41 | 22978825.67 | 0.0089 | 0.0010 |
| Neptune | 58202-10-17 14:24 G | 22979192.88 | 22979193.10 | 22979193.36 | 0.0089 | 0.0036 |
| Neptune | 58203-10-19 22:34 G | 22979560.29 | 22979560.44 | 22979560.60 | 0.0089 | 0.0069 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 58218-11-02 16:05 G | 22985053.05 | 22985053.17 | 22985053.34 | 0.0136 | 0.0110 |
| Uranus | 58219-11-07 05:17 G | 22985422.50 | 22985422.72 | 22985422.96 | 0.0136 | 0.0063 |
| Uranus | 58220-11-10 11:46 G | 22985791.74 | 22985791.99 | 22985792.23 | 0.0136 | 0.0003 |
| Uranus | 58221-11-14 23:46 G | 22986161.25 | 22986161.49 | 22986161.73 | 0.0135 | 0.0056 |
| Uranus | 58222-11-19 04:05 G | 22986530.54 | 22986530.67 | 22986530.83 | 0.0135 | 0.0108 |
| Saturn | 58225-09-09 19:55 G | 22987556.09 | 22987556.33 | 22987556.58 | 0.0272 | 0.0014 |
| Jupiter | 58236-10-09 08:24 G | 22991603.65 | 22991603.85 | 22991604.06 | 0.0502 | 0.0198 |
| Saturn | 58241-03-10 04:05 G | 22993216.42 | 22993216.67 | 22993216.92 | 0.0288 | 0.0062 |
| Jupiter | 58242-04-04 12:29 G | 22993606.87 | 22993607.02 | 22993607.19 | 0.0527 | 0.0383 |
| Jupiter | 58248-10-13 13:41 G | 22995990.84 | 22995991.07 | 22995991.31 | 0.0504 | 0.0117 |
| Jupiter | 58254-04-09 06:43 G | 22997994.55 | 22997994.78 | 22997995.02 | 0.0525 | 0.0037 |
| Saturn | 58254-09-04 11:02 G | 22998142.83 | 22998142.96 | 22998143.11 | 0.0273 | 0.0226 |
| Jupiter | 58260-10-18 04:34 G | 23000378.55 | 23000378.69 | 23000378.83 | 0.0506 | 0.0395 |
| Uranus | 58262-04-30 11:31 G | 23000937.98 | 23000937.98 | 23000937.99 | 0.0142 | 0.0142 |
| Uranus | 58263-05-05 07:41 G | 23001307.59 | 23001307.82 | 23001308.05 | 0.0142 | 0.0072 |
| Uranus | 58264-05-09 06:29 G | 23001677.53 | 23001677.77 | 23001678.02 | 0.0142 | 0.0016 |
| Uranus | 58265-05-14 06:29 G | 23002047.55 | 23002047.77 | 23002048.02 | 0.0143 | 0.0066 |
| Jupiter | 58266-04-14 11:46 G | 23002382.79 | 23002382.99 | 23002383.19 | 0.0522 | 0.0252 |
| Uranus | 58266-05-19 04:19 G | 23002417.57 | 23002417.68 | 23002417.82 | 0.0143 | 0.0122 |
| Saturn | 58270-03-04 07:55 G | 23003802.70 | 23003802.83 | 23003802.97 | 0.0288 | 0.0231 |
| Neptune | 58280-04-07 01:41 G | 23007489.41 | 23007489.57 | 23007489.75 | 0.0089 | 0.0066 |
| Pluto | 58281-02-26 01:12 G | 23007814.41 | 23007814.55 | 23007814.72 | 0.0066 | 0.0052 |
| Neptune | 58281-04-09 06:43 G | 23007856.57 | 23007856.78 | 23007857.01 | 0.0089 | 0.0045 |
| Pluto | 58282-02-27 07:12 G | 23008180.62 | 23008180.80 | 23008181.03 | 0.0066 | 0.0042 |
| Neptune | 58282-04-12 01:55 G | 23008224.32 | 23008224.58 | 23008224.84 | 0.0089 | 0.0005 |
| Neptune | 58283-04-14 07:26 G | 23008591.57 | 23008591.81 | 23008592.07 | 0.0089 | 0.0017 |
| Neptune | 58284-04-15 23:46 G | 23008959.31 | 23008959.49 | 23008959.72 | 0.0089 | 0.0056 |
| Saturn | 58284-09-11 04:05 G | 23009107.43 | 23009107.67 | 23009107.91 | 0.0271 | 0.0080 |
| Neptune | 58285-04-18 09:36 G | 23009326.79 | 23009326.90 | 23009327.03 | 0.0089 | 0.0077 |
| Saturn | 58300-03-12 16:05 G | 23014767.96 | 23014768.17 | 23014768.38 | 0.0289 | 0.0145 |

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| Mars | 58301-02-05 20:53 G | 23015098.17 | 23015098.37 | 23015098.56 | 0.1633 | 0.0405 |
| Uranus | 58302-11-04 06:58 G | 23015734.67 | 23015734.79 | 23015734.92 | 0.0136 | 0.0117 |
| Uranus | 58303-11-08 18:29 G | 23016104.03 | 23016104.27 | 23016104.53 | 0.0136 | 0.0046 |
| Uranus | 58304-11-12 02:24 G | 23016473.35 | 23016473.60 | 23016473.84 | 0.0136 | 0.0003 |
| Uranus | 58305-11-16 13:41 G | 23016842.84 | 23016843.07 | 23016843.31 | 0.0135 | 0.0062 |
| Uranus | 58306-11-20 19:26 G | 23017212.21 | 23017212.31 | 23017212.43 | 0.0135 | 0.0120 |
| Saturn | 58313-09-07 00:00 G | 23019694.31 | 23019694.50 | 23019694.71 | 0.0272 | 0.0154 |
| Jupiter | 58319-10-10 04:34 G | 23021918.48 | 23021918.69 | 23021918.90 | 0.0502 | 0.0252 |
| Jupiter | 58325-04-04 05:31 G | 23023921.62 | 23023921.73 | 23023921.86 | 0.0527 | 0.0446 |
| Saturn | 58329-03-07 02:10 G | 23025354.38 | 23025354.59 | 23025354.80 | 0.0288 | 0.0148 |
| Jupiter | 58331-10-14 19:26 G | 23026306.08 | 23026306.31 | 23026306.53 | 0.0504 | 0.0071 |
| Jupiter | 58337-04-09 11:31 G | 23028309.76 | 23028309.98 | 23028310.21 | 0.0525 | 0.0105 |
| Mars | 58339-08-10 12:58 G | 23029162.87 | 23029163.04 | 23029163.21 | 0.1891 | 0.1080 |
| Saturn | 58343-09-14 10:19 G | 23030658.73 | 23030658.93 | 23030659.15 | 0.0271 | 0.0149 |
| Jupiter | 58343-10-19 11:17 G | 23030693.79 | 23030693.97 | 23030694.15 | 0.0505 | 0.0337 |
| Uranus | 58346-05-02 00:43 G | 23031619.48 | 23031619.53 | 23031619.62 | 0.0142 | 0.0136 |
| Uranus | 58347-05-06 19:55 G | 23031989.12 | 23031989.33 | 23031989.57 | 0.0142 | 0.0074 |
| Uranus | 58348-05-10 20:10 G | 23032359.09 | 23032359.34 | 23032359.59 | 0.0142 | 0.0004 |
| Jupiter | 58349-04-14 01:41 G | 23032697.34 | 23032697.57 | 23032697.80 | 0.0523 | 0.0175 |
| Uranus | 58349-05-15 19:12 G | 23032729.05 | 23032729.30 | 23032729.54 | 0.0143 | 0.0057 |
| Uranus | 58350-05-20 17:31 G | 23033099.17 | 23033099.23 | 23033099.31 | 0.0143 | 0.0138 |
| Saturn | 58359-03-15 08:10 G | 23036319.71 | 23036319.84 | 23036319.99 | 0.0289 | 0.0231 |
| Jupiter | 58361-04-19 01:12 G | 23037085.51 | 23037085.55 | 23037085.60 | 0.0521 | 0.0507 |
| Neptune | 58363-10-11 09:36 G | 23037990.79 | 23037990.90 | 23037991.07 | 0.0088 | 0.0075 |
| Neptune | 58364-10-12 14:53 G | 23038357.91 | 23038358.12 | 23038358.37 | 0.0089 | 0.0038 |
| Neptune | 58365-10-15 06:58 G | 23038725.53 | 23038725.79 | 23038726.05 | 0.0089 | 0.0014 |
| Neptune | 58366-10-17 16:19 G | 23039092.95 | 23039093.18 | 23039093.43 | 0.0089 | 0.0023 |
| Neptune | 58367-10-20 03:07 G | 23039460.42 | 23039460.63 | 23039460.88 | 0.0089 | 0.0046 |
| Pluto | 58368-08-30 22:19 G | 23039776.35 | 23039776.43 | 23039776.56 | 0.0078 | 0.0072 |
| Neptune | 58368-10-21 17:46 G | 23039828.16 | 23039828.24 | 23039828.33 | 0.0089 | 0.0083 |

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| Saturn | 58372-09-08 16:19 G | 23041245.96 | 23041246.18 | 23041246.42 | 0.0272 | 0.0078 |
| Uranus | 58386-11-04 21:36 G | 23046416.24 | 23046416.40 | 23046416.59 | 0.0136 | 0.0096 |
| Uranus | 58387-11-09 08:24 G | 23046785.62 | 23046785.85 | 23046786.11 | 0.0136 | 0.0051 |
| Saturn | 58388-03-08 13:26 G | 23046905.82 | 23046906.06 | 23046906.31 | 0.0288 | 0.0066 |
| Uranus | 58388-11-12 17:17 G | 23047154.98 | 23047155.22 | 23047155.46 | 0.0136 | 0.0016 |
| Uranus | 58389-11-17 03:07 G | 23047524.42 | 23047524.63 | 23047524.87 | 0.0135 | 0.0068 |
| Uranus | 58390-11-21 09:50 G | 23047893.83 | 23047893.91 | 23047894.04 | 0.0135 | 0.0121 |
| Saturn | 58402-09-15 19:55 G | 23052210.19 | 23052210.33 | 23052210.47 | 0.0271 | 0.0220 |
| Jupiter | 58402-10-09 11:17 G | 23052233.79 | 23052233.97 | 23052234.15 | 0.0501 | 0.0290 |
| Jupiter | 58408-04-03 07:12 G | 23054236.79 | 23054236.80 | 23054236.83 | 0.0528 | 0.0525 |
| Jupiter | 58414-10-14 00:43 G | 23056621.28 | 23056621.53 | 23056621.77 | 0.0503 | 0.0023 |
| Jupiter | 58420-04-08 01:41 G | 23058624.35 | 23058624.57 | 23058624.80 | 0.0526 | 0.0180 |
| Jupiter | 58426-10-18 03:22 G | 23061008.46 | 23061008.64 | 23061008.84 | 0.0505 | 0.0275 |
| Uranus | 58430-05-02 12:00 G | 23062300.91 | 23062301.00 | 23062301.12 | 0.0142 | 0.0129 |
| Uranus | 58431-05-07 05:46 G | 23062670.52 | 23062670.74 | 23062670.99 | 0.0142 | 0.0062 |
| Saturn | 58431-09-11 06:43 G | 23062797.53 | 23062797.78 | 23062798.03 | 0.0272 | 0.0003 |
| Jupiter | 58432-04-13 06:14 G | 23063012.54 | 23063012.76 | 23063012.98 | 0.0524 | 0.0118 |
| Uranus | 58432-05-11 07:26 G | 23063040.56 | 23063040.81 | 23063041.05 | 0.0142 | 0.0005 |
| Uranus | 58433-05-16 04:34 G | 23063410.48 | 23063410.69 | 23063410.93 | 0.0143 | 0.0077 |
| Uranus | 58434-05-21 04:48 G | 23063780.62 | 23063780.70 | 23063780.81 | 0.0143 | 0.0131 |
| Neptune | 58444-04-06 23:17 G | 23067389.44 | 23067389.47 | 23067389.53 | 0.0089 | 0.0087 |
| Jupiter | 58444-04-18 07:41 G | 23067400.72 | 23067400.82 | 23067400.95 | 0.0521 | 0.0457 |
| Neptune | 58445-04-09 18:00 G | 23067757.07 | 23067757.25 | 23067757.47 | 0.0089 | 0.0057 |
| Neptune | 58446-04-12 00:58 G | 23068124.30 | 23068124.54 | 23068124.78 | 0.0089 | 0.0026 |
| Saturn | 58447-03-10 21:07 G | 23068457.13 | 23068457.38 | 23068457.63 | 0.0288 | 0.0014 |
| Neptune | 58447-04-14 16:05 G | 23068491.91 | 23068492.17 | 23068492.44 | 0.0089 | 0.0004 |
| Neptune | 58448-04-16 02:38 G | 23068859.39 | 23068859.61 | 23068859.85 | 0.0089 | 0.0034 |
| Neptune | 58449-04-18 12:43 G | 23069226.86 | 23069227.03 | 23069227.23 | 0.0089 | 0.0064 |
| Saturn | 58460-09-04 17:31 G | 23073384.14 | 23073384.23 | 23073384.33 | 0.0273 | 0.0250 |
| Uranus | 58470-11-05 10:19 G | 23077097.79 | 23077097.93 | 23077098.10 | 0.0137 | 0.0105 |

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| Uranus | 58471-11-09 19:55 G | 23077467.09 | 23077467.33 | 23077467.60 | 0.0136 | 0.0034 |
| Uranus | 58472-11-13 06:29 G | 23077836.53 | 23077836.77 | 23077837.02 | 0.0136 | 0.0014 |
| Uranus | 58473-11-17 15:50 G | 23078205.96 | 23078206.16 | 23078206.39 | 0.0136 | 0.0075 |
| Uranus | 58474-11-22 00:29 G | 23078575.46 | 23078575.52 | 23078575.58 | 0.0135 | 0.0131 |
| Saturn | 58476-03-04 15:50 G | 23079044.07 | 23079044.16 | 23079044.27 | 0.0287 | 0.0260 |
| Jupiter | 58485-10-08 12:14 G | 23082548.83 | 23082549.01 | 23082549.18 | 0.0500 | 0.0343 |
| Saturn | 58490-09-12 13:41 G | 23084348.83 | 23084349.07 | 23084349.32 | 0.0272 | 0.0067 |
| Jupiter | 58497-10-12 19:41 G | 23086936.09 | 23086936.32 | 23086936.54 | 0.0502 | 0.0037 |
| Jupiter | 58503-04-09 09:22 G | 23088939.70 | 23088939.89 | 23088940.09 | 0.0526 | 0.0240 |
| Mars | 58506-02-06 02:10 G | 23089973.54 | 23089973.59 | 23089973.64 | 0.1629 | 0.1541 |
| Saturn | 58506-03-13 05:46 G | 23090008.51 | 23090008.74 | 23090008.97 | 0.0289 | 0.0088 |
| Jupiter | 58509-10-18 16:34 G | 23091323.99 | 23091324.19 | 23091324.40 | 0.0505 | 0.0230 |
| Uranus | 58514-05-04 02:38 G | 23092982.50 | 23092982.61 | 23092982.73 | 0.0142 | 0.0124 |
| Jupiter | 58515-04-14 10:05 G | 23093327.68 | 23093327.92 | 23093328.16 | 0.0524 | 0.0057 |
| Uranus | 58515-05-08 19:26 G | 23093352.08 | 23093352.31 | 23093352.56 | 0.0142 | 0.0060 |
| Uranus | 58516-05-12 21:50 G | 23093722.16 | 23093722.41 | 23093722.66 | 0.0142 | 0.0015 |
| Uranus | 58517-05-17 18:00 G | 23094092.02 | 23094092.25 | 23094092.49 | 0.0143 | 0.0069 |
| Saturn | 58519-09-08 05:17 G | 23094935.55 | 23094935.72 | 23094935.90 | 0.0272 | 0.0184 |
| Jupiter | 58521-10-22 23:46 G | 23095711.47 | 23095711.49 | 23095711.52 | 0.0506 | 0.0503 |
| Jupiter | 58527-04-19 00:14 G | 23097715.36 | 23097715.51 | 23097715.66 | 0.0522 | 0.0391 |
| Pluto | 58528-03-01 18:58 G | 23098033.05 | 23098033.29 | 23098033.54 | 0.0066 | 0.0013 |
| Neptune | 58528-10-13 00:14 G | 23098258.33 | 23098258.51 | 23098258.74 | 0.0088 | 0.0055 |
| Neptune | 58529-10-15 11:02 G | 23098625.74 | 23098625.96 | 23098626.21 | 0.0089 | 0.0032 |
| Neptune | 58530-10-17 20:24 G | 23098993.09 | 23098993.35 | 23098993.62 | 0.0089 | 0.0006 |
| Neptune | 58531-10-20 11:17 G | 23099360.75 | 23099360.97 | 23099361.22 | 0.0089 | 0.0030 |
| Neptune | 58532-10-21 16:34 G | 23099728.05 | 23099728.19 | 23099728.39 | 0.0089 | 0.0067 |
| Saturn | 58535-03-07 23:02 G | 23100595.29 | 23100595.46 | 23100595.66 | 0.0288 | 0.0192 |
| Saturn | 58549-09-14 16:34 G | 23105899.98 | 23105900.19 | 23105900.42 | 0.0271 | 0.0132 |
| Uranus | 58554-11-07 00:14 G | 23107779.34 | 23107779.51 | 23107779.72 | 0.0137 | 0.0085 |
| Uranus | 58555-11-11 09:22 G | 23108148.64 | 23108148.89 | 23108149.14 | 0.0136 | 0.0040 |

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| Uranus | 58556-11-14 20:38 G | 23108518.13 | 23108518.36 | 23108518.60 | 0.0136 | 0.0029 |
| Uranus | 58557-11-19 04:48 G | 23108887.49 | 23108887.70 | 23108887.92 | 0.0136 | 0.0078 |
| Uranus | 58558-11-23 14:10 G | 23109257.07 | 23109257.09 | 23109257.14 | 0.0135 | 0.0134 |
| Saturn | 58565-03-14 15:22 G | 23111559.95 | 23111560.14 | 23111560.34 | 0.0289 | 0.0159 |
| Jupiter | 58568-10-08 14:24 G | 23112863.96 | 23112864.10 | 23112864.25 | 0.0500 | 0.0382 |
| Saturn | 58578-09-09 14:38 G | 23116486.89 | 23116487.11 | 23116487.33 | 0.0272 | 0.0121 |
| Jupiter | 58580-10-13 11:02 G | 23117251.73 | 23117251.96 | 23117252.20 | 0.0502 | 0.0072 |
| Mars | 58585-02-07 21:36 G | 23118830.22 | 23118830.40 | 23118830.58 | 0.1631 | 0.0259 |
| Jupiter | 58586-04-08 09:50 G | 23119254.72 | 23119254.91 | 23119255.11 | 0.0527 | 0.0307 |
| Jupiter | 58592-10-17 15:50 G | 23121638.94 | 23121639.16 | 23121639.38 | 0.0504 | 0.0186 |
| Saturn | 58594-03-08 22:34 G | 23122146.22 | 23122146.44 | 23122146.68 | 0.0288 | 0.0128 |
| Jupiter | 58598-04-13 06:00 G | 23123642.52 | 23123642.75 | 23123642.98 | 0.0525 | 0.0004 |
| Uranus | 58598-05-04 15:36 G | 23123664.01 | 23123664.15 | 23123664.30 | 0.0141 | 0.0114 |
| Uranus | 58599-05-09 07:12 G | 23124033.57 | 23124033.80 | 23124034.06 | 0.0142 | 0.0050 |
| Uranus | 58600-05-14 10:34 G | 23124403.69 | 23124403.94 | 23124404.19 | 0.0142 | 0.0009 |
| Uranus | 58601-05-19 05:31 G | 23124773.53 | 23124773.73 | 23124773.94 | 0.0143 | 0.0089 |
| Uranus | 58602-05-24 07:55 G | 23125143.82 | 23125143.83 | 23125143.86 | 0.0143 | 0.0142 |
| Jupiter | 58604-10-23 06:58 G | 23126026.69 | 23126026.79 | 23126026.90 | 0.0506 | 0.0449 |
| Saturn | 58608-09-16 22:34 G | 23127451.28 | 23127451.44 | 23127451.62 | 0.0271 | 0.0191 |
| Neptune | 58609-04-10 16:48 G | 23127657.07 | 23127657.20 | 23127657.37 | 0.0089 | 0.0071 |
| Neptune | 58610-04-13 06:58 G | 23128024.59 | 23128024.79 | 23128025.03 | 0.0089 | 0.0049 |
| Jupiter | 58610-04-19 14:24 G | 23128030.93 | 23128031.10 | 23128031.28 | 0.0523 | 0.0356 |
| Neptune | 58611-04-15 20:24 G | 23128392.10 | 23128392.35 | 23128392.60 | 0.0089 | 0.0010 |
| Neptune | 58612-04-17 05:31 G | 23128759.47 | 23128759.73 | 23128759.99 | 0.0089 | 0.0012 |
| Neptune | 58613-04-19 22:05 G | 23129127.23 | 23129127.42 | 23129127.64 | 0.0089 | 0.0052 |
| Neptune | 58614-04-22 03:36 G | 23129494.51 | 23129494.65 | 23129494.81 | 0.0089 | 0.0073 |
| Pluto | 58615-09-04 23:17 G | 23129995.21 | 23129995.47 | 23129995.73 | 0.0078 | 0.0003 |
| Saturn | 58624-03-16 22:05 G | 23133111.27 | 23133111.42 | 23133111.58 | 0.0288 | 0.0222 |
| Saturn | 58637-09-11 16:05 G | 23138037.93 | 23138038.17 | 23138038.42 | 0.0272 | 0.0064 |
| Uranus | 58638-11-08 13:12 G | 23138460.88 | 23138461.05 | 23138461.24 | 0.0137 | 0.0093 |

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| Uranus | 58639-11-12 20:53 G | 23138830.12 | 23138830.37 | 23138830.63 | 0.0136 | 0.0021 |
| Uranus | 58640-11-16 09:50 G | 23139199.67 | 23139199.91 | 23139200.15 | 0.0136 | 0.0024 |
| Uranus | 58641-11-20 17:02 G | 23139569.03 | 23139569.21 | 23139569.42 | 0.0136 | 0.0088 |
| Jupiter | 58651-10-10 06:14 G | 23143179.64 | 23143179.76 | 23143179.90 | 0.0500 | 0.0411 |
| Saturn | 58653-03-10 21:07 G | 23143697.14 | 23143697.38 | 23143697.61 | 0.0288 | 0.0068 |
| Jupiter | 58663-10-14 06:29 G | 23147566.55 | 23147566.77 | 23147567.00 | 0.0501 | 0.0128 |
| Saturn | 58667-09-19 04:48 G | 23149002.61 | 23149002.70 | 23149002.82 | 0.0272 | 0.0243 |
| Jupiter | 58669-04-08 13:26 G | 23149569.90 | 23149570.06 | 23149570.23 | 0.0528 | 0.0357 |
| Jupiter | 58675-10-19 02:10 G | 23151954.38 | 23151954.59 | 23151954.82 | 0.0503 | 0.0129 |
| Jupiter | 58681-04-13 22:05 G | 23153958.19 | 23153958.42 | 23153958.66 | 0.0525 | 0.0043 |
| Uranus | 58682-05-06 06:29 G | 23154345.63 | 23154345.77 | 23154345.93 | 0.0141 | 0.0112 |
| Saturn | 58683-03-18 21:22 G | 23154662.35 | 23154662.39 | 23154662.44 | 0.0288 | 0.0283 |
| Uranus | 58683-05-10 21:50 G | 23154715.17 | 23154715.41 | 23154715.67 | 0.0142 | 0.0046 |
| Uranus | 58684-05-15 01:26 G | 23155085.32 | 23155085.56 | 23155085.81 | 0.0142 | 0.0028 |
| Uranus | 58685-05-19 19:41 G | 23155455.11 | 23155455.32 | 23155455.54 | 0.0143 | 0.0081 |
| Jupiter | 58687-10-23 12:43 G | 23156341.90 | 23156342.03 | 23156342.17 | 0.0505 | 0.0414 |
| Neptune | 58692-10-13 05:31 G | 23158158.62 | 23158158.73 | 23158158.86 | 0.0088 | 0.0077 |
| Jupiter | 58693-04-18 14:53 G | 23158345.94 | 23158346.12 | 23158346.31 | 0.0523 | 0.0321 |
| Neptune | 58693-10-15 13:26 G | 23158525.85 | 23158526.06 | 23158526.31 | 0.0088 | 0.0043 |
| Neptune | 58694-10-18 06:14 G | 23158893.52 | 23158893.76 | 23158894.02 | 0.0088 | 0.0016 |
| Neptune | 58695-10-20 10:48 G | 23159260.71 | 23159260.95 | 23159261.22 | 0.0089 | 0.0019 |
| Saturn | 58696-09-12 12:14 G | 23159588.75 | 23159589.01 | 23159589.26 | 0.0272 | 0.0013 |
| Neptune | 58696-10-22 05:02 G | 23159628.50 | 23159628.71 | 23159628.95 | 0.0089 | 0.0044 |
| Neptune | 58697-10-24 10:05 G | 23159995.81 | 23159995.92 | 23159996.05 | 0.0089 | 0.0078 |
| Saturn | 58712-03-12 23:46 G | 23165248.25 | 23165248.49 | 23165248.73 | 0.0288 | 0.0008 |
| Uranus | 58722-11-10 04:05 G | 23169142.47 | 23169142.67 | 23169142.88 | 0.0137 | 0.0073 |
| Uranus | 58723-11-14 10:48 G | 23169511.71 | 23169511.95 | 23169512.22 | 0.0136 | 0.0030 |
| Uranus | 58724-11-18 00:43 G | 23169881.30 | 23169881.53 | 23169881.77 | 0.0136 | 0.0041 |
| Saturn | 58725-09-08 14:53 G | 23170176.02 | 23170176.12 | 23170176.23 | 0.0274 | 0.0245 |
| Uranus | 58725-11-22 06:29 G | 23170250.59 | 23170250.77 | 23170250.99 | 0.0136 | 0.0088 |

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| Jupiter | 58734-10-10 04:19 G | 23173494.60 | 23173494.68 | 23173494.78 | 0.0499 | 0.0460 |
| Jupiter | 58746-10-14 23:46 G | 23177882.27 | 23177882.49 | 23177882.70 | 0.0501 | 0.0167 |
| Jupiter | 58752-04-09 04:34 G | 23179885.54 | 23179885.69 | 23179885.85 | 0.0528 | 0.0397 |
| Saturn | 58755-09-15 09:36 G | 23181139.66 | 23181139.90 | 23181140.15 | 0.0273 | 0.0037 |
| Jupiter | 58758-10-19 09:50 G | 23182269.68 | 23182269.91 | 23182270.15 | 0.0503 | 0.0091 |
| Jupiter | 58764-04-13 19:26 G | 23184273.09 | 23184273.31 | 23184273.55 | 0.0526 | 0.0094 |
| Uranus | 58766-05-07 19:26 G | 23185027.14 | 23185027.31 | 23185027.49 | 0.0141 | 0.0101 |
| Uranus | 58767-05-12 09:50 G | 23185396.67 | 23185396.91 | 23185397.17 | 0.0142 | 0.0039 |
| Uranus | 58768-05-16 14:10 G | 23185766.84 | 23185767.09 | 23185767.34 | 0.0142 | 0.0022 |
| Uranus | 58769-05-21 06:58 G | 23186136.62 | 23186136.79 | 23186136.99 | 0.0143 | 0.0101 |
| Jupiter | 58770-10-24 00:14 G | 23186657.36 | 23186657.51 | 23186657.65 | 0.0505 | 0.0388 |
| Saturn | 58771-03-15 03:07 G | 23186799.39 | 23186799.63 | 23186799.87 | 0.0288 | 0.0052 |
| Neptune | 58774-04-13 12:29 G | 23187924.87 | 23187925.02 | 23187925.21 | 0.0089 | 0.0064 |
| Pluto | 58775-03-06 09:50 G | 23188251.68 | 23188251.91 | 23188252.15 | 0.0066 | 0.0024 |
| Neptune | 58775-04-15 20:38 G | 23188292.11 | 23188292.36 | 23188292.61 | 0.0089 | 0.0028 |
| Neptune | 58776-04-17 14:38 G | 23188659.86 | 23188660.11 | 23188660.36 | 0.0089 | 0.0002 |
| Jupiter | 58776-04-19 01:41 G | 23188661.39 | 23188661.57 | 23188661.77 | 0.0524 | 0.0286 |
| Neptune | 58777-04-19 19:41 G | 23189027.09 | 23189027.32 | 23189027.57 | 0.0089 | 0.0032 |
| Neptune | 58778-04-22 14:38 G | 23189394.93 | 23189395.11 | 23189395.33 | 0.0089 | 0.0059 |
| Saturn | 58784-09-09 14:10 G | 23191726.93 | 23191727.09 | 23191727.28 | 0.0274 | 0.0197 |
| Mars | 58790-02-09 13:26 G | 23193705.89 | 23193706.06 | 23193706.24 | 0.1627 | 0.0597 |
| Saturn | 58800-03-08 01:26 G | 23197385.43 | 23197385.56 | 23197385.70 | 0.0286 | 0.0236 |
| Uranus | 58805-11-06 00:58 G | 23199454.46 | 23199454.54 | 23199454.64 | 0.0137 | 0.0127 |
| Uranus | 58806-11-10 17:46 G | 23199824.04 | 23199824.24 | 23199824.44 | 0.0137 | 0.0081 |
| Uranus | 58807-11-14 23:31 G | 23200193.23 | 23200193.48 | 23200193.74 | 0.0136 | 0.0010 |
| Uranus | 58808-11-18 14:10 G | 23200562.86 | 23200563.09 | 23200563.34 | 0.0136 | 0.0035 |
| Uranus | 58809-11-22 19:41 G | 23200932.15 | 23200932.32 | 23200932.50 | 0.0136 | 0.0099 |
| Saturn | 58814-09-16 12:00 G | 23202690.78 | 23202691.00 | 23202691.23 | 0.0273 | 0.0082 |
| Jupiter | 58817-10-09 22:48 G | 23203810.40 | 23203810.45 | 23203810.51 | 0.0499 | 0.0483 |
| Jupiter | 58829-10-14 06:58 G | 23208197.57 | 23208197.79 | 23208198.01 | 0.0501 | 0.0203 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 58830-03-16 01:12 G | 23208350.32 | 23208350.55 | 23208350.78 | 0.0287 | 0.0112 |
| Jupiter | 58835-04-09 01:26 G | 23210200.45 | 23210200.56 | 23210200.68 | 0.0528 | 0.0456 |
| Jupiter | 58841-10-18 17:31 G | 23212585.00 | 23212585.23 | 23212585.45 | 0.0502 | 0.0043 |
| Saturn | 58843-09-11 07:12 G | 23213277.59 | 23213277.80 | 23213278.01 | 0.0274 | 0.0155 |
| Jupiter | 58847-04-14 08:53 G | 23214588.65 | 23214588.87 | 23214589.09 | 0.0527 | 0.0138 |
| Uranus | 58850-05-08 08:24 G | 23215708.69 | 23215708.85 | 23215709.04 | 0.0141 | 0.0101 |
| Uranus | 58851-05-12 22:48 G | 23216078.21 | 23216078.45 | 23216078.71 | 0.0142 | 0.0034 |
| Uranus | 58852-05-17 03:22 G | 23216448.41 | 23216448.64 | 23216448.89 | 0.0142 | 0.0037 |
| Uranus | 58853-05-21 19:55 G | 23216818.13 | 23216818.33 | 23216818.53 | 0.0143 | 0.0091 |
| Jupiter | 58853-10-23 08:10 G | 23216972.67 | 23216972.84 | 23216973.02 | 0.0504 | 0.0342 |
| Neptune | 58857-10-16 01:26 G | 23218426.39 | 23218426.56 | 23218426.78 | 0.0088 | 0.0057 |
| Neptune | 58858-10-18 06:00 G | 23218793.52 | 23218793.75 | 23218793.99 | 0.0088 | 0.0036 |
| Saturn | 58859-03-10 05:17 G | 23218936.54 | 23218936.72 | 23218936.91 | 0.0285 | 0.0176 |
| Jupiter | 58859-04-19 06:58 G | 23218976.58 | 23218976.79 | 23218977.00 | 0.0525 | 0.0251 |
| Neptune | 58859-10-21 00:14 G | 23219161.25 | 23219161.51 | 23219161.77 | 0.0089 | 0.0003 |
| Neptune | 58860-10-22 05:02 G | 23219528.48 | 23219528.71 | 23219528.96 | 0.0089 | 0.0025 |
| Neptune | 58861-10-24 20:10 G | 23219896.18 | 23219896.34 | 23219896.55 | 0.0089 | 0.0064 |
| Pluto | 58862-09-07 18:43 G | 23220214.10 | 23220214.28 | 23220214.48 | 0.0078 | 0.0053 |
| Neptune | 58862-10-27 05:02 G | 23220263.67 | 23220263.71 | 23220263.79 | 0.0089 | 0.0086 |
| Mars | 58869-02-11 13:26 G | 23222562.95 | 23222563.06 | 23222563.17 | 0.1628 | 0.1257 |
| Saturn | 58873-09-17 13:26 G | 23224241.85 | 23224242.06 | 23224242.29 | 0.0273 | 0.0127 |
| Saturn | 58889-03-16 21:22 G | 23229901.21 | 23229901.39 | 23229901.60 | 0.0287 | 0.0176 |
| Uranus | 58889-11-06 14:53 G | 23230136.05 | 23230136.12 | 23230136.21 | 0.0137 | 0.0129 |
| Uranus | 58890-11-11 08:38 G | 23230505.64 | 23230505.86 | 23230506.08 | 0.0137 | 0.0061 |
| Uranus | 58891-11-15 13:55 G | 23230874.82 | 23230875.08 | 23230875.34 | 0.0136 | 0.0017 |
| Uranus | 58892-11-19 05:02 G | 23231244.50 | 23231244.71 | 23231244.95 | 0.0136 | 0.0053 |
| Uranus | 58893-11-23 09:22 G | 23231613.71 | 23231613.89 | 23231614.07 | 0.0136 | 0.0097 |
| Saturn | 58902-09-13 02:53 G | 23234828.40 | 23234828.62 | 23234828.85 | 0.0274 | 0.0113 |
| Jupiter | 58912-10-14 14:38 G | 23238512.92 | 23238513.11 | 23238513.31 | 0.0499 | 0.0252 |
| Saturn | 58918-03-12 12:58 G | 23240487.83 | 23240488.04 | 23240488.27 | 0.0285 | 0.0111 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 58918-04-09 14:53 G | 23240516.08 | 23240516.12 | 23240516.18 | 0.0530 | 0.0514 |
| Jupiter | 58924-10-19 04:19 G | 23242900.44 | 23242900.68 | 23242900.92 | 0.0502 | 0.0009 |
| Jupiter | 58930-04-14 12:58 G | 23244903.82 | 23244904.04 | 23244904.27 | 0.0527 | 0.0176 |
| Saturn | 58932-09-19 09:22 G | 23245792.70 | 23245792.89 | 23245793.10 | 0.0273 | 0.0171 |
| Uranus | 58934-05-09 20:24 G | 23246390.17 | 23246390.35 | 23246390.57 | 0.0141 | 0.0088 |
| Uranus | 58935-05-14 10:05 G | 23246759.68 | 23246759.92 | 23246760.18 | 0.0142 | 0.0029 |
| Uranus | 58936-05-18 14:53 G | 23247129.88 | 23247130.12 | 23247130.37 | 0.0142 | 0.0033 |
| Jupiter | 58936-10-23 13:41 G | 23247287.89 | 23247288.07 | 23247288.25 | 0.0504 | 0.0317 |
| Uranus | 58937-05-23 06:29 G | 23247499.61 | 23247499.77 | 23247499.94 | 0.0142 | 0.0110 |
| Neptune | 58938-04-13 12:14 G | 23247824.89 | 23247825.01 | 23247825.17 | 0.0089 | 0.0075 |
| Neptune | 58939-04-16 07:12 G | 23248192.60 | 23248192.80 | 23248193.02 | 0.0089 | 0.0052 |
| Neptune | 58940-04-17 12:14 G | 23248559.76 | 23248560.01 | 23248560.27 | 0.0089 | 0.0014 |
| Neptune | 58941-04-20 06:58 G | 23248927.54 | 23248927.79 | 23248928.06 | 0.0089 | 0.0009 |
| Jupiter | 58942-04-19 13:26 G | 23249291.86 | 23249292.06 | 23249292.27 | 0.0525 | 0.0208 |
| Neptune | 58942-04-22 13:55 G | 23249294.87 | 23249295.08 | 23249295.30 | 0.0089 | 0.0047 |
| Neptune | 58943-04-25 04:48 G | 23249662.56 | 23249662.70 | 23249662.89 | 0.0089 | 0.0070 |
| Saturn | 58948-03-19 01:12 G | 23251452.43 | 23251452.55 | 23251452.69 | 0.0287 | 0.0240 |
| Saturn | 58961-09-14 06:00 G | 23256379.52 | 23256379.75 | 23256379.98 | 0.0274 | 0.0065 |
| Uranus | 58973-11-08 01:55 G | 23260817.47 | 23260817.58 | 23260817.73 | 0.0137 | 0.0117 |
| Uranus | 58974-11-12 20:10 G | 23261187.14 | 23261187.34 | 23261187.57 | 0.0137 | 0.0069 |
| Uranus | 58975-11-17 00:58 G | 23261556.29 | 23261556.54 | 23261556.80 | 0.0136 | 0.0003 |
| Uranus | 58976-11-20 17:02 G | 23261925.98 | 23261926.21 | 23261926.45 | 0.0136 | 0.0045 |
| Saturn | 58977-03-13 20:10 G | 23262039.09 | 23262039.34 | 23262039.58 | 0.0285 | 0.0044 |
| Uranus | 58977-11-24 20:38 G | 23262295.23 | 23262295.36 | 23262295.52 | 0.0136 | 0.0111 |
| Mars | 58986-08-15 03:50 G | 23265480.53 | 23265480.66 | 23265480.80 | 0.1898 | 0.1377 |
| Saturn | 58991-09-21 06:58 G | 23267343.66 | 23267343.79 | 23267343.95 | 0.0273 | 0.0221 |
| Jupiter | 58995-10-15 01:12 G | 23268828.35 | 23268828.55 | 23268828.74 | 0.0499 | 0.0289 |

60TH MILLENNIUM CE

This is a list of transits of Moon in the 60th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 59007-10-20 08:53 | G | 23273215.65 | 23273215.87 | 23273216.10 | 0.0501 | 0.0033 | |
| Jupiter | 59013-04-14 16:48 | G | 23275219.00 | 23275219.20 | 23275219.40 | 0.0528 | 0.0236 | |
| Uranus | 59017-05-06 05:17 | G | 23276701.71 | 23276701.72 | 23276701.76 | 0.0141 | 0.0140 | |
| Uranus | 59018-05-11 08:38 | G | 23277071.66 | 23277071.86 | 23277072.06 | 0.0141 | 0.0090 | |
| Uranus | 59019-05-15 22:19 | G | 23277441.19 | 23277441.43 | 23277441.69 | 0.0142 | 0.0022 | |
| Jupiter | 59019-10-25 02:24 | G | 23277603.41 | 23277603.60 | 23277603.79 | 0.0503 | 0.0283 | |
| Uranus | 59020-05-20 03:07 | G | 23277811.40 | 23277811.63 | 23277811.88 | 0.0142 | 0.0047 | |
| Saturn | 59020-09-16 11:31 | G | 23277930.74 | 23277930.98 | 23277931.22 | 0.0274 | 0.0014 | |
| Pluto | 59021-03-08 10:48 | G | 23278103.86 | 23278103.95 | 23278104.11 | 0.0066 | 0.0058 | |
| Uranus | 59021-05-24 18:43 | G | 23278181.10 | 23278181.28 | 23278181.46 | 0.0142 | 0.0102 | |
| Neptune | 59021-10-17 01:12 | G | 23278326.44 | 23278326.55 | 23278326.68 | 0.0088 | 0.0078 | |
| Pluto | 59022-03-09 19:12 | G | 23278470.15 | 23278470.30 | 23278470.49 | 0.0066 | 0.0048 | |
| Neptune | 59022-10-19 19:12 | G | 23278694.09 | 23278694.30 | 23278694.53 | 0.0088 | 0.0047 | |
| Neptune | 59023-10-22 01:26 | G | 23279061.32 | 23279061.56 | 23279061.81 | 0.0088 | 0.0018 | |
| Neptune | 59024-10-23 16:05 | G | 23279428.92 | 23279429.17 | 23279429.44 | 0.0088 | 0.0015 | |
| Jupiter | 59025-04-19 15:22 | G | 23279606.91 | 23279607.14 | 23279607.38 | 0.0526 | 0.0150 | |
| Neptune | 59025-10-26 02:10 | G | 23279796.38 | 23279796.59 | 23279796.82 | 0.0089 | 0.0043 | |
| Neptune | 59026-10-28 11:17 | G | 23280163.84 | 23280163.97 | 23280164.14 | 0.0089 | 0.0074 | |
| Saturn | 59036-03-16 01:26 | G | 23283590.31 | 23283590.56 | 23283590.81 | 0.0286 | 0.0033 | |
| Jupiter | 59037-04-24 12:14 | G | 23283994.98 | 23283995.01 | 23283995.04 | 0.0524 | 0.0518 | |
| Saturn | 59049-09-10 19:12 | G | 23288517.24 | 23288517.30 | 23288517.37 | 0.0275 | 0.0265 | |
| Uranus | 59057-11-09 13:55 | G | 23291498.96 | 23291499.08 | 23291499.22 | 0.0137 | 0.0118 | |

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| Uranus | 59058-11-14 08:38 G | 23291868.64 | 23291868.86 | 23291869.11 | 0.0137 | 0.0051 |
| Uranus | 59059-11-18 13:12 G | 23292237.79 | 23292238.05 | 23292238.30 | 0.0137 | 0.0007 |
| Uranus | 59060-11-22 05:46 G | 23292607.53 | 23292607.74 | 23292607.97 | 0.0136 | 0.0064 |
| Uranus | 59061-11-26 08:24 G | 23292976.72 | 23292976.85 | 23292977.03 | 0.0136 | 0.0107 |
| Saturn | 59065-03-10 08:24 G | 23294176.75 | 23294176.85 | 23294176.96 | 0.0285 | 0.0255 |
| Mars | 59074-02-12 09:50 G | 23297437.71 | 23297437.91 | 23297438.10 | 0.1624 | 0.0115 |
| Jupiter | 59078-10-15 03:07 G | 23299143.46 | 23299143.63 | 23299143.80 | 0.0498 | 0.0338 |
| Saturn | 59079-09-18 15:22 G | 23299481.88 | 23299482.14 | 23299482.39 | 0.0274 | 0.0045 |
| Jupiter | 59090-10-19 19:55 G | 23303531.10 | 23303531.33 | 23303531.56 | 0.0500 | 0.0079 |
| Saturn | 59095-03-18 09:36 G | 23305141.68 | 23305141.90 | 23305142.13 | 0.0286 | 0.0113 |
| Jupiter | 59096-04-13 16:05 G | 23305533.98 | 23305534.17 | 23305534.38 | 0.0529 | 0.0298 |
| Uranus | 59102-05-12 21:07 G | 23307753.17 | 23307753.38 | 23307753.61 | 0.0141 | 0.0074 |
| Jupiter | 59102-10-24 22:19 G | 23307918.22 | 23307918.43 | 23307918.64 | 0.0502 | 0.0235 |
| Neptune | 59103-04-17 05:46 G | 23308092.59 | 23308092.74 | 23308092.90 | 0.0089 | 0.0069 |
| Uranus | 59103-05-17 10:48 G | 23308122.70 | 23308122.95 | 23308123.21 | 0.0142 | 0.0017 |
| Neptune | 59104-04-18 23:17 G | 23308460.24 | 23308460.47 | 23308460.74 | 0.0089 | 0.0032 |
| Uranus | 59104-05-21 15:07 G | 23308492.90 | 23308493.13 | 23308493.38 | 0.0142 | 0.0046 |
| Neptune | 59105-04-21 07:12 G | 23308827.56 | 23308827.80 | 23308828.06 | 0.0089 | 0.0007 |
| Uranus | 59105-05-26 06:14 G | 23308862.63 | 23308862.76 | 23308862.90 | 0.0142 | 0.0121 |
| Neptune | 59106-04-23 21:07 G | 23309195.15 | 23309195.38 | 23309195.65 | 0.0089 | 0.0030 |
| Neptune | 59107-04-26 09:50 G | 23309562.72 | 23309562.91 | 23309563.12 | 0.0089 | 0.0054 |
| Jupiter | 59108-04-19 15:50 G | 23309921.94 | 23309922.16 | 23309922.38 | 0.0527 | 0.0107 |
| Saturn | 59108-09-13 03:36 G | 23310068.49 | 23310068.65 | 23310068.81 | 0.0275 | 0.0202 |
| Jupiter | 59120-04-24 21:07 G | 23314310.28 | 23314310.38 | 23314310.50 | 0.0524 | 0.0461 |
| Saturn | 59124-03-12 22:48 G | 23315728.27 | 23315728.45 | 23315728.65 | 0.0285 | 0.0174 |
| Saturn | 59138-09-20 17:31 G | 23321033.00 | 23321033.23 | 23321033.47 | 0.0274 | 0.0104 |
| Uranus | 59141-11-11 00:00 G | 23322180.36 | 23322180.50 | 23322180.68 | 0.0137 | 0.0108 |
| Uranus | 59142-11-15 19:12 G | 23322550.07 | 23322550.30 | 23322550.53 | 0.0137 | 0.0058 |
| Uranus | 59143-11-19 23:02 G | 23322919.21 | 23322919.46 | 23322919.71 | 0.0137 | 0.0012 |
| Uranus | 59144-11-23 15:50 G | 23323288.94 | 23323289.16 | 23323289.40 | 0.0136 | 0.0055 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 59145-11-27 18:29 G | 23323658.18 | 23323658.27 | 23323658.40 | 0.0136 | 0.0122 |
| Saturn | 59154-03-21 01:55 G | 23326693.41 | 23326693.58 | 23326693.75 | 0.0286 | 0.0196 |
| Jupiter | 59161-10-15 11:02 G | 23329458.82 | 23329458.96 | 23329459.10 | 0.0498 | 0.0398 |
| Saturn | 59167-09-15 17:46 G | 23331620.04 | 23331620.24 | 23331620.46 | 0.0274 | 0.0136 |
| Jupiter | 59173-10-19 15:07 G | 23333845.91 | 23333846.13 | 23333846.36 | 0.0500 | 0.0134 |
| Jupiter | 59179-04-14 14:53 G | 23335848.96 | 23335849.12 | 23335849.29 | 0.0529 | 0.0357 |
| Saturn | 59183-03-15 09:22 G | 23337279.65 | 23337279.89 | 23337280.13 | 0.0286 | 0.0093 |
| Uranus | 59185-05-08 06:58 G | 23338064.71 | 23338064.79 | 23338064.92 | 0.0141 | 0.0128 |
| Jupiter | 59185-10-24 10:19 G | 23338233.72 | 23338233.93 | 23338234.14 | 0.0502 | 0.0196 |
| Uranus | 59186-05-13 08:53 G | 23338434.67 | 23338434.87 | 23338435.10 | 0.0141 | 0.0078 |
| Neptune | 59186-10-19 21:50 G | 23338594.24 | 23338594.41 | 23338594.62 | 0.0088 | 0.0059 |
| Uranus | 59187-05-17 23:31 G | 23338804.23 | 23338804.48 | 23338804.74 | 0.0142 | 0.0009 |
| Neptune | 59187-10-22 11:31 G | 23338961.73 | 23338961.98 | 23338962.22 | 0.0088 | 0.0037 |
| Uranus | 59188-05-22 03:50 G | 23339174.43 | 23339174.66 | 23339174.90 | 0.0142 | 0.0058 |
| Neptune | 59188-10-23 22:48 G | 23339329.21 | 23339329.45 | 23339329.70 | 0.0088 | 0.0002 |
| Uranus | 59189-05-26 18:43 G | 23339544.15 | 23339544.28 | 23339544.45 | 0.0142 | 0.0114 |
| Neptune | 59189-10-26 07:12 G | 23339696.55 | 23339696.80 | 23339697.06 | 0.0089 | 0.0023 |
| Neptune | 59190-10-28 23:31 G | 23340064.30 | 23340064.48 | 23340064.66 | 0.0089 | 0.0062 |
| Jupiter | 59191-04-19 20:10 G | 23340237.11 | 23340237.34 | 23340237.58 | 0.0527 | 0.0047 |
| Neptune | 59191-10-31 04:05 G | 23340431.60 | 23340431.67 | 23340431.78 | 0.0089 | 0.0083 |
| Saturn | 59197-09-22 00:58 G | 23342584.36 | 23342584.54 | 23342584.74 | 0.0273 | 0.0170 |
| Jupiter | 59203-04-24 08:10 G | 23344624.69 | 23344624.84 | 23344625.00 | 0.0525 | 0.0386 |
| Saturn | 59213-03-22 20:24 G | 23348245.32 | 23348245.35 | 23348245.40 | 0.0287 | 0.0282 |
| Uranus | 59225-11-11 11:31 G | 23352861.84 | 23352861.98 | 23352862.15 | 0.0137 | 0.0107 |
| Saturn | 59226-09-17 07:12 G | 23353171.56 | 23353171.80 | 23353172.05 | 0.0274 | 0.0065 |
| Uranus | 59226-11-16 06:43 G | 23353231.54 | 23353231.78 | 23353232.03 | 0.0137 | 0.0042 |
| Uranus | 59227-11-20 10:48 G | 23353600.69 | 23353600.95 | 23353601.20 | 0.0137 | 0.0003 |
| Uranus | 59228-11-24 03:50 G | 23353970.46 | 23353970.66 | 23353970.89 | 0.0136 | 0.0074 |
| Uranus | 59229-11-28 06:14 G | 23354339.65 | 23354339.76 | 23354339.92 | 0.0136 | 0.0115 |
| Saturn | 59242-03-16 19:41 G | 23358831.07 | 23358831.32 | 23358831.57 | 0.0286 | 0.0009 |

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| Jupiter | 59244-10-14 08:24 G | 23359773.76 | 23359773.85 | 23359773.95 | 0.0498 | 0.0453 |
| Saturn | 59256-09-23 15:07 G | 23364136.03 | 23364136.13 | 23364136.25 | 0.0273 | 0.0239 |
| Jupiter | 59256-10-19 02:38 G | 23364161.40 | 23364161.61 | 23364161.83 | 0.0499 | 0.0178 |
| Jupiter | 59262-04-13 13:41 G | 23366163.94 | 23366164.07 | 23366164.21 | 0.0530 | 0.0433 |
| Neptune | 59267-04-16 16:48 G | 23367993.10 | 23367993.20 | 23367993.34 | 0.0089 | 0.0079 |
| Pluto | 59268-03-10 20:10 G | 23368322.17 | 23368322.34 | 23368322.57 | 0.0066 | 0.0041 |
| Neptune | 59268-04-18 01:41 G | 23368360.40 | 23368360.57 | 23368360.80 | 0.0089 | 0.0054 |
| Jupiter | 59268-10-23 08:10 G | 23368548.61 | 23368548.84 | 23368549.07 | 0.0501 | 0.0143 |
| Pluto | 59269-03-12 02:53 G | 23368688.49 | 23368688.62 | 23368688.79 | 0.0066 | 0.0053 |
| Neptune | 59269-04-20 14:53 G | 23368727.86 | 23368728.12 | 23368728.38 | 0.0089 | 0.0018 |
| Uranus | 59269-05-08 20:38 G | 23368746.32 | 23368746.36 | 23368746.44 | 0.0141 | 0.0137 |
| Neptune | 59270-04-23 04:19 G | 23369095.43 | 23369095.68 | 23369095.93 | 0.0089 | 0.0007 |
| Uranus | 59270-05-13 21:36 G | 23369116.18 | 23369116.40 | 23369116.65 | 0.0141 | 0.0062 |
| Mars | 59270-08-16 19:12 G | 23369211.11 | 23369211.30 | 23369211.50 | 0.1902 | 0.0070 |
| Saturn | 59271-03-11 20:53 G | 23369418.32 | 23369418.37 | 23369418.44 | 0.0285 | 0.0275 |
| Neptune | 59271-04-25 11:31 G | 23369462.77 | 23369462.98 | 23369463.24 | 0.0089 | 0.0043 |
| Uranus | 59271-05-18 12:43 G | 23369485.78 | 23369486.03 | 23369486.28 | 0.0142 | 0.0007 |
| Neptune | 59272-04-27 05:31 G | 23369830.58 | 23369830.73 | 23369830.91 | 0.0089 | 0.0068 |
| Uranus | 59272-05-22 16:05 G | 23369855.94 | 23369856.17 | 23369856.42 | 0.0142 | 0.0058 |
| Uranus | 59273-05-27 07:12 G | 23370225.72 | 23370225.80 | 23370225.91 | 0.0142 | 0.0132 |
| Jupiter | 59274-04-18 07:26 G | 23370551.58 | 23370551.81 | 23370552.04 | 0.0528 | 0.0031 |
| Mars | 59279-02-13 00:14 G | 23372313.43 | 23372313.51 | 23372313.60 | 0.1622 | 0.1411 |
| Jupiter | 59280-10-27 18:14 G | 23372936.18 | 23372936.26 | 23372936.35 | 0.0503 | 0.0464 |
| Saturn | 59285-09-18 16:05 G | 23374722.91 | 23374723.17 | 23374723.42 | 0.0274 | 0.0010 |
| Jupiter | 59286-04-23 17:46 G | 23374940.07 | 23374940.24 | 23374940.42 | 0.0526 | 0.0332 |
| Saturn | 59301-03-19 08:53 G | 23380382.64 | 23380382.87 | 23380383.11 | 0.0286 | 0.0071 |
| Uranus | 59309-11-12 22:48 G | 23383543.29 | 23383543.45 | 23383543.63 | 0.0137 | 0.0100 |
| Uranus | 59310-11-17 17:02 G | 23383912.98 | 23383913.21 | 23383913.46 | 0.0137 | 0.0049 |
| Uranus | 59311-11-21 21:07 G | 23384282.14 | 23384282.38 | 23384282.64 | 0.0137 | 0.0021 |
| Uranus | 59312-11-25 14:10 G | 23384651.88 | 23384652.09 | 23384652.33 | 0.0136 | 0.0063 |

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| Uranus | 59313-11-29 16:48 G | 23385021.15 | 23385021.20 | 23385021.28 | 0.0136 | 0.0131 |
| Saturn | 59314-09-14 09:22 G | 23385309.78 | 23385309.89 | 23385310.02 | 0.0275 | 0.0239 |
| Saturn | 59330-03-14 10:05 G | 23390969.74 | 23390969.92 | 23390970.10 | 0.0285 | 0.0195 |
| Jupiter | 59339-10-19 20:10 G | 23394476.13 | 23394476.34 | 23394476.55 | 0.0499 | 0.0242 |
| Saturn | 59344-09-21 00:43 G | 23396274.29 | 23396274.53 | 23396274.77 | 0.0274 | 0.0081 |
| Jupiter | 59345-04-13 08:24 G | 23396478.78 | 23396478.85 | 23396478.94 | 0.0530 | 0.0496 |
| Neptune | 59350-10-20 07:41 G | 23398494.70 | 23398494.82 | 23398494.96 | 0.0088 | 0.0077 |
| Neptune | 59351-10-22 20:38 G | 23398862.17 | 23398862.36 | 23398862.58 | 0.0088 | 0.0050 |
| Jupiter | 59351-10-24 10:34 G | 23398863.72 | 23398863.94 | 23398864.16 | 0.0501 | 0.0088 |
| Neptune | 59352-10-24 04:05 G | 23399229.42 | 23399229.67 | 23399229.94 | 0.0088 | 0.0017 |
| Uranus | 59353-05-10 08:24 G | 23399427.73 | 23399427.85 | 23399428.00 | 0.0141 | 0.0117 |
| Neptune | 59353-10-26 21:07 G | 23399597.13 | 23399597.38 | 23399597.63 | 0.0088 | 0.0012 |
| Uranus | 59354-05-15 08:10 G | 23399797.62 | 23399797.84 | 23399798.08 | 0.0141 | 0.0068 |
| Neptune | 59354-10-29 01:26 G | 23399964.35 | 23399964.56 | 23399964.80 | 0.0089 | 0.0044 |
| Uranus | 59355-05-20 00:29 G | 23400167.27 | 23400167.52 | 23400167.77 | 0.0142 | 0.0004 |
| Pluto | 59355-09-13 13:41 G | 23400284.00 | 23400284.07 | 23400284.19 | 0.0079 | 0.0073 |
| Neptune | 59355-10-31 19:12 G | 23400332.18 | 23400332.30 | 23400332.47 | 0.0089 | 0.0073 |
| Uranus | 59356-05-24 03:36 G | 23400537.43 | 23400537.65 | 23400537.89 | 0.0142 | 0.0067 |
| Jupiter | 59357-04-18 18:14 G | 23400867.03 | 23400867.26 | 23400867.49 | 0.0528 | 0.0085 |
| Uranus | 59357-05-28 19:12 G | 23400907.20 | 23400907.30 | 23400907.44 | 0.0142 | 0.0125 |
| Mars | 59358-02-15 18:58 G | 23401170.16 | 23401170.29 | 23401170.43 | 0.1623 | 0.1047 |
| Saturn | 59360-03-21 00:29 G | 23401934.32 | 23401934.52 | 23401934.72 | 0.0286 | 0.0152 |
| Jupiter | 59363-10-29 00:43 G | 23403251.39 | 23403251.53 | 23403251.66 | 0.0503 | 0.0415 |
| Jupiter | 59369-04-23 11:31 G | 23405254.78 | 23405254.98 | 23405255.19 | 0.0526 | 0.0264 |
| Saturn | 59373-09-15 23:31 G | 23406861.30 | 23406861.48 | 23406861.68 | 0.0274 | 0.0167 |
| Saturn | 59389-03-15 15:07 G | 23412520.91 | 23412521.13 | 23412521.37 | 0.0285 | 0.0117 |
| Uranus | 59393-11-13 10:19 G | 23414224.78 | 23414224.93 | 23414225.13 | 0.0137 | 0.0098 |
| Uranus | 59394-11-18 05:02 G | 23414594.46 | 23414594.71 | 23414594.96 | 0.0137 | 0.0034 |
| Uranus | 59395-11-22 09:22 G | 23414963.65 | 23414963.89 | 23414964.14 | 0.0137 | 0.0012 |
| Uranus | 59396-11-26 02:38 G | 23415333.41 | 23415333.61 | 23415333.82 | 0.0136 | 0.0082 |

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| Uranus | 59397-11-30 05:17 G | 23415702.64 | 23415702.72 | 23415702.85 | 0.0136 | 0.0123 |
| Saturn | 59403-09-24 12:58 G | 23417825.85 | 23417826.04 | 23417826.24 | 0.0273 | 0.0156 |
| Saturn | 59419-03-24 13:26 G | 23423485.92 | 23423486.06 | 23423486.20 | 0.0286 | 0.0230 |
| Jupiter | 59422-10-20 04:48 G | 23424791.52 | 23424791.70 | 23424791.88 | 0.0499 | 0.0285 |
| Neptune | 59432-04-19 08:38 G | 23428260.71 | 23428260.86 | 23428261.02 | 0.0089 | 0.0071 |
| Saturn | 59432-09-18 07:55 G | 23428412.60 | 23428412.83 | 23428413.08 | 0.0274 | 0.0098 |
| Neptune | 59433-04-21 23:31 G | 23428628.27 | 23428628.48 | 23428628.73 | 0.0089 | 0.0033 |
| Neptune | 59434-04-24 06:43 G | 23428995.53 | 23428995.78 | 23428996.05 | 0.0089 | 0.0011 |
| Jupiter | 59434-10-24 18:29 G | 23429179.03 | 23429179.27 | 23429179.51 | 0.0500 | 0.0057 |
| Neptune | 59435-04-27 01:12 G | 23429363.32 | 23429363.55 | 23429363.80 | 0.0089 | 0.0029 |
| Neptune | 59436-04-28 06:00 G | 23429730.56 | 23429730.75 | 23429730.98 | 0.0089 | 0.0051 |
| Uranus | 59437-05-11 20:53 G | 23430109.27 | 23430109.37 | 23430109.48 | 0.0141 | 0.0126 |
| Uranus | 59438-05-16 19:26 G | 23430479.08 | 23430479.31 | 23430479.57 | 0.0141 | 0.0051 |
| Uranus | 59439-05-21 12:29 G | 23430848.77 | 23430849.02 | 23430849.27 | 0.0141 | 0.0002 |
| Jupiter | 59440-04-18 07:55 G | 23431181.60 | 23431181.83 | 23431182.06 | 0.0529 | 0.0163 |
| Uranus | 59440-05-25 14:24 G | 23431218.88 | 23431219.10 | 23431219.34 | 0.0142 | 0.0069 |
| Uranus | 59441-05-30 06:58 G | 23431588.75 | 23431588.79 | 23431588.84 | 0.0142 | 0.0140 |
| Jupiter | 59446-10-29 00:58 G | 23433566.39 | 23433566.54 | 23433566.69 | 0.0502 | 0.0372 |
| Saturn | 59448-03-17 19:41 G | 23434072.08 | 23434072.32 | 23434072.57 | 0.0286 | 0.0043 |
| Jupiter | 59452-04-23 12:43 G | 23435569.82 | 23435570.03 | 23435570.24 | 0.0527 | 0.0190 |
| Saturn | 59462-09-26 01:12 G | 23439377.43 | 23439377.55 | 23439377.70 | 0.0273 | 0.0224 |
| Jupiter | 59464-04-28 16:05 G | 23439958.10 | 23439958.17 | 23439958.25 | 0.0525 | 0.0499 |
| Uranus | 59477-11-14 21:36 G | 23444906.23 | 23444906.40 | 23444906.60 | 0.0137 | 0.0091 |
| Uranus | 59478-11-19 15:07 G | 23445275.88 | 23445276.13 | 23445276.38 | 0.0137 | 0.0038 |
| Uranus | 59479-11-23 20:10 G | 23445645.10 | 23445645.34 | 23445645.58 | 0.0137 | 0.0029 |
| Uranus | 59480-11-27 12:29 G | 23446014.81 | 23446015.02 | 23446015.25 | 0.0136 | 0.0071 |
| Saturn | 59491-09-20 10:34 G | 23449963.69 | 23449963.94 | 23449964.20 | 0.0274 | 0.0036 |
| Jupiter | 59505-10-20 12:29 G | 23455106.84 | 23455107.02 | 23455107.22 | 0.0498 | 0.0318 |
| Saturn | 59507-03-21 03:07 G | 23455623.40 | 23455623.63 | 23455623.87 | 0.0286 | 0.0022 |
| Pluto | 59515-03-16 00:14 G | 23458540.35 | 23458540.51 | 23458540.68 | 0.0066 | 0.0050 |

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| Neptune | 59515-10-23 23:46 G | 23458762.32 | 23458762.49 | 23458762.71 | 0.0088 | 0.0060 |
| Pluto | 59516-03-16 06:00 G | 23458906.60 | 23458906.75 | 23458906.94 | 0.0066 | 0.0049 |
| Neptune | 59516-10-25 18:00 G | 23459130.03 | 23459130.25 | 23459130.49 | 0.0088 | 0.0038 |
| Jupiter | 59517-10-24 15:22 G | 23459493.92 | 23459494.14 | 23459494.37 | 0.0499 | 0.0011 |
| Neptune | 59517-10-27 22:48 G | 23459497.19 | 23459497.45 | 23459497.71 | 0.0088 | 0.0002 |
| Neptune | 59518-10-30 16:48 G | 23459864.95 | 23459865.20 | 23459865.46 | 0.0088 | 0.0023 |
| Neptune | 59519-11-01 22:19 G | 23460232.27 | 23460232.43 | 23460232.62 | 0.0089 | 0.0062 |
| Saturn | 59520-09-15 13:55 G | 23460551.04 | 23460551.08 | 23460551.13 | 0.0276 | 0.0270 |
| Neptune | 59520-11-03 13:41 G | 23460600.00 | 23460600.07 | 23460600.18 | 0.0089 | 0.0083 |
| Uranus | 59521-05-13 06:58 G | 23460790.65 | 23460790.79 | 23460790.98 | 0.0141 | 0.0107 |
| Uranus | 59522-05-18 04:48 G | 23461160.46 | 23461160.70 | 23461160.94 | 0.0141 | 0.0058 |
| Jupiter | 59523-04-19 17:46 G | 23461497.04 | 23461497.24 | 23461497.45 | 0.0530 | 0.0213 |
| Uranus | 59523-05-22 23:02 G | 23461530.22 | 23461530.46 | 23461530.71 | 0.0141 | 0.0015 |
| Uranus | 59524-05-27 00:00 G | 23461900.29 | 23461900.50 | 23461900.74 | 0.0142 | 0.0075 |
| Uranus | 59525-05-31 17:31 G | 23462270.18 | 23462270.23 | 23462270.32 | 0.0142 | 0.0135 |
| Jupiter | 59529-10-29 10:19 G | 23463881.75 | 23463881.93 | 23463882.11 | 0.0501 | 0.0317 |
| Jupiter | 59535-04-24 20:38 G | 23465885.13 | 23465885.36 | 23465885.59 | 0.0527 | 0.0136 |
| Saturn | 59536-03-14 10:34 G | 23466209.85 | 23466209.94 | 23466210.03 | 0.0284 | 0.0263 |
| Jupiter | 59547-04-29 17:02 G | 23470273.09 | 23470273.21 | 23470273.32 | 0.0525 | 0.0450 |
| Saturn | 59550-09-22 13:12 G | 23471514.81 | 23471515.05 | 23471515.30 | 0.0274 | 0.0022 |
| Uranus | 59561-11-16 07:41 G | 23475587.65 | 23475587.82 | 23475588.03 | 0.0137 | 0.0086 |
| Uranus | 59562-11-21 00:43 G | 23475957.28 | 23475957.53 | 23475957.79 | 0.0137 | 0.0026 |
| Mars | 59563-02-17 08:38 G | 23476045.68 | 23476045.86 | 23476046.05 | 0.1620 | 0.0523 |
| Uranus | 59563-11-25 06:58 G | 23476326.55 | 23476326.79 | 23476327.04 | 0.0137 | 0.0022 |
| Uranus | 59564-11-28 23:02 G | 23476696.28 | 23476696.46 | 23476696.66 | 0.0136 | 0.0091 |
| Uranus | 59565-12-03 03:36 G | 23477065.60 | 23477065.65 | 23477065.72 | 0.0136 | 0.0131 |
| Saturn | 59566-03-22 08:53 G | 23477174.64 | 23477174.87 | 23477175.10 | 0.0286 | 0.0084 |
| Saturn | 59579-09-17 18:29 G | 23482102.12 | 23482102.27 | 23482102.43 | 0.0276 | 0.0213 |
| Jupiter | 59588-10-19 12:29 G | 23485421.88 | 23485422.02 | 23485422.18 | 0.0497 | 0.0369 |
| Saturn | 59595-03-16 08:53 G | 23487760.71 | 23487760.87 | 23487761.06 | 0.0284 | 0.0202 |

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| Neptune | 59596-04-19 20:10 G | 23488161.26 | 23488161.34 | 23488161.45 | 0.0089 | 0.0082 |
| Neptune | 59597-04-22 01:41 G | 23488528.39 | 23488528.57 | 23488528.81 | 0.0089 | 0.0053 |
| Neptune | 59598-04-24 20:53 G | 23488896.13 | 23488896.37 | 23488896.63 | 0.0089 | 0.0020 |
| Neptune | 59599-04-27 02:10 G | 23489263.34 | 23489263.59 | 23489263.85 | 0.0089 | 0.0008 |
| Neptune | 59600-04-28 20:10 G | 23489631.11 | 23489631.34 | 23489631.58 | 0.0089 | 0.0041 |
| Jupiter | 59600-10-24 07:26 G | 23489809.57 | 23489809.81 | 23489810.04 | 0.0499 | 0.0028 |
| Neptune | 59601-05-01 02:53 G | 23489998.48 | 23489998.62 | 23489998.80 | 0.0089 | 0.0068 |
| Uranus | 59605-05-13 19:12 G | 23491472.18 | 23491472.30 | 23491472.46 | 0.0141 | 0.0115 |
| Jupiter | 59606-04-19 00:14 G | 23491812.30 | 23491812.51 | 23491812.72 | 0.0530 | 0.0253 |
| Uranus | 59606-05-18 15:36 G | 23491841.91 | 23491842.15 | 23491842.42 | 0.0141 | 0.0039 |
| Uranus | 59607-05-23 11:02 G | 23492211.72 | 23492211.96 | 23492212.21 | 0.0141 | 0.0012 |
| Uranus | 59608-05-27 10:19 G | 23492581.73 | 23492581.93 | 23492582.16 | 0.0142 | 0.0081 |
| Saturn | 59609-09-23 19:12 G | 23493066.07 | 23493066.30 | 23493066.53 | 0.0274 | 0.0078 |
| Jupiter | 59612-10-28 12:43 G | 23494196.85 | 23494197.03 | 23494197.23 | 0.0501 | 0.0284 |
| Jupiter | 59618-04-23 19:41 G | 23496200.10 | 23496200.32 | 23496200.54 | 0.0528 | 0.0077 |
| Saturn | 59625-03-23 08:53 G | 23498725.66 | 23498725.87 | 23498726.10 | 0.0286 | 0.0141 |
| Jupiter | 59630-04-29 02:24 G | 23500588.45 | 23500588.60 | 23500588.76 | 0.0526 | 0.0394 |
| Saturn | 59638-09-18 14:38 G | 23503652.91 | 23503653.11 | 23503653.33 | 0.0276 | 0.0161 |
| Uranus | 59644-11-12 07:41 G | 23505899.77 | 23505899.82 | 23505899.88 | 0.0138 | 0.0134 |
| Uranus | 59645-11-16 17:31 G | 23506269.04 | 23506269.23 | 23506269.43 | 0.0137 | 0.0084 |
| Uranus | 59646-11-21 08:53 G | 23506638.62 | 23506638.87 | 23506639.13 | 0.0137 | 0.0028 |
| Uranus | 59647-11-25 16:05 G | 23507007.94 | 23507008.17 | 23507008.42 | 0.0137 | 0.0037 |
| Uranus | 59648-11-29 06:58 G | 23507377.60 | 23507377.79 | 23507378.02 | 0.0136 | 0.0081 |
| Saturn | 59654-03-17 11:02 G | 23509311.76 | 23509311.96 | 23509312.17 | 0.0284 | 0.0144 |
| Saturn | 59668-09-24 21:50 G | 23514617.20 | 23514617.41 | 23514617.64 | 0.0274 | 0.0131 |
| Jupiter | 59671-10-20 06:43 G | 23515737.63 | 23515737.78 | 23515737.92 | 0.0497 | 0.0393 |
| Neptune | 59679-10-23 16:19 G | 23518663.07 | 23518663.18 | 23518663.34 | 0.0088 | 0.0076 |
| Neptune | 59680-10-24 20:53 G | 23519030.18 | 23519030.37 | 23519030.60 | 0.0088 | 0.0051 |
| Neptune | 59681-10-27 14:53 G | 23519397.87 | 23519398.12 | 23519398.39 | 0.0088 | 0.0016 |
| Neptune | 59682-10-29 21:07 G | 23519765.14 | 23519765.38 | 23519765.63 | 0.0088 | 0.0010 |

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| Jupiter | 59683-10-24 10:19 G | 23520124.69 | 23520124.93 | 23520125.16 | 0.0499 | 0.0061 |
| Neptune | 59683-11-01 10:48 G | 23520132.74 | 23520132.95 | 23520133.20 | 0.0088 | 0.0045 |
| Saturn | 59684-03-24 04:05 G | 23520276.49 | 23520276.67 | 23520276.86 | 0.0286 | 0.0195 |
| Neptune | 59684-11-02 21:22 G | 23520500.27 | 23520500.39 | 23520500.56 | 0.0089 | 0.0072 |
| Jupiter | 59689-04-18 00:43 G | 23522127.35 | 23522127.53 | 23522127.72 | 0.0530 | 0.0310 |
| Uranus | 59689-05-14 06:14 G | 23522153.59 | 23522153.76 | 23522153.96 | 0.0141 | 0.0096 |
| Uranus | 59690-05-19 01:12 G | 23522523.31 | 23522523.55 | 23522523.81 | 0.0141 | 0.0048 |
| Uranus | 59691-05-23 21:50 G | 23522893.18 | 23522893.41 | 23522893.66 | 0.0141 | 0.0027 |
| Uranus | 59692-05-27 20:10 G | 23523263.15 | 23523263.34 | 23523263.57 | 0.0142 | 0.0084 |
| Jupiter | 59695-10-29 01:55 G | 23524512.38 | 23524512.58 | 23524512.79 | 0.0500 | 0.0232 |
| Saturn | 59697-09-19 10:34 G | 23525203.73 | 23525203.94 | 23525204.18 | 0.0276 | 0.0113 |
| Jupiter | 59701-04-24 08:10 G | 23526515.61 | 23526515.84 | 23526516.08 | 0.0529 | 0.0029 |
| Jupiter | 59707-11-03 09:07 G | 23528899.85 | 23528899.88 | 23528899.94 | 0.0502 | 0.0492 |
| Saturn | 59713-03-19 17:02 G | 23530862.98 | 23530863.21 | 23530863.43 | 0.0284 | 0.0085 |
| Jupiter | 59713-04-29 04:05 G | 23530903.51 | 23530903.67 | 23530903.85 | 0.0527 | 0.0357 |
| Saturn | 59727-09-27 17:46 G | 23536168.05 | 23536168.24 | 23536168.43 | 0.0274 | 0.0182 |
| Uranus | 59729-11-18 02:38 G | 23536950.42 | 23536950.61 | 23536950.83 | 0.0137 | 0.0077 |
| Uranus | 59730-11-22 17:17 G | 23537319.96 | 23537320.22 | 23537320.48 | 0.0137 | 0.0020 |
| Uranus | 59731-11-27 02:10 G | 23537689.36 | 23537689.59 | 23537689.83 | 0.0137 | 0.0031 |
| Uranus | 59732-11-30 16:05 G | 23538059.00 | 23538059.17 | 23538059.37 | 0.0136 | 0.0098 |
| Saturn | 59743-03-27 02:24 G | 23541827.49 | 23541827.60 | 23541827.72 | 0.0286 | 0.0251 |
| Jupiter | 59754-10-20 06:43 G | 23546052.67 | 23546052.78 | 23546052.89 | 0.0496 | 0.0436 |
| Saturn | 59756-09-21 10:48 G | 23546754.72 | 23546754.95 | 23546755.19 | 0.0276 | 0.0064 |
| Neptune | 59761-04-22 16:48 G | 23548429.07 | 23548429.20 | 23548429.37 | 0.0089 | 0.0072 |
| Pluto | 59762-03-18 00:29 G | 23548758.52 | 23548758.52 | 23548758.53 | 0.0065 | 0.0065 |
| Neptune | 59762-04-24 22:34 G | 23548796.21 | 23548796.44 | 23548796.68 | 0.0089 | 0.0032 |
| Pluto | 59763-03-19 07:12 G | 23549124.61 | 23549124.80 | 23549125.02 | 0.0066 | 0.0039 |
| Neptune | 59763-04-27 16:19 G | 23549163.92 | 23549164.18 | 23549164.45 | 0.0089 | 0.0011 |
| Neptune | 59764-04-29 00:29 G | 23549531.29 | 23549531.52 | 23549531.77 | 0.0089 | 0.0029 |
| Neptune | 59765-05-01 13:41 G | 23549898.87 | 23549899.07 | 23549899.31 | 0.0089 | 0.0051 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 59766-10-25 00:43 G | 23550440.30 | 23550440.53 | 23550440.75 | 0.0498 | 0.0100 |
| Saturn | 59772-03-20 19:55 G | 23552414.09 | 23552414.33 | 23552414.58 | 0.0283 | 0.0027 |
| Jupiter | 59772-04-18 13:41 G | 23552442.90 | 23552443.07 | 23552443.26 | 0.0531 | 0.0351 |
| Uranus | 59773-05-15 18:58 G | 23552835.13 | 23552835.29 | 23552835.46 | 0.0141 | 0.0103 |
| Uranus | 59774-05-20 12:29 G | 23553204.77 | 23553205.02 | 23553205.29 | 0.0141 | 0.0028 |
| Uranus | 59775-05-25 10:19 G | 23553574.69 | 23553574.93 | 23553575.18 | 0.0141 | 0.0021 |
| Uranus | 59776-05-29 06:58 G | 23553944.60 | 23553944.79 | 23553945.00 | 0.0142 | 0.0092 |
| Jupiter | 59778-10-29 06:58 G | 23554827.57 | 23554827.79 | 23554828.02 | 0.0500 | 0.0190 |
| Jupiter | 59784-04-23 10:34 G | 23556830.70 | 23556830.94 | 23556831.17 | 0.0529 | 0.0015 |
| Saturn | 59786-09-28 12:14 G | 23557718.88 | 23557719.01 | 23557719.14 | 0.0274 | 0.0233 |
| Jupiter | 59790-11-02 21:50 G | 23559215.33 | 23559215.41 | 23559215.50 | 0.0502 | 0.0459 |
| Jupiter | 59796-04-28 16:48 G | 23561219.02 | 23561219.20 | 23561219.39 | 0.0527 | 0.0313 |
| Uranus | 59812-11-14 23:31 G | 23567262.40 | 23567262.48 | 23567262.61 | 0.0138 | 0.0126 |
| Uranus | 59813-11-19 12:29 G | 23567631.84 | 23567632.02 | 23567632.24 | 0.0137 | 0.0079 |
| Uranus | 59814-11-24 01:41 G | 23568001.31 | 23568001.57 | 23568001.83 | 0.0137 | 0.0019 |
| Saturn | 59815-09-24 12:58 G | 23568305.80 | 23568306.04 | 23568306.28 | 0.0276 | 0.0016 |
| Uranus | 59815-11-28 11:46 G | 23568370.76 | 23568370.99 | 23568371.23 | 0.0137 | 0.0042 |
| Uranus | 59816-12-02 00:14 G | 23568740.32 | 23568740.51 | 23568740.72 | 0.0136 | 0.0088 |
| Saturn | 59831-03-23 18:58 G | 23573965.04 | 23573965.29 | 23573965.54 | 0.0283 | 0.0030 |
| Jupiter | 59837-10-20 23:17 G | 23576368.39 | 23576368.47 | 23576368.55 | 0.0496 | 0.0463 |
| Neptune | 59844-10-26 12:14 G | 23578930.83 | 23578931.01 | 23578931.22 | 0.0088 | 0.0059 |
| Neptune | 59845-10-28 19:55 G | 23579298.10 | 23579298.33 | 23579298.56 | 0.0088 | 0.0036 |
| Neptune | 59846-10-31 09:07 G | 23579665.61 | 23579665.88 | 23579666.15 | 0.0088 | 0.0002 |
| Mars | 59847-02-20 06:29 G | 23579777.58 | 23579777.77 | 23579777.96 | 0.1618 | 0.0130 |
| Neptune | 59847-11-02 20:53 G | 23580033.15 | 23580033.37 | 23580033.63 | 0.0088 | 0.0026 |
| Neptune | 59848-11-04 05:02 G | 23580400.55 | 23580400.71 | 23580400.92 | 0.0089 | 0.0063 |
| Jupiter | 59849-10-25 05:46 G | 23580755.51 | 23580755.74 | 23580755.98 | 0.0498 | 0.0131 |
| Neptune | 59849-11-06 21:07 G | 23580768.34 | 23580768.38 | 23580768.49 | 0.0089 | 0.0085 |
| Pluto | 59850-09-21 20:24 G | 23581087.16 | 23581087.35 | 23581087.56 | 0.0078 | 0.0052 |
| Jupiter | 59855-04-19 12:29 G | 23582757.87 | 23582758.02 | 23582758.17 | 0.0531 | 0.0404 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 59857-05-17 05:31 G | 23583516.55 | 23583516.73 | 23583516.94 | 0.0141 | 0.0086 |
| Uranus | 59858-05-21 22:05 G | 23583886.16 | 23583886.42 | 23583886.67 | 0.0141 | 0.0038 |
| Uranus | 59859-05-26 20:53 G | 23584256.14 | 23584256.37 | 23584256.62 | 0.0141 | 0.0037 |
| Saturn | 59860-03-17 03:22 G | 23584551.55 | 23584551.64 | 23584551.76 | 0.0283 | 0.0251 |
| Uranus | 59860-05-30 16:34 G | 23584626.00 | 23584626.19 | 23584626.40 | 0.0142 | 0.0091 |
| Jupiter | 59861-10-29 19:12 G | 23585143.09 | 23585143.30 | 23585143.52 | 0.0500 | 0.0153 |
| Jupiter | 59867-04-24 20:38 G | 23587146.14 | 23587146.36 | 23587146.59 | 0.0530 | 0.0078 |
| Jupiter | 59873-11-03 06:58 G | 23589530.66 | 23589530.79 | 23589530.94 | 0.0501 | 0.0412 |
| Saturn | 59874-09-25 11:46 G | 23589856.74 | 23589856.99 | 23589857.25 | 0.0276 | 0.0035 |
| Jupiter | 59879-04-29 14:38 G | 23591533.90 | 23591534.11 | 23591534.32 | 0.0528 | 0.0255 |
| Saturn | 59890-03-24 21:22 G | 23595516.17 | 23595516.39 | 23595516.63 | 0.0284 | 0.0091 |
| Uranus | 59896-11-15 08:24 G | 23597943.82 | 23597943.85 | 23597943.94 | 0.0138 | 0.0134 |
| Uranus | 59897-11-19 23:02 G | 23598313.25 | 23598313.46 | 23598313.67 | 0.0137 | 0.0068 |
| Uranus | 59898-11-24 10:34 G | 23598682.68 | 23598682.94 | 23598683.20 | 0.0137 | 0.0015 |
| Uranus | 59899-11-28 22:19 G | 23599052.20 | 23599052.43 | 23599052.67 | 0.0137 | 0.0039 |
| Uranus | 59900-12-03 09:36 G | 23599421.74 | 23599421.90 | 23599422.08 | 0.0136 | 0.0103 |
| Saturn | 59903-09-20 16:05 G | 23600443.05 | 23600443.17 | 23600443.31 | 0.0277 | 0.0234 |
| Mars | 59917-08-23 08:38 G | 23605528.65 | 23605528.86 | 23605529.08 | 0.1906 | 0.0173 |
| Saturn | 59919-03-20 11:17 G | 23606102.80 | 23606102.97 | 23606103.16 | 0.0283 | 0.0187 |
| Jupiter | 59920-10-21 04:05 G | 23606683.64 | 23606683.67 | 23606683.71 | 0.0496 | 0.0488 |
| Neptune | 59925-04-23 19:55 G | 23608329.26 | 23608329.33 | 23608329.43 | 0.0089 | 0.0083 |
| Neptune | 59926-04-26 12:29 G | 23608696.82 | 23608697.02 | 23608697.26 | 0.0089 | 0.0052 |
| Neptune | 59927-04-28 21:50 G | 23609064.18 | 23609064.41 | 23609064.66 | 0.0089 | 0.0021 |
| Neptune | 59928-04-30 09:50 G | 23609431.66 | 23609431.91 | 23609432.19 | 0.0089 | 0.0011 |
| Neptune | 59929-05-03 00:14 G | 23609799.30 | 23609799.51 | 23609799.74 | 0.0089 | 0.0041 |
| Neptune | 59930-05-05 07:41 G | 23610166.69 | 23610166.82 | 23610167.01 | 0.0089 | 0.0071 |
| Jupiter | 59932-10-25 15:22 G | 23611070.93 | 23611071.14 | 23611071.36 | 0.0497 | 0.0167 |
| Saturn | 59933-09-27 07:55 G | 23611407.59 | 23611407.83 | 23611408.07 | 0.0276 | 0.0091 |
| Jupiter | 59938-04-19 18:58 G | 23613073.19 | 23613073.29 | 23613073.39 | 0.0533 | 0.0475 |
| Uranus | 59941-05-18 16:34 G | 23614198.03 | 23614198.19 | 23614198.40 | 0.0141 | 0.0094 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 59942-05-23 07:55 G | 23614567.57 | 23614567.83 | 23614568.09 | 0.0141 | 0.0020 |
| Uranus | 59943-05-28 08:10 G | 23614937.60 | 23614937.84 | 23614938.08 | 0.0141 | 0.0029 |
| Uranus | 59944-06-01 01:41 G | 23615307.41 | 23615307.57 | 23615307.77 | 0.0142 | 0.0102 |
| Jupiter | 59944-10-30 03:36 G | 23615458.41 | 23615458.65 | 23615458.89 | 0.0498 | 0.0106 |
| Saturn | 59949-03-27 07:41 G | 23617067.64 | 23617067.82 | 23617068.03 | 0.0284 | 0.0159 |
| Jupiter | 59950-04-24 16:34 G | 23617460.96 | 23617461.19 | 23617461.42 | 0.0531 | 0.0143 |
| Jupiter | 59956-11-03 08:53 G | 23619845.71 | 23619845.87 | 23619846.02 | 0.0500 | 0.0370 |
| Jupiter | 59962-04-29 23:31 G | 23621849.28 | 23621849.48 | 23621849.69 | 0.0528 | 0.0215 |
| Saturn | 59962-09-22 00:43 G | 23621994.35 | 23621994.53 | 23621994.73 | 0.0277 | 0.0172 |
| Saturn | 59978-03-21 16:48 G | 23627653.97 | 23627654.20 | 23627654.43 | 0.0283 | 0.0120 |
| Uranus | 59980-11-16 18:00 G | 23628625.13 | 23628625.25 | 23628625.41 | 0.0138 | 0.0117 |
| Uranus | 59981-11-21 09:50 G | 23628994.70 | 23628994.91 | 23628995.12 | 0.0137 | 0.0072 |
| Uranus | 59982-11-25 19:55 G | 23629364.07 | 23629364.33 | 23629364.59 | 0.0137 | 0.0010 |
| Uranus | 59983-11-30 08:24 G | 23629733.63 | 23629733.85 | 23629734.09 | 0.0137 | 0.0048 |
| Uranus | 59984-12-03 17:46 G | 23630103.07 | 23630103.24 | 23630103.45 | 0.0136 | 0.0096 |
| Saturn | 59992-09-28 10:34 G | 23632958.75 | 23632958.94 | 23632959.15 | 0.0275 | 0.0154 |

61ST MILLENNIUM CE

This is a list of transits of Moon in the 61st millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Saturn | 60008-03-28 21:50 G | 23638619.27 | 23638619.41 | 23638619.55 | 0.0284 | 0.0230 | | |
| Neptune | 60008-10-26 19:41 G | 23638831.20 | 23638831.32 | 23638831.48 | 0.0088 | 0.0073 | | |
| Neptune | 60009-10-29 07:41 G | 23639198.60 | 23639198.82 | 23639199.04 | 0.0088 | 0.0049 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 60010-03-22 04:34 G | 23639342.43 | 23639342.69 | 23639342.96 | 0.0066 | 0.0005 |
| Neptune | 60010-10-31 20:10 G | 23639566.11 | 23639566.34 | 23639566.60 | 0.0088 | 0.0014 |
| Neptune | 60011-11-03 03:36 G | 23639933.39 | 23639933.65 | 23639933.91 | 0.0088 | 0.0010 |
| Neptune | 60012-11-04 20:38 G | 23640301.15 | 23640301.36 | 23640301.58 | 0.0089 | 0.0047 |
| Neptune | 60013-11-07 00:29 G | 23640668.40 | 23640668.52 | 23640668.70 | 0.0089 | 0.0072 |
| Jupiter | 60015-10-25 21:22 G | 23641386.18 | 23641386.39 | 23641386.61 | 0.0496 | 0.0212 |
| Jupiter | 60021-04-18 17:02 G | 23643388.19 | 23643388.21 | 23643388.23 | 0.0533 | 0.0530 |
| Saturn | 60021-09-23 08:24 G | 23643545.62 | 23643545.85 | 23643546.08 | 0.0276 | 0.0105 |
| Uranus | 60025-05-19 02:10 G | 23644879.39 | 23644879.59 | 23644879.80 | 0.0141 | 0.0078 |
| Uranus | 60026-05-23 16:05 G | 23645248.92 | 23645249.17 | 23645249.43 | 0.0141 | 0.0030 |
| Uranus | 60027-05-28 17:17 G | 23645618.99 | 23645619.22 | 23645619.46 | 0.0141 | 0.0046 |
| Jupiter | 60027-10-30 04:05 G | 23645773.45 | 23645773.67 | 23645773.90 | 0.0498 | 0.0059 |
| Uranus | 60028-06-01 09:50 G | 23645988.74 | 23645988.91 | 23645989.12 | 0.0142 | 0.0097 |
| Jupiter | 60033-04-23 23:17 G | 23647776.26 | 23647776.47 | 23647776.67 | 0.0531 | 0.0207 |
| Saturn | 60037-03-22 23:17 G | 23649205.23 | 23649205.47 | 23649205.72 | 0.0283 | 0.0048 |
| Jupiter | 60039-11-03 22:05 G | 23650161.25 | 23650161.42 | 23650161.60 | 0.0500 | 0.0328 |
| Jupiter | 60045-04-28 23:02 G | 23652164.23 | 23652164.46 | 23652164.70 | 0.0529 | 0.0147 |
| Saturn | 60051-09-30 21:07 G | 23654510.25 | 23654510.38 | 23654510.53 | 0.0275 | 0.0220 |
| Mars | 60052-02-21 00:58 G | 23654653.37 | 23654653.54 | 23654653.71 | 0.1617 | 0.0550 |
| Uranus | 60064-11-17 02:38 G | 23659306.52 | 23659306.61 | 23659306.73 | 0.0138 | 0.0126 |
| Uranus | 60065-11-21 19:12 G | 23659676.10 | 23659676.30 | 23659676.54 | 0.0137 | 0.0059 |
| Uranus | 60066-11-26 04:34 G | 23660045.43 | 23660045.69 | 23660045.95 | 0.0137 | 0.0009 |
| Uranus | 60067-11-30 18:43 G | 23660415.06 | 23660415.28 | 23660415.52 | 0.0137 | 0.0048 |
| Uranus | 60068-12-04 02:53 G | 23660784.48 | 23660784.62 | 23660784.79 | 0.0136 | 0.0109 |
| Saturn | 60080-09-24 14:24 G | 23665096.84 | 23665097.10 | 23665097.36 | 0.0276 | 0.0032 |
| Neptune | 60090-04-25 19:41 G | 23668597.18 | 23668597.32 | 23668597.48 | 0.0089 | 0.0070 |
| Neptune | 60091-04-28 06:43 G | 23668964.54 | 23668964.78 | 23668965.04 | 0.0089 | 0.0031 |
| Neptune | 60092-04-29 22:19 G | 23669332.19 | 23669332.43 | 23669332.69 | 0.0089 | 0.0010 |
| Neptune | 60093-05-02 05:02 G | 23669699.47 | 23669699.71 | 23669699.97 | 0.0089 | 0.0030 |
| Neptune | 60094-05-04 23:17 G | 23670067.28 | 23670067.47 | 23670067.69 | 0.0089 | 0.0052 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 60096-03-24 11:17 G | 23670756.73 | 23670756.97 | 23670757.21 | 0.0284 | 0.0028 |
| Pluto | 60097-09-23 12:29 G | 23671304.76 | 23671305.02 | 23671305.28 | 0.0078 | 0.0006 |
| Jupiter | 60098-10-24 23:02 G | 23671701.27 | 23671701.46 | 23671701.66 | 0.0496 | 0.0259 |
| Uranus | 60108-05-15 09:50 G | 23675190.88 | 23675190.91 | 23675190.99 | 0.0140 | 0.0138 |
| Uranus | 60109-05-20 11:46 G | 23675560.80 | 23675560.99 | 23675561.21 | 0.0141 | 0.0084 |
| Uranus | 60110-05-25 00:58 G | 23675930.29 | 23675930.54 | 23675930.81 | 0.0141 | 0.0012 |
| Jupiter | 60110-10-30 16:05 G | 23676088.94 | 23676089.17 | 23676089.41 | 0.0498 | 0.0010 |
| Uranus | 60111-05-30 03:07 G | 23676300.39 | 23676300.63 | 23676300.87 | 0.0141 | 0.0036 |
| Uranus | 60112-06-02 18:14 G | 23676670.12 | 23676670.26 | 23676670.45 | 0.0142 | 0.0111 |
| Jupiter | 60116-04-23 15:36 G | 23678090.94 | 23678091.15 | 23678091.35 | 0.0532 | 0.0290 |
| Jupiter | 60122-11-03 18:29 G | 23680476.08 | 23680476.27 | 23680476.47 | 0.0499 | 0.0277 |
| Saturn | 60125-03-20 16:05 G | 23681344.03 | 23681344.17 | 23681344.33 | 0.0283 | 0.0221 |
| Jupiter | 60128-04-28 16:05 G | 23682478.95 | 23682479.17 | 23682479.40 | 0.0530 | 0.0073 |
| Mars | 60131-02-23 19:12 G | 23683510.17 | 23683510.30 | 23683510.42 | 0.1617 | 0.1119 |
| Saturn | 60139-09-27 23:02 G | 23686648.21 | 23686648.46 | 23686648.70 | 0.0276 | 0.0042 |
| Jupiter | 60140-05-04 00:58 G | 23686867.47 | 23686867.54 | 23686867.63 | 0.0528 | 0.0497 |
| Uranus | 60148-11-18 10:34 G | 23689987.80 | 23689987.94 | 23689988.12 | 0.0138 | 0.0108 |
| Uranus | 60149-11-23 04:48 G | 23690357.49 | 23690357.70 | 23690357.93 | 0.0137 | 0.0065 |
| Uranus | 60150-11-27 12:29 G | 23690726.76 | 23690727.02 | 23690727.28 | 0.0137 | 0.0002 |
| Uranus | 60151-12-02 03:36 G | 23691096.43 | 23691096.65 | 23691096.89 | 0.0137 | 0.0054 |
| Uranus | 60152-12-05 10:19 G | 23691465.78 | 23691465.93 | 23691466.11 | 0.0136 | 0.0104 |
| Saturn | 60155-03-28 04:19 G | 23692308.47 | 23692308.68 | 23692308.91 | 0.0284 | 0.0104 |
| Saturn | 60168-09-21 21:36 G | 23697235.26 | 23697235.40 | 23697235.56 | 0.0277 | 0.0219 |
| Neptune | 60173-10-29 20:10 G | 23699099.16 | 23699099.34 | 23699099.54 | 0.0088 | 0.0058 |
| Neptune | 60174-11-01 02:53 G | 23699466.38 | 23699466.62 | 23699466.87 | 0.0088 | 0.0033 |
| Neptune | 60175-11-03 20:38 G | 23699834.11 | 23699834.36 | 23699834.62 | 0.0088 | 0.0004 |
| Neptune | 60176-11-05 00:58 G | 23700201.30 | 23700201.54 | 23700201.79 | 0.0088 | 0.0028 |
| Neptune | 60177-11-07 18:29 G | 23700569.12 | 23700569.27 | 23700569.48 | 0.0089 | 0.0065 |
| Neptune | 60178-11-10 00:14 G | 23700936.50 | 23700936.51 | 23700936.56 | 0.0089 | 0.0088 |
| Jupiter | 60181-10-25 09:22 G | 23702016.71 | 23702016.89 | 23702017.08 | 0.0495 | 0.0307 |

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| Saturn | 60184-03-21 23:46 G | 23702895.29 | 23702895.49 | 23702895.72 | 0.0283 | 0.0148 |
| Uranus | 60192-05-15 18:58 G | 23705872.23 | 23705872.29 | 23705872.38 | 0.0140 | 0.0134 |
| Uranus | 60193-05-20 20:53 G | 23706242.16 | 23706242.37 | 23706242.60 | 0.0141 | 0.0070 |
| Jupiter | 60193-10-29 08:24 G | 23706403.61 | 23706403.85 | 23706404.08 | 0.0497 | 0.0061 |
| Uranus | 60194-05-25 09:22 G | 23706611.64 | 23706611.89 | 23706612.15 | 0.0141 | 0.0021 |
| Uranus | 60195-05-30 12:00 G | 23706981.78 | 23706982.00 | 23706982.24 | 0.0141 | 0.0055 |
| Uranus | 60196-06-03 03:07 G | 23707351.45 | 23707351.63 | 23707351.81 | 0.0142 | 0.0103 |
| Saturn | 60198-09-29 12:58 G | 23708199.83 | 23708200.04 | 23708200.26 | 0.0276 | 0.0120 |
| Jupiter | 60199-04-23 16:05 G | 23708406.01 | 23708406.17 | 23708406.34 | 0.0532 | 0.0357 |
| Jupiter | 60205-11-04 01:41 G | 23710791.37 | 23710791.57 | 23710791.78 | 0.0499 | 0.0219 |
| Jupiter | 60211-04-29 23:02 G | 23712794.22 | 23712794.46 | 23712794.70 | 0.0530 | 0.0019 |
| Saturn | 60214-03-30 20:10 G | 23713860.16 | 23713860.34 | 23713860.53 | 0.0284 | 0.0181 |
| Jupiter | 60223-05-04 16:05 G | 23717182.04 | 23717182.17 | 23717182.31 | 0.0528 | 0.0428 |
| Saturn | 60227-09-25 08:10 G | 23718786.63 | 23718786.84 | 23718787.07 | 0.0277 | 0.0141 |
| Uranus | 60232-11-19 18:14 G | 23720669.15 | 23720669.26 | 23720669.41 | 0.0138 | 0.0119 |
| Uranus | 60233-11-24 12:58 G | 23721038.82 | 23721039.04 | 23721039.28 | 0.0137 | 0.0050 |
| Uranus | 60234-11-28 19:41 G | 23721408.06 | 23721408.32 | 23721408.58 | 0.0137 | 0.0004 |
| Uranus | 60235-12-03 12:14 G | 23721777.80 | 23721778.01 | 23721778.24 | 0.0137 | 0.0057 |
| Uranus | 60236-12-06 18:00 G | 23722147.12 | 23722147.25 | 23722147.41 | 0.0136 | 0.0114 |
| Saturn | 60243-03-25 09:22 G | 23724446.66 | 23724446.89 | 23724447.13 | 0.0283 | 0.0073 |
| Neptune | 60254-04-27 03:50 G | 23728497.58 | 23728497.66 | 23728497.78 | 0.0089 | 0.0082 |
| Neptune | 60255-04-29 19:55 G | 23728865.14 | 23728865.33 | 23728865.56 | 0.0089 | 0.0049 |
| Neptune | 60256-05-01 02:24 G | 23729232.35 | 23729232.60 | 23729232.86 | 0.0089 | 0.0021 |
| Pluto | 60257-03-24 23:46 G | 23729560.25 | 23729560.49 | 23729560.73 | 0.0065 | 0.0027 |
| Neptune | 60257-05-03 21:36 G | 23729600.14 | 23729600.40 | 23729600.65 | 0.0089 | 0.0013 |
| Saturn | 60257-10-02 06:14 G | 23729751.60 | 23729751.76 | 23729751.93 | 0.0275 | 0.0200 |
| Neptune | 60258-05-06 02:10 G | 23729967.38 | 23729967.59 | 23729967.83 | 0.0089 | 0.0042 |
| Neptune | 60259-05-08 20:24 G | 23730335.23 | 23730335.35 | 23730335.52 | 0.0089 | 0.0074 |
| Jupiter | 60264-10-25 02:24 G | 23732331.45 | 23732331.60 | 23732331.76 | 0.0495 | 0.0373 |
| Saturn | 60273-04-01 05:02 G | 23735411.61 | 23735411.71 | 23735411.83 | 0.0284 | 0.0256 |

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| Uranus | 60276-05-17 04:48 G | 23736553.61 | 23736553.70 | 23736553.79 | 0.0140 | 0.0130 |
| Jupiter | 60276-10-29 19:41 G | 23736719.10 | 23736719.32 | 23736719.55 | 0.0497 | 0.0116 |
| Uranus | 60277-05-22 06:29 G | 23736923.56 | 23736923.77 | 23736924.00 | 0.0141 | 0.0074 |
| Uranus | 60278-05-26 18:58 G | 23737293.03 | 23737293.29 | 23737293.54 | 0.0141 | 0.0004 |
| Uranus | 60279-05-31 22:05 G | 23737663.18 | 23737663.42 | 23737663.66 | 0.0141 | 0.0044 |
| Uranus | 60280-06-04 12:00 G | 23738032.87 | 23738033.00 | 23738033.15 | 0.0142 | 0.0120 |
| Jupiter | 60282-04-23 19:12 G | 23738721.16 | 23738721.30 | 23738721.45 | 0.0532 | 0.0428 |
| Saturn | 60286-09-26 15:07 G | 23740337.88 | 23740338.13 | 23740338.38 | 0.0276 | 0.0061 |
| Jupiter | 60288-11-03 02:10 G | 23741106.37 | 23741106.59 | 23741106.82 | 0.0498 | 0.0173 |
| Jupiter | 60294-04-28 10:19 G | 23743108.70 | 23743108.93 | 23743109.16 | 0.0531 | 0.0065 |
| Saturn | 60302-03-27 22:05 G | 23745998.18 | 23745998.42 | 23745998.65 | 0.0284 | 0.0002 |
| Jupiter | 60306-05-04 18:58 G | 23747497.12 | 23747497.29 | 23747497.46 | 0.0529 | 0.0356 |
| Uranus | 60316-11-21 01:55 G | 23751350.42 | 23751350.58 | 23751350.77 | 0.0138 | 0.0101 |
| Uranus | 60317-11-25 21:36 G | 23751720.18 | 23751720.40 | 23751720.63 | 0.0137 | 0.0059 |
| Uranus | 60318-11-30 03:22 G | 23752089.39 | 23752089.64 | 23752089.90 | 0.0137 | 0.0008 |
| Uranus | 60319-12-04 20:38 G | 23752459.14 | 23752459.36 | 23752459.59 | 0.0137 | 0.0058 |
| Uranus | 60320-12-08 01:12 G | 23752828.42 | 23752828.55 | 23752828.71 | 0.0136 | 0.0111 |
| Saturn | 60331-03-22 09:22 G | 23756584.83 | 23756584.89 | 23756584.98 | 0.0282 | 0.0269 |
| Mars | 60336-02-25 03:36 G | 23758385.46 | 23758385.65 | 23758385.85 | 0.1616 | 0.0239 |
| Neptune | 60337-10-31 01:12 G | 23758999.41 | 23758999.55 | 23758999.74 | 0.0088 | 0.0070 |
| Neptune | 60338-11-02 19:26 G | 23759367.12 | 23759367.31 | 23759367.55 | 0.0088 | 0.0048 |
| Neptune | 60339-11-05 00:14 G | 23759734.26 | 23759734.51 | 23759734.77 | 0.0088 | 0.0009 |
| Neptune | 60340-11-06 17:31 G | 23760101.98 | 23760102.23 | 23760102.50 | 0.0088 | 0.0014 |
| Neptune | 60341-11-08 23:46 G | 23760469.30 | 23760469.49 | 23760469.71 | 0.0089 | 0.0051 |
| Neptune | 60342-11-11 14:24 G | 23760836.96 | 23760837.10 | 23760837.26 | 0.0089 | 0.0073 |
| Pluto | 60344-09-26 23:02 G | 23761522.37 | 23761522.46 | 23761522.57 | 0.0079 | 0.0072 |
| Saturn | 60345-09-29 00:43 G | 23761889.29 | 23761889.53 | 23761889.77 | 0.0276 | 0.0014 |
| Jupiter | 60347-10-26 15:50 G | 23762647.04 | 23762647.16 | 23762647.28 | 0.0495 | 0.0420 |
| Jupiter | 60359-10-30 19:55 G | 23767034.10 | 23767034.33 | 23767034.56 | 0.0496 | 0.0163 |
| Uranus | 60360-05-18 13:55 G | 23767234.99 | 23767235.08 | 23767235.22 | 0.0140 | 0.0125 |

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| Saturn | 60361-03-29 09:22 G | 23767549.66 | 23767549.89 | 23767550.12 | 0.0284 | 0.0070 |
| Uranus | 60361-05-23 15:50 G | 23767604.93 | 23767605.16 | 23767605.39 | 0.0141 | 0.0063 |
| Uranus | 60362-05-28 04:05 G | 23767974.42 | 23767974.67 | 23767974.93 | 0.0141 | 0.0012 |
| Uranus | 60363-06-02 07:12 G | 23768344.59 | 23768344.80 | 23768345.04 | 0.0141 | 0.0063 |
| Uranus | 60364-06-05 20:53 G | 23768714.23 | 23768714.37 | 23768714.55 | 0.0142 | 0.0111 |
| Jupiter | 60365-04-23 09:07 G | 23769035.83 | 23769035.88 | 23769035.94 | 0.0533 | 0.0515 |
| Jupiter | 60371-11-04 05:31 G | 23771421.51 | 23771421.73 | 23771421.95 | 0.0498 | 0.0112 |
| Saturn | 60374-09-24 05:46 G | 23772476.62 | 23772476.74 | 23772476.89 | 0.0277 | 0.0231 |
| Jupiter | 60377-04-28 20:53 G | 23773424.15 | 23773424.37 | 23773424.60 | 0.0532 | 0.0120 |
| Jupiter | 60383-11-08 16:34 G | 23775809.09 | 23775809.19 | 23775809.29 | 0.0499 | 0.0452 |
| Jupiter | 60389-05-03 17:31 G | 23777812.03 | 23777812.23 | 23777812.43 | 0.0529 | 0.0300 |
| Saturn | 60390-03-23 12:29 G | 23778135.86 | 23778136.02 | 23778136.20 | 0.0282 | 0.0204 |
| Uranus | 60400-11-21 10:05 G | 23782031.80 | 23782031.92 | 23782032.09 | 0.0138 | 0.0113 |
| Uranus | 60401-11-26 06:14 G | 23782401.53 | 23782401.76 | 23782402.00 | 0.0137 | 0.0043 |
| Uranus | 60402-11-30 11:31 G | 23782770.72 | 23782770.98 | 23782771.23 | 0.0137 | 0.0002 |
| Uranus | 60403-12-05 05:17 G | 23783140.51 | 23783140.72 | 23783140.95 | 0.0137 | 0.0064 |
| Saturn | 60404-09-30 12:29 G | 23783440.79 | 23783441.02 | 23783441.24 | 0.0276 | 0.0084 |
| Uranus | 60404-12-08 09:36 G | 23783509.79 | 23783509.90 | 23783510.04 | 0.0136 | 0.0118 |
| Neptune | 60419-04-30 00:14 G | 23788765.37 | 23788765.51 | 23788765.71 | 0.0089 | 0.0068 |
| Saturn | 60420-03-30 15:07 G | 23789100.92 | 23789101.13 | 23789101.35 | 0.0284 | 0.0134 |
| Neptune | 60420-05-01 19:55 G | 23789133.09 | 23789133.33 | 23789133.58 | 0.0089 | 0.0028 |
| Neptune | 60421-05-04 01:12 G | 23789500.30 | 23789500.55 | 23789500.80 | 0.0089 | 0.0006 |
| Neptune | 60422-05-06 18:14 G | 23789868.03 | 23789868.26 | 23789868.52 | 0.0089 | 0.0033 |
| Neptune | 60423-05-09 02:10 G | 23790235.41 | 23790235.59 | 23790235.81 | 0.0089 | 0.0055 |
| Jupiter | 60430-10-25 12:29 G | 23792961.98 | 23792962.02 | 23792962.09 | 0.0494 | 0.0478 |
| Saturn | 60433-09-25 09:22 G | 23794027.69 | 23794027.89 | 23794028.10 | 0.0277 | 0.0162 |
| Jupiter | 60442-10-30 02:10 G | 23797349.38 | 23797349.59 | 23797349.79 | 0.0495 | 0.0222 |
| Uranus | 60444-05-18 23:02 G | 23797916.37 | 23797916.46 | 23797916.60 | 0.0140 | 0.0125 |
| Uranus | 60445-05-24 00:43 G | 23798286.31 | 23798286.53 | 23798286.77 | 0.0141 | 0.0065 |
| Uranus | 60446-05-28 13:41 G | 23798655.82 | 23798656.07 | 23798656.32 | 0.0141 | 0.0003 |

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| Uranus | 60447-06-02 17:02 G | 23799025.98 | 23799026.21 | 23799026.46 | 0.0141 | 0.0051 |
| Uranus | 60448-06-06 06:58 G | 23799395.69 | 23799395.79 | 23799395.91 | 0.0142 | 0.0128 |
| Saturn | 60449-03-24 18:14 G | 23799687.07 | 23799687.26 | 23799687.47 | 0.0282 | 0.0144 |
| Jupiter | 60454-11-03 12:58 G | 23801736.80 | 23801737.04 | 23801737.28 | 0.0497 | 0.0076 |
| Jupiter | 60460-04-27 18:43 G | 23803739.05 | 23803739.28 | 23803739.50 | 0.0532 | 0.0175 |
| Saturn | 60463-10-02 20:10 G | 23804992.15 | 23804992.34 | 23804992.56 | 0.0276 | 0.0149 |
| Jupiter | 60466-11-07 21:50 G | 23806124.30 | 23806124.41 | 23806124.53 | 0.0499 | 0.0427 |
| Jupiter | 60472-05-02 22:34 G | 23808127.25 | 23808127.44 | 23808127.65 | 0.0530 | 0.0238 |
| Saturn | 60479-04-01 13:12 G | 23810651.87 | 23810652.05 | 23810652.24 | 0.0284 | 0.0188 |
| Uranus | 60484-11-21 19:26 G | 23812713.14 | 23812713.31 | 23812713.51 | 0.0138 | 0.0095 |
| Uranus | 60485-11-26 15:36 G | 23813082.92 | 23813083.15 | 23813083.39 | 0.0137 | 0.0054 |
| Uranus | 60486-11-30 20:24 G | 23813452.11 | 23813452.35 | 23813452.61 | 0.0137 | 0.0015 |
| Uranus | 60487-12-05 14:38 G | 23813821.90 | 23813822.11 | 23813822.34 | 0.0137 | 0.0062 |
| Uranus | 60488-12-08 18:14 G | 23814191.15 | 23814191.26 | 23814191.40 | 0.0136 | 0.0119 |
| Saturn | 60492-09-26 10:05 G | 23815578.69 | 23815578.92 | 23815579.16 | 0.0277 | 0.0099 |
| Neptune | 60501-10-31 19:12 G | 23818900.30 | 23818900.30 | 23818900.32 | 0.0088 | 0.0088 |
| Neptune | 60502-11-02 23:31 G | 23819267.31 | 23819267.48 | 23819267.71 | 0.0088 | 0.0056 |
| Neptune | 60503-11-05 17:17 G | 23819634.98 | 23819635.22 | 23819635.48 | 0.0088 | 0.0029 |
| Neptune | 60504-11-07 00:58 G | 23820002.29 | 23820002.54 | 23820002.79 | 0.0088 | 0.0005 |
| Pluto | 60505-03-29 06:14 G | 23820144.54 | 23820144.76 | 23820145.02 | 0.0066 | 0.0021 |
| Neptune | 60505-11-09 13:55 G | 23820369.84 | 23820370.08 | 23820370.35 | 0.0088 | 0.0031 |
| Neptune | 60506-11-12 01:26 G | 23820737.41 | 23820737.56 | 23820737.74 | 0.0089 | 0.0066 |
| Saturn | 60508-03-27 02:24 G | 23821238.38 | 23821238.60 | 23821238.83 | 0.0282 | 0.0087 |
| Saturn | 60522-10-04 20:53 G | 23826543.22 | 23826543.37 | 23826543.55 | 0.0276 | 0.0208 |
| Jupiter | 60525-10-30 11:31 G | 23827664.78 | 23827664.98 | 23827665.20 | 0.0495 | 0.0259 |
| Uranus | 60528-05-20 08:53 G | 23828597.75 | 23828597.87 | 23828598.02 | 0.0140 | 0.0116 |
| Uranus | 60529-05-25 09:22 G | 23828967.66 | 23828967.89 | 23828968.13 | 0.0141 | 0.0057 |
| Uranus | 60530-05-29 22:48 G | 23829337.20 | 23829337.45 | 23829337.70 | 0.0141 | 0.0004 |
| Uranus | 60531-06-04 01:41 G | 23829707.35 | 23829707.57 | 23829707.80 | 0.0141 | 0.0069 |
| Uranus | 60532-06-07 15:22 G | 23830077.01 | 23830077.14 | 23830077.30 | 0.0142 | 0.0117 |

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| Jupiter | 60537-11-03 18:58 G | 23832052.06 | 23832052.29 | 23832052.51 | 0.0497 | 0.0046 |
| Saturn | 60538-04-03 12:14 G | 23832202.89 | 23832203.01 | 23832203.14 | 0.0284 | 0.0241 |
| Mars | 60541-02-24 09:22 G | 23833260.81 | 23833260.89 | 23833260.96 | 0.1614 | 0.1446 |
| Jupiter | 60543-04-29 01:41 G | 23834054.37 | 23834054.57 | 23834054.78 | 0.0532 | 0.0236 |
| Jupiter | 60549-11-08 08:53 G | 23836439.72 | 23836439.87 | 23836440.02 | 0.0498 | 0.0382 |
| Saturn | 60551-09-29 13:26 G | 23837129.82 | 23837130.06 | 23837130.30 | 0.0277 | 0.0039 |
| Jupiter | 60555-05-04 02:10 G | 23838442.37 | 23838442.59 | 23838442.82 | 0.0531 | 0.0186 |
| Mars | 60564-08-29 05:02 G | 23841847.57 | 23841847.71 | 23841847.85 | 0.1909 | 0.1340 |
| Saturn | 60567-03-29 05:31 G | 23842789.49 | 23842789.73 | 23842789.98 | 0.0282 | 0.0034 |
| Uranus | 60568-11-23 05:02 G | 23843394.57 | 23843394.71 | 23843394.89 | 0.0138 | 0.0105 |
| Uranus | 60569-11-28 00:43 G | 23843764.30 | 23843764.53 | 23843764.79 | 0.0137 | 0.0036 |
| Uranus | 60570-12-02 05:46 G | 23844133.49 | 23844133.74 | 23844133.99 | 0.0137 | 0.0007 |
| Uranus | 60571-12-07 00:00 G | 23844503.30 | 23844503.50 | 23844503.73 | 0.0137 | 0.0072 |
| Uranus | 60572-12-10 03:36 G | 23844872.56 | 23844872.65 | 23844872.78 | 0.0136 | 0.0123 |
| Saturn | 60581-10-05 17:02 G | 23848094.17 | 23848094.21 | 23848094.29 | 0.0276 | 0.0267 |
| Neptune | 60583-04-30 18:14 G | 23848666.15 | 23848666.26 | 23848666.38 | 0.0089 | 0.0079 |
| Neptune | 60584-05-01 23:46 G | 23849033.27 | 23849033.49 | 23849033.71 | 0.0089 | 0.0044 |
| Neptune | 60585-05-04 16:05 G | 23849400.92 | 23849401.17 | 23849401.44 | 0.0089 | 0.0019 |
| Neptune | 60586-05-07 01:12 G | 23849768.32 | 23849768.55 | 23849768.81 | 0.0089 | 0.0017 |
| Neptune | 60587-05-09 13:41 G | 23850135.85 | 23850136.07 | 23850136.32 | 0.0089 | 0.0043 |
| Neptune | 60588-05-11 03:36 G | 23850503.55 | 23850503.65 | 23850503.78 | 0.0089 | 0.0078 |
| Pluto | 60592-09-30 01:41 G | 23852106.32 | 23852106.57 | 23852106.84 | 0.0078 | 0.0010 |
| Jupiter | 60608-10-30 15:22 G | 23857979.97 | 23857980.14 | 23857980.32 | 0.0494 | 0.0309 |
| Saturn | 60610-10-01 17:31 G | 23858680.99 | 23858681.23 | 23858681.47 | 0.0277 | 0.0017 |
| Uranus | 60612-05-21 17:02 G | 23859279.10 | 23859279.21 | 23859279.36 | 0.0140 | 0.0119 |
| Uranus | 60613-05-26 16:48 G | 23859648.97 | 23859649.20 | 23859649.45 | 0.0141 | 0.0056 |
| Uranus | 60614-05-31 07:41 G | 23860018.57 | 23860018.82 | 23860019.07 | 0.0141 | 0.0009 |
| Uranus | 60615-06-05 10:05 G | 23860388.69 | 23860388.92 | 23860389.16 | 0.0141 | 0.0058 |
| Uranus | 60616-06-09 00:29 G | 23860758.46 | 23860758.52 | 23860758.61 | 0.0142 | 0.0135 |
| Mars | 60620-02-28 04:34 G | 23862117.54 | 23862117.69 | 23862117.83 | 0.1615 | 0.0984 |

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| Jupiter | 60620-11-04 08:10 G | 23862367.60 | 23862367.84 | 23862368.07 | 0.0496 | 0.0009 |
| Saturn | 60626-03-31 03:22 G | 23864340.39 | 23864340.64 | 23864340.90 | 0.0282 | 0.0021 |
| Jupiter | 60626-04-29 06:14 G | 23864369.56 | 23864369.76 | 23864369.97 | 0.0533 | 0.0274 |
| Jupiter | 60632-11-08 10:48 G | 23866754.79 | 23866754.95 | 23866755.12 | 0.0498 | 0.0348 |
| Jupiter | 60638-05-04 09:36 G | 23868757.68 | 23868757.90 | 23868758.11 | 0.0531 | 0.0151 |
| Saturn | 60639-09-25 13:41 G | 23869267.00 | 23869267.07 | 23869267.15 | 0.0279 | 0.0264 |
| Jupiter | 60650-05-09 15:07 G | 23873146.05 | 23873146.13 | 23873146.23 | 0.0529 | 0.0488 |
| Uranus | 60652-11-24 14:24 G | 23874075.92 | 23874076.10 | 23874076.30 | 0.0138 | 0.0087 |
| Uranus | 60653-11-29 09:50 G | 23874445.67 | 23874445.91 | 23874446.15 | 0.0137 | 0.0045 |
| Uranus | 60654-12-03 15:22 G | 23874814.89 | 23874815.14 | 23874815.39 | 0.0137 | 0.0023 |
| Saturn | 60655-03-25 12:43 G | 23874926.93 | 23874927.03 | 23874927.14 | 0.0281 | 0.0251 |
| Uranus | 60655-12-08 09:22 G | 23875184.68 | 23875184.89 | 23875185.12 | 0.0137 | 0.0069 |
| Uranus | 60656-12-11 12:58 G | 23875553.98 | 23875554.04 | 23875554.16 | 0.0136 | 0.0128 |
| Neptune | 60666-11-03 15:36 G | 23879167.99 | 23879168.15 | 23879168.34 | 0.0088 | 0.0067 |
| Neptune | 60667-11-05 23:31 G | 23879535.29 | 23879535.48 | 23879535.71 | 0.0088 | 0.0046 |
| Neptune | 60668-11-07 12:14 G | 23879902.75 | 23879903.01 | 23879903.28 | 0.0088 | 0.0006 |
| Saturn | 60669-10-02 15:22 G | 23880231.90 | 23880232.14 | 23880232.39 | 0.0277 | 0.0071 |
| Neptune | 60669-11-10 01:26 G | 23880270.32 | 23880270.56 | 23880270.81 | 0.0088 | 0.0016 |
| Neptune | 60670-11-12 08:53 G | 23880637.68 | 23880637.87 | 23880638.10 | 0.0088 | 0.0055 |
| Neptune | 60671-11-15 01:55 G | 23881005.47 | 23881005.58 | 23881005.73 | 0.0089 | 0.0076 |
| Saturn | 60685-04-01 01:55 G | 23885891.35 | 23885891.58 | 23885891.82 | 0.0282 | 0.0074 |
| Jupiter | 60691-10-31 07:41 G | 23888295.65 | 23888295.82 | 23888295.99 | 0.0494 | 0.0345 |
| Uranus | 60696-05-22 03:07 G | 23889960.47 | 23889960.63 | 23889960.79 | 0.0140 | 0.0106 |
| Uranus | 60697-05-27 01:12 G | 23890330.31 | 23890330.55 | 23890330.80 | 0.0141 | 0.0051 |
| Uranus | 60698-05-31 16:34 G | 23890699.95 | 23890700.19 | 23890700.44 | 0.0141 | 0.0006 |
| Saturn | 60698-09-26 13:55 G | 23890817.94 | 23890818.08 | 23890818.25 | 0.0279 | 0.0213 |
| Uranus | 60699-06-05 17:46 G | 23891070.03 | 23891070.24 | 23891070.47 | 0.0141 | 0.0076 |
| Uranus | 60700-06-10 08:38 G | 23891439.76 | 23891439.86 | 23891440.01 | 0.0142 | 0.0124 |
| Jupiter | 60703-11-05 11:02 G | 23892682.73 | 23892682.96 | 23892683.20 | 0.0496 | 0.0025 |
| Jupiter | 60709-04-29 11:31 G | 23894684.81 | 23894684.98 | 23894685.17 | 0.0533 | 0.0316 |

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| Saturn | 60714-03-27 17:17 G | 23896478.06 | 23896478.22 | 23896478.40 | 0.0281 | 0.0197 |
| Jupiter | 60715-11-10 05:46 G | 23897070.57 | 23897070.74 | 23897070.92 | 0.0498 | 0.0322 |
| Jupiter | 60721-05-04 18:14 G | 23899073.03 | 23899073.26 | 23899073.50 | 0.0532 | 0.0097 |
| Saturn | 60728-10-04 08:24 G | 23901782.62 | 23901782.85 | 23901783.08 | 0.0277 | 0.0120 |
| Jupiter | 60733-05-09 11:31 G | 23903460.85 | 23903460.98 | 23903461.11 | 0.0530 | 0.0436 |
| Uranus | 60736-11-25 23:46 G | 23904757.32 | 23904757.49 | 23904757.67 | 0.0138 | 0.0095 |
| Uranus | 60737-11-30 18:14 G | 23905127.01 | 23905127.26 | 23905127.52 | 0.0137 | 0.0027 |
| Uranus | 60738-12-05 00:14 G | 23905496.26 | 23905496.51 | 23905496.76 | 0.0137 | 0.0014 |
| Uranus | 60739-12-09 17:46 G | 23905866.05 | 23905866.24 | 23905866.46 | 0.0137 | 0.0081 |
| Uranus | 60740-12-12 22:05 G | 23906235.36 | 23906235.42 | 23906235.52 | 0.0136 | 0.0129 |
| Saturn | 60744-04-03 06:29 G | 23907442.56 | 23907442.77 | 23907442.98 | 0.0282 | 0.0132 |
| Neptune | 60747-05-01 22:48 G | 23908566.44 | 23908566.45 | 23908566.50 | 0.0089 | 0.0088 |
| Neptune | 60748-05-03 14:24 G | 23908933.94 | 23908934.10 | 23908934.31 | 0.0089 | 0.0064 |
| Neptune | 60749-05-06 00:58 G | 23909301.31 | 23909301.54 | 23909301.79 | 0.0089 | 0.0027 |
| Neptune | 60750-05-08 11:46 G | 23909668.73 | 23909668.99 | 23909669.26 | 0.0089 | 0.0003 |
| Neptune | 60751-05-11 02:38 G | 23910036.38 | 23910036.61 | 23910036.84 | 0.0089 | 0.0035 |
| Pluto | 60752-03-31 17:46 G | 23910362.03 | 23910362.24 | 23910362.47 | 0.0065 | 0.0030 |
| Neptune | 60752-05-12 09:07 G | 23910403.70 | 23910403.88 | 23910404.09 | 0.0089 | 0.0058 |
| Pluto | 60753-04-02 01:41 G | 23910728.57 | 23910728.57 | 23910728.61 | 0.0066 | 0.0066 |
| Saturn | 60757-09-28 18:00 G | 23912369.06 | 23912369.25 | 23912369.45 | 0.0279 | 0.0158 |
| Saturn | 60773-03-28 17:31 G | 23918029.02 | 23918029.23 | 23918029.46 | 0.0281 | 0.0144 |
| Jupiter | 60774-10-31 10:48 G | 23918610.81 | 23918610.95 | 23918611.11 | 0.0494 | 0.0380 |
| Uranus | 60780-05-23 11:46 G | 23920641.85 | 23920641.99 | 23920642.15 | 0.0140 | 0.0111 |
| Uranus | 60781-05-28 09:07 G | 23921011.63 | 23921011.88 | 23921012.13 | 0.0141 | 0.0045 |
| Uranus | 60782-06-02 01:55 G | 23921381.34 | 23921381.58 | 23921381.83 | 0.0141 | 0.0016 |
| Uranus | 60783-06-07 02:10 G | 23921751.37 | 23921751.59 | 23921751.83 | 0.0141 | 0.0067 |
| Jupiter | 60786-11-05 03:36 G | 23922998.42 | 23922998.65 | 23922998.88 | 0.0495 | 0.0056 |
| Saturn | 60787-10-06 06:14 G | 23923333.58 | 23923333.76 | 23923333.96 | 0.0277 | 0.0171 |
| Jupiter | 60792-04-28 16:34 G | 23925000.03 | 23925000.19 | 23925000.37 | 0.0535 | 0.0374 |
| Jupiter | 60798-11-09 07:41 G | 23927385.63 | 23927385.82 | 23927386.03 | 0.0497 | 0.0280 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 60803-04-05 15:22 G | 23928993.97 | 23928994.14 | 23928994.32 | 0.0282 | 0.0192 |
| Jupiter | 60804-05-03 15:07 G | 23929387.90 | 23929388.13 | 23929388.36 | 0.0533 | 0.0042 |
| Jupiter | 60816-05-09 03:22 G | 23933776.49 | 23933776.64 | 23933776.80 | 0.0530 | 0.0391 |
| Saturn | 60816-09-29 20:10 G | 23933920.11 | 23933920.34 | 23933920.58 | 0.0278 | 0.0103 |
| Uranus | 60820-11-26 08:10 G | 23935438.65 | 23935438.84 | 23935439.05 | 0.0138 | 0.0080 |
| Uranus | 60821-12-01 01:55 G | 23935808.34 | 23935808.58 | 23935808.84 | 0.0137 | 0.0038 |
| Uranus | 60822-12-05 09:07 G | 23936177.65 | 23936177.88 | 23936178.13 | 0.0137 | 0.0032 |
| Uranus | 60823-12-10 02:38 G | 23936547.39 | 23936547.61 | 23936547.83 | 0.0137 | 0.0074 |
| Uranus | 60824-12-13 07:26 G | 23936916.80 | 23936916.81 | 23936916.85 | 0.0136 | 0.0136 |
| Mars | 60825-02-28 00:58 G | 23936993.36 | 23936993.54 | 23936993.72 | 0.1614 | 0.0454 |
| Neptune | 60830-11-04 00:14 G | 23939068.45 | 23939068.51 | 23939068.58 | 0.0088 | 0.0085 |
| Neptune | 60831-11-06 11:17 G | 23939435.77 | 23939435.97 | 23939436.20 | 0.0088 | 0.0054 |
| Saturn | 60832-03-29 17:31 G | 23939580.00 | 23939580.23 | 23939580.47 | 0.0281 | 0.0086 |
| Neptune | 60832-11-08 01:41 G | 23939803.33 | 23939803.57 | 23939803.81 | 0.0088 | 0.0025 |
| Neptune | 60833-11-10 07:55 G | 23940170.58 | 23940170.83 | 23940171.10 | 0.0088 | 0.0007 |
| Neptune | 60834-11-13 01:26 G | 23940538.34 | 23940538.56 | 23940538.81 | 0.0088 | 0.0035 |
| Neptune | 60835-11-15 06:00 G | 23940905.59 | 23940905.75 | 23940905.93 | 0.0089 | 0.0067 |
| Pluto | 60840-10-04 12:14 G | 23942691.00 | 23942691.01 | 23942691.09 | 0.0078 | 0.0077 |
| Saturn | 60846-10-07 10:34 G | 23944884.81 | 23944884.94 | 23944885.09 | 0.0277 | 0.0223 |
| Jupiter | 60857-10-31 02:38 G | 23948926.49 | 23948926.61 | 23948926.74 | 0.0493 | 0.0414 |
| Saturn | 60862-04-06 22:34 G | 23950545.34 | 23950545.44 | 23950545.55 | 0.0282 | 0.0254 |
| Uranus | 60864-05-23 21:50 G | 23951323.25 | 23951323.41 | 23951323.60 | 0.0140 | 0.0097 |
| Uranus | 60865-05-28 17:31 G | 23951692.99 | 23951693.23 | 23951693.49 | 0.0141 | 0.0045 |
| Uranus | 60866-06-02 11:31 G | 23952062.74 | 23952062.98 | 23952063.23 | 0.0141 | 0.0016 |
| Uranus | 60867-06-07 10:19 G | 23952432.72 | 23952432.93 | 23952433.15 | 0.0141 | 0.0083 |
| Uranus | 60868-06-11 03:36 G | 23952802.56 | 23952802.65 | 23952802.75 | 0.0142 | 0.0131 |
| Jupiter | 60869-11-04 04:34 G | 23953313.45 | 23953313.69 | 23953313.93 | 0.0495 | 0.0094 |
| Jupiter | 60875-04-28 17:02 G | 23955315.08 | 23955315.21 | 23955315.35 | 0.0535 | 0.0423 |
| Saturn | 60875-10-01 19:55 G | 23955471.07 | 23955471.33 | 23955471.58 | 0.0278 | 0.0043 |
| Jupiter | 60881-11-08 17:31 G | 23957701.04 | 23957701.23 | 23957701.43 | 0.0497 | 0.0245 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 60887-05-04 03:36 G | 23959703.41 | 23959703.65 | 23959703.88 | 0.0533 | 0.0016 |
| Saturn | 60891-04-01 01:12 G | 23961131.31 | 23961131.55 | 23961131.79 | 0.0281 | 0.0021 |
| Jupiter | 60899-05-08 22:05 G | 23964091.24 | 23964091.42 | 23964091.62 | 0.0531 | 0.0321 |
| Uranus | 60903-11-24 07:55 G | 23965750.77 | 23965750.83 | 23965750.88 | 0.0138 | 0.0134 |
| Uranus | 60904-11-27 17:46 G | 23966120.07 | 23966120.24 | 23966120.45 | 0.0138 | 0.0087 |
| Uranus | 60905-12-02 10:48 G | 23966489.69 | 23966489.95 | 23966490.21 | 0.0137 | 0.0020 |
| Uranus | 60906-12-06 18:29 G | 23966859.03 | 23966859.27 | 23966859.52 | 0.0137 | 0.0021 |
| Uranus | 60907-12-11 10:34 G | 23967228.75 | 23967228.94 | 23967229.15 | 0.0137 | 0.0088 |
| Uranus | 60908-12-14 16:19 G | 23967598.15 | 23967598.18 | 23967598.24 | 0.0136 | 0.0134 |
| Neptune | 60912-05-03 23:02 G | 23968834.36 | 23968834.46 | 23968834.60 | 0.0089 | 0.0078 |
| Neptune | 60913-05-06 09:22 G | 23969201.66 | 23969201.89 | 23969202.14 | 0.0089 | 0.0040 |
| Neptune | 60914-05-09 01:41 G | 23969569.33 | 23969569.57 | 23969569.82 | 0.0089 | 0.0017 |
| Neptune | 60915-05-11 07:41 G | 23969936.57 | 23969936.82 | 23969937.08 | 0.0089 | 0.0021 |
| Neptune | 60916-05-13 01:55 G | 23970304.38 | 23970304.58 | 23970304.83 | 0.0089 | 0.0045 |
| Neptune | 60917-05-15 06:58 G | 23970671.72 | 23970671.79 | 23970671.91 | 0.0089 | 0.0082 |
| Saturn | 60920-03-27 05:46 G | 23971718.67 | 23971718.74 | 23971718.82 | 0.0280 | 0.0266 |
| Saturn | 60934-10-03 22:19 G | 23977022.19 | 23977022.43 | 23977022.68 | 0.0278 | 0.0024 |
| Jupiter | 60940-10-31 02:24 G | 23979241.53 | 23979241.60 | 23979241.70 | 0.0493 | 0.0457 |
| Uranus | 60948-05-25 07:41 G | 23982004.66 | 23982004.82 | 23982004.99 | 0.0140 | 0.0104 |
| Uranus | 60949-05-30 01:55 G | 23982374.33 | 23982374.58 | 23982374.84 | 0.0141 | 0.0035 |
| Saturn | 60950-04-03 14:24 G | 23982682.87 | 23982683.10 | 23982683.33 | 0.0282 | 0.0051 |
| Uranus | 60950-06-03 21:36 G | 23982744.16 | 23982744.40 | 23982744.65 | 0.0141 | 0.0022 |
| Uranus | 60951-06-08 19:12 G | 23983114.08 | 23983114.30 | 23983114.53 | 0.0141 | 0.0076 |
| Jupiter | 60952-11-04 14:53 G | 23983628.90 | 23983629.12 | 23983629.34 | 0.0495 | 0.0123 |
| Jupiter | 60958-04-29 00:29 G | 23985630.44 | 23985630.52 | 23985630.62 | 0.0535 | 0.0488 |
| Saturn | 60963-09-28 18:43 G | 23987609.17 | 23987609.28 | 23987609.41 | 0.0279 | 0.0241 |
| Jupiter | 60964-11-09 02:24 G | 23988016.39 | 23988016.60 | 23988016.83 | 0.0496 | 0.0206 |
| Jupiter | 60970-05-03 15:22 G | 23990017.91 | 23990018.14 | 23990018.38 | 0.0534 | 0.0099 |
| Jupiter | 60976-11-13 07:26 G | 23992403.76 | 23992403.81 | 23992403.87 | 0.0497 | 0.0482 |
| Saturn | 60979-03-29 11:31 G | 23993269.81 | 23993269.98 | 23993270.17 | 0.0281 | 0.0196 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 60982-05-08 23:31 G | 23994406.28 | 23994406.48 | 23994406.68 | 0.0532 | 0.0244 |
| Uranus | 60987-11-24 15:22 G | 23996432.11 | 23996432.14 | 23996432.23 | 0.0138 | 0.0134 |
| Uranus | 60988-11-28 03:50 G | 23996801.46 | 23996801.66 | 23996801.87 | 0.0138 | 0.0074 |
| Uranus | 60989-12-02 19:12 G | 23997171.05 | 23997171.30 | 23997171.56 | 0.0137 | 0.0030 |
| Uranus | 60990-12-07 04:48 G | 23997540.46 | 23997540.70 | 23997540.93 | 0.0137 | 0.0038 |
| Uranus | 60991-12-11 19:26 G | 23997910.12 | 23997910.31 | 23997910.54 | 0.0137 | 0.0080 |
| Saturn | 60993-10-05 09:50 G | 23998573.68 | 23998573.91 | 23998574.13 | 0.0278 | 0.0091 |
| Neptune | 60995-11-07 00:29 G | 23999336.36 | 23999336.52 | 23999336.70 | 0.0088 | 0.0064 |
| Neptune | 60996-11-08 06:43 G | 23999703.55 | 23999703.78 | 23999704.01 | 0.0088 | 0.0043 |
| Neptune | 60997-11-11 00:58 G | 24000071.28 | 24000071.54 | 24000071.79 | 0.0088 | 0.0003 |
| Neptune | 60998-11-13 05:17 G | 24000438.48 | 24000438.72 | 24000438.98 | 0.0088 | 0.0018 |
| Neptune | 60999-11-15 23:02 G | 24000806.29 | 24000806.46 | 24000806.68 | 0.0088 | 0.0058 |
| Pluto | 61000-04-04 10:05 G | 24000945.66 | 24000945.92 | 24000946.19 | 0.0065 | 0.0005 |
| Neptune | 61000-11-18 05:31 G | 24001173.64 | 24001173.73 | 24001173.87 | 0.0089 | 0.0079 |

62ND MILLENNIUM CE

This is a list of transits of Moon in the 62nd millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Saturn | 61009-04-06 03:07 G | 24004234.42 | 24004234.63 | 24004234.86 | 0.0282 | 0.0125 | | |
| Saturn | 61022-10-01 00:58 G | 24009160.35 | 24009160.54 | 24009160.75 | 0.0279 | 0.0172 | | |
| Mars | 61030-02-28 21:07 G | 24011868.31 | 24011868.38 | 24011868.45 | 0.1614 | 0.1484 | | |
| Uranus | 61032-05-26 18:00 G | 24012686.05 | 24012686.25 | 24012686.44 | 0.0140 | 0.0088 | | |
| Uranus | 61033-05-31 10:34 G | 24013055.68 | 24013055.94 | 24013056.19 | 0.0141 | 0.0039 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 61034-06-05 06:58 G | 24013425.55 | 24013425.79 | 24013426.04 | 0.0141 | 0.0024 |
| Uranus | 61035-06-10 02:53 G | 24013795.42 | 24013795.62 | 24013795.84 | 0.0141 | 0.0088 |
| Jupiter | 61035-11-05 21:36 G | 24013944.18 | 24013944.40 | 24013944.64 | 0.0494 | 0.0160 |
| Uranus | 61036-06-13 23:02 G | 24014165.41 | 24014165.46 | 24014165.52 | 0.0142 | 0.0138 |
| Saturn | 61038-03-31 20:38 G | 24014821.14 | 24014821.36 | 24014821.58 | 0.0281 | 0.0123 |
| Jupiter | 61047-11-09 23:31 G | 24018331.27 | 24018331.48 | 24018331.70 | 0.0495 | 0.0149 |
| Saturn | 61052-10-08 01:12 G | 24020125.37 | 24020125.55 | 24020125.76 | 0.0278 | 0.0165 |
| Jupiter | 61053-05-03 23:17 G | 24020333.25 | 24020333.47 | 24020333.68 | 0.0534 | 0.0164 |
| Jupiter | 61059-11-14 15:36 G | 24022719.04 | 24022719.15 | 24022719.28 | 0.0497 | 0.0423 |
| Jupiter | 61065-05-09 00:29 G | 24024721.30 | 24024721.52 | 24024721.75 | 0.0532 | 0.0177 |
| Saturn | 61068-04-07 12:43 G | 24025785.86 | 24025786.03 | 24025786.21 | 0.0282 | 0.0202 |
| Uranus | 61071-11-26 02:10 G | 24027113.51 | 24027113.59 | 24027113.70 | 0.0138 | 0.0128 |
| Uranus | 61072-11-29 14:53 G | 24027482.94 | 24027483.12 | 24027483.34 | 0.0138 | 0.0078 |
| Uranus | 61073-12-04 05:02 G | 24027852.45 | 24027852.71 | 24027852.98 | 0.0137 | 0.0013 |
| Uranus | 61074-12-08 15:22 G | 24028221.90 | 24028222.14 | 24028222.38 | 0.0137 | 0.0028 |
| Uranus | 61075-12-13 04:48 G | 24028591.51 | 24028591.70 | 24028591.89 | 0.0137 | 0.0095 |
| Neptune | 61076-05-04 06:58 G | 24028734.75 | 24028734.79 | 24028734.87 | 0.0089 | 0.0086 |
| Neptune | 61077-05-07 00:00 G | 24029102.34 | 24029102.50 | 24029102.70 | 0.0089 | 0.0061 |
| Neptune | 61078-05-09 06:00 G | 24029469.50 | 24029469.75 | 24029469.99 | 0.0089 | 0.0025 |
| Neptune | 61079-05-12 00:43 G | 24029837.27 | 24029837.53 | 24029837.79 | 0.0089 | 0.0000 |
| Neptune | 61080-05-13 05:31 G | 24030204.51 | 24030204.73 | 24030204.98 | 0.0089 | 0.0037 |
| Neptune | 61081-05-15 22:48 G | 24030572.28 | 24030572.45 | 24030572.66 | 0.0089 | 0.0062 |
| Saturn | 61081-10-02 08:10 G | 24030711.61 | 24030711.84 | 24030712.09 | 0.0278 | 0.0100 |
| Pluto | 61087-10-07 10:48 G | 24032907.74 | 24032907.95 | 24032908.18 | 0.0079 | 0.0042 |
| Saturn | 61097-04-02 10:34 G | 24036372.70 | 24036372.94 | 24036373.17 | 0.0281 | 0.0047 |
| Mars | 61109-03-04 01:12 G | 24040725.36 | 24040725.55 | 24040725.75 | 0.1614 | 0.0321 |
| Saturn | 61111-10-11 13:55 G | 24041676.96 | 24041677.08 | 24041677.21 | 0.0277 | 0.0238 |
| Uranus | 61116-05-28 02:38 G | 24043367.44 | 24043367.61 | 24043367.80 | 0.0140 | 0.0098 |
| Uranus | 61117-06-01 18:00 G | 24043737.00 | 24043737.25 | 24043737.52 | 0.0141 | 0.0027 |
| Uranus | 61118-06-06 16:34 G | 24044106.95 | 24044107.19 | 24044107.43 | 0.0141 | 0.0027 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 61118-11-05 18:43 G | 24044259.08 | 24044259.28 | 24044259.48 | 0.0493 | 0.0221 |
| Uranus | 61119-06-11 11:02 G | 24044476.76 | 24044476.96 | 24044477.18 | 0.0141 | 0.0084 |
| Saturn | 61127-04-10 21:36 G | 24047337.36 | 24047337.40 | 24047337.43 | 0.0282 | 0.0279 |
| Jupiter | 61130-11-10 10:34 G | 24048646.71 | 24048646.94 | 24048647.17 | 0.0495 | 0.0099 |
| Jupiter | 61136-05-03 19:12 G | 24050648.08 | 24050648.30 | 24050648.51 | 0.0534 | 0.0238 |
| Saturn | 61140-10-04 20:53 G | 24052263.13 | 24052263.37 | 24052263.61 | 0.0278 | 0.0024 |
| Jupiter | 61142-11-14 14:10 G | 24053033.94 | 24053034.09 | 24053034.25 | 0.0497 | 0.0373 |
| Jupiter | 61148-05-08 16:34 G | 24055035.97 | 24055036.19 | 24055036.42 | 0.0533 | 0.0091 |
| Uranus | 61155-11-27 11:02 G | 24057794.86 | 24057794.96 | 24057795.10 | 0.0138 | 0.0123 |
| Saturn | 61156-04-05 01:41 G | 24057924.33 | 24057924.57 | 24057924.81 | 0.0282 | 0.0027 |
| Uranus | 61156-12-01 01:41 G | 24058164.37 | 24058164.57 | 24058164.80 | 0.0138 | 0.0067 |
| Uranus | 61157-12-05 14:24 G | 24058533.85 | 24058534.10 | 24058534.37 | 0.0137 | 0.0021 |
| Uranus | 61158-12-10 02:24 G | 24058903.37 | 24058903.60 | 24058903.83 | 0.0137 | 0.0046 |
| Neptune | 61159-11-08 05:02 G | 24059236.64 | 24059236.71 | 24059236.84 | 0.0088 | 0.0081 |
| Uranus | 61159-12-14 14:53 G | 24059272.92 | 24059273.12 | 24059273.32 | 0.0137 | 0.0086 |
| Jupiter | 61160-05-13 22:05 G | 24059424.31 | 24059424.42 | 24059424.53 | 0.0531 | 0.0467 |
| Neptune | 61160-11-09 23:31 G | 24059604.29 | 24059604.48 | 24059604.71 | 0.0088 | 0.0053 |
| Neptune | 61161-11-12 04:34 G | 24059971.44 | 24059971.69 | 24059971.94 | 0.0088 | 0.0021 |
| Neptune | 61162-11-14 21:36 G | 24060339.15 | 24060339.40 | 24060339.67 | 0.0088 | 0.0009 |
| Neptune | 61163-11-17 04:19 G | 24060706.47 | 24060706.68 | 24060706.92 | 0.0088 | 0.0039 |
| Neptune | 61164-11-18 17:31 G | 24061074.08 | 24061074.23 | 24061074.42 | 0.0088 | 0.0068 |
| Saturn | 61169-09-29 23:31 G | 24062850.42 | 24062850.48 | 24062850.57 | 0.0279 | 0.0266 |
| Saturn | 61185-03-30 07:26 G | 24068510.70 | 24068510.81 | 24068510.94 | 0.0280 | 0.0241 |
| Saturn | 61199-10-07 12:29 G | 24073814.79 | 24073815.02 | 24073815.26 | 0.0278 | 0.0052 |
| Uranus | 61200-05-28 11:46 G | 24074048.80 | 24074048.99 | 24074049.21 | 0.0140 | 0.0080 |
| Uranus | 61201-06-02 01:55 G | 24074418.33 | 24074418.58 | 24074418.84 | 0.0141 | 0.0034 |
| Jupiter | 61201-11-05 06:29 G | 24074574.57 | 24074574.77 | 24074574.97 | 0.0493 | 0.0261 |
| Uranus | 61202-06-07 01:12 G | 24074788.31 | 24074788.55 | 24074788.80 | 0.0141 | 0.0033 |
| Uranus | 61203-06-11 18:00 G | 24075158.06 | 24075158.25 | 24075158.46 | 0.0142 | 0.0092 |
| Mars | 61211-09-04 13:41 G | 24078165.03 | 24078165.07 | 24078165.10 | 0.1910 | 0.1873 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 61213-11-09 07:55 G | 24078961.60 | 24078961.83 | 24078962.07 | 0.0495 | 0.0048 |
| Saturn | 61215-04-07 11:46 G | 24079475.77 | 24079475.99 | 24079476.23 | 0.0282 | 0.0102 |
| Jupiter | 61219-05-03 13:26 G | 24080962.89 | 24080963.06 | 24080963.24 | 0.0535 | 0.0330 |
| Jupiter | 61225-11-13 20:38 G | 24083349.18 | 24083349.36 | 24083349.54 | 0.0496 | 0.0300 |
| Saturn | 61228-10-01 08:24 G | 24084401.68 | 24084401.85 | 24084402.06 | 0.0279 | 0.0188 |
| Jupiter | 61231-05-08 21:07 G | 24085351.14 | 24085351.38 | 24085351.62 | 0.0534 | 0.0022 |
| Uranus | 61239-11-27 21:07 G | 24088476.28 | 24088476.38 | 24088476.54 | 0.0138 | 0.0120 |
| Uranus | 61240-12-01 12:58 G | 24088845.84 | 24088846.04 | 24088846.27 | 0.0138 | 0.0067 |
| Neptune | 61241-05-07 02:38 G | 24089002.51 | 24089002.61 | 24089002.77 | 0.0089 | 0.0077 |
| Uranus | 61241-12-06 00:14 G | 24089215.25 | 24089215.51 | 24089215.78 | 0.0137 | 0.0005 |
| Neptune | 61242-05-09 21:50 G | 24089370.19 | 24089370.41 | 24089370.66 | 0.0089 | 0.0037 |
| Uranus | 61242-12-10 13:12 G | 24089584.81 | 24089585.05 | 24089585.29 | 0.0137 | 0.0037 |
| Neptune | 61243-05-12 03:50 G | 24089737.42 | 24089737.66 | 24089737.92 | 0.0089 | 0.0015 |
| Jupiter | 61243-05-13 19:12 G | 24089739.16 | 24089739.30 | 24089739.45 | 0.0531 | 0.0414 |
| Uranus | 61243-12-14 23:17 G | 24089954.32 | 24089954.47 | 24089954.66 | 0.0137 | 0.0104 |
| Saturn | 61244-03-31 18:00 G | 24090062.07 | 24090062.25 | 24090062.44 | 0.0280 | 0.0169 |
| Neptune | 61244-05-13 20:53 G | 24090105.12 | 24090105.37 | 24090105.63 | 0.0089 | 0.0023 |
| Neptune | 61245-05-16 05:46 G | 24090472.54 | 24090472.74 | 24090472.96 | 0.0089 | 0.0046 |
| Neptune | 61246-05-18 17:31 G | 24090840.17 | 24090840.23 | 24090840.34 | 0.0089 | 0.0084 |
| Pluto | 61248-04-07 09:36 G | 24091529.66 | 24091529.90 | 24091530.15 | 0.0066 | 0.0017 |
| Saturn | 61258-10-09 02:38 G | 24095366.40 | 24095366.61 | 24095366.83 | 0.0278 | 0.0128 |
| Saturn | 61274-04-08 15:07 G | 24101026.94 | 24101027.13 | 24101027.33 | 0.0282 | 0.0174 |
| Uranus | 61283-05-24 20:10 G | 24104360.28 | 24104360.34 | 24104360.44 | 0.0140 | 0.0133 |
| Uranus | 61284-05-28 20:38 G | 24104730.18 | 24104730.36 | 24104730.57 | 0.0140 | 0.0090 |
| Jupiter | 61284-11-04 00:14 G | 24104889.34 | 24104889.51 | 24104889.69 | 0.0492 | 0.0325 |
| Uranus | 61285-06-02 09:50 G | 24105099.65 | 24105099.91 | 24105100.17 | 0.0141 | 0.0018 |
| Uranus | 61286-06-07 10:34 G | 24105469.70 | 24105469.94 | 24105470.19 | 0.0141 | 0.0033 |
| Uranus | 61287-06-12 02:24 G | 24105839.42 | 24105839.60 | 24105839.81 | 0.0141 | 0.0093 |
| Saturn | 61287-10-03 16:34 G | 24105952.97 | 24105953.19 | 24105953.42 | 0.0279 | 0.0113 |
| Jupiter | 61296-11-08 16:34 G | 24109276.96 | 24109277.19 | 24109277.42 | 0.0494 | 0.0020 |

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| Jupiter | 61302-05-03 19:26 G | 24111278.15 | 24111278.31 | 24111278.48 | 0.0536 | 0.0390 |
| Saturn | 61303-04-04 06:29 G | 24111613.55 | 24111613.77 | 24111613.99 | 0.0280 | 0.0097 |
| Jupiter | 61308-11-13 20:53 G | 24113664.16 | 24113664.37 | 24113664.58 | 0.0496 | 0.0248 |
| Mars | 61314-03-04 13:41 G | 24115600.90 | 24115601.07 | 24115601.24 | 0.1614 | 0.0433 |
| Jupiter | 61314-05-08 18:14 G | 24115666.04 | 24115666.26 | 24115666.49 | 0.0534 | 0.0047 |
| Saturn | 61317-10-11 09:22 G | 24116917.71 | 24116917.89 | 24116918.08 | 0.0278 | 0.0195 |
| Uranus | 61323-11-29 05:46 G | 24119157.60 | 24119157.74 | 24119157.91 | 0.0138 | 0.0111 |
| Neptune | 61324-11-10 02:38 G | 24119504.45 | 24119504.61 | 24119504.81 | 0.0088 | 0.0062 |
| Uranus | 61324-12-02 23:02 G | 24119527.24 | 24119527.46 | 24119527.69 | 0.0138 | 0.0058 |
| Neptune | 61325-11-12 19:26 G | 24119872.09 | 24119872.31 | 24119872.56 | 0.0088 | 0.0041 |
| Uranus | 61325-12-07 08:53 G | 24119896.62 | 24119896.87 | 24119897.14 | 0.0137 | 0.0010 |
| Jupiter | 61326-05-14 00:00 G | 24120054.33 | 24120054.50 | 24120054.68 | 0.0532 | 0.0343 |
| Neptune | 61326-11-15 04:05 G | 24120239.43 | 24120239.67 | 24120239.92 | 0.0088 | 0.0003 |
| Uranus | 61326-12-11 23:17 G | 24120266.26 | 24120266.47 | 24120266.71 | 0.0137 | 0.0055 |
| Neptune | 61327-11-17 16:34 G | 24120606.93 | 24120607.19 | 24120607.45 | 0.0088 | 0.0020 |
| Uranus | 61327-12-16 09:07 G | 24120635.69 | 24120635.88 | 24120636.07 | 0.0137 | 0.0094 |
| Neptune | 61328-11-19 05:17 G | 24120974.54 | 24120974.72 | 24120974.91 | 0.0088 | 0.0059 |
| Neptune | 61329-11-21 12:43 G | 24121341.92 | 24121342.03 | 24121342.14 | 0.0089 | 0.0080 |
| Saturn | 61333-04-10 18:58 G | 24122578.18 | 24122578.29 | 24122578.43 | 0.0282 | 0.0243 |
| Pluto | 61335-10-10 22:34 G | 24123491.19 | 24123491.44 | 24123491.70 | 0.0078 | 0.0016 |
| Saturn | 61346-10-06 03:50 G | 24127504.42 | 24127504.66 | 24127504.89 | 0.0279 | 0.0046 |
| Saturn | 61362-04-05 14:24 G | 24133164.86 | 24133165.10 | 24133165.34 | 0.0280 | 0.0032 |
| Jupiter | 61367-11-05 14:24 G | 24135204.94 | 24135205.10 | 24135205.26 | 0.0492 | 0.0360 |
| Uranus | 61368-05-30 05:46 G | 24135411.54 | 24135411.74 | 24135411.97 | 0.0140 | 0.0071 |
| Uranus | 61369-06-03 18:00 G | 24135781.01 | 24135781.25 | 24135781.51 | 0.0141 | 0.0027 |
| Uranus | 61370-06-08 19:41 G | 24136151.08 | 24136151.32 | 24136151.56 | 0.0141 | 0.0042 |
| Uranus | 61371-06-13 10:05 G | 24136520.75 | 24136520.92 | 24136521.12 | 0.0141 | 0.0099 |
| Saturn | 61376-10-12 10:48 G | 24138468.87 | 24138468.95 | 24138469.06 | 0.0278 | 0.0257 |
| Jupiter | 61379-11-09 19:12 G | 24139592.06 | 24139592.30 | 24139592.54 | 0.0494 | 0.0061 |
| Jupiter | 61385-05-02 14:53 G | 24141593.01 | 24141593.12 | 24141593.22 | 0.0536 | 0.0471 |

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| Jupiter | 61391-11-14 08:10 G | 24143979.64 | 24143979.84 | 24143980.05 | 0.0495 | 0.0206 |
| Mars | 61393-03-06 07:26 G | 24144457.69 | 24144457.81 | 24144457.92 | 0.1614 | 0.1203 |
| Jupiter | 61397-05-07 23:46 G | 24145981.27 | 24145981.49 | 24145981.72 | 0.0534 | 0.0126 |
| Jupiter | 61403-11-19 14:10 G | 24148367.07 | 24148367.09 | 24148367.11 | 0.0497 | 0.0494 |
| Neptune | 61405-05-08 19:12 G | 24148903.25 | 24148903.30 | 24148903.41 | 0.0089 | 0.0085 |
| Saturn | 61405-10-08 13:12 G | 24149055.80 | 24149056.05 | 24149056.29 | 0.0279 | 0.0015 |
| Neptune | 61406-05-11 01:12 G | 24149270.39 | 24149270.55 | 24149270.77 | 0.0089 | 0.0058 |
| Neptune | 61407-05-13 17:17 G | 24149637.97 | 24149638.22 | 24149638.48 | 0.0089 | 0.0024 |
| Uranus | 61407-11-30 15:50 G | 24149839.02 | 24149839.16 | 24149839.32 | 0.0138 | 0.0112 |
| Neptune | 61408-05-15 03:22 G | 24150005.40 | 24150005.64 | 24150005.89 | 0.0089 | 0.0004 |
| Uranus | 61408-12-04 09:50 G | 24150208.69 | 24150208.91 | 24150209.14 | 0.0138 | 0.0056 |
| Jupiter | 61409-05-13 20:10 G | 24150369.15 | 24150369.34 | 24150369.55 | 0.0533 | 0.0282 |
| Neptune | 61409-05-17 14:24 G | 24150372.87 | 24150373.10 | 24150373.35 | 0.0089 | 0.0037 |
| Uranus | 61409-12-08 18:29 G | 24150578.01 | 24150578.27 | 24150578.53 | 0.0137 | 0.0003 |
| Neptune | 61410-05-20 05:31 G | 24150740.58 | 24150740.73 | 24150740.92 | 0.0089 | 0.0065 |
| Uranus | 61410-12-13 09:50 G | 24150947.68 | 24150947.91 | 24150948.14 | 0.0137 | 0.0046 |
| Uranus | 61411-12-17 17:17 G | 24151317.09 | 24151317.22 | 24151317.39 | 0.0137 | 0.0113 |
| Saturn | 61421-04-07 15:50 G | 24154715.91 | 24154716.16 | 24154716.41 | 0.0280 | 0.0032 |
| Saturn | 61434-10-02 08:38 G | 24159641.81 | 24159641.86 | 24159641.94 | 0.0280 | 0.0269 |
| Saturn | 61450-04-02 04:05 G | 24165302.55 | 24165302.67 | 24165302.81 | 0.0280 | 0.0234 |
| Jupiter | 61450-11-05 18:00 G | 24165520.12 | 24165520.25 | 24165520.40 | 0.0492 | 0.0394 |
| Uranus | 61451-05-27 14:38 G | 24165723.01 | 24165723.11 | 24165723.23 | 0.0140 | 0.0125 |
| Uranus | 61452-05-31 15:36 G | 24166092.96 | 24166093.15 | 24166093.37 | 0.0140 | 0.0081 |
| Uranus | 61453-06-05 03:22 G | 24166462.39 | 24166462.64 | 24166462.90 | 0.0141 | 0.0009 |
| Uranus | 61454-06-10 05:46 G | 24166832.50 | 24166832.74 | 24166832.99 | 0.0141 | 0.0039 |
| Uranus | 61455-06-14 19:55 G | 24167202.16 | 24167202.33 | 24167202.52 | 0.0141 | 0.0103 |
| Jupiter | 61462-11-10 04:05 G | 24169907.45 | 24169907.67 | 24169907.89 | 0.0493 | 0.0114 |
| Saturn | 61464-10-09 15:07 G | 24170606.89 | 24170607.13 | 24170607.38 | 0.0279 | 0.0070 |
| Jupiter | 61474-11-14 13:12 G | 24174294.82 | 24174295.05 | 24174295.28 | 0.0494 | 0.0154 |
| Saturn | 61480-04-08 14:38 G | 24176266.88 | 24176267.11 | 24176267.34 | 0.0280 | 0.0092 |

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| Jupiter | 61480-05-07 23:02 G | 24176296.24 | 24176296.46 | 24176296.68 | 0.0535 | 0.0179 |
| Jupiter | 61486-11-18 20:38 G | 24178682.28 | 24178682.36 | 24178682.44 | 0.0496 | 0.0466 |
| Neptune | 61488-11-10 16:34 G | 24179405.10 | 24179405.19 | 24179405.33 | 0.0088 | 0.0079 |
| Neptune | 61489-11-13 02:10 G | 24179772.40 | 24179772.59 | 24179772.80 | 0.0088 | 0.0053 |
| Neptune | 61490-11-15 12:58 G | 24180139.79 | 24180140.04 | 24180140.31 | 0.0088 | 0.0018 |
| Neptune | 61491-11-18 03:07 G | 24180507.38 | 24180507.63 | 24180507.88 | 0.0088 | 0.0008 |
| Uranus | 61491-12-01 00:43 G | 24180520.37 | 24180520.53 | 24180520.72 | 0.0138 | 0.0101 |
| Jupiter | 61492-05-13 10:19 G | 24180684.73 | 24180684.93 | 24180685.13 | 0.0533 | 0.0246 |
| Neptune | 61492-11-19 09:36 G | 24180874.68 | 24180874.90 | 24180875.14 | 0.0088 | 0.0042 |
| Uranus | 61492-12-04 19:55 G | 24180890.11 | 24180890.33 | 24180890.57 | 0.0138 | 0.0051 |
| Saturn | 61493-10-03 11:02 G | 24181192.82 | 24181192.96 | 24181193.12 | 0.0280 | 0.0214 |
| Neptune | 61493-11-22 03:50 G | 24181242.50 | 24181242.66 | 24181242.82 | 0.0088 | 0.0068 |
| Uranus | 61493-12-09 03:50 G | 24181259.40 | 24181259.66 | 24181259.92 | 0.0137 | 0.0001 |
| Uranus | 61494-12-13 20:38 G | 24181629.14 | 24181629.36 | 24181629.58 | 0.0137 | 0.0062 |
| Mars | 61495-09-05 23:31 G | 24181895.30 | 24181895.48 | 24181895.67 | 0.1909 | 0.0387 |
| Uranus | 61495-12-18 03:36 G | 24181998.49 | 24181998.65 | 24181998.83 | 0.0137 | 0.0102 |
| Pluto | 61496-04-10 17:02 G | 24182112.99 | 24182113.21 | 24182113.45 | 0.0066 | 0.0030 |
| Saturn | 61509-04-04 09:22 G | 24186853.71 | 24186853.89 | 24186854.08 | 0.0280 | 0.0176 |
| Saturn | 61523-10-12 10:34 G | 24192157.72 | 24192157.94 | 24192158.18 | 0.0279 | 0.0118 |
| Jupiter | 61533-11-06 05:02 G | 24195835.61 | 24195835.71 | 24195835.81 | 0.0491 | 0.0435 |
| Uranus | 61535-05-28 23:46 G | 24196404.43 | 24196404.49 | 24196404.59 | 0.0140 | 0.0133 |
| Uranus | 61536-06-02 00:58 G | 24196774.33 | 24196774.54 | 24196774.79 | 0.0140 | 0.0063 |
| Uranus | 61537-06-06 12:58 G | 24197143.79 | 24197144.04 | 24197144.29 | 0.0141 | 0.0019 |
| Uranus | 61538-06-11 15:22 G | 24197513.92 | 24197514.14 | 24197514.39 | 0.0141 | 0.0052 |
| Saturn | 61539-04-11 17:31 G | 24197818.04 | 24197818.23 | 24197818.44 | 0.0280 | 0.0152 |
| Uranus | 61539-06-16 04:48 G | 24197883.54 | 24197883.70 | 24197883.89 | 0.0141 | 0.0106 |
| Jupiter | 61545-11-10 13:12 G | 24200222.82 | 24200223.05 | 24200223.29 | 0.0493 | 0.0152 |
| Saturn | 61552-10-05 15:07 G | 24202743.95 | 24202744.13 | 24202744.34 | 0.0280 | 0.0164 |
| Jupiter | 61557-11-14 21:07 G | 24204610.16 | 24204610.38 | 24204610.60 | 0.0494 | 0.0119 |
| Jupiter | 61563-05-09 11:02 G | 24206611.76 | 24206611.96 | 24206612.16 | 0.0535 | 0.0233 |

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| Saturn | 61568-04-05 08:10 G | 24208404.62 | 24208404.84 | 24208405.07 | 0.0280 | 0.0118 |
| Jupiter | 61569-11-19 13:26 G | 24208997.96 | 24208998.06 | 24208998.17 | 0.0496 | 0.0443 |
| Neptune | 61570-05-11 13:55 G | 24209170.95 | 24209171.08 | 24209171.23 | 0.0089 | 0.0075 |
| Neptune | 61571-05-14 01:26 G | 24209538.35 | 24209538.56 | 24209538.80 | 0.0089 | 0.0036 |
| Neptune | 61572-05-15 11:17 G | 24209905.71 | 24209905.97 | 24209906.24 | 0.0089 | 0.0014 |
| Neptune | 61573-05-18 02:53 G | 24210273.39 | 24210273.62 | 24210273.87 | 0.0089 | 0.0026 |
| Neptune | 61574-05-20 08:38 G | 24210640.66 | 24210640.86 | 24210641.10 | 0.0089 | 0.0047 |
| Jupiter | 61575-05-14 09:36 G | 24210999.67 | 24210999.90 | 24211000.12 | 0.0533 | 0.0186 |
| Neptune | 61575-05-23 03:36 G | 24211008.61 | 24211008.65 | 24211008.73 | 0.0089 | 0.0086 |
| Uranus | 61575-12-02 12:00 G | 24211201.86 | 24211202.00 | 24211202.19 | 0.0138 | 0.0105 |
| Uranus | 61576-12-06 07:55 G | 24211571.61 | 24211571.83 | 24211572.07 | 0.0138 | 0.0046 |
| Uranus | 61577-12-10 14:38 G | 24211940.85 | 24211941.11 | 24211941.37 | 0.0137 | 0.0010 |
| Uranus | 61578-12-15 07:55 G | 24212310.61 | 24212310.83 | 24212311.07 | 0.0137 | 0.0055 |
| Uranus | 61579-12-19 13:26 G | 24212679.96 | 24212680.06 | 24212680.21 | 0.0137 | 0.0121 |
| Saturn | 61582-10-13 07:12 G | 24213708.62 | 24213708.80 | 24213709.01 | 0.0279 | 0.0166 |
| Pluto | 61583-10-14 18:58 G | 24214075.02 | 24214075.29 | 24214075.55 | 0.0078 | 0.0004 |
| Mars | 61598-03-08 02:10 G | 24219333.41 | 24219333.59 | 24219333.77 | 0.1615 | 0.0540 |
| Saturn | 61598-04-13 00:29 G | 24219369.36 | 24219369.52 | 24219369.67 | 0.0280 | 0.0214 |
| Saturn | 61611-10-07 16:19 G | 24224294.96 | 24224295.18 | 24224295.41 | 0.0280 | 0.0115 |
| Jupiter | 61616-11-05 15:22 G | 24226151.07 | 24226151.14 | 24226151.22 | 0.0491 | 0.0465 |
| Uranus | 61619-05-29 10:19 G | 24227085.81 | 24227085.93 | 24227086.08 | 0.0140 | 0.0118 |
| Uranus | 61620-06-02 11:02 G | 24227455.75 | 24227455.96 | 24227456.19 | 0.0140 | 0.0073 |
| Uranus | 61621-06-06 23:02 G | 24227825.20 | 24227825.46 | 24227825.71 | 0.0141 | 0.0002 |
| Uranus | 61622-06-12 01:55 G | 24228195.34 | 24228195.58 | 24228195.82 | 0.0141 | 0.0046 |
| Uranus | 61623-06-16 15:36 G | 24228564.99 | 24228565.15 | 24228565.31 | 0.0141 | 0.0112 |
| Saturn | 61627-04-07 04:34 G | 24229955.45 | 24229955.69 | 24229955.94 | 0.0280 | 0.0059 |
| Jupiter | 61628-11-09 21:50 G | 24230538.20 | 24230538.41 | 24230538.62 | 0.0493 | 0.0193 |
| Jupiter | 61640-11-14 12:00 G | 24234925.77 | 24234926.00 | 24234926.24 | 0.0493 | 0.0078 |
| Saturn | 61641-10-14 08:53 G | 24235259.72 | 24235259.87 | 24235260.04 | 0.0279 | 0.0210 |
| Jupiter | 61646-05-08 07:55 G | 24236926.63 | 24236926.83 | 24236927.03 | 0.0536 | 0.0297 |

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| Jupiter | 61652-11-18 14:10 G | 24239312.96 | 24239313.09 | 24239313.22 | 0.0495 | 0.0403 |
| Neptune | 61653-11-13 09:22 G | 24239672.73 | 24239672.89 | 24239673.11 | 0.0088 | 0.0062 |
| Neptune | 61654-11-16 01:26 G | 24240040.33 | 24240040.56 | 24240040.79 | 0.0088 | 0.0039 |
| Neptune | 61655-11-18 07:12 G | 24240407.54 | 24240407.80 | 24240408.06 | 0.0088 | 0.0001 |
| Neptune | 61656-11-20 01:12 G | 24240775.31 | 24240775.55 | 24240775.81 | 0.0088 | 0.0021 |
| Saturn | 61657-04-14 03:07 G | 24240920.59 | 24240920.63 | 24240920.69 | 0.0280 | 0.0273 |
| Neptune | 61657-11-22 05:46 G | 24241142.55 | 24241142.74 | 24241142.93 | 0.0088 | 0.0059 |
| Jupiter | 61658-05-13 14:53 G | 24241314.91 | 24241315.12 | 24241315.34 | 0.0535 | 0.0146 |
| Neptune | 61658-11-24 23:02 G | 24241510.38 | 24241510.46 | 24241510.59 | 0.0089 | 0.0081 |
| Uranus | 61659-12-02 23:17 G | 24241883.29 | 24241883.47 | 24241883.68 | 0.0138 | 0.0090 |
| Uranus | 61660-12-06 19:41 G | 24242253.08 | 24242253.32 | 24242253.56 | 0.0138 | 0.0042 |
| Uranus | 61661-12-11 01:55 G | 24242622.32 | 24242622.58 | 24242622.84 | 0.0137 | 0.0010 |
| Uranus | 61662-12-15 19:55 G | 24242992.13 | 24242992.33 | 24242992.55 | 0.0137 | 0.0071 |
| Uranus | 61663-12-20 01:26 G | 24243361.42 | 24243361.56 | 24243361.72 | 0.0137 | 0.0111 |
| Saturn | 61670-10-08 11:46 G | 24245845.75 | 24245845.99 | 24245846.25 | 0.0280 | 0.0070 |
| Saturn | 61686-04-08 06:43 G | 24251506.54 | 24251506.78 | 24251507.02 | 0.0280 | 0.0002 |
| Saturn | 61700-10-16 11:31 G | 24256810.89 | 24256810.98 | 24256811.09 | 0.0279 | 0.0253 |
| Uranus | 61703-05-30 19:26 G | 24257767.21 | 24257767.31 | 24257767.45 | 0.0140 | 0.0123 |
| Uranus | 61704-06-03 20:24 G | 24258137.11 | 24258137.35 | 24258137.59 | 0.0140 | 0.0054 |
| Uranus | 61705-06-08 08:38 G | 24258506.61 | 24258506.86 | 24258507.11 | 0.0141 | 0.0011 |
| Uranus | 61706-06-13 11:17 G | 24258876.75 | 24258876.97 | 24258877.21 | 0.0141 | 0.0061 |
| Uranus | 61707-06-18 00:29 G | 24259246.37 | 24259246.52 | 24259246.68 | 0.0142 | 0.0112 |
| Jupiter | 61711-11-11 12:58 G | 24260853.84 | 24260854.04 | 24260854.25 | 0.0492 | 0.0237 |
| Saturn | 61715-04-04 11:02 G | 24262093.87 | 24262093.96 | 24262094.06 | 0.0278 | 0.0257 |
| Jupiter | 61723-11-15 12:58 G | 24265240.81 | 24265241.04 | 24265241.28 | 0.0493 | 0.0038 |
| Jupiter | 61729-05-08 18:00 G | 24267242.08 | 24267242.25 | 24267242.42 | 0.0537 | 0.0339 |
| Saturn | 61729-10-10 09:36 G | 24267396.65 | 24267396.90 | 24267397.14 | 0.0280 | 0.0023 |
| Neptune | 61734-05-11 22:05 G | 24269071.39 | 24269071.42 | 24269071.52 | 0.0089 | 0.0086 |
| Neptune | 61735-05-14 06:58 G | 24269438.59 | 24269438.79 | 24269439.01 | 0.0089 | 0.0054 |
| Jupiter | 61735-11-20 06:43 G | 24269628.63 | 24269628.78 | 24269628.93 | 0.0495 | 0.0375 |

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| Neptune | 61736-05-15 23:46 G | 24269806.26 | 24269806.49 | 24269806.75 | 0.0089 | 0.0025 |
| Neptune | 61737-05-18 05:31 G | 24270173.47 | 24270173.73 | 24270173.99 | 0.0089 | 0.0005 |
| Neptune | 61738-05-21 00:14 G | 24270541.28 | 24270541.51 | 24270541.75 | 0.0089 | 0.0036 |
| Neptune | 61739-05-23 05:02 G | 24270908.56 | 24270908.71 | 24270908.89 | 0.0089 | 0.0066 |
| Jupiter | 61741-05-14 00:43 G | 24271630.29 | 24271630.53 | 24271630.76 | 0.0535 | 0.0106 |
| Uranus | 61742-11-30 04:48 G | 24272195.67 | 24272195.70 | 24272195.73 | 0.0138 | 0.0137 |
| Uranus | 61743-12-04 12:00 G | 24272564.81 | 24272565.00 | 24272565.18 | 0.0138 | 0.0094 |
| Pluto | 61744-04-14 11:17 G | 24272696.75 | 24272696.97 | 24272697.20 | 0.0065 | 0.0033 |
| Uranus | 61744-12-08 08:24 G | 24272934.61 | 24272934.85 | 24272935.10 | 0.0138 | 0.0034 |
| Saturn | 61745-04-10 13:55 G | 24273057.86 | 24273058.08 | 24273058.32 | 0.0280 | 0.0061 |
| Uranus | 61745-12-12 14:10 G | 24273303.84 | 24273304.09 | 24273304.34 | 0.0137 | 0.0020 |
| Uranus | 61746-12-17 08:38 G | 24273673.65 | 24273673.86 | 24273674.09 | 0.0137 | 0.0066 |
| Uranus | 61747-12-21 13:26 G | 24274042.99 | 24274043.06 | 24274043.15 | 0.0137 | 0.0130 |
| Jupiter | 61753-05-18 20:10 G | 24276018.30 | 24276018.34 | 24276018.39 | 0.0533 | 0.0519 |
| Saturn | 61774-04-05 12:00 G | 24283644.83 | 24283645.00 | 24283645.19 | 0.0278 | 0.0193 |
| Uranus | 61787-05-31 06:14 G | 24288448.63 | 24288448.76 | 24288448.94 | 0.0140 | 0.0110 |
| Uranus | 61788-06-04 06:14 G | 24288818.53 | 24288818.76 | 24288819.00 | 0.0140 | 0.0062 |
| Saturn | 61788-10-11 15:22 G | 24288947.91 | 24288948.14 | 24288948.38 | 0.0280 | 0.0033 |
| Uranus | 61789-06-08 19:12 G | 24289188.05 | 24289188.30 | 24289188.55 | 0.0141 | 0.0010 |
| Uranus | 61790-06-13 21:22 G | 24289558.16 | 24289558.39 | 24289558.63 | 0.0141 | 0.0055 |
| Uranus | 61791-06-18 11:02 G | 24289927.84 | 24289927.96 | 24289928.09 | 0.0142 | 0.0122 |
| Jupiter | 61794-11-10 13:12 G | 24291168.86 | 24291169.05 | 24291169.25 | 0.0491 | 0.0282 |
| Mars | 61803-03-08 22:19 G | 24294208.33 | 24294208.43 | 24294208.53 | 0.1616 | 0.1334 |
| Saturn | 61804-04-12 22:48 G | 24294609.23 | 24294609.45 | 24294609.67 | 0.0280 | 0.0125 |
| Jupiter | 61806-11-16 06:00 G | 24295556.52 | 24295556.75 | 24295556.98 | 0.0493 | 0.0005 |
| Jupiter | 61812-05-08 21:50 G | 24297557.25 | 24297557.41 | 24297557.57 | 0.0537 | 0.0401 |
| Saturn | 61817-10-07 02:53 G | 24299534.48 | 24299534.62 | 24299534.77 | 0.0281 | 0.0233 |
| Neptune | 61817-11-14 20:53 G | 24299573.27 | 24299573.37 | 24299573.50 | 0.0088 | 0.0078 |
| Neptune | 61818-11-17 01:55 G | 24299940.40 | 24299940.58 | 24299940.81 | 0.0088 | 0.0055 |
| Jupiter | 61818-11-20 09:22 G | 24299943.72 | 24299943.89 | 24299944.07 | 0.0494 | 0.0339 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 61819-11-19 21:07 G | 24300308.13 | 24300308.38 | 24300308.64 | 0.0088 | 0.0018 |
| Neptune | 61820-11-21 01:55 G | 24300675.33 | 24300675.58 | 24300675.84 | 0.0088 | 0.0007 |
| Neptune | 61821-11-23 19:12 G | 24301043.07 | 24301043.30 | 24301043.54 | 0.0088 | 0.0043 |
| Neptune | 61822-11-26 02:24 G | 24301410.46 | 24301410.60 | 24301410.77 | 0.0088 | 0.0068 |
| Jupiter | 61824-05-13 15:22 G | 24301944.91 | 24301945.14 | 24301945.37 | 0.0536 | 0.0026 |
| Uranus | 61827-12-05 23:02 G | 24303246.26 | 24303246.46 | 24303246.68 | 0.0138 | 0.0078 |
| Uranus | 61828-12-09 19:41 G | 24303616.08 | 24303616.32 | 24303616.58 | 0.0138 | 0.0032 |
| Uranus | 61829-12-14 01:26 G | 24303985.32 | 24303985.56 | 24303985.82 | 0.0137 | 0.0023 |
| Uranus | 61830-12-18 20:53 G | 24304355.17 | 24304355.37 | 24304355.57 | 0.0137 | 0.0081 |
| Pluto | 61831-10-17 23:31 G | 24304658.23 | 24304658.48 | 24304658.73 | 0.0078 | 0.0003 |
| Uranus | 61831-12-23 01:26 G | 24304724.46 | 24304724.56 | 24304724.68 | 0.0137 | 0.0122 |
| Saturn | 61833-04-07 15:50 G | 24305195.94 | 24305196.16 | 24305196.38 | 0.0279 | 0.0125 |
| Jupiter | 61836-05-19 03:22 G | 24306333.52 | 24306333.64 | 24306333.76 | 0.0534 | 0.0453 |
| Saturn | 61847-10-15 01:12 G | 24310499.32 | 24310499.55 | 24310499.78 | 0.0280 | 0.0093 |
| Saturn | 61863-04-15 04:05 G | 24316160.50 | 24316160.67 | 24316160.86 | 0.0280 | 0.0196 |
| Uranus | 61871-06-01 16:19 G | 24319130.04 | 24319130.18 | 24319130.34 | 0.0140 | 0.0111 |
| Uranus | 61872-06-05 15:22 G | 24319499.90 | 24319500.14 | 24319500.39 | 0.0140 | 0.0044 |
| Uranus | 61873-06-10 05:17 G | 24319869.47 | 24319869.72 | 24319869.97 | 0.0141 | 0.0001 |
| Uranus | 61874-06-15 06:58 G | 24320239.57 | 24320239.79 | 24320240.01 | 0.0141 | 0.0072 |
| Uranus | 61875-06-19 20:24 G | 24320609.23 | 24320609.35 | 24320609.49 | 0.0142 | 0.0120 |
| Saturn | 61876-10-08 04:48 G | 24321085.51 | 24321085.70 | 24321085.91 | 0.0280 | 0.0174 |
| Jupiter | 61877-11-11 05:02 G | 24321484.54 | 24321484.71 | 24321484.89 | 0.0491 | 0.0322 |
| Mars | 61882-03-10 23:02 G | 24323065.33 | 24323065.46 | 24323065.59 | 0.1615 | 0.1166 |
| Jupiter | 61889-11-15 07:12 G | 24325871.56 | 24325871.80 | 24325872.04 | 0.0492 | 0.0035 |
| Saturn | 61892-04-09 03:22 G | 24326747.41 | 24326747.64 | 24326747.88 | 0.0279 | 0.0052 |
| Jupiter | 61895-05-08 12:43 G | 24327871.94 | 24327872.03 | 24327872.12 | 0.0538 | 0.0490 |
| Neptune | 61899-05-14 20:38 G | 24329339.25 | 24329339.36 | 24329339.52 | 0.0089 | 0.0076 |
| Neptune | 61900-05-17 01:55 G | 24329706.35 | 24329706.58 | 24329706.82 | 0.0089 | 0.0035 |
| Neptune | 61901-05-19 20:38 G | 24330074.11 | 24330074.36 | 24330074.62 | 0.0089 | 0.0014 |
| Jupiter | 61901-11-20 16:34 G | 24330259.01 | 24330259.19 | 24330259.37 | 0.0494 | 0.0298 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 61902-05-22 01:55 G | 24330441.35 | 24330441.58 | 24330441.83 | 0.0089 | 0.0026 |
| Neptune | 61903-05-24 18:14 G | 24330809.04 | 24330809.26 | 24330809.49 | 0.0089 | 0.0047 |
| Neptune | 61904-05-26 02:38 G | 24331176.59 | 24331176.61 | 24331176.69 | 0.0089 | 0.0087 |
| Saturn | 61906-10-17 08:53 G | 24332050.67 | 24332050.87 | 24332051.08 | 0.0279 | 0.0161 |
| Jupiter | 61907-05-15 02:53 G | 24332260.38 | 24332260.62 | 24332260.85 | 0.0536 | 0.0029 |
| Uranus | 61910-12-03 03:36 G | 24333558.55 | 24333558.65 | 24333558.76 | 0.0138 | 0.0125 |
| Uranus | 61911-12-07 11:17 G | 24333927.78 | 24333927.97 | 24333928.18 | 0.0138 | 0.0083 |
| Uranus | 61912-12-11 08:10 G | 24334297.59 | 24334297.84 | 24334298.10 | 0.0138 | 0.0021 |
| Uranus | 61913-12-15 13:55 G | 24334666.84 | 24334667.08 | 24334667.33 | 0.0137 | 0.0030 |
| Uranus | 61914-12-20 08:53 G | 24335036.68 | 24335036.87 | 24335037.10 | 0.0137 | 0.0078 |
| Jupiter | 61919-05-19 23:31 G | 24336648.32 | 24336648.48 | 24336648.64 | 0.0534 | 0.0389 |
| Saturn | 61922-04-17 09:22 G | 24337711.84 | 24337711.89 | 24337711.96 | 0.0280 | 0.0271 |
| Saturn | 61935-10-11 13:55 G | 24342636.86 | 24342637.08 | 24342637.31 | 0.0280 | 0.0105 |
| Saturn | 61951-04-12 17:31 G | 24348299.00 | 24348299.23 | 24348299.47 | 0.0280 | 0.0026 |
| Uranus | 61955-06-03 04:34 G | 24349811.53 | 24349811.69 | 24349811.87 | 0.0140 | 0.0100 |
| Uranus | 61956-06-07 01:55 G | 24350181.35 | 24350181.58 | 24350181.84 | 0.0140 | 0.0052 |
| Uranus | 61957-06-11 16:48 G | 24350550.95 | 24350551.20 | 24350551.44 | 0.0141 | 0.0020 |
| Uranus | 61958-06-16 17:02 G | 24350920.99 | 24350921.21 | 24350921.46 | 0.0141 | 0.0064 |
| Uranus | 61959-06-21 07:41 G | 24351290.75 | 24351290.82 | 24351290.91 | 0.0141 | 0.0133 |
| Jupiter | 61960-11-11 01:41 G | 24351799.42 | 24351799.57 | 24351799.72 | 0.0490 | 0.0377 |
| Saturn | 61965-10-18 15:36 G | 24353602.02 | 24353602.15 | 24353602.31 | 0.0279 | 0.0231 |
| Jupiter | 61972-11-15 13:26 G | 24356186.84 | 24356187.06 | 24356187.28 | 0.0492 | 0.0086 |
| Saturn | 61980-04-06 00:43 G | 24358885.42 | 24358885.53 | 24358885.66 | 0.0278 | 0.0242 |
| Neptune | 61982-11-17 15:50 G | 24359841.01 | 24359841.16 | 24359841.37 | 0.0088 | 0.0064 |
| Neptune | 61983-11-19 21:22 G | 24360208.18 | 24360208.39 | 24360208.64 | 0.0088 | 0.0039 |
| Jupiter | 61984-11-19 23:02 G | 24360574.26 | 24360574.46 | 24360574.67 | 0.0494 | 0.0260 |
| Neptune | 61984-11-21 14:24 G | 24360575.83 | 24360576.10 | 24360576.36 | 0.0088 | 0.0003 |
| Neptune | 61985-11-23 22:34 G | 24360943.21 | 24360943.44 | 24360943.69 | 0.0088 | 0.0021 |
| Neptune | 61986-11-26 10:05 G | 24361310.73 | 24361310.92 | 24361311.14 | 0.0088 | 0.0057 |
| Neptune | 61987-11-28 23:31 G | 24361678.40 | 24361678.48 | 24361678.60 | 0.0088 | 0.0081 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 61990-05-13 18:14 G | 24362575.03 | 24362575.26 | 24362575.49 | 0.0536 | 0.0105 |
| Pluto | 61992-04-17 13:41 G | 24363279.84 | 24363280.07 | 24363280.32 | 0.0065 | 0.0023 |
| Saturn | 61994-10-13 04:48 G | 24364188.46 | 24364188.70 | 24364188.94 | 0.0280 | 0.0035 |
| Uranus | 61994-12-03 14:53 G | 24364240.08 | 24364240.12 | 24364240.20 | 0.0138 | 0.0135 |
| Uranus | 61995-12-07 23:02 G | 24364609.26 | 24364609.46 | 24364609.70 | 0.0138 | 0.0066 |
| Uranus | 61996-12-11 19:41 G | 24364979.07 | 24364979.32 | 24364979.57 | 0.0138 | 0.0021 |
| Uranus | 61997-12-16 01:26 G | 24365348.33 | 24365348.56 | 24365348.82 | 0.0137 | 0.0036 |
| Uranus | 61998-12-20 20:53 G | 24365718.19 | 24365718.37 | 24365718.57 | 0.0137 | 0.0091 |
| Uranus | 61999-12-25 01:26 G | 24366087.52 | 24366087.56 | 24366087.63 | 0.0137 | 0.0133 |

63RD MILLENNIUM CE

This is a list of transits of Moon in the 63rd millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|-------------|-------------|-------------|--------|--------|-------|---|
| Jupiter | 62002-05-18 22:19 G | 24366963.25 | 24366963.43 | 24366963.62 | 0.0535 | 0.0298 | | |
| Saturn | 62010-04-14 04:05 G | 24369850.44 | 24369850.67 | 24369850.90 | 0.0280 | 0.0100 | | |
| Saturn | 62039-04-08 12:14 G | 24380436.82 | 24380437.01 | 24380437.20 | 0.0279 | 0.0169 | | |
| Uranus | 62039-06-03 15:36 G | 24380492.98 | 24380493.15 | 24380493.33 | 0.0140 | 0.0099 | | |
| Uranus | 62040-06-07 12:00 G | 24380862.76 | 24380863.00 | 24380863.27 | 0.0140 | 0.0036 | | |
| Uranus | 62041-06-12 03:50 G | 24381232.42 | 24381232.66 | 24381232.91 | 0.0141 | 0.0010 | | |
| Uranus | 62042-06-17 03:22 G | 24381602.44 | 24381602.64 | 24381602.87 | 0.0141 | 0.0082 | | |
| Uranus | 62043-06-21 18:29 G | 24381972.18 | 24381972.27 | 24381972.39 | 0.0141 | 0.0129 | | |
| Jupiter | 62043-11-11 10:05 G | 24382114.82 | 24382114.92 | 24382115.03 | 0.0490 | 0.0433 | | |
| Saturn | 62053-10-14 19:26 G | 24385740.06 | 24385740.31 | 24385740.56 | 0.0280 | 0.0039 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 62055-11-15 19:55 G | 24386502.10 | 24386502.33 | 24386502.57 | 0.0492 | 0.0125 |
| Neptune | 62063-05-14 20:24 G | 24389239.34 | 24389239.35 | 24389239.42 | 0.0089 | 0.0088 |
| Neptune | 62064-05-16 14:53 G | 24389606.93 | 24389607.12 | 24389607.35 | 0.0089 | 0.0054 |
| Neptune | 62065-05-18 21:22 G | 24389974.17 | 24389974.39 | 24389974.65 | 0.0089 | 0.0026 |
| Neptune | 62066-05-21 13:12 G | 24390341.79 | 24390342.05 | 24390342.32 | 0.0089 | 0.0007 |
| Neptune | 62067-05-23 23:31 G | 24390709.27 | 24390709.48 | 24390709.72 | 0.0089 | 0.0035 |
| Jupiter | 62067-11-20 00:00 G | 24390889.30 | 24390889.50 | 24390889.71 | 0.0493 | 0.0216 |
| Neptune | 62068-05-25 09:50 G | 24391076.76 | 24391076.91 | 24391077.11 | 0.0089 | 0.0067 |
| Saturn | 62069-04-15 10:48 G | 24391401.76 | 24391401.95 | 24391402.15 | 0.0280 | 0.0176 |
| Jupiter | 62073-05-12 17:46 G | 24392890.03 | 24392890.24 | 24392890.46 | 0.0537 | 0.0194 |
| Uranus | 62078-12-04 03:22 G | 24394921.50 | 24394921.64 | 24394921.79 | 0.0138 | 0.0114 |
| Pluto | 62079-10-20 06:58 G | 24395241.53 | 24395241.79 | 24395242.05 | 0.0079 | 0.0022 |
| Uranus | 62079-12-08 12:14 G | 24395290.81 | 24395291.01 | 24395291.23 | 0.0138 | 0.0073 |
| Uranus | 62080-12-12 08:24 G | 24395660.60 | 24395660.85 | 24395661.11 | 0.0138 | 0.0009 |
| Uranus | 62081-12-16 14:53 G | 24396029.89 | 24396030.12 | 24396030.37 | 0.0137 | 0.0040 |
| Saturn | 62082-10-09 06:58 G | 24396326.63 | 24396326.79 | 24396326.96 | 0.0281 | 0.0207 |
| Uranus | 62082-12-21 09:50 G | 24396399.73 | 24396399.91 | 24396400.12 | 0.0137 | 0.0089 |
| Jupiter | 62085-05-17 19:41 G | 24397278.11 | 24397278.32 | 24397278.55 | 0.0535 | 0.0224 |
| Mars | 62087-03-11 14:53 G | 24397940.94 | 24397941.12 | 24397941.29 | 0.1617 | 0.0302 |
| Saturn | 62098-04-10 03:07 G | 24401988.40 | 24401988.63 | 24401988.85 | 0.0279 | 0.0092 |
| Saturn | 62112-10-17 04:19 G | 24407291.45 | 24407291.68 | 24407291.92 | 0.0279 | 0.0114 |
| Uranus | 62123-06-05 04:48 G | 24411174.52 | 24411174.70 | 24411174.89 | 0.0140 | 0.0091 |
| Uranus | 62124-06-09 00:00 G | 24411544.25 | 24411544.50 | 24411544.75 | 0.0140 | 0.0040 |
| Uranus | 62125-06-13 16:19 G | 24411913.94 | 24411914.18 | 24411914.42 | 0.0141 | 0.0030 |
| Uranus | 62126-06-18 14:24 G | 24412283.89 | 24412284.10 | 24412284.34 | 0.0141 | 0.0073 |
| Jupiter | 62126-11-11 15:50 G | 24412430.13 | 24412430.16 | 24412430.19 | 0.0490 | 0.0485 |
| Saturn | 62128-04-17 18:14 G | 24412953.16 | 24412953.26 | 24412953.37 | 0.0280 | 0.0251 |
| Jupiter | 62138-11-15 16:34 G | 24416816.99 | 24416817.19 | 24416817.41 | 0.0491 | 0.0192 |
| Saturn | 62141-10-11 23:17 G | 24417878.27 | 24417878.47 | 24417878.69 | 0.0280 | 0.0128 |
| Mars | 62142-09-11 11:31 G | 24418212.76 | 24418212.98 | 24418213.20 | 0.1907 | 0.0290 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 62146-11-17 15:50 G | 24419741.07 | 24419741.16 | 24419741.30 | 0.0088 | 0.0078 |
| Neptune | 62147-11-20 06:58 G | 24420108.61 | 24420108.79 | 24420109.03 | 0.0088 | 0.0057 |
| Neptune | 62148-11-21 17:31 G | 24420475.99 | 24420476.23 | 24420476.48 | 0.0088 | 0.0019 |
| Neptune | 62149-11-24 04:19 G | 24420843.42 | 24420843.68 | 24420843.95 | 0.0088 | 0.0004 |
| Jupiter | 62150-11-20 07:12 G | 24421204.57 | 24421204.80 | 24421205.03 | 0.0492 | 0.0155 |
| Neptune | 62150-11-26 19:12 G | 24421211.09 | 24421211.30 | 24421211.54 | 0.0088 | 0.0042 |
| Neptune | 62151-11-29 01:12 G | 24421578.40 | 24421578.55 | 24421578.76 | 0.0088 | 0.0065 |
| Jupiter | 62156-05-12 15:50 G | 24423204.95 | 24423205.16 | 24423205.37 | 0.0537 | 0.0254 |
| Saturn | 62157-04-12 15:50 G | 24423539.91 | 24423540.16 | 24423540.40 | 0.0279 | 0.0018 |
| Jupiter | 62162-11-24 09:07 G | 24425591.82 | 24425591.88 | 24425591.94 | 0.0494 | 0.0475 |
| Uranus | 62162-12-05 16:34 G | 24425603.08 | 24425603.19 | 24425603.32 | 0.0138 | 0.0123 |
| Uranus | 62163-12-10 01:55 G | 24425972.36 | 24425972.58 | 24425972.82 | 0.0138 | 0.0055 |
| Uranus | 62164-12-13 21:07 G | 24426342.13 | 24426342.38 | 24426342.64 | 0.0138 | 0.0011 |
| Uranus | 62165-12-18 04:05 G | 24426711.44 | 24426711.67 | 24426711.91 | 0.0137 | 0.0047 |
| Uranus | 62166-12-22 22:34 G | 24427081.27 | 24427081.44 | 24427081.62 | 0.0137 | 0.0100 |
| Jupiter | 62168-05-17 21:22 G | 24427593.18 | 24427593.39 | 24427593.61 | 0.0536 | 0.0154 |
| Saturn | 62171-10-19 12:14 G | 24428842.83 | 24428843.01 | 24428843.20 | 0.0279 | 0.0188 |
| Jupiter | 62180-05-22 22:19 G | 24431981.35 | 24431981.43 | 24431981.52 | 0.0534 | 0.0494 |
| Saturn | 62186-04-07 06:14 G | 24434126.69 | 24434126.76 | 24434126.84 | 0.0279 | 0.0264 |
| Saturn | 62200-10-14 14:38 G | 24439429.87 | 24439430.11 | 24439430.35 | 0.0280 | 0.0053 |
| Uranus | 62207-06-06 15:50 G | 24441855.98 | 24441856.16 | 24441856.36 | 0.0140 | 0.0088 |
| Uranus | 62208-06-10 10:05 G | 24442225.66 | 24442225.92 | 24442226.18 | 0.0140 | 0.0027 |
| Uranus | 62209-06-15 03:50 G | 24442595.41 | 24442595.66 | 24442595.90 | 0.0141 | 0.0020 |
| Uranus | 62210-06-20 00:43 G | 24442965.35 | 24442965.53 | 24442965.75 | 0.0141 | 0.0092 |
| Uranus | 62211-06-24 17:46 G | 24443335.20 | 24443335.24 | 24443335.33 | 0.0142 | 0.0137 |
| Saturn | 62216-04-14 21:36 G | 24445091.16 | 24445091.40 | 24445091.65 | 0.0279 | 0.0056 |
| Jupiter | 62221-11-16 04:05 G | 24447132.47 | 24447132.67 | 24447132.89 | 0.0491 | 0.0237 |
| Neptune | 62228-05-17 17:31 G | 24449507.11 | 24449507.23 | 24449507.37 | 0.0089 | 0.0075 |
| Neptune | 62229-05-20 07:12 G | 24449874.58 | 24449874.80 | 24449875.06 | 0.0089 | 0.0037 |
| Neptune | 62230-05-22 18:58 G | 24450242.05 | 24450242.29 | 24450242.54 | 0.0089 | 0.0015 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 62230-10-21 22:34 G | 24450394.37 | 24450394.44 | 24450394.54 | 0.0279 | 0.0261 |
| Neptune | 62231-05-25 04:05 G | 24450609.42 | 24450609.67 | 24450609.93 | 0.0089 | 0.0024 |
| Neptune | 62232-05-26 20:10 G | 24450977.15 | 24450977.34 | 24450977.58 | 0.0089 | 0.0047 |
| Neptune | 62233-05-29 01:26 G | 24451344.53 | 24451344.56 | 24451344.66 | 0.0089 | 0.0086 |
| Jupiter | 62233-11-20 06:29 G | 24451519.55 | 24451519.77 | 24451520.00 | 0.0492 | 0.0111 |
| Jupiter | 62239-05-13 14:53 G | 24453519.95 | 24453520.12 | 24453520.30 | 0.0537 | 0.0336 |
| Pluto | 62240-04-21 01:26 G | 24453863.31 | 24453863.56 | 24453863.83 | 0.0065 | 0.0006 |
| Saturn | 62245-04-09 15:22 G | 24455677.98 | 24455678.14 | 24455678.31 | 0.0279 | 0.0197 |
| Jupiter | 62245-11-24 22:34 G | 24455907.32 | 24455907.44 | 24455907.55 | 0.0494 | 0.0425 |
| Uranus | 62246-12-07 05:46 G | 24456284.57 | 24456284.74 | 24456284.92 | 0.0138 | 0.0102 |
| Uranus | 62247-12-11 16:05 G | 24456653.96 | 24456654.17 | 24456654.40 | 0.0138 | 0.0062 |
| Uranus | 62248-12-15 11:02 G | 24457023.70 | 24457023.96 | 24457024.22 | 0.0138 | 0.0004 |
| Uranus | 62249-12-19 18:43 G | 24457393.05 | 24457393.28 | 24457393.51 | 0.0137 | 0.0050 |
| Uranus | 62250-12-24 12:29 G | 24457762.85 | 24457763.02 | 24457763.20 | 0.0137 | 0.0100 |
| Jupiter | 62251-05-18 18:43 G | 24457908.04 | 24457908.28 | 24457908.52 | 0.0536 | 0.0067 |
| Saturn | 62259-10-17 00:14 G | 24460981.26 | 24460981.51 | 24460981.76 | 0.0280 | 0.0018 |
| Jupiter | 62263-05-23 18:58 G | 24462296.16 | 24462296.29 | 24462296.43 | 0.0535 | 0.0426 |
| Saturn | 62275-04-16 23:46 G | 24466642.28 | 24466642.49 | 24466642.72 | 0.0279 | 0.0126 |
| Saturn | 62288-10-09 19:55 G | 24471567.27 | 24471567.33 | 24471567.41 | 0.0281 | 0.0269 |
| Uranus | 62290-06-02 10:19 G | 24472167.85 | 24472167.93 | 24472168.02 | 0.0140 | 0.0132 |
| Uranus | 62291-06-07 05:02 G | 24472537.52 | 24472537.71 | 24472537.92 | 0.0140 | 0.0082 |
| Mars | 62292-03-11 13:55 G | 24472815.97 | 24472816.08 | 24472816.19 | 0.1619 | 0.1322 |
| Uranus | 62292-06-10 21:22 G | 24472907.14 | 24472907.39 | 24472907.66 | 0.0140 | 0.0029 |
| Uranus | 62293-06-15 16:05 G | 24473276.94 | 24473277.17 | 24473277.42 | 0.0141 | 0.0039 |
| Uranus | 62294-06-20 11:46 G | 24473646.79 | 24473646.99 | 24473647.22 | 0.0141 | 0.0082 |
| Saturn | 62304-04-12 00:00 G | 24477229.29 | 24477229.50 | 24477229.71 | 0.0279 | 0.0131 |
| Jupiter | 62304-11-16 04:19 G | 24477447.50 | 24477447.68 | 24477447.88 | 0.0491 | 0.0281 |
| Neptune | 62311-11-21 12:29 G | 24480008.87 | 24480009.02 | 24480009.19 | 0.0088 | 0.0068 |
| Neptune | 62312-11-22 21:36 G | 24480376.16 | 24480376.40 | 24480376.64 | 0.0088 | 0.0040 |
| Neptune | 62313-11-25 13:26 G | 24480743.81 | 24480744.06 | 24480744.31 | 0.0088 | 0.0006 |

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| Neptune | 62314-11-27 18:29 G | 24481111.03 | 24481111.27 | 24481111.54 | 0.0088 | 0.0021 |
| Neptune | 62315-11-30 13:12 G | 24481478.85 | 24481479.05 | 24481479.26 | 0.0088 | 0.0054 |
| Jupiter | 62316-11-20 17:31 G | 24481835.00 | 24481835.23 | 24481835.46 | 0.0491 | 0.0062 |
| Neptune | 62316-12-01 17:02 G | 24481846.13 | 24481846.21 | 24481846.35 | 0.0088 | 0.0080 |
| Saturn | 62318-10-19 02:10 G | 24482532.35 | 24482532.59 | 24482532.84 | 0.0280 | 0.0079 |
| Jupiter | 62322-05-13 16:05 G | 24483835.02 | 24483835.17 | 24483835.33 | 0.0539 | 0.0404 |
| Pluto | 62327-10-24 09:50 G | 24485824.79 | 24485824.91 | 24485825.08 | 0.0079 | 0.0064 |
| Jupiter | 62328-11-24 20:53 G | 24486222.21 | 24486222.37 | 24486222.53 | 0.0493 | 0.0364 |
| Uranus | 62330-12-08 18:58 G | 24486966.15 | 24486966.29 | 24486966.47 | 0.0138 | 0.0110 |
| Uranus | 62331-12-13 06:29 G | 24487335.54 | 24487335.77 | 24487336.01 | 0.0138 | 0.0041 |
| Uranus | 62332-12-17 00:14 G | 24487705.24 | 24487705.51 | 24487705.77 | 0.0138 | 0.0002 |
| Uranus | 62333-12-21 08:10 G | 24488074.63 | 24488074.84 | 24488075.07 | 0.0137 | 0.0060 |
| Saturn | 62334-04-19 05:31 G | 24488193.56 | 24488193.73 | 24488193.91 | 0.0279 | 0.0189 |
| Jupiter | 62334-05-18 19:55 G | 24488223.11 | 24488223.33 | 24488223.56 | 0.0537 | 0.0008 |
| Uranus | 62334-12-26 01:12 G | 24488444.41 | 24488444.55 | 24488444.71 | 0.0137 | 0.0111 |
| Jupiter | 62346-05-24 07:26 G | 24492611.65 | 24492611.81 | 24492611.99 | 0.0535 | 0.0370 |
| Saturn | 62347-10-13 06:14 G | 24493118.60 | 24493118.76 | 24493118.93 | 0.0281 | 0.0207 |
| Saturn | 62363-04-14 01:55 G | 24498780.35 | 24498780.58 | 24498780.83 | 0.0279 | 0.0073 |
| Mars | 62371-03-15 21:50 G | 24501673.23 | 24501673.41 | 24501673.59 | 0.1618 | 0.0591 |
| Uranus | 62374-06-03 19:55 G | 24502849.29 | 24502849.33 | 24502849.41 | 0.0139 | 0.0136 |
| Uranus | 62375-06-08 16:19 G | 24503218.98 | 24503219.18 | 24503219.39 | 0.0140 | 0.0075 |
| Uranus | 62376-06-12 07:41 G | 24503588.56 | 24503588.82 | 24503589.09 | 0.0140 | 0.0017 |
| Uranus | 62377-06-17 03:36 G | 24503958.42 | 24503958.65 | 24503958.89 | 0.0141 | 0.0032 |
| Saturn | 62377-10-20 02:53 G | 24504083.42 | 24504083.62 | 24504083.84 | 0.0280 | 0.0137 |
| Uranus | 62378-06-21 22:19 G | 24504328.26 | 24504328.43 | 24504328.62 | 0.0141 | 0.0101 |
| Jupiter | 62387-11-16 18:14 G | 24507763.08 | 24507763.26 | 24507763.43 | 0.0490 | 0.0316 |
| Saturn | 62393-04-20 13:12 G | 24509744.96 | 24509745.05 | 24509745.17 | 0.0279 | 0.0249 |
| Neptune | 62393-05-20 13:26 G | 24509774.87 | 24509775.06 | 24509775.26 | 0.0089 | 0.0055 |
| Neptune | 62394-05-22 21:50 G | 24510142.17 | 24510142.41 | 24510142.66 | 0.0089 | 0.0029 |
| Neptune | 62395-05-25 15:22 G | 24510509.89 | 24510510.14 | 24510510.39 | 0.0089 | 0.0007 |

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| Neptune | 62396-05-26 20:10 G | 24510877.11 | 24510877.34 | 24510877.59 | 0.0089 | 0.0032 |
| Neptune | 62397-05-29 14:53 G | 24511244.97 | 24511245.12 | 24511245.31 | 0.0089 | 0.0067 |
| Jupiter | 62399-11-20 20:24 G | 24512150.11 | 24512150.35 | 24512150.59 | 0.0491 | 0.0026 |
| Jupiter | 62405-05-12 20:53 G | 24514150.26 | 24514150.37 | 24514150.49 | 0.0539 | 0.0454 |
| Saturn | 62406-10-14 10:19 G | 24514669.73 | 24514669.93 | 24514670.15 | 0.0281 | 0.0151 |
| Jupiter | 62411-11-25 09:36 G | 24516537.73 | 24516537.90 | 24516538.07 | 0.0493 | 0.0327 |
| Uranus | 62414-12-09 07:12 G | 24517647.61 | 24517647.80 | 24517648.01 | 0.0139 | 0.0089 |
| Uranus | 62415-12-13 19:55 G | 24518017.10 | 24518017.33 | 24518017.56 | 0.0138 | 0.0049 |
| Uranus | 62416-12-17 12:43 G | 24518386.78 | 24518387.03 | 24518387.30 | 0.0138 | 0.0017 |
| Jupiter | 62417-05-18 05:31 G | 24518538.50 | 24518538.73 | 24518538.96 | 0.0537 | 0.0064 |
| Uranus | 62417-12-21 22:05 G | 24518756.22 | 24518756.42 | 24518756.66 | 0.0137 | 0.0063 |
| Uranus | 62418-12-26 14:38 G | 24519125.97 | 24519126.11 | 24519126.26 | 0.0137 | 0.0113 |
| Saturn | 62422-04-14 23:17 G | 24520331.22 | 24520331.47 | 24520331.73 | 0.0279 | 0.0016 |
| Jupiter | 62429-05-23 01:12 G | 24522926.36 | 24522926.55 | 24522926.75 | 0.0535 | 0.0296 |
| Saturn | 62436-10-21 07:55 G | 24525634.66 | 24525634.83 | 24525635.01 | 0.0280 | 0.0192 |
| Saturn | 62451-04-09 22:34 G | 24530918.40 | 24530918.44 | 24530918.51 | 0.0277 | 0.0270 |
| Uranus | 62458-06-04 08:53 G | 24533530.74 | 24533530.87 | 24533531.01 | 0.0139 | 0.0119 |
| Uranus | 62459-06-09 05:46 G | 24533900.53 | 24533900.74 | 24533900.96 | 0.0140 | 0.0071 |
| Uranus | 62460-06-12 19:26 G | 24534270.06 | 24534270.31 | 24534270.58 | 0.0140 | 0.0016 |
| Uranus | 62461-06-17 16:19 G | 24534639.96 | 24534640.18 | 24534640.42 | 0.0141 | 0.0050 |
| Uranus | 62462-06-22 09:36 G | 24535009.72 | 24535009.90 | 24535010.11 | 0.0141 | 0.0093 |
| Saturn | 62465-10-15 07:12 G | 24536220.56 | 24536220.80 | 24536221.04 | 0.0281 | 0.0094 |
| Jupiter | 62470-11-15 22:34 G | 24538078.27 | 24538078.44 | 24538078.62 | 0.0490 | 0.0342 |
| Neptune | 62475-11-20 14:24 G | 24539909.00 | 24539909.10 | 24539909.23 | 0.0088 | 0.0079 |
| Neptune | 62476-11-22 07:26 G | 24540276.64 | 24540276.81 | 24540277.01 | 0.0088 | 0.0059 |
| Neptune | 62477-11-24 12:29 G | 24540643.78 | 24540644.02 | 24540644.29 | 0.0088 | 0.0020 |
| Neptune | 62478-11-27 07:12 G | 24541011.54 | 24541011.80 | 24541012.06 | 0.0088 | 0.0001 |
| Neptune | 62479-11-29 12:00 G | 24541378.78 | 24541379.00 | 24541379.23 | 0.0088 | 0.0040 |
| Neptune | 62480-12-01 04:48 G | 24541746.52 | 24541746.70 | 24541746.90 | 0.0088 | 0.0061 |
| Saturn | 62481-04-15 22:48 G | 24541882.21 | 24541882.45 | 24541882.69 | 0.0279 | 0.0041 |

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| Jupiter | 62482-11-20 10:19 G | 24542465.70 | 24542465.93 | 24542466.15 | 0.0491 | 0.0010 |
| Pluto | 62488-04-23 04:48 G | 24544446.46 | 24544446.70 | 24544446.96 | 0.0065 | 0.0008 |
| Jupiter | 62488-05-12 04:19 G | 24544465.62 | 24544465.68 | 24544465.75 | 0.0539 | 0.0516 |
| Jupiter | 62494-11-24 17:46 G | 24546853.04 | 24546853.24 | 24546853.44 | 0.0492 | 0.0282 |
| Saturn | 62495-10-23 10:48 G | 24547185.83 | 24547185.95 | 24547186.07 | 0.0280 | 0.0244 |
| Uranus | 62498-12-09 19:55 G | 24548329.16 | 24548329.33 | 24548329.54 | 0.0139 | 0.0097 |
| Uranus | 62499-12-14 09:36 G | 24548698.66 | 24548698.90 | 24548699.14 | 0.0138 | 0.0028 |
| Jupiter | 62500-05-17 23:31 G | 24548853.26 | 24548853.48 | 24548853.71 | 0.0538 | 0.0138 |
| Uranus | 62500-12-19 01:12 G | 24549068.29 | 24549068.55 | 24549068.82 | 0.0138 | 0.0013 |
| Uranus | 62501-12-23 11:31 G | 24549437.78 | 24549437.98 | 24549438.19 | 0.0137 | 0.0073 |
| Uranus | 62502-12-28 02:24 G | 24549807.50 | 24549807.60 | 24549807.74 | 0.0137 | 0.0122 |
| Saturn | 62510-04-12 03:07 G | 24552469.48 | 24552469.63 | 24552469.80 | 0.0277 | 0.0210 |
| Jupiter | 62512-05-23 13:12 G | 24553241.86 | 24553242.05 | 24553242.26 | 0.0537 | 0.0247 |
| Saturn | 62524-10-17 04:05 G | 24557771.43 | 24557771.67 | 24557771.92 | 0.0281 | 0.0042 |
| Saturn | 62540-04-18 03:22 G | 24563433.42 | 24563433.64 | 24563433.86 | 0.0278 | 0.0096 |
| Uranus | 62542-06-05 19:41 G | 24564212.22 | 24564212.32 | 24564212.45 | 0.0139 | 0.0125 |
| Uranus | 62543-06-10 17:46 G | 24564582.02 | 24564582.24 | 24564582.46 | 0.0140 | 0.0062 |
| Uranus | 62544-06-14 06:43 G | 24564951.52 | 24564951.78 | 24564952.05 | 0.0140 | 0.0007 |
| Uranus | 62545-06-19 04:48 G | 24565321.47 | 24565321.70 | 24565321.94 | 0.0141 | 0.0044 |
| Uranus | 62546-06-23 20:53 G | 24565691.24 | 24565691.37 | 24565691.55 | 0.0141 | 0.0113 |
| Jupiter | 62553-11-16 11:17 G | 24568393.83 | 24568393.97 | 24568394.12 | 0.0489 | 0.0370 |
| Neptune | 62557-05-20 13:55 G | 24569674.96 | 24569675.08 | 24569675.23 | 0.0089 | 0.0076 |
| Neptune | 62558-05-23 07:55 G | 24570042.62 | 24570042.83 | 24570043.07 | 0.0089 | 0.0040 |
| Neptune | 62559-05-25 13:12 G | 24570409.80 | 24570410.05 | 24570410.31 | 0.0089 | 0.0016 |
| Neptune | 62560-05-27 07:55 G | 24570777.58 | 24570777.83 | 24570778.09 | 0.0089 | 0.0021 |
| Neptune | 62561-05-29 13:55 G | 24571144.86 | 24571145.08 | 24571145.30 | 0.0089 | 0.0044 |
| Neptune | 62562-06-01 05:46 G | 24571512.66 | 24571512.74 | 24571512.85 | 0.0089 | 0.0082 |
| Jupiter | 62565-11-20 20:10 G | 24572781.09 | 24572781.34 | 24572781.58 | 0.0490 | 0.0038 |
| Saturn | 62569-04-13 01:41 G | 24574020.37 | 24574020.57 | 24574020.79 | 0.0277 | 0.0152 |
| Mars | 62576-03-14 21:22 G | 24576548.22 | 24576548.39 | 24576548.56 | 0.1620 | 0.0462 |

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| Jupiter | 62577-11-25 00:29 G | 24577168.32 | 24577168.52 | 24577168.72 | 0.0492 | 0.0242 |
| Uranus | 62582-12-11 07:26 G | 24579010.61 | 24579010.81 | 24579011.04 | 0.0139 | 0.0078 |
| Jupiter | 62583-05-18 15:50 G | 24579168.94 | 24579169.16 | 24579169.37 | 0.0538 | 0.0184 |
| Saturn | 62583-10-19 06:14 G | 24579322.52 | 24579322.76 | 24579323.00 | 0.0281 | 0.0013 |
| Uranus | 62583-12-15 22:19 G | 24579380.20 | 24579380.43 | 24579380.67 | 0.0138 | 0.0037 |
| Uranus | 62584-12-19 13:26 G | 24579749.81 | 24579750.06 | 24579750.32 | 0.0138 | 0.0029 |
| Uranus | 62585-12-24 01:12 G | 24580119.35 | 24580119.55 | 24580119.76 | 0.0138 | 0.0073 |
| Uranus | 62586-12-28 15:50 G | 24580489.06 | 24580489.16 | 24580489.26 | 0.0137 | 0.0126 |
| Jupiter | 62595-05-23 15:07 G | 24583556.91 | 24583557.13 | 24583557.36 | 0.0536 | 0.0195 |
| Saturn | 62599-04-20 08:38 G | 24584984.67 | 24584984.86 | 24584985.08 | 0.0278 | 0.0153 |
| Saturn | 62612-10-13 16:34 G | 24589909.12 | 24589909.19 | 24589909.29 | 0.0282 | 0.0264 |
| Uranus | 62626-06-07 09:36 G | 24594893.74 | 24594893.90 | 24594894.08 | 0.0139 | 0.0106 |
| Uranus | 62627-06-12 07:55 G | 24595263.61 | 24595263.83 | 24595264.06 | 0.0140 | 0.0061 |
| Saturn | 62628-04-15 01:12 G | 24595571.33 | 24595571.55 | 24595571.79 | 0.0277 | 0.0095 |
| Uranus | 62628-06-15 19:55 G | 24595633.07 | 24595633.33 | 24595633.59 | 0.0140 | 0.0003 |
| Uranus | 62629-06-20 18:29 G | 24596003.06 | 24596003.27 | 24596003.50 | 0.0141 | 0.0061 |
| Uranus | 62630-06-25 09:36 G | 24596372.75 | 24596372.90 | 24596373.10 | 0.0141 | 0.0105 |
| Jupiter | 62636-11-16 20:53 G | 24598709.24 | 24598709.37 | 24598709.51 | 0.0489 | 0.0400 |
| Neptune | 62640-11-23 06:00 G | 24600176.62 | 24600176.75 | 24600176.91 | 0.0088 | 0.0072 |
| Neptune | 62641-11-26 00:14 G | 24600544.30 | 24600544.51 | 24600544.76 | 0.0088 | 0.0042 |
| Saturn | 62642-10-21 11:02 G | 24600873.72 | 24600873.96 | 24600874.19 | 0.0281 | 0.0067 |
| Neptune | 62642-11-28 05:46 G | 24600911.50 | 24600911.74 | 24600912.00 | 0.0088 | 0.0011 |
| Neptune | 62643-11-30 21:22 G | 24601279.13 | 24601279.39 | 24601279.66 | 0.0088 | 0.0018 |
| Neptune | 62644-12-02 06:29 G | 24601646.58 | 24601646.77 | 24601646.99 | 0.0088 | 0.0050 |
| Neptune | 62645-12-04 17:46 G | 24602014.13 | 24602014.24 | 24602014.37 | 0.0088 | 0.0078 |
| Jupiter | 62648-11-21 02:10 G | 24603096.37 | 24603096.59 | 24603096.82 | 0.0490 | 0.0077 |
| Mars | 62655-03-18 19:55 G | 24605405.23 | 24605405.33 | 24605405.44 | 0.1619 | 0.1321 |
| Saturn | 62658-04-22 09:50 G | 24606535.75 | 24606535.91 | 24606536.08 | 0.0278 | 0.0206 |
| Jupiter | 62660-11-25 17:02 G | 24607483.99 | 24607484.21 | 24607484.43 | 0.0492 | 0.0198 |
| Uranus | 62665-12-08 06:58 G | 24609322.72 | 24609322.79 | 24609322.89 | 0.0139 | 0.0130 |

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| Jupiter | 62666-05-18 12:58 G | 24609483.83 | 24609484.04 | 24609484.25 | 0.0538 | 0.0249 |
| Uranus | 62666-12-12 20:53 G | 24609692.17 | 24609692.37 | 24609692.59 | 0.0139 | 0.0085 |
| Uranus | 62667-12-17 12:43 G | 24610061.79 | 24610062.03 | 24610062.28 | 0.0138 | 0.0017 |
| Uranus | 62668-12-21 02:10 G | 24610431.34 | 24610431.59 | 24610431.86 | 0.0138 | 0.0023 |
| Uranus | 62669-12-25 14:38 G | 24610800.93 | 24610801.11 | 24610801.31 | 0.0138 | 0.0085 |
| Uranus | 62670-12-30 04:05 G | 24611170.61 | 24611170.67 | 24611170.75 | 0.0137 | 0.0132 |
| Saturn | 62671-10-15 12:29 G | 24611459.86 | 24611460.02 | 24611460.19 | 0.0282 | 0.0210 |
| Jupiter | 62672-11-29 18:14 G | 24611871.23 | 24611871.26 | 24611871.31 | 0.0493 | 0.0485 |
| Jupiter | 62678-05-23 15:36 G | 24613871.94 | 24613872.15 | 24613872.37 | 0.0537 | 0.0125 |
| Saturn | 62687-04-17 07:55 G | 24617122.60 | 24617122.83 | 24617123.07 | 0.0277 | 0.0037 |
| Saturn | 62701-10-23 13:26 G | 24622424.84 | 24622425.06 | 24622425.30 | 0.0281 | 0.0125 |
| Uranus | 62710-06-08 21:50 G | 24625575.26 | 24625575.41 | 24625575.56 | 0.0139 | 0.0114 |
| Uranus | 62711-06-13 20:24 G | 24625945.12 | 24625945.35 | 24625945.59 | 0.0140 | 0.0050 |
| Uranus | 62712-06-17 07:55 G | 24626314.58 | 24626314.83 | 24626315.10 | 0.0140 | 0.0005 |
| Uranus | 62713-06-22 07:55 G | 24626684.60 | 24626684.83 | 24626685.06 | 0.0140 | 0.0056 |
| Uranus | 62714-06-26 22:34 G | 24627054.32 | 24627054.44 | 24627054.56 | 0.0141 | 0.0123 |
| Saturn | 62717-04-24 10:19 G | 24628086.86 | 24628086.93 | 24628087.02 | 0.0279 | 0.0263 |
| Jupiter | 62719-11-18 03:07 G | 24629024.54 | 24629024.63 | 24629024.74 | 0.0489 | 0.0435 |
| Neptune | 62722-05-24 06:29 G | 24629942.57 | 24629942.77 | 24629942.97 | 0.0089 | 0.0057 |
| Neptune | 62723-05-27 00:14 G | 24630310.29 | 24630310.51 | 24630310.78 | 0.0089 | 0.0034 |
| Neptune | 62724-05-28 07:41 G | 24630677.57 | 24630677.82 | 24630678.07 | 0.0089 | 0.0005 |
| Neptune | 62725-05-30 22:19 G | 24631045.19 | 24631045.43 | 24631045.69 | 0.0089 | 0.0028 |
| Neptune | 62726-06-02 08:53 G | 24631412.73 | 24631412.87 | 24631413.07 | 0.0089 | 0.0066 |
| Neptune | 62727-06-04 18:58 G | 24631780.27 | 24631780.29 | 24631780.34 | 0.0089 | 0.0088 |
| Saturn | 62730-10-17 15:22 G | 24633010.95 | 24633011.14 | 24633011.36 | 0.0282 | 0.0151 |
| Jupiter | 62731-11-22 17:46 G | 24633412.01 | 24633412.24 | 24633412.48 | 0.0490 | 0.0113 |
| Pluto | 62736-04-27 08:38 G | 24635029.64 | 24635029.86 | 24635030.12 | 0.0065 | 0.0027 |
| Jupiter | 62743-11-26 18:29 G | 24637799.04 | 24637799.27 | 24637799.49 | 0.0491 | 0.0155 |
| Saturn | 62746-04-19 17:46 G | 24638674.00 | 24638674.24 | 24638674.47 | 0.0278 | 0.0026 |
| Jupiter | 62749-05-18 14:24 G | 24639798.93 | 24639799.10 | 24639799.28 | 0.0539 | 0.0332 |

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| Uranus | 62749-12-09 20:10 G | 24640004.27 | 24640004.34 | 24640004.42 | 0.0139 | 0.0132 |
| Uranus | 62750-12-14 09:07 G | 24640373.65 | 24640373.88 | 24640374.11 | 0.0139 | 0.0067 |
| Uranus | 62751-12-19 02:10 G | 24640743.35 | 24640743.59 | 24640743.83 | 0.0138 | 0.0026 |
| Uranus | 62752-12-22 14:53 G | 24641112.88 | 24641113.12 | 24641113.38 | 0.0138 | 0.0041 |
| Uranus | 62753-12-27 05:02 G | 24641482.52 | 24641482.71 | 24641482.91 | 0.0138 | 0.0083 |
| Jupiter | 62755-12-01 07:55 G | 24642186.73 | 24642186.83 | 24642186.93 | 0.0492 | 0.0442 |
| Saturn | 62760-10-24 14:10 G | 24643975.90 | 24643976.09 | 24643976.27 | 0.0281 | 0.0191 |
| Jupiter | 62761-05-23 23:17 G | 24644187.23 | 24644187.47 | 24644187.71 | 0.0538 | 0.0074 |
| Jupiter | 62773-05-28 22:48 G | 24648575.43 | 24648575.45 | 24648575.47 | 0.0536 | 0.0533 |
| Saturn | 62775-04-14 01:55 G | 24649260.47 | 24649260.58 | 24649260.73 | 0.0277 | 0.0234 |
| Mars | 62789-09-18 06:00 G | 24654531.73 | 24654531.75 | 24654531.79 | 0.1903 | 0.1873 |
| Saturn | 62789-10-19 01:26 G | 24654562.33 | 24654562.56 | 24654562.79 | 0.0282 | 0.0084 |
| Uranus | 62794-06-09 11:17 G | 24656256.80 | 24656256.97 | 24656257.17 | 0.0139 | 0.0094 |
| Uranus | 62795-06-14 10:48 G | 24656626.72 | 24656626.95 | 24656627.19 | 0.0140 | 0.0050 |
| Uranus | 62796-06-17 21:36 G | 24656996.14 | 24656996.40 | 24656996.66 | 0.0140 | 0.0010 |
| Uranus | 62797-06-22 21:50 G | 24657366.20 | 24657366.41 | 24657366.63 | 0.0140 | 0.0071 |
| Uranus | 62798-06-27 11:02 G | 24657735.83 | 24657735.96 | 24657736.13 | 0.0141 | 0.0116 |
| Jupiter | 62802-11-17 18:00 G | 24659340.17 | 24659340.25 | 24659340.32 | 0.0488 | 0.0461 |
| Neptune | 62804-11-23 17:31 G | 24660077.16 | 24660077.23 | 24660077.35 | 0.0088 | 0.0083 |
| Saturn | 62805-04-21 02:10 G | 24660225.36 | 24660225.59 | 24660225.83 | 0.0278 | 0.0093 |
| Neptune | 62805-11-25 23:46 G | 24660444.34 | 24660444.49 | 24660444.70 | 0.0088 | 0.0062 |
| Neptune | 62806-11-28 15:22 G | 24660811.88 | 24660812.14 | 24660812.39 | 0.0088 | 0.0023 |
| Neptune | 62807-12-01 01:55 G | 24661179.33 | 24661179.58 | 24661179.83 | 0.0088 | 0.0002 |
| Neptune | 62808-12-02 11:17 G | 24661546.74 | 24661546.97 | 24661547.22 | 0.0088 | 0.0036 |
| Neptune | 62809-12-05 01:55 G | 24661914.41 | 24661914.58 | 24661914.80 | 0.0088 | 0.0058 |
| Jupiter | 62814-11-21 15:36 G | 24663726.92 | 24663727.15 | 24663727.37 | 0.0489 | 0.0167 |
| Saturn | 62819-10-26 19:26 G | 24665527.24 | 24665527.31 | 24665527.40 | 0.0281 | 0.0263 |
| Pluto | 62824-10-30 08:38 G | 24667357.62 | 24667357.86 | 24667358.10 | 0.0078 | 0.0029 |
| Jupiter | 62826-11-26 06:29 G | 24668114.55 | 24668114.77 | 24668115.00 | 0.0490 | 0.0104 |
| Jupiter | 62832-05-17 18:58 G | 24670114.13 | 24670114.29 | 24670114.45 | 0.0539 | 0.0399 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 62833-12-10 11:02 G | 24670685.85 | 24670685.96 | 24670686.10 | 0.0139 | 0.0119 |
| Saturn | 62834-04-15 09:07 G | 24670811.70 | 24670811.88 | 24670812.08 | 0.0277 | 0.0168 |
| Uranus | 62834-12-14 23:17 G | 24671055.25 | 24671055.47 | 24671055.69 | 0.0139 | 0.0072 |
| Uranus | 62835-12-19 17:17 G | 24671424.97 | 24671425.22 | 24671425.46 | 0.0138 | 0.0005 |
| Uranus | 62836-12-23 04:48 G | 24671794.45 | 24671794.70 | 24671794.96 | 0.0138 | 0.0034 |
| Uranus | 62837-12-27 19:12 G | 24672164.15 | 24672164.30 | 24672164.50 | 0.0138 | 0.0098 |
| Jupiter | 62838-11-30 09:22 G | 24672501.75 | 24672501.89 | 24672502.03 | 0.0492 | 0.0399 |
| Jupiter | 62844-05-22 18:43 G | 24674502.06 | 24674502.28 | 24674502.51 | 0.0538 | 0.0006 |
| Saturn | 62848-10-20 11:17 G | 24676113.72 | 24676113.97 | 24676114.22 | 0.0281 | 0.0013 |
| Jupiter | 62856-05-28 00:29 G | 24678890.39 | 24678890.52 | 24678890.65 | 0.0537 | 0.0446 |
| Mars | 62860-03-18 14:38 G | 24680280.94 | 24680281.11 | 24680281.28 | 0.1622 | 0.0578 |
| Saturn | 62864-04-22 07:26 G | 24681776.60 | 24681776.81 | 24681777.02 | 0.0278 | 0.0160 |
| Saturn | 62877-10-14 17:17 G | 24686700.18 | 24686700.22 | 24686700.28 | 0.0282 | 0.0276 |
| Uranus | 62878-06-10 00:00 G | 24686938.33 | 24686938.50 | 24686938.68 | 0.0139 | 0.0101 |
| Uranus | 62879-06-14 23:17 G | 24687308.24 | 24687308.47 | 24687308.72 | 0.0140 | 0.0037 |
| Uranus | 62880-06-18 10:05 G | 24687677.66 | 24687677.92 | 24687678.17 | 0.0140 | 0.0015 |
| Uranus | 62881-06-23 10:34 G | 24688047.74 | 24688047.94 | 24688048.18 | 0.0140 | 0.0069 |
| Uranus | 62882-06-27 23:46 G | 24688417.42 | 24688417.49 | 24688417.57 | 0.0141 | 0.0134 |
| Neptune | 62886-05-23 16:19 G | 24689843.08 | 24689843.18 | 24689843.31 | 0.0089 | 0.0080 |
| Neptune | 62887-05-25 23:46 G | 24690210.30 | 24690210.49 | 24690210.72 | 0.0089 | 0.0045 |
| Neptune | 62888-05-27 13:12 G | 24690577.80 | 24690578.05 | 24690578.32 | 0.0089 | 0.0019 |
| Neptune | 62889-05-30 02:10 G | 24690945.35 | 24690945.59 | 24690945.84 | 0.0089 | 0.0016 |
| Neptune | 62890-06-01 10:48 G | 24691312.73 | 24691312.95 | 24691313.20 | 0.0089 | 0.0042 |
| Neptune | 62891-06-04 04:05 G | 24691680.56 | 24691680.67 | 24691680.80 | 0.0089 | 0.0077 |
| Saturn | 62893-04-16 23:02 G | 24692363.25 | 24692363.46 | 24692363.68 | 0.0277 | 0.0098 |
| Jupiter | 62897-11-21 04:34 G | 24694042.49 | 24694042.69 | 24694042.91 | 0.0489 | 0.0217 |
| Saturn | 62907-10-23 17:46 G | 24697664.99 | 24697665.24 | 24697665.49 | 0.0281 | 0.0062 |
| Jupiter | 62909-11-26 07:55 G | 24698429.59 | 24698429.83 | 24698430.07 | 0.0490 | 0.0060 |
| Jupiter | 62915-05-18 08:24 G | 24700428.78 | 24700428.85 | 24700428.93 | 0.0540 | 0.0505 |
| Uranus | 62917-12-11 22:48 G | 24701367.34 | 24701367.45 | 24701367.60 | 0.0139 | 0.0119 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 62918-12-16 10:34 G | 24701736.70 | 24701736.94 | 24701737.18 | 0.0139 | 0.0055 |
| Uranus | 62919-12-21 06:00 G | 24702106.50 | 24702106.75 | 24702106.99 | 0.0138 | 0.0014 |
| Uranus | 62920-12-24 16:34 G | 24702475.97 | 24702476.19 | 24702476.45 | 0.0138 | 0.0054 |
| Jupiter | 62921-11-30 18:43 G | 24702817.13 | 24702817.28 | 24702817.43 | 0.0491 | 0.0362 |
| Uranus | 62921-12-29 09:22 G | 24702845.72 | 24702845.89 | 24702846.08 | 0.0138 | 0.0094 |
| Saturn | 62923-04-25 13:26 G | 24703327.94 | 24703328.06 | 24703328.21 | 0.0279 | 0.0231 |
| Jupiter | 62927-05-23 18:43 G | 24704817.05 | 24704817.28 | 24704817.51 | 0.0539 | 0.0095 |
| Saturn | 62936-10-17 09:22 G | 24708251.73 | 24708251.89 | 24708252.07 | 0.0282 | 0.0197 |
| Jupiter | 62939-05-28 18:00 G | 24709205.09 | 24709205.25 | 24709205.42 | 0.0537 | 0.0374 |
| Saturn | 62952-04-19 12:29 G | 24713914.78 | 24713915.02 | 24713915.26 | 0.0278 | 0.0027 |
| Uranus | 62962-06-11 13:26 G | 24717619.86 | 24717620.06 | 24717620.27 | 0.0139 | 0.0080 |
| Uranus | 62963-06-16 13:12 G | 24717989.81 | 24717990.05 | 24717990.30 | 0.0140 | 0.0037 |
| Uranus | 62964-06-19 23:17 G | 24718359.22 | 24718359.47 | 24718359.73 | 0.0140 | 0.0024 |
| Uranus | 62965-06-25 00:14 G | 24718729.31 | 24718729.51 | 24718729.72 | 0.0140 | 0.0082 |
| Uranus | 62966-06-29 12:00 G | 24719098.92 | 24719099.00 | 24719099.13 | 0.0141 | 0.0128 |
| Saturn | 62966-10-25 02:10 G | 24719216.38 | 24719216.59 | 24719216.81 | 0.0281 | 0.0139 |
| Neptune | 62969-11-26 08:10 G | 24720344.71 | 24720344.84 | 24720344.99 | 0.0088 | 0.0074 |
| Neptune | 62970-11-28 19:55 G | 24720712.12 | 24720712.33 | 24720712.56 | 0.0088 | 0.0043 |
| Neptune | 62971-12-01 04:48 G | 24721079.44 | 24721079.70 | 24721079.96 | 0.0088 | 0.0016 |
| Neptune | 62972-12-02 21:22 G | 24721447.14 | 24721447.39 | 24721447.64 | 0.0088 | 0.0018 |
| Neptune | 62973-12-05 01:55 G | 24721814.37 | 24721814.58 | 24721814.82 | 0.0088 | 0.0045 |
| Neptune | 62974-12-07 20:10 G | 24722182.25 | 24722182.34 | 24722182.49 | 0.0088 | 0.0078 |
| Jupiter | 62980-11-21 04:48 G | 24724357.50 | 24724357.70 | 24724357.91 | 0.0489 | 0.0264 |
| Saturn | 62981-04-14 07:41 G | 24724501.75 | 24724501.82 | 24724501.92 | 0.0277 | 0.0260 |
| Pluto | 62984-04-29 15:07 G | 24725613.00 | 24725613.13 | 24725613.30 | 0.0065 | 0.0052 |
| Pluto | 62985-04-30 22:05 G | 24725979.27 | 24725979.42 | 24725979.64 | 0.0065 | 0.0046 |
| Jupiter | 62992-11-25 12:29 G | 24728744.80 | 24728745.02 | 24728745.25 | 0.0490 | 0.0011 |
| Saturn | 62995-10-20 02:53 G | 24729803.40 | 24729803.62 | 24729803.85 | 0.0282 | 0.0116 |

64TH MILLENNIUM CE

This is a list of transits of Moon in the 64th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------|---|-------------|-------------|-------------|--------|--------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Uranus | 63001-12-13 12:58 | G | 24732048.89 | 24732049.04 | 24732049.21 | 0.0139 | 0.0107 | |
| Uranus | 63002-12-17 23:46 | G | 24732418.26 | 24732418.49 | 24732418.73 | 0.0139 | 0.0059 | |
| Uranus | 63003-12-22 19:55 | G | 24732788.08 | 24732788.33 | 24732788.58 | 0.0138 | 0.0008 | |
| Jupiter | 63004-11-30 20:38 | G | 24733132.17 | 24733132.36 | 24733132.56 | 0.0491 | 0.0304 | |
| Uranus | 63004-12-26 05:46 | G | 24733157.50 | 24733157.74 | 24733158.00 | 0.0138 | 0.0046 | |
| Uranus | 63005-12-30 22:48 | G | 24733527.32 | 24733527.45 | 24733527.61 | 0.0138 | 0.0111 | |
| Jupiter | 63010-05-23 13:26 | G | 24735131.85 | 24735132.06 | 24735132.29 | 0.0539 | 0.0166 | |
| Saturn | 63011-04-22 20:38 | G | 24735466.11 | 24735466.36 | 24735466.61 | 0.0278 | 0.0043 | |
| Jupiter | 63022-05-29 00:58 | G | 24739520.36 | 24739520.54 | 24739520.73 | 0.0537 | 0.0308 | |
| Saturn | 63025-10-27 15:36 | G | 24740768.00 | 24740768.15 | 24740768.31 | 0.0281 | 0.0216 | |
| Saturn | 63040-04-16 18:43 | G | 24746053.12 | 24746053.28 | 24746053.45 | 0.0278 | 0.0192 | |
| Uranus | 63045-06-08 17:46 | G | 24747932.15 | 24747932.24 | 24747932.37 | 0.0139 | 0.0126 | |
| Uranus | 63046-06-13 02:24 | G | 24748301.42 | 24748301.60 | 24748301.81 | 0.0139 | 0.0088 | |
| Uranus | 63047-06-18 01:55 | G | 24748671.33 | 24748671.58 | 24748671.84 | 0.0139 | 0.0022 | |
| Uranus | 63048-06-21 11:46 | G | 24749040.75 | 24749040.99 | 24749041.25 | 0.0140 | 0.0028 | |
| Uranus | 63049-06-26 12:58 | G | 24749410.85 | 24749411.04 | 24749411.26 | 0.0140 | 0.0081 | |
| Neptune | 63051-05-27 06:14 | G | 24750110.58 | 24750110.76 | 24750110.97 | 0.0089 | 0.0059 | |
| Neptune | 63052-05-28 19:55 | G | 24750478.12 | 24750478.33 | 24750478.57 | 0.0089 | 0.0039 | |
| Neptune | 63053-05-31 03:36 | G | 24750845.38 | 24750845.65 | 24750845.91 | 0.0089 | 0.0002 | |
| Neptune | 63054-06-02 20:53 | G | 24751213.14 | 24751213.37 | 24751213.62 | 0.0089 | 0.0024 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 63054-10-22 16:19 G | 24751354.93 | 24751355.18 | 24751355.43 | 0.0282 | 0.0034 |
| Neptune | 63055-06-05 01:26 G | 24751580.40 | 24751580.56 | 24751580.76 | 0.0089 | 0.0064 |
| Neptune | 63056-06-06 20:24 G | 24751948.29 | 24751948.35 | 24751948.45 | 0.0089 | 0.0084 |
| Jupiter | 63063-11-22 10:05 G | 24754672.75 | 24754672.92 | 24754673.08 | 0.0488 | 0.0332 |
| Mars | 63065-03-19 10:48 G | 24755155.84 | 24755155.95 | 24755156.06 | 0.1625 | 0.1297 |
| Saturn | 63070-04-24 02:53 G | 24757017.39 | 24757017.62 | 24757017.85 | 0.0278 | 0.0112 |
| Pluto | 63072-11-02 13:55 G | 24757940.83 | 24757941.08 | 24757941.35 | 0.0079 | 0.0013 |
| Mars | 63073-09-18 18:43 G | 24758261.07 | 24758261.28 | 24758261.49 | 0.1899 | 0.0810 |
| Jupiter | 63075-11-26 17:31 G | 24759059.99 | 24759060.23 | 24759060.48 | 0.0489 | 0.0062 |
| Uranus | 63085-12-13 23:46 G | 24762730.34 | 24762730.49 | 24762730.67 | 0.0139 | 0.0105 |
| Uranus | 63086-12-18 10:05 G | 24763099.68 | 24763099.92 | 24763100.17 | 0.0139 | 0.0044 |
| Jupiter | 63087-11-30 22:48 G | 24763447.26 | 24763447.45 | 24763447.64 | 0.0491 | 0.0261 |
| Uranus | 63087-12-23 07:26 G | 24763469.56 | 24763469.81 | 24763470.06 | 0.0139 | 0.0002 |
| Uranus | 63088-12-26 16:34 G | 24763838.98 | 24763839.19 | 24763839.43 | 0.0138 | 0.0066 |
| Uranus | 63089-12-31 11:17 G | 24764208.82 | 24764208.97 | 24764209.14 | 0.0138 | 0.0105 |
| Jupiter | 63093-05-22 15:50 G | 24765446.96 | 24765447.16 | 24765447.36 | 0.0539 | 0.0253 |
| Saturn | 63099-04-19 06:58 G | 24767604.58 | 24767604.79 | 24767605.00 | 0.0278 | 0.0123 |
| Jupiter | 63105-05-28 13:26 G | 24769834.85 | 24769835.06 | 24769835.29 | 0.0538 | 0.0213 |
| Saturn | 63113-10-24 23:46 G | 24772906.24 | 24772906.49 | 24772906.75 | 0.0281 | 0.0047 |
| Saturn | 63129-04-26 11:02 G | 24778568.80 | 24778568.96 | 24778569.15 | 0.0278 | 0.0183 |
| Uranus | 63129-06-10 07:12 G | 24778613.75 | 24778613.80 | 24778613.88 | 0.0139 | 0.0134 |
| Uranus | 63130-06-14 16:19 G | 24778982.97 | 24778983.18 | 24778983.41 | 0.0139 | 0.0067 |
| Uranus | 63131-06-19 15:36 G | 24779352.91 | 24779353.15 | 24779353.41 | 0.0139 | 0.0026 |
| Uranus | 63132-06-23 01:26 G | 24779722.33 | 24779722.56 | 24779722.82 | 0.0140 | 0.0037 |
| Uranus | 63133-06-28 02:24 G | 24780092.42 | 24780092.60 | 24780092.80 | 0.0140 | 0.0094 |
| Neptune | 63133-11-27 15:22 G | 24780245.09 | 24780245.14 | 24780245.20 | 0.0088 | 0.0086 |
| Uranus | 63134-07-02 13:26 G | 24780462.05 | 24780462.06 | 24780462.11 | 0.0141 | 0.0140 |
| Neptune | 63134-11-29 22:48 G | 24780612.28 | 24780612.45 | 24780612.65 | 0.0088 | 0.0064 |
| Neptune | 63135-12-02 16:19 G | 24780979.94 | 24780980.18 | 24780980.43 | 0.0088 | 0.0025 |
| Neptune | 63136-12-03 20:53 G | 24781347.11 | 24781347.37 | 24781347.63 | 0.0088 | 0.0004 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 63137-12-06 15:22 G | 24781714.90 | 24781715.14 | 24781715.38 | 0.0088 | 0.0035 |
| Neptune | 63138-12-08 20:10 G | 24782082.16 | 24782082.34 | 24782082.55 | 0.0088 | 0.0056 |
| Saturn | 63142-10-19 05:46 G | 24783492.62 | 24783492.74 | 24783492.87 | 0.0282 | 0.0239 |
| Mars | 63144-03-22 17:46 G | 24784013.13 | 24784013.24 | 24784013.35 | 0.1624 | 0.1353 |
| Jupiter | 63146-11-22 16:34 G | 24784988.04 | 24784988.19 | 24784988.34 | 0.0488 | 0.0387 |
| Saturn | 63158-04-21 15:07 G | 24789155.89 | 24789156.13 | 24789156.38 | 0.0278 | 0.0056 |
| Jupiter | 63158-11-26 19:55 G | 24789375.11 | 24789375.33 | 24789375.56 | 0.0489 | 0.0116 |
| Uranus | 63169-12-15 12:58 G | 24793411.87 | 24793412.04 | 24793412.23 | 0.0139 | 0.0097 |
| Jupiter | 63170-12-01 07:41 G | 24793762.60 | 24793762.82 | 24793763.04 | 0.0490 | 0.0202 |
| Uranus | 63170-12-19 22:48 G | 24793781.22 | 24793781.45 | 24793781.70 | 0.0139 | 0.0048 |
| Uranus | 63171-12-24 20:38 G | 24794151.12 | 24794151.36 | 24794151.61 | 0.0139 | 0.0018 |
| Saturn | 63172-10-26 08:10 G | 24794457.63 | 24794457.84 | 24794458.07 | 0.0281 | 0.0122 |
| Uranus | 63172-12-28 05:17 G | 24794520.49 | 24794520.72 | 24794520.96 | 0.0138 | 0.0056 |
| Uranus | 63174-01-02 00:14 G | 24794890.41 | 24794890.51 | 24794890.64 | 0.0138 | 0.0122 |
| Jupiter | 63176-05-22 09:07 G | 24795761.69 | 24795761.88 | 24795762.06 | 0.0540 | 0.0330 |
| Saturn | 63188-04-27 22:19 G | 24800120.33 | 24800120.43 | 24800120.54 | 0.0278 | 0.0247 |
| Jupiter | 63188-05-27 19:26 G | 24800150.10 | 24800150.31 | 24800150.52 | 0.0539 | 0.0158 |
| Saturn | 63201-10-20 15:22 G | 24805043.95 | 24805044.14 | 24805044.36 | 0.0282 | 0.0169 |
| Uranus | 63213-06-10 20:53 G | 24809295.23 | 24809295.37 | 24809295.53 | 0.0139 | 0.0113 |
| Uranus | 63214-06-15 06:00 G | 24809664.55 | 24809664.75 | 24809664.97 | 0.0139 | 0.0076 |
| Neptune | 63215-05-27 12:58 G | 24810010.96 | 24810011.04 | 24810011.16 | 0.0089 | 0.0081 |
| Uranus | 63215-06-20 04:48 G | 24810034.44 | 24810034.70 | 24810034.95 | 0.0139 | 0.0009 |
| Neptune | 63216-05-28 19:26 G | 24810378.12 | 24810378.31 | 24810378.55 | 0.0089 | 0.0051 |
| Uranus | 63216-06-23 14:24 G | 24810403.87 | 24810404.10 | 24810404.35 | 0.0140 | 0.0039 |
| Saturn | 63217-04-22 16:19 G | 24810706.93 | 24810707.18 | 24810707.43 | 0.0278 | 0.0002 |
| Neptune | 63217-05-31 14:10 G | 24810745.86 | 24810746.09 | 24810746.35 | 0.0089 | 0.0020 |
| Uranus | 63217-06-28 15:07 G | 24810773.95 | 24810774.13 | 24810774.33 | 0.0140 | 0.0094 |
| Neptune | 63218-06-02 18:58 G | 24811113.05 | 24811113.29 | 24811113.56 | 0.0089 | 0.0013 |
| Neptune | 63219-06-05 13:41 G | 24811480.84 | 24811481.07 | 24811481.31 | 0.0089 | 0.0040 |
| Neptune | 63220-06-06 20:10 G | 24811848.20 | 24811848.34 | 24811848.49 | 0.0089 | 0.0072 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 63229-11-21 17:02 G | 24815303.13 | 24815303.21 | 24815303.30 | 0.0487 | 0.0449 |
| Saturn | 63231-10-28 18:58 G | 24816009.12 | 24816009.29 | 24816009.47 | 0.0281 | 0.0190 |
| Pluto | 63233-05-04 06:43 G | 24816562.55 | 24816562.78 | 24816563.04 | 0.0065 | 0.0017 |
| Jupiter | 63241-11-26 07:12 G | 24819690.58 | 24819690.80 | 24819691.03 | 0.0488 | 0.0168 |
| Saturn | 63246-04-17 14:38 G | 24821294.00 | 24821294.11 | 24821294.21 | 0.0276 | 0.0246 |
| Jupiter | 63253-11-30 06:58 G | 24824077.57 | 24824077.79 | 24824078.01 | 0.0490 | 0.0158 |
| Uranus | 63253-12-16 00:14 G | 24824093.33 | 24824093.51 | 24824093.70 | 0.0139 | 0.0094 |
| Uranus | 63254-12-20 09:22 G | 24824462.65 | 24824462.89 | 24824463.15 | 0.0139 | 0.0035 |
| Uranus | 63255-12-25 07:55 G | 24824832.58 | 24824832.83 | 24824833.08 | 0.0139 | 0.0009 |
| Uranus | 63256-12-28 15:50 G | 24825201.96 | 24825202.16 | 24825202.39 | 0.0138 | 0.0076 |
| Uranus | 63258-01-02 11:46 G | 24825571.87 | 24825571.99 | 24825572.15 | 0.0138 | 0.0114 |
| Jupiter | 63259-05-22 18:00 G | 24826077.10 | 24826077.25 | 24826077.41 | 0.0540 | 0.0379 |
| Saturn | 63260-10-21 18:43 G | 24826595.05 | 24826595.28 | 24826595.53 | 0.0282 | 0.0101 |
| Jupiter | 63271-05-27 21:07 G | 24830465.14 | 24830465.38 | 24830465.62 | 0.0538 | 0.0087 |
| Saturn | 63276-04-23 16:48 G | 24832257.96 | 24832258.20 | 24832258.44 | 0.0278 | 0.0055 |
| Jupiter | 63283-06-01 20:38 G | 24834853.28 | 24834853.36 | 24834853.45 | 0.0537 | 0.0494 |
| Saturn | 63290-10-30 02:53 G | 24837560.51 | 24837560.62 | 24837560.73 | 0.0281 | 0.0252 |
| Uranus | 63297-06-11 09:07 G | 24839976.78 | 24839976.88 | 24839977.03 | 0.0139 | 0.0122 |
| Uranus | 63298-06-15 19:12 G | 24840346.09 | 24840346.30 | 24840346.54 | 0.0139 | 0.0055 |
| Neptune | 63298-11-29 11:02 G | 24840512.86 | 24840512.96 | 24840513.10 | 0.0088 | 0.0077 |
| Uranus | 63299-06-20 17:46 G | 24840715.98 | 24840716.24 | 24840716.50 | 0.0139 | 0.0014 |
| Neptune | 63299-12-01 15:22 G | 24840879.93 | 24840880.14 | 24840880.39 | 0.0088 | 0.0042 |
| Uranus | 63300-06-25 03:50 G | 24841085.44 | 24841085.66 | 24841085.91 | 0.0140 | 0.0049 |
| Neptune | 63300-12-04 09:50 G | 24841247.67 | 24841247.91 | 24841248.18 | 0.0088 | 0.0019 |
| Uranus | 63301-06-30 04:05 G | 24841455.51 | 24841455.67 | 24841455.86 | 0.0140 | 0.0104 |
| Neptune | 63301-12-06 16:05 G | 24841614.92 | 24841615.17 | 24841615.42 | 0.0088 | 0.0017 |
| Neptune | 63302-12-09 07:12 G | 24841982.59 | 24841982.80 | 24841983.06 | 0.0088 | 0.0042 |
| Neptune | 63303-12-11 17:31 G | 24842350.11 | 24842350.23 | 24842350.36 | 0.0088 | 0.0077 |
| Saturn | 63305-04-19 21:36 G | 24842845.23 | 24842845.40 | 24842845.58 | 0.0276 | 0.0188 |
| Saturn | 63319-10-24 19:12 G | 24848146.05 | 24848146.30 | 24848146.55 | 0.0282 | 0.0038 |

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| Pluto | 63320-11-05 03:36 G | 24848523.58 | 24848523.65 | 24848523.76 | 0.0079 | 0.0073 |
| Jupiter | 63324-11-26 08:24 G | 24850005.64 | 24850005.85 | 24850006.07 | 0.0488 | 0.0208 |
| Saturn | 63335-04-26 21:36 G | 24853809.19 | 24853809.40 | 24853809.63 | 0.0278 | 0.0108 |
| Jupiter | 63336-11-30 23:46 G | 24854393.27 | 24854393.49 | 24854393.72 | 0.0490 | 0.0132 |
| Uranus | 63336-12-12 12:58 G | 24854404.99 | 24854405.04 | 24854405.10 | 0.0140 | 0.0136 |
| Uranus | 63337-12-17 13:26 G | 24854774.87 | 24854775.06 | 24854775.27 | 0.0139 | 0.0087 |
| Uranus | 63338-12-21 22:48 G | 24855144.21 | 24855144.45 | 24855144.70 | 0.0139 | 0.0036 |
| Uranus | 63339-12-26 21:22 G | 24855514.15 | 24855514.39 | 24855514.64 | 0.0139 | 0.0028 |
| Uranus | 63340-12-30 04:48 G | 24855883.49 | 24855883.70 | 24855883.94 | 0.0138 | 0.0067 |
| Uranus | 63342-01-04 00:58 G | 24856253.49 | 24856253.54 | 24856253.64 | 0.0138 | 0.0132 |
| Jupiter | 63342-05-22 17:46 G | 24856392.11 | 24856392.24 | 24856392.38 | 0.0540 | 0.0451 |
| Jupiter | 63348-12-05 00:58 G | 24858780.49 | 24858780.54 | 24858780.61 | 0.0490 | 0.0474 |
| Mars | 63349-03-22 21:50 G | 24858888.24 | 24858888.41 | 24858888.59 | 0.1627 | 0.0315 |
| Jupiter | 63354-05-27 18:29 G | 24860780.04 | 24860780.27 | 24860780.49 | 0.0540 | 0.0015 |
| Saturn | 63364-04-20 22:05 G | 24864396.21 | 24864396.42 | 24864396.65 | 0.0276 | 0.0134 |
| Jupiter | 63366-06-02 07:41 G | 24865168.69 | 24865168.82 | 24865168.97 | 0.0538 | 0.0430 |
| Saturn | 63378-10-25 22:19 G | 24869697.19 | 24869697.43 | 24869697.67 | 0.0282 | 0.0020 |
| Neptune | 63380-05-29 08:24 G | 24870278.68 | 24870278.85 | 24870279.04 | 0.0089 | 0.0062 |
| Neptune | 63381-05-31 12:58 G | 24870645.84 | 24870646.04 | 24870646.29 | 0.0089 | 0.0042 |
| Uranus | 63381-06-12 22:34 G | 24870658.27 | 24870658.44 | 24870658.63 | 0.0139 | 0.0101 |
| Neptune | 63382-06-03 07:12 G | 24871013.54 | 24871013.80 | 24871014.07 | 0.0089 | 0.0002 |
| Uranus | 63382-06-17 08:53 G | 24871027.66 | 24871027.87 | 24871028.10 | 0.0139 | 0.0064 |
| Neptune | 63383-06-05 14:10 G | 24871380.85 | 24871381.09 | 24871381.34 | 0.0089 | 0.0020 |
| Uranus | 63383-06-22 06:14 G | 24871397.50 | 24871397.76 | 24871398.02 | 0.0139 | 0.0003 |
| Neptune | 63384-06-07 03:36 G | 24871748.48 | 24871748.65 | 24871748.87 | 0.0089 | 0.0060 |
| Uranus | 63384-06-25 16:34 G | 24871766.97 | 24871767.19 | 24871767.43 | 0.0140 | 0.0049 |
| Neptune | 63385-06-09 15:50 G | 24872116.07 | 24872116.16 | 24872116.27 | 0.0089 | 0.0081 |
| Uranus | 63385-06-30 16:34 G | 24872137.02 | 24872137.19 | 24872137.36 | 0.0140 | 0.0105 |
| Saturn | 63394-04-28 03:07 G | 24875360.45 | 24875360.63 | 24875360.84 | 0.0277 | 0.0158 |
| Saturn | 63407-10-21 10:34 G | 24880283.84 | 24880283.94 | 24880284.07 | 0.0283 | 0.0253 |

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| Jupiter | 63407-11-28 00:43 G | 24880321.33 | 24880321.53 | 24880321.73 | 0.0488 | 0.0242 |
| Jupiter | 63419-12-02 03:22 G | 24884708.41 | 24884708.64 | 24884708.89 | 0.0489 | 0.0102 |
| Uranus | 63420-12-14 00:15 G | 24885086.51 | 24885086.51 | 24885086.53 | 0.0140 | 0.0140 |
| Uranus | 63421-12-19 00:15 G | 24885456.32 | 24885456.51 | 24885456.73 | 0.0139 | 0.0081 |
| Uranus | 63422-12-23 09:36 G | 24885825.65 | 24885825.90 | 24885826.15 | 0.0139 | 0.0024 |
| Saturn | 63423-04-23 20:24 G | 24885947.11 | 24885947.35 | 24885947.58 | 0.0276 | 0.0083 |
| Uranus | 63423-12-28 08:10 G | 24886195.59 | 24886195.84 | 24886196.09 | 0.0139 | 0.0020 |
| Uranus | 63424-12-31 15:22 G | 24886564.96 | 24886565.14 | 24886565.35 | 0.0138 | 0.0087 |
| Jupiter | 63425-05-22 19:12 G | 24886707.24 | 24886707.30 | 24886707.36 | 0.0541 | 0.0516 |
| Uranus | 63426-01-05 12:00 G | 24886934.91 | 24886935.00 | 24886935.14 | 0.0138 | 0.0123 |
| Jupiter | 63431-12-06 12:43 G | 24889095.95 | 24889096.03 | 24889096.14 | 0.0490 | 0.0444 |
| Jupiter | 63437-05-28 08:39 G | 24891095.63 | 24891095.86 | 24891096.10 | 0.0540 | 0.0027 |
| Saturn | 63437-10-28 03:51 G | 24891248.43 | 24891248.66 | 24891248.90 | 0.0282 | 0.0078 |
| Jupiter | 63449-06-02 06:29 G | 24895483.60 | 24895483.77 | 24895483.94 | 0.0538 | 0.0367 |
| Saturn | 63453-04-30 03:51 G | 24896911.51 | 24896911.66 | 24896911.83 | 0.0277 | 0.0209 |
| Neptune | 63462-11-30 11:46 G | 24900412.95 | 24900412.99 | 24900413.04 | 0.0088 | 0.0086 |
| Neptune | 63463-12-03 05:17 G | 24900780.56 | 24900780.72 | 24900780.92 | 0.0088 | 0.0064 |
| Neptune | 63464-12-04 12:15 G | 24901147.78 | 24901148.01 | 24901148.26 | 0.0088 | 0.0028 |
| Uranus | 63465-06-14 09:51 G | 24901339.76 | 24901339.91 | 24901340.08 | 0.0139 | 0.0108 |
| Neptune | 63465-12-07 02:39 G | 24901515.34 | 24901515.61 | 24901515.88 | 0.0088 | 0.0004 |
| Uranus | 63466-06-18 21:07 G | 24901709.16 | 24901709.38 | 24901709.63 | 0.0139 | 0.0043 |
| Saturn | 63466-10-22 05:03 G | 24901834.54 | 24901834.71 | 24901834.90 | 0.0283 | 0.0198 |
| Neptune | 63466-12-09 12:58 G | 24901882.82 | 24901883.04 | 24901883.29 | 0.0088 | 0.0033 |
| Uranus | 63467-06-23 17:46 G | 24902078.98 | 24902079.24 | 24902079.50 | 0.0139 | 0.0004 |
| Neptune | 63467-12-11 22:05 G | 24902250.24 | 24902250.42 | 24902250.65 | 0.0088 | 0.0056 |
| Uranus | 63468-06-27 05:17 G | 24902448.51 | 24902448.72 | 24902448.95 | 0.0140 | 0.0061 |
| Uranus | 63469-07-02 04:05 G | 24902818.54 | 24902818.67 | 24902818.84 | 0.0140 | 0.0113 |
| Pluto | 63481-05-07 01:41 G | 24907145.32 | 24907145.57 | 24907145.81 | 0.0065 | 0.0017 |
| Saturn | 63482-04-24 22:34 G | 24907498.21 | 24907498.44 | 24907498.68 | 0.0276 | 0.0030 |
| Jupiter | 63490-11-27 05:31 G | 24910636.53 | 24910636.73 | 24910636.93 | 0.0487 | 0.0274 |

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| Saturn | 63496-10-29 04:05 G | 24912799.45 | 24912799.67 | 24912799.90 | 0.0282 | 0.0131 |
| Jupiter | 63502-12-02 15:36 G | 24915023.92 | 24915024.15 | 24915024.37 | 0.0489 | 0.0076 |
| Uranus | 63504-12-15 11:31 G | 24915767.89 | 24915767.98 | 24915768.12 | 0.0140 | 0.0124 |
| Uranus | 63505-12-20 12:00 G | 24916137.79 | 24916138.00 | 24916138.22 | 0.0139 | 0.0076 |
| Uranus | 63506-12-24 21:36 G | 24916507.15 | 24916507.40 | 24916507.65 | 0.0139 | 0.0024 |
| Uranus | 63507-12-29 19:55 G | 24916877.10 | 24916877.33 | 24916877.59 | 0.0139 | 0.0039 |
| Uranus | 63509-01-02 03:22 G | 24917246.45 | 24917246.64 | 24917246.87 | 0.0138 | 0.0078 |
| Saturn | 63512-05-02 01:12 G | 24918462.47 | 24918462.55 | 24918462.65 | 0.0277 | 0.0257 |
| Jupiter | 63514-12-07 00:58 G | 24919411.42 | 24919411.54 | 24919411.68 | 0.0490 | 0.0411 |
| Jupiter | 63520-05-28 04:48 G | 24921410.48 | 24921410.70 | 24921410.93 | 0.0540 | 0.0092 |
| Saturn | 63525-10-24 05:17 G | 24923385.52 | 24923385.72 | 24923385.93 | 0.0283 | 0.0147 |
| Jupiter | 63532-06-02 12:43 G | 24925798.84 | 24925799.03 | 24925799.22 | 0.0539 | 0.0293 |
| Saturn | 63541-04-27 05:31 G | 24929049.50 | 24929049.73 | 24929049.97 | 0.0276 | 0.0022 |
| Neptune | 63544-05-30 06:58 G | 24930178.72 | 24930178.79 | 24930178.92 | 0.0089 | 0.0082 |
| Neptune | 63545-06-02 00:43 G | 24930546.33 | 24930546.53 | 24930546.75 | 0.0089 | 0.0054 |
| Neptune | 63546-06-04 09:22 G | 24930913.66 | 24930913.89 | 24930914.14 | 0.0089 | 0.0021 |
| Neptune | 63547-06-06 22:48 G | 24931281.18 | 24931281.45 | 24931281.71 | 0.0089 | 0.0008 |
| Neptune | 63548-06-08 11:17 G | 24931648.77 | 24931648.97 | 24931649.22 | 0.0089 | 0.0042 |
| Neptune | 63549-06-10 18:58 G | 24932016.16 | 24932016.29 | 24932016.49 | 0.0089 | 0.0069 |
| Uranus | 63549-06-15 21:51 G | 24932021.22 | 24932021.41 | 24932021.62 | 0.0139 | 0.0089 |
| Uranus | 63550-06-20 10:05 G | 24932390.70 | 24932390.92 | 24932391.16 | 0.0139 | 0.0051 |
| Uranus | 63551-06-25 05:17 G | 24932760.46 | 24932760.72 | 24932760.98 | 0.0139 | 0.0015 |
| Uranus | 63552-06-28 17:03 G | 24933130.00 | 24933130.21 | 24933130.45 | 0.0140 | 0.0060 |
| Uranus | 63553-07-03 15:22 G | 24933500.01 | 24933500.14 | 24933500.30 | 0.0140 | 0.0117 |
| Mars | 63554-03-24 07:55 G | 24933763.70 | 24933763.83 | 24933763.96 | 0.1631 | 0.1210 |
| Saturn | 63555-10-31 23:46 G | 24934350.30 | 24934350.49 | 24934350.69 | 0.0282 | 0.0183 |
| Pluto | 63569-11-10 06:29 G | 24939473.56 | 24939473.77 | 24939473.98 | 0.0078 | 0.0042 |
| Saturn | 63570-04-21 15:22 G | 24939636.02 | 24939636.14 | 24939636.28 | 0.0276 | 0.0235 |
| Jupiter | 63573-11-27 17:46 G | 24940952.07 | 24940952.24 | 24940952.42 | 0.0488 | 0.0305 |
| Saturn | 63584-10-25 09:36 G | 24944936.67 | 24944936.90 | 24944937.12 | 0.0283 | 0.0095 |

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| Jupiter | 63585-12-02 03:36 G | 24945339.41 | 24945339.65 | 24945339.89 | 0.0488 | 0.0050 |
| Uranus | 63588-12-15 22:19 G | 24946449.34 | 24946449.43 | 24946449.53 | 0.0140 | 0.0129 |
| Uranus | 63589-12-20 21:22 G | 24946819.18 | 24946819.39 | 24946819.63 | 0.0139 | 0.0069 |
| Uranus | 63590-12-25 07:12 G | 24947188.55 | 24947188.80 | 24947189.05 | 0.0139 | 0.0015 |
| Uranus | 63591-12-30 05:17 G | 24947558.48 | 24947558.72 | 24947558.98 | 0.0139 | 0.0031 |
| Uranus | 63593-01-02 12:43 G | 24947927.87 | 24947928.03 | 24947928.23 | 0.0138 | 0.0097 |
| Uranus | 63594-01-07 09:36 G | 24948297.85 | 24948297.90 | 24948298.00 | 0.0138 | 0.0132 |
| Jupiter | 63597-12-06 07:27 G | 24949726.67 | 24949726.81 | 24949726.96 | 0.0489 | 0.0378 |
| Saturn | 63600-04-28 11:31 G | 24950600.75 | 24950600.98 | 24950601.22 | 0.0276 | 0.0076 |
| Jupiter | 63603-05-28 11:46 G | 24951725.77 | 24951725.99 | 24951726.21 | 0.0541 | 0.0162 |
| Saturn | 63614-11-02 00:43 G | 24955901.40 | 24955901.53 | 24955901.66 | 0.0282 | 0.0240 |
| Jupiter | 63615-06-02 14:53 G | 24956113.91 | 24956114.12 | 24956114.34 | 0.0540 | 0.0240 |
| Neptune | 63627-12-03 08:39 G | 24960680.77 | 24960680.86 | 24960680.99 | 0.0088 | 0.0079 |
| Neptune | 63628-12-04 21:51 G | 24961048.19 | 24961048.41 | 24961048.67 | 0.0088 | 0.0042 |
| Saturn | 63629-04-22 17:31 G | 24961187.07 | 24961187.23 | 24961187.42 | 0.0276 | 0.0183 |
| Neptune | 63629-12-07 10:19 G | 24961415.70 | 24961415.93 | 24961416.19 | 0.0088 | 0.0019 |
| Neptune | 63630-12-09 18:43 G | 24961783.04 | 24961783.28 | 24961783.56 | 0.0088 | 0.0019 |
| Neptune | 63631-12-12 11:17 G | 24962150.76 | 24962150.97 | 24962151.21 | 0.0088 | 0.0040 |
| Uranus | 63632-06-11 17:03 G | 24962333.20 | 24962333.21 | 24962333.25 | 0.0138 | 0.0138 |
| Neptune | 63632-12-13 16:05 G | 24962518.07 | 24962518.17 | 24962518.32 | 0.0088 | 0.0078 |
| Mars | 63633-03-26 12:43 G | 24962620.86 | 24962621.03 | 24962621.20 | 0.1629 | 0.0710 |
| Uranus | 63633-06-16 07:55 G | 24962702.67 | 24962702.83 | 24962703.04 | 0.0138 | 0.0096 |
| Uranus | 63634-06-20 21:51 G | 24963072.18 | 24963072.41 | 24963072.65 | 0.0139 | 0.0031 |
| Uranus | 63635-06-25 16:05 G | 24963441.91 | 24963442.17 | 24963442.43 | 0.0139 | 0.0008 |
| Uranus | 63636-06-29 05:31 G | 24963811.53 | 24963811.73 | 24963811.95 | 0.0140 | 0.0073 |
| Uranus | 63637-07-04 02:39 G | 24964181.51 | 24964181.61 | 24964181.75 | 0.0140 | 0.0123 |
| Saturn | 63643-10-27 13:12 G | 24966487.80 | 24966488.05 | 24966488.30 | 0.0283 | 0.0037 |
| Jupiter | 63656-11-27 06:00 G | 24971267.57 | 24971267.75 | 24971267.93 | 0.0487 | 0.0332 |
| Saturn | 63659-04-30 12:43 G | 24972151.82 | 24972152.03 | 24972152.26 | 0.0277 | 0.0134 |
| Jupiter | 63668-12-01 06:43 G | 24975654.55 | 24975654.78 | 24975655.01 | 0.0488 | 0.0010 |

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| Uranus | 63672-12-16 08:24 G | 24977130.72 | 24977130.85 | 24977131.01 | 0.0140 | 0.0113 |
| Uranus | 63673-12-21 06:58 G | 24977500.58 | 24977500.79 | 24977501.03 | 0.0140 | 0.0068 |
| Uranus | 63674-12-25 18:00 G | 24977870.00 | 24977870.25 | 24977870.50 | 0.0139 | 0.0014 |
| Uranus | 63675-12-30 15:36 G | 24978239.92 | 24978240.15 | 24978240.41 | 0.0139 | 0.0047 |
| Uranus | 63677-01-03 00:00 G | 24978609.31 | 24978609.50 | 24978609.70 | 0.0138 | 0.0087 |
| Jupiter | 63680-12-05 20:39 G | 24980042.19 | 24980042.36 | 24980042.54 | 0.0489 | 0.0329 |
| Jupiter | 63686-05-27 11:46 G | 24982040.77 | 24982040.99 | 24982041.21 | 0.0541 | 0.0219 |
| Saturn | 63688-04-24 03:07 G | 24982738.42 | 24982738.63 | 24982738.84 | 0.0276 | 0.0122 |
| Jupiter | 63698-06-01 19:55 G | 24986429.12 | 24986429.33 | 24986429.54 | 0.0539 | 0.0171 |
| Saturn | 63702-10-29 14:39 G | 24988038.85 | 24988039.11 | 24988039.36 | 0.0283 | 0.0023 |
| Neptune | 63709-06-02 05:03 G | 24990446.54 | 24990446.71 | 24990446.89 | 0.0089 | 0.0064 |
| Neptune | 63710-06-04 16:19 G | 24990813.96 | 24990814.18 | 24990814.43 | 0.0089 | 0.0041 |
| Neptune | 63711-06-07 06:58 G | 24991181.54 | 24991181.79 | 24991182.04 | 0.0089 | 0.0003 |
| Neptune | 63712-06-08 13:55 G | 24991548.83 | 24991549.08 | 24991549.35 | 0.0089 | 0.0019 |
| Neptune | 63713-06-11 08:10 G | 24991916.65 | 24991916.84 | 24991917.04 | 0.0089 | 0.0058 |
| Neptune | 63714-06-13 13:12 G | 24992283.94 | 24992284.05 | 24992284.17 | 0.0089 | 0.0079 |
| Uranus | 63716-06-13 06:00 G | 24993014.74 | 24993014.75 | 24993014.80 | 0.0138 | 0.0137 |
| Uranus | 63717-06-17 19:55 G | 24993384.13 | 24993384.33 | 24993384.56 | 0.0138 | 0.0079 |
| Saturn | 63718-05-02 15:51 G | 24993702.99 | 24993703.16 | 24993703.34 | 0.0277 | 0.0194 |
| Uranus | 63718-06-22 10:34 G | 24993753.71 | 24993753.94 | 24993754.18 | 0.0139 | 0.0040 |
| Uranus | 63719-06-27 03:22 G | 24994123.38 | 24994123.64 | 24994123.90 | 0.0139 | 0.0027 |
| Uranus | 63720-06-30 17:31 G | 24994493.02 | 24994493.23 | 24994493.45 | 0.0140 | 0.0070 |
| Mars | 63720-09-25 05:17 G | 24994579.53 | 24994579.72 | 24994579.90 | 0.1893 | 0.0245 |
| Uranus | 63721-07-05 13:41 G | 24994862.98 | 24994863.07 | 24994863.18 | 0.0140 | 0.0129 |
| Pluto | 63729-05-10 05:46 G | 24997728.67 | 24997728.74 | 24997728.84 | 0.0065 | 0.0061 |
| Pluto | 63730-05-11 15:07 G | 24998094.94 | 24998095.13 | 24998095.31 | 0.0065 | 0.0043 |
| Saturn | 63731-10-23 23:31 G | 24998625.36 | 24998625.48 | 24998625.60 | 0.0283 | 0.0243 |
| Jupiter | 63739-11-28 07:12 G | 25001582.66 | 25001582.80 | 25001582.94 | 0.0487 | 0.0382 |
| Saturn | 63747-04-27 13:41 G | 25004289.83 | 25004290.07 | 25004290.30 | 0.0276 | 0.0059 |
| Jupiter | 63751-12-02 20:39 G | 25005970.12 | 25005970.36 | 25005970.60 | 0.0488 | 0.0027 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 63756-12-17 18:29 G | 25007812.16 | 25007812.27 | 25007812.40 | 0.0140 | 0.0121 |
| Uranus | 63757-12-22 15:51 G | 25008181.93 | 25008182.16 | 25008182.41 | 0.0140 | 0.0059 |
| Uranus | 63758-12-27 03:22 G | 25008551.39 | 25008551.64 | 25008551.89 | 0.0139 | 0.0008 |
| Uranus | 63760-01-01 00:15 G | 25008921.27 | 25008921.51 | 25008921.76 | 0.0139 | 0.0040 |
| Uranus | 63761-01-04 09:07 G | 25009290.72 | 25009290.88 | 25009291.05 | 0.0138 | 0.0104 |
| Saturn | 63761-10-30 17:31 G | 25009590.00 | 25009590.23 | 25009590.48 | 0.0282 | 0.0090 |
| Jupiter | 63763-12-06 21:51 G | 25010357.22 | 25010357.41 | 25010357.61 | 0.0489 | 0.0287 |
| Jupiter | 63769-05-27 10:05 G | 25012355.74 | 25012355.92 | 25012356.10 | 0.0541 | 0.0318 |
| Saturn | 63777-05-04 01:12 G | 25015254.49 | 25015254.55 | 25015254.63 | 0.0277 | 0.0264 |
| Jupiter | 63781-06-01 14:24 G | 25016743.86 | 25016744.10 | 25016744.34 | 0.0540 | 0.0072 |
| Saturn | 63790-10-25 13:12 G | 25020176.85 | 25020177.05 | 25020177.25 | 0.0283 | 0.0169 |
| Neptune | 63791-12-03 18:43 G | 25020581.25 | 25020581.28 | 25020581.36 | 0.0088 | 0.0086 |
| Neptune | 63792-12-05 08:10 G | 25020948.67 | 25020948.84 | 25020949.03 | 0.0088 | 0.0061 |
| Jupiter | 63793-06-06 18:15 G | 25021132.17 | 25021132.26 | 25021132.35 | 0.0539 | 0.0495 |
| Neptune | 63793-12-07 15:07 G | 25021315.89 | 25021316.13 | 25021316.40 | 0.0088 | 0.0028 |
| Neptune | 63794-12-10 08:39 G | 25021683.61 | 25021683.86 | 25021684.11 | 0.0088 | 0.0003 |
| Neptune | 63795-12-12 12:58 G | 25022050.82 | 25022051.04 | 25022051.30 | 0.0088 | 0.0033 |
| Neptune | 63796-12-14 07:12 G | 25022418.63 | 25022418.80 | 25022419.03 | 0.0088 | 0.0058 |
| Uranus | 63800-06-14 17:17 G | 25023696.15 | 25023696.22 | 25023696.33 | 0.0138 | 0.0128 |
| Uranus | 63801-06-19 06:15 G | 25024065.56 | 25024065.76 | 25024065.97 | 0.0138 | 0.0084 |
| Uranus | 63802-06-23 22:05 G | 25024435.18 | 25024435.42 | 25024435.67 | 0.0139 | 0.0021 |
| Uranus | 63803-06-28 13:55 G | 25024804.82 | 25024805.08 | 25024805.35 | 0.0139 | 0.0018 |
| Uranus | 63804-07-02 06:00 G | 25025174.55 | 25025174.75 | 25025174.94 | 0.0140 | 0.0084 |
| Uranus | 63805-07-07 00:58 G | 25025544.47 | 25025544.54 | 25025544.65 | 0.0140 | 0.0131 |
| Saturn | 63806-04-29 21:22 G | 25025841.14 | 25025841.39 | 25025841.64 | 0.0276 | 0.0010 |
| Pluto | 63817-11-12 15:07 G | 25030055.91 | 25030056.13 | 25030056.38 | 0.0079 | 0.0035 |
| Saturn | 63820-11-02 04:34 G | 25031141.50 | 25031141.69 | 25031141.90 | 0.0282 | 0.0159 |
| Jupiter | 63822-11-28 20:39 G | 25031898.25 | 25031898.36 | 25031898.50 | 0.0487 | 0.0414 |
| Jupiter | 63834-12-02 20:24 G | 25036285.12 | 25036285.35 | 25036285.59 | 0.0487 | 0.0069 |
| Saturn | 63835-04-24 20:10 G | 25036428.20 | 25036428.34 | 25036428.49 | 0.0276 | 0.0217 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Mars | 63838-03-27 04:48 G | 25037495.52 | 25037495.70 | 25037495.87 | 0.1634 | 0.0591 |
| Uranus | 63840-12-19 04:48 G | 25038493.55 | 25038493.70 | 25038493.88 | 0.0140 | 0.0104 |
| Uranus | 63841-12-24 01:12 G | 25038863.32 | 25038863.55 | 25038863.79 | 0.0140 | 0.0061 |
| Uranus | 63842-12-28 13:55 G | 25039232.84 | 25039233.08 | 25039233.33 | 0.0139 | 0.0004 |
| Uranus | 63844-01-02 10:19 G | 25039602.69 | 25039602.93 | 25039603.18 | 0.0139 | 0.0053 |
| Uranus | 63845-01-05 20:10 G | 25039972.17 | 25039972.34 | 25039972.52 | 0.0138 | 0.0095 |
| Jupiter | 63846-12-07 07:27 G | 25040672.61 | 25040672.81 | 25040673.02 | 0.0488 | 0.0227 |
| Saturn | 63849-10-27 23:46 G | 25041728.25 | 25041728.49 | 25041728.73 | 0.0283 | 0.0094 |
| Jupiter | 63852-05-27 08:53 G | 25042670.72 | 25042670.87 | 25042671.04 | 0.0542 | 0.0398 |
| Jupiter | 63864-06-01 14:10 G | 25047058.87 | 25047059.09 | 25047059.32 | 0.0541 | 0.0004 |
| Saturn | 63865-05-01 02:53 G | 25047392.38 | 25047392.62 | 25047392.86 | 0.0277 | 0.0077 |
| Neptune | 63873-06-02 11:31 G | 25050346.90 | 25050346.98 | 25050347.13 | 0.0089 | 0.0081 |
| Neptune | 63874-06-05 03:36 G | 25050714.47 | 25050714.65 | 25050714.86 | 0.0089 | 0.0055 |
| Neptune | 63875-06-07 09:51 G | 25051081.67 | 25051081.91 | 25051082.18 | 0.0089 | 0.0020 |
| Jupiter | 63876-06-07 01:41 G | 25051447.42 | 25051447.57 | 25051447.71 | 0.0539 | 0.0422 |
| Neptune | 63876-06-09 04:48 G | 25051449.44 | 25051449.70 | 25051449.95 | 0.0089 | 0.0006 |
| Neptune | 63877-06-11 09:07 G | 25051816.68 | 25051816.88 | 25051817.13 | 0.0089 | 0.0042 |
| Neptune | 63878-06-14 03:36 G | 25052184.50 | 25052184.65 | 25052184.84 | 0.0089 | 0.0068 |
| Saturn | 63879-11-04 20:24 G | 25052693.22 | 25052693.35 | 25052693.49 | 0.0282 | 0.0230 |
| Uranus | 63884-06-15 06:15 G | 25054377.66 | 25054377.76 | 25054377.86 | 0.0138 | 0.0126 |
| Uranus | 63885-06-19 17:31 G | 25054747.02 | 25054747.23 | 25054747.47 | 0.0138 | 0.0069 |
| Uranus | 63886-06-24 10:34 G | 25055116.70 | 25055116.94 | 25055117.18 | 0.0139 | 0.0029 |
| Uranus | 63887-06-29 00:43 G | 25055486.29 | 25055486.53 | 25055486.80 | 0.0139 | 0.0038 |
| Uranus | 63888-07-02 17:31 G | 25055856.04 | 25055856.23 | 25055856.45 | 0.0140 | 0.0079 |
| Uranus | 63889-07-07 11:31 G | 25056225.98 | 25056225.98 | 25056226.01 | 0.0140 | 0.0140 |
| Saturn | 63894-04-26 09:36 G | 25057979.71 | 25057979.90 | 25057980.10 | 0.0277 | 0.0151 |
| Jupiter | 63905-11-28 15:51 G | 25062213.12 | 25062213.16 | 25062213.23 | 0.0486 | 0.0472 |
| Saturn | 63908-10-30 08:53 G | 25063279.62 | 25063279.87 | 25063280.13 | 0.0283 | 0.0019 |
| Mars | 63917-03-30 10:34 G | 25066352.85 | 25066352.94 | 25066353.04 | 0.1632 | 0.1405 |
| Jupiter | 63917-12-03 05:31 G | 25066600.51 | 25066600.73 | 25066600.95 | 0.0487 | 0.0125 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 63924-05-03 11:03 G | 25068943.76 | 25068943.96 | 25068944.17 | 0.0277 | 0.0146 |
| Uranus | 63924-12-20 15:07 G | 25069175.01 | 25069175.13 | 25069175.29 | 0.0140 | 0.0113 |
| Uranus | 63925-12-25 10:34 G | 25069544.70 | 25069544.94 | 25069545.19 | 0.0140 | 0.0049 |
| Uranus | 63926-12-30 00:15 G | 25069914.27 | 25069914.51 | 25069914.76 | 0.0139 | 0.0001 |
| Uranus | 63928-01-03 19:12 G | 25070284.06 | 25070284.30 | 25070284.55 | 0.0139 | 0.0050 |
| Uranus | 63929-01-07 05:31 G | 25070653.60 | 25070653.73 | 25070653.89 | 0.0138 | 0.0112 |
| Jupiter | 63929-12-07 06:58 G | 25070987.57 | 25070987.79 | 25070988.02 | 0.0488 | 0.0173 |
| Jupiter | 63935-05-28 07:55 G | 25072985.74 | 25072985.83 | 25072985.94 | 0.0542 | 0.0480 |
| Jupiter | 63941-12-11 18:15 G | 25075375.19 | 25075375.26 | 25075375.35 | 0.0489 | 0.0457 |
| Jupiter | 63947-06-02 13:55 G | 25077373.85 | 25077374.08 | 25077374.31 | 0.0540 | 0.0107 |
| Saturn | 63953-04-28 20:10 G | 25079531.11 | 25079531.34 | 25079531.58 | 0.0277 | 0.0085 |
| Neptune | 63956-12-06 12:00 G | 25080848.91 | 25080849.00 | 25080849.16 | 0.0088 | 0.0078 |
| Neptune | 63957-12-09 06:15 G | 25081216.55 | 25081216.76 | 25081217.01 | 0.0088 | 0.0040 |
| Neptune | 63958-12-11 11:03 G | 25081583.71 | 25081583.96 | 25081584.22 | 0.0088 | 0.0018 |
| Jupiter | 63959-06-07 09:51 G | 25081761.72 | 25081761.91 | 25081762.10 | 0.0539 | 0.0315 |
| Neptune | 63959-12-14 05:17 G | 25081951.48 | 25081951.72 | 25081951.99 | 0.0088 | 0.0021 |
| Neptune | 63960-12-15 10:48 G | 25082318.75 | 25082318.95 | 25082319.19 | 0.0088 | 0.0042 |
| Neptune | 63961-12-18 02:10 G | 25082686.49 | 25082686.59 | 25082686.73 | 0.0088 | 0.0079 |
| Saturn | 63967-11-01 21:22 G | 25084831.16 | 25084831.39 | 25084831.64 | 0.0282 | 0.0061 |
| Uranus | 63968-06-16 16:48 G | 25085059.08 | 25085059.20 | 25085059.33 | 0.0138 | 0.0119 |
| Uranus | 63969-06-21 02:53 G | 25085428.42 | 25085428.62 | 25085428.86 | 0.0138 | 0.0073 |
| Uranus | 63970-06-25 21:36 G | 25085798.15 | 25085798.40 | 25085798.64 | 0.0139 | 0.0011 |
| Uranus | 63971-06-30 11:03 G | 25086167.71 | 25086167.96 | 25086168.22 | 0.0139 | 0.0028 |
| Uranus | 63972-07-04 05:17 G | 25086537.55 | 25086537.72 | 25086537.91 | 0.0140 | 0.0095 |
| Uranus | 63973-07-08 22:05 G | 25086907.41 | 25086907.42 | 25086907.47 | 0.0140 | 0.0139 |
| Pluto | 63978-05-14 13:41 G | 25088677.80 | 25088678.07 | 25088678.34 | 0.0065 | 0.0000 |
| Saturn | 63983-05-06 00:43 G | 25090495.39 | 25090495.53 | 25090495.68 | 0.0277 | 0.0217 |
| Saturn | 63996-10-26 06:00 G | 25095417.60 | 25095417.75 | 25095417.91 | 0.0283 | 0.0221 |
| Jupiter | 64000-12-02 06:15 G | 25096915.53 | 25096915.76 | 25096915.99 | 0.0487 | 0.0174 |

65TH MILLENNIUM CE

This is a list of transits of Moon in the 65th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Mars | 64004-09-26 10:05 | G | 25098309.80 | 25098309.92 | 25098310.05 | 0.1887 | 0.1538 | |
| Uranus | 64008-12-21 01:41 | G | 25099856.39 | 25099856.57 | 25099856.75 | 0.0140 | 0.0093 | |
| Uranus | 64009-12-25 19:12 | G | 25100226.07 | 25100226.30 | 25100226.56 | 0.0140 | 0.0053 | |
| Uranus | 64010-12-30 10:48 | G | 25100595.70 | 25100595.95 | 25100596.19 | 0.0139 | 0.0008 | |
| Uranus | 64012-01-04 04:48 | G | 25100965.47 | 25100965.70 | 25100965.95 | 0.0139 | 0.0061 | |
| Saturn | 64012-04-30 00:43 | G | 25101082.28 | 25101082.53 | 25101082.78 | 0.0277 | 0.0018 | |
| Jupiter | 64012-12-06 15:36 | G | 25101302.93 | 25101303.15 | 25101303.37 | 0.0488 | 0.0119 | |
| Uranus | 64013-01-07 16:48 | G | 25101335.05 | 25101335.20 | 25101335.37 | 0.0138 | 0.0105 | |
| Jupiter | 64024-12-10 20:53 | G | 25105690.23 | 25105690.37 | 25105690.52 | 0.0489 | 0.0387 | |
| Saturn | 64026-11-03 13:27 | G | 25106382.85 | 25106383.06 | 25106383.27 | 0.0282 | 0.0137 | |
| Jupiter | 64030-06-01 04:34 | G | 25107688.48 | 25107688.69 | 25107688.91 | 0.0541 | 0.0192 | |
| Neptune | 64038-06-05 05:46 | G | 25110614.58 | 25110614.74 | 25110614.94 | 0.0089 | 0.0064 | |
| Neptune | 64039-06-08 00:58 | G | 25110982.31 | 25110982.54 | 25110982.77 | 0.0089 | 0.0041 | |
| Neptune | 64040-06-09 05:46 | G | 25111349.49 | 25111349.74 | 25111350.00 | 0.0089 | 0.0002 | |
| Saturn | 64041-04-24 21:22 | G | 25111669.33 | 25111669.39 | 25111669.47 | 0.0275 | 0.0260 | |
| Neptune | 64041-06-11 23:46 | G | 25111717.23 | 25111717.49 | 25111717.75 | 0.0089 | 0.0020 | |
| Jupiter | 64042-06-06 19:55 | G | 25112077.13 | 25112077.33 | 25112077.53 | 0.0540 | 0.0255 | |
| Neptune | 64042-06-14 06:43 | G | 25112084.61 | 25112084.78 | 25112084.99 | 0.0089 | 0.0059 | |
| Neptune | 64043-06-16 21:36 | G | 25112452.30 | 25112452.40 | 25112452.52 | 0.0089 | 0.0081 | |
| Uranus | 64052-06-17 04:05 | G | 25115740.54 | 25115740.67 | 25115740.82 | 0.0138 | 0.0113 | |

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| Uranus | 64053-06-21 13:41 G | 25116109.85 | 25116110.07 | 25116110.32 | 0.0138 | 0.0060 |
| Uranus | 64054-06-26 08:53 G | 25116479.63 | 25116479.87 | 25116480.12 | 0.0139 | 0.0018 |
| Uranus | 64055-06-30 21:22 G | 25116849.14 | 25116849.39 | 25116849.64 | 0.0139 | 0.0048 |
| Saturn | 64055-10-28 14:10 G | 25116968.88 | 25116969.09 | 25116969.32 | 0.0283 | 0.0147 |
| Uranus | 64056-07-04 16:05 G | 25117219.00 | 25117219.17 | 25117219.38 | 0.0140 | 0.0088 |
| Pluto | 64066-11-16 10:19 G | 25121005.82 | 25121005.93 | 25121006.10 | 0.0078 | 0.0067 |
| Saturn | 64071-05-02 04:48 G | 25122633.46 | 25122633.70 | 25122633.94 | 0.0277 | 0.0046 |
| Jupiter | 64083-12-02 12:00 G | 25127230.80 | 25127231.00 | 25127231.20 | 0.0486 | 0.0235 |
| Saturn | 64085-11-05 03:36 G | 25127934.50 | 25127934.65 | 25127934.82 | 0.0282 | 0.0209 |
| Uranus | 64092-12-21 11:03 G | 25130537.81 | 25130537.96 | 25130538.14 | 0.0140 | 0.0103 |
| Uranus | 64093-12-26 03:51 G | 25130907.42 | 25130907.66 | 25130907.93 | 0.0139 | 0.0038 |
| Uranus | 64094-12-30 20:24 G | 25131277.11 | 25131277.35 | 25131277.60 | 0.0139 | 0.0008 |
| Jupiter | 64095-12-06 19:55 G | 25131618.09 | 25131618.33 | 25131618.57 | 0.0487 | 0.0053 |
| Uranus | 64096-01-04 12:58 G | 25131646.82 | 25131647.04 | 25131647.29 | 0.0139 | 0.0061 |
| Uranus | 64097-01-08 01:55 G | 25132016.48 | 25132016.58 | 25132016.72 | 0.0138 | 0.0120 |
| Saturn | 64100-04-27 08:39 G | 25133220.70 | 25133220.86 | 25133221.04 | 0.0275 | 0.0196 |
| Jupiter | 64107-12-11 22:19 G | 25136005.27 | 25136005.43 | 25136005.60 | 0.0489 | 0.0335 |
| Jupiter | 64113-06-01 15:51 G | 25138003.96 | 25138004.16 | 25138004.36 | 0.0542 | 0.0256 |
| Saturn | 64114-10-30 20:39 G | 25138520.13 | 25138520.36 | 25138520.61 | 0.0283 | 0.0078 |
| Neptune | 64120-12-07 04:19 G | 25140749.64 | 25140749.68 | 25140749.76 | 0.0088 | 0.0085 |
| Neptune | 64121-12-09 09:22 G | 25141116.70 | 25141116.89 | 25141117.08 | 0.0088 | 0.0058 |
| Mars | 64122-03-30 17:17 G | 25141228.05 | 25141228.22 | 25141228.39 | 0.1637 | 0.0313 |
| Neptune | 64122-12-12 03:36 G | 25141484.39 | 25141484.65 | 25141484.90 | 0.0088 | 0.0026 |
| Neptune | 64123-12-14 09:36 G | 25141851.65 | 25141851.90 | 25141852.15 | 0.0088 | 0.0001 |
| Neptune | 64124-12-15 23:46 G | 25142219.26 | 25142219.49 | 25142219.75 | 0.0088 | 0.0033 |
| Jupiter | 64125-06-06 12:15 G | 25142391.79 | 25142392.01 | 25142392.24 | 0.0540 | 0.0173 |
| Neptune | 64125-12-18 10:19 G | 25142586.77 | 25142586.93 | 25142587.13 | 0.0088 | 0.0060 |
| Saturn | 64130-05-04 11:31 G | 25144184.77 | 25144184.98 | 25144185.20 | 0.0277 | 0.0109 |
| Uranus | 64136-06-18 13:55 G | 25146421.95 | 25146422.08 | 25146422.25 | 0.0138 | 0.0109 |
| Uranus | 64137-06-22 22:34 G | 25146791.23 | 25146791.44 | 25146791.69 | 0.0138 | 0.0061 |

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| Uranus | 64138-06-27 19:12 G | 25147161.06 | 25147161.30 | 25147161.55 | 0.0139 | 0.0002 |
| Uranus | 64139-07-02 06:29 G | 25147530.53 | 25147530.77 | 25147531.03 | 0.0139 | 0.0038 |
| Uranus | 64140-07-06 02:53 G | 25147900.48 | 25147900.62 | 25147900.80 | 0.0140 | 0.0106 |
| Saturn | 64144-11-07 11:31 G | 25149485.92 | 25149485.98 | 25149486.05 | 0.0282 | 0.0273 |
| Saturn | 64159-04-29 15:07 G | 25154771.92 | 25154772.13 | 25154772.35 | 0.0275 | 0.0134 |
| Jupiter | 64166-12-02 19:27 G | 25157546.12 | 25157546.31 | 25157546.52 | 0.0486 | 0.0281 |
| Saturn | 64173-11-01 06:15 G | 25160071.52 | 25160071.76 | 25160072.00 | 0.0283 | 0.0015 |
| Uranus | 64176-12-22 20:10 G | 25161219.16 | 25161219.34 | 25161219.55 | 0.0140 | 0.0084 |
| Uranus | 64177-12-27 11:46 G | 25161588.75 | 25161588.99 | 25161589.25 | 0.0139 | 0.0045 |
| Jupiter | 64178-12-06 23:03 G | 25161933.23 | 25161933.46 | 25161933.69 | 0.0487 | 0.0010 |
| Uranus | 64179-01-01 05:46 G | 25161958.51 | 25161958.74 | 25161958.99 | 0.0139 | 0.0018 |
| Uranus | 64180-01-05 21:22 G | 25162328.18 | 25162328.39 | 25162328.64 | 0.0139 | 0.0068 |
| Uranus | 64181-01-09 12:15 G | 25162697.89 | 25162698.01 | 25162698.16 | 0.0138 | 0.0115 |
| Saturn | 64189-05-05 19:55 G | 25165736.15 | 25165736.33 | 25165736.52 | 0.0277 | 0.0167 |
| Jupiter | 64190-12-11 13:12 G | 25166320.87 | 25166321.05 | 25166321.25 | 0.0489 | 0.0291 |
| Jupiter | 64196-05-31 06:43 G | 25168318.60 | 25168318.78 | 25168318.97 | 0.0542 | 0.0344 |
| Neptune | 64202-06-06 22:34 G | 25170515.34 | 25170515.44 | 25170515.59 | 0.0089 | 0.0077 |
| Saturn | 64202-10-27 21:36 G | 25170658.35 | 25170658.40 | 25170658.48 | 0.0284 | 0.0275 |
| Neptune | 64203-06-09 03:36 G | 25170882.48 | 25170882.65 | 25170882.88 | 0.0089 | 0.0055 |
| Neptune | 64204-06-10 21:36 G | 25171250.14 | 25171250.40 | 25171250.66 | 0.0089 | 0.0017 |
| Neptune | 64205-06-13 05:31 G | 25171617.48 | 25171617.73 | 25171617.98 | 0.0089 | 0.0007 |
| Neptune | 64206-06-15 18:00 G | 25171985.03 | 25171985.25 | 25171985.50 | 0.0089 | 0.0043 |
| Neptune | 64207-06-18 06:29 G | 25172352.63 | 25172352.77 | 25172352.94 | 0.0089 | 0.0068 |
| Jupiter | 64208-06-06 14:39 G | 25172706.89 | 25172707.11 | 25172707.33 | 0.0541 | 0.0103 |
| Saturn | 64218-05-01 15:22 G | 25176322.90 | 25176323.14 | 25176323.38 | 0.0275 | 0.0077 |
| Uranus | 64220-06-20 00:58 G | 25177103.39 | 25177103.54 | 25177103.72 | 0.0138 | 0.0101 |
| Uranus | 64221-06-24 09:07 G | 25177472.65 | 25177472.88 | 25177473.13 | 0.0138 | 0.0051 |
| Uranus | 64222-06-29 06:15 G | 25177842.51 | 25177842.76 | 25177843.01 | 0.0139 | 0.0007 |
| Uranus | 64223-07-03 16:19 G | 25178211.95 | 25178212.18 | 25178212.42 | 0.0139 | 0.0057 |
| Uranus | 64224-07-07 13:12 G | 25178581.89 | 25178582.05 | 25178582.24 | 0.0140 | 0.0096 |

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| Pluto | 64226-05-17 13:12 G | 25179260.91 | 25179261.05 | 25179261.23 | 0.0065 | 0.0050 |
| Pluto | 64227-05-18 19:41 G | 25179627.19 | 25179627.32 | 25179627.48 | 0.0065 | 0.0055 |
| Saturn | 64232-11-03 15:36 G | 25181622.92 | 25181623.15 | 25181623.39 | 0.0283 | 0.0043 |
| Saturn | 64248-05-08 00:58 G | 25187287.40 | 25187287.54 | 25187287.69 | 0.0277 | 0.0222 |
| Jupiter | 64249-12-02 23:46 G | 25187861.33 | 25187861.49 | 25187861.67 | 0.0486 | 0.0325 |
| Uranus | 64259-12-20 07:12 G | 25191530.74 | 25191530.80 | 25191530.89 | 0.0140 | 0.0134 |
| Uranus | 64260-12-24 05:31 G | 25191900.56 | 25191900.73 | 25191900.93 | 0.0140 | 0.0095 |
| Saturn | 64261-10-28 20:10 G | 25192209.19 | 25192209.34 | 25192209.50 | 0.0284 | 0.0223 |
| Jupiter | 64261-12-07 13:27 G | 25192248.82 | 25192249.06 | 25192249.29 | 0.0487 | 0.0047 |
| Uranus | 64261-12-28 20:10 G | 25192270.08 | 25192270.34 | 25192270.60 | 0.0139 | 0.0028 |
| Uranus | 64263-01-02 15:22 G | 25192639.89 | 25192640.14 | 25192640.38 | 0.0139 | 0.0015 |
| Uranus | 64264-01-07 05:03 G | 25193009.50 | 25193009.71 | 25193009.95 | 0.0139 | 0.0071 |
| Uranus | 64265-01-10 20:53 G | 25193379.29 | 25193379.37 | 25193379.49 | 0.0138 | 0.0126 |
| Jupiter | 64273-12-11 12:58 G | 25196635.84 | 25196636.04 | 25196636.25 | 0.0488 | 0.0247 |
| Saturn | 64277-05-02 17:46 G | 25197874.00 | 25197874.24 | 25197874.48 | 0.0275 | 0.0021 |
| Jupiter | 64279-06-01 13:55 G | 25198633.95 | 25198634.08 | 25198634.23 | 0.0543 | 0.0418 |
| Neptune | 64285-12-10 00:29 G | 25201017.40 | 25201017.52 | 25201017.68 | 0.0088 | 0.0075 |
| Neptune | 64286-12-12 07:55 G | 25201384.62 | 25201384.83 | 25201385.08 | 0.0088 | 0.0037 |
| Neptune | 64287-12-14 22:05 G | 25201752.17 | 25201752.42 | 25201752.70 | 0.0088 | 0.0017 |
| Neptune | 64288-12-16 09:51 G | 25202119.68 | 25202119.91 | 25202120.16 | 0.0088 | 0.0023 |
| Neptune | 64289-12-18 18:43 G | 25202487.05 | 25202487.28 | 25202487.52 | 0.0088 | 0.0044 |
| Neptune | 64290-12-21 10:05 G | 25202854.86 | 25202854.92 | 25202855.04 | 0.0088 | 0.0083 |
| Jupiter | 64291-06-06 22:05 G | 25203022.19 | 25203022.42 | 25203022.66 | 0.0541 | 0.0059 |
| Saturn | 64291-11-05 18:43 G | 25203174.05 | 25203174.28 | 25203174.52 | 0.0283 | 0.0098 |
| Jupiter | 64303-06-12 23:46 G | 25207410.49 | 25207410.49 | 25207410.51 | 0.0540 | 0.0539 |
| Uranus | 64304-06-21 11:03 G | 25207784.80 | 25207784.96 | 25207785.14 | 0.0138 | 0.0101 |
| Uranus | 64305-06-25 18:15 G | 25208154.03 | 25208154.26 | 25208154.51 | 0.0138 | 0.0050 |
| Saturn | 64306-04-28 15:51 G | 25208461.14 | 25208461.16 | 25208461.21 | 0.0275 | 0.0272 |
| Uranus | 64306-06-30 16:05 G | 25208523.92 | 25208524.17 | 25208524.42 | 0.0139 | 0.0008 |
| Uranus | 64307-07-05 01:27 G | 25208893.33 | 25208893.56 | 25208893.81 | 0.0139 | 0.0047 |

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| Uranus | 64308-07-08 23:31 G | 25209263.35 | 25209263.48 | 25209263.64 | 0.0140 | 0.0115 |
| Pluto | 64314-11-20 03:22 G | 25211588.39 | 25211588.64 | 25211588.90 | 0.0079 | 0.0023 |
| Saturn | 64320-10-30 20:39 G | 25213760.18 | 25213760.36 | 25213760.56 | 0.0284 | 0.0171 |
| Mars | 64327-03-31 19:41 G | 25216103.23 | 25216103.32 | 25216103.42 | 0.1642 | 0.1443 |
| Jupiter | 64332-12-03 16:48 G | 25218177.04 | 25218177.20 | 25218177.36 | 0.0486 | 0.0358 |
| Saturn | 64336-05-05 00:43 G | 25219425.30 | 25219425.53 | 25219425.76 | 0.0275 | 0.0037 |
| Jupiter | 64344-12-07 14:39 G | 25222563.88 | 25222564.11 | 25222564.35 | 0.0486 | 0.0086 |
| Uranus | 64344-12-25 14:39 G | 25222581.91 | 25222582.11 | 25222582.33 | 0.0140 | 0.0076 |
| Uranus | 64345-12-30 03:51 G | 25222951.41 | 25222951.66 | 25222951.92 | 0.0139 | 0.0038 |
| Uranus | 64347-01-04 00:29 G | 25223321.28 | 25223321.52 | 25223321.76 | 0.0139 | 0.0026 |
| Uranus | 64348-01-08 13:12 G | 25223690.84 | 25223691.05 | 25223691.29 | 0.0139 | 0.0073 |
| Uranus | 64349-01-12 06:43 G | 25224060.68 | 25224060.78 | 25224060.91 | 0.0138 | 0.0123 |
| Saturn | 64350-11-07 16:05 G | 25224724.95 | 25224725.17 | 25224725.39 | 0.0283 | 0.0147 |
| Jupiter | 64356-12-12 05:46 G | 25226951.53 | 25226951.74 | 25226951.95 | 0.0488 | 0.0217 |
| Jupiter | 64362-06-01 18:58 G | 25228949.18 | 25228949.29 | 25228949.41 | 0.0542 | 0.0475 |
| Saturn | 64365-04-29 14:10 G | 25230011.94 | 25230012.09 | 25230012.25 | 0.0275 | 0.0217 |
| Neptune | 64367-06-09 18:43 G | 25230783.10 | 25230783.28 | 25230783.48 | 0.0089 | 0.0062 |
| Mars | 64367-10-02 12:43 G | 25230897.89 | 25230898.03 | 25230898.17 | 0.1884 | 0.1478 |
| Neptune | 64368-06-11 03:36 G | 25231150.43 | 25231150.65 | 25231150.88 | 0.0089 | 0.0037 |
| Neptune | 64369-06-13 15:51 G | 25231517.90 | 25231518.16 | 25231518.43 | 0.0089 | 0.0001 |
| Neptune | 64370-06-16 05:31 G | 25231885.50 | 25231885.73 | 25231885.98 | 0.0089 | 0.0024 |
| Neptune | 64371-06-18 12:58 G | 25232252.87 | 25232253.04 | 25232253.26 | 0.0089 | 0.0061 |
| Neptune | 64372-06-20 06:29 G | 25232620.71 | 25232620.77 | 25232620.88 | 0.0089 | 0.0084 |
| Jupiter | 64374-06-06 22:05 G | 25233337.19 | 25233337.42 | 25233337.64 | 0.0541 | 0.0012 |
| Saturn | 64379-11-02 00:15 G | 25235311.30 | 25235311.51 | 25235311.73 | 0.0284 | 0.0125 |
| Jupiter | 64386-06-12 05:03 G | 25237725.59 | 25237725.71 | 25237725.83 | 0.0541 | 0.0465 |
| Uranus | 64388-06-21 21:07 G | 25238466.21 | 25238466.38 | 25238466.58 | 0.0138 | 0.0092 |
| Uranus | 64389-06-26 04:19 G | 25238835.45 | 25238835.68 | 25238835.94 | 0.0138 | 0.0044 |
| Uranus | 64390-07-01 02:24 G | 25239205.35 | 25239205.60 | 25239205.86 | 0.0139 | 0.0003 |
| Uranus | 64391-07-05 11:03 G | 25239574.75 | 25239574.96 | 25239575.20 | 0.0139 | 0.0065 |

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| Uranus | 64392-07-09 09:22 G | 25239944.75 | 25239944.89 | 25239945.08 | 0.0140 | 0.0104 |
| Saturn | 64395-05-07 06:00 G | 25240976.52 | 25240976.75 | 25240976.98 | 0.0275 | 0.0092 |
| Mars | 64406-04-03 03:07 G | 25244960.51 | 25244960.63 | 25244960.76 | 0.1640 | 0.1234 |
| Saturn | 64409-11-08 13:41 G | 25246275.90 | 25246276.07 | 25246276.26 | 0.0283 | 0.0198 |
| Jupiter | 64415-12-03 18:29 G | 25248492.14 | 25248492.27 | 25248492.41 | 0.0485 | 0.0397 |
| Saturn | 64424-04-30 12:58 G | 25251562.85 | 25251563.04 | 25251563.23 | 0.0275 | 0.0165 |
| Jupiter | 64427-12-08 08:39 G | 25252879.64 | 25252879.86 | 25252880.09 | 0.0487 | 0.0122 |
| Uranus | 64427-12-22 00:00 G | 25252893.41 | 25252893.50 | 25252893.63 | 0.0140 | 0.0127 |
| Uranus | 64428-12-26 00:43 G | 25253263.34 | 25253263.53 | 25253263.73 | 0.0140 | 0.0086 |
| Uranus | 64429-12-30 12:43 G | 25253632.78 | 25253633.03 | 25253633.30 | 0.0139 | 0.0020 |
| Uranus | 64431-01-04 10:19 G | 25254002.68 | 25254002.93 | 25254003.17 | 0.0139 | 0.0020 |
| Uranus | 64432-01-08 21:36 G | 25254372.19 | 25254372.40 | 25254372.62 | 0.0139 | 0.0079 |
| Uranus | 64433-01-12 15:36 G | 25254742.09 | 25254742.15 | 25254742.25 | 0.0138 | 0.0131 |
| Saturn | 64438-11-03 02:39 G | 25256862.37 | 25256862.61 | 25256862.85 | 0.0283 | 0.0077 |
| Jupiter | 64439-12-12 11:31 G | 25257266.76 | 25257266.98 | 25257267.21 | 0.0487 | 0.0189 |
| Neptune | 64449-12-10 06:43 G | 25260917.73 | 25260917.78 | 25260917.88 | 0.0088 | 0.0085 |
| Neptune | 64450-12-12 19:12 G | 25261285.11 | 25261285.30 | 25261285.54 | 0.0088 | 0.0054 |
| Neptune | 64451-12-15 08:24 G | 25261652.62 | 25261652.85 | 25261653.10 | 0.0088 | 0.0024 |
| Neptune | 64452-12-16 16:48 G | 25262019.94 | 25262020.20 | 25262020.47 | 0.0088 | 0.0005 |
| Neptune | 64453-12-19 10:05 G | 25262387.69 | 25262387.92 | 25262388.16 | 0.0088 | 0.0035 |
| Saturn | 64454-05-08 06:29 G | 25262527.56 | 25262527.77 | 25262527.98 | 0.0276 | 0.0149 |
| Neptune | 64454-12-21 14:53 G | 25262754.95 | 25262755.12 | 25262755.31 | 0.0088 | 0.0064 |
| Jupiter | 64457-06-06 03:36 G | 25263652.42 | 25263652.65 | 25263652.88 | 0.0542 | 0.0076 |
| Saturn | 64468-11-09 17:03 G | 25267827.10 | 25267827.21 | 25267827.33 | 0.0283 | 0.0247 |
| Jupiter | 64469-06-11 06:15 G | 25268040.62 | 25268040.76 | 25268040.91 | 0.0541 | 0.0417 |
| Uranus | 64471-06-18 10:19 G | 25268777.88 | 25268777.93 | 25268778.01 | 0.0138 | 0.0133 |
| Uranus | 64472-06-22 06:43 G | 25269147.61 | 25269147.78 | 25269147.98 | 0.0138 | 0.0093 |
| Uranus | 64473-06-26 13:41 G | 25269516.84 | 25269517.07 | 25269517.32 | 0.0139 | 0.0040 |
| Uranus | 64474-07-01 11:46 G | 25269886.74 | 25269886.99 | 25269887.25 | 0.0139 | 0.0015 |
| Pluto | 64475-05-21 00:15 G | 25270210.27 | 25270210.51 | 25270210.78 | 0.0065 | 0.0007 |

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| Uranus | 64475-07-05 20:10 G | 25270256.11 | 25270256.34 | 25270256.58 | 0.0139 | 0.0055 |
| Uranus | 64476-07-09 19:12 G | 25270626.19 | 25270626.30 | 25270626.44 | 0.0140 | 0.0122 |
| Saturn | 64483-05-02 17:03 G | 25273114.00 | 25273114.21 | 25273114.43 | 0.0275 | 0.0110 |
| Saturn | 64497-11-03 23:03 G | 25278413.21 | 25278413.46 | 25278413.72 | 0.0283 | 0.0032 |
| Jupiter | 64498-12-03 12:15 G | 25278807.92 | 25278808.01 | 25278808.12 | 0.0485 | 0.0434 |
| Jupiter | 64510-12-08 15:22 G | 25283194.92 | 25283195.14 | 25283195.38 | 0.0486 | 0.0158 |
| Uranus | 64511-12-23 09:22 G | 25283574.80 | 25283574.89 | 25283574.98 | 0.0140 | 0.0131 |
| Uranus | 64512-12-27 10:05 G | 25283944.71 | 25283944.92 | 25283945.14 | 0.0140 | 0.0067 |
| Saturn | 64513-05-10 05:03 G | 25284078.56 | 25284078.71 | 25284078.88 | 0.0276 | 0.0207 |
| Uranus | 64513-12-31 21:22 G | 25284314.14 | 25284314.39 | 25284314.65 | 0.0139 | 0.0030 |
| Uranus | 64515-01-05 19:12 G | 25284684.08 | 25284684.30 | 25284684.56 | 0.0139 | 0.0037 |
| Uranus | 64516-01-10 06:15 G | 25285053.55 | 25285053.76 | 25285053.97 | 0.0139 | 0.0078 |
| Uranus | 64517-01-14 01:55 G | 25285423.51 | 25285423.58 | 25285423.66 | 0.0138 | 0.0131 |
| Jupiter | 64522-12-12 21:36 G | 25287582.19 | 25287582.40 | 25287582.62 | 0.0487 | 0.0155 |
| Neptune | 64531-06-10 02:53 G | 25290683.51 | 25290683.62 | 25290683.79 | 0.0089 | 0.0075 |
| Neptune | 64532-06-11 14:10 G | 25291050.89 | 25291051.09 | 25291051.32 | 0.0089 | 0.0051 |
| Neptune | 64533-06-14 04:48 G | 25291418.46 | 25291418.70 | 25291418.95 | 0.0089 | 0.0013 |
| Neptune | 64534-06-16 11:17 G | 25291785.71 | 25291785.97 | 25291786.23 | 0.0089 | 0.0009 |
| Neptune | 64535-06-19 04:48 G | 25292153.51 | 25292153.70 | 25292153.94 | 0.0089 | 0.0047 |
| Neptune | 64536-06-20 09:36 G | 25292520.76 | 25292520.90 | 25292521.08 | 0.0089 | 0.0070 |
| Jupiter | 64540-06-06 04:19 G | 25293967.46 | 25293967.68 | 25293967.91 | 0.0542 | 0.0123 |
| Saturn | 64542-05-05 00:43 G | 25294665.30 | 25294665.53 | 25294665.76 | 0.0275 | 0.0053 |
| Jupiter | 64552-06-11 16:34 G | 25298356.02 | 25298356.19 | 25298356.36 | 0.0541 | 0.0355 |
| Uranus | 64556-06-23 15:51 G | 25299828.97 | 25299829.16 | 25299829.38 | 0.0138 | 0.0081 |
| Saturn | 64556-11-05 20:24 G | 25299964.10 | 25299964.35 | 25299964.60 | 0.0283 | 0.0017 |
| Uranus | 64557-06-27 23:17 G | 25300198.23 | 25300198.47 | 25300198.72 | 0.0139 | 0.0036 |
| Uranus | 64558-07-02 21:22 G | 25300568.14 | 25300568.39 | 25300568.65 | 0.0139 | 0.0012 |
| Uranus | 64559-07-07 05:31 G | 25300937.52 | 25300937.73 | 25300937.95 | 0.0139 | 0.0073 |
| Uranus | 64560-07-11 04:34 G | 25301307.56 | 25301307.69 | 25301307.86 | 0.0140 | 0.0111 |
| Pluto | 64563-11-23 16:48 G | 25302538.10 | 25302538.20 | 25302538.35 | 0.0078 | 0.0070 |

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| Saturn | 64572-05-11 09:22 G | 25305629.84 | 25305629.89 | 25305629.95 | 0.0276 | 0.0267 |
| Jupiter | 64581-12-03 16:19 G | 25309123.18 | 25309123.18 | 25309123.20 | 0.0485 | 0.0484 |
| Saturn | 64585-10-31 09:07 G | 25310550.78 | 25310550.88 | 25310551.01 | 0.0284 | 0.0252 |
| Jupiter | 64593-12-08 00:00 G | 25313510.29 | 25313510.50 | 25313510.70 | 0.0486 | 0.0208 |
| Uranus | 64595-12-23 17:46 G | 25314256.13 | 25314256.24 | 25314256.40 | 0.0140 | 0.0118 |
| Uranus | 64596-12-27 19:41 G | 25314626.11 | 25314626.32 | 25314626.53 | 0.0140 | 0.0076 |
| Uranus | 64598-01-01 06:15 G | 25314995.51 | 25314995.76 | 25314996.02 | 0.0139 | 0.0010 |
| Uranus | 64599-01-06 05:03 G | 25315365.47 | 25315365.71 | 25315365.96 | 0.0139 | 0.0028 |
| Uranus | 64600-01-10 14:24 G | 25315734.92 | 25315735.10 | 25315735.31 | 0.0139 | 0.0089 |
| Uranus | 64601-01-15 10:34 G | 25316104.92 | 25316104.94 | 25316105.00 | 0.0138 | 0.0137 |
| Saturn | 64601-05-07 05:46 G | 25316216.49 | 25316216.74 | 25316216.98 | 0.0275 | 0.0010 |
| Jupiter | 64605-12-13 09:22 G | 25317897.66 | 25317897.89 | 25317898.13 | 0.0487 | 0.0120 |
| Mars | 64611-04-03 18:58 G | 25319835.13 | 25319835.29 | 25319835.45 | 0.1646 | 0.0717 |
| Neptune | 64614-12-14 07:27 G | 25321185.69 | 25321185.81 | 25321185.98 | 0.0088 | 0.0072 |
| Saturn | 64615-11-09 02:24 G | 25321515.37 | 25321515.60 | 25321515.83 | 0.0283 | 0.0077 |
| Neptune | 64615-12-16 14:53 G | 25321552.89 | 25321553.12 | 25321553.38 | 0.0088 | 0.0034 |
| Neptune | 64616-12-18 08:53 G | 25321920.62 | 25321920.87 | 25321921.13 | 0.0088 | 0.0013 |
| Jupiter | 64617-12-17 12:43 G | 25322285.00 | 25322285.03 | 25322285.07 | 0.0488 | 0.0481 |
| Neptune | 64617-12-20 13:27 G | 25322287.83 | 25322288.06 | 25322288.32 | 0.0088 | 0.0027 |
| Neptune | 64618-12-23 08:10 G | 25322655.62 | 25322655.84 | 25322656.07 | 0.0088 | 0.0047 |
| Neptune | 64619-12-25 12:58 G | 25323023.02 | 25323023.04 | 25323023.13 | 0.0088 | 0.0086 |
| Jupiter | 64623-06-07 06:58 G | 25324282.58 | 25324282.79 | 25324283.00 | 0.0542 | 0.0207 |
| Saturn | 64630-05-02 04:19 G | 25326803.55 | 25326803.68 | 25326803.83 | 0.0275 | 0.0221 |
| Jupiter | 64635-06-12 06:43 G | 25328670.58 | 25328670.78 | 25328670.99 | 0.0542 | 0.0264 |
| Uranus | 64639-06-21 05:17 G | 25330140.62 | 25330140.72 | 25330140.83 | 0.0138 | 0.0123 |
| Uranus | 64640-06-25 00:29 G | 25330510.34 | 25330510.52 | 25330510.74 | 0.0138 | 0.0085 |
| Uranus | 64641-06-29 08:10 G | 25330879.60 | 25330879.84 | 25330880.09 | 0.0139 | 0.0029 |
| Uranus | 64642-07-04 05:46 G | 25331249.49 | 25331249.74 | 25331249.99 | 0.0139 | 0.0023 |
| Uranus | 64643-07-08 14:24 G | 25331618.87 | 25331619.10 | 25331619.32 | 0.0139 | 0.0065 |
| Uranus | 64644-07-12 13:27 G | 25331988.98 | 25331989.06 | 25331989.16 | 0.0140 | 0.0130 |

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| Saturn | 64644-11-02 14:24 G | 25332101.90 | 25332102.10 | 25332102.29 | 0.0284 | 0.0185 |
| Mars | 64651-10-03 09:36 G | 25334627.73 | 25334627.90 | 25334628.08 | 0.1877 | 0.0754 |
| Saturn | 64660-05-08 07:27 G | 25337767.57 | 25337767.81 | 25337768.06 | 0.0276 | 0.0076 |
| Saturn | 64674-11-10 12:43 G | 25343066.82 | 25343067.03 | 25343067.24 | 0.0283 | 0.0140 |
| Jupiter | 64676-12-08 11:46 G | 25343825.78 | 25343825.99 | 25343826.20 | 0.0486 | 0.0248 |
| Uranus | 64679-12-25 02:39 G | 25344937.51 | 25344937.61 | 25344937.77 | 0.0140 | 0.0121 |
| Uranus | 64680-12-29 04:19 G | 25345307.45 | 25345307.68 | 25345307.91 | 0.0140 | 0.0058 |
| Uranus | 64682-01-02 14:24 G | 25345676.85 | 25345677.10 | 25345677.36 | 0.0139 | 0.0021 |
| Uranus | 64683-01-07 13:41 G | 25346046.84 | 25346047.07 | 25346047.31 | 0.0139 | 0.0045 |
| Uranus | 64684-01-11 22:48 G | 25346416.25 | 25346416.45 | 25346416.66 | 0.0139 | 0.0085 |
| Jupiter | 64688-12-12 13:12 G | 25348212.82 | 25348213.05 | 25348213.28 | 0.0486 | 0.0082 |
| Saturn | 64689-05-03 14:39 G | 25348354.92 | 25348355.11 | 25348355.31 | 0.0276 | 0.0155 |
| Neptune | 64696-06-12 03:36 G | 25350951.49 | 25350951.65 | 25350951.86 | 0.0089 | 0.0060 |
| Neptune | 64697-06-14 10:19 G | 25351318.69 | 25351318.93 | 25351319.17 | 0.0089 | 0.0033 |
| Neptune | 64698-06-17 04:48 G | 25351686.45 | 25351686.70 | 25351686.96 | 0.0089 | 0.0002 |
| Neptune | 64699-06-19 09:36 G | 25352053.66 | 25352053.90 | 25352054.14 | 0.0089 | 0.0028 |
| Neptune | 64700-06-22 03:07 G | 25352421.47 | 25352421.63 | 25352421.84 | 0.0089 | 0.0064 |
| Jupiter | 64700-12-18 00:15 G | 25352600.41 | 25352600.51 | 25352600.62 | 0.0487 | 0.0432 |
| Neptune | 64701-06-24 10:05 G | 25352788.91 | 25352788.92 | 25352788.97 | 0.0089 | 0.0088 |
| Saturn | 64703-11-05 19:27 G | 25353653.08 | 25353653.31 | 25353653.55 | 0.0284 | 0.0117 |
| Jupiter | 64706-06-07 02:39 G | 25354597.41 | 25354597.61 | 25354597.82 | 0.0543 | 0.0278 |
| Jupiter | 64718-06-12 15:22 G | 25358985.94 | 25358986.14 | 25358986.35 | 0.0542 | 0.0202 |
| Saturn | 64719-05-11 13:12 G | 25359318.85 | 25359319.05 | 25359319.26 | 0.0276 | 0.0146 |
| Pluto | 64723-05-24 13:27 G | 25360792.91 | 25360793.06 | 25360793.27 | 0.0065 | 0.0046 |
| Uranus | 64723-06-22 13:41 G | 25360822.03 | 25360822.07 | 25360822.15 | 0.0138 | 0.0133 |
| Pluto | 64724-05-25 05:17 G | 25361159.65 | 25361159.72 | 25361159.87 | 0.0065 | 0.0059 |
| Uranus | 64724-06-26 08:39 G | 25361191.65 | 25361191.86 | 25361192.09 | 0.0138 | 0.0071 |
| Uranus | 64725-06-30 17:03 G | 25361560.98 | 25361561.21 | 25361561.46 | 0.0139 | 0.0029 |
| Uranus | 64726-07-05 14:24 G | 25361930.85 | 25361931.10 | 25361931.36 | 0.0139 | 0.0022 |
| Uranus | 64727-07-09 23:03 G | 25362300.27 | 25362300.46 | 25362300.68 | 0.0139 | 0.0080 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 64728-07-13 22:19 G | 25362670.31 | 25362670.43 | 25362670.58 | 0.0140 | 0.0119 |
| Saturn | 64733-11-12 22:19 G | 25364618.27 | 25364618.43 | 25364618.61 | 0.0283 | 0.0209 |
| Saturn | 64748-05-06 00:43 G | 25369906.30 | 25369906.53 | 25369906.76 | 0.0276 | 0.0088 |
| Jupiter | 64759-12-09 10:34 G | 25374140.76 | 25374140.94 | 25374141.12 | 0.0485 | 0.0307 |
| Saturn | 64762-11-07 05:46 G | 25375204.50 | 25375204.74 | 25375204.98 | 0.0283 | 0.0044 |
| Uranus | 64763-12-26 11:17 G | 25375618.83 | 25375618.97 | 25375619.14 | 0.0140 | 0.0110 |
| Uranus | 64764-12-30 12:29 G | 25375988.81 | 25375989.02 | 25375989.26 | 0.0140 | 0.0067 |
| Uranus | 64766-01-03 22:48 G | 25376358.20 | 25376358.45 | 25376358.71 | 0.0139 | 0.0003 |
| Uranus | 64767-01-08 22:19 G | 25376728.20 | 25376728.43 | 25376728.69 | 0.0139 | 0.0035 |
| Uranus | 64768-01-13 06:58 G | 25377097.62 | 25377097.79 | 25377097.98 | 0.0139 | 0.0098 |
| Jupiter | 64771-12-13 23:46 G | 25378528.25 | 25378528.49 | 25378528.73 | 0.0486 | 0.0034 |
| Saturn | 64778-05-13 01:27 G | 25380870.42 | 25380870.56 | 25380870.70 | 0.0276 | 0.0216 |
| Neptune | 64778-12-14 12:58 G | 25381085.97 | 25381086.04 | 25381086.16 | 0.0088 | 0.0082 |
| Neptune | 64779-12-17 07:12 G | 25381453.61 | 25381453.80 | 25381454.03 | 0.0088 | 0.0050 |
| Neptune | 64780-12-18 12:00 G | 25381820.77 | 25381821.00 | 25381821.27 | 0.0088 | 0.0023 |
| Neptune | 64781-12-21 06:29 G | 25382188.52 | 25382188.77 | 25382189.04 | 0.0088 | 0.0010 |
| Neptune | 64782-12-23 12:15 G | 25382555.80 | 25382556.01 | 25382556.26 | 0.0088 | 0.0038 |
| Jupiter | 64783-12-17 22:48 G | 25382915.31 | 25382915.45 | 25382915.60 | 0.0487 | 0.0386 |
| Neptune | 64783-12-26 04:34 G | 25382923.52 | 25382923.69 | 25382923.86 | 0.0088 | 0.0068 |
| Jupiter | 64789-06-06 09:22 G | 25384912.72 | 25384912.89 | 25384913.06 | 0.0543 | 0.0351 |
| Saturn | 64792-11-14 06:15 G | 25386169.74 | 25386169.76 | 25386169.79 | 0.0283 | 0.0281 |
| Jupiter | 64801-06-11 07:27 G | 25389300.58 | 25389300.81 | 25389301.05 | 0.0542 | 0.0095 |
| Saturn | 64807-05-08 06:43 G | 25391457.53 | 25391457.78 | 25391458.03 | 0.0276 | 0.0019 |
| Uranus | 64807-06-22 23:17 G | 25391503.35 | 25391503.47 | 25391503.62 | 0.0138 | 0.0115 |
| Uranus | 64808-06-26 17:03 G | 25391873.01 | 25391873.21 | 25391873.44 | 0.0138 | 0.0078 |
| Uranus | 64809-07-01 02:24 G | 25392242.35 | 25392242.60 | 25392242.84 | 0.0139 | 0.0020 |
| Uranus | 64810-07-05 22:34 G | 25392612.18 | 25392612.44 | 25392612.69 | 0.0139 | 0.0029 |
| Uranus | 64811-07-10 07:41 G | 25392981.63 | 25392981.82 | 25392982.05 | 0.0139 | 0.0075 |
| Pluto | 64811-11-26 06:00 G | 25393120.53 | 25393120.75 | 25393121.02 | 0.0079 | 0.0025 |
| Uranus | 64812-07-14 06:15 G | 25393351.74 | 25393351.76 | 25393351.83 | 0.0140 | 0.0138 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 64813-06-16 09:22 G | 25393688.80 | 25393688.89 | 25393688.99 | 0.0541 | 0.0490 |
| Saturn | 64821-11-08 22:34 G | 25396756.21 | 25396756.44 | 25396756.68 | 0.0283 | 0.0032 |
| Saturn | 64836-05-02 00:15 G | 25402044.46 | 25402044.51 | 25402044.56 | 0.0275 | 0.0268 |
| Jupiter | 64842-12-08 22:05 G | 25404456.27 | 25404456.42 | 25404456.59 | 0.0485 | 0.0356 |
| Uranus | 64847-12-26 20:24 G | 25406300.20 | 25406300.35 | 25406300.51 | 0.0140 | 0.0110 |
| Uranus | 64848-12-30 20:53 G | 25406670.14 | 25406670.37 | 25406670.62 | 0.0140 | 0.0051 |
| Uranus | 64850-01-04 07:12 G | 25407039.55 | 25407039.80 | 25407040.05 | 0.0139 | 0.0013 |
| Saturn | 64850-11-02 22:05 G | 25407342.32 | 25407342.42 | 25407342.55 | 0.0284 | 0.0252 |
| Uranus | 64851-01-09 06:29 G | 25407409.54 | 25407409.77 | 25407410.02 | 0.0139 | 0.0053 |
| Uranus | 64852-01-13 15:07 G | 25407778.95 | 25407779.13 | 25407779.33 | 0.0139 | 0.0091 |
| Jupiter | 64854-12-12 22:34 G | 25408843.20 | 25408843.44 | 25408843.68 | 0.0486 | 0.0011 |
| Neptune | 64860-06-12 08:39 G | 25410851.71 | 25410851.86 | 25410852.03 | 0.0089 | 0.0070 |
| Neptune | 64861-06-15 03:22 G | 25411219.44 | 25411219.64 | 25411219.86 | 0.0089 | 0.0049 |
| Neptune | 64862-06-17 08:24 G | 25411586.61 | 25411586.85 | 25411587.11 | 0.0089 | 0.0009 |
| Neptune | 64863-06-20 01:55 G | 25411954.32 | 25411954.58 | 25411954.84 | 0.0089 | 0.0013 |
| Neptune | 64864-06-21 08:53 G | 25412321.68 | 25412321.87 | 25412322.09 | 0.0089 | 0.0051 |
| Neptune | 64865-06-23 22:34 G | 25412689.31 | 25412689.44 | 25412689.61 | 0.0089 | 0.0073 |
| Saturn | 64866-05-09 11:17 G | 25413008.72 | 25413008.97 | 25413009.21 | 0.0276 | 0.0051 |
| Jupiter | 64866-12-17 11:03 G | 25413230.81 | 25413230.96 | 25413231.13 | 0.0487 | 0.0343 |
| Jupiter | 64872-06-04 22:05 G | 25415227.30 | 25415227.42 | 25415227.55 | 0.0543 | 0.0461 |
| Saturn | 64880-11-10 15:36 G | 25418307.93 | 25418308.15 | 25418308.38 | 0.0283 | 0.0108 |
| Jupiter | 64884-06-10 04:19 G | 25419615.45 | 25419615.68 | 25419615.90 | 0.0543 | 0.0008 |
| Uranus | 64891-06-23 07:55 G | 25422184.76 | 25422184.83 | 25422184.96 | 0.0138 | 0.0126 |
| Uranus | 64892-06-27 00:58 G | 25422554.32 | 25422554.54 | 25422554.78 | 0.0138 | 0.0062 |
| Uranus | 64893-07-01 11:31 G | 25422923.74 | 25422923.98 | 25422924.22 | 0.0139 | 0.0022 |
| Uranus | 64894-07-06 06:58 G | 25423293.54 | 25423293.79 | 25423294.05 | 0.0139 | 0.0031 |
| Mars | 64895-04-06 08:53 G | 25423567.69 | 25423567.87 | 25423568.04 | 0.1649 | 0.0286 |
| Saturn | 64895-05-04 14:10 G | 25423595.93 | 25423596.09 | 25423596.26 | 0.0275 | 0.0197 |
| Uranus | 64895-07-10 17:46 G | 25423663.05 | 25423663.24 | 25423663.43 | 0.0139 | 0.0087 |
| Jupiter | 64896-06-15 17:46 G | 25424004.09 | 25424004.24 | 25424004.39 | 0.0541 | 0.0413 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 64896-07-14 15:51 G | 25424033.06 | 25424033.16 | 25424033.28 | 0.0140 | 0.0127 |
| Saturn | 64909-11-05 08:53 G | 25428893.68 | 25428893.87 | 25428894.06 | 0.0284 | 0.0176 |
| Saturn | 64925-05-11 18:58 G | 25434560.09 | 25434560.29 | 25434560.52 | 0.0276 | 0.0122 |
| Jupiter | 64925-12-08 20:24 G | 25434771.23 | 25434771.35 | 25434771.49 | 0.0485 | 0.0408 |
| Uranus | 64931-12-28 04:48 G | 25436981.55 | 25436981.70 | 25436981.88 | 0.0140 | 0.0105 |
| Uranus | 64933-01-01 05:17 G | 25437351.49 | 25437351.72 | 25437351.96 | 0.0140 | 0.0058 |
| Uranus | 64934-01-05 16:05 G | 25437720.92 | 25437721.17 | 25437721.42 | 0.0139 | 0.0005 |
| Uranus | 64935-01-10 15:36 G | 25438090.90 | 25438091.15 | 25438091.39 | 0.0139 | 0.0042 |
| Mars | 64935-10-05 05:03 G | 25438358.68 | 25438358.71 | 25438358.75 | 0.1871 | 0.1830 |
| Uranus | 64936-01-15 00:00 G | 25438460.35 | 25438460.50 | 25438460.68 | 0.0139 | 0.0106 |
| Jupiter | 64937-12-13 07:12 G | 25439158.58 | 25439158.80 | 25439159.03 | 0.0486 | 0.0063 |
| Saturn | 64939-11-14 02:39 G | 25439859.43 | 25439859.61 | 25439859.81 | 0.0283 | 0.0185 |
| Neptune | 64942-12-15 07:12 G | 25440986.80 | 25440986.80 | 25440986.80 | 0.0088 | 0.0088 |
| Neptune | 64943-12-17 11:46 G | 25441353.83 | 25441353.99 | 25441354.16 | 0.0088 | 0.0068 |
| Neptune | 64944-12-19 05:31 G | 25441721.50 | 25441721.73 | 25441721.99 | 0.0088 | 0.0030 |
| Neptune | 64945-12-21 12:15 G | 25442088.77 | 25442089.01 | 25442089.27 | 0.0088 | 0.0009 |
| Neptune | 64946-12-24 02:39 G | 25442456.36 | 25442456.61 | 25442456.87 | 0.0088 | 0.0029 |
| Neptune | 64947-12-26 13:12 G | 25442823.86 | 25442824.05 | 25442824.27 | 0.0088 | 0.0051 |
| Jupiter | 64949-12-17 09:36 G | 25443545.70 | 25443545.90 | 25443546.10 | 0.0486 | 0.0280 |
| Saturn | 64954-05-06 23:46 G | 25445147.27 | 25445147.49 | 25445147.71 | 0.0275 | 0.0125 |
| Jupiter | 64955-06-05 23:46 G | 25445542.46 | 25445542.49 | 25445542.54 | 0.0544 | 0.0534 |
| Jupiter | 64967-06-11 11:17 G | 25449930.73 | 25449930.97 | 25449931.20 | 0.0543 | 0.0071 |
| Saturn | 64968-11-06 23:31 G | 25450445.26 | 25450445.48 | 25450445.71 | 0.0284 | 0.0099 |
| Pluto | 64972-05-27 02:53 G | 25451742.39 | 25451742.62 | 25451742.87 | 0.0065 | 0.0012 |
| Uranus | 64975-06-24 17:46 G | 25452866.11 | 25452866.24 | 25452866.42 | 0.0138 | 0.0108 |
| Uranus | 64976-06-28 09:36 G | 25453235.68 | 25453235.90 | 25453236.13 | 0.0138 | 0.0071 |
| Uranus | 64977-07-02 21:07 G | 25453605.14 | 25453605.38 | 25453605.63 | 0.0139 | 0.0011 |
| Uranus | 64978-07-07 15:07 G | 25453974.88 | 25453975.13 | 25453975.39 | 0.0139 | 0.0035 |
| Jupiter | 64979-06-16 06:15 G | 25454318.58 | 25454318.76 | 25454318.95 | 0.0541 | 0.0319 |
| Uranus | 64979-07-12 02:24 G | 25454344.42 | 25454344.60 | 25454344.82 | 0.0139 | 0.0084 |

Saturn 64984-05-13 07:12 G 25456111.64 25456111.80 25456111.97 0.0276 0.0191

Saturn 64998-11-15 09:51 G 25461410.82 25461410.91 25461411.02 0.0283 0.0258

66TH MILLENNIUM CE

This is a list of transits of Moon in the 66th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 65008-12-09 06:43 | G | 25465086.72 | 25465086.78 | 25465086.86 | 0.0485 | 0.0461 | |
| Saturn | 65013-05-09 03:36 | G | 25466698.41 | 25466698.65 | 25466698.90 | 0.0275 | 0.0055 | |
| Uranus | 65015-12-29 14:53 | G | 25467662.97 | 25467663.12 | 25467663.31 | 0.0140 | 0.0102 | |
| Uranus | 65017-01-02 13:55 | G | 25468032.85 | 25468033.08 | 25468033.34 | 0.0140 | 0.0045 | |
| Uranus | 65018-01-07 01:41 | G | 25468402.32 | 25468402.57 | 25468402.82 | 0.0139 | 0.0005 | |
| Uranus | 65019-01-12 00:00 | G | 25468772.28 | 25468772.50 | 25468772.75 | 0.0139 | 0.0061 | |
| Uranus | 65020-01-16 09:22 | G | 25469141.71 | 25469141.89 | 25469142.07 | 0.0139 | 0.0097 | |
| Jupiter | 65020-12-13 08:39 | G | 25469473.62 | 25469473.86 | 25469474.09 | 0.0485 | 0.0112 | |
| Neptune | 65024-06-14 01:41 | G | 25470752.56 | 25470752.57 | 25470752.64 | 0.0089 | 0.0088 | |
| Neptune | 65025-06-16 06:58 | G | 25471119.62 | 25471119.79 | 25471120.01 | 0.0089 | 0.0057 | |
| Neptune | 65026-06-19 00:15 | G | 25471487.28 | 25471487.51 | 25471487.78 | 0.0089 | 0.0029 | |
| Neptune | 65027-06-21 09:07 | G | 25471854.63 | 25471854.88 | 25471855.13 | 0.0089 | 0.0004 | |
| Saturn | 65027-11-10 14:24 | G | 25471996.86 | 25471997.10 | 25471997.34 | 0.0284 | 0.0026 | |
| Neptune | 65028-06-22 21:51 | G | 25472222.18 | 25472222.41 | 25472222.67 | 0.0089 | 0.0032 | |
| Neptune | 65029-06-25 10:19 | G | 25472589.79 | 25472589.93 | 25472590.12 | 0.0089 | 0.0066 | |
| Jupiter | 65032-12-17 17:46 | G | 25473861.04 | 25473861.24 | 25473861.44 | 0.0486 | 0.0233 | |
| Saturn | 65043-05-16 15:51 | G | 25477663.08 | 25477663.16 | 25477663.26 | 0.0276 | 0.0257 | |

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| Jupiter | 65050-06-10 23:46 G | 25480245.28 | 25480245.49 | 25480245.71 | 0.0543 | 0.0167 |
| Uranus | 65059-06-26 03:22 G | 25483547.52 | 25483547.64 | 25483547.77 | 0.0138 | 0.0117 |
| Uranus | 65060-06-29 17:31 G | 25483916.99 | 25483917.23 | 25483917.47 | 0.0138 | 0.0054 |
| Pluto | 65060-11-30 00:58 G | 25484070.42 | 25484070.54 | 25484070.67 | 0.0079 | 0.0069 |
| Uranus | 65061-07-04 06:29 G | 25484286.53 | 25484286.77 | 25484287.02 | 0.0139 | 0.0015 |
| Jupiter | 65062-06-16 11:46 G | 25484633.79 | 25484633.99 | 25484634.20 | 0.0542 | 0.0236 |
| Uranus | 65062-07-08 23:31 G | 25484656.24 | 25484656.48 | 25484656.74 | 0.0139 | 0.0041 |
| Uranus | 65063-07-13 12:58 G | 25485025.86 | 25485026.04 | 25485026.22 | 0.0139 | 0.0093 |
| Uranus | 65064-07-17 08:53 G | 25485395.82 | 25485395.87 | 25485395.95 | 0.0140 | 0.0135 |
| Saturn | 65072-05-10 08:53 G | 25488249.63 | 25488249.87 | 25488250.11 | 0.0275 | 0.0011 |
| Saturn | 65086-11-11 23:46 G | 25493548.24 | 25493548.49 | 25493548.74 | 0.0284 | 0.0041 |
| Uranus | 65099-12-30 00:00 G | 25498344.35 | 25498344.50 | 25498344.70 | 0.0140 | 0.0098 |
| Mars | 65100-04-07 02:10 G | 25498442.46 | 25498442.59 | 25498442.72 | 0.1656 | 0.1245 |
| Uranus | 65101-01-03 22:34 G | 25498714.21 | 25498714.44 | 25498714.70 | 0.0140 | 0.0048 |
| Saturn | 65101-05-06 10:48 G | 25498836.84 | 25498836.95 | 25498837.07 | 0.0275 | 0.0240 |
| Uranus | 65102-01-08 11:17 G | 25499083.73 | 25499083.97 | 25499084.22 | 0.0139 | 0.0014 |
| Uranus | 65103-01-13 09:22 G | 25499453.66 | 25499453.89 | 25499454.15 | 0.0139 | 0.0050 |
| Jupiter | 65103-12-14 17:46 G | 25499789.02 | 25499789.24 | 25499789.45 | 0.0486 | 0.0154 |
| Uranus | 65104-01-17 19:12 G | 25499823.18 | 25499823.30 | 25499823.46 | 0.0139 | 0.0115 |
| Neptune | 65107-12-19 03:22 G | 25501254.55 | 25501254.64 | 25501254.79 | 0.0088 | 0.0079 |
| Neptune | 65108-12-20 11:03 G | 25501621.75 | 25501621.96 | 25501622.19 | 0.0088 | 0.0045 |
| Neptune | 65109-12-23 00:58 G | 25501989.28 | 25501989.54 | 25501989.80 | 0.0088 | 0.0019 |
| Neptune | 65110-12-25 13:12 G | 25502356.81 | 25502357.05 | 25502357.30 | 0.0088 | 0.0014 |
| Neptune | 65111-12-27 21:36 G | 25502724.18 | 25502724.40 | 25502724.66 | 0.0088 | 0.0041 |
| Neptune | 65112-12-29 13:55 G | 25503091.96 | 25503092.08 | 25503092.24 | 0.0088 | 0.0073 |
| Saturn | 65115-11-07 05:17 G | 25504134.57 | 25504134.72 | 25504134.87 | 0.0284 | 0.0223 |
| Jupiter | 65115-12-19 00:43 G | 25504176.31 | 25504176.53 | 25504176.76 | 0.0486 | 0.0181 |
| Jupiter | 65127-12-23 03:22 G | 25508563.58 | 25508563.64 | 25508563.70 | 0.0487 | 0.0468 |
| Saturn | 65131-05-13 16:48 G | 25509800.98 | 25509801.20 | 25509801.44 | 0.0275 | 0.0072 |
| Jupiter | 65133-06-11 08:53 G | 25510560.67 | 25510560.87 | 25510561.08 | 0.0544 | 0.0239 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 65143-06-27 12:43 G | 25514228.88 | 25514229.03 | 25514229.22 | 0.0138 | 0.0099 |
| Uranus | 65144-07-01 01:41 G | 25514598.35 | 25514598.57 | 25514598.82 | 0.0138 | 0.0063 |
| Jupiter | 65145-06-16 10:34 G | 25514948.72 | 25514948.94 | 25514949.17 | 0.0543 | 0.0175 |
| Uranus | 65145-07-05 16:19 G | 25514967.93 | 25514968.18 | 25514968.42 | 0.0139 | 0.0003 |
| Saturn | 65145-11-14 01:41 G | 25515099.33 | 25515099.57 | 25515099.81 | 0.0284 | 0.0103 |
| Uranus | 65146-07-10 07:41 G | 25515337.57 | 25515337.82 | 25515338.08 | 0.0139 | 0.0042 |
| Uranus | 65147-07-14 21:51 G | 25515707.24 | 25515707.41 | 25515707.60 | 0.0139 | 0.0093 |
| Saturn | 65160-05-07 12:58 G | 25520387.85 | 25520388.04 | 25520388.23 | 0.0275 | 0.0179 |
| Saturn | 65174-11-08 13:27 G | 25525685.87 | 25525686.06 | 25525686.26 | 0.0284 | 0.0165 |
| Mars | 65179-04-10 13:55 G | 25527299.94 | 25527300.08 | 25527300.22 | 0.1653 | 0.1124 |
| Uranus | 65183-12-31 11:03 G | 25529025.77 | 25529025.96 | 25529026.15 | 0.0140 | 0.0089 |
| Uranus | 65185-01-04 07:55 G | 25529395.59 | 25529395.83 | 25529396.09 | 0.0140 | 0.0036 |
| Uranus | 65186-01-08 21:36 G | 25529765.15 | 25529765.40 | 25529765.65 | 0.0139 | 0.0006 |
| Jupiter | 65186-12-14 03:36 G | 25530104.43 | 25530104.65 | 25530104.88 | 0.0485 | 0.0186 |
| Uranus | 65187-01-13 18:29 G | 25530135.06 | 25530135.27 | 25530135.51 | 0.0139 | 0.0070 |
| Uranus | 65188-01-18 04:48 G | 25530504.56 | 25530504.70 | 25530504.88 | 0.0139 | 0.0106 |
| Neptune | 65189-06-16 22:34 G | 25531020.29 | 25531020.44 | 25531020.64 | 0.0089 | 0.0066 |
| Saturn | 65190-05-15 01:12 G | 25531352.34 | 25531352.55 | 25531352.76 | 0.0275 | 0.0132 |
| Neptune | 65190-06-19 07:41 G | 25531387.62 | 25531387.82 | 25531388.04 | 0.0089 | 0.0046 |
| Neptune | 65191-06-21 19:12 G | 25531755.04 | 25531755.30 | 25531755.57 | 0.0089 | 0.0006 |
| Neptune | 65192-06-23 09:07 G | 25532122.65 | 25532122.88 | 25532123.14 | 0.0089 | 0.0017 |
| Neptune | 65193-06-25 16:34 G | 25532490.01 | 25532490.19 | 25532490.42 | 0.0089 | 0.0055 |
| Neptune | 65194-06-28 10:48 G | 25532857.82 | 25532857.95 | 25532858.09 | 0.0089 | 0.0076 |
| Jupiter | 65198-12-18 04:34 G | 25534491.47 | 25534491.69 | 25534491.91 | 0.0486 | 0.0137 |
| Saturn | 65204-11-15 02:24 G | 25536650.41 | 25536650.60 | 25536650.81 | 0.0284 | 0.0163 |
| Jupiter | 65210-12-22 19:12 G | 25538879.18 | 25538879.30 | 25538879.41 | 0.0487 | 0.0422 |
| Jupiter | 65216-06-10 06:15 G | 25540875.57 | 25540875.76 | 25540875.95 | 0.0543 | 0.0306 |
| Saturn | 65219-05-09 11:03 G | 25541938.75 | 25541938.96 | 25541939.19 | 0.0275 | 0.0121 |
| Pluto | 65220-05-29 21:07 G | 25542325.19 | 25542325.38 | 25542325.63 | 0.0065 | 0.0038 |
| Uranus | 65227-06-27 21:36 G | 25544910.27 | 25544910.40 | 25544910.57 | 0.0138 | 0.0108 |

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| Jupiter | 65228-06-15 16:19 G | 25545263.97 | 25545264.18 | 25545264.41 | 0.0542 | 0.0098 |
| Uranus | 65228-07-01 09:22 G | 25545279.66 | 25545279.89 | 25545280.15 | 0.0138 | 0.0045 |
| Uranus | 65229-07-06 01:27 G | 25545649.32 | 25545649.56 | 25545649.81 | 0.0139 | 0.0007 |
| Uranus | 65230-07-10 15:51 G | 25546018.93 | 25546019.16 | 25546019.42 | 0.0139 | 0.0051 |
| Uranus | 65231-07-15 07:41 G | 25546388.66 | 25546388.82 | 25546389.00 | 0.0139 | 0.0100 |
| Saturn | 65233-11-09 17:46 G | 25547237.01 | 25547237.24 | 25547237.47 | 0.0284 | 0.0109 |
| Saturn | 65249-05-16 04:19 G | 25552903.52 | 25552903.68 | 25552903.88 | 0.0275 | 0.0191 |
| Saturn | 65263-11-17 07:27 G | 25558201.67 | 25558201.81 | 25558201.97 | 0.0284 | 0.0223 |
| Uranus | 65266-12-27 01:55 G | 25559337.52 | 25559337.58 | 25559337.69 | 0.0140 | 0.0133 |
| Uranus | 65267-12-31 19:55 G | 25559707.16 | 25559707.33 | 25559707.54 | 0.0140 | 0.0088 |
| Uranus | 65269-01-04 16:19 G | 25560076.93 | 25560077.18 | 25560077.44 | 0.0140 | 0.0036 |
| Jupiter | 65269-12-13 07:55 G | 25560419.62 | 25560419.83 | 25560420.04 | 0.0485 | 0.0219 |
| Uranus | 65270-01-09 07:12 G | 25560446.56 | 25560446.80 | 25560447.05 | 0.0139 | 0.0023 |
| Uranus | 65271-01-14 03:22 G | 25560816.42 | 25560816.64 | 25560816.89 | 0.0139 | 0.0060 |
| Neptune | 65271-12-18 10:19 G | 25561154.91 | 25561154.93 | 25561155.02 | 0.0088 | 0.0086 |
| Uranus | 65272-01-18 15:22 G | 25561186.04 | 25561186.14 | 25561186.25 | 0.0139 | 0.0124 |
| Neptune | 65272-12-19 23:03 G | 25561522.30 | 25561522.46 | 25561522.67 | 0.0088 | 0.0063 |
| Neptune | 65273-12-22 12:15 G | 25561889.78 | 25561890.01 | 25561890.26 | 0.0088 | 0.0027 |
| Neptune | 65274-12-24 20:10 G | 25562257.08 | 25562257.34 | 25562257.61 | 0.0088 | 0.0004 |
| Neptune | 65275-12-27 12:58 G | 25562624.82 | 25562625.04 | 25562625.29 | 0.0088 | 0.0033 |
| Neptune | 65276-12-28 18:15 G | 25562992.06 | 25562992.26 | 25562992.47 | 0.0088 | 0.0054 |
| Saturn | 65278-05-10 13:55 G | 25563489.86 | 25563490.08 | 25563490.32 | 0.0275 | 0.0063 |
| Jupiter | 65281-12-17 21:51 G | 25564807.18 | 25564807.41 | 25564807.64 | 0.0486 | 0.0100 |
| Saturn | 65292-11-10 14:39 G | 25568787.86 | 25568788.11 | 25568788.37 | 0.0284 | 0.0054 |
| Jupiter | 65293-12-21 20:53 G | 25569194.23 | 25569194.37 | 25569194.52 | 0.0486 | 0.0386 |
| Jupiter | 65299-06-10 09:51 G | 25571190.77 | 25571190.91 | 25571191.06 | 0.0544 | 0.0401 |
| Saturn | 65308-05-18 02:10 G | 25574454.50 | 25574454.59 | 25574454.70 | 0.0275 | 0.0250 |
| Pluto | 65308-12-02 06:00 G | 25574652.51 | 25574652.75 | 25574653.00 | 0.0079 | 0.0020 |
| Jupiter | 65311-06-16 15:51 G | 25575578.92 | 25575579.16 | 25575579.40 | 0.0543 | 0.0020 |
| Uranus | 65311-06-29 07:27 G | 25575591.64 | 25575591.81 | 25575592.01 | 0.0138 | 0.0090 |

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| Uranus | 65312-07-02 17:46 G | 25575961.01 | 25575961.24 | 25575961.49 | 0.0138 | 0.0054 |
| Uranus | 65313-07-07 10:48 G | 25576330.70 | 25576330.95 | 25576331.20 | 0.0139 | 0.0009 |
| Uranus | 65314-07-11 23:17 G | 25576700.24 | 25576700.47 | 25576700.73 | 0.0139 | 0.0049 |
| Uranus | 65315-07-16 16:19 G | 25577070.02 | 25577070.18 | 25577070.35 | 0.0139 | 0.0103 |
| Saturn | 65322-11-19 12:43 G | 25579753.00 | 25579753.03 | 25579753.08 | 0.0284 | 0.0280 |
| Jupiter | 65323-06-21 23:03 G | 25579967.41 | 25579967.46 | 25579967.53 | 0.0542 | 0.0518 |
| Saturn | 65337-05-12 20:53 G | 25585041.13 | 25585041.37 | 25585041.61 | 0.0275 | 0.0005 |
| Uranus | 65350-12-28 11:17 G | 25590018.94 | 25590018.97 | 25590019.01 | 0.0140 | 0.0139 |
| Saturn | 65351-11-13 10:19 G | 25590338.68 | 25590338.93 | 25590339.18 | 0.0284 | 0.0002 |
| Uranus | 65352-01-02 06:43 G | 25590388.59 | 25590388.78 | 25590388.99 | 0.0140 | 0.0078 |
| Jupiter | 65352-12-14 01:41 G | 25590735.37 | 25590735.57 | 25590735.78 | 0.0485 | 0.0243 |
| Uranus | 65353-01-06 01:41 G | 25590758.31 | 25590758.57 | 25590758.83 | 0.0140 | 0.0028 |
| Neptune | 65353-06-17 06:43 G | 25590920.73 | 25590920.78 | 25590920.89 | 0.0089 | 0.0085 |
| Uranus | 65354-01-10 17:31 G | 25591127.99 | 25591128.23 | 25591128.48 | 0.0139 | 0.0018 |
| Neptune | 65354-06-19 17:46 G | 25591288.05 | 25591288.24 | 25591288.47 | 0.0089 | 0.0054 |
| Uranus | 65355-01-15 12:00 G | 25591497.81 | 25591498.00 | 25591498.24 | 0.0139 | 0.0079 |
| Neptune | 65355-06-22 08:53 G | 25591655.64 | 25591655.87 | 25591656.12 | 0.0089 | 0.0023 |
| Uranus | 65356-01-20 00:43 G | 25591867.41 | 25591867.53 | 25591867.69 | 0.0139 | 0.0115 |
| Neptune | 65356-06-23 15:22 G | 25592022.88 | 25592023.14 | 25592023.40 | 0.0089 | 0.0006 |
| Neptune | 65357-06-26 08:53 G | 25592390.66 | 25592390.87 | 25592391.12 | 0.0089 | 0.0037 |
| Neptune | 65358-06-28 13:41 G | 25592757.92 | 25592758.07 | 25592758.26 | 0.0089 | 0.0066 |
| Jupiter | 65364-12-18 01:12 G | 25595122.31 | 25595122.55 | 25595122.79 | 0.0485 | 0.0068 |
| Saturn | 65366-05-07 20:39 G | 25595628.25 | 25595628.36 | 25595628.50 | 0.0274 | 0.0238 |
| Jupiter | 65376-12-22 13:12 G | 25599509.90 | 25599510.05 | 25599510.22 | 0.0486 | 0.0348 |
| Jupiter | 65382-06-10 14:39 G | 25601505.99 | 25601506.11 | 25601506.24 | 0.0544 | 0.0462 |
| Mars | 65384-04-09 05:31 G | 25602174.56 | 25602174.73 | 25602174.90 | 0.1660 | 0.0486 |
| Jupiter | 65394-06-15 22:05 G | 25605894.19 | 25605894.42 | 25605894.64 | 0.0543 | 0.0036 |
| Uranus | 65394-06-24 22:48 G | 25605903.44 | 25605903.45 | 25605903.49 | 0.0138 | 0.0137 |
| Uranus | 65395-06-29 16:34 G | 25606273.03 | 25606273.19 | 25606273.38 | 0.0138 | 0.0098 |
| Saturn | 65396-05-14 00:15 G | 25606592.27 | 25606592.51 | 25606592.75 | 0.0275 | 0.0052 |

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| Uranus | 65396-07-03 01:55 G | 25606642.33 | 25606642.58 | 25606642.84 | 0.0138 | 0.0035 |
| Uranus | 65397-07-07 20:10 G | 25607012.09 | 25607012.34 | 25607012.59 | 0.0139 | 0.0000 |
| Uranus | 65398-07-12 07:41 G | 25607381.60 | 25607381.82 | 25607382.07 | 0.0139 | 0.0061 |
| Uranus | 65399-07-17 02:10 G | 25607751.44 | 25607751.59 | 25607751.76 | 0.0139 | 0.0106 |
| Jupiter | 65406-06-22 08:24 G | 25610282.73 | 25610282.85 | 25610282.98 | 0.0542 | 0.0456 |
| Saturn | 65410-11-15 11:31 G | 25611889.75 | 25611889.98 | 25611890.22 | 0.0284 | 0.0053 |
| Saturn | 65425-05-09 21:36 G | 25617179.23 | 25617179.40 | 25617179.59 | 0.0275 | 0.0182 |
| Uranus | 65434-12-29 19:41 G | 25620700.19 | 25620700.32 | 25620700.45 | 0.0140 | 0.0122 |
| Jupiter | 65435-12-15 03:22 G | 25621050.45 | 25621050.64 | 25621050.84 | 0.0484 | 0.0284 |
| Uranus | 65436-01-03 16:19 G | 25621069.99 | 25621070.18 | 25621070.39 | 0.0140 | 0.0080 |
| Neptune | 65436-12-21 10:05 G | 25621422.82 | 25621422.92 | 25621423.08 | 0.0088 | 0.0076 |
| Uranus | 65437-01-07 10:05 G | 25621439.66 | 25621439.92 | 25621440.18 | 0.0140 | 0.0025 |
| Neptune | 65437-12-23 18:00 G | 25621790.02 | 25621790.25 | 25621790.49 | 0.0088 | 0.0040 |
| Uranus | 65438-01-12 03:36 G | 25621809.41 | 25621809.65 | 25621809.90 | 0.0139 | 0.0030 |
| Neptune | 65438-12-26 12:00 G | 25622157.75 | 25622158.00 | 25622158.26 | 0.0088 | 0.0017 |
| Uranus | 65439-01-16 21:07 G | 25622179.17 | 25622179.38 | 25622179.62 | 0.0139 | 0.0069 |
| Saturn | 65439-11-09 18:00 G | 25622476.11 | 25622476.25 | 25622476.42 | 0.0284 | 0.0226 |
| Neptune | 65439-12-28 16:34 G | 25622524.95 | 25622525.19 | 25622525.45 | 0.0088 | 0.0019 |
| Uranus | 65440-01-21 11:17 G | 25622548.92 | 25622548.97 | 25622549.06 | 0.0139 | 0.0133 |
| Neptune | 65440-12-30 11:17 G | 25622892.75 | 25622892.97 | 25622893.21 | 0.0088 | 0.0043 |
| Neptune | 65442-01-01 16:48 G | 25623260.09 | 25623260.20 | 25623260.33 | 0.0088 | 0.0078 |
| Jupiter | 65447-12-19 17:03 G | 25625437.98 | 25625438.21 | 25625438.43 | 0.0485 | 0.0025 |
| Saturn | 65455-05-16 23:31 G | 25628143.25 | 25628143.48 | 25628143.71 | 0.0275 | 0.0108 |
| Jupiter | 65459-12-23 19:12 G | 25629825.12 | 25629825.30 | 25629825.49 | 0.0486 | 0.0307 |
| Jupiter | 65465-06-10 18:29 G | 25631821.24 | 25631821.27 | 25631821.32 | 0.0544 | 0.0535 |
| Pluto | 65469-06-03 06:58 G | 25633274.57 | 25633274.79 | 25633275.05 | 0.0065 | 0.0025 |
| Saturn | 65469-11-16 17:03 G | 25633440.98 | 25633441.21 | 25633441.43 | 0.0284 | 0.0110 |
| Jupiter | 65477-06-15 22:34 G | 25636209.21 | 25636209.44 | 25636209.67 | 0.0544 | 0.0125 |
| Uranus | 65479-07-01 02:10 G | 25636954.41 | 25636954.59 | 25636954.81 | 0.0138 | 0.0083 |
| Uranus | 65480-07-04 10:19 G | 25637323.69 | 25637323.93 | 25637324.18 | 0.0138 | 0.0046 |

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| Uranus | 65481-07-09 05:31 G | 25637693.49 | 25637693.73 | 25637693.98 | 0.0139 | 0.0018 |
| Uranus | 65482-07-13 15:22 G | 25638062.92 | 25638063.14 | 25638063.40 | 0.0139 | 0.0055 |
| Uranus | 65483-07-18 10:48 G | 25638432.82 | 25638432.95 | 25638433.11 | 0.0139 | 0.0112 |
| Saturn | 65484-05-11 04:05 G | 25638730.46 | 25638730.67 | 25638730.88 | 0.0275 | 0.0123 |
| Jupiter | 65489-06-20 23:03 G | 25640597.30 | 25640597.46 | 25640597.63 | 0.0543 | 0.0373 |
| Saturn | 65498-11-10 17:03 G | 25644027.01 | 25644027.21 | 25644027.43 | 0.0284 | 0.0163 |
| Saturn | 65514-05-19 00:29 G | 25649694.33 | 25649694.52 | 25649694.72 | 0.0275 | 0.0168 |
| Neptune | 65518-06-21 07:27 G | 25651188.65 | 25651188.81 | 25651189.00 | 0.0089 | 0.0063 |
| Jupiter | 65518-12-15 19:12 G | 25651366.13 | 25651366.30 | 25651366.47 | 0.0484 | 0.0323 |
| Uranus | 65518-12-31 05:31 G | 25651381.65 | 25651381.73 | 25651381.84 | 0.0140 | 0.0131 |
| Neptune | 65519-06-23 13:12 G | 25651555.84 | 25651556.05 | 25651556.29 | 0.0089 | 0.0042 |
| Uranus | 65520-01-05 03:36 G | 25651751.45 | 25651751.65 | 25651751.88 | 0.0140 | 0.0068 |
| Neptune | 65520-06-25 07:41 G | 25651923.57 | 25651923.82 | 25651924.08 | 0.0089 | 0.0004 |
| Uranus | 65521-01-08 20:10 G | 25652121.08 | 25652121.34 | 25652121.60 | 0.0140 | 0.0021 |
| Neptune | 65521-06-27 12:15 G | 25652290.77 | 25652291.01 | 25652291.27 | 0.0089 | 0.0018 |
| Uranus | 65522-01-13 14:39 G | 25652490.87 | 25652491.11 | 25652491.35 | 0.0139 | 0.0027 |
| Neptune | 65522-06-30 05:46 G | 25652658.57 | 25652658.74 | 25652658.97 | 0.0089 | 0.0058 |
| Uranus | 65523-01-18 06:15 G | 25652860.57 | 25652860.76 | 25652860.99 | 0.0139 | 0.0086 |
| Neptune | 65523-07-02 12:43 G | 25653025.95 | 25653026.03 | 25653026.17 | 0.0089 | 0.0079 |
| Uranus | 65524-01-22 21:36 G | 25653230.30 | 25653230.40 | 25653230.52 | 0.0139 | 0.0122 |
| Saturn | 65528-11-18 21:22 G | 25654992.20 | 25654992.39 | 25654992.60 | 0.0284 | 0.0170 |
| Jupiter | 65530-12-19 23:17 G | 25655753.22 | 25655753.47 | 25655753.71 | 0.0485 | 0.0020 |
| Jupiter | 65542-12-24 06:15 G | 25660140.57 | 25660140.76 | 25660140.95 | 0.0485 | 0.0269 |
| Saturn | 65543-05-14 12:00 G | 25660281.77 | 25660282.00 | 25660282.24 | 0.0275 | 0.0060 |
| Saturn | 65557-11-12 22:34 G | 25665578.21 | 25665578.44 | 25665578.67 | 0.0284 | 0.0095 |
| Jupiter | 65560-06-15 20:53 G | 25666524.16 | 25666524.37 | 25666524.59 | 0.0544 | 0.0193 |
| Uranus | 65562-06-27 17:03 G | 25667266.14 | 25667266.21 | 25667266.30 | 0.0138 | 0.0130 |
| Uranus | 65563-07-02 12:00 G | 25667635.82 | 25667636.00 | 25667636.20 | 0.0138 | 0.0089 |
| Uranus | 65564-07-05 19:27 G | 25668005.05 | 25668005.31 | 25668005.56 | 0.0138 | 0.0028 |
| Uranus | 65565-07-10 15:07 G | 25668374.89 | 25668375.13 | 25668375.38 | 0.0139 | 0.0008 |

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| Uranus | 65566-07-15 00:29 G | 25668744.31 | 25668744.52 | 25668744.76 | 0.0139 | 0.0070 |
| Uranus | 65567-07-19 20:53 G | 25669114.24 | 25669114.37 | 25669114.54 | 0.0139 | 0.0111 |
| Jupiter | 65572-06-21 12:29 G | 25670912.85 | 25670913.02 | 25670913.21 | 0.0543 | 0.0331 |
| Saturn | 65573-05-20 07:27 G | 25671245.69 | 25671245.81 | 25671245.95 | 0.0275 | 0.0231 |
| Mars | 65582-10-11 07:41 G | 25674676.63 | 25674676.82 | 25674677.02 | 0.1860 | 0.0346 |
| Saturn | 65587-11-20 22:19 G | 25676543.31 | 25676543.43 | 25676543.58 | 0.0283 | 0.0238 |
| Neptune | 65600-12-21 15:07 G | 25681323.06 | 25681323.13 | 25681323.22 | 0.0088 | 0.0084 |
| Jupiter | 65601-12-15 01:12 G | 25681681.39 | 25681681.55 | 25681681.71 | 0.0484 | 0.0363 |
| Neptune | 65601-12-24 09:22 G | 25681690.72 | 25681690.89 | 25681691.09 | 0.0088 | 0.0060 |
| Saturn | 65602-05-15 16:05 G | 25681832.92 | 25681833.17 | 25681833.42 | 0.0275 | 0.0004 |
| Neptune | 65602-12-26 14:24 G | 25682057.85 | 25682058.10 | 25682058.35 | 0.0088 | 0.0024 |
| Uranus | 65602-12-31 14:39 G | 25682062.97 | 25682063.11 | 25682063.29 | 0.0140 | 0.0112 |
| Neptune | 65603-12-29 08:39 G | 25682425.60 | 25682425.86 | 25682426.13 | 0.0088 | 0.0002 |
| Uranus | 65604-01-05 14:24 G | 25682432.89 | 25682433.10 | 25682433.31 | 0.0140 | 0.0071 |
| Neptune | 65604-12-30 14:39 G | 25682792.89 | 25682793.11 | 25682793.35 | 0.0088 | 0.0035 |
| Uranus | 65605-01-09 05:17 G | 25682802.46 | 25682802.72 | 25682802.99 | 0.0140 | 0.0014 |
| Neptune | 65606-01-02 05:46 G | 25683160.56 | 25683160.74 | 25683160.96 | 0.0088 | 0.0058 |
| Uranus | 65606-01-14 01:27 G | 25683172.32 | 25683172.56 | 25683172.79 | 0.0139 | 0.0038 |
| Uranus | 65607-01-18 16:19 G | 25683541.97 | 25683542.18 | 25683542.40 | 0.0139 | 0.0078 |
| Jupiter | 65613-12-19 05:31 G | 25686068.51 | 25686068.73 | 25686068.96 | 0.0484 | 0.0080 |
| Saturn | 65616-11-14 11:31 G | 25687129.74 | 25687129.98 | 25687130.22 | 0.0284 | 0.0023 |
| Jupiter | 65625-12-23 15:22 G | 25690455.92 | 25690456.14 | 25690456.36 | 0.0485 | 0.0213 |
| Saturn | 65631-05-10 06:00 G | 25692419.66 | 25692419.75 | 25692419.86 | 0.0275 | 0.0246 |
| Jupiter | 65643-06-16 06:29 G | 25696839.58 | 25696839.77 | 25696839.98 | 0.0544 | 0.0258 |
| Uranus | 65646-06-28 01:41 G | 25697947.49 | 25697947.57 | 25697947.68 | 0.0138 | 0.0128 |
| Uranus | 65647-07-02 21:22 G | 25698317.20 | 25698317.39 | 25698317.62 | 0.0138 | 0.0075 |
| Uranus | 65648-07-06 04:05 G | 25698686.43 | 25698686.67 | 25698686.92 | 0.0138 | 0.0037 |
| Uranus | 65649-07-11 00:29 G | 25699056.29 | 25699056.52 | 25699056.78 | 0.0139 | 0.0027 |
| Uranus | 65650-07-15 08:53 G | 25699425.65 | 25699425.87 | 25699426.11 | 0.0139 | 0.0061 |
| Uranus | 65651-07-20 05:46 G | 25699795.64 | 25699795.74 | 25699795.88 | 0.0139 | 0.0121 |

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| Jupiter | 65655-06-21 00:29 G | 25701227.30 | 25701227.52 | 25701227.73 | 0.0543 | 0.0227 |
| Saturn | 65661-05-16 17:46 G | 25703384.01 | 25703384.24 | 25703384.49 | 0.0276 | 0.0071 |
| Mars | 65668-04-12 17:46 G | 25705907.06 | 25705907.24 | 25705907.41 | 0.1665 | 0.0424 |
| Saturn | 65675-11-17 00:29 G | 25708681.28 | 25708681.52 | 25708681.77 | 0.0284 | 0.0053 |
| Neptune | 65682-06-20 11:46 G | 25711088.88 | 25711088.99 | 25711089.11 | 0.0089 | 0.0080 |
| Neptune | 65683-06-23 06:00 G | 25711456.56 | 25711456.75 | 25711456.97 | 0.0089 | 0.0053 |
| Neptune | 65684-06-24 11:03 G | 25711823.72 | 25711823.96 | 25711824.21 | 0.0089 | 0.0020 |
| Jupiter | 65684-12-14 05:46 G | 25711996.63 | 25711996.74 | 25711996.85 | 0.0484 | 0.0421 |
| Neptune | 65685-06-27 04:19 G | 25712191.43 | 25712191.68 | 25712191.95 | 0.0089 | 0.0009 |
| Neptune | 65686-06-29 11:31 G | 25712558.77 | 25712558.98 | 25712559.21 | 0.0089 | 0.0041 |
| Uranus | 65687-01-01 01:55 G | 25712744.45 | 25712744.58 | 25712744.72 | 0.0140 | 0.0120 |
| Neptune | 65687-07-02 00:00 G | 25712926.36 | 25712926.50 | 25712926.71 | 0.0089 | 0.0069 |
| Uranus | 65688-01-06 02:10 G | 25713114.37 | 25713114.59 | 25713114.83 | 0.0140 | 0.0056 |
| Uranus | 65689-01-09 16:05 G | 25713483.91 | 25713484.17 | 25713484.44 | 0.0140 | 0.0012 |
| Uranus | 65690-01-14 12:43 G | 25713853.80 | 25713854.03 | 25713854.28 | 0.0139 | 0.0039 |
| Saturn | 65690-05-11 18:00 G | 25713971.08 | 25713971.25 | 25713971.43 | 0.0275 | 0.0179 |
| Uranus | 65691-01-19 02:24 G | 25714223.41 | 25714223.60 | 25714223.80 | 0.0139 | 0.0094 |
| Uranus | 65692-01-23 19:55 G | 25714593.26 | 25714593.33 | 25714593.42 | 0.0139 | 0.0131 |
| Jupiter | 65696-12-18 15:07 G | 25716383.90 | 25716384.13 | 25716384.37 | 0.0485 | 0.0134 |
| Saturn | 65704-11-10 17:46 G | 25719267.11 | 25719267.24 | 25719267.39 | 0.0284 | 0.0234 |
| Jupiter | 65708-12-23 16:34 G | 25720770.97 | 25720771.19 | 25720771.41 | 0.0485 | 0.0167 |
| Pluto | 65717-06-06 12:43 G | 25723857.78 | 25723858.03 | 25723858.29 | 0.0065 | 0.0017 |
| Saturn | 65720-05-19 00:43 G | 25724935.33 | 25724935.53 | 25724935.74 | 0.0276 | 0.0136 |
| Jupiter | 65726-06-15 15:51 G | 25727154.00 | 25727154.16 | 25727154.34 | 0.0544 | 0.0371 |
| Uranus | 65730-06-29 11:31 G | 25728628.88 | 25728628.98 | 25728629.12 | 0.0138 | 0.0122 |
| Uranus | 65731-07-04 07:27 G | 25728998.60 | 25728998.81 | 25728999.01 | 0.0138 | 0.0078 |
| Uranus | 65732-07-07 13:27 G | 25729367.81 | 25729368.06 | 25729368.32 | 0.0138 | 0.0019 |
| Uranus | 65733-07-12 10:19 G | 25729737.69 | 25729737.93 | 25729738.18 | 0.0139 | 0.0016 |
| Uranus | 65734-07-16 18:15 G | 25730107.06 | 25730107.26 | 25730107.48 | 0.0139 | 0.0080 |
| Saturn | 65734-11-19 10:48 G | 25730232.72 | 25730232.95 | 25730233.18 | 0.0283 | 0.0127 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 65735-07-21 16:34 G | 25730477.06 | 25730477.19 | 25730477.32 | 0.0139 | 0.0118 |
| Jupiter | 65738-06-21 04:48 G | 25731542.49 | 25731542.70 | 25731542.92 | 0.0544 | 0.0147 |
| Saturn | 65749-05-14 03:51 G | 25735522.44 | 25735522.66 | 25735522.89 | 0.0275 | 0.0110 |
| Saturn | 65763-11-13 08:10 G | 25740818.65 | 25740818.84 | 25740819.05 | 0.0284 | 0.0159 |
| Neptune | 65765-12-24 10:48 G | 25741590.83 | 25741590.95 | 25741591.11 | 0.0088 | 0.0074 |
| Neptune | 65766-12-27 05:03 G | 25741958.48 | 25741958.71 | 25741958.96 | 0.0088 | 0.0037 |
| Jupiter | 65767-12-15 15:22 G | 25742312.09 | 25742312.14 | 25742312.20 | 0.0484 | 0.0469 |
| Neptune | 65767-12-29 12:43 G | 25742325.78 | 25742326.03 | 25742326.28 | 0.0088 | 0.0015 |
| Neptune | 65768-12-31 02:53 G | 25742693.37 | 25742693.62 | 25742693.89 | 0.0088 | 0.0021 |
| Neptune | 65770-01-02 14:24 G | 25743060.89 | 25743061.10 | 25743061.32 | 0.0088 | 0.0043 |
| Uranus | 65771-01-02 11:31 G | 25743425.81 | 25743425.98 | 25743426.18 | 0.0140 | 0.0099 |
| Neptune | 65771-01-04 23:03 G | 25743428.38 | 25743428.46 | 25743428.60 | 0.0088 | 0.0080 |
| Uranus | 65772-01-07 12:29 G | 25743795.81 | 25743796.02 | 25743796.26 | 0.0140 | 0.0061 |
| Uranus | 65773-01-11 01:41 G | 25744165.31 | 25744165.57 | 25744165.83 | 0.0140 | 0.0001 |
| Uranus | 65774-01-15 23:31 G | 25744535.26 | 25744535.48 | 25744535.72 | 0.0139 | 0.0048 |
| Uranus | 65775-01-20 12:29 G | 25744904.82 | 25744905.02 | 25744905.22 | 0.0139 | 0.0089 |
| Saturn | 65779-05-21 12:15 G | 25746486.87 | 25746487.01 | 25746487.18 | 0.0276 | 0.0201 |
| Jupiter | 65779-12-19 15:07 G | 25746698.92 | 25746699.13 | 25746699.35 | 0.0485 | 0.0188 |
| Jupiter | 65791-12-24 02:39 G | 25751086.38 | 25751086.61 | 25751086.84 | 0.0485 | 0.0109 |
| Saturn | 65793-11-20 20:10 G | 25751784.17 | 25751784.34 | 25751784.52 | 0.0283 | 0.0206 |
| Jupiter | 65803-12-29 01:41 G | 25755473.50 | 25755473.57 | 25755473.65 | 0.0485 | 0.0459 |
| Pluto | 65805-12-09 16:34 G | 25756184.93 | 25756185.19 | 25756185.46 | 0.0079 | 0.0009 |
| Saturn | 65808-05-16 09:51 G | 25757073.67 | 25757073.91 | 25757074.16 | 0.0275 | 0.0043 |
| Jupiter | 65809-06-15 23:31 G | 25757469.36 | 25757469.48 | 25757469.61 | 0.0544 | 0.0446 |
| Uranus | 65814-06-30 20:10 G | 25759310.23 | 25759310.34 | 25759310.49 | 0.0138 | 0.0117 |
| Uranus | 65815-07-05 16:05 G | 25759679.96 | 25759680.17 | 25759680.40 | 0.0138 | 0.0066 |
| Uranus | 65816-07-08 22:19 G | 25760049.18 | 25760049.43 | 25760049.68 | 0.0138 | 0.0027 |
| Uranus | 65817-07-13 19:27 G | 25760419.07 | 25760419.31 | 25760419.56 | 0.0139 | 0.0036 |
| Uranus | 65818-07-18 02:53 G | 25760788.41 | 25760788.62 | 25760788.85 | 0.0139 | 0.0070 |
| Uranus | 65819-07-23 01:12 G | 25761158.47 | 25761158.55 | 25761158.64 | 0.0139 | 0.0131 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 65821-06-21 03:22 G | 25761857.41 | 25761857.64 | 25761857.88 | 0.0544 | 0.0072 |
| Saturn | 65822-11-16 01:27 G | 25762370.33 | 25762370.56 | 25762370.80 | 0.0284 | 0.0078 |
| Jupiter | 65833-06-26 04:34 G | 25766245.65 | 25766245.69 | 25766245.75 | 0.0542 | 0.0528 |
| Saturn | 65838-05-23 23:46 G | 25768038.43 | 25768038.49 | 25768038.54 | 0.0276 | 0.0268 |
| Neptune | 65847-06-24 08:53 G | 25771356.70 | 25771356.87 | 25771357.07 | 0.0089 | 0.0060 |
| Neptune | 65848-06-26 01:12 G | 25771724.33 | 25771724.55 | 25771724.80 | 0.0089 | 0.0039 |
| Neptune | 65849-06-28 10:05 G | 25772091.68 | 25772091.92 | 25772092.17 | 0.0089 | 0.0002 |
| Neptune | 65850-06-30 22:34 G | 25772459.19 | 25772459.44 | 25772459.70 | 0.0089 | 0.0021 |
| Neptune | 65851-07-03 11:31 G | 25772826.81 | 25772826.98 | 25772827.18 | 0.0089 | 0.0059 |
| Neptune | 65852-07-04 18:58 G | 25773194.20 | 25773194.29 | 25773194.42 | 0.0089 | 0.0080 |
| Saturn | 65852-11-23 07:55 G | 25773335.83 | 25773335.83 | 25773335.86 | 0.0283 | 0.0283 |
| Uranus | 65855-01-03 22:34 G | 25774107.29 | 25774107.44 | 25774107.61 | 0.0140 | 0.0109 |
| Uranus | 65856-01-09 00:15 G | 25774477.28 | 25774477.51 | 25774477.76 | 0.0140 | 0.0043 |
| Uranus | 65857-01-12 12:43 G | 25774846.77 | 25774847.03 | 25774847.29 | 0.0140 | 0.0003 |
| Uranus | 65858-01-17 11:03 G | 25775216.74 | 25775216.96 | 25775217.20 | 0.0139 | 0.0051 |
| Uranus | 65859-01-21 22:19 G | 25775586.28 | 25775586.43 | 25775586.62 | 0.0139 | 0.0104 |
| Jupiter | 65862-12-20 02:10 G | 25777014.38 | 25777014.59 | 25777014.79 | 0.0484 | 0.0246 |
| Mars | 65866-10-13 04:48 G | 25778407.57 | 25778407.70 | 25778407.83 | 0.1853 | 0.1337 |
| Saturn | 65867-05-18 16:05 G | 25778624.93 | 25778625.17 | 25778625.41 | 0.0275 | 0.0027 |
| Jupiter | 65874-12-24 00:15 G | 25781401.27 | 25781401.51 | 25781401.74 | 0.0485 | 0.0057 |
| Saturn | 65881-11-17 14:53 G | 25783921.86 | 25783922.12 | 25783922.37 | 0.0284 | 0.0002 |
| Jupiter | 65886-12-28 12:58 G | 25785788.93 | 25785789.04 | 25785789.16 | 0.0486 | 0.0421 |
| Jupiter | 65892-06-14 16:05 G | 25787784.15 | 25787784.17 | 25787784.21 | 0.0544 | 0.0539 |
| Saturn | 65896-05-12 22:05 G | 25789212.27 | 25789212.42 | 25789212.58 | 0.0275 | 0.0208 |
| Uranus | 65898-07-01 07:12 G | 25789991.66 | 25789991.80 | 25789991.94 | 0.0138 | 0.0113 |
| Uranus | 65899-07-06 01:55 G | 25790361.37 | 25790361.58 | 25790361.81 | 0.0138 | 0.0068 |
| Uranus | 65900-07-10 08:24 G | 25790730.60 | 25790730.85 | 25790731.10 | 0.0138 | 0.0011 |
| Uranus | 65901-07-15 05:03 G | 25791100.47 | 25791100.71 | 25791100.97 | 0.0139 | 0.0026 |
| Uranus | 65902-07-19 12:43 G | 25791469.84 | 25791470.03 | 25791470.23 | 0.0139 | 0.0089 |
| Uranus | 65903-07-24 11:31 G | 25791839.88 | 25791839.98 | 25791840.09 | 0.0139 | 0.0126 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 65904-06-20 21:36 G | 25792172.18 | 25792172.40 | 25792172.62 | 0.0543 | 0.0033 |
| Saturn | 65910-11-13 00:15 G | 25794508.41 | 25794508.51 | 25794508.62 | 0.0284 | 0.0255 |
| Jupiter | 65916-06-26 06:00 G | 25796560.61 | 25796560.75 | 25796560.90 | 0.0543 | 0.0432 |
| Saturn | 65926-05-21 02:24 G | 25800176.38 | 25800176.60 | 25800176.82 | 0.0275 | 0.0094 |
| Neptune | 65929-12-26 00:29 G | 25801491.46 | 25801491.52 | 25801491.65 | 0.0088 | 0.0082 |
| Neptune | 65930-12-28 08:53 G | 25801858.69 | 25801858.87 | 25801859.07 | 0.0088 | 0.0057 |
| Neptune | 65931-12-30 21:36 G | 25802226.15 | 25802226.40 | 25802226.67 | 0.0088 | 0.0025 |
| Neptune | 65933-01-01 10:48 G | 25802593.70 | 25802593.95 | 25802594.20 | 0.0088 | 0.0001 |
| Neptune | 65934-01-03 18:58 G | 25802961.06 | 25802961.29 | 25802961.54 | 0.0088 | 0.0035 |
| Neptune | 65935-01-06 12:15 G | 25803328.84 | 25803329.01 | 25803329.21 | 0.0088 | 0.0060 |
| Uranus | 65939-01-05 08:39 G | 25804788.68 | 25804788.86 | 25804789.08 | 0.0141 | 0.0089 |
| Uranus | 65940-01-10 10:48 G | 25805158.72 | 25805158.95 | 25805159.19 | 0.0140 | 0.0051 |
| Saturn | 65940-11-19 21:22 G | 25805473.15 | 25805473.39 | 25805473.65 | 0.0284 | 0.0077 |
| Uranus | 65941-01-13 22:19 G | 25805528.18 | 25805528.43 | 25805528.69 | 0.0140 | 0.0011 |
| Uranus | 65942-01-18 21:51 G | 25805898.19 | 25805898.41 | 25805898.65 | 0.0139 | 0.0057 |
| Uranus | 65943-01-23 08:53 G | 25806267.71 | 25806267.87 | 25806268.06 | 0.0139 | 0.0101 |
| Jupiter | 65945-12-20 00:15 G | 25807329.33 | 25807329.51 | 25807329.70 | 0.0484 | 0.0303 |
| Mars | 65952-04-16 13:27 G | 25809638.89 | 25809639.06 | 25809639.23 | 0.1669 | 0.0901 |
| Saturn | 65955-05-16 03:22 G | 25810763.44 | 25810763.64 | 25810763.86 | 0.0275 | 0.0144 |
| Jupiter | 65957-12-24 12:00 G | 25811716.77 | 25811717.00 | 25811717.23 | 0.0485 | 0.0012 |
| Pluto | 65965-06-09 09:22 G | 25814440.71 | 25814440.89 | 25814441.09 | 0.0065 | 0.0041 |
| Pluto | 65966-06-11 00:29 G | 25814807.38 | 25814807.52 | 25814807.67 | 0.0065 | 0.0053 |
| Saturn | 65969-11-14 14:24 G | 25816059.92 | 25816060.10 | 25816060.29 | 0.0284 | 0.0184 |
| Jupiter | 65969-12-28 13:41 G | 25816103.91 | 25816104.07 | 25816104.23 | 0.0485 | 0.0366 |
| Uranus | 65982-07-02 16:19 G | 25820673.02 | 25820673.18 | 25820673.34 | 0.0138 | 0.0106 |
| Uranus | 65983-07-07 11:03 G | 25821042.73 | 25821042.96 | 25821043.20 | 0.0138 | 0.0058 |
| Uranus | 65984-07-10 17:46 G | 25821412.00 | 25821412.24 | 25821412.49 | 0.0138 | 0.0017 |
| Saturn | 65985-05-22 14:24 G | 25821727.92 | 25821728.10 | 25821728.31 | 0.0275 | 0.0159 |
| Uranus | 65985-07-15 14:24 G | 25821781.87 | 25821782.10 | 25821782.35 | 0.0139 | 0.0045 |
| Uranus | 65986-07-19 22:05 G | 25822151.23 | 25822151.42 | 25822151.64 | 0.0139 | 0.0079 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 65987-06-21 00:43 G | 25822487.30 | 25822487.53 | 25822487.76 | 0.0544 | 0.0103 |
| Jupiter | 65999-06-26 03:07 G | 25826875.47 | 25826875.63 | 25826875.80 | 0.0543 | 0.0365 |
| Saturn | 65999-11-22 04:34 G | 25827024.49 | 25827024.69 | 25827024.91 | 0.0284 | 0.0149 |

67TH MILLENNIUM CE

This is a list of transits of Moon in the 67th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Neptune | 66011-06-24 22:05 G | | 25831257.30 | 25831257.42 | 25831257.57 | 0.0089 | 0.0077 | |
| Neptune | 66012-06-26 07:41 G | | 25831624.64 | 25831624.82 | 25831625.04 | 0.0089 | 0.0052 | |
| Neptune | 66013-06-28 18:43 G | | 25831992.04 | 25831992.28 | 25831992.56 | 0.0089 | 0.0018 | |
| Saturn | 66014-05-17 05:03 G | | 25832314.47 | 25832314.71 | 25832314.95 | 0.0275 | 0.0084 | |
| Neptune | 66014-07-01 08:53 G | | 25832359.63 | 25832359.87 | 25832360.13 | 0.0089 | 0.0010 | |
| Neptune | 66015-07-03 15:07 G | | 25832726.93 | 25832727.13 | 25832727.38 | 0.0089 | 0.0045 | |
| Neptune | 66016-07-05 09:07 G | | 25833094.74 | 25833094.88 | 25833095.06 | 0.0089 | 0.0069 | |
| Uranus | 66022-01-01 07:27 G | | 25835100.75 | 25835100.81 | 25835100.88 | 0.0141 | 0.0136 | |
| Uranus | 66023-01-05 20:10 G | | 25835470.17 | 25835470.34 | 25835470.53 | 0.0141 | 0.0099 | |
| Uranus | 66024-01-10 22:34 G | | 25835840.20 | 25835840.44 | 25835840.69 | 0.0140 | 0.0032 | |
| Uranus | 66025-01-14 10:05 G | | 25836209.66 | 25836209.92 | 25836210.17 | 0.0140 | 0.0007 | |
| Uranus | 66026-01-19 09:51 G | | 25836579.70 | 25836579.91 | 25836580.15 | 0.0139 | 0.0062 | |
| Uranus | 66027-01-23 19:55 G | | 25836949.20 | 25836949.33 | 25836949.50 | 0.0139 | 0.0113 | |
| Saturn | 66028-11-15 23:46 G | | 25837611.28 | 25837611.49 | 25837611.73 | 0.0284 | 0.0118 | |
| Jupiter | 66028-12-19 11:31 G | | 25837644.83 | 25837644.98 | 25837645.14 | 0.0484 | 0.0360 | |
| Jupiter | 66040-12-23 15:22 G | | 25842031.90 | 25842032.14 | 25842032.39 | 0.0484 | 0.0034 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 66044-05-23 21:51 G | 25843279.27 | 25843279.41 | 25843279.56 | 0.0275 | 0.0218 |
| Jupiter | 66052-12-27 21:36 G | 25846419.23 | 25846419.40 | 25846419.57 | 0.0485 | 0.0326 |
| Pluto | 66053-12-11 17:17 G | 25846768.05 | 25846768.22 | 25846768.42 | 0.0079 | 0.0054 |
| Saturn | 66058-11-23 14:24 G | 25848575.95 | 25848576.10 | 25848576.27 | 0.0284 | 0.0212 |
| Uranus | 66066-07-03 04:05 G | 25851354.52 | 25851354.67 | 25851354.83 | 0.0138 | 0.0105 |
| Uranus | 66067-07-07 21:51 G | 25851724.18 | 25851724.41 | 25851724.65 | 0.0138 | 0.0057 |
| Uranus | 66068-07-11 05:03 G | 25852093.46 | 25852093.71 | 25852093.96 | 0.0138 | 0.0002 |
| Uranus | 66069-07-16 01:12 G | 25852463.30 | 25852463.55 | 25852463.80 | 0.0139 | 0.0035 |
| Jupiter | 66070-06-19 21:36 G | 25852802.19 | 25852802.40 | 25852802.62 | 0.0544 | 0.0173 |
| Uranus | 66070-07-20 08:53 G | 25852832.71 | 25852832.87 | 25852833.06 | 0.0139 | 0.0099 |
| Uranus | 66071-07-25 07:27 G | 25853202.76 | 25853202.81 | 25853202.90 | 0.0139 | 0.0134 |
| Saturn | 66073-05-18 09:22 G | 25853865.66 | 25853865.89 | 25853866.13 | 0.0275 | 0.0027 |
| Jupiter | 66082-06-25 10:05 G | 25857190.72 | 25857190.92 | 25857191.12 | 0.0543 | 0.0282 |
| Saturn | 66087-11-18 02:39 G | 25859162.36 | 25859162.61 | 25859162.86 | 0.0284 | 0.0057 |
| Neptune | 66094-12-27 17:17 G | 25861759.09 | 25861759.22 | 25861759.38 | 0.0088 | 0.0074 |
| Neptune | 66095-12-30 07:12 G | 25862126.59 | 25862126.80 | 25862127.05 | 0.0088 | 0.0036 |
| Neptune | 66096-12-31 14:24 G | 25862493.85 | 25862494.10 | 25862494.37 | 0.0088 | 0.0015 |
| Neptune | 66098-01-03 07:55 G | 25862861.60 | 25862861.83 | 25862862.09 | 0.0088 | 0.0024 |
| Neptune | 66099-01-05 12:43 G | 25863228.82 | 25863229.03 | 25863229.27 | 0.0088 | 0.0043 |
| Neptune | 66100-01-08 07:12 G | 25863596.73 | 25863596.80 | 25863596.93 | 0.0088 | 0.0081 |
| Saturn | 66102-05-14 19:12 G | 25864453.23 | 25864453.30 | 25864453.40 | 0.0274 | 0.0256 |
| Saturn | 66103-05-26 22:19 G | 25864830.41 | 25864830.43 | 25864830.48 | 0.0275 | 0.0272 |
| Uranus | 66107-01-07 07:27 G | 25866151.62 | 25866151.81 | 25866152.04 | 0.0141 | 0.0079 |
| Uranus | 66108-01-12 09:51 G | 25866521.67 | 25866521.91 | 25866522.16 | 0.0140 | 0.0041 |
| Uranus | 66109-01-15 20:53 G | 25866891.12 | 25866891.37 | 25866891.62 | 0.0140 | 0.0022 |
| Uranus | 66110-01-20 21:22 G | 25867261.18 | 25867261.39 | 25867261.62 | 0.0139 | 0.0066 |
| Uranus | 66111-01-25 07:12 G | 25867630.67 | 25867630.80 | 25867630.97 | 0.0139 | 0.0112 |
| Jupiter | 66111-12-20 16:48 G | 25867960.07 | 25867960.20 | 25867960.34 | 0.0484 | 0.0404 |
| Saturn | 66117-11-25 23:17 G | 25870127.41 | 25870127.47 | 25870127.53 | 0.0284 | 0.0273 |
| Jupiter | 66123-12-25 00:00 G | 25872347.28 | 25872347.50 | 25872347.73 | 0.0484 | 0.0075 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 66132-05-20 16:48 G | 25875416.97 | 25875417.20 | 25875417.43 | 0.0275 | 0.0028 |
| Jupiter | 66135-12-29 08:39 G | 25876734.66 | 25876734.86 | 25876735.05 | 0.0485 | 0.0290 |
| Saturn | 66146-11-20 00:43 G | 25880713.28 | 25880713.53 | 25880713.78 | 0.0284 | 0.0002 |
| Uranus | 66150-07-04 13:41 G | 25882035.91 | 25882036.07 | 25882036.27 | 0.0137 | 0.0096 |
| Uranus | 66151-07-09 07:12 G | 25882405.57 | 25882405.80 | 25882406.05 | 0.0138 | 0.0050 |
| Uranus | 66152-07-12 15:36 G | 25882774.90 | 25882775.15 | 25882775.39 | 0.0138 | 0.0007 |
| Jupiter | 66153-06-20 01:55 G | 25883117.38 | 25883117.58 | 25883117.78 | 0.0545 | 0.0260 |
| Uranus | 66153-07-17 10:48 G | 25883144.73 | 25883144.95 | 25883145.20 | 0.0139 | 0.0054 |
| Uranus | 66154-07-21 19:41 G | 25883514.15 | 25883514.32 | 25883514.53 | 0.0139 | 0.0088 |
| Mars | 66157-04-16 07:55 G | 25884513.69 | 25884513.83 | 25884513.98 | 0.1678 | 0.0922 |
| Saturn | 66161-05-15 20:10 G | 25886004.17 | 25886004.34 | 25886004.52 | 0.0274 | 0.0198 |
| Jupiter | 66165-06-25 02:24 G | 25887505.39 | 25887505.60 | 25887505.82 | 0.0544 | 0.0203 |
| Saturn | 66175-11-14 05:46 G | 25891299.71 | 25891299.74 | 25891299.78 | 0.0284 | 0.0281 |
| Neptune | 66176-06-26 14:10 G | 25891524.92 | 25891525.09 | 25891525.30 | 0.0089 | 0.0060 |
| Neptune | 66177-06-29 05:46 G | 25891892.53 | 25891892.74 | 25891892.99 | 0.0089 | 0.0038 |
| Neptune | 66178-07-01 12:29 G | 25892259.76 | 25892260.02 | 25892260.28 | 0.0089 | 0.0001 |
| Neptune | 66179-07-04 06:29 G | 25892627.53 | 25892627.77 | 25892628.03 | 0.0089 | 0.0023 |
| Neptune | 66180-07-05 10:48 G | 25892994.79 | 25892994.95 | 25892995.16 | 0.0089 | 0.0060 |
| Neptune | 66181-07-08 05:03 G | 25893362.62 | 25893362.71 | 25893362.83 | 0.0089 | 0.0081 |
| Uranus | 66190-01-03 06:00 G | 25896463.66 | 25896463.75 | 25896463.89 | 0.0141 | 0.0126 |
| Uranus | 66191-01-07 19:41 G | 25896833.14 | 25896833.32 | 25896833.53 | 0.0141 | 0.0088 |
| Saturn | 66191-05-22 22:05 G | 25896968.19 | 25896968.42 | 25896968.65 | 0.0275 | 0.0082 |
| Uranus | 66192-01-12 22:19 G | 25897203.17 | 25897203.43 | 25897203.68 | 0.0140 | 0.0021 |
| Uranus | 66193-01-16 09:36 G | 25897572.65 | 25897572.90 | 25897573.16 | 0.0140 | 0.0017 |
| Uranus | 66194-01-21 10:19 G | 25897942.73 | 25897942.93 | 25897943.16 | 0.0139 | 0.0074 |
| Jupiter | 66194-12-20 02:24 G | 25898275.52 | 25898275.60 | 25898275.69 | 0.0484 | 0.0447 |
| Uranus | 66195-01-25 20:10 G | 25898312.23 | 25898312.34 | 25898312.46 | 0.0139 | 0.0123 |
| Saturn | 66205-11-22 02:10 G | 25902264.35 | 25902264.59 | 25902264.83 | 0.0284 | 0.0056 |
| Jupiter | 66206-12-25 12:29 G | 25902662.78 | 25902663.02 | 25902663.26 | 0.0484 | 0.0101 |
| Pluto | 66214-06-14 01:41 G | 25905390.36 | 25905390.57 | 25905390.82 | 0.0065 | 0.0023 |

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| Jupiter | 66218-12-29 13:55 G | 25907049.89 | 25907050.08 | 25907050.28 | 0.0484 | 0.0265 |
| Saturn | 66220-05-17 19:12 G | 25907555.10 | 25907555.30 | 25907555.51 | 0.0275 | 0.0142 |
| Uranus | 66233-07-01 18:15 G | 25912348.21 | 25912348.26 | 25912348.36 | 0.0137 | 0.0131 |
| Uranus | 66234-07-06 02:39 G | 25912717.45 | 25912717.61 | 25912717.81 | 0.0137 | 0.0096 |
| Saturn | 66234-11-16 05:46 G | 25912850.59 | 25912850.74 | 25912850.90 | 0.0284 | 0.0224 |
| Uranus | 66235-07-10 19:12 G | 25913087.05 | 25913087.30 | 25913087.55 | 0.0138 | 0.0045 |
| Mars | 66236-04-19 07:41 G | 25913370.72 | 25913370.82 | 25913370.91 | 0.1675 | 0.1410 |
| Jupiter | 66236-06-20 01:27 G | 25913432.38 | 25913432.56 | 25913432.75 | 0.0545 | 0.0318 |
| Uranus | 66236-07-14 03:51 G | 25913456.42 | 25913456.66 | 25913456.91 | 0.0138 | 0.0008 |
| Uranus | 66237-07-18 22:34 G | 25913826.20 | 25913826.44 | 25913826.69 | 0.0139 | 0.0046 |
| Uranus | 66238-07-23 07:27 G | 25914195.68 | 25914195.81 | 25914195.98 | 0.0139 | 0.0109 |
| Jupiter | 66248-06-25 16:05 G | 25917820.95 | 25917821.17 | 25917821.39 | 0.0544 | 0.0141 |
| Saturn | 66250-05-24 22:19 G | 25918519.22 | 25918519.43 | 25918519.66 | 0.0275 | 0.0133 |
| Neptune | 66258-12-29 01:55 G | 25921659.52 | 25921659.58 | 25921659.68 | 0.0088 | 0.0083 |
| Neptune | 66259-12-31 08:10 G | 25922026.66 | 25922026.84 | 25922027.07 | 0.0088 | 0.0055 |
| Neptune | 66261-01-02 02:53 G | 25922394.38 | 25922394.62 | 25922394.88 | 0.0088 | 0.0025 |
| Neptune | 66262-01-04 07:55 G | 25922761.57 | 25922761.83 | 25922762.09 | 0.0088 | 0.0002 |
| Neptune | 66263-01-07 01:55 G | 25923129.35 | 25923129.58 | 25923129.84 | 0.0088 | 0.0034 |
| Neptune | 66264-01-09 08:10 G | 25923496.68 | 25923496.84 | 25923497.04 | 0.0088 | 0.0061 |
| Saturn | 66264-11-23 06:43 G | 25923815.56 | 25923815.78 | 25923816.01 | 0.0284 | 0.0108 |
| Uranus | 66274-01-04 18:15 G | 25927145.18 | 25927145.26 | 25927145.38 | 0.0141 | 0.0130 |
| Uranus | 66275-01-09 08:39 G | 25927514.64 | 25927514.86 | 25927515.08 | 0.0141 | 0.0066 |
| Uranus | 66276-01-14 10:19 G | 25927884.68 | 25927884.93 | 25927885.18 | 0.0140 | 0.0029 |
| Uranus | 66277-01-17 21:51 G | 25928254.17 | 25928254.41 | 25928254.66 | 0.0140 | 0.0035 |
| Jupiter | 66277-12-20 17:17 G | 25928591.18 | 25928591.22 | 25928591.27 | 0.0484 | 0.0474 |
| Uranus | 66278-01-22 22:48 G | 25928624.24 | 25928624.45 | 25928624.66 | 0.0139 | 0.0077 |
| Uranus | 66279-01-27 08:24 G | 25928993.75 | 25928993.85 | 25928993.97 | 0.0139 | 0.0124 |
| Saturn | 66279-05-19 23:46 G | 25929106.27 | 25929106.49 | 25929106.71 | 0.0275 | 0.0091 |
| Jupiter | 66289-12-24 17:03 G | 25932977.98 | 25932978.21 | 25932978.43 | 0.0484 | 0.0133 |
| Saturn | 66293-11-17 02:24 G | 25934401.40 | 25934401.60 | 25934401.81 | 0.0284 | 0.0169 |

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| Jupiter | 66301-12-30 06:43 G | 25937365.58 | 25937365.78 | 25937365.99 | 0.0484 | 0.0233 |
| Pluto | 66302-12-17 17:03 G | 25937718.16 | 25937718.21 | 25937718.33 | 0.0079 | 0.0075 |
| Saturn | 66309-05-26 19:41 G | 25940070.15 | 25940070.32 | 25940070.51 | 0.0275 | 0.0182 |
| Uranus | 66317-07-03 04:05 G | 25943029.67 | 25943029.67 | 25943029.69 | 0.0137 | 0.0137 |
| Uranus | 66318-07-07 13:27 G | 25943398.88 | 25943399.06 | 25943399.27 | 0.0137 | 0.0082 |
| Jupiter | 66319-06-21 12:58 G | 25943747.88 | 25943748.04 | 25943748.20 | 0.0545 | 0.0381 |
| Uranus | 66319-07-12 04:48 G | 25943768.46 | 25943768.70 | 25943768.96 | 0.0138 | 0.0039 |
| Uranus | 66320-07-15 15:07 G | 25944137.89 | 25944138.13 | 25944138.38 | 0.0138 | 0.0006 |
| Uranus | 66321-07-20 08:39 G | 25944507.64 | 25944507.86 | 25944508.10 | 0.0138 | 0.0064 |
| Uranus | 66322-07-24 18:58 G | 25944877.13 | 25944877.29 | 25944877.48 | 0.0139 | 0.0099 |
| Saturn | 66323-11-26 07:55 G | 25945366.62 | 25945366.83 | 25945367.04 | 0.0284 | 0.0158 |
| Jupiter | 66331-06-26 10:05 G | 25948135.68 | 25948135.92 | 25948136.16 | 0.0544 | 0.0042 |
| Saturn | 66338-05-22 06:43 G | 25950657.54 | 25950657.78 | 25950658.01 | 0.0275 | 0.0038 |
| Neptune | 66340-06-28 02:10 G | 25951425.46 | 25951425.59 | 25951425.73 | 0.0089 | 0.0075 |
| Neptune | 66341-06-30 07:12 G | 25951792.61 | 25951792.80 | 25951793.02 | 0.0089 | 0.0053 |
| Neptune | 66342-07-03 01:55 G | 25952160.33 | 25952160.58 | 25952160.83 | 0.0089 | 0.0016 |
| Jupiter | 66343-07-01 16:19 G | 25952524.08 | 25952524.18 | 25952524.29 | 0.0544 | 0.0479 |
| Neptune | 66343-07-05 06:58 G | 25952527.54 | 25952527.79 | 25952528.04 | 0.0089 | 0.0008 |
| Neptune | 66344-07-07 00:00 G | 25952895.29 | 25952895.50 | 25952895.74 | 0.0089 | 0.0045 |
| Neptune | 66345-07-09 07:27 G | 25953262.66 | 25953262.81 | 25953262.98 | 0.0089 | 0.0069 |
| Saturn | 66352-11-19 04:05 G | 25955952.45 | 25955952.67 | 25955952.90 | 0.0284 | 0.0116 |
| Uranus | 66358-01-06 05:31 G | 25957826.60 | 25957826.73 | 25957826.91 | 0.0141 | 0.0114 |
| Uranus | 66359-01-10 20:39 G | 25958196.16 | 25958196.36 | 25958196.59 | 0.0141 | 0.0074 |
| Uranus | 66360-01-15 22:34 G | 25958566.18 | 25958566.44 | 25958566.70 | 0.0140 | 0.0008 |
| Uranus | 66361-01-19 10:48 G | 25958935.71 | 25958935.95 | 25958936.20 | 0.0140 | 0.0030 |
| Uranus | 66362-01-24 11:46 G | 25959305.79 | 25959305.99 | 25959306.19 | 0.0139 | 0.0087 |
| Uranus | 66363-01-28 21:22 G | 25959675.34 | 25959675.39 | 25959675.47 | 0.0139 | 0.0134 |
| Saturn | 66368-05-27 22:48 G | 25961621.34 | 25961621.45 | 25961621.59 | 0.0275 | 0.0233 |
| Jupiter | 66372-12-25 09:51 G | 25963293.70 | 25963293.91 | 25963294.14 | 0.0484 | 0.0158 |
| Saturn | 66382-11-27 04:34 G | 25966917.51 | 25966917.69 | 25966917.86 | 0.0284 | 0.0207 |

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| Jupiter | 66384-12-29 10:05 G | 25967680.71 | 25967680.92 | 25967681.14 | 0.0484 | 0.0200 |
| Saturn | 66397-05-23 08:53 G | 25972208.62 | 25972208.87 | 25972209.11 | 0.0275 | 0.0015 |
| Uranus | 66401-07-03 16:05 G | 25973711.06 | 25973711.17 | 25973711.32 | 0.0137 | 0.0118 |
| Jupiter | 66402-06-20 05:17 G | 25974062.61 | 25974062.72 | 25974062.84 | 0.0545 | 0.0475 |
| Uranus | 66402-07-08 02:53 G | 25974080.44 | 25974080.62 | 25974080.83 | 0.0137 | 0.0084 |
| Uranus | 66403-07-12 17:03 G | 25974449.96 | 25974450.21 | 25974450.47 | 0.0138 | 0.0032 |
| Uranus | 66404-07-16 03:51 G | 25974819.42 | 25974819.66 | 25974819.90 | 0.0138 | 0.0018 |
| Uranus | 66405-07-20 20:10 G | 25975189.11 | 25975189.34 | 25975189.58 | 0.0138 | 0.0058 |
| Uranus | 66406-07-25 07:12 G | 25975558.68 | 25975558.80 | 25975558.93 | 0.0139 | 0.0119 |
| Saturn | 66411-11-21 11:17 G | 25977503.74 | 25977503.97 | 25977504.21 | 0.0284 | 0.0060 |
| Jupiter | 66414-06-25 15:36 G | 25978450.93 | 25978451.15 | 25978451.37 | 0.0545 | 0.0028 |
| Neptune | 66423-12-31 21:36 G | 25981927.28 | 25981927.40 | 25981927.56 | 0.0088 | 0.0074 |
| Neptune | 66425-01-02 02:24 G | 25982294.39 | 25982294.60 | 25982294.85 | 0.0088 | 0.0036 |
| Neptune | 66426-01-04 20:24 G | 25982662.10 | 25982662.35 | 25982662.62 | 0.0088 | 0.0016 |
| Saturn | 66426-05-17 18:43 G | 25982795.17 | 25982795.28 | 25982795.41 | 0.0275 | 0.0233 |
| Jupiter | 66426-07-01 04:34 G | 25982839.55 | 25982839.69 | 25982839.84 | 0.0544 | 0.0424 |
| Neptune | 66427-01-07 03:07 G | 25983029.40 | 25983029.63 | 25983029.89 | 0.0088 | 0.0023 |
| Neptune | 66428-01-09 17:03 G | 25983396.98 | 25983397.21 | 25983397.45 | 0.0088 | 0.0043 |
| Neptune | 66429-01-11 04:48 G | 25983764.61 | 25983764.70 | 25983764.81 | 0.0088 | 0.0081 |
| Mars | 66441-04-19 15:36 G | 25988245.96 | 25988246.15 | 25988246.34 | 0.1683 | 0.0013 |
| Saturn | 66441-11-28 03:51 G | 25988468.57 | 25988468.66 | 25988468.76 | 0.0284 | 0.0261 |
| Uranus | 66442-01-06 18:00 G | 25988508.13 | 25988508.25 | 25988508.42 | 0.0141 | 0.0116 |
| Uranus | 66443-01-11 10:05 G | 25988877.69 | 25988877.92 | 25988878.15 | 0.0141 | 0.0054 |
| Uranus | 66444-01-16 11:03 G | 25989247.70 | 25989247.96 | 25989248.22 | 0.0140 | 0.0016 |
| Uranus | 66445-01-19 23:46 G | 25989617.26 | 25989617.49 | 25989617.73 | 0.0140 | 0.0048 |
| Uranus | 66446-01-24 23:46 G | 25989987.30 | 25989987.49 | 25989987.70 | 0.0140 | 0.0089 |
| Uranus | 66447-01-29 10:05 G | 25990356.90 | 25990356.92 | 25990356.96 | 0.0139 | 0.0138 |
| Jupiter | 66455-12-25 13:41 G | 25993608.85 | 25993609.07 | 25993609.29 | 0.0484 | 0.0191 |
| Saturn | 66456-05-24 07:55 G | 25993759.59 | 25993759.83 | 25993760.08 | 0.0275 | 0.0068 |
| Pluto | 66462-06-16 04:05 G | 25995973.42 | 25995973.67 | 25995973.95 | 0.0065 | 0.0008 |

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| Jupiter | 66467-12-30 00:15 G | 25997996.30 | 25997996.51 | 25997996.73 | 0.0484 | 0.0156 |
| Saturn | 66470-11-22 19:12 G | 25999055.05 | 25999055.30 | 25999055.55 | 0.0284 | 0.0004 |
| Jupiter | 66480-01-03 03:07 G | 26002383.56 | 26002383.63 | 26002383.72 | 0.0484 | 0.0456 |
| Saturn | 66485-05-19 03:07 G | 26004346.46 | 26004346.63 | 26004346.82 | 0.0275 | 0.0177 |
| Jupiter | 66485-06-19 13:27 G | 26004378.03 | 26004378.06 | 26004378.11 | 0.0545 | 0.0536 |
| Uranus | 66485-07-04 02:10 G | 26004392.51 | 26004392.59 | 26004392.71 | 0.0137 | 0.0126 |
| Uranus | 66486-07-08 14:24 G | 26004761.90 | 26004762.10 | 26004762.31 | 0.0137 | 0.0070 |
| Uranus | 66487-07-13 02:53 G | 26005131.38 | 26005131.62 | 26005131.89 | 0.0138 | 0.0030 |
| Uranus | 66488-07-16 15:22 G | 26005500.90 | 26005501.14 | 26005501.38 | 0.0138 | 0.0018 |
| Uranus | 66489-07-21 06:29 G | 26005870.56 | 26005870.77 | 26005871.00 | 0.0138 | 0.0073 |
| Uranus | 66490-07-25 18:43 G | 26006240.15 | 26006240.28 | 26006240.44 | 0.0139 | 0.0110 |
| Jupiter | 66497-06-24 23:03 G | 26008766.22 | 26008766.46 | 26008766.69 | 0.0545 | 0.0097 |
| Saturn | 66499-11-16 11:03 G | 26009640.92 | 26009640.96 | 26009641.01 | 0.0284 | 0.0278 |
| Neptune | 66505-06-30 20:39 G | 26011693.18 | 26011693.36 | 26011693.55 | 0.0089 | 0.0062 |
| Neptune | 66506-07-03 01:41 G | 26012060.36 | 26012060.57 | 26012060.82 | 0.0089 | 0.0037 |
| Neptune | 66507-07-05 18:58 G | 26012428.02 | 26012428.29 | 26012428.55 | 0.0089 | 0.0002 |
| Neptune | 66508-07-07 03:22 G | 26012795.40 | 26012795.64 | 26012795.88 | 0.0089 | 0.0023 |
| Jupiter | 66509-06-30 17:46 G | 26013154.07 | 26013154.24 | 26013154.43 | 0.0544 | 0.0325 |
| Neptune | 66509-07-09 15:07 G | 26013162.95 | 26013163.13 | 26013163.35 | 0.0089 | 0.0059 |
| Neptune | 66510-07-12 04:34 G | 26013530.61 | 26013530.69 | 26013530.79 | 0.0089 | 0.0082 |
| Mars | 66513-10-19 22:34 G | 26014726.27 | 26014726.44 | 26014726.60 | 0.1841 | 0.1225 |
| Saturn | 66515-05-27 10:48 G | 26015310.74 | 26015310.95 | 26015311.17 | 0.0276 | 0.0126 |
| Uranus | 66526-01-08 05:46 G | 26019189.56 | 26019189.74 | 26019189.92 | 0.0141 | 0.0103 |
| Uranus | 66527-01-12 22:34 G | 26019559.22 | 26019559.44 | 26019559.67 | 0.0141 | 0.0061 |
| Uranus | 66528-01-17 23:03 G | 26019929.20 | 26019929.46 | 26019929.72 | 0.0140 | 0.0005 |
| Uranus | 66529-01-21 12:29 G | 26020298.80 | 26020299.02 | 26020299.27 | 0.0140 | 0.0042 |
| Saturn | 66529-11-25 00:29 G | 26020606.27 | 26020606.52 | 26020606.77 | 0.0284 | 0.0067 |
| Uranus | 66530-01-26 12:43 G | 26020668.86 | 26020669.03 | 26020669.22 | 0.0140 | 0.0100 |
| Jupiter | 66538-12-26 02:10 G | 26023924.39 | 26023924.59 | 26023924.79 | 0.0483 | 0.0237 |
| Saturn | 66544-05-21 11:46 G | 26025897.77 | 26025897.99 | 26025898.21 | 0.0275 | 0.0114 |

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| Pluto | 66550-12-19 12:00 G | 26028300.77 | 26028301.00 | 26028301.24 | 0.0079 | 0.0029 |
| Jupiter | 66550-12-30 04:34 G | 26028311.45 | 26028311.69 | 26028311.93 | 0.0484 | 0.0106 |
| Saturn | 66558-11-18 21:36 G | 26031192.26 | 26031192.40 | 26031192.57 | 0.0284 | 0.0215 |
| Jupiter | 66563-01-03 11:17 G | 26032698.86 | 26032698.97 | 26032699.10 | 0.0485 | 0.0408 |
| Uranus | 66569-07-05 15:22 G | 26035073.99 | 26035074.14 | 26035074.32 | 0.0137 | 0.0106 |
| Uranus | 66570-07-10 04:19 G | 26035443.48 | 26035443.68 | 26035443.90 | 0.0137 | 0.0074 |
| Uranus | 66571-07-14 15:51 G | 26035812.90 | 26035813.16 | 26035813.42 | 0.0138 | 0.0019 |
| Uranus | 66572-07-18 04:34 G | 26036182.45 | 26036182.69 | 26036182.93 | 0.0138 | 0.0027 |
| Uranus | 66573-07-22 18:15 G | 26036552.04 | 26036552.26 | 26036552.50 | 0.0138 | 0.0069 |
| Saturn | 66574-05-28 19:12 G | 26036862.14 | 26036862.30 | 26036862.48 | 0.0276 | 0.0187 |
| Uranus | 66574-07-27 07:12 G | 26036921.73 | 26036921.80 | 26036921.91 | 0.0139 | 0.0129 |
| Jupiter | 66580-06-24 11:31 G | 26039080.77 | 26039080.98 | 26039081.19 | 0.0544 | 0.0207 |
| Neptune | 66587-12-31 19:55 G | 26041827.28 | 26041827.33 | 26041827.41 | 0.0088 | 0.0085 |
| Saturn | 66588-11-26 05:46 G | 26042157.52 | 26042157.74 | 26042157.96 | 0.0283 | 0.0135 |
| Neptune | 66589-01-02 12:58 G | 26042194.85 | 26042195.04 | 26042195.27 | 0.0088 | 0.0054 |
| Neptune | 66590-01-04 21:22 G | 26042562.17 | 26042562.39 | 26042562.65 | 0.0088 | 0.0027 |
| Neptune | 66591-01-07 10:48 G | 26042929.68 | 26042929.95 | 26042930.22 | 0.0088 | 0.0003 |
| Neptune | 66592-01-09 23:46 G | 26043297.26 | 26043297.49 | 26043297.74 | 0.0088 | 0.0031 |
| Jupiter | 66592-06-30 01:55 G | 26043469.38 | 26043469.58 | 26043469.78 | 0.0545 | 0.0251 |
| Neptune | 66593-01-11 07:27 G | 26043664.64 | 26043664.81 | 26043665.02 | 0.0088 | 0.0061 |
| Saturn | 66603-05-24 16:05 G | 26047448.93 | 26047449.17 | 26047449.42 | 0.0275 | 0.0055 |
| Uranus | 66610-01-09 18:43 G | 26049871.10 | 26049871.28 | 26049871.46 | 0.0141 | 0.0103 |
| Uranus | 66611-01-14 12:29 G | 26050240.79 | 26050241.02 | 26050241.26 | 0.0141 | 0.0043 |
| Uranus | 66612-01-19 12:00 G | 26050610.74 | 26050611.00 | 26050611.26 | 0.0140 | 0.0005 |
| Uranus | 66613-01-23 02:10 G | 26050980.37 | 26050980.59 | 26050980.82 | 0.0140 | 0.0060 |
| Uranus | 66614-01-28 01:12 G | 26051350.37 | 26051350.55 | 26051350.74 | 0.0140 | 0.0099 |
| Saturn | 66617-11-21 12:00 G | 26052743.79 | 26052744.00 | 26052744.21 | 0.0284 | 0.0145 |
| Jupiter | 66621-12-26 06:00 G | 26054239.55 | 26054239.75 | 26054239.95 | 0.0484 | 0.0280 |
| Saturn | 66633-05-31 06:15 G | 26058413.66 | 26058413.76 | 26058413.86 | 0.0276 | 0.0247 |
| Jupiter | 66633-12-30 11:46 G | 26058626.76 | 26058626.99 | 26058627.21 | 0.0484 | 0.0057 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 66646-01-03 19:55 G | 26063014.17 | 26063014.33 | 26063014.51 | 0.0484 | 0.0342 |
| Saturn | 66647-11-29 17:03 G | 26063709.06 | 26063709.21 | 26063709.39 | 0.0283 | 0.0206 |
| Uranus | 66653-07-07 02:39 G | 26065755.48 | 26065755.61 | 26065755.76 | 0.0137 | 0.0115 |
| Uranus | 66654-07-11 16:34 G | 26066124.97 | 26066125.19 | 26066125.42 | 0.0137 | 0.0058 |
| Uranus | 66655-07-16 02:39 G | 26066494.35 | 26066494.61 | 26066494.87 | 0.0138 | 0.0020 |
| Uranus | 66656-07-19 16:48 G | 26066863.96 | 26066864.20 | 26066864.44 | 0.0138 | 0.0030 |
| Uranus | 66657-07-24 05:17 G | 26067233.52 | 26067233.72 | 26067233.94 | 0.0138 | 0.0083 |
| Uranus | 66658-07-28 19:41 G | 26067603.21 | 26067603.32 | 26067603.45 | 0.0139 | 0.0120 |
| Saturn | 66662-05-25 20:24 G | 26069000.11 | 26069000.35 | 26069000.60 | 0.0275 | 0.0008 |
| Jupiter | 66663-06-25 20:39 G | 26069396.17 | 26069396.36 | 26069396.56 | 0.0545 | 0.0285 |
| Neptune | 66669-06-30 21:07 G | 26071593.26 | 26071593.38 | 26071593.53 | 0.0089 | 0.0075 |
| Neptune | 66670-07-03 12:15 G | 26071960.82 | 26071961.01 | 26071961.24 | 0.0089 | 0.0054 |
| Neptune | 66671-07-05 22:05 G | 26072328.17 | 26072328.42 | 26072328.66 | 0.0089 | 0.0016 |
| Neptune | 66672-07-07 08:53 G | 26072695.61 | 26072695.87 | 26072696.13 | 0.0089 | 0.0006 |
| Neptune | 66673-07-09 23:03 G | 26073063.27 | 26073063.46 | 26073063.70 | 0.0089 | 0.0045 |
| Neptune | 66674-07-12 06:00 G | 26073430.59 | 26073430.75 | 26073430.94 | 0.0089 | 0.0066 |
| Jupiter | 66675-06-30 21:07 G | 26073784.16 | 26073784.38 | 26073784.61 | 0.0544 | 0.0175 |
| Saturn | 66676-11-22 22:48 G | 26074295.20 | 26074295.45 | 26074295.70 | 0.0284 | 0.0074 |
| Saturn | 66691-05-21 04:19 G | 26079587.54 | 26079587.68 | 26079587.84 | 0.0276 | 0.0217 |
| Uranus | 66694-01-10 06:15 G | 26080552.56 | 26080552.76 | 26080552.96 | 0.0141 | 0.0092 |
| Uranus | 66695-01-15 01:12 G | 26080922.33 | 26080922.55 | 26080922.79 | 0.0141 | 0.0049 |
| Uranus | 66696-01-20 00:00 G | 26081292.24 | 26081292.50 | 26081292.77 | 0.0141 | 0.0016 |
| Uranus | 66697-01-23 15:36 G | 26081661.92 | 26081662.15 | 26081662.38 | 0.0140 | 0.0053 |
| Uranus | 66698-01-28 13:41 G | 26082031.94 | 26082032.07 | 26082032.25 | 0.0140 | 0.0112 |
| Jupiter | 66704-12-26 09:22 G | 26084554.73 | 26084554.89 | 26084555.06 | 0.0484 | 0.0334 |
| Saturn | 66706-12-02 10:19 G | 26085260.90 | 26085260.93 | 26085260.99 | 0.0283 | 0.0277 |
| Pluto | 66710-06-20 13:55 G | 26086556.83 | 26086557.08 | 26086557.33 | 0.0065 | 0.0011 |
| Jupiter | 66716-12-30 19:55 G | 26088942.09 | 26088942.33 | 26088942.58 | 0.0484 | 0.0007 |
| Saturn | 66721-05-28 06:58 G | 26090551.56 | 26090551.79 | 26090552.02 | 0.0275 | 0.0070 |
| Mars | 66725-04-23 05:46 G | 26091977.56 | 26091977.74 | 26091977.93 | 0.1689 | 0.0520 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 66729-01-03 18:29 G | 26093329.09 | 26093329.27 | 26093329.46 | 0.0484 | 0.0288 |
| Saturn | 66735-11-26 07:12 G | 26095846.54 | 26095846.80 | 26095847.06 | 0.0284 | 0.0003 |
| Uranus | 66737-07-08 16:19 G | 26096437.01 | 26096437.18 | 26096437.38 | 0.0137 | 0.0094 |
| Uranus | 66738-07-13 07:12 G | 26096806.58 | 26096806.80 | 26096807.02 | 0.0137 | 0.0062 |
| Uranus | 66739-07-17 16:05 G | 26097175.91 | 26097176.17 | 26097176.43 | 0.0138 | 0.0007 |
| Uranus | 66740-07-21 06:43 G | 26097545.55 | 26097545.78 | 26097546.02 | 0.0138 | 0.0037 |
| Uranus | 66741-07-25 18:00 G | 26097915.05 | 26097915.25 | 26097915.47 | 0.0138 | 0.0081 |
| Uranus | 66742-07-30 09:22 G | 26098284.87 | 26098284.89 | 26098284.91 | 0.0139 | 0.0138 |
| Jupiter | 66746-06-25 09:36 G | 26099710.75 | 26099710.90 | 26099711.07 | 0.0544 | 0.0391 |
| Saturn | 66750-05-23 11:46 G | 26101138.79 | 26101138.99 | 26101139.20 | 0.0276 | 0.0153 |
| Neptune | 66753-01-03 15:36 G | 26102095.04 | 26102095.15 | 26102095.31 | 0.0088 | 0.0075 |
| Neptune | 66754-01-06 03:22 G | 26102462.39 | 26102462.64 | 26102462.88 | 0.0088 | 0.0037 |
| Neptune | 66755-01-08 17:17 G | 26102829.98 | 26102830.22 | 26102830.48 | 0.0088 | 0.0017 |
| Neptune | 66756-01-11 00:15 G | 26103197.26 | 26103197.51 | 26103197.77 | 0.0088 | 0.0021 |
| Neptune | 66757-01-12 18:15 G | 26103565.04 | 26103565.26 | 26103565.50 | 0.0088 | 0.0041 |
| Neptune | 66758-01-14 22:34 G | 26103932.35 | 26103932.44 | 26103932.57 | 0.0088 | 0.0080 |
| Jupiter | 66758-06-30 19:55 G | 26104099.11 | 26104099.33 | 26104099.56 | 0.0544 | 0.0068 |
| Saturn | 66764-11-20 03:22 G | 26106433.53 | 26106433.64 | 26106433.77 | 0.0283 | 0.0246 |
| Uranus | 66777-01-06 22:34 G | 26110864.43 | 26110864.44 | 26110864.48 | 0.0142 | 0.0141 |
| Uranus | 66778-01-11 19:41 G | 26111234.12 | 26111234.32 | 26111234.53 | 0.0141 | 0.0088 |
| Uranus | 66779-01-16 16:05 G | 26111603.93 | 26111604.17 | 26111604.41 | 0.0141 | 0.0030 |
| Uranus | 66780-01-21 13:27 G | 26111973.80 | 26111974.06 | 26111974.33 | 0.0141 | 0.0009 |
| Saturn | 66780-05-29 20:24 G | 26112103.14 | 26112103.35 | 26112103.55 | 0.0275 | 0.0134 |
| Uranus | 66781-01-25 05:46 G | 26112343.53 | 26112343.74 | 26112343.95 | 0.0140 | 0.0073 |
| Uranus | 66782-01-30 02:39 G | 26112713.47 | 26112713.61 | 26112713.79 | 0.0140 | 0.0110 |
| Jupiter | 66787-12-26 18:29 G | 26114870.12 | 26114870.27 | 26114870.42 | 0.0483 | 0.0379 |
| Saturn | 66794-11-27 18:43 G | 26117398.05 | 26117398.28 | 26117398.52 | 0.0284 | 0.0073 |
| Mars | 66797-10-21 12:58 G | 26118456.85 | 26118457.04 | 26118457.22 | 0.1832 | 0.0106 |
| Pluto | 66798-12-22 16:19 G | 26118883.91 | 26118884.18 | 26118884.45 | 0.0079 | 0.0008 |
| Jupiter | 66799-12-30 18:15 G | 26119257.03 | 26119257.26 | 26119257.50 | 0.0484 | 0.0056 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 66809-05-24 15:36 G | 26122689.92 | 26122690.15 | 26122690.39 | 0.0276 | 0.0093 |
| Jupiter | 66812-01-04 07:41 G | 26123644.61 | 26123644.82 | 26123645.02 | 0.0484 | 0.0234 |
| Uranus | 66820-07-04 22:34 G | 26126749.40 | 26126749.44 | 26126749.52 | 0.0136 | 0.0133 |
| Uranus | 66821-07-09 04:19 G | 26127118.52 | 26127118.68 | 26127118.87 | 0.0137 | 0.0102 |
| Uranus | 66822-07-13 19:55 G | 26127488.10 | 26127488.33 | 26127488.57 | 0.0137 | 0.0044 |
| Uranus | 66823-07-18 03:36 G | 26127857.40 | 26127857.65 | 26127857.92 | 0.0138 | 0.0009 |
| Saturn | 66823-11-22 17:46 G | 26127985.05 | 26127985.24 | 26127985.45 | 0.0283 | 0.0172 |
| Uranus | 66824-07-21 19:41 G | 26128227.09 | 26128227.32 | 26128227.56 | 0.0138 | 0.0043 |
| Uranus | 66825-07-26 06:00 G | 26128596.57 | 26128596.75 | 26128596.95 | 0.0138 | 0.0093 |
| Uranus | 66826-07-30 22:05 G | 26128966.37 | 26128966.42 | 26128966.52 | 0.0139 | 0.0132 |
| Jupiter | 66829-06-24 11:31 G | 26130025.90 | 26130025.98 | 26130026.08 | 0.0545 | 0.0497 |
| Neptune | 66834-07-03 16:34 G | 26131861.03 | 26131861.19 | 26131861.37 | 0.0089 | 0.0065 |
| Neptune | 66835-07-06 01:55 G | 26132228.36 | 26132228.58 | 26132228.84 | 0.0089 | 0.0037 |
| Neptune | 66836-07-07 17:46 G | 26132596.00 | 26132596.24 | 26132596.49 | 0.0089 | 0.0005 |
| Neptune | 66837-07-09 23:17 G | 26132963.23 | 26132963.47 | 26132963.73 | 0.0089 | 0.0023 |
| Neptune | 66838-07-12 17:17 G | 26133331.04 | 26133331.22 | 26133331.44 | 0.0089 | 0.0056 |
| Saturn | 66839-06-01 06:58 G | 26133654.63 | 26133654.79 | 26133654.97 | 0.0275 | 0.0200 |
| Neptune | 66839-07-14 21:51 G | 26133698.34 | 26133698.41 | 26133698.53 | 0.0089 | 0.0082 |
| Jupiter | 66841-06-29 15:36 G | 26134413.91 | 26134414.15 | 26134414.38 | 0.0545 | 0.0021 |
| Jupiter | 66853-07-05 00:58 G | 26138802.48 | 26138802.54 | 26138802.60 | 0.0544 | 0.0519 |
| Saturn | 66853-11-29 09:07 G | 26138949.68 | 26138949.88 | 26138950.09 | 0.0284 | 0.0145 |
| Uranus | 66861-01-07 10:48 G | 26141545.87 | 26141545.95 | 26141546.07 | 0.0142 | 0.0129 |
| Uranus | 66862-01-12 06:43 G | 26141915.57 | 26141915.78 | 26141916.01 | 0.0141 | 0.0080 |
| Uranus | 66863-01-17 04:34 G | 26142285.45 | 26142285.69 | 26142285.93 | 0.0141 | 0.0034 |
| Uranus | 66864-01-22 00:58 G | 26142655.28 | 26142655.54 | 26142655.80 | 0.0141 | 0.0029 |
| Uranus | 66865-01-25 18:15 G | 26143025.05 | 26143025.26 | 26143025.49 | 0.0140 | 0.0065 |
| Uranus | 66866-01-30 15:07 G | 26143395.02 | 26143395.13 | 26143395.26 | 0.0140 | 0.0124 |
| Saturn | 66868-05-25 20:53 G | 26144241.13 | 26144241.37 | 26144241.61 | 0.0276 | 0.0032 |
| Jupiter | 66870-12-25 16:48 G | 26145185.10 | 26145185.20 | 26145185.30 | 0.0484 | 0.0435 |
| Saturn | 66882-11-24 01:55 G | 26149536.35 | 26149536.58 | 26149536.83 | 0.0284 | 0.0105 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 66882-12-30 06:00 G | 26149572.53 | 26149572.75 | 26149572.99 | 0.0484 | 0.0112 |
| Jupiter | 66895-01-03 05:17 G | 26153959.50 | 26153959.72 | 26153959.95 | 0.0484 | 0.0179 |
| Saturn | 66897-05-21 07:41 G | 26154828.73 | 26154828.82 | 26154828.91 | 0.0275 | 0.0254 |
| Saturn | 66898-06-02 12:15 G | 26155205.95 | 26155206.01 | 26155206.10 | 0.0275 | 0.0261 |
| Uranus | 66905-07-10 18:29 G | 26157800.06 | 26157800.27 | 26157800.48 | 0.0137 | 0.0080 |
| Uranus | 66906-07-15 10:05 G | 26158169.70 | 26158169.92 | 26158170.16 | 0.0137 | 0.0050 |
| Uranus | 66907-07-19 17:17 G | 26158538.96 | 26158539.22 | 26158539.48 | 0.0137 | 0.0007 |
| Uranus | 66908-07-23 09:36 G | 26158908.68 | 26158908.90 | 26158909.14 | 0.0138 | 0.0049 |
| Uranus | 66909-07-27 18:29 G | 26159278.10 | 26159278.27 | 26159278.48 | 0.0138 | 0.0095 |
| Saturn | 66912-12-01 23:31 G | 26160501.33 | 26160501.48 | 26160501.65 | 0.0284 | 0.0213 |
| Neptune | 66917-01-03 19:27 G | 26161995.31 | 26161995.31 | 26161995.33 | 0.0088 | 0.0088 |
| Neptune | 66918-01-06 11:03 G | 26162362.78 | 26162362.96 | 26162363.18 | 0.0088 | 0.0054 |
| Neptune | 66919-01-08 17:17 G | 26162729.99 | 26162730.22 | 26162730.49 | 0.0088 | 0.0030 |
| Neptune | 66920-01-11 12:29 G | 26163097.76 | 26163098.02 | 26163098.28 | 0.0088 | 0.0004 |
| Neptune | 66921-01-12 16:48 G | 26163464.97 | 26163465.20 | 26163465.45 | 0.0088 | 0.0028 |
| Neptune | 66922-01-15 11:03 G | 26163832.78 | 26163832.96 | 26163833.16 | 0.0088 | 0.0060 |
| Neptune | 66923-01-17 17:31 G | 26164200.19 | 26164200.23 | 26164200.29 | 0.0088 | 0.0086 |
| Jupiter | 66924-06-29 18:15 G | 26164729.04 | 26164729.26 | 26164729.47 | 0.0544 | 0.0095 |
| Saturn | 66927-05-29 06:43 G | 26165792.55 | 26165792.78 | 26165793.01 | 0.0276 | 0.0026 |
| Mars | 66930-04-23 06:29 G | 26166852.73 | 26166852.77 | 26166852.80 | 0.1698 | 0.1656 |
| Jupiter | 66936-07-05 00:29 G | 26169117.38 | 26169117.52 | 26169117.67 | 0.0544 | 0.0428 |
| Saturn | 66941-11-26 05:46 G | 26171087.49 | 26171087.74 | 26171087.99 | 0.0284 | 0.0045 |
| Uranus | 66945-01-09 01:27 G | 26172227.46 | 26172227.56 | 26172227.66 | 0.0142 | 0.0128 |
| Uranus | 66946-01-13 20:24 G | 26172597.12 | 26172597.35 | 26172597.58 | 0.0141 | 0.0074 |
| Uranus | 66947-01-18 18:58 G | 26172967.05 | 26172967.29 | 26172967.54 | 0.0141 | 0.0018 |
| Uranus | 66948-01-23 14:10 G | 26173336.83 | 26173337.09 | 26173337.35 | 0.0141 | 0.0022 |
| Uranus | 66949-01-27 08:39 G | 26173706.67 | 26173706.86 | 26173707.06 | 0.0140 | 0.0086 |
| Uranus | 66950-02-01 03:51 G | 26174076.54 | 26174076.66 | 26174076.80 | 0.0140 | 0.0121 |
| Jupiter | 66953-12-26 07:27 G | 26175500.78 | 26175500.81 | 26175500.85 | 0.0483 | 0.0476 |
| Saturn | 66956-05-23 11:31 G | 26176379.82 | 26176379.98 | 26176380.17 | 0.0275 | 0.0197 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 66958-06-22 14:53 G | 26177139.90 | 26177140.12 | 26177140.38 | 0.0065 | 0.0024 |
| Jupiter | 66965-12-30 05:31 G | 26179887.50 | 26179887.73 | 26179887.96 | 0.0483 | 0.0165 |
| Saturn | 66971-12-04 07:55 G | 26182052.78 | 26182052.83 | 26182052.90 | 0.0284 | 0.0274 |
| Jupiter | 66978-01-03 17:31 G | 26184275.01 | 26184275.23 | 26184275.45 | 0.0484 | 0.0126 |
| Saturn | 66986-05-30 16:19 G | 26187343.95 | 26187344.18 | 26187344.41 | 0.0275 | 0.0080 |
| Uranus | 66988-07-07 02:10 G | 26188112.50 | 26188112.59 | 26188112.73 | 0.0136 | 0.0120 |
| Uranus | 66989-07-11 06:29 G | 26188481.58 | 26188481.77 | 26188481.97 | 0.0137 | 0.0089 |
| Jupiter | 66990-01-07 20:24 G | 26188662.28 | 26188662.35 | 26188662.44 | 0.0484 | 0.0456 |
| Uranus | 66990-07-15 23:17 G | 26188851.23 | 26188851.47 | 26188851.71 | 0.0137 | 0.0031 |
| Uranus | 66991-07-20 05:17 G | 26189220.46 | 26189220.72 | 26189220.98 | 0.0137 | 0.0004 |
| Uranus | 66992-07-23 22:34 G | 26189590.23 | 26189590.44 | 26189590.68 | 0.0138 | 0.0057 |
| Uranus | 66993-07-28 06:58 G | 26189959.64 | 26189959.79 | 26189959.98 | 0.0138 | 0.0105 |
| Neptune | 66998-07-03 18:29 G | 26191761.15 | 26191761.27 | 26191761.42 | 0.0089 | 0.0077 |
| Neptune | 66999-07-06 11:03 G | 26192128.78 | 26192128.96 | 26192129.17 | 0.0089 | 0.0057 |
| Neptune | 67000-07-08 16:34 G | 26192495.94 | 26192496.19 | 26192496.45 | 0.0089 | 0.0017 |
| Saturn | 67000-11-28 12:43 G | 26192638.79 | 26192639.03 | 26192639.27 | 0.0284 | 0.0012 |

68TH MILLENNIUM CE

This is a list of transits of Moon in the 68th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Neptune | 67001-07-11 11:17 G | 26192863.71 | 26192863.97 | 26192864.23 | 0.0089 | 0.0003 | | |
| Neptune | 67002-07-13 15:36 G | 26193230.95 | 26193231.15 | 26193231.39 | 0.0089 | 0.0043 | | |
| Neptune | 67003-07-16 08:39 G | 26193598.70 | 26193598.86 | 26193599.07 | 0.0089 | 0.0063 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 67007-06-30 14:39 G | 26195043.89 | 26195044.11 | 26195044.33 | 0.0545 | 0.0187 |
| Mars | 67009-04-26 04:34 G | 26195709.56 | 26195709.69 | 26195709.82 | 0.1695 | 0.1179 |
| Saturn | 67015-05-26 13:41 G | 26197930.87 | 26197931.07 | 26197931.29 | 0.0275 | 0.0143 |
| Jupiter | 67019-07-05 18:00 G | 26199432.09 | 26199432.25 | 26199432.43 | 0.0545 | 0.0350 |
| Uranus | 67029-01-10 12:58 G | 26202908.91 | 26202909.04 | 26202909.20 | 0.0142 | 0.0115 |
| Saturn | 67029-11-22 16:05 G | 26203225.07 | 26203225.17 | 26203225.26 | 0.0284 | 0.0262 |
| Uranus | 67030-01-15 06:58 G | 26203278.56 | 26203278.79 | 26203279.02 | 0.0141 | 0.0068 |
| Uranus | 67031-01-20 06:43 G | 26203648.54 | 26203648.78 | 26203649.03 | 0.0141 | 0.0021 |
| Uranus | 67032-01-25 00:43 G | 26204018.29 | 26204018.53 | 26204018.80 | 0.0141 | 0.0041 |
| Uranus | 67033-01-28 20:53 G | 26204388.17 | 26204388.37 | 26204388.58 | 0.0140 | 0.0077 |
| Uranus | 67034-02-02 15:36 G | 26204758.11 | 26204758.15 | 26204758.21 | 0.0140 | 0.0137 |
| Saturn | 67045-06-01 19:27 G | 26208895.10 | 26208895.31 | 26208895.53 | 0.0275 | 0.0133 |
| Pluto | 67046-12-25 19:41 G | 26209467.10 | 26209467.32 | 26209467.57 | 0.0079 | 0.0027 |
| Jupiter | 67048-12-30 18:43 G | 26210203.08 | 26210203.28 | 26210203.48 | 0.0484 | 0.0219 |
| Saturn | 67059-11-30 20:39 G | 26214190.13 | 26214190.36 | 26214190.60 | 0.0284 | 0.0066 |
| Jupiter | 67061-01-03 23:03 G | 26214590.22 | 26214590.46 | 26214590.71 | 0.0484 | 0.0080 |
| Uranus | 67072-07-08 16:05 G | 26218794.09 | 26218794.17 | 26218794.29 | 0.0136 | 0.0125 |
| Jupiter | 67073-01-08 05:31 G | 26218977.63 | 26218977.73 | 26218977.85 | 0.0484 | 0.0425 |
| Uranus | 67073-07-12 19:55 G | 26219163.12 | 26219163.33 | 26219163.57 | 0.0137 | 0.0068 |
| Saturn | 67074-05-27 19:27 G | 26219482.09 | 26219482.31 | 26219482.54 | 0.0275 | 0.0087 |
| Uranus | 67074-07-17 13:12 G | 26219532.82 | 26219533.05 | 26219533.30 | 0.0137 | 0.0038 |
| Uranus | 67075-07-21 18:43 G | 26219902.03 | 26219902.28 | 26219902.54 | 0.0137 | 0.0020 |
| Uranus | 67076-07-25 12:43 G | 26220271.82 | 26220272.03 | 26220272.26 | 0.0138 | 0.0060 |
| Uranus | 67077-07-29 19:55 G | 26220641.19 | 26220641.33 | 26220641.51 | 0.0138 | 0.0107 |
| Mars | 67081-10-23 18:15 G | 26222188.07 | 26222188.26 | 26222188.46 | 0.1824 | 0.0410 |
| Neptune | 67082-01-06 09:51 G | 26222262.80 | 26222262.91 | 26222263.07 | 0.0088 | 0.0075 |
| Neptune | 67083-01-09 04:48 G | 26222630.49 | 26222630.70 | 26222630.95 | 0.0088 | 0.0039 |
| Neptune | 67084-01-11 09:51 G | 26222997.67 | 26222997.91 | 26222998.17 | 0.0088 | 0.0018 |
| Neptune | 67085-01-13 03:07 G | 26223365.38 | 26223365.63 | 26223365.90 | 0.0088 | 0.0019 |
| Neptune | 67086-01-15 11:03 G | 26223732.75 | 26223732.96 | 26223733.19 | 0.0088 | 0.0040 |

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| Neptune | 67087-01-18 00:15 G | 26224100.41 | 26224100.51 | 26224100.67 | 0.0088 | 0.0077 |
| Saturn | 67088-11-23 15:07 G | 26224775.97 | 26224776.13 | 26224776.31 | 0.0284 | 0.0210 |
| Jupiter | 67090-06-29 16:48 G | 26225359.00 | 26225359.20 | 26225359.40 | 0.0545 | 0.0243 |
| Jupiter | 67102-07-06 07:55 G | 26229747.63 | 26229747.83 | 26229748.02 | 0.0545 | 0.0297 |
| Saturn | 67104-06-03 18:15 G | 26230446.08 | 26230446.26 | 26230446.45 | 0.0275 | 0.0184 |
| Uranus | 67113-01-12 02:53 G | 26233590.49 | 26233590.62 | 26233590.77 | 0.0142 | 0.0117 |
| Uranus | 67114-01-16 19:55 G | 26233960.10 | 26233960.33 | 26233960.58 | 0.0142 | 0.0061 |
| Uranus | 67115-01-21 20:53 G | 26234330.12 | 26234330.37 | 26234330.62 | 0.0141 | 0.0007 |
| Uranus | 67116-01-26 13:41 G | 26234699.82 | 26234700.07 | 26234700.34 | 0.0141 | 0.0034 |
| Uranus | 67117-01-30 10:34 G | 26235069.78 | 26235069.94 | 26235070.13 | 0.0140 | 0.0098 |
| Uranus | 67118-02-04 03:51 G | 26235439.60 | 26235439.66 | 26235439.77 | 0.0140 | 0.0132 |
| Saturn | 67118-12-02 23:17 G | 26235741.25 | 26235741.47 | 26235741.71 | 0.0284 | 0.0117 |
| Jupiter | 67132-01-01 03:36 G | 26240518.44 | 26240518.65 | 26240518.86 | 0.0483 | 0.0259 |
| Saturn | 67133-05-30 03:07 G | 26241033.40 | 26241033.63 | 26241033.87 | 0.0275 | 0.0033 |
| Jupiter | 67144-01-05 08:24 G | 26244905.62 | 26244905.85 | 26244906.07 | 0.0483 | 0.0040 |
| Saturn | 67147-11-26 16:34 G | 26246326.99 | 26246327.19 | 26246327.40 | 0.0284 | 0.0157 |
| Jupiter | 67156-01-09 18:00 G | 26249293.11 | 26249293.25 | 26249293.40 | 0.0484 | 0.0389 |
| Uranus | 67156-07-10 05:46 G | 26249475.61 | 26249475.74 | 26249475.92 | 0.0136 | 0.0108 |
| Uranus | 67157-07-14 09:07 G | 26249844.68 | 26249844.88 | 26249845.10 | 0.0137 | 0.0077 |
| Uranus | 67158-07-19 02:39 G | 26250214.36 | 26250214.61 | 26250214.86 | 0.0137 | 0.0018 |
| Uranus | 67159-07-23 07:27 G | 26250583.56 | 26250583.81 | 26250584.07 | 0.0137 | 0.0015 |
| Uranus | 67160-07-27 01:55 G | 26250953.38 | 26250953.58 | 26250953.81 | 0.0138 | 0.0070 |
| Uranus | 67161-07-31 08:53 G | 26251322.75 | 26251322.87 | 26251323.03 | 0.0138 | 0.0115 |
| Saturn | 67163-06-05 20:24 G | 26251997.24 | 26251997.35 | 26251997.47 | 0.0275 | 0.0237 |
| Neptune | 67163-07-07 09:22 G | 26252028.75 | 26252028.89 | 26252029.07 | 0.0089 | 0.0069 |
| Neptune | 67164-07-09 04:05 G | 26252396.45 | 26252396.67 | 26252396.92 | 0.0089 | 0.0038 |
| Neptune | 67165-07-11 09:36 G | 26252763.66 | 26252763.90 | 26252764.16 | 0.0089 | 0.0010 |
| Neptune | 67166-07-14 01:27 G | 26253131.32 | 26253131.56 | 26253131.83 | 0.0089 | 0.0022 |
| Neptune | 67167-07-16 10:19 G | 26253498.74 | 26253498.93 | 26253499.14 | 0.0089 | 0.0052 |
| Neptune | 67168-07-17 21:22 G | 26253866.31 | 26253866.39 | 26253866.53 | 0.0089 | 0.0081 |

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| Jupiter | 67173-06-30 03:36 G | 26255674.46 | 26255674.65 | 26255674.85 | 0.0545 | 0.0303 |
| Saturn | 67177-12-03 20:10 G | 26257292.13 | 26257292.34 | 26257292.55 | 0.0284 | 0.0164 |
| Jupiter | 67185-07-04 20:39 G | 26260062.15 | 26260062.36 | 26260062.58 | 0.0545 | 0.0198 |
| Saturn | 67192-05-31 07:27 G | 26262584.57 | 26262584.81 | 26262585.05 | 0.0275 | 0.0021 |
| Uranus | 67197-01-12 14:10 G | 26264271.93 | 26264272.09 | 26264272.27 | 0.0142 | 0.0102 |
| Uranus | 67198-01-17 06:00 G | 26264641.53 | 26264641.75 | 26264642.01 | 0.0142 | 0.0059 |
| Uranus | 67199-01-22 08:10 G | 26265011.59 | 26265011.84 | 26265012.09 | 0.0141 | 0.0009 |
| Uranus | 67200-01-27 00:15 G | 26265381.27 | 26265381.51 | 26265381.76 | 0.0141 | 0.0051 |
| Uranus | 67201-01-30 22:34 G | 26265751.26 | 26265751.44 | 26265751.64 | 0.0140 | 0.0088 |
| Pluto | 67206-06-26 05:31 G | 26267723.54 | 26267723.73 | 26267723.97 | 0.0065 | 0.0036 |
| Saturn | 67206-11-27 21:51 G | 26267878.20 | 26267878.41 | 26267878.64 | 0.0284 | 0.0107 |
| Mars | 67214-04-26 04:48 G | 26270584.55 | 26270584.70 | 26270584.85 | 0.1704 | 0.1098 |
| Jupiter | 67214-12-31 12:00 G | 26270833.83 | 26270834.00 | 26270834.18 | 0.0483 | 0.0305 |
| Saturn | 67221-05-25 14:10 G | 26273170.98 | 26273171.09 | 26273171.24 | 0.0275 | 0.0229 |
| Jupiter | 67227-01-04 21:51 G | 26275221.16 | 26275221.41 | 26275221.65 | 0.0484 | 0.0009 |
| Saturn | 67236-12-04 16:05 G | 26278843.02 | 26278843.17 | 26278843.35 | 0.0284 | 0.0211 |
| Jupiter | 67239-01-08 23:03 G | 26279608.32 | 26279608.46 | 26279608.62 | 0.0484 | 0.0365 |
| Uranus | 67240-07-10 19:41 G | 26280157.19 | 26280157.32 | 26280157.47 | 0.0136 | 0.0112 |
| Uranus | 67241-07-14 22:48 G | 26280526.23 | 26280526.45 | 26280526.69 | 0.0137 | 0.0056 |
| Uranus | 67242-07-19 16:48 G | 26280895.95 | 26280896.20 | 26280896.45 | 0.0137 | 0.0026 |
| Uranus | 67243-07-23 21:22 G | 26281265.15 | 26281265.39 | 26281265.64 | 0.0137 | 0.0033 |
| Uranus | 67244-07-27 16:19 G | 26281634.98 | 26281635.18 | 26281635.40 | 0.0138 | 0.0071 |
| Uranus | 67245-07-31 22:34 G | 26282004.33 | 26282004.44 | 26282004.58 | 0.0138 | 0.0119 |
| Neptune | 67247-01-09 04:34 G | 26282530.49 | 26282530.69 | 26282530.89 | 0.0088 | 0.0054 |
| Neptune | 67248-01-11 21:07 G | 26282898.14 | 26282898.38 | 26282898.64 | 0.0088 | 0.0032 |
| Neptune | 67249-01-13 06:15 G | 26283265.51 | 26283265.76 | 26283266.01 | 0.0088 | 0.0004 |
| Neptune | 67250-01-15 17:46 G | 26283633.00 | 26283633.24 | 26283633.51 | 0.0088 | 0.0026 |
| Neptune | 67251-01-18 07:12 G | 26284000.64 | 26284000.80 | 26284001.00 | 0.0088 | 0.0061 |
| Saturn | 67251-06-02 06:15 G | 26284135.52 | 26284135.76 | 26284136.01 | 0.0275 | 0.0071 |
| Neptune | 67252-01-20 14:10 G | 26284368.03 | 26284368.09 | 26284368.21 | 0.0088 | 0.0083 |

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| Jupiter | 67256-06-28 17:31 G | 26285989.07 | 26285989.23 | 26285989.38 | 0.0545 | 0.0402 |
| Saturn | 67265-11-29 03:07 G | 26289429.39 | 26289429.63 | 26289429.88 | 0.0284 | 0.0056 |
| Jupiter | 67268-07-04 10:19 G | 26290377.71 | 26290377.93 | 26290378.15 | 0.0545 | 0.0141 |
| Saturn | 67280-05-26 20:24 G | 26294722.18 | 26294722.35 | 26294722.53 | 0.0275 | 0.0179 |
| Uranus | 67281-01-13 03:36 G | 26294953.49 | 26294953.65 | 26294953.83 | 0.0142 | 0.0106 |
| Uranus | 67282-01-17 19:27 G | 26295323.07 | 26295323.31 | 26295323.56 | 0.0142 | 0.0048 |
| Uranus | 67283-01-22 22:19 G | 26295693.18 | 26295693.43 | 26295693.68 | 0.0141 | 0.0004 |
| Uranus | 67284-01-27 13:12 G | 26296062.82 | 26296063.05 | 26296063.32 | 0.0141 | 0.0046 |
| Uranus | 67285-01-31 12:43 G | 26296432.89 | 26296433.03 | 26296433.20 | 0.0140 | 0.0109 |
| Pluto | 67294-12-27 22:48 G | 26300050.25 | 26300050.45 | 26300050.70 | 0.0079 | 0.0042 |
| Saturn | 67295-12-06 18:29 G | 26300394.20 | 26300394.27 | 26300394.38 | 0.0284 | 0.0262 |
| Jupiter | 67297-12-31 02:24 G | 26301149.44 | 26301149.60 | 26301149.78 | 0.0483 | 0.0343 |
| Jupiter | 67310-01-05 03:36 G | 26305536.42 | 26305536.65 | 26305536.89 | 0.0483 | 0.0029 |
| Saturn | 67310-06-04 04:48 G | 26305686.48 | 26305686.70 | 26305686.92 | 0.0275 | 0.0122 |
| Jupiter | 67322-01-09 15:51 G | 26309924.00 | 26309924.16 | 26309924.33 | 0.0483 | 0.0337 |
| Uranus | 67324-07-12 09:51 G | 26310838.74 | 26310838.91 | 26310839.11 | 0.0136 | 0.0094 |
| Saturn | 67324-12-01 02:53 G | 26310980.36 | 26310980.62 | 26310980.88 | 0.0283 | 0.0003 |
| Uranus | 67325-07-16 12:43 G | 26311207.82 | 26311208.03 | 26311208.26 | 0.0137 | 0.0063 |
| Uranus | 67326-07-21 06:43 G | 26311577.53 | 26311577.78 | 26311578.03 | 0.0137 | 0.0005 |
| Neptune | 67327-07-07 20:10 G | 26311929.24 | 26311929.34 | 26311929.48 | 0.0089 | 0.0080 |
| Uranus | 67327-07-25 10:48 G | 26311946.71 | 26311946.95 | 26311947.21 | 0.0137 | 0.0028 |
| Neptune | 67328-07-09 02:24 G | 26312296.43 | 26312296.60 | 26312296.81 | 0.0089 | 0.0060 |
| Uranus | 67328-07-29 06:00 G | 26312316.56 | 26312316.75 | 26312316.96 | 0.0138 | 0.0083 |
| Neptune | 67329-07-11 17:46 G | 26312663.99 | 26312664.24 | 26312664.51 | 0.0089 | 0.0020 |
| Uranus | 67329-08-02 12:15 G | 26312685.92 | 26312686.01 | 26312686.12 | 0.0138 | 0.0126 |
| Neptune | 67330-07-14 04:34 G | 26313031.45 | 26313031.69 | 26313031.94 | 0.0089 | 0.0002 |
| Neptune | 67331-07-16 14:53 G | 26313398.89 | 26313399.12 | 26313399.37 | 0.0089 | 0.0039 |
| Neptune | 67332-07-18 05:31 G | 26313766.58 | 26313766.73 | 26313766.94 | 0.0089 | 0.0061 |
| Saturn | 67339-05-30 02:53 G | 26316273.41 | 26316273.62 | 26316273.84 | 0.0275 | 0.0126 |
| Jupiter | 67339-06-30 09:07 G | 26316304.76 | 26316304.88 | 26316305.01 | 0.0545 | 0.0448 |

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| Jupiter | 67351-07-05 11:03 G | 26320692.73 | 26320692.96 | 26320693.20 | 0.0545 | 0.0074 |
| Saturn | 67353-11-25 00:58 G | 26321566.53 | 26321566.54 | 26321566.56 | 0.0284 | 0.0283 |
| Jupiter | 67363-07-10 12:00 G | 26325080.92 | 26325081.00 | 26325081.09 | 0.0545 | 0.0501 |
| Uranus | 67365-01-14 14:24 G | 26325634.92 | 26325635.10 | 26325635.31 | 0.0142 | 0.0089 |
| Mars | 67365-10-24 21:07 G | 26325918.35 | 26325918.38 | 26325918.42 | 0.1815 | 0.1784 |
| Uranus | 67366-01-19 05:46 G | 26326004.50 | 26326004.74 | 26326004.99 | 0.0142 | 0.0047 |
| Uranus | 67367-01-24 09:07 G | 26326374.63 | 26326374.88 | 26326375.13 | 0.0141 | 0.0004 |
| Uranus | 67368-01-28 23:31 G | 26326744.26 | 26326744.48 | 26326744.73 | 0.0141 | 0.0063 |
| Uranus | 67369-02-02 00:15 G | 26327114.35 | 26327114.51 | 26327114.70 | 0.0140 | 0.0100 |
| Saturn | 67369-06-05 09:22 G | 26327237.72 | 26327237.89 | 26327238.08 | 0.0276 | 0.0178 |
| Jupiter | 67380-12-31 05:17 G | 26331464.59 | 26331464.72 | 26331464.86 | 0.0483 | 0.0394 |
| Saturn | 67383-12-03 02:53 G | 26332531.38 | 26332531.62 | 26332531.88 | 0.0283 | 0.0055 |
| Jupiter | 67393-01-04 18:58 G | 26335852.06 | 26335852.29 | 26335852.53 | 0.0483 | 0.0069 |
| Saturn | 67398-05-31 04:19 G | 26337824.44 | 26337824.68 | 26337824.92 | 0.0275 | 0.0070 |
| Jupiter | 67405-01-09 17:31 G | 26340239.05 | 26340239.23 | 26340239.43 | 0.0484 | 0.0297 |
| Uranus | 67407-07-10 06:58 G | 26341150.76 | 26341150.79 | 26341150.83 | 0.0136 | 0.0134 |
| Uranus | 67408-07-13 22:48 G | 26341520.30 | 26341520.45 | 26341520.65 | 0.0136 | 0.0099 |
| Uranus | 67409-07-18 02:10 G | 26341889.37 | 26341889.59 | 26341889.85 | 0.0136 | 0.0043 |
| Uranus | 67410-07-22 20:24 G | 26342259.10 | 26342259.35 | 26342259.61 | 0.0137 | 0.0013 |
| Neptune | 67411-01-10 14:10 G | 26342430.96 | 26342431.09 | 26342431.25 | 0.0088 | 0.0074 |
| Uranus | 67411-07-27 00:58 G | 26342628.31 | 26342628.54 | 26342628.78 | 0.0137 | 0.0047 |
| Neptune | 67412-01-13 00:00 G | 26342798.29 | 26342798.50 | 26342798.74 | 0.0088 | 0.0041 |
| Uranus | 67412-07-30 20:24 G | 26342998.15 | 26342998.35 | 26342998.55 | 0.0138 | 0.0083 |
| Saturn | 67412-11-27 08:39 G | 26343117.72 | 26343117.86 | 26343118.01 | 0.0283 | 0.0225 |
| Neptune | 67413-01-14 11:03 G | 26343165.70 | 26343165.96 | 26343166.23 | 0.0088 | 0.0017 |
| Uranus | 67413-08-04 02:10 G | 26343367.53 | 26343367.59 | 26343367.66 | 0.0138 | 0.0132 |
| Neptune | 67414-01-17 02:10 G | 26343533.35 | 26343533.59 | 26343533.85 | 0.0088 | 0.0017 |
| Neptune | 67415-01-19 08:24 G | 26343900.63 | 26343900.85 | 26343901.10 | 0.0088 | 0.0040 |
| Neptune | 67416-01-22 02:24 G | 26344268.50 | 26344268.60 | 26344268.76 | 0.0088 | 0.0075 |
| Saturn | 67428-06-07 18:00 G | 26348789.13 | 26348789.25 | 26348789.37 | 0.0276 | 0.0235 |

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| Jupiter | 67434-07-05 07:41 G | 26351007.59 | 26351007.82 | 26351008.04 | 0.0545 | 0.0031 |
| Saturn | 67442-12-05 10:34 G | 26354082.72 | 26354082.94 | 26354083.16 | 0.0283 | 0.0118 |
| Jupiter | 67446-07-10 18:15 G | 26355396.12 | 26355396.26 | 26355396.42 | 0.0545 | 0.0422 |
| Uranus | 67448-01-11 20:53 G | 26355946.29 | 26355946.37 | 26355946.49 | 0.0142 | 0.0131 |
| Uranus | 67449-01-16 03:07 G | 26356316.45 | 26356316.63 | 26356316.83 | 0.0142 | 0.0094 |
| Uranus | 67450-01-20 18:15 G | 26356686.02 | 26356686.26 | 26356686.52 | 0.0142 | 0.0034 |
| Uranus | 67451-01-25 22:34 G | 26357056.19 | 26357056.44 | 26357056.69 | 0.0141 | 0.0015 |
| Uranus | 67452-01-30 12:29 G | 26357425.80 | 26357426.02 | 26357426.27 | 0.0141 | 0.0059 |
| Uranus | 67453-02-03 13:55 G | 26357795.97 | 26357796.08 | 26357796.22 | 0.0140 | 0.0121 |
| Pluto | 67454-06-29 10:19 G | 26358306.73 | 26358306.93 | 26358307.18 | 0.0065 | 0.0030 |
| Saturn | 67457-06-02 05:17 G | 26359375.47 | 26359375.72 | 26359375.97 | 0.0275 | 0.0012 |
| Jupiter | 67464-01-01 19:41 G | 26361780.24 | 26361780.32 | 26361780.42 | 0.0483 | 0.0448 |
| Saturn | 67471-11-29 14:24 G | 26364668.89 | 26364669.10 | 26364669.32 | 0.0283 | 0.0159 |
| Jupiter | 67476-01-05 20:39 G | 26366167.12 | 26366167.36 | 26366167.59 | 0.0484 | 0.0112 |
| Saturn | 67486-05-28 12:15 G | 26369962.89 | 26369963.01 | 26369963.14 | 0.0276 | 0.0233 |
| Jupiter | 67488-01-10 08:10 G | 26370554.65 | 26370554.84 | 26370555.03 | 0.0484 | 0.0261 |
| Uranus | 67491-07-10 20:39 G | 26371832.32 | 26371832.36 | 26371832.44 | 0.0136 | 0.0131 |
| Neptune | 67492-07-09 10:48 G | 26372196.81 | 26372196.95 | 26372197.12 | 0.0089 | 0.0072 |
| Uranus | 67492-07-14 13:12 G | 26372201.85 | 26372202.05 | 26372202.25 | 0.0136 | 0.0081 |
| Neptune | 67493-07-11 22:19 G | 26372564.22 | 26372564.43 | 26372564.67 | 0.0089 | 0.0039 |
| Uranus | 67493-07-18 16:34 G | 26372570.96 | 26372571.19 | 26372571.42 | 0.0136 | 0.0049 |
| Neptune | 67494-07-14 07:27 G | 26372931.56 | 26372931.81 | 26372932.08 | 0.0089 | 0.0013 |
| Uranus | 67494-07-23 10:05 G | 26372940.67 | 26372940.92 | 26372941.18 | 0.0137 | 0.0010 |
| Neptune | 67495-07-16 23:46 G | 26373299.25 | 26373299.49 | 26373299.74 | 0.0089 | 0.0020 |
| Uranus | 67495-07-27 14:24 G | 26373309.87 | 26373310.10 | 26373310.35 | 0.0137 | 0.0041 |
| Neptune | 67496-07-18 05:03 G | 26373666.50 | 26373666.71 | 26373666.94 | 0.0089 | 0.0047 |
| Uranus | 67496-07-31 09:07 G | 26373679.72 | 26373679.88 | 26373680.08 | 0.0138 | 0.0097 |
| Neptune | 67497-07-20 23:17 G | 26374034.39 | 26374034.47 | 26374034.61 | 0.0089 | 0.0081 |
| Mars | 67498-04-28 13:27 G | 26374315.90 | 26374316.06 | 26374316.22 | 0.1711 | 0.0910 |
| Saturn | 67501-12-07 23:17 G | 26375634.30 | 26375634.47 | 26375634.66 | 0.0283 | 0.0186 |

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| Saturn | 67516-06-04 12:00 G | 26380926.77 | 26380927.00 | 26380927.23 | 0.0275 | 0.0051 |
| Jupiter | 67517-07-05 13:41 G | 26381322.84 | 26381323.07 | 26381323.31 | 0.0545 | 0.0096 |
| Jupiter | 67529-07-10 16:19 G | 26385711.01 | 26385711.18 | 26385711.35 | 0.0545 | 0.0350 |
| Saturn | 67530-12-01 19:12 G | 26386220.06 | 26386220.30 | 26386220.54 | 0.0283 | 0.0093 |
| Uranus | 67532-01-13 07:41 G | 26386627.80 | 26386627.82 | 26386627.88 | 0.0142 | 0.0141 |
| Uranus | 67533-01-17 13:41 G | 26386997.87 | 26386998.07 | 26386998.30 | 0.0142 | 0.0075 |
| Uranus | 67534-01-22 04:34 G | 26387367.45 | 26387367.69 | 26387367.95 | 0.0142 | 0.0036 |
| Uranus | 67535-01-27 08:53 G | 26387737.62 | 26387737.87 | 26387738.12 | 0.0141 | 0.0018 |
| Uranus | 67536-01-31 22:34 G | 26388107.23 | 26388107.44 | 26388107.67 | 0.0141 | 0.0074 |
| Uranus | 67537-02-05 00:43 G | 26388477.39 | 26388477.53 | 26388477.69 | 0.0140 | 0.0112 |
| Pluto | 67543-01-01 12:58 G | 26390633.85 | 26390634.04 | 26390634.25 | 0.0079 | 0.0050 |
| Saturn | 67545-05-30 19:27 G | 26391514.12 | 26391514.31 | 26391514.50 | 0.0276 | 0.0173 |
| Jupiter | 67559-01-06 06:43 G | 26396482.57 | 26396482.78 | 26396483.00 | 0.0483 | 0.0164 |
| Saturn | 67560-12-09 12:15 G | 26397185.91 | 26397186.01 | 26397186.12 | 0.0283 | 0.0254 |
| Jupiter | 67571-01-10 10:34 G | 26400869.72 | 26400869.94 | 26400870.17 | 0.0483 | 0.0207 |
| Saturn | 67575-06-06 23:17 G | 26402478.26 | 26402478.47 | 26402478.69 | 0.0275 | 0.0116 |
| Uranus | 67575-07-12 09:51 G | 26402513.82 | 26402513.91 | 26402514.03 | 0.0136 | 0.0122 |
| Neptune | 67576-01-13 05:46 G | 26402698.54 | 26402698.74 | 26402698.97 | 0.0088 | 0.0053 |
| Uranus | 67576-07-16 01:12 G | 26402883.36 | 26402883.55 | 26402883.77 | 0.0136 | 0.0084 |
| Neptune | 67577-01-14 21:51 G | 26403066.18 | 26403066.41 | 26403066.65 | 0.0088 | 0.0033 |
| Uranus | 67577-07-20 05:17 G | 26403252.49 | 26403252.72 | 26403252.98 | 0.0136 | 0.0030 |
| Neptune | 67578-01-17 03:22 G | 26403433.37 | 26403433.64 | 26403433.90 | 0.0088 | 0.0004 |
| Uranus | 67578-07-24 23:03 G | 26403622.20 | 26403622.46 | 26403622.71 | 0.0137 | 0.0002 |
| Neptune | 67579-01-19 21:22 G | 26403801.16 | 26403801.39 | 26403801.66 | 0.0088 | 0.0025 |
| Uranus | 67579-07-29 03:22 G | 26403991.43 | 26403991.64 | 26403991.88 | 0.0137 | 0.0060 |
| Neptune | 67580-01-22 01:55 G | 26404168.42 | 26404168.58 | 26404168.78 | 0.0088 | 0.0062 |
| Uranus | 67580-08-01 22:34 G | 26404361.26 | 26404361.44 | 26404361.63 | 0.0137 | 0.0095 |
| Neptune | 67581-01-23 19:27 G | 26404536.25 | 26404536.31 | 26404536.44 | 0.0088 | 0.0082 |
| Saturn | 67589-12-03 04:34 G | 26407771.45 | 26407771.69 | 26407771.94 | 0.0283 | 0.0023 |
| Jupiter | 67600-07-04 06:00 G | 26411637.54 | 26411637.75 | 26411637.96 | 0.0544 | 0.0198 |

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|---------|---------------------|-------------|-------------|-------------|--------|----------|
| Saturn | 67604-05-31 22:34 G | 26413065.21 | 26413065.44 | 26413065.66 | 0.0276 | 0.0113 |
| Jupiter | 67612-07-09 16:19 G | 26416025.97 | 26416026.18 | 26416026.39 | 0.0544 | 0.0235 |
| Uranus | 67616-01-13 19:41 G | 26417309.20 | 26417309.32 | 26417309.47 | 0.0142 | 0.0119 |
| Uranus | 67617-01-18 01:41 G | 26417679.37 | 26417679.57 | 26417679.78 | 0.0142 | 0.0082 |
| Uranus | 67618-01-22 16:34 G | 26418048.95 | 26418049.19 | 26418049.45 | 0.0142 | 0.0022 |
| Saturn | 67618-11-28 04:48 G | 26418358.63 | 26418358.70 | 26418358.79 | 0.0283 | 0.0267 |
| Uranus | 67619-01-27 21:36 G | 26418419.15 | 26418419.40 | 26418419.65 | 0.0141 | 0.0026 |
| Uranus | 67620-02-01 11:03 G | 26418788.75 | 26418788.96 | 26418789.19 | 0.0141 | 0.0071 |
| Uranus | 67621-02-05 13:41 G | 26419158.99 | 26419159.07 | 26419159.16 | 0.0140 | 0.0132 |
| Saturn | 67634-06-08 11:17 G | 26424029.79 | 26424029.97 | 26424030.15 | 0.0275 | 0.0180 |
| Jupiter | 67642-01-05 09:22 G | 26426797.67 | 26426797.89 | 26426798.11 | 0.0483 | 0.0214 |
| Saturn | 67648-12-04 20:39 G | 26429323.12 | 26429323.36 | 26429323.59 | 0.0283 | 0.0052 |
| Jupiter | 67654-01-09 15:07 G | 26431184.92 | 26431185.13 | 26431185.35 | 0.0484 | 0.0161 |
| Neptune | 67656-07-09 16:34 G | 26432097.12 | 26432097.19 | 26432097.30 | 0.0089 | 0.0083 |
| Neptune | 67657-07-12 00:29 G | 26432464.35 | 26432464.52 | 26432464.73 | 0.0089 | 0.0061 |
| Neptune | 67658-07-14 18:00 G | 26432832.02 | 26432832.25 | 26432832.51 | 0.0089 | 0.0023 |
| Uranus | 67659-07-12 23:17 G | 26433195.37 | 26433195.47 | 26433195.61 | 0.0136 | 0.0118 |
| Neptune | 67659-07-16 23:17 G | 26433199.21 | 26433199.47 | 26433199.73 | 0.0089 | 0.0001 |
| Uranus | 67660-07-16 14:39 G | 26433564.90 | 26433565.11 | 26433565.34 | 0.0136 | 0.0069 |
| Neptune | 67660-07-18 17:31 G | 26433567.02 | 26433567.23 | 26433567.48 | 0.0089 | 0.0038 |
| Uranus | 67661-07-20 19:27 G | 26433934.07 | 26433934.31 | 26433934.54 | 0.0136 | 0.0036 |
| Neptune | 67661-07-20 23:03 G | 26433934.29 | 26433934.46 | 26433934.66 | 0.0089 | 0.0059 * |
| Uranus | 67662-07-25 11:46 G | 26434303.74 | 26434303.99 | 26434304.25 | 0.0137 | 0.0022 |
| Saturn | 67663-06-03 03:07 G | 26434616.39 | 26434616.63 | 26434616.87 | 0.0276 | 0.0051 |
| Uranus | 67663-07-29 16:48 G | 26434672.97 | 26434673.20 | 26434673.43 | 0.0137 | 0.0052 |
| Uranus | 67664-08-02 10:48 G | 26435042.81 | 26435042.95 | 26435043.12 | 0.0137 | 0.0109 |
| Saturn | 67677-11-29 13:55 G | 26439909.90 | 26439910.08 | 26439910.28 | 0.0283 | 0.0193 |
| Jupiter | 67683-07-04 07:27 G | 26441952.62 | 26441952.81 | 26441953.01 | 0.0545 | 0.0299 |
| Saturn | 67693-06-09 18:15 G | 26445581.16 | 26445581.26 | 26445581.38 | 0.0275 | 0.0247 |
| Jupiter | 67695-07-09 09:07 G | 26446340.65 | 26446340.88 | 26446341.10 | 0.0545 | 0.0146 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 67700-01-14 06:43 G | 26447990.67 | 26447990.78 | 26447990.88 | 0.0142 | 0.0129 |
| Uranus | 67701-01-19 11:46 G | 26448360.76 | 26448360.99 | 26448361.23 | 0.0142 | 0.0063 |
| Uranus | 67702-01-24 03:07 G | 26448730.38 | 26448730.63 | 26448730.88 | 0.0142 | 0.0025 |
| Pluto | 67702-07-03 05:17 G | 26448890.47 | 26448890.72 | 26448890.97 | 0.0065 | 0.0018 |
| Uranus | 67703-01-29 07:12 G | 26449100.56 | 26449100.80 | 26449101.06 | 0.0141 | 0.0031 |
| Uranus | 67704-02-02 20:24 G | 26449470.16 | 26449470.35 | 26449470.57 | 0.0141 | 0.0084 |
| Uranus | 67705-02-06 23:31 G | 26449840.37 | 26449840.48 | 26449840.61 | 0.0141 | 0.0122 |
| Saturn | 67707-12-08 13:27 G | 26450874.84 | 26450875.06 | 26450875.28 | 0.0283 | 0.0126 |
| Saturn | 67722-06-05 14:10 G | 26456167.85 | 26456168.09 | 26456168.32 | 0.0276 | 0.0015 |
| Jupiter | 67725-01-05 13:12 G | 26457112.87 | 26457113.05 | 26457113.25 | 0.0484 | 0.0264 |
| Saturn | 67736-12-01 22:48 G | 26461461.23 | 26461461.45 | 26461461.68 | 0.0283 | 0.0121 |
| Jupiter | 67737-01-09 23:17 G | 26461500.24 | 26461500.47 | 26461500.71 | 0.0483 | 0.0110 |
| Neptune | 67740-01-13 16:48 G | 26462599.08 | 26462599.20 | 26462599.37 | 0.0088 | 0.0073 |
| Neptune | 67741-01-14 22:19 G | 26462966.21 | 26462966.43 | 26462966.67 | 0.0088 | 0.0041 |
| Neptune | 67742-01-17 17:17 G | 26463333.97 | 26463334.22 | 26463334.48 | 0.0088 | 0.0015 |
| Neptune | 67743-01-19 22:05 G | 26463701.18 | 26463701.42 | 26463701.69 | 0.0088 | 0.0017 |
| Uranus | 67743-07-14 12:29 G | 26463876.89 | 26463877.02 | 26463877.17 | 0.0136 | 0.0111 |
| Neptune | 67744-01-22 15:36 G | 26464068.93 | 26464069.15 | 26464069.40 | 0.0088 | 0.0041 |
| Uranus | 67744-07-18 02:10 G | 26464246.39 | 26464246.59 | 26464246.83 | 0.0136 | 0.0072 |
| Neptune | 67745-01-23 23:46 G | 26464436.36 | 26464436.49 | 26464436.63 | 0.0088 | 0.0073 |
| Uranus | 67745-07-22 07:41 G | 26464615.58 | 26464615.82 | 26464616.07 | 0.0136 | 0.0018 |
| Uranus | 67746-07-26 23:31 G | 26464985.23 | 26464985.48 | 26464985.74 | 0.0137 | 0.0013 |
| Uranus | 67747-07-31 05:03 G | 26465354.51 | 26465354.71 | 26465354.93 | 0.0137 | 0.0072 |
| Uranus | 67748-08-03 22:48 G | 26465724.30 | 26465724.45 | 26465724.63 | 0.0138 | 0.0105 |
| Jupiter | 67749-01-13 22:34 G | 26465887.35 | 26465887.44 | 26465887.55 | 0.0483 | 0.0438 |
| Saturn | 67751-05-31 18:43 G | 26466755.13 | 26466755.28 | 26466755.45 | 0.0276 | 0.0214 |
| Jupiter | 67766-07-04 03:07 G | 26472267.47 | 26472267.63 | 26472267.80 | 0.0545 | 0.0380 |
| Saturn | 67766-12-10 00:29 G | 26472426.35 | 26472426.52 | 26472426.71 | 0.0283 | 0.0200 |
| Jupiter | 67778-07-09 14:53 G | 26476655.89 | 26476656.12 | 26476656.34 | 0.0545 | 0.0051 |
| Saturn | 67781-06-07 01:41 G | 26477719.35 | 26477719.57 | 26477719.81 | 0.0276 | 0.0080 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Mars | 67782-05-01 15:36 G | 26478047.98 | 26478048.15 | 26478048.32 | 0.1717 | 0.0288 |
| Uranus | 67784-01-15 17:46 G | 26478672.10 | 26478672.24 | 26478672.42 | 0.0142 | 0.0108 |
| Uranus | 67785-01-19 22:34 G | 26479042.23 | 26479042.44 | 26479042.68 | 0.0142 | 0.0072 |
| Uranus | 67786-01-24 14:39 G | 26479411.86 | 26479412.11 | 26479412.36 | 0.0142 | 0.0010 |
| Uranus | 67787-01-29 18:43 G | 26479782.04 | 26479782.28 | 26479782.55 | 0.0141 | 0.0036 |
| Uranus | 67788-02-03 08:24 G | 26480151.66 | 26480151.85 | 26480152.07 | 0.0141 | 0.0082 |
| Uranus | 67789-02-07 11:31 G | 26480521.98 | 26480521.98 | 26480521.98 | 0.0141 | 0.0141 |
| Jupiter | 67790-07-14 14:24 G | 26481044.03 | 26481044.10 | 26481044.16 | 0.0544 | 0.0522 |
| Pluto | 67791-01-03 19:41 G | 26481217.11 | 26481217.32 | 26481217.56 | 0.0079 | 0.0042 |
| Saturn | 67795-12-04 11:17 G | 26483012.73 | 26483012.97 | 26483013.21 | 0.0283 | 0.0051 |
| Jupiter | 67808-01-06 23:31 G | 26487428.30 | 26487428.48 | 26487428.67 | 0.0483 | 0.0303 |
| Saturn | 67810-06-02 23:46 G | 26488306.29 | 26488306.49 | 26488306.71 | 0.0276 | 0.0150 |
| Jupiter | 67820-01-10 21:51 G | 26491815.18 | 26491815.41 | 26491815.65 | 0.0483 | 0.0059 |
| Neptune | 67821-07-13 13:12 G | 26492364.93 | 26492365.05 | 26492365.21 | 0.0089 | 0.0075 |
| Neptune | 67822-07-15 18:00 G | 26492732.03 | 26492732.25 | 26492732.49 | 0.0089 | 0.0038 |
| Neptune | 67823-07-18 12:29 G | 26493099.76 | 26493100.02 | 26493100.28 | 0.0089 | 0.0015 |
| Neptune | 67824-07-19 18:00 G | 26493467.01 | 26493467.25 | 26493467.50 | 0.0089 | 0.0020 |
| Neptune | 67825-07-22 09:22 G | 26493834.68 | 26493834.89 | 26493835.14 | 0.0089 | 0.0044 |
| Saturn | 67825-12-12 06:58 G | 26493977.73 | 26493977.79 | 26493977.87 | 0.0283 | 0.0272 |
| Neptune | 67826-07-24 19:12 G | 26494202.21 | 26494202.30 | 26494202.44 | 0.0089 | 0.0080 |
| Uranus | 67827-07-16 01:41 G | 26494558.44 | 26494558.57 | 26494558.74 | 0.0136 | 0.0105 |
| Uranus | 67828-07-19 15:07 G | 26494927.91 | 26494928.13 | 26494928.38 | 0.0136 | 0.0058 |
| Uranus | 67829-07-23 21:22 G | 26495297.15 | 26495297.39 | 26495297.63 | 0.0136 | 0.0024 |
| Uranus | 67830-07-28 12:00 G | 26495666.75 | 26495667.00 | 26495667.26 | 0.0137 | 0.0033 |
| Uranus | 67831-08-01 18:00 G | 26496036.04 | 26496036.25 | 26496036.48 | 0.0137 | 0.0063 |
| Jupiter | 67832-01-15 12:00 G | 26496202.87 | 26496203.00 | 26496203.15 | 0.0484 | 0.0385 |
| Uranus | 67832-08-05 10:48 G | 26496405.84 | 26496405.95 | 26496406.09 | 0.0138 | 0.0120 |
| Saturn | 67840-06-09 09:07 G | 26499270.68 | 26499270.88 | 26499271.10 | 0.0276 | 0.0140 |
| Jupiter | 67849-07-04 07:41 G | 26502582.72 | 26502582.82 | 26502582.93 | 0.0544 | 0.0478 |
| Saturn | 67854-12-07 00:15 G | 26504564.27 | 26504564.51 | 26504564.75 | 0.0283 | 0.0017 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 67861-07-09 03:51 G | 26506970.43 | 26506970.66 | 26506970.90 | 0.0545 | 0.0056 |
| Uranus | 67868-01-17 04:48 G | 26509353.57 | 26509353.70 | 26509353.85 | 0.0142 | 0.0117 |
| Uranus | 67869-01-21 08:24 G | 26509723.62 | 26509723.85 | 26509724.10 | 0.0142 | 0.0052 |
| Saturn | 67869-06-04 06:58 G | 26509857.57 | 26509857.79 | 26509858.02 | 0.0276 | 0.0089 |
| Uranus | 67870-01-26 01:12 G | 26510093.30 | 26510093.55 | 26510093.80 | 0.0142 | 0.0015 |
| Uranus | 67871-01-31 04:34 G | 26510463.45 | 26510463.69 | 26510463.95 | 0.0141 | 0.0042 |
| Uranus | 67872-02-04 17:46 G | 26510833.07 | 26510833.24 | 26510833.45 | 0.0141 | 0.0093 |
| Uranus | 67873-02-08 20:39 G | 26511203.29 | 26511203.36 | 26511203.46 | 0.0141 | 0.0132 |
| Jupiter | 67873-07-14 14:24 G | 26511358.97 | 26511359.10 | 26511359.23 | 0.0545 | 0.0441 |
| Saturn | 67883-11-30 20:53 G | 26515150.28 | 26515150.37 | 26515150.49 | 0.0283 | 0.0257 |
| Jupiter | 67891-01-05 22:34 G | 26517743.28 | 26517743.44 | 26517743.60 | 0.0483 | 0.0355 |
| Saturn | 67899-06-11 11:31 G | 26520821.82 | 26520821.98 | 26520822.16 | 0.0276 | 0.0201 |
| Jupiter | 67903-01-11 12:00 G | 26522130.76 | 26522131.00 | 26522131.23 | 0.0484 | 0.0014 |
| Neptune | 67905-01-16 12:43 G | 26522866.84 | 26522867.03 | 26522867.27 | 0.0088 | 0.0052 |
| Neptune | 67906-01-18 18:15 G | 26523234.04 | 26523234.26 | 26523234.52 | 0.0088 | 0.0033 |
| Neptune | 67907-01-21 11:03 G | 26523601.69 | 26523601.96 | 26523602.23 | 0.0088 | 0.0005 |
| Neptune | 67908-01-23 19:41 G | 26523969.08 | 26523969.32 | 26523969.57 | 0.0088 | 0.0025 |
| Neptune | 67909-01-25 06:43 G | 26524336.62 | 26524336.78 | 26524337.00 | 0.0088 | 0.0063 |
| Neptune | 67910-01-27 20:53 G | 26524704.31 | 26524704.37 | 26524704.48 | 0.0088 | 0.0083 |
| Uranus | 67911-07-17 14:10 G | 26525239.95 | 26525240.09 | 26525240.28 | 0.0136 | 0.0100 |
| Uranus | 67912-07-21 02:10 G | 26525609.37 | 26525609.59 | 26525609.84 | 0.0136 | 0.0058 |
| Uranus | 67913-07-25 09:22 G | 26525978.64 | 26525978.89 | 26525979.13 | 0.0136 | 0.0007 |
| Saturn | 67913-12-09 08:53 G | 26526115.63 | 26526115.87 | 26526116.11 | 0.0283 | 0.0077 |
| Uranus | 67914-07-29 23:03 G | 26526348.21 | 26526348.46 | 26526348.72 | 0.0137 | 0.0025 |
| Jupiter | 67915-01-15 10:48 G | 26526517.78 | 26526517.95 | 26526518.13 | 0.0483 | 0.0332 |
| Uranus | 67915-08-03 06:00 G | 26526717.58 | 26526717.75 | 26526717.97 | 0.0137 | 0.0084 |
| Uranus | 67916-08-06 22:19 G | 26527087.31 | 26527087.43 | 26527087.59 | 0.0138 | 0.0115 |
| Saturn | 67928-06-06 17:46 G | 26531409.01 | 26531409.24 | 26531409.47 | 0.0276 | 0.0026 |
| Saturn | 67942-12-03 01:55 G | 26536701.42 | 26536701.58 | 26536701.77 | 0.0283 | 0.0196 |
| Jupiter | 67944-07-09 12:00 G | 26537285.79 | 26537286.00 | 26537286.22 | 0.0545 | 0.0124 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 67950-07-06 18:15 G | 26539474.02 | 26539474.26 | 26539474.51 | 0.0065 | 0.0002 |
| Uranus | 67952-01-18 15:51 G | 26540034.98 | 26540035.16 | 26540035.34 | 0.0142 | 0.0097 |
| Uranus | 67953-01-22 18:29 G | 26540405.03 | 26540405.27 | 26540405.51 | 0.0142 | 0.0060 |
| Uranus | 67954-01-27 11:46 G | 26540774.75 | 26540774.99 | 26540775.25 | 0.0142 | 0.0004 |
| Uranus | 67955-02-01 14:53 G | 26541144.88 | 26541145.12 | 26541145.37 | 0.0141 | 0.0044 |
| Uranus | 67956-02-06 05:17 G | 26541514.54 | 26541514.72 | 26541514.91 | 0.0141 | 0.0093 |
| Jupiter | 67956-07-14 19:55 G | 26541674.16 | 26541674.33 | 26541674.51 | 0.0545 | 0.0378 |
| Saturn | 67957-06-01 07:27 G | 26541995.79 | 26541995.81 | 26541995.86 | 0.0276 | 0.0273 |
| Saturn | 67958-06-13 13:41 G | 26542373.01 | 26542373.07 | 26542373.17 | 0.0276 | 0.0259 |
| Saturn | 67972-12-10 09:51 G | 26547666.69 | 26547666.91 | 26547667.14 | 0.0283 | 0.0137 |
| Jupiter | 67974-01-06 13:27 G | 26548058.94 | 26548059.06 | 26548059.20 | 0.0484 | 0.0396 |
| Neptune | 67985-07-13 13:27 G | 26552265.00 | 26552265.06 | 26552265.19 | 0.0089 | 0.0083 |
| Jupiter | 67986-01-10 13:55 G | 26552445.84 | 26552446.08 | 26552446.32 | 0.0483 | 0.0030 |
| Neptune | 67986-07-16 08:10 G | 26552632.65 | 26552632.84 | 26552633.04 | 0.0089 | 0.0059 |
| Saturn | 67987-06-09 02:10 G | 26552960.35 | 26552960.59 | 26552960.83 | 0.0276 | 0.0033 |
| Neptune | 67987-07-18 14:24 G | 26552999.88 | 26553000.10 | 26553000.35 | 0.0089 | 0.0024 |
| Neptune | 67988-07-20 05:31 G | 26553367.47 | 26553367.73 | 26553367.99 | 0.0089 | 0.0001 |
| Neptune | 67989-07-22 16:05 G | 26553734.95 | 26553735.17 | 26553735.40 | 0.0089 | 0.0036 |
| Neptune | 67990-07-25 01:12 G | 26554102.37 | 26554102.55 | 26554102.77 | 0.0089 | 0.0059 |
| Uranus | 67995-07-18 03:07 G | 26555921.46 | 26555921.63 | 26555921.82 | 0.0136 | 0.0091 |
| Uranus | 67996-07-21 14:10 G | 26556290.86 | 26556291.09 | 26556291.34 | 0.0136 | 0.0047 |
| Uranus | 67997-07-25 22:19 G | 26556660.19 | 26556660.43 | 26556660.67 | 0.0136 | 0.0010 |
| Jupiter | 67998-01-15 00:29 G | 26556833.34 | 26556833.52 | 26556833.71 | 0.0483 | 0.0281 |
| Uranus | 67998-07-30 10:48 G | 26557029.71 | 26557029.95 | 26557030.21 | 0.0137 | 0.0045 |
| Uranus | 67999-08-03 19:12 G | 26557399.09 | 26557399.30 | 26557399.50 | 0.0137 | 0.0075 |
| Uranus | 68000-08-07 09:36 G | 26557768.85 | 26557768.90 | 26557769.00 | 0.0137 | 0.0132 |

69TH MILLENNIUM CE

This is a list of transits of Moon in the 69th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 68001-12-04 10:48 | G | 26558252.74 | 26558252.95 | 26558253.16 | 0.0283 | 0.0134 | |
| Saturn | 68016-06-02 09:07 | G | 26563546.74 | 26563546.88 | 26563547.04 | 0.0276 | 0.0216 | |
| Jupiter | 68027-07-09 14:10 | G | 26567600.87 | 26567601.09 | 26567601.32 | 0.0545 | 0.0199 | |
| Saturn | 68031-12-12 07:41 | G | 26569217.65 | 26569217.82 | 26569218.01 | 0.0283 | 0.0194 | |
| Uranus | 68036-01-19 01:55 | G | 26570716.43 | 26570716.58 | 26570716.77 | 0.0142 | 0.0104 | |
| Uranus | 68037-01-23 03:36 | G | 26571086.40 | 26571086.65 | 26571086.91 | 0.0142 | 0.0040 | |
| Uranus | 68038-01-27 22:05 | G | 26571456.17 | 26571456.42 | 26571456.67 | 0.0142 | 0.0004 | |
| Pluto | 68039-01-07 21:07 | G | 26571801.13 | 26571801.38 | 26571801.65 | 0.0079 | 0.0008 | |
| Uranus | 68039-02-02 00:00 | G | 26571826.26 | 26571826.50 | 26571826.74 | 0.0141 | 0.0054 | |
| Jupiter | 68039-07-14 11:46 | G | 26571988.80 | 26571988.99 | 26571989.18 | 0.0545 | 0.0283 | |
| Uranus | 68040-02-06 14:24 | G | 26572195.94 | 26572196.10 | 26572196.29 | 0.0141 | 0.0102 | |
| Saturn | 68046-06-10 03:07 | G | 26574511.40 | 26574511.63 | 26574511.87 | 0.0276 | 0.0093 | |
| Jupiter | 68057-01-05 16:05 | G | 26578374.07 | 26578374.17 | 26578374.28 | 0.0483 | 0.0435 | |
| Saturn | 68060-12-05 17:03 | G | 26579803.97 | 26579804.21 | 26579804.45 | 0.0283 | 0.0075 | |
| Mars | 68066-05-04 15:36 | G | 26581779.96 | 26581780.15 | 26581780.34 | 0.1724 | 0.0267 | |
| Jupiter | 68069-01-10 03:51 | G | 26582761.44 | 26582761.66 | 26582761.89 | 0.0483 | 0.0074 | |
| Neptune | 68069-01-15 14:24 | G | 26582766.97 | 26582767.10 | 26582767.28 | 0.0088 | 0.0070 | |
| Neptune | 68070-01-18 06:29 | G | 26583134.55 | 26583134.77 | 26583135.02 | 0.0088 | 0.0041 | |
| Neptune | 68071-01-20 17:31 | G | 26583501.98 | 26583502.23 | 26583502.48 | 0.0088 | 0.0012 | |
| Neptune | 68072-01-23 04:05 | G | 26583869.41 | 26583869.67 | 26583869.94 | 0.0088 | 0.0017 | |
| Neptune | 68073-01-24 18:58 | G | 26584237.08 | 26584237.29 | 26584237.52 | 0.0088 | 0.0045 | |
| Neptune | 68074-01-27 00:58 | G | 26584604.41 | 26584604.54 | 26584604.70 | 0.0088 | 0.0073 | |

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| Saturn | 68075-06-04 15:07 G | 26585097.95 | 26585098.13 | 26585098.33 | 0.0275 | 0.0159 |
| Uranus | 68078-07-14 06:00 G | 26586233.66 | 26586233.75 | 26586233.86 | 0.0136 | 0.0124 |
| Uranus | 68079-07-18 14:39 G | 26586602.94 | 26586603.11 | 26586603.30 | 0.0136 | 0.0089 |
| Uranus | 68080-07-22 00:29 G | 26586972.27 | 26586972.52 | 26586972.76 | 0.0136 | 0.0045 |
| Jupiter | 68081-01-14 07:41 G | 26587148.61 | 26587148.82 | 26587149.05 | 0.0483 | 0.0231 |
| Uranus | 68081-07-26 09:22 G | 26587341.64 | 26587341.89 | 26587342.13 | 0.0136 | 0.0004 |
| Uranus | 68082-07-30 20:53 G | 26587711.12 | 26587711.37 | 26587711.63 | 0.0137 | 0.0037 |
| Uranus | 68083-08-04 06:29 G | 26588080.60 | 26588080.77 | 26588080.95 | 0.0137 | 0.0094 |
| Uranus | 68084-08-07 20:10 G | 26588450.26 | 26588450.34 | 26588450.47 | 0.0137 | 0.0126 |
| Saturn | 68090-12-13 10:48 G | 26590768.85 | 26590768.95 | 26590769.06 | 0.0283 | 0.0250 |
| Saturn | 68105-06-12 01:55 G | 26596062.38 | 26596062.58 | 26596062.79 | 0.0276 | 0.0153 |
| Jupiter | 68110-07-09 09:07 G | 26597915.70 | 26597915.88 | 26597916.07 | 0.0545 | 0.0299 |
| Saturn | 68119-12-08 15:51 G | 26601354.91 | 26601355.16 | 26601355.42 | 0.0283 | 0.0019 |
| Uranus | 68120-01-20 12:29 G | 26601397.84 | 26601398.02 | 26601398.23 | 0.0142 | 0.0087 |
| Uranus | 68121-01-24 12:29 G | 26601767.78 | 26601768.02 | 26601768.28 | 0.0142 | 0.0049 |
| Uranus | 68122-01-29 08:10 G | 26602137.60 | 26602137.84 | 26602138.09 | 0.0142 | 0.0015 |
| Jupiter | 68122-07-15 00:43 G | 26602304.33 | 26602304.53 | 26602304.75 | 0.0546 | 0.0233 |
| Uranus | 68123-02-03 08:53 G | 26602507.64 | 26602507.87 | 26602508.13 | 0.0141 | 0.0054 |
| Uranus | 68124-02-08 00:58 G | 26602877.39 | 26602877.54 | 26602877.72 | 0.0141 | 0.0105 |
| Saturn | 68134-06-06 21:36 G | 26606649.18 | 26606649.40 | 26606649.63 | 0.0275 | 0.0102 |
| Jupiter | 68140-01-07 06:15 G | 26608689.70 | 26608689.76 | 26608689.82 | 0.0484 | 0.0467 |
| Neptune | 68150-07-16 11:31 G | 26612532.87 | 26612532.98 | 26612533.14 | 0.0089 | 0.0075 |
| Neptune | 68151-07-19 01:12 G | 26612900.32 | 26612900.55 | 26612900.80 | 0.0089 | 0.0037 |
| Jupiter | 68152-01-11 12:43 G | 26613076.79 | 26613077.03 | 26613077.27 | 0.0483 | 0.0112 |
| Neptune | 68152-07-20 13:12 G | 26613267.81 | 26613268.05 | 26613268.30 | 0.0089 | 0.0015 |
| Neptune | 68153-07-22 21:51 G | 26613635.16 | 26613635.41 | 26613635.67 | 0.0089 | 0.0023 |
| Neptune | 68154-07-25 14:10 G | 26614002.88 | 26614003.09 | 26614003.32 | 0.0089 | 0.0044 |
| Neptune | 68155-07-27 19:27 G | 26614370.21 | 26614370.31 | 26614370.43 | 0.0089 | 0.0081 |
| Uranus | 68162-07-15 16:05 G | 26616915.11 | 26616915.17 | 26616915.27 | 0.0136 | 0.0129 |
| Uranus | 68163-07-20 02:24 G | 26617284.41 | 26617284.60 | 26617284.81 | 0.0136 | 0.0079 |

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| Jupiter | 68164-01-15 18:15 G | 26617464.05 | 26617464.26 | 26617464.47 | 0.0483 | 0.0195 |
| Saturn | 68164-06-13 04:48 G | 26617613.56 | 26617613.70 | 26617613.86 | 0.0276 | 0.0209 |
| Uranus | 68164-07-23 11:03 G | 26617653.71 | 26617653.96 | 26617654.22 | 0.0136 | 0.0038 |
| Uranus | 68165-07-27 21:36 G | 26618023.15 | 26618023.40 | 26618023.64 | 0.0136 | 0.0002 |
| Uranus | 68166-08-01 07:27 G | 26618392.59 | 26618392.81 | 26618393.07 | 0.0137 | 0.0055 |
| Uranus | 68167-08-05 18:15 G | 26618762.08 | 26618762.26 | 26618762.46 | 0.0137 | 0.0086 |
| Saturn | 68178-12-09 13:27 G | 26622905.81 | 26622906.06 | 26622906.31 | 0.0283 | 0.0040 |
| Saturn | 68193-06-07 23:46 G | 26628200.25 | 26628200.49 | 26628200.74 | 0.0275 | 0.0047 |
| Jupiter | 68193-07-08 23:46 G | 26628231.31 | 26628231.49 | 26628231.67 | 0.0545 | 0.0353 |
| Pluto | 68197-07-08 01:41 G | 26629691.57 | 26629691.57 | 26629691.58 | 0.0064 | 0.0064 |
| Pluto | 68198-07-09 15:51 G | 26630057.94 | 26630058.16 | 26630058.42 | 0.0065 | 0.0027 |
| Uranus | 68203-01-16 21:36 G | 26631709.35 | 26631709.40 | 26631709.50 | 0.0143 | 0.0137 |
| Uranus | 68204-01-21 22:48 G | 26632079.27 | 26632079.45 | 26632079.64 | 0.0142 | 0.0093 |
| Uranus | 68205-01-25 21:22 G | 26632449.14 | 26632449.39 | 26632449.66 | 0.0142 | 0.0030 |
| Jupiter | 68205-07-14 22:48 G | 26632619.23 | 26632619.45 | 26632619.67 | 0.0545 | 0.0166 |
| Uranus | 68206-01-30 18:15 G | 26632819.02 | 26632819.26 | 26632819.51 | 0.0142 | 0.0006 |
| Uranus | 68207-02-04 17:46 G | 26633189.01 | 26633189.24 | 26633189.48 | 0.0141 | 0.0065 |
| Saturn | 68207-12-04 19:12 G | 26633492.18 | 26633492.30 | 26633492.43 | 0.0283 | 0.0240 |
| Uranus | 68208-02-09 10:19 G | 26633558.79 | 26633558.93 | 26633559.10 | 0.0141 | 0.0110 |
| Saturn | 68222-06-03 20:53 G | 26638787.34 | 26638787.37 | 26638787.41 | 0.0276 | 0.0273 |
| Saturn | 68223-06-16 11:03 G | 26639164.91 | 26639164.96 | 26639165.03 | 0.0276 | 0.0266 |
| Neptune | 68233-01-17 02:39 G | 26642667.57 | 26642667.61 | 26642667.66 | 0.0088 | 0.0086 |
| Neptune | 68234-01-19 13:55 G | 26643034.88 | 26643035.08 | 26643035.30 | 0.0088 | 0.0049 |
| Jupiter | 68235-01-11 20:39 G | 26643392.14 | 26643392.36 | 26643392.58 | 0.0483 | 0.0154 |
| Neptune | 68235-01-21 23:03 G | 26643402.23 | 26643402.46 | 26643402.73 | 0.0088 | 0.0030 |
| Neptune | 68236-01-24 15:36 G | 26643769.90 | 26643770.15 | 26643770.41 | 0.0088 | 0.0008 |
| Neptune | 68237-01-25 21:22 G | 26644137.15 | 26644137.39 | 26644137.66 | 0.0088 | 0.0027 |
| Saturn | 68237-12-11 15:51 G | 26644456.93 | 26644457.16 | 26644457.39 | 0.0283 | 0.0095 |
| Neptune | 68238-01-28 16:19 G | 26644505.02 | 26644505.18 | 26644505.37 | 0.0088 | 0.0065 |
| Neptune | 68239-01-30 21:07 G | 26644872.32 | 26644872.38 | 26644872.46 | 0.0088 | 0.0084 |

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| Uranus | 68246-07-17 01:55 G | 26647596.45 | 26647596.58 | 26647596.74 | 0.0136 | 0.0113 |
| Jupiter | 68247-01-16 08:24 G | 26647779.62 | 26647779.85 | 26647780.08 | 0.0483 | 0.0149 |
| Uranus | 68247-07-21 13:12 G | 26647965.86 | 26647966.05 | 26647966.25 | 0.0136 | 0.0080 |
| Uranus | 68248-07-24 20:10 G | 26648335.09 | 26648335.34 | 26648335.60 | 0.0136 | 0.0033 |
| Uranus | 68249-07-29 07:41 G | 26648704.58 | 26648704.82 | 26648705.07 | 0.0137 | 0.0013 |
| Uranus | 68250-08-02 16:48 G | 26649073.97 | 26649074.20 | 26649074.46 | 0.0137 | 0.0048 |
| Uranus | 68251-08-07 05:03 G | 26649443.56 | 26649443.71 | 26649443.88 | 0.0137 | 0.0104 |
| Saturn | 68252-06-09 22:05 G | 26649751.18 | 26649751.42 | 26649751.68 | 0.0276 | 0.0013 |
| Uranus | 68252-08-10 16:34 G | 26649813.16 | 26649813.19 | 26649813.27 | 0.0137 | 0.0135 |
| Jupiter | 68259-01-20 07:27 G | 26652166.76 | 26652166.81 | 26652166.86 | 0.0483 | 0.0470 |
| Saturn | 68266-12-05 20:24 G | 26655043.17 | 26655043.35 | 26655043.55 | 0.0283 | 0.0183 |
| Jupiter | 68276-07-08 13:41 G | 26658545.95 | 26658546.07 | 26658546.20 | 0.0545 | 0.0456 |
| Saturn | 68281-06-05 03:22 G | 26660338.50 | 26660338.64 | 26660338.79 | 0.0277 | 0.0216 |
| Pluto | 68287-01-11 13:55 G | 26662384.91 | 26662385.08 | 26662385.29 | 0.0079 | 0.0054 |
| Uranus | 68287-01-17 06:29 G | 26662390.69 | 26662390.77 | 26662390.88 | 0.0143 | 0.0133 |
| Uranus | 68288-01-22 08:10 G | 26662760.65 | 26662760.84 | 26662761.06 | 0.0142 | 0.0078 |
| Jupiter | 68288-07-14 02:53 G | 26662934.40 | 26662934.62 | 26662934.84 | 0.0545 | 0.0068 |
| Uranus | 68289-01-26 05:31 G | 26663130.48 | 26663130.73 | 26663130.99 | 0.0142 | 0.0040 |
| Uranus | 68290-01-31 03:51 G | 26663500.42 | 26663500.66 | 26663500.91 | 0.0142 | 0.0024 |
| Uranus | 68291-02-05 01:55 G | 26663870.35 | 26663870.58 | 26663870.83 | 0.0141 | 0.0061 |
| Uranus | 68292-02-09 20:24 G | 26664240.22 | 26664240.35 | 26664240.51 | 0.0141 | 0.0115 |
| Mars | 68296-11-03 20:39 G | 26665969.23 | 26665969.36 | 26665969.48 | 0.1795 | 0.1436 |
| Saturn | 68296-12-12 23:31 G | 26666008.29 | 26666008.48 | 26666008.69 | 0.0283 | 0.0156 |
| Saturn | 68311-06-12 23:31 G | 26671302.26 | 26671302.48 | 26671302.72 | 0.0276 | 0.0071 |
| Neptune | 68314-07-17 22:48 G | 26672433.35 | 26672433.45 | 26672433.57 | 0.0089 | 0.0081 |
| Neptune | 68315-07-20 11:31 G | 26672800.81 | 26672800.98 | 26672801.20 | 0.0089 | 0.0056 |
| Neptune | 68316-07-21 19:27 G | 26673168.07 | 26673168.31 | 26673168.57 | 0.0089 | 0.0023 |
| Neptune | 68317-07-24 12:29 G | 26673535.77 | 26673536.02 | 26673536.27 | 0.0089 | 0.0003 |
| Jupiter | 68318-01-12 10:19 G | 26673707.72 | 26673707.93 | 26673708.16 | 0.0483 | 0.0198 |
| Neptune | 68318-07-26 17:17 G | 26673902.99 | 26673903.22 | 26673903.45 | 0.0089 | 0.0036 |

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| Neptune | 68319-07-29 11:03 G | 26674270.80 | 26674270.96 | 26674271.17 | 0.0089 | 0.0062 |
| Saturn | 68325-12-07 18:58 G | 26676594.06 | 26676594.29 | 26676594.52 | 0.0283 | 0.0120 |
| Jupiter | 68330-01-16 11:17 G | 26678094.74 | 26678094.97 | 26678095.20 | 0.0483 | 0.0105 |
| Uranus | 68330-07-18 11:31 G | 26678277.89 | 26678277.98 | 26678278.12 | 0.0136 | 0.0121 |
| Uranus | 68331-07-23 00:29 G | 26678647.31 | 26678647.52 | 26678647.73 | 0.0136 | 0.0068 |
| Uranus | 68332-07-26 06:43 G | 26679016.52 | 26679016.78 | 26679017.03 | 0.0136 | 0.0030 |
| Uranus | 68333-07-30 19:27 G | 26679386.07 | 26679386.31 | 26679386.56 | 0.0137 | 0.0012 |
| Uranus | 68334-08-04 03:22 G | 26679755.41 | 26679755.64 | 26679755.88 | 0.0137 | 0.0063 |
| Uranus | 68335-08-08 16:19 G | 26680125.02 | 26680125.18 | 26680125.37 | 0.0137 | 0.0095 |
| Saturn | 68340-06-07 08:24 G | 26681889.65 | 26681889.85 | 26681890.05 | 0.0277 | 0.0156 |
| Jupiter | 68342-01-21 01:12 G | 26682482.46 | 26682482.55 | 26682482.64 | 0.0484 | 0.0440 |
| Mars | 68350-05-07 20:53 G | 26685511.19 | 26685511.37 | 26685511.57 | 0.1732 | 0.0474 |
| Saturn | 68355-12-16 07:55 G | 26687559.67 | 26687559.83 | 26687559.99 | 0.0283 | 0.0219 |
| Jupiter | 68359-07-10 00:15 G | 26688861.47 | 26688861.51 | 26688861.56 | 0.0545 | 0.0531 |
| Saturn | 68370-06-14 07:55 G | 26692853.62 | 26692853.83 | 26692854.03 | 0.0276 | 0.0133 |
| Uranus | 68371-01-18 14:53 G | 26693072.02 | 26693072.12 | 26693072.25 | 0.0143 | 0.0129 |
| Jupiter | 68371-07-15 03:07 G | 26693249.39 | 26693249.63 | 26693249.87 | 0.0545 | 0.0009 |
| Uranus | 68372-01-23 18:00 G | 26693442.07 | 26693442.25 | 26693442.47 | 0.0142 | 0.0083 |
| Uranus | 68373-01-27 14:24 G | 26693811.84 | 26693812.10 | 26693812.37 | 0.0142 | 0.0022 |
| Uranus | 68374-02-01 13:55 G | 26694181.84 | 26694182.08 | 26694182.33 | 0.0142 | 0.0014 |
| Uranus | 68375-02-06 10:19 G | 26694551.73 | 26694551.93 | 26694552.18 | 0.0141 | 0.0076 |
| Uranus | 68376-02-11 06:00 G | 26694921.63 | 26694921.75 | 26694921.90 | 0.0141 | 0.0117 |
| Jupiter | 68383-07-20 12:29 G | 26697638.01 | 26697638.02 | 26697638.04 | 0.0545 | 0.0543 |
| Saturn | 68384-12-08 23:31 G | 26698145.24 | 26698145.48 | 26698145.72 | 0.0283 | 0.0054 |
| Neptune | 68398-01-19 20:10 G | 26702935.18 | 26702935.34 | 26702935.54 | 0.0088 | 0.0065 |
| Neptune | 68399-01-22 13:27 G | 26703302.85 | 26703303.06 | 26703303.30 | 0.0088 | 0.0040 |
| Saturn | 68399-06-09 08:24 G | 26703440.61 | 26703440.85 | 26703441.08 | 0.0277 | 0.0095 |
| Neptune | 68400-01-24 18:58 G | 26703670.03 | 26703670.29 | 26703670.56 | 0.0088 | 0.0008 |
| Jupiter | 68401-01-11 12:43 G | 26704022.83 | 26704023.03 | 26704023.23 | 0.0484 | 0.0248 |
| Neptune | 68401-01-26 13:55 G | 26704037.83 | 26704038.08 | 26704038.34 | 0.0088 | 0.0019 |

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| Neptune | 68402-01-28 18:58 G | 26704405.09 | 26704405.29 | 26704405.52 | 0.0088 | 0.0049 |
| Neptune | 68403-01-31 12:00 G | 26704772.89 | 26704773.00 | 26704773.16 | 0.0088 | 0.0076 |
| Jupiter | 68413-01-16 01:27 G | 26708410.33 | 26708410.56 | 26708410.79 | 0.0483 | 0.0050 |
| Uranus | 68414-07-18 21:22 G | 26708959.24 | 26708959.39 | 26708959.58 | 0.0136 | 0.0103 |
| Uranus | 68415-07-23 10:34 G | 26709328.75 | 26709328.94 | 26709329.17 | 0.0136 | 0.0072 |
| Uranus | 68416-07-26 15:36 G | 26709697.91 | 26709698.15 | 26709698.42 | 0.0136 | 0.0023 |
| Uranus | 68417-07-31 05:46 G | 26710067.50 | 26710067.74 | 26710067.98 | 0.0137 | 0.0022 |
| Uranus | 68418-08-04 12:43 G | 26710436.80 | 26710437.03 | 26710437.27 | 0.0137 | 0.0058 |
| Uranus | 68419-08-09 03:22 G | 26710806.51 | 26710806.64 | 26710806.78 | 0.0137 | 0.0113 |
| Jupiter | 68425-01-20 01:41 G | 26712797.43 | 26712797.57 | 26712797.71 | 0.0483 | 0.0390 |
| Saturn | 68429-06-15 17:17 G | 26714405.07 | 26714405.22 | 26714405.40 | 0.0276 | 0.0198 |
| Saturn | 68443-12-11 11:46 G | 26719696.75 | 26719696.99 | 26719697.23 | 0.0282 | 0.0014 |
| Pluto | 68445-07-12 05:31 G | 26720275.50 | 26720275.73 | 26720276.00 | 0.0064 | 0.0021 |
| Jupiter | 68454-07-14 03:36 G | 26723564.43 | 26723564.65 | 26723564.87 | 0.0544 | 0.0082 |
| Uranus | 68455-01-18 23:03 G | 26723753.35 | 26723753.46 | 26723753.62 | 0.0142 | 0.0122 |
| Uranus | 68456-01-24 03:36 G | 26724123.43 | 26724123.65 | 26724123.87 | 0.0142 | 0.0069 |
| Uranus | 68457-01-27 22:19 G | 26724493.17 | 26724493.43 | 26724493.69 | 0.0142 | 0.0029 |
| Uranus | 68458-02-01 23:03 G | 26724863.23 | 26724863.46 | 26724863.71 | 0.0142 | 0.0034 |
| Saturn | 68458-06-10 09:51 G | 26724991.67 | 26724991.91 | 26724992.16 | 0.0277 | 0.0034 |
| Uranus | 68459-02-06 18:43 G | 26725233.05 | 26725233.28 | 26725233.51 | 0.0141 | 0.0069 |
| Uranus | 68460-02-11 15:51 G | 26725603.07 | 26725603.16 | 26725603.29 | 0.0141 | 0.0126 |
| Jupiter | 68466-07-19 08:39 G | 26727952.72 | 26727952.86 | 26727953.01 | 0.0545 | 0.0431 |
| Saturn | 68472-12-05 03:22 G | 26730283.51 | 26730283.64 | 26730283.80 | 0.0282 | 0.0232 |
| Neptune | 68479-07-19 16:48 G | 26732701.06 | 26732701.20 | 26732701.37 | 0.0089 | 0.0072 |
| Neptune | 68480-07-21 10:19 G | 26733068.72 | 26733068.93 | 26733069.18 | 0.0089 | 0.0034 |
| Neptune | 68481-07-23 15:22 G | 26733435.89 | 26733436.14 | 26733436.40 | 0.0089 | 0.0013 |
| Neptune | 68482-07-26 09:22 G | 26733803.66 | 26733803.89 | 26733804.16 | 0.0089 | 0.0027 |
| Neptune | 68483-07-28 15:07 G | 26734170.93 | 26734171.13 | 26734171.36 | 0.0089 | 0.0047 |
| Jupiter | 68484-01-12 01:41 G | 26734338.40 | 26734338.57 | 26734338.76 | 0.0484 | 0.0309 |
| Neptune | 68484-07-30 06:58 G | 26734538.72 | 26734538.79 | 26734538.90 | 0.0089 | 0.0084 |

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| Saturn | 68488-06-16 22:34 G | 26735956.37 | 26735956.44 | 26735956.53 | 0.0276 | 0.0260 |
| Jupiter | 68496-01-16 01:12 G | 26738725.31 | 26738725.55 | 26738725.79 | 0.0483 | 0.0007 |
| Uranus | 68498-07-19 06:58 G | 26739640.66 | 26739640.79 | 26739640.95 | 0.0136 | 0.0111 |
| Uranus | 68499-07-23 21:51 G | 26740010.19 | 26740010.41 | 26740010.64 | 0.0136 | 0.0056 |
| Uranus | 68500-07-28 02:10 G | 26740379.33 | 26740379.59 | 26740379.84 | 0.0136 | 0.0021 |
| Uranus | 68501-08-01 17:17 G | 26740748.98 | 26740749.22 | 26740749.46 | 0.0137 | 0.0024 |
| Uranus | 68502-08-05 23:03 G | 26741118.25 | 26741118.46 | 26741118.69 | 0.0137 | 0.0073 |
| Saturn | 68502-12-14 01:27 G | 26741248.32 | 26741248.56 | 26741248.79 | 0.0282 | 0.0084 |
| Uranus | 68503-08-10 14:39 G | 26741487.96 | 26741488.11 | 26741488.27 | 0.0137 | 0.0105 |
| Jupiter | 68508-01-21 12:15 G | 26743112.86 | 26743113.01 | 26743113.17 | 0.0483 | 0.0347 |
| Saturn | 68517-06-12 18:15 G | 26746543.02 | 26746543.26 | 26746543.49 | 0.0277 | 0.0027 |
| Saturn | 68531-12-08 12:00 G | 26751834.80 | 26751835.00 | 26751835.21 | 0.0282 | 0.0161 |
| Pluto | 68534-01-13 14:53 G | 26752601.97 | 26752602.12 | 26752602.29 | 0.0080 | 0.0062 |
| Jupiter | 68537-07-14 00:43 G | 26753879.31 | 26753879.53 | 26753879.76 | 0.0545 | 0.0172 |
| Uranus | 68539-01-20 07:41 G | 26754434.68 | 26754434.82 | 26754434.96 | 0.0142 | 0.0120 |
| Uranus | 68540-01-25 12:43 G | 26754804.83 | 26754805.03 | 26754805.26 | 0.0142 | 0.0070 |
| Uranus | 68541-01-29 06:58 G | 26755174.53 | 26755174.79 | 26755175.05 | 0.0142 | 0.0012 |
| Uranus | 68542-02-03 08:53 G | 26755544.63 | 26755544.87 | 26755545.12 | 0.0141 | 0.0024 |
| Uranus | 68543-02-08 02:53 G | 26755914.43 | 26755914.62 | 26755914.85 | 0.0141 | 0.0086 |
| Uranus | 68544-02-13 01:27 G | 26756284.47 | 26756284.56 | 26756284.69 | 0.0141 | 0.0125 |
| Saturn | 68546-06-07 20:53 G | 26757130.22 | 26757130.37 | 26757130.53 | 0.0277 | 0.0214 |
| Jupiter | 68549-07-19 05:31 G | 26758267.57 | 26758267.73 | 26758267.91 | 0.0545 | 0.0353 |
| Mars | 68555-05-07 14:24 G | 26760386.02 | 26760386.10 | 26760386.18 | 0.1742 | 0.1544 |
| Saturn | 68561-12-15 12:29 G | 26762799.81 | 26762800.02 | 26762800.24 | 0.0282 | 0.0155 |
| Neptune | 68562-01-20 11:03 G | 26762835.89 | 26762835.96 | 26762836.05 | 0.0088 | 0.0083 |
| Neptune | 68563-01-22 15:51 G | 26763202.95 | 26763203.16 | 26763203.40 | 0.0088 | 0.0046 |
| Neptune | 68564-01-25 10:48 G | 26763570.71 | 26763570.95 | 26763571.22 | 0.0088 | 0.0026 |
| Neptune | 68565-01-26 16:19 G | 26763937.94 | 26763938.18 | 26763938.45 | 0.0088 | 0.0012 |
| Neptune | 68566-01-29 09:07 G | 26764305.64 | 26764305.88 | 26764306.14 | 0.0088 | 0.0031 |
| Jupiter | 68567-01-12 00:43 G | 26764653.38 | 26764653.53 | 26764653.69 | 0.0484 | 0.0370 |

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| Neptune | 68567-01-31 18:00 G | 26764673.12 | 26764673.25 | 26764673.43 | 0.0088 | 0.0068 |
| Neptune | 68568-02-03 06:58 G | 26765040.77 | 26765040.79 | 26765040.83 | 0.0088 | 0.0087 |
| Saturn | 68576-06-14 05:17 G | 26768094.50 | 26768094.72 | 26768094.95 | 0.0277 | 0.0091 |
| Jupiter | 68579-01-16 10:34 G | 26769040.71 | 26769040.94 | 26769041.17 | 0.0484 | 0.0063 |
| Mars | 68580-11-05 08:53 G | 26769699.68 | 26769699.87 | 26769700.05 | 0.1786 | 0.0561 |
| Uranus | 68582-07-20 16:34 G | 26770322.02 | 26770322.19 | 26770322.39 | 0.0136 | 0.0092 |
| Uranus | 68583-07-25 07:41 G | 26770691.61 | 26770691.82 | 26770692.05 | 0.0136 | 0.0062 |
| Uranus | 68584-07-28 11:17 G | 26771060.71 | 26771060.97 | 26771061.23 | 0.0136 | 0.0010 |
| Uranus | 68585-08-02 02:53 G | 26771430.39 | 26771430.62 | 26771430.87 | 0.0137 | 0.0032 |
| Uranus | 68586-08-06 08:10 G | 26771799.63 | 26771799.84 | 26771800.07 | 0.0137 | 0.0070 |
| Uranus | 68587-08-11 00:43 G | 26772169.44 | 26772169.53 | 26772169.65 | 0.0137 | 0.0124 |
| Saturn | 68590-12-10 01:27 G | 26773386.34 | 26773386.56 | 26773386.80 | 0.0282 | 0.0091 |
| Jupiter | 68591-01-20 14:24 G | 26773427.91 | 26773428.10 | 26773428.30 | 0.0483 | 0.0289 |
| Saturn | 68605-06-10 01:55 G | 26778681.38 | 26778681.58 | 26778681.80 | 0.0277 | 0.0145 |
| Jupiter | 68620-07-14 00:43 G | 26784194.33 | 26784194.53 | 26784194.72 | 0.0545 | 0.0248 |
| Saturn | 68620-12-17 20:53 G | 26784351.24 | 26784351.37 | 26784351.53 | 0.0282 | 0.0229 |
| Uranus | 68623-01-21 16:05 G | 26785116.02 | 26785116.17 | 26785116.35 | 0.0142 | 0.0109 |
| Uranus | 68624-01-26 22:05 G | 26785486.20 | 26785486.42 | 26785486.65 | 0.0142 | 0.0060 |
| Uranus | 68625-01-30 14:53 G | 26785855.86 | 26785856.12 | 26785856.38 | 0.0142 | 0.0018 |
| Uranus | 68626-02-04 17:46 G | 26786226.02 | 26786226.24 | 26786226.49 | 0.0141 | 0.0045 |
| Uranus | 68627-02-09 10:48 G | 26786595.75 | 26786595.95 | 26786596.19 | 0.0141 | 0.0079 |
| Uranus | 68628-02-14 11:03 G | 26786965.92 | 26786965.96 | 26786966.03 | 0.0141 | 0.0137 |
| Jupiter | 68632-07-19 10:05 G | 26788582.72 | 26788582.92 | 26788583.13 | 0.0544 | 0.0259 |
| Mars | 68634-05-10 17:46 G | 26789243.10 | 26789243.24 | 26789243.38 | 0.1738 | 0.1039 |
| Saturn | 68635-06-17 15:07 G | 26789645.93 | 26789646.13 | 26789646.34 | 0.0277 | 0.0155 |
| Neptune | 68643-07-21 09:51 G | 26792601.80 | 26792601.91 | 26792602.03 | 0.0089 | 0.0079 |
| Neptune | 68644-07-22 14:10 G | 26792968.90 | 26792969.09 | 26792969.31 | 0.0089 | 0.0051 |
| Neptune | 68645-07-25 08:39 G | 26793336.61 | 26793336.86 | 26793337.12 | 0.0089 | 0.0019 |
| Neptune | 68646-07-27 14:53 G | 26793703.87 | 26793704.12 | 26793704.37 | 0.0089 | 0.0008 |
| Neptune | 68647-07-30 05:17 G | 26794071.49 | 26794071.72 | 26794071.97 | 0.0089 | 0.0039 |

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| Neptune | 68648-07-31 15:22 G | 26794438.99 | 26794439.14 | 26794439.32 | 0.0089 | 0.0066 |
| Saturn | 68649-12-12 18:29 G | 26794938.03 | 26794938.27 | 26794938.51 | 0.0282 | 0.0016 |
| Jupiter | 68650-01-12 08:10 G | 26794968.75 | 26794968.84 | 26794968.94 | 0.0484 | 0.0434 |
| Jupiter | 68662-01-16 13:55 G | 26799355.85 | 26799356.08 | 26799356.32 | 0.0484 | 0.0117 |
| Saturn | 68664-06-11 10:19 G | 26800232.70 | 26800232.93 | 26800233.16 | 0.0277 | 0.0076 |
| Uranus | 68665-07-18 00:00 G | 26800634.44 | 26800634.50 | 26800634.60 | 0.0135 | 0.0128 |
| Uranus | 68666-07-22 01:55 G | 26801003.42 | 26801003.58 | 26801003.75 | 0.0136 | 0.0101 |
| Uranus | 68667-07-26 17:46 G | 26801373.01 | 26801373.24 | 26801373.48 | 0.0136 | 0.0045 |
| Uranus | 68668-07-29 21:07 G | 26801742.12 | 26801742.38 | 26801742.63 | 0.0136 | 0.0012 |
| Uranus | 68669-08-03 13:41 G | 26802111.84 | 26802112.07 | 26802112.32 | 0.0137 | 0.0036 |
| Uranus | 68670-08-07 17:46 G | 26802481.06 | 26802481.24 | 26802481.47 | 0.0137 | 0.0082 |
| Uranus | 68671-08-12 11:17 G | 26802850.85 | 26802850.97 | 26802851.11 | 0.0137 | 0.0116 |
| Jupiter | 68674-01-20 18:00 G | 26803743.06 | 26803743.25 | 26803743.45 | 0.0483 | 0.0242 |
| Saturn | 68678-12-06 15:22 G | 26805524.13 | 26805524.14 | 26805524.18 | 0.0282 | 0.0280 |
| Pluto | 68693-07-16 05:17 G | 26810859.51 | 26810859.72 | 26810859.95 | 0.0065 | 0.0029 |
| Saturn | 68694-06-18 19:41 G | 26811197.19 | 26811197.32 | 26811197.49 | 0.0277 | 0.0221 |
| Jupiter | 68703-07-15 01:41 G | 26814509.40 | 26814509.57 | 26814509.76 | 0.0544 | 0.0346 |
| Uranus | 68707-01-23 00:43 G | 26815797.39 | 26815797.53 | 26815797.71 | 0.0142 | 0.0112 |
| Uranus | 68708-01-28 07:27 G | 26816167.59 | 26816167.81 | 26816168.05 | 0.0142 | 0.0058 |
| Saturn | 68708-12-15 07:41 G | 26816489.57 | 26816489.82 | 26816490.07 | 0.0282 | 0.0056 |
| Uranus | 68709-02-01 00:00 G | 26816537.24 | 26816537.50 | 26816537.76 | 0.0142 | 0.0003 |
| Uranus | 68710-02-06 03:51 G | 26816907.42 | 26816907.66 | 26816907.91 | 0.0141 | 0.0034 |
| Uranus | 68711-02-10 19:55 G | 26817277.15 | 26817277.33 | 26817277.53 | 0.0141 | 0.0097 |
| Uranus | 68712-02-15 20:39 G | 26817647.30 | 26817647.36 | 26817647.46 | 0.0141 | 0.0133 |
| Jupiter | 68715-07-19 20:53 G | 26818897.16 | 26818897.37 | 26818897.60 | 0.0545 | 0.0147 |
| Saturn | 68723-06-14 23:46 G | 26821784.25 | 26821784.49 | 26821784.72 | 0.0276 | 0.0009 |
| Neptune | 68727-01-24 09:07 G | 26823103.69 | 26823103.88 | 26823104.08 | 0.0088 | 0.0059 |
| Neptune | 68728-01-26 15:22 G | 26823470.91 | 26823471.14 | 26823471.37 | 0.0088 | 0.0036 |
| Neptune | 68729-01-28 07:12 G | 26823838.53 | 26823838.80 | 26823839.07 | 0.0088 | 0.0004 |
| Neptune | 68730-01-30 16:34 G | 26824205.96 | 26824206.19 | 26824206.45 | 0.0088 | 0.0021 |

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| Neptune | 68731-02-02 03:51 G | 26824573.45 | 26824573.66 | 26824573.88 | 0.0088 | 0.0053 |
| Neptune | 68732-02-04 18:29 G | 26824941.16 | 26824941.27 | 26824941.39 | 0.0088 | 0.0078 |
| Saturn | 68737-12-09 02:53 G | 26827075.46 | 26827075.62 | 26827075.78 | 0.0282 | 0.0210 |
| Jupiter | 68745-01-16 17:31 G | 26829671.02 | 26829671.23 | 26829671.45 | 0.0484 | 0.0172 |
| Uranus | 68750-07-23 11:03 G | 26831684.77 | 26831684.96 | 26831685.18 | 0.0136 | 0.0082 |
| Uranus | 68751-07-28 03:22 G | 26832054.41 | 26832054.64 | 26832054.87 | 0.0136 | 0.0053 |
| Saturn | 68752-06-08 16:34 G | 26832371.09 | 26832371.19 | 26832371.29 | 0.0277 | 0.0252 |
| Uranus | 68752-07-31 06:00 G | 26832423.50 | 26832423.75 | 26832424.00 | 0.0136 | 0.0001 |
| Uranus | 68753-08-04 22:34 G | 26832793.22 | 26832793.44 | 26832793.69 | 0.0137 | 0.0040 |
| Uranus | 68754-08-09 02:10 G | 26833162.41 | 26833162.59 | 26833162.82 | 0.0137 | 0.0081 |
| Uranus | 68755-08-13 20:24 G | 26833532.29 | 26833532.35 | 26833532.42 | 0.0137 | 0.0131 |
| Jupiter | 68757-01-21 03:36 G | 26834058.43 | 26834058.65 | 26834058.87 | 0.0484 | 0.0197 |
| Saturn | 68767-12-17 13:27 G | 26838040.83 | 26838041.06 | 26838041.29 | 0.0282 | 0.0123 |
| Pluto | 68782-01-18 10:19 G | 26843186.71 | 26843186.93 | 26843187.14 | 0.0079 | 0.0045 |
| Saturn | 68782-06-16 11:46 G | 26843335.76 | 26843335.99 | 26843336.23 | 0.0276 | 0.0060 |
| Jupiter | 68786-07-13 16:05 G | 26844824.04 | 26844824.17 | 26844824.30 | 0.0545 | 0.0449 |
| Uranus | 68791-01-23 09:51 G | 26846478.74 | 26846478.91 | 26846479.11 | 0.0142 | 0.0098 |
| Uranus | 68792-01-28 16:19 G | 26846848.96 | 26846849.18 | 26846849.43 | 0.0142 | 0.0052 |
| Uranus | 68793-02-01 08:10 G | 26847218.58 | 26847218.84 | 26847219.10 | 0.0142 | 0.0007 |
| Uranus | 68794-02-06 12:29 G | 26847588.80 | 26847589.02 | 26847589.27 | 0.0141 | 0.0054 |
| Uranus | 68795-02-11 03:51 G | 26847958.47 | 26847958.66 | 26847958.88 | 0.0141 | 0.0086 |
| Saturn | 68796-12-10 16:19 G | 26848626.98 | 26848627.18 | 26848627.39 | 0.0282 | 0.0144 |
| Jupiter | 68798-07-19 07:41 G | 26849212.59 | 26849212.82 | 26849213.04 | 0.0545 | 0.0069 |
| Neptune | 68807-07-21 13:12 G | 26852501.99 | 26852502.05 | 26852502.10 | 0.0090 | 0.0087 |
| Neptune | 68808-07-23 06:15 G | 26852869.61 | 26852869.76 | 26852869.95 | 0.0089 | 0.0068 |
| Neptune | 68809-07-25 13:27 G | 26853236.84 | 26853237.06 | 26853237.30 | 0.0089 | 0.0029 |
| Jupiter | 68810-07-24 08:53 G | 26853600.80 | 26853600.87 | 26853600.95 | 0.0545 | 0.0515 |
| Neptune | 68810-07-28 03:51 G | 26853604.40 | 26853604.66 | 26853604.93 | 0.0089 | 0.0009 |
| Saturn | 68811-06-10 20:53 G | 26853922.20 | 26853922.37 | 26853922.56 | 0.0277 | 0.0189 |
| Neptune | 68811-07-30 15:22 G | 26853971.92 | 26853972.14 | 26853972.38 | 0.0089 | 0.0030 |

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| Neptune | 68812-08-01 00:29 G | 26854339.32 | 26854339.52 | 26854339.75 | 0.0089 | 0.0050 |
| Neptune | 68813-08-03 16:05 G | 26854707.16 | 26854707.17 | 26854707.22 | 0.0089 | 0.0089 |
| Saturn | 68826-12-18 17:03 G | 26859592.03 | 26859592.21 | 26859592.41 | 0.0282 | 0.0186 |
| Jupiter | 68828-01-17 03:51 G | 26859986.44 | 26859986.66 | 26859986.87 | 0.0484 | 0.0221 |
| Uranus | 68833-07-19 18:29 G | 26861997.17 | 26861997.27 | 26861997.41 | 0.0136 | 0.0120 |
| Uranus | 68834-07-23 19:55 G | 26862366.17 | 26862366.33 | 26862366.53 | 0.0136 | 0.0093 |
| Uranus | 68835-07-28 12:29 G | 26862735.78 | 26862736.02 | 26862736.27 | 0.0136 | 0.0036 |
| Uranus | 68836-07-31 15:07 G | 26863104.88 | 26863105.13 | 26863105.38 | 0.0136 | 0.0004 |
| Uranus | 68837-08-05 08:10 G | 26863474.61 | 26863474.84 | 26863475.09 | 0.0137 | 0.0046 |
| Uranus | 68838-08-09 11:31 G | 26863843.81 | 26863843.98 | 26863844.19 | 0.0137 | 0.0089 |
| Mars | 68839-05-10 01:41 G | 26864117.46 | 26864117.57 | 26864117.69 | 0.1750 | 0.1433 |
| Uranus | 68839-08-14 05:46 G | 26864213.65 | 26864213.74 | 26864213.86 | 0.0137 | 0.0125 |
| Jupiter | 68840-01-21 04:19 G | 26864373.46 | 26864373.68 | 26864373.90 | 0.0483 | 0.0155 |
| Saturn | 68841-06-17 18:00 G | 26864887.03 | 26864887.25 | 26864887.48 | 0.0276 | 0.0121 |
| Saturn | 68855-12-13 02:39 G | 26870178.38 | 26870178.61 | 26870178.85 | 0.0282 | 0.0080 |
| Mars | 68864-11-07 23:17 G | 26873431.30 | 26873431.47 | 26873431.64 | 0.1778 | 0.0631 |
| Jupiter | 68869-07-13 04:05 G | 26875139.59 | 26875139.67 | 26875139.76 | 0.0544 | 0.0504 |
| Saturn | 68870-06-12 04:19 G | 26875473.48 | 26875473.68 | 26875473.90 | 0.0277 | 0.0130 |
| Uranus | 68874-01-19 01:41 G | 26876790.54 | 26876790.57 | 26876790.62 | 0.0143 | 0.0141 |
| Uranus | 68875-01-23 18:43 G | 26877160.12 | 26877160.28 | 26877160.47 | 0.0142 | 0.0103 |
| Uranus | 68876-01-29 01:41 G | 26877530.33 | 26877530.57 | 26877530.81 | 0.0142 | 0.0047 |
| Uranus | 68877-02-01 17:17 G | 26877899.96 | 26877900.22 | 26877900.48 | 0.0142 | 0.0006 |
| Uranus | 68878-02-06 22:19 G | 26878270.19 | 26878270.43 | 26878270.68 | 0.0141 | 0.0043 |
| Uranus | 68879-02-11 12:58 G | 26878639.88 | 26878640.04 | 26878640.22 | 0.0141 | 0.0106 |
| Uranus | 68880-02-16 15:07 G | 26879010.12 | 26879010.13 | 26879010.19 | 0.0141 | 0.0140 |
| Jupiter | 68881-07-18 02:24 G | 26879527.37 | 26879527.60 | 26879527.84 | 0.0545 | 0.0021 |
| Saturn | 68885-12-19 23:46 G | 26881143.38 | 26881143.49 | 26881143.62 | 0.0282 | 0.0244 |
| Neptune | 68891-01-23 13:12 G | 26883003.96 | 26883004.05 | 26883004.19 | 0.0088 | 0.0078 |
| Neptune | 68892-01-26 04:19 G | 26883371.46 | 26883371.68 | 26883371.93 | 0.0088 | 0.0042 |
| Neptune | 68893-01-27 15:36 G | 26883738.91 | 26883739.15 | 26883739.40 | 0.0088 | 0.0021 |

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| Jupiter | 68893-07-23 06:29 G | 26883915.63 | 26883915.77 | 26883915.92 | 0.0545 | 0.0414 |
| Neptune | 68894-01-30 01:55 G | 26884106.32 | 26884106.58 | 26884106.85 | 0.0088 | 0.0015 |
| Neptune | 68895-02-01 17:46 G | 26884474.02 | 26884474.24 | 26884474.48 | 0.0088 | 0.0036 |
| Neptune | 68896-02-03 23:31 G | 26884841.36 | 26884841.48 | 26884841.66 | 0.0088 | 0.0072 |
| Saturn | 68900-06-19 19:55 G | 26886438.15 | 26886438.33 | 26886438.52 | 0.0276 | 0.0183 |
| Jupiter | 68911-01-17 05:03 G | 26890301.52 | 26890301.71 | 26890301.91 | 0.0484 | 0.0269 |
| Saturn | 68914-12-15 06:15 G | 26891729.50 | 26891729.76 | 26891730.02 | 0.0282 | 0.0021 |
| Uranus | 68917-07-21 03:51 G | 26892678.59 | 26892678.66 | 26892678.75 | 0.0136 | 0.0128 |
| Mars | 68918-05-13 19:27 G | 26892975.25 | 26892975.31 | 26892975.37 | 0.1745 | 0.1651 |
| Uranus | 68918-07-25 06:00 G | 26893047.54 | 26893047.75 | 26893047.96 | 0.0136 | 0.0073 |
| Uranus | 68919-07-29 21:36 G | 26893417.17 | 26893417.40 | 26893417.65 | 0.0136 | 0.0045 |
| Uranus | 68920-08-02 00:15 G | 26893786.26 | 26893786.51 | 26893786.76 | 0.0136 | 0.0010 |
| Uranus | 68921-08-06 16:48 G | 26894155.98 | 26894156.20 | 26894156.45 | 0.0137 | 0.0047 |
| Uranus | 68922-08-10 19:55 G | 26894525.16 | 26894525.33 | 26894525.54 | 0.0137 | 0.0090 |
| Jupiter | 68923-01-21 19:55 G | 26894689.10 | 26894689.33 | 26894689.56 | 0.0483 | 0.0115 |
| Saturn | 68929-06-14 14:10 G | 26897024.86 | 26897025.09 | 26897025.32 | 0.0276 | 0.0068 |
| Jupiter | 68935-01-25 18:00 G | 26899076.21 | 26899076.25 | 26899076.29 | 0.0483 | 0.0475 |
| Pluto | 68940-07-18 23:17 G | 26901077.22 | 26901077.47 | 26901077.73 | 0.0064 | 0.0001 |
| Uranus | 68959-01-25 04:19 G | 26907841.49 | 26907841.68 | 26907841.89 | 0.0142 | 0.0088 |
| Saturn | 68959-06-21 22:48 G | 26907989.35 | 26907989.45 | 26907989.58 | 0.0276 | 0.0242 |
| Uranus | 68960-01-30 10:34 G | 26908211.70 | 26908211.94 | 26908212.19 | 0.0142 | 0.0044 |
| Uranus | 68961-02-03 01:55 G | 26908581.33 | 26908581.58 | 26908581.84 | 0.0142 | 0.0004 |
| Uranus | 68962-02-08 06:58 G | 26908951.57 | 26908951.79 | 26908952.02 | 0.0141 | 0.0062 |
| Uranus | 68963-02-12 21:07 G | 26909321.19 | 26909321.38 | 26909321.57 | 0.0141 | 0.0094 |
| Jupiter | 68964-07-18 03:36 G | 26909842.44 | 26909842.65 | 26909842.87 | 0.0545 | 0.0119 |
| Neptune | 68972-07-23 13:27 G | 26912769.96 | 26912770.06 | 26912770.22 | 0.0090 | 0.0077 |
| Neptune | 68973-07-26 02:39 G | 26913137.40 | 26913137.61 | 26913137.85 | 0.0089 | 0.0046 |
| Saturn | 68973-12-16 05:03 G | 26913280.46 | 26913280.71 | 26913280.97 | 0.0282 | 0.0036 |
| Neptune | 68974-07-28 14:53 G | 26913504.88 | 26913505.12 | 26913505.36 | 0.0089 | 0.0017 |
| Neptune | 68975-07-30 22:48 G | 26913872.20 | 26913872.45 | 26913872.72 | 0.0089 | 0.0014 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 68976-07-23 11:46 G | 26914230.81 | 26914230.99 | 26914231.18 | 0.0545 | 0.0345 |
| Neptune | 68976-08-01 15:36 G | 26914239.94 | 26914240.15 | 26914240.38 | 0.0089 | 0.0042 |
| Neptune | 68977-08-03 20:39 G | 26914607.22 | 26914607.36 | 26914607.54 | 0.0089 | 0.0071 |
| Saturn | 68988-06-15 19:12 G | 26918576.06 | 26918576.30 | 26918576.55 | 0.0276 | 0.0009 |
| Jupiter | 68994-01-16 20:53 G | 26920617.19 | 26920617.37 | 26920617.55 | 0.0484 | 0.0310 |

70TH MILLENNIUM CE

This is a list of transits of Moon in the 70th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Uranus | 69001-07-22 12:43 G | | 26923359.91 | 26923360.03 | 26923360.20 | 0.0136 | 0.0111 | |
| Uranus | 69002-07-26 14:53 G | | 26923728.94 | 26923729.12 | 26923729.33 | 0.0136 | 0.0083 | |
| Saturn | 69002-12-11 14:24 G | | 26923866.96 | 26923867.10 | 26923867.25 | 0.0282 | 0.0229 | |
| Uranus | 69003-07-31 06:29 G | | 26924098.53 | 26924098.77 | 26924099.03 | 0.0136 | 0.0026 | |
| Uranus | 69004-08-03 09:22 G | | 26924467.65 | 26924467.89 | 26924468.15 | 0.0136 | 0.0005 | |
| Uranus | 69005-08-08 01:55 G | | 26924837.36 | 26924837.58 | 26924837.82 | 0.0137 | 0.0056 | |
| Jupiter | 69006-01-21 21:36 G | | 26925004.16 | 26925004.40 | 26925004.64 | 0.0484 | 0.0074 | |
| Uranus | 69006-08-12 05:17 G | | 26925206.57 | 26925206.72 | 26925206.92 | 0.0137 | 0.0096 | |
| Uranus | 69007-08-16 23:31 G | | 26925576.44 | 26925576.48 | 26925576.56 | 0.0137 | 0.0133 | |
| Saturn | 69017-06-11 15:36 G | | 26929163.03 | 26929163.15 | 26929163.29 | 0.0277 | 0.0230 | |
| Jupiter | 69018-01-26 10:05 G | | 26929391.84 | 26929391.92 | 26929392.02 | 0.0483 | 0.0442 | |
| Pluto | 69029-01-20 20:24 G | | 26933404.13 | 26933404.35 | 26933404.61 | 0.0079 | 0.0030 | |
| Saturn | 69032-12-18 06:29 G | | 26934831.55 | 26934831.77 | 26934832.01 | 0.0282 | 0.0090 | |
| Uranus | 69042-01-21 18:29 G | | 26938153.18 | 26938153.27 | 26938153.39 | 0.0143 | 0.0130 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 69043-01-26 12:58 G | 26938522.87 | 26938523.04 | 26938523.24 | 0.0142 | 0.0094 |
| Uranus | 69044-01-31 18:43 G | 26938893.03 | 26938893.28 | 26938893.54 | 0.0142 | 0.0036 |
| Uranus | 69045-02-04 10:48 G | 26939262.70 | 26939262.95 | 26939263.21 | 0.0142 | 0.0014 |
| Uranus | 69046-02-09 15:51 G | 26939632.93 | 26939633.16 | 26939633.41 | 0.0141 | 0.0054 |
| Uranus | 69047-02-14 05:31 G | 26940002.60 | 26940002.73 | 26940002.90 | 0.0141 | 0.0115 |
| Saturn | 69047-06-18 17:31 G | 26940126.98 | 26940127.23 | 26940127.48 | 0.0276 | 0.0047 |
| Jupiter | 69047-07-19 10:19 G | 26940157.71 | 26940157.93 | 26940158.16 | 0.0545 | 0.0176 |
| Neptune | 69056-01-27 14:39 G | 26943271.93 | 26943272.11 | 26943272.32 | 0.0088 | 0.0054 |
| Neptune | 69057-01-28 23:31 G | 26943639.24 | 26943639.48 | 26943639.74 | 0.0088 | 0.0032 |
| Neptune | 69058-01-31 16:19 G | 26944006.93 | 26944007.18 | 26944007.44 | 0.0088 | 0.0002 |
| Neptune | 69059-02-02 21:36 G | 26944374.16 | 26944374.40 | 26944374.66 | 0.0088 | 0.0024 |
| Jupiter | 69059-07-24 14:24 G | 26944545.92 | 26944546.10 | 26944546.30 | 0.0545 | 0.0278 |
| Neptune | 69060-02-05 16:34 G | 26944742.00 | 26944742.19 | 26944742.39 | 0.0088 | 0.0058 |
| Neptune | 69061-02-06 21:07 G | 26945109.30 | 26945109.38 | 26945109.49 | 0.0088 | 0.0081 |
| Saturn | 69061-12-12 14:24 G | 26945417.90 | 26945418.10 | 26945418.30 | 0.0282 | 0.0177 |
| Saturn | 69076-06-12 21:36 G | 26950714.22 | 26950714.40 | 26950714.58 | 0.0277 | 0.0177 |
| Jupiter | 69077-01-17 01:55 G | 26950932.41 | 26950932.58 | 26950932.75 | 0.0484 | 0.0342 |
| Uranus | 69085-07-22 21:22 G | 26954041.28 | 26954041.39 | 26954041.54 | 0.0136 | 0.0117 |
| Uranus | 69086-07-27 00:29 G | 26954410.32 | 26954410.52 | 26954410.75 | 0.0136 | 0.0064 |
| Uranus | 69087-07-31 15:22 G | 26954779.90 | 26954780.14 | 26954780.39 | 0.0136 | 0.0036 |
| Uranus | 69088-08-03 18:58 G | 26955149.04 | 26955149.29 | 26955149.53 | 0.0136 | 0.0020 |
| Jupiter | 69089-01-21 12:43 G | 26955319.81 | 26955320.03 | 26955320.26 | 0.0484 | 0.0044 |
| Uranus | 69089-08-08 10:48 G | 26955518.72 | 26955518.95 | 26955519.19 | 0.0137 | 0.0054 |
| Uranus | 69090-08-12 14:24 G | 26955887.95 | 26955888.10 | 26955888.29 | 0.0137 | 0.0100 |
| Saturn | 69091-12-20 12:43 G | 26956382.82 | 26956383.03 | 26956383.24 | 0.0282 | 0.0140 |
| Jupiter | 69101-01-26 19:12 G | 26959707.16 | 26959707.30 | 26959707.44 | 0.0483 | 0.0395 |
| Saturn | 69106-06-20 17:17 G | 26961678.00 | 26961678.22 | 26961678.45 | 0.0276 | 0.0102 |
| Saturn | 69120-12-14 09:07 G | 26966968.66 | 26966968.88 | 26966969.12 | 0.0282 | 0.0131 |
| Mars | 69123-05-13 06:00 G | 26967848.68 | 26967848.75 | 26967848.82 | 0.1758 | 0.1608 |
| Uranus | 69126-01-23 03:07 G | 26968834.60 | 26968834.63 | 26968834.70 | 0.0142 | 0.0140 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 69127-01-27 22:34 G | 26969204.25 | 26969204.44 | 26969204.67 | 0.0142 | 0.0077 |
| Uranus | 69128-02-02 03:22 G | 26969574.40 | 26969574.64 | 26969574.91 | 0.0142 | 0.0035 |
| Uranus | 69129-02-05 19:55 G | 26969944.08 | 26969944.33 | 26969944.58 | 0.0142 | 0.0015 |
| Uranus | 69130-02-11 00:15 G | 26970314.29 | 26970314.51 | 26970314.74 | 0.0141 | 0.0071 |
| Jupiter | 69130-07-19 06:58 G | 26970472.61 | 26970472.79 | 26970472.99 | 0.0544 | 0.0282 |
| Uranus | 69131-02-15 14:10 G | 26970683.93 | 26970684.09 | 26970684.27 | 0.0141 | 0.0104 |
| Saturn | 69135-06-16 01:27 G | 26972265.35 | 26972265.56 | 26972265.79 | 0.0277 | 0.0122 |
| Neptune | 69136-07-25 00:58 G | 26972670.47 | 26972670.54 | 26972670.67 | 0.0090 | 0.0083 |
| Neptune | 69137-07-27 14:39 G | 26973037.95 | 26973038.11 | 26973038.30 | 0.0089 | 0.0063 |
| Neptune | 69138-07-29 22:19 G | 26973405.19 | 26973405.43 | 26973405.69 | 0.0089 | 0.0024 |
| Neptune | 69139-08-01 15:36 G | 26973772.90 | 26973773.15 | 26973773.41 | 0.0089 | 0.0005 |
| Neptune | 69140-08-02 20:24 G | 26974140.12 | 26974140.35 | 26974140.59 | 0.0089 | 0.0034 |
| Neptune | 69141-08-05 14:24 G | 26974507.91 | 26974508.10 | 26974508.32 | 0.0089 | 0.0054 |
| Jupiter | 69142-07-24 17:17 G | 26974861.00 | 26974861.22 | 26974861.45 | 0.0545 | 0.0175 |
| Mars | 69148-11-11 04:34 G | 26977162.48 | 26977162.69 | 26977162.89 | 0.1770 | 0.0423 |
| Saturn | 69150-12-22 16:48 G | 26977934.03 | 26977934.20 | 26977934.40 | 0.0282 | 0.0191 |
| Jupiter | 69160-01-18 15:51 G | 26981248.02 | 26981248.16 | 26981248.31 | 0.0484 | 0.0375 |
| Saturn | 69165-06-21 22:19 G | 26983229.24 | 26983229.43 | 26983229.63 | 0.0276 | 0.0153 |
| Uranus | 69169-07-24 06:00 G | 26984722.60 | 26984722.75 | 26984722.94 | 0.0136 | 0.0102 |
| Uranus | 69170-07-28 09:36 G | 26985091.71 | 26985091.90 | 26985092.12 | 0.0136 | 0.0073 |
| Uranus | 69171-08-01 23:46 G | 26985461.23 | 26985461.49 | 26985461.74 | 0.0136 | 0.0017 |
| Jupiter | 69172-01-22 21:36 G | 26985635.15 | 26985635.40 | 26985635.64 | 0.0484 | 0.0011 |
| Uranus | 69172-08-05 03:51 G | 26985830.42 | 26985830.66 | 26985830.91 | 0.0136 | 0.0013 |
| Uranus | 69173-08-09 18:58 G | 26986200.08 | 26986200.29 | 26986200.53 | 0.0137 | 0.0066 |
| Uranus | 69174-08-14 00:15 G | 26986569.35 | 26986569.51 | 26986569.67 | 0.0137 | 0.0103 |
| Saturn | 69179-12-16 09:22 G | 26988519.65 | 26988519.89 | 26988520.12 | 0.0282 | 0.0081 |
| Jupiter | 69184-01-27 02:10 G | 26990022.44 | 26990022.59 | 26990022.75 | 0.0484 | 0.0357 |
| Pluto | 69187-07-22 19:27 G | 26991295.10 | 26991295.31 | 26991295.56 | 0.0064 | 0.0029 |
| Saturn | 69194-06-17 01:27 G | 26993816.31 | 26993816.56 | 26993816.80 | 0.0278 | 0.0070 |
| Saturn | 69209-12-23 16:05 G | 26999485.05 | 26999485.17 | 26999485.31 | 0.0282 | 0.0240 |

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| Uranus | 69210-01-23 11:46 G | 26999515.84 | 26999515.99 | 26999516.13 | 0.0142 | 0.0119 |
| Uranus | 69211-01-28 07:41 G | 26999885.64 | 26999885.82 | 26999886.04 | 0.0142 | 0.0084 |
| Uranus | 69212-02-02 11:31 G | 27000255.73 | 27000255.98 | 27000256.25 | 0.0142 | 0.0024 |
| Uranus | 69213-02-06 04:48 G | 27000625.46 | 27000625.70 | 27000625.95 | 0.0142 | 0.0023 |
| Jupiter | 69213-07-18 15:36 G | 27000787.98 | 27000788.15 | 27000788.33 | 0.0545 | 0.0362 |
| Uranus | 69214-02-11 08:53 G | 27000995.65 | 27000995.87 | 27000996.11 | 0.0141 | 0.0064 |
| Uranus | 69215-02-15 23:03 G | 27001365.36 | 27001365.46 | 27001365.60 | 0.0141 | 0.0124 |
| Neptune | 69220-01-27 20:53 G | 27003172.23 | 27003172.37 | 27003172.55 | 0.0088 | 0.0071 |
| Neptune | 69221-01-29 14:53 G | 27003539.90 | 27003540.12 | 27003540.36 | 0.0088 | 0.0038 |
| Neptune | 69222-01-31 20:24 G | 27003907.10 | 27003907.35 | 27003907.62 | 0.0088 | 0.0016 |
| Neptune | 69223-02-03 15:22 G | 27004274.89 | 27004275.14 | 27004275.41 | 0.0088 | 0.0019 |
| Neptune | 69224-02-05 20:39 G | 27004642.15 | 27004642.36 | 27004642.60 | 0.0088 | 0.0041 |
| Saturn | 69224-06-23 04:48 G | 27004780.56 | 27004780.70 | 27004780.87 | 0.0277 | 0.0208 |
| Neptune | 69225-02-07 13:41 G | 27005009.96 | 27005010.07 | 27005010.23 | 0.0088 | 0.0076 |
| Jupiter | 69225-07-23 17:46 G | 27005176.02 | 27005176.24 | 27005176.47 | 0.0545 | 0.0113 |
| Saturn | 69238-12-17 15:36 G | 27010070.92 | 27010071.15 | 27010071.39 | 0.0282 | 0.0029 |
| Jupiter | 69243-01-18 00:58 G | 27011563.41 | 27011563.54 | 27011563.67 | 0.0484 | 0.0406 |
| Saturn | 69253-06-17 23:03 G | 27015367.21 | 27015367.46 | 27015367.71 | 0.0278 | 0.0016 |
| Uranus | 69253-07-24 13:55 G | 27015403.92 | 27015404.08 | 27015404.24 | 0.0136 | 0.0106 |
| Uranus | 69254-07-28 18:58 G | 27015773.08 | 27015773.29 | 27015773.52 | 0.0136 | 0.0056 |
| Jupiter | 69255-01-22 04:48 G | 27015950.47 | 27015950.70 | 27015950.93 | 0.0484 | 0.0025 |
| Uranus | 69255-08-02 07:41 G | 27016142.58 | 27016142.82 | 27016143.08 | 0.0136 | 0.0027 |
| Uranus | 69256-08-05 12:58 G | 27016511.81 | 27016512.04 | 27016512.29 | 0.0136 | 0.0030 |
| Uranus | 69257-08-10 03:07 G | 27016881.41 | 27016881.63 | 27016881.87 | 0.0137 | 0.0062 |
| Uranus | 69258-08-14 08:39 G | 27017250.73 | 27017250.86 | 27017251.02 | 0.0137 | 0.0111 |
| Jupiter | 69267-01-26 16:48 G | 27020338.02 | 27020338.20 | 27020338.39 | 0.0484 | 0.0311 |
| Saturn | 69267-12-12 04:34 G | 27020657.62 | 27020657.69 | 27020657.78 | 0.0281 | 0.0266 |
| Pluto | 69276-01-23 13:27 G | 27023621.92 | 27023622.06 | 27023622.21 | 0.0080 | 0.0065 |
| Saturn | 69282-06-12 20:24 G | 27025954.28 | 27025954.35 | 27025954.44 | 0.0277 | 0.0260 |
| Saturn | 69283-06-25 08:39 G | 27026331.80 | 27026331.86 | 27026331.95 | 0.0277 | 0.0263 |

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| Uranus | 69294-01-23 20:10 G | 27030197.24 | 27030197.34 | 27030197.47 | 0.0143 | 0.0129 |
| Uranus | 69295-01-28 18:00 G | 27030567.04 | 27030567.25 | 27030567.48 | 0.0142 | 0.0065 |
| Uranus | 69296-02-02 20:39 G | 27030937.10 | 27030937.36 | 27030937.62 | 0.0142 | 0.0026 |
| Jupiter | 69296-07-17 15:07 G | 27031103.00 | 27031103.13 | 27031103.27 | 0.0544 | 0.0433 |
| Uranus | 69297-02-06 14:39 G | 27031306.87 | 27031307.11 | 27031307.36 | 0.0142 | 0.0027 |
| Saturn | 69297-12-18 23:31 G | 27031622.24 | 27031622.48 | 27031622.73 | 0.0282 | 0.0030 |
| Uranus | 69298-02-11 17:17 G | 27031677.02 | 27031677.22 | 27031677.45 | 0.0141 | 0.0080 |
| Uranus | 69299-02-16 08:24 G | 27032046.71 | 27032046.85 | 27032047.01 | 0.0141 | 0.0114 |
| Neptune | 69301-07-27 21:07 G | 27032938.26 | 27032938.38 | 27032938.56 | 0.0090 | 0.0073 |
| Neptune | 69302-07-30 14:53 G | 27033305.91 | 27033306.12 | 27033306.36 | 0.0089 | 0.0041 |
| Neptune | 69303-08-01 19:27 G | 27033673.07 | 27033673.31 | 27033673.57 | 0.0089 | 0.0015 |
| Neptune | 69304-08-03 13:41 G | 27034040.82 | 27034041.07 | 27034041.33 | 0.0089 | 0.0018 |
| Neptune | 69305-08-05 18:58 G | 27034408.09 | 27034408.29 | 27034408.52 | 0.0089 | 0.0045 |
| Neptune | 69306-08-08 10:34 G | 27034775.82 | 27034775.94 | 27034776.09 | 0.0089 | 0.0076 |
| Jupiter | 69308-07-24 00:00 G | 27035491.27 | 27035491.50 | 27035491.73 | 0.0544 | 0.0019 |
| Saturn | 69312-06-20 02:10 G | 27036918.35 | 27036918.59 | 27036918.82 | 0.0278 | 0.0040 |
| Jupiter | 69326-01-18 04:48 G | 27041878.62 | 27041878.70 | 27041878.78 | 0.0485 | 0.0454 |
| Saturn | 69326-12-14 07:55 G | 27042208.67 | 27042208.83 | 27042209.01 | 0.0281 | 0.0207 |
| Uranus | 69337-07-25 21:51 G | 27046085.24 | 27046085.41 | 27046085.61 | 0.0136 | 0.0095 |
| Jupiter | 69338-01-22 18:29 G | 27046266.03 | 27046266.27 | 27046266.51 | 0.0484 | 0.0068 |
| Uranus | 69338-07-30 03:51 G | 27046454.45 | 27046454.66 | 27046454.88 | 0.0136 | 0.0063 |
| Uranus | 69339-08-03 15:22 G | 27046823.88 | 27046824.14 | 27046824.40 | 0.0136 | 0.0008 |
| Uranus | 69340-08-06 21:51 G | 27047193.17 | 27047193.41 | 27047193.65 | 0.0136 | 0.0020 |
| Saturn | 69341-06-15 01:27 G | 27047505.40 | 27047505.56 | 27047505.74 | 0.0278 | 0.0201 |
| Uranus | 69341-08-11 10:48 G | 27047562.75 | 27047562.95 | 27047563.18 | 0.0137 | 0.0076 |
| Uranus | 69342-08-15 17:46 G | 27047932.12 | 27047932.24 | 27047932.41 | 0.0137 | 0.0111 |
| Jupiter | 69350-01-26 17:03 G | 27050653.01 | 27050653.21 | 27050653.41 | 0.0484 | 0.0260 |
| Saturn | 69356-12-21 05:31 G | 27053173.49 | 27053173.73 | 27053173.98 | 0.0281 | 0.0091 |
| Saturn | 69371-06-22 11:03 G | 27058469.74 | 27058469.96 | 27058470.18 | 0.0278 | 0.0095 |
| Uranus | 69378-01-25 04:19 G | 27060878.52 | 27060878.68 | 27060878.86 | 0.0143 | 0.0110 |

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| Uranus | 69379-01-30 03:22 G | 27061248.43 | 27061248.64 | 27061248.85 | 0.0142 | 0.0075 |
| Jupiter | 69379-07-18 18:58 G | 27061418.26 | 27061418.29 | 27061418.32 | 0.0543 | 0.0538 |
| Uranus | 69380-02-04 04:34 G | 27061618.42 | 27061618.69 | 27061618.95 | 0.0142 | 0.0013 |
| Uranus | 69381-02-07 23:46 G | 27061988.25 | 27061988.49 | 27061988.74 | 0.0142 | 0.0031 |
| Uranus | 69382-02-13 02:10 G | 27062358.37 | 27062358.59 | 27062358.82 | 0.0141 | 0.0075 |
| Uranus | 69383-02-17 18:00 G | 27062728.18 | 27062728.25 | 27062728.34 | 0.0141 | 0.0132 |
| Neptune | 69384-01-28 12:43 G | 27063072.99 | 27063073.03 | 27063073.12 | 0.0088 | 0.0085 |
| Neptune | 69385-01-29 18:15 G | 27063440.05 | 27063440.26 | 27063440.48 | 0.0088 | 0.0048 |
| Saturn | 69385-12-15 18:43 G | 27063760.08 | 27063760.28 | 27063760.50 | 0.0281 | 0.0146 |
| Neptune | 69386-02-01 12:58 G | 27063807.81 | 27063808.04 | 27063808.31 | 0.0088 | 0.0028 |
| Neptune | 69387-02-03 18:58 G | 27064175.04 | 27064175.29 | 27064175.55 | 0.0088 | 0.0008 |
| Neptune | 69388-02-06 11:03 G | 27064542.72 | 27064542.96 | 27064543.23 | 0.0088 | 0.0029 |
| Neptune | 69389-02-07 20:10 G | 27064910.19 | 27064910.34 | 27064910.54 | 0.0088 | 0.0064 |
| Neptune | 69390-02-10 08:39 G | 27065277.80 | 27065277.86 | 27065277.95 | 0.0088 | 0.0084 |
| Jupiter | 69391-07-23 16:05 G | 27065805.94 | 27065806.17 | 27065806.41 | 0.0545 | 0.0074 |
| Saturn | 69400-06-17 03:36 G | 27069056.44 | 27069056.65 | 27069056.86 | 0.0278 | 0.0143 |
| Jupiter | 69403-07-30 04:19 G | 27070194.59 | 27070194.68 | 27070194.78 | 0.0545 | 0.0487 |
| Mars | 69407-05-16 03:51 G | 27071580.54 | 27071580.66 | 27071580.78 | 0.1765 | 0.1265 |
| Saturn | 69415-12-24 10:34 G | 27074724.73 | 27074724.94 | 27074725.16 | 0.0281 | 0.0151 |
| Uranus | 69420-07-22 20:39 G | 27076397.36 | 27076397.36 | 27076397.39 | 0.0135 | 0.0135 |
| Jupiter | 69421-01-22 17:17 G | 27076580.99 | 27076581.22 | 27076581.45 | 0.0484 | 0.0124 |
| Uranus | 69421-07-27 05:03 G | 27076766.55 | 27076766.71 | 27076766.91 | 0.0136 | 0.0097 |
| Uranus | 69422-07-31 12:58 G | 27077135.82 | 27077136.04 | 27077136.28 | 0.0136 | 0.0049 |
| Uranus | 69423-08-04 23:17 G | 27077505.22 | 27077505.47 | 27077505.73 | 0.0136 | 0.0019 |
| Uranus | 69424-08-08 06:58 G | 27077874.56 | 27077874.79 | 27077875.03 | 0.0136 | 0.0038 |
| Uranus | 69425-08-12 18:58 G | 27078244.07 | 27078244.29 | 27078244.52 | 0.0137 | 0.0068 |
| Uranus | 69426-08-17 02:53 G | 27078613.52 | 27078613.62 | 27078613.75 | 0.0137 | 0.0120 |
| Saturn | 69430-06-24 19:12 G | 27080021.09 | 27080021.30 | 27080021.50 | 0.0278 | 0.0151 |
| Mars | 69432-11-12 21:07 G | 27080893.18 | 27080893.38 | 27080893.57 | 0.1761 | 0.0056 |
| Jupiter | 69433-01-27 06:43 G | 27080968.57 | 27080968.78 | 27080968.99 | 0.0484 | 0.0200 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 69434-07-25 20:39 G | 27081513.17 | 27081513.36 | 27081513.59 | 0.0064 | 0.0038 |
| Pluto | 69435-07-27 14:24 G | 27081880.03 | 27081880.10 | 27081880.22 | 0.0065 | 0.0060 |
| Saturn | 69444-12-18 10:19 G | 27085311.70 | 27085311.93 | 27085312.16 | 0.0281 | 0.0081 |
| Saturn | 69459-06-19 09:51 G | 27090607.68 | 27090607.91 | 27090608.14 | 0.0278 | 0.0082 |
| Uranus | 69462-01-26 12:58 G | 27091559.91 | 27091560.04 | 27091560.20 | 0.0143 | 0.0119 |
| Uranus | 69463-01-31 13:27 G | 27091929.84 | 27091930.06 | 27091930.30 | 0.0142 | 0.0056 |
| Uranus | 69464-02-05 13:41 G | 27092299.81 | 27092300.07 | 27092300.33 | 0.0142 | 0.0018 |
| Uranus | 69465-02-09 10:05 G | 27092669.69 | 27092669.92 | 27092670.17 | 0.0142 | 0.0037 |
| Neptune | 69465-07-28 14:39 G | 27092839.02 | 27092839.11 | 27092839.26 | 0.0089 | 0.0079 |
| Uranus | 69466-02-14 10:48 G | 27093039.75 | 27093039.95 | 27093040.17 | 0.0141 | 0.0087 |
| Neptune | 69466-07-30 19:27 G | 27093206.13 | 27093206.31 | 27093206.52 | 0.0089 | 0.0058 |
| Uranus | 69467-02-19 03:36 G | 27093409.55 | 27093409.65 | 27093409.78 | 0.0141 | 0.0124 |
| Neptune | 69467-08-02 13:27 G | 27093573.82 | 27093574.06 | 27093574.32 | 0.0089 | 0.0020 |
| Neptune | 69468-08-03 19:55 G | 27093941.08 | 27093941.33 | 27093941.58 | 0.0089 | 0.0001 |
| Neptune | 69469-08-06 10:19 G | 27094308.70 | 27094308.93 | 27094309.17 | 0.0089 | 0.0038 |
| Neptune | 69470-08-08 19:55 G | 27094676.17 | 27094676.33 | 27094676.55 | 0.0089 | 0.0059 |
| Jupiter | 69474-07-24 00:43 G | 27096121.31 | 27096121.53 | 27096121.74 | 0.0544 | 0.0142 |
| Saturn | 69474-12-25 21:07 G | 27096276.23 | 27096276.38 | 27096276.54 | 0.0281 | 0.0218 |
| Jupiter | 69486-07-29 02:53 G | 27100509.47 | 27100509.62 | 27100509.79 | 0.0544 | 0.0397 |
| Saturn | 69489-06-25 22:48 G | 27101572.29 | 27101572.45 | 27101572.62 | 0.0278 | 0.0207 |
| Saturn | 69503-12-21 22:48 G | 27106863.19 | 27106863.45 | 27106863.70 | 0.0281 | 0.0015 |
| Jupiter | 69504-01-24 04:19 G | 27106896.46 | 27106896.68 | 27106896.89 | 0.0485 | 0.0183 |
| Uranus | 69504-07-24 06:29 G | 27107078.71 | 27107078.77 | 27107078.87 | 0.0135 | 0.0128 |
| Uranus | 69505-07-28 13:55 G | 27107447.88 | 27107448.08 | 27107448.28 | 0.0136 | 0.0088 |
| Uranus | 69506-08-01 22:19 G | 27107817.22 | 27107817.43 | 27107817.66 | 0.0136 | 0.0054 |
| Uranus | 69507-08-06 06:58 G | 27108186.53 | 27108186.79 | 27108187.06 | 0.0136 | 0.0002 |
| Uranus | 69508-08-09 16:05 G | 27108555.94 | 27108556.17 | 27108556.42 | 0.0136 | 0.0029 |
| Uranus | 69509-08-14 02:39 G | 27108925.42 | 27108925.61 | 27108925.83 | 0.0137 | 0.0085 |
| Uranus | 69510-08-18 12:29 G | 27109294.91 | 27109295.02 | 27109295.16 | 0.0137 | 0.0117 |
| Jupiter | 69516-01-28 06:00 G | 27111283.51 | 27111283.75 | 27111283.98 | 0.0484 | 0.0138 |

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| Saturn | 69518-06-21 22:05 G | 27112159.19 | 27112159.42 | 27112159.65 | 0.0278 | 0.0019 |
| Jupiter | 69528-02-01 15:07 G | 27115671.05 | 27115671.13 | 27115671.21 | 0.0483 | 0.0454 |
| Saturn | 69532-12-14 19:41 G | 27117449.27 | 27117449.32 | 27117449.39 | 0.0281 | 0.0271 |
| Uranus | 69546-01-27 20:39 G | 27122241.19 | 27122241.36 | 27122241.57 | 0.0143 | 0.0101 |
| Uranus | 69547-02-01 22:34 G | 27122611.23 | 27122611.44 | 27122611.67 | 0.0142 | 0.0065 |
| Saturn | 69547-06-16 17:31 G | 27122746.14 | 27122746.23 | 27122746.33 | 0.0278 | 0.0255 |
| Uranus | 69548-02-06 21:22 G | 27122981.12 | 27122981.39 | 27122981.66 | 0.0142 | 0.0002 |
| Saturn | 69548-06-28 03:22 G | 27123123.58 | 27123123.64 | 27123123.72 | 0.0278 | 0.0265 |
| Neptune | 69549-01-31 10:05 G | 27123340.77 | 27123340.92 | 27123341.12 | 0.0088 | 0.0066 |
| Uranus | 69549-02-10 19:12 G | 27123351.07 | 27123351.30 | 27123351.55 | 0.0142 | 0.0039 |
| Neptune | 69550-02-02 16:48 G | 27123707.98 | 27123708.20 | 27123708.45 | 0.0088 | 0.0034 |
| Uranus | 69550-02-15 18:58 G | 27123721.10 | 27123721.29 | 27123721.52 | 0.0141 | 0.0087 |
| Neptune | 69551-02-05 08:39 G | 27124075.61 | 27124075.86 | 27124076.14 | 0.0088 | 0.0011 |
| Uranus | 69551-02-20 13:41 G | 27124091.07 | 27124091.07 | 27124091.09 | 0.0141 | 0.0141 |
| Neptune | 69552-02-07 19:27 G | 27124443.08 | 27124443.31 | 27124443.57 | 0.0088 | 0.0022 |
| Neptune | 69553-02-09 06:15 G | 27124810.55 | 27124810.76 | 27124811.01 | 0.0088 | 0.0046 |
| Neptune | 69554-02-11 21:07 G | 27125178.29 | 27125178.38 | 27125178.51 | 0.0088 | 0.0079 |
| Jupiter | 69557-07-23 18:29 G | 27126436.06 | 27126436.27 | 27126436.49 | 0.0543 | 0.0245 |
| Saturn | 69562-12-23 07:27 G | 27128414.56 | 27128414.81 | 27128415.07 | 0.0281 | 0.0052 |
| Jupiter | 69569-07-28 18:15 G | 27130824.08 | 27130824.26 | 27130824.46 | 0.0545 | 0.0291 |
| Saturn | 69577-06-23 11:31 G | 27133710.74 | 27133710.98 | 27133711.21 | 0.0278 | 0.0046 |
| Jupiter | 69587-01-23 03:22 G | 27137211.43 | 27137211.64 | 27137211.85 | 0.0484 | 0.0242 |
| Uranus | 69588-07-24 15:36 G | 27137760.08 | 27137760.15 | 27137760.24 | 0.0135 | 0.0128 |
| Uranus | 69589-07-28 21:22 G | 27138129.21 | 27138129.39 | 27138129.61 | 0.0136 | 0.0086 |
| Uranus | 69590-08-02 07:55 G | 27138498.61 | 27138498.83 | 27138499.07 | 0.0136 | 0.0041 |
| Uranus | 69591-08-06 15:36 G | 27138867.89 | 27138868.15 | 27138868.41 | 0.0136 | 0.0009 |
| Saturn | 69591-12-17 12:00 G | 27139000.84 | 27139001.00 | 27139001.17 | 0.0281 | 0.0202 |
| Uranus | 69592-08-10 01:55 G | 27139237.36 | 27139237.58 | 27139237.82 | 0.0136 | 0.0048 |
| Uranus | 69593-08-14 11:31 G | 27139606.77 | 27139606.98 | 27139607.20 | 0.0137 | 0.0076 |
| Uranus | 69594-08-18 22:05 G | 27139976.36 | 27139976.42 | 27139976.51 | 0.0137 | 0.0130 |

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| Jupiter | 69599-01-27 13:41 G | 27141598.85 | 27141599.07 | 27141599.30 | 0.0484 | 0.0076 |
| Saturn | 69606-06-17 22:19 G | 27144297.27 | 27144297.43 | 27144297.62 | 0.0278 | 0.0192 |
| Jupiter | 69611-01-31 18:15 G | 27145986.12 | 27145986.26 | 27145986.40 | 0.0484 | 0.0393 |
| Saturn | 69621-12-24 16:05 G | 27149965.95 | 27149966.17 | 27149966.40 | 0.0281 | 0.0119 |
| Uranus | 69630-01-28 05:17 G | 27152922.57 | 27152922.72 | 27152922.92 | 0.0143 | 0.0108 |
| Neptune | 69630-07-31 12:00 G | 27153106.85 | 27153107.00 | 27153107.19 | 0.0089 | 0.0068 |
| Uranus | 69631-02-02 09:07 G | 27153292.64 | 27153292.88 | 27153293.11 | 0.0142 | 0.0045 |
| Neptune | 69631-08-02 18:58 G | 27153474.07 | 27153474.29 | 27153474.52 | 0.0089 | 0.0035 |
| Uranus | 69632-02-07 06:29 G | 27153662.51 | 27153662.77 | 27153663.04 | 0.0142 | 0.0009 |
| Neptune | 69632-08-04 08:24 G | 27153841.60 | 27153841.85 | 27153842.12 | 0.0089 | 0.0011 |
| Uranus | 69633-02-11 05:46 G | 27154032.52 | 27154032.74 | 27154032.98 | 0.0142 | 0.0050 |
| Neptune | 69633-08-06 19:55 G | 27154209.10 | 27154209.33 | 27154209.58 | 0.0089 | 0.0023 |
| Uranus | 69634-02-16 03:51 G | 27154402.49 | 27154402.66 | 27154402.88 | 0.0141 | 0.0096 |
| Neptune | 69634-08-09 05:03 G | 27154576.50 | 27154576.71 | 27154576.94 | 0.0089 | 0.0048 |
| Uranus | 69635-02-20 23:46 G | 27154772.44 | 27154772.49 | 27154772.57 | 0.0141 | 0.0135 |
| Neptune | 69635-08-11 20:39 G | 27154944.28 | 27154944.36 | 27154944.49 | 0.0089 | 0.0082 |
| Saturn | 69636-06-24 21:22 G | 27155262.17 | 27155262.39 | 27155262.62 | 0.0278 | 0.0111 |
| Jupiter | 69640-07-22 13:41 G | 27156750.91 | 27156751.07 | 27156751.24 | 0.0544 | 0.0348 |
| Saturn | 69650-12-19 03:22 G | 27160552.43 | 27160552.64 | 27160552.86 | 0.0281 | 0.0133 |
| Jupiter | 69652-07-28 02:24 G | 27161139.38 | 27161139.60 | 27161139.81 | 0.0545 | 0.0216 |
| Saturn | 69665-06-19 07:55 G | 27165848.62 | 27165848.83 | 27165849.04 | 0.0278 | 0.0130 |
| Jupiter | 69670-01-22 10:05 G | 27167526.75 | 27167526.92 | 27167527.10 | 0.0485 | 0.0305 |
| Uranus | 69672-07-25 01:55 G | 27168441.47 | 27168441.58 | 27168441.71 | 0.0135 | 0.0117 |
| Uranus | 69673-07-29 06:29 G | 27168810.57 | 27168810.77 | 27168810.99 | 0.0136 | 0.0080 |
| Uranus | 69674-08-02 18:00 G | 27169180.02 | 27169180.25 | 27169180.48 | 0.0136 | 0.0042 |
| Uranus | 69675-08-07 00:00 G | 27169549.24 | 27169549.50 | 27169549.76 | 0.0136 | 0.0008 |
| Uranus | 69676-08-10 12:00 G | 27169918.77 | 27169919.00 | 27169919.24 | 0.0136 | 0.0038 |
| Uranus | 69677-08-14 19:55 G | 27170288.16 | 27170288.33 | 27170288.53 | 0.0137 | 0.0095 |
| Uranus | 69678-08-19 08:24 G | 27170657.77 | 27170657.85 | 27170657.96 | 0.0137 | 0.0125 |
| Saturn | 69680-12-26 03:36 G | 27171517.47 | 27171517.65 | 27171517.83 | 0.0281 | 0.0184 |

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| Pluto | 69681-07-28 00:58 G | 27171731.35 | 27171731.54 | 27171731.78 | 0.0064 | 0.0036 |
| Jupiter | 69682-01-26 16:48 G | 27171913.95 | 27171914.20 | 27171914.44 | 0.0484 | 0.0017 |
| Pluto | 69682-07-29 18:43 G | 27172098.17 | 27172098.28 | 27172098.44 | 0.0065 | 0.0055 |
| Mars | 69691-05-17 13:27 G | 27175311.93 | 27175312.06 | 27175312.19 | 0.1774 | 0.1335 |
| Jupiter | 69694-01-30 22:34 G | 27176301.28 | 27176301.44 | 27176301.60 | 0.0484 | 0.0347 |
| Saturn | 69695-06-27 02:39 G | 27176813.42 | 27176813.61 | 27176813.81 | 0.0278 | 0.0172 |
| Saturn | 69709-12-21 12:00 G | 27182103.75 | 27182104.00 | 27182104.25 | 0.0281 | 0.0070 |
| Neptune | 69713-01-31 14:53 G | 27183241.05 | 27183241.12 | 27183241.24 | 0.0088 | 0.0081 |
| Uranus | 69714-01-29 13:55 G | 27183603.88 | 27183604.08 | 27183604.29 | 0.0143 | 0.0091 |
| Neptune | 69714-02-03 05:31 G | 27183608.51 | 27183608.73 | 27183608.98 | 0.0088 | 0.0044 |
| Uranus | 69715-02-03 18:15 G | 27183974.04 | 27183974.26 | 27183974.50 | 0.0142 | 0.0054 |
| Neptune | 69715-02-05 16:48 G | 27183975.97 | 27183976.20 | 27183976.46 | 0.0088 | 0.0025 |
| Neptune | 69716-02-08 02:53 G | 27184343.36 | 27184343.62 | 27184343.89 | 0.0088 | 0.0013 |
| Uranus | 69716-02-08 14:39 G | 27184343.84 | 27184344.11 | 27184344.37 | 0.0142 | 0.0010 * |
| Mars | 69716-11-15 14:24 G | 27184624.92 | 27184625.10 | 27184625.28 | 0.1753 | 0.0354 |
| Neptune | 69717-02-09 19:12 G | 27184711.07 | 27184711.30 | 27184711.54 | 0.0088 | 0.0032 |
| Uranus | 69717-02-12 15:22 G | 27184713.91 | 27184714.14 | 27184714.38 | 0.0142 | 0.0049 |
| Neptune | 69718-02-12 00:58 G | 27185078.40 | 27185078.54 | 27185078.73 | 0.0088 | 0.0069 |
| Uranus | 69718-02-17 12:43 G | 27185083.85 | 27185084.03 | 27185084.23 | 0.0141 | 0.0099 |
| Neptune | 69719-02-14 20:10 G | 27185446.34 | 27185446.34 | 27185446.38 | 0.0088 | 0.0088 |
| Jupiter | 69723-07-23 21:07 G | 27187066.23 | 27187066.38 | 27187066.53 | 0.0543 | 0.0418 |
| Saturn | 69724-06-21 20:39 G | 27187400.14 | 27187400.36 | 27187400.59 | 0.0278 | 0.0071 |
| Jupiter | 69735-07-28 18:29 G | 27191454.05 | 27191454.27 | 27191454.50 | 0.0544 | 0.0122 |
| Saturn | 69739-12-29 16:19 G | 27193069.06 | 27193069.18 | 27193069.30 | 0.0281 | 0.0244 |
| Jupiter | 69753-01-22 17:03 G | 27197842.05 | 27197842.21 | 27197842.39 | 0.0485 | 0.0351 |
| Saturn | 69754-06-29 08:39 G | 27198364.73 | 27198364.86 | 27198365.00 | 0.0277 | 0.0231 |
| Uranus | 69756-07-26 11:03 G | 27199122.85 | 27199122.96 | 27199123.08 | 0.0135 | 0.0119 |
| Uranus | 69757-07-30 14:39 G | 27199491.90 | 27199492.11 | 27199492.34 | 0.0136 | 0.0074 |
| Uranus | 69758-08-04 03:36 G | 27199861.42 | 27199861.65 | 27199861.89 | 0.0136 | 0.0032 |
| Uranus | 69759-08-08 08:53 G | 27200230.61 | 27200230.87 | 27200231.13 | 0.0136 | 0.0003 |

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| Uranus | 69760-08-11 21:51 G | 27200600.20 | 27200600.41 | 27200600.64 | 0.0136 | 0.0057 |
| Uranus | 69761-08-16 04:19 G | 27200969.50 | 27200969.68 | 27200969.90 | 0.0137 | 0.0086 |
| Jupiter | 69765-01-26 21:51 G | 27202229.18 | 27202229.41 | 27202229.64 | 0.0484 | 0.0040 |
| Saturn | 69768-12-22 15:22 G | 27203654.88 | 27203655.14 | 27203655.39 | 0.0281 | 0.0014 |
| Jupiter | 69777-01-31 09:51 G | 27206616.73 | 27206616.91 | 27206617.10 | 0.0484 | 0.0298 |
| Saturn | 69783-06-24 06:00 G | 27208951.51 | 27208951.75 | 27208951.99 | 0.0278 | 0.0011 |
| Neptune | 69794-07-31 18:29 G | 27213007.15 | 27213007.27 | 27213007.42 | 0.0089 | 0.0075 |
| Neptune | 69795-08-03 07:41 G | 27213374.62 | 27213374.82 | 27213375.04 | 0.0089 | 0.0053 |
| Neptune | 69796-08-04 20:10 G | 27213742.10 | 27213742.34 | 27213742.59 | 0.0089 | 0.0017 |
| Uranus | 69797-01-25 05:03 G | 27213915.67 | 27213915.71 | 27213915.79 | 0.0143 | 0.0139 |
| Neptune | 69797-08-07 04:05 G | 27214109.41 | 27214109.67 | 27214109.93 | 0.0089 | 0.0005 |
| Saturn | 69797-12-17 06:58 G | 27214241.72 | 27214241.79 | 27214241.89 | 0.0281 | 0.0262 |
| Uranus | 69798-01-29 23:46 G | 27214285.30 | 27214285.49 | 27214285.69 | 0.0143 | 0.0095 |
| Neptune | 69798-08-09 20:24 G | 27214477.13 | 27214477.35 | 27214477.57 | 0.0089 | 0.0042 |
| Uranus | 69799-02-04 05:31 G | 27214655.49 | 27214655.73 | 27214655.97 | 0.0142 | 0.0033 |
| Neptune | 69799-08-12 00:43 G | 27214844.37 | 27214844.53 | 27214844.74 | 0.0089 | 0.0063 |
| Uranus | 69800-02-09 00:43 G | 27215025.26 | 27215025.53 | 27215025.80 | 0.0142 | 0.0002 |
| Uranus | 69801-02-14 02:24 G | 27215395.39 | 27215395.60 | 27215395.84 | 0.0142 | 0.0063 |
| Uranus | 69802-02-18 22:19 G | 27215765.27 | 27215765.43 | 27215765.63 | 0.0141 | 0.0105 |
| Jupiter | 69806-07-23 09:36 G | 27217380.87 | 27217380.90 | 27217380.93 | 0.0543 | 0.0535 |
| Saturn | 69812-06-19 02:39 G | 27219538.48 | 27219538.61 | 27219538.76 | 0.0278 | 0.0225 |
| Jupiter | 69818-07-28 22:05 G | 27221769.19 | 27221769.42 | 27221769.64 | 0.0544 | 0.0027 |
| Saturn | 69827-12-25 21:22 G | 27225206.15 | 27225206.39 | 27225206.63 | 0.0281 | 0.0042 |
| Jupiter | 69830-08-03 00:00 G | 27226157.47 | 27226157.50 | 27226157.55 | 0.0545 | 0.0537 |
| Jupiter | 69836-01-23 22:19 G | 27228157.31 | 27228157.43 | 27228157.55 | 0.0485 | 0.0407 |
| Uranus | 69840-07-27 21:22 G | 27229804.25 | 27229804.39 | 27229804.55 | 0.0135 | 0.0105 |
| Uranus | 69841-07-31 23:46 G | 27230173.29 | 27230173.49 | 27230173.72 | 0.0136 | 0.0072 |
| Saturn | 69842-06-26 08:39 G | 27230502.61 | 27230502.86 | 27230503.11 | 0.0277 | 0.0044 |
| Uranus | 69842-08-05 13:41 G | 27230542.83 | 27230543.07 | 27230543.31 | 0.0136 | 0.0031 |
| Uranus | 69843-08-09 17:31 G | 27230911.98 | 27230912.23 | 27230912.49 | 0.0136 | 0.0017 |

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| Uranus | 69844-08-13 07:41 G | 27231281.60 | 27231281.82 | 27231282.05 | 0.0136 | 0.0048 |
| Uranus | 69845-08-17 12:58 G | 27231650.90 | 27231651.04 | 27231651.23 | 0.0137 | 0.0105 |
| Uranus | 69846-08-22 03:51 G | 27232020.62 | 27232020.66 | 27232020.72 | 0.0137 | 0.0133 |
| Jupiter | 69848-01-28 09:07 G | 27232544.65 | 27232544.88 | 27232545.12 | 0.0485 | 0.0097 |
| Saturn | 69856-12-19 10:05 G | 27235792.76 | 27235792.92 | 27235793.10 | 0.0281 | 0.0208 |
| Jupiter | 69860-02-01 09:51 G | 27236931.71 | 27236931.91 | 27236932.11 | 0.0484 | 0.0251 |
| Saturn | 69871-06-21 10:34 G | 27241089.76 | 27241089.94 | 27241090.13 | 0.0278 | 0.0168 |
| Neptune | 69877-02-01 02:10 G | 27243141.56 | 27243141.59 | 27243141.62 | 0.0088 | 0.0087 |
| Neptune | 69878-02-03 14:39 G | 27243508.95 | 27243509.11 | 27243509.31 | 0.0088 | 0.0061 |
| Neptune | 69879-02-05 23:46 G | 27243876.25 | 27243876.49 | 27243876.75 | 0.0088 | 0.0031 |
| Neptune | 69880-02-08 17:03 G | 27244243.95 | 27244244.21 | 27244244.46 | 0.0088 | 0.0005 |
| Uranus | 69881-01-26 15:22 G | 27244597.07 | 27244597.14 | 27244597.24 | 0.0143 | 0.0134 |
| Neptune | 69881-02-09 22:05 G | 27244611.17 | 27244611.42 | 27244611.68 | 0.0088 | 0.0024 |
| Uranus | 69882-01-31 09:07 G | 27244966.68 | 27244966.88 | 27244967.11 | 0.0143 | 0.0081 |
| Neptune | 69882-02-12 16:48 G | 27244979.01 | 27244979.20 | 27244979.43 | 0.0088 | 0.0050 |
| Uranus | 69883-02-05 15:22 G | 27245336.91 | 27245337.14 | 27245337.39 | 0.0142 | 0.0043 |
| Neptune | 69883-02-14 21:51 G | 27245346.34 | 27245346.41 | 27245346.53 | 0.0088 | 0.0081 |
| Uranus | 69884-02-10 09:36 G | 27245706.65 | 27245706.90 | 27245707.17 | 0.0142 | 0.0022 |
| Uranus | 69885-02-14 12:43 G | 27246076.81 | 27246077.03 | 27246077.27 | 0.0142 | 0.0059 |
| Uranus | 69886-02-19 07:41 G | 27246446.68 | 27246446.82 | 27246447.00 | 0.0141 | 0.0111 |
| Saturn | 69886-12-27 05:03 G | 27246757.49 | 27246757.71 | 27246757.94 | 0.0281 | 0.0096 |
| Saturn | 69901-06-28 09:36 G | 27252053.68 | 27252053.90 | 27252054.14 | 0.0277 | 0.0099 |
| Jupiter | 69901-07-28 22:34 G | 27252084.21 | 27252084.44 | 27252084.68 | 0.0544 | 0.0031 |
| Jupiter | 69913-08-03 08:10 G | 27256472.73 | 27256472.84 | 27256472.96 | 0.0544 | 0.0466 |
| Saturn | 69915-12-22 07:12 G | 27257343.60 | 27257343.80 | 27257344.02 | 0.0281 | 0.0161 |
| Jupiter | 69919-01-24 11:03 G | 27258472.90 | 27258472.96 | 27258473.05 | 0.0485 | 0.0460 |
| Uranus | 69924-07-29 06:29 G | 27260485.64 | 27260485.77 | 27260485.92 | 0.0135 | 0.0110 |
| Uranus | 69925-08-02 08:24 G | 27260854.63 | 27260854.85 | 27260855.09 | 0.0136 | 0.0063 |
| Uranus | 69926-08-06 23:03 G | 27261224.22 | 27261224.46 | 27261224.71 | 0.0136 | 0.0024 |
| Uranus | 69927-08-11 02:24 G | 27261593.34 | 27261593.60 | 27261593.86 | 0.0136 | 0.0013 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 69928-08-01 10:48 G | 27261949.73 | 27261949.95 | 27261950.20 | 0.0064 | 0.0030 |
| Uranus | 69928-08-14 17:17 G | 27261963.01 | 27261963.22 | 27261963.44 | 0.0136 | 0.0066 |
| Uranus | 69929-08-18 21:36 G | 27262332.22 | 27262332.40 | 27262332.59 | 0.0137 | 0.0094 |
| Saturn | 69930-06-23 18:15 G | 27262641.05 | 27262641.26 | 27262641.49 | 0.0278 | 0.0113 |
| Jupiter | 69931-01-28 12:58 G | 27262859.82 | 27262860.04 | 27262860.27 | 0.0485 | 0.0142 |
| Jupiter | 69943-02-02 03:22 G | 27267247.44 | 27267247.64 | 27267247.85 | 0.0484 | 0.0216 |
| Saturn | 69945-12-29 09:36 G | 27268308.70 | 27268308.90 | 27268309.12 | 0.0281 | 0.0147 |
| Neptune | 69958-08-02 04:34 G | 27272907.65 | 27272907.69 | 27272907.77 | 0.0090 | 0.0087 |
| Neptune | 69959-08-04 18:15 G | 27273275.10 | 27273275.26 | 27273275.43 | 0.0089 | 0.0065 |
| Saturn | 69960-06-29 13:55 G | 27273604.90 | 27273605.08 | 27273605.29 | 0.0277 | 0.0153 |
| Neptune | 69960-08-06 01:27 G | 27273642.33 | 27273642.56 | 27273642.82 | 0.0089 | 0.0029 |
| Neptune | 69961-08-08 19:12 G | 27274010.05 | 27274010.30 | 27274010.55 | 0.0089 | 0.0008 |
| Neptune | 69962-08-10 23:46 G | 27274377.26 | 27274377.49 | 27274377.74 | 0.0089 | 0.0028 |
| Neptune | 69963-08-13 17:46 G | 27274745.05 | 27274745.24 | 27274745.48 | 0.0089 | 0.0051 |
| Neptune | 69964-08-14 23:17 G | 27275112.42 | 27275112.47 | 27275112.56 | 0.0089 | 0.0086 |
| Uranus | 69965-01-28 01:41 G | 27275278.48 | 27275278.57 | 27275278.70 | 0.0143 | 0.0129 |
| Uranus | 69966-02-01 19:55 G | 27275648.12 | 27275648.33 | 27275648.54 | 0.0143 | 0.0083 |
| Uranus | 69967-02-07 03:07 G | 27276018.38 | 27276018.63 | 27276018.88 | 0.0142 | 0.0023 |
| Uranus | 69968-02-11 20:24 G | 27276388.09 | 27276388.35 | 27276388.62 | 0.0142 | 0.0012 |
| Uranus | 69969-02-16 00:29 G | 27276758.32 | 27276758.52 | 27276758.74 | 0.0142 | 0.0074 |
| Uranus | 69970-02-20 18:00 G | 27277128.11 | 27277128.25 | 27277128.43 | 0.0141 | 0.0114 |
| Saturn | 69974-12-23 05:17 G | 27278894.49 | 27278894.72 | 27278894.95 | 0.0281 | 0.0114 |
| Jupiter | 69984-07-28 00:58 G | 27282399.33 | 27282399.54 | 27282399.76 | 0.0544 | 0.0128 |
| Saturn | 69989-06-24 20:39 G | 27284192.12 | 27284192.36 | 27284192.60 | 0.0278 | 0.0062 |
| Jupiter | 69996-08-02 03:51 G | 27286787.49 | 27286787.66 | 27286787.84 | 0.0544 | 0.0361 |
| Mars | 70000-11-18 01:27 G | 27288356.37 | 27288356.56 | 27288356.76 | 0.1745 | 0.0539 |

71ST MILLENNIUM CE

This is a list of transits of Moon in the 71st millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 70004-12-30 08:39 | G | 27289859.68 | 27289859.86 | 27289860.05 | 0.0281 | 0.0196 | |
| Uranus | 70008-07-29 17:31 | G | 27291167.06 | 27291167.23 | 27291167.41 | 0.0135 | 0.0095 | |
| Uranus | 70009-08-02 18:29 | G | 27291536.06 | 27291536.27 | 27291536.50 | 0.0136 | 0.0064 | |
| Uranus | 70010-08-07 09:22 | G | 27291905.65 | 27291905.89 | 27291906.14 | 0.0136 | 0.0021 | |
| Uranus | 70011-08-11 11:31 | G | 27292274.73 | 27292274.98 | 27292275.23 | 0.0136 | 0.0025 | |
| Uranus | 70012-08-15 02:53 | G | 27292644.40 | 27292644.62 | 27292644.85 | 0.0136 | 0.0058 | |
| Uranus | 70013-08-19 06:29 | G | 27293013.64 | 27293013.77 | 27293013.92 | 0.0137 | 0.0113 | |
| Jupiter | 70014-01-28 06:15 | G | 27293175.55 | 27293175.76 | 27293175.98 | 0.0485 | 0.0185 | |
| Saturn | 70019-07-01 21:07 | G | 27295156.23 | 27295156.38 | 27295156.55 | 0.0277 | 0.0202 | |
| Jupiter | 70026-02-01 05:46 | G | 27297562.52 | 27297562.74 | 27297562.98 | 0.0484 | 0.0174 | |
| Saturn | 70033-12-24 08:24 | G | 27300445.62 | 27300445.85 | 27300446.08 | 0.0281 | 0.0066 | |
| Neptune | 70042-02-03 19:12 | G | 27303409.20 | 27303409.30 | 27303409.46 | 0.0088 | 0.0077 | |
| Neptune | 70043-02-06 13:27 | G | 27303776.84 | 27303777.06 | 27303777.30 | 0.0088 | 0.0040 | |
| Neptune | 70044-02-08 18:29 | G | 27304144.03 | 27304144.27 | 27304144.54 | 0.0088 | 0.0022 | |
| Neptune | 70045-02-10 13:41 | G | 27304511.81 | 27304512.07 | 27304512.33 | 0.0088 | 0.0016 | |
| Neptune | 70046-02-12 18:58 | G | 27304879.07 | 27304879.29 | 27304879.54 | 0.0088 | 0.0035 | |
| Neptune | 70047-02-15 11:46 | G | 27305246.87 | 27305246.99 | 27305247.17 | 0.0088 | 0.0072 | |
| Saturn | 70048-06-25 16:48 | G | 27305742.96 | 27305743.20 | 27305743.45 | 0.0279 | 0.0019 | |
| Uranus | 70049-01-28 12:29 | G | 27305959.89 | 27305960.02 | 27305960.16 | 0.0143 | 0.0121 | |
| Uranus | 70050-02-02 06:00 | G | 27306329.53 | 27306329.75 | 27306329.98 | 0.0143 | 0.0071 | |
| Uranus | 70051-02-07 13:12 | G | 27306699.81 | 27306700.05 | 27306700.30 | 0.0142 | 0.0031 | |
| Uranus | 70052-02-12 06:00 | G | 27307069.50 | 27307069.75 | 27307070.01 | 0.0142 | 0.0033 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 70053-02-16 10:48 G | 27307439.74 | 27307439.95 | 27307440.18 | 0.0142 | 0.0068 |
| Uranus | 70054-02-21 03:51 G | 27307809.54 | 27307809.66 | 27307809.80 | 0.0142 | 0.0123 |
| Saturn | 70064-01-01 06:15 G | 27311410.64 | 27311410.76 | 27311410.89 | 0.0281 | 0.0244 |
| Jupiter | 70067-07-28 03:07 G | 27312714.41 | 27312714.63 | 27312714.86 | 0.0544 | 0.0197 |
| Saturn | 70077-06-20 09:36 G | 27316329.84 | 27316329.90 | 27316329.97 | 0.0278 | 0.0266 |
| Saturn | 70078-07-03 00:58 G | 27316707.44 | 27316707.54 | 27316707.65 | 0.0277 | 0.0250 |
| Jupiter | 70079-08-02 11:17 G | 27317102.79 | 27317102.97 | 27317103.16 | 0.0545 | 0.0302 |
| Uranus | 70091-07-26 12:29 G | 27321478.95 | 27321479.02 | 27321479.11 | 0.0135 | 0.0127 |
| Uranus | 70092-07-30 02:39 G | 27321848.47 | 27321848.61 | 27321848.79 | 0.0135 | 0.0102 |
| Saturn | 70092-12-25 13:12 G | 27321996.80 | 27321997.05 | 27321997.29 | 0.0281 | 0.0020 |
| Uranus | 70093-08-03 03:51 G | 27322217.43 | 27322217.66 | 27322217.90 | 0.0135 | 0.0052 |
| Uranus | 70094-08-07 18:58 G | 27322587.05 | 27322587.29 | 27322587.54 | 0.0136 | 0.0016 |
| Uranus | 70095-08-11 20:53 G | 27322956.12 | 27322956.37 | 27322956.62 | 0.0136 | 0.0023 |
| Uranus | 70096-08-15 12:58 G | 27323325.83 | 27323326.04 | 27323326.25 | 0.0136 | 0.0074 |
| Jupiter | 70097-01-27 09:22 G | 27323490.67 | 27323490.89 | 27323491.11 | 0.0485 | 0.0227 |
| Uranus | 70097-08-19 15:22 G | 27323694.99 | 27323695.14 | 27323695.33 | 0.0137 | 0.0103 |
| Saturn | 70107-06-28 17:17 G | 27327293.98 | 27327294.22 | 27327294.46 | 0.0279 | 0.0029 |
| Jupiter | 70109-02-01 21:07 G | 27327878.17 | 27327878.38 | 27327878.60 | 0.0485 | 0.0147 |
| Saturn | 70121-12-20 18:43 G | 27332583.19 | 27332583.28 | 27332583.38 | 0.0280 | 0.0259 |
| Neptune | 70123-08-04 23:31 G | 27333175.35 | 27333175.48 | 27333175.65 | 0.0090 | 0.0072 |
| Neptune | 70124-08-06 17:03 G | 27333543.02 | 27333543.21 | 27333543.44 | 0.0089 | 0.0050 |
| Neptune | 70125-08-08 21:51 G | 27333910.17 | 27333910.41 | 27333910.67 | 0.0089 | 0.0015 |
| Neptune | 70126-08-11 15:51 G | 27334277.91 | 27334278.16 | 27334278.42 | 0.0089 | 0.0008 |
| Neptune | 70127-08-13 21:36 G | 27334645.19 | 27334645.40 | 27334645.62 | 0.0089 | 0.0044 |
| Neptune | 70128-08-15 12:00 G | 27335012.86 | 27335013.00 | 27335013.21 | 0.0089 | 0.0067 |
| Uranus | 70133-01-29 22:19 G | 27336641.30 | 27336641.43 | 27336641.59 | 0.0143 | 0.0118 |
| Uranus | 70134-02-03 16:34 G | 27337010.97 | 27337011.19 | 27337011.41 | 0.0143 | 0.0070 |
| Uranus | 70135-02-09 00:15 G | 27337381.26 | 27337381.51 | 27337381.77 | 0.0142 | 0.0012 |
| Uranus | 70136-02-13 16:48 G | 27337750.95 | 27337751.20 | 27337751.46 | 0.0142 | 0.0023 |
| Saturn | 70136-06-22 12:29 G | 27337880.87 | 27337881.02 | 27337881.18 | 0.0279 | 0.0215 |

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| Uranus | 70137-02-17 22:19 G | 27338121.24 | 27338121.43 | 27338121.64 | 0.0142 | 0.0086 |
| Uranus | 70138-02-22 14:10 G | 27338490.98 | 27338491.09 | 27338491.24 | 0.0142 | 0.0123 |
| Jupiter | 70150-07-28 10:48 G | 27343029.76 | 27343029.95 | 27343030.15 | 0.0543 | 0.0258 |
| Saturn | 70151-12-28 13:55 G | 27343547.82 | 27343548.08 | 27343548.33 | 0.0280 | 0.0033 |
| Jupiter | 70162-08-02 15:07 G | 27347417.91 | 27347418.13 | 27347418.35 | 0.0544 | 0.0197 |
| Saturn | 70166-06-29 22:48 G | 27348845.22 | 27348845.45 | 27348845.67 | 0.0279 | 0.0077 |
| Pluto | 70175-08-05 00:00 G | 27352168.24 | 27352168.50 | 27352168.77 | 0.0064 | 0.0004 |
| Uranus | 70176-07-31 14:10 G | 27352529.91 | 27352530.09 | 27352530.31 | 0.0135 | 0.0083 |
| Uranus | 70177-08-04 15:07 G | 27352898.90 | 27352899.13 | 27352899.36 | 0.0135 | 0.0054 |
| Uranus | 70178-08-09 06:15 G | 27353268.51 | 27353268.76 | 27353269.01 | 0.0136 | 0.0009 |
| Uranus | 70179-08-13 07:27 G | 27353637.57 | 27353637.81 | 27353638.06 | 0.0136 | 0.0034 |
| Jupiter | 70180-01-28 22:05 G | 27353806.23 | 27353806.42 | 27353806.61 | 0.0485 | 0.0271 |
| Uranus | 70180-08-16 23:31 G | 27354007.26 | 27354007.48 | 27354007.69 | 0.0136 | 0.0068 |
| Saturn | 70180-12-22 00:58 G | 27354134.38 | 27354134.54 | 27354134.70 | 0.0280 | 0.0204 |
| Uranus | 70181-08-21 01:55 G | 27354376.47 | 27354376.58 | 27354376.70 | 0.0137 | 0.0122 |
| Jupiter | 70192-02-02 06:29 G | 27358193.53 | 27358193.77 | 27358194.01 | 0.0484 | 0.0114 |
| Saturn | 70195-06-24 12:00 G | 27359431.80 | 27359432.00 | 27359432.20 | 0.0279 | 0.0164 |
| Neptune | 70206-02-05 09:22 G | 27363309.86 | 27363309.89 | 27363309.97 | 0.0088 | 0.0086 |
| Neptune | 70207-02-07 14:10 G | 27363676.92 | 27363677.09 | 27363677.32 | 0.0088 | 0.0057 |
| Neptune | 70208-02-10 09:22 G | 27364044.65 | 27364044.89 | 27364045.15 | 0.0088 | 0.0029 |
| Neptune | 70209-02-11 15:51 G | 27364411.91 | 27364412.16 | 27364412.42 | 0.0088 | 0.0001 |
| Neptune | 70210-02-14 07:27 G | 27364779.57 | 27364779.81 | 27364780.08 | 0.0088 | 0.0027 |
| Saturn | 70210-12-30 12:58 G | 27365098.80 | 27365099.04 | 27365099.29 | 0.0280 | 0.0089 |
| Neptune | 70211-02-16 17:17 G | 27365147.03 | 27365147.22 | 27365147.43 | 0.0088 | 0.0054 |
| Neptune | 70212-02-19 04:05 G | 27365514.58 | 27365514.67 | 27365514.78 | 0.0088 | 0.0081 |
| Uranus | 70217-01-31 08:39 G | 27367322.71 | 27367322.86 | 27367323.05 | 0.0143 | 0.0108 |
| Uranus | 70218-02-05 02:53 G | 27367692.40 | 27367692.62 | 27367692.87 | 0.0143 | 0.0060 |
| Uranus | 70219-02-10 10:19 G | 27368062.68 | 27368062.93 | 27368063.19 | 0.0142 | 0.0019 |
| Uranus | 70220-02-15 02:39 G | 27368432.37 | 27368432.61 | 27368432.86 | 0.0142 | 0.0045 |
| Uranus | 70221-02-19 08:24 G | 27368802.65 | 27368802.85 | 27368803.07 | 0.0142 | 0.0079 |

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| Uranus | 70222-02-24 00:00 G | 27369172.44 | 27369172.50 | 27369172.59 | 0.0142 | 0.0136 |
| Saturn | 70225-07-02 03:36 G | 27370396.44 | 27370396.65 | 27370396.87 | 0.0279 | 0.0126 |
| Jupiter | 70233-07-28 11:03 G | 27373344.79 | 27373344.96 | 27373345.14 | 0.0542 | 0.0358 |
| Saturn | 70239-12-25 11:03 G | 27375685.77 | 27375685.96 | 27375686.18 | 0.0279 | 0.0146 |
| Jupiter | 70245-08-02 09:51 G | 27377732.68 | 27377732.91 | 27377733.13 | 0.0544 | 0.0107 |
| Saturn | 70254-06-26 12:58 G | 27380982.82 | 27380983.04 | 27380983.27 | 0.0279 | 0.0112 |
| Mars | 70259-05-23 05:17 G | 27382774.64 | 27382774.72 | 27382774.80 | 0.1790 | 0.1571 |
| Uranus | 70259-07-29 10:05 G | 27382841.81 | 27382841.92 | 27382842.06 | 0.0135 | 0.0116 |
| Uranus | 70260-08-02 00:15 G | 27383211.33 | 27383211.51 | 27383211.71 | 0.0135 | 0.0090 |
| Uranus | 70261-08-06 00:58 G | 27383580.30 | 27383580.54 | 27383580.78 | 0.0135 | 0.0039 |
| Uranus | 70262-08-10 16:05 G | 27383949.92 | 27383950.17 | 27383950.42 | 0.0136 | 0.0006 |
| Jupiter | 70263-01-29 06:00 G | 27384121.57 | 27384121.75 | 27384121.94 | 0.0485 | 0.0317 |
| Uranus | 70263-08-14 17:17 G | 27384318.99 | 27384319.22 | 27384319.47 | 0.0136 | 0.0035 |
| Pluto | 70264-02-06 05:31 G | 27384494.53 | 27384494.73 | 27384494.98 | 0.0080 | 0.0039 |
| Uranus | 70264-08-18 09:22 G | 27384688.71 | 27384688.89 | 27384689.10 | 0.0136 | 0.0084 |
| Uranus | 70265-08-22 12:00 G | 27385057.87 | 27385058.00 | 27385058.15 | 0.0137 | 0.0113 |
| Saturn | 70269-12-31 19:12 G | 27386650.10 | 27386650.30 | 27386650.51 | 0.0280 | 0.0150 |
| Jupiter | 70275-02-02 09:51 G | 27388508.69 | 27388508.91 | 27388509.14 | 0.0485 | 0.0071 |
| Saturn | 70284-07-03 05:17 G | 27391947.54 | 27391947.72 | 27391947.92 | 0.0279 | 0.0181 |
| Mars | 70284-11-19 23:17 G | 27392087.28 | 27392087.47 | 27392087.66 | 0.1737 | 0.0488 |
| Jupiter | 70287-02-06 23:17 G | 27392896.39 | 27392896.47 | 27392896.55 | 0.0485 | 0.0454 |
| Neptune | 70287-08-05 14:24 G | 27393076.04 | 27393076.10 | 27393076.22 | 0.0090 | 0.0084 |
| Neptune | 70288-08-06 19:27 G | 27393443.14 | 27393443.31 | 27393443.49 | 0.0090 | 0.0063 |
| Neptune | 70289-08-09 12:58 G | 27393810.79 | 27393811.04 | 27393811.29 | 0.0089 | 0.0026 |
| Neptune | 70290-08-11 19:41 G | 27394178.07 | 27394178.32 | 27394178.57 | 0.0089 | 0.0005 |
| Neptune | 70291-08-14 09:51 G | 27394545.68 | 27394545.91 | 27394546.17 | 0.0089 | 0.0031 |
| Neptune | 70292-08-15 20:39 G | 27394913.18 | 27394913.36 | 27394913.58 | 0.0089 | 0.0052 |
| Neptune | 70293-08-18 06:15 G | 27395280.72 | 27395280.76 | 27395280.81 | 0.0089 | 0.0088 |
| Saturn | 70298-12-26 19:55 G | 27397237.09 | 27397237.33 | 27397237.57 | 0.0279 | 0.0084 |
| Uranus | 70301-02-01 19:27 G | 27398004.14 | 27398004.31 | 27398004.49 | 0.0143 | 0.0106 |

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| Uranus | 70302-02-06 13:55 G | 27398373.86 | 27398374.08 | 27398374.32 | 0.0143 | 0.0057 |
| Uranus | 70303-02-11 21:22 G | 27398744.13 | 27398744.39 | 27398744.65 | 0.0143 | 0.0001 |
| Uranus | 70304-02-16 13:55 G | 27399113.83 | 27399114.08 | 27399114.33 | 0.0142 | 0.0035 |
| Uranus | 70305-02-20 19:55 G | 27399484.16 | 27399484.33 | 27399484.53 | 0.0142 | 0.0099 |
| Uranus | 70306-02-25 11:17 G | 27399853.90 | 27399853.97 | 27399854.07 | 0.0142 | 0.0133 |
| Saturn | 70313-06-28 20:53 G | 27402534.14 | 27402534.37 | 27402534.60 | 0.0279 | 0.0056 |
| Jupiter | 70316-07-28 08:24 G | 27403659.72 | 27403659.85 | 27403659.99 | 0.0543 | 0.0438 |
| Jupiter | 70328-08-02 22:34 G | 27408048.22 | 27408048.44 | 27408048.67 | 0.0544 | 0.0036 |
| Saturn | 70329-01-03 07:55 G | 27408201.68 | 27408201.83 | 27408201.99 | 0.0280 | 0.0215 |
| Jupiter | 70340-08-07 17:46 G | 27412436.16 | 27412436.24 | 27412436.33 | 0.0544 | 0.0502 |
| Saturn | 70343-07-06 06:15 G | 27413498.63 | 27413498.76 | 27413498.91 | 0.0279 | 0.0232 |
| Uranus | 70343-07-30 21:51 G | 27413523.33 | 27413523.41 | 27413523.52 | 0.0135 | 0.0125 |
| Uranus | 70344-08-03 11:46 G | 27413892.79 | 27413892.99 | 27413893.22 | 0.0135 | 0.0071 |
| Uranus | 70345-08-07 12:43 G | 27414261.80 | 27414262.03 | 27414262.27 | 0.0135 | 0.0044 |
| Jupiter | 70346-01-29 07:41 G | 27414436.68 | 27414436.82 | 27414436.97 | 0.0486 | 0.0376 |
| Uranus | 70346-08-12 03:36 G | 27414631.39 | 27414631.65 | 27414631.90 | 0.0136 | 0.0003 |
| Uranus | 70347-08-16 05:03 G | 27415000.48 | 27415000.71 | 27415000.95 | 0.0136 | 0.0043 |
| Uranus | 70348-08-19 20:24 G | 27415370.16 | 27415370.35 | 27415370.57 | 0.0136 | 0.0079 |
| Uranus | 70349-08-23 22:48 G | 27415739.41 | 27415739.45 | 27415739.53 | 0.0137 | 0.0133 |
| Saturn | 70357-12-29 02:24 G | 27418788.34 | 27418788.60 | 27418788.86 | 0.0279 | 0.0020 |
| Jupiter | 70358-02-02 21:51 G | 27418824.17 | 27418824.41 | 27418824.65 | 0.0485 | 0.0022 |
| Jupiter | 70370-02-06 21:51 G | 27423211.29 | 27423211.41 | 27423211.55 | 0.0484 | 0.0402 |
| Neptune | 70371-02-08 03:51 G | 27423577.53 | 27423577.66 | 27423577.82 | 0.0088 | 0.0074 |
| Neptune | 70372-02-10 10:48 G | 27423944.74 | 27423944.95 | 27423945.20 | 0.0088 | 0.0038 |
| Saturn | 70372-06-30 08:53 G | 27424085.64 | 27424085.87 | 27424086.11 | 0.0279 | 0.0005 |
| Neptune | 70373-02-12 01:55 G | 27424312.32 | 27424312.58 | 27424312.85 | 0.0088 | 0.0019 |
| Neptune | 70374-02-14 13:27 G | 27424679.82 | 27424680.06 | 27424680.32 | 0.0088 | 0.0018 |
| Neptune | 70375-02-16 23:17 G | 27425047.25 | 27425047.47 | 27425047.74 | 0.0088 | 0.0037 |
| Neptune | 70376-02-19 15:07 G | 27425415.02 | 27425415.13 | 27425415.30 | 0.0088 | 0.0074 |
| Uranus | 70385-02-02 06:29 G | 27428685.59 | 27428685.77 | 27428685.98 | 0.0143 | 0.0094 |

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| Uranus | 70386-02-07 02:10 G | 27429055.35 | 27429055.59 | 27429055.83 | 0.0143 | 0.0048 |
| Saturn | 70386-12-23 06:58 G | 27429374.76 | 27429374.79 | 27429374.84 | 0.0279 | 0.0275 |
| Uranus | 70387-02-12 08:39 G | 27429425.60 | 27429425.86 | 27429426.12 | 0.0143 | 0.0005 |
| Saturn | 70388-01-05 21:22 G | 27429753.38 | 27429753.39 | 27429753.42 | 0.0280 | 0.0279 |
| Uranus | 70388-02-17 00:58 G | 27429795.32 | 27429795.54 | 27429795.79 | 0.0142 | 0.0057 |
| Uranus | 70389-02-21 06:58 G | 27430165.61 | 27430165.79 | 27430166.01 | 0.0142 | 0.0090 |
| Jupiter | 70399-07-28 16:34 G | 27433975.14 | 27433975.19 | 27433975.26 | 0.0542 | 0.0520 |
| Saturn | 70401-06-24 19:27 G | 27434672.20 | 27434672.31 | 27434672.46 | 0.0280 | 0.0237 |
| Jupiter | 70411-08-02 11:17 G | 27438362.74 | 27438362.97 | 27438363.21 | 0.0543 | 0.0070 |
| Saturn | 70416-12-30 10:05 G | 27440339.68 | 27440339.92 | 27440340.17 | 0.0280 | 0.0046 |
| Pluto | 70421-08-07 00:29 G | 27442020.52 | 27442020.52 | 27442020.54 | 0.0064 | 0.0064 |
| Pluto | 70422-08-08 16:34 G | 27442386.99 | 27442387.19 | 27442387.44 | 0.0065 | 0.0034 |
| Jupiter | 70423-08-07 18:43 G | 27442751.14 | 27442751.28 | 27442751.43 | 0.0544 | 0.0406 |
| Uranus | 70427-07-31 08:39 G | 27444204.73 | 27444204.86 | 27444205.03 | 0.0135 | 0.0106 |
| Uranus | 70428-08-03 21:36 G | 27444574.21 | 27444574.40 | 27444574.62 | 0.0135 | 0.0080 |
| Jupiter | 70429-01-28 19:55 G | 27444752.23 | 27444752.33 | 27444752.45 | 0.0486 | 0.0427 |
| Uranus | 70429-08-07 23:03 G | 27444943.22 | 27444943.46 | 27444943.71 | 0.0135 | 0.0028 |
| Uranus | 70430-08-12 13:12 G | 27445312.80 | 27445313.05 | 27445313.31 | 0.0136 | 0.0004 |
| Saturn | 70431-07-02 18:15 G | 27445637.02 | 27445637.26 | 27445637.50 | 0.0279 | 0.0062 |
| Uranus | 70431-08-16 15:07 G | 27445681.91 | 27445682.13 | 27445682.37 | 0.0136 | 0.0047 |
| Uranus | 70432-08-20 06:43 G | 27446051.60 | 27446051.78 | 27446051.97 | 0.0136 | 0.0093 |
| Uranus | 70433-08-24 09:22 G | 27446420.81 | 27446420.89 | 27446421.01 | 0.0136 | 0.0125 |
| Jupiter | 70441-02-01 19:12 G | 27449139.07 | 27449139.30 | 27449139.54 | 0.0485 | 0.0039 |
| Saturn | 70445-12-24 22:19 G | 27450926.28 | 27450926.43 | 27450926.61 | 0.0279 | 0.0206 |
| Neptune | 70452-08-07 09:36 G | 27453343.76 | 27453343.90 | 27453344.09 | 0.0090 | 0.0070 |
| Jupiter | 70453-02-06 10:05 G | 27453526.76 | 27453526.92 | 27453527.08 | 0.0485 | 0.0343 |
| Neptune | 70453-08-09 16:48 G | 27453711.01 | 27453711.20 | 27453711.43 | 0.0090 | 0.0046 |
| Neptune | 70454-08-12 05:46 G | 27454078.49 | 27454078.74 | 27454079.01 | 0.0089 | 0.0014 |
| Neptune | 70455-08-14 17:31 G | 27454445.99 | 27454446.23 | 27454446.48 | 0.0089 | 0.0012 |
| Neptune | 70456-08-16 01:55 G | 27454813.35 | 27454813.58 | 27454813.81 | 0.0089 | 0.0044 |

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| Neptune | 70457-08-18 18:00 G | 27455181.12 | 27455181.25 | 27455181.43 | 0.0089 | 0.0069 |
| Saturn | 70460-06-26 04:34 G | 27456223.51 | 27456223.69 | 27456223.88 | 0.0280 | 0.0177 |
| Uranus | 70468-01-29 12:00 G | 27458996.93 | 27458997.00 | 27458997.11 | 0.0143 | 0.0134 |
| Uranus | 70469-02-02 17:17 G | 27459367.04 | 27459367.22 | 27459367.43 | 0.0143 | 0.0096 |
| Uranus | 70470-02-07 13:41 G | 27459736.83 | 27459737.07 | 27459737.31 | 0.0143 | 0.0043 |
| Uranus | 70471-02-12 19:41 G | 27460107.06 | 27460107.32 | 27460107.59 | 0.0143 | 0.0011 |
| Uranus | 70472-02-17 13:12 G | 27460476.81 | 27460477.05 | 27460477.29 | 0.0142 | 0.0047 |
| Uranus | 70473-02-21 19:27 G | 27460847.15 | 27460847.31 | 27460847.47 | 0.0142 | 0.0110 |
| Saturn | 70476-01-01 23:31 G | 27461891.27 | 27461891.48 | 27461891.71 | 0.0280 | 0.0115 |
| Saturn | 70490-07-03 23:46 G | 27467188.28 | 27467188.49 | 27467188.72 | 0.0279 | 0.0126 |
| Jupiter | 70494-08-01 15:07 G | 27468677.92 | 27468678.13 | 27468678.34 | 0.0543 | 0.0169 |
| Saturn | 70504-12-27 08:24 G | 27472477.63 | 27472477.85 | 27472478.08 | 0.0279 | 0.0136 |
| Jupiter | 70506-08-07 19:27 G | 27473066.12 | 27473066.31 | 27473066.50 | 0.0544 | 0.0328 |
| Pluto | 70511-02-10 01:27 G | 27474713.31 | 27474713.56 | 27474713.82 | 0.0080 | 0.0020 |
| Uranus | 70511-08-01 21:07 G | 27474886.25 | 27474886.38 | 27474886.51 | 0.0135 | 0.0114 |
| Uranus | 70512-08-05 09:22 G | 27475255.67 | 27475255.89 | 27475256.13 | 0.0135 | 0.0061 |
| Uranus | 70513-08-09 11:31 G | 27475624.74 | 27475624.98 | 27475625.22 | 0.0135 | 0.0034 |
| Uranus | 70514-08-14 00:58 G | 27475994.29 | 27475994.54 | 27475994.80 | 0.0136 | 0.0015 |
| Uranus | 70515-08-18 03:22 G | 27476363.42 | 27476363.64 | 27476363.88 | 0.0136 | 0.0053 |
| Uranus | 70516-08-21 18:00 G | 27476733.07 | 27476733.25 | 27476733.45 | 0.0136 | 0.0090 |
| Saturn | 70519-06-29 17:46 G | 27477775.03 | 27477775.24 | 27477775.46 | 0.0280 | 0.0113 |
| Jupiter | 70524-02-03 05:31 G | 27479454.50 | 27479454.73 | 27479454.96 | 0.0486 | 0.0095 |
| Saturn | 70535-01-04 15:51 G | 27483442.99 | 27483443.16 | 27483443.35 | 0.0280 | 0.0184 |
| Neptune | 70535-02-08 05:46 G | 27483477.70 | 27483477.74 | 27483477.82 | 0.0088 | 0.0085 |
| Jupiter | 70536-02-07 07:12 G | 27483841.60 | 27483841.80 | 27483842.00 | 0.0485 | 0.0279 |
| Neptune | 70536-02-10 19:27 G | 27483845.12 | 27483845.31 | 27483845.55 | 0.0088 | 0.0054 |
| Neptune | 70537-02-12 08:24 G | 27484212.63 | 27484212.85 | 27484213.11 | 0.0088 | 0.0030 |
| Neptune | 70538-02-14 17:17 G | 27484579.96 | 27484580.22 | 27484580.49 | 0.0088 | 0.0003 |
| Neptune | 70539-02-17 10:19 G | 27484947.69 | 27484947.93 | 27484948.17 | 0.0088 | 0.0027 |
| Neptune | 70540-02-19 15:22 G | 27485314.97 | 27485315.14 | 27485315.36 | 0.0088 | 0.0058 |

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| Neptune | 70541-02-21 10:34 G | 27485682.87 | 27485682.94 | 27485683.05 | 0.0088 | 0.0082 |
| Mars | 70543-05-25 14:53 G | 27486506.03 | 27486506.12 | 27486506.21 | 0.1798 | 0.1605 |
| Saturn | 70549-07-06 08:10 G | 27488739.67 | 27488739.84 | 27488740.02 | 0.0279 | 0.0190 |
| Uranus | 70552-01-31 00:43 G | 27489678.51 | 27489678.53 | 27489678.59 | 0.0143 | 0.0142 |
| Uranus | 70553-02-04 04:48 G | 27490048.50 | 27490048.70 | 27490048.94 | 0.0143 | 0.0082 |
| Uranus | 70554-02-09 02:10 G | 27490418.36 | 27490418.59 | 27490418.84 | 0.0143 | 0.0038 |
| Uranus | 70555-02-14 07:41 G | 27490788.56 | 27490788.82 | 27490789.08 | 0.0143 | 0.0007 |
| Uranus | 70556-02-19 01:12 G | 27491158.35 | 27491158.55 | 27491158.79 | 0.0142 | 0.0069 |
| Uranus | 70557-02-23 06:58 G | 27491528.62 | 27491528.79 | 27491528.98 | 0.0142 | 0.0101 |
| Saturn | 70563-12-29 16:19 G | 27494028.94 | 27494029.18 | 27494029.43 | 0.0280 | 0.0066 |
| Mars | 70568-11-22 20:24 G | 27495819.21 | 27495819.35 | 27495819.49 | 0.1730 | 0.1104 |
| Jupiter | 70577-08-01 13:27 G | 27498992.85 | 27498993.06 | 27498993.27 | 0.0542 | 0.0254 |
| Saturn | 70578-07-01 06:00 G | 27499326.51 | 27499326.75 | 27499326.99 | 0.0279 | 0.0049 |
| Jupiter | 70589-08-06 15:51 G | 27503380.96 | 27503381.16 | 27503381.36 | 0.0543 | 0.0234 |
| Saturn | 70594-01-06 02:53 G | 27504994.52 | 27504994.62 | 27504994.75 | 0.0280 | 0.0250 |
| Uranus | 70595-08-02 08:39 G | 27505567.71 | 27505567.86 | 27505568.05 | 0.0135 | 0.0096 |
| Uranus | 70596-08-05 20:10 G | 27505937.12 | 27505937.34 | 27505937.56 | 0.0135 | 0.0069 |
| Uranus | 70597-08-09 22:34 G | 27506306.20 | 27506306.44 | 27506306.69 | 0.0135 | 0.0017 |
| Uranus | 70598-08-14 11:03 G | 27506675.71 | 27506675.96 | 27506676.22 | 0.0136 | 0.0014 |
| Uranus | 70599-08-18 14:24 G | 27507044.88 | 27507045.10 | 27507045.32 | 0.0136 | 0.0058 |
| Uranus | 70600-08-23 04:34 G | 27507414.53 | 27507414.69 | 27507414.87 | 0.0136 | 0.0101 |
| Uranus | 70601-08-27 08:53 G | 27507783.84 | 27507783.87 | 27507783.91 | 0.0136 | 0.0135 |
| Jupiter | 70607-02-03 05:46 G | 27509769.51 | 27509769.74 | 27509769.98 | 0.0486 | 0.0143 |
| Saturn | 70607-06-27 01:55 G | 27509913.51 | 27509913.58 | 27509913.66 | 0.0280 | 0.0265 |
| Saturn | 70608-07-08 20:53 G | 27510291.28 | 27510291.37 | 27510291.46 | 0.0279 | 0.0257 |
| Neptune | 70616-08-08 13:12 G | 27513243.98 | 27513244.05 | 27513244.18 | 0.0090 | 0.0082 |
| Neptune | 70617-08-11 01:27 G | 27513611.39 | 27513611.56 | 27513611.78 | 0.0090 | 0.0062 |
| Neptune | 70618-08-13 15:22 G | 27513978.90 | 27513979.14 | 27513979.38 | 0.0090 | 0.0024 |
| Jupiter | 70619-02-07 15:51 G | 27514156.96 | 27514157.16 | 27514157.36 | 0.0485 | 0.0223 |
| Neptune | 70619-08-15 22:34 G | 27514346.18 | 27514346.44 | 27514346.70 | 0.0090 | 0.0004 |

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| Neptune | 70620-08-17 15:07 G | 27514713.91 | 27514714.13 | 27514714.38 | 0.0089 | 0.0034 |
| Neptune | 70621-08-19 19:27 G | 27515081.13 | 27515081.31 | 27515081.54 | 0.0089 | 0.0053 |
| Saturn | 70623-01-01 03:07 G | 27515580.39 | 27515580.63 | 27515580.88 | 0.0280 | 0.0001 |
| Uranus | 70636-02-01 12:29 G | 27520359.89 | 27520360.02 | 27520360.16 | 0.0144 | 0.0121 |
| Uranus | 70637-02-05 15:22 G | 27520729.93 | 27520730.14 | 27520730.36 | 0.0143 | 0.0085 |
| Saturn | 70637-07-03 13:12 G | 27520877.80 | 27520878.05 | 27520878.30 | 0.0279 | 0.0013 |
| Uranus | 70638-02-10 13:41 G | 27521099.83 | 27521100.07 | 27521100.32 | 0.0143 | 0.0030 |
| Uranus | 70639-02-15 18:15 G | 27521470.01 | 27521470.26 | 27521470.53 | 0.0143 | 0.0022 |
| Uranus | 70640-02-20 13:41 G | 27521839.84 | 27521840.07 | 27521840.30 | 0.0142 | 0.0060 |
| Uranus | 70641-02-24 18:43 G | 27522210.16 | 27522210.28 | 27522210.43 | 0.0142 | 0.0122 |
| Saturn | 70651-12-26 23:46 G | 27526167.37 | 27526167.49 | 27526167.62 | 0.0279 | 0.0242 |
| Jupiter | 70660-08-01 07:27 G | 27529307.65 | 27529307.81 | 27529307.97 | 0.0542 | 0.0378 |
| Saturn | 70666-06-28 13:27 G | 27531464.91 | 27531465.06 | 27531465.23 | 0.0280 | 0.0203 |
| Pluto | 70668-08-10 18:43 G | 27532239.04 | 27532239.28 | 27532239.54 | 0.0064 | 0.0015 |
| Jupiter | 70672-08-06 15:36 G | 27533695.92 | 27533696.15 | 27533696.38 | 0.0543 | 0.0125 |
| Uranus | 70678-07-30 18:15 G | 27535880.22 | 27535880.26 | 27535880.35 | 0.0135 | 0.0130 |
| Uranus | 70679-08-03 21:36 G | 27536249.26 | 27536249.40 | 27536249.57 | 0.0135 | 0.0103 |
| Uranus | 70680-08-07 08:10 G | 27536618.61 | 27536618.84 | 27536619.09 | 0.0135 | 0.0050 |
| Uranus | 70681-08-11 12:00 G | 27536987.77 | 27536988.00 | 27536988.25 | 0.0135 | 0.0023 |
| Saturn | 70682-01-02 15:22 G | 27537131.91 | 27537132.14 | 27537132.38 | 0.0280 | 0.0065 |
| Uranus | 70682-08-15 23:46 G | 27537357.24 | 27537357.49 | 27537357.75 | 0.0135 | 0.0027 |
| Uranus | 70683-08-20 03:51 G | 27537726.45 | 27537726.66 | 27537726.89 | 0.0136 | 0.0063 |
| Uranus | 70684-08-23 16:48 G | 27538096.05 | 27538096.20 | 27538096.39 | 0.0136 | 0.0102 |
| Jupiter | 70690-02-02 14:24 G | 27540084.90 | 27540085.10 | 27540085.32 | 0.0486 | 0.0192 |
| Saturn | 70696-07-04 17:17 G | 27542428.98 | 27542429.22 | 27542429.46 | 0.0279 | 0.0072 |
| Neptune | 70700-02-11 02:24 G | 27543745.47 | 27543745.60 | 27543745.75 | 0.0088 | 0.0072 |
| Neptune | 70701-02-13 10:05 G | 27544112.69 | 27544112.92 | 27544113.18 | 0.0088 | 0.0037 |
| Jupiter | 70702-02-07 20:39 G | 27544472.13 | 27544472.36 | 27544472.59 | 0.0485 | 0.0164 |
| Neptune | 70702-02-16 04:19 G | 27544480.43 | 27544480.68 | 27544480.94 | 0.0088 | 0.0017 |
| Neptune | 70703-02-18 09:22 G | 27544847.65 | 27544847.89 | 27544848.16 | 0.0088 | 0.0019 |

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| Neptune | 70704-02-21 04:19 G | 27545215.47 | 27545215.68 | 27545215.94 | 0.0088 | 0.0038 |
| Neptune | 70705-02-22 09:51 G | 27545582.80 | 27545582.91 | 27545583.07 | 0.0088 | 0.0074 |
| Saturn | 70710-12-29 01:27 G | 27547718.38 | 27547718.56 | 27547718.77 | 0.0279 | 0.0183 |
| Uranus | 70720-02-03 00:29 G | 27551041.44 | 27551041.52 | 27551041.65 | 0.0144 | 0.0130 |
| Uranus | 70721-02-07 02:39 G | 27551411.39 | 27551411.61 | 27551411.86 | 0.0143 | 0.0068 |
| Uranus | 70722-02-12 02:39 G | 27551781.37 | 27551781.61 | 27551781.86 | 0.0143 | 0.0026 |
| Uranus | 70723-02-17 06:29 G | 27552151.50 | 27552151.77 | 27552152.03 | 0.0143 | 0.0021 |
| Uranus | 70724-02-22 01:55 G | 27552521.39 | 27552521.58 | 27552521.80 | 0.0142 | 0.0081 |
| Uranus | 70725-02-26 06:43 G | 27552891.63 | 27552891.78 | 27552891.95 | 0.0142 | 0.0114 |
| Saturn | 70725-07-01 01:41 G | 27553016.37 | 27553016.57 | 27553016.78 | 0.0280 | 0.0143 |
| Saturn | 70741-01-05 01:27 G | 27558683.35 | 27558683.56 | 27558683.79 | 0.0280 | 0.0124 |
| Jupiter | 70743-08-02 13:41 G | 27559622.95 | 27559623.07 | 27559623.19 | 0.0542 | 0.0459 |
| Saturn | 70755-07-07 23:46 G | 27563980.29 | 27563980.49 | 27563980.71 | 0.0279 | 0.0132 |
| Jupiter | 70755-08-07 15:07 G | 27564010.91 | 27564011.13 | 27564011.36 | 0.0543 | 0.0058 |
| Pluto | 70757-02-12 04:19 G | 27564565.60 | 27564565.68 | 27564565.77 | 0.0080 | 0.0075 |
| Uranus | 70762-08-01 06:58 G | 27566561.76 | 27566561.79 | 27566561.84 | 0.0135 | 0.0133 |
| Uranus | 70763-08-05 10:48 G | 27566930.78 | 27566930.95 | 27566931.16 | 0.0135 | 0.0084 |
| Uranus | 70764-08-08 19:55 G | 27567300.10 | 27567300.33 | 27567300.58 | 0.0135 | 0.0057 |
| Uranus | 70765-08-13 00:43 G | 27567669.28 | 27567669.53 | 27567669.77 | 0.0135 | 0.0005 |
| Uranus | 70766-08-17 11:03 G | 27568038.71 | 27568038.96 | 27568039.22 | 0.0135 | 0.0025 |
| Uranus | 70767-08-21 15:51 G | 27568407.97 | 27568408.16 | 27568408.39 | 0.0136 | 0.0072 |
| Uranus | 70768-08-25 04:34 G | 27568777.55 | 27568777.69 | 27568777.84 | 0.0136 | 0.0112 |
| Saturn | 70769-12-30 02:10 G | 27569269.38 | 27569269.59 | 27569269.82 | 0.0279 | 0.0127 |
| Jupiter | 70773-02-02 20:53 G | 27570400.16 | 27570400.37 | 27570400.59 | 0.0486 | 0.0240 |
| Neptune | 70781-08-11 10:19 G | 27573511.80 | 27573511.93 | 27573512.10 | 0.0090 | 0.0071 |
| Neptune | 70782-08-13 16:48 G | 27573878.98 | 27573879.20 | 27573879.44 | 0.0090 | 0.0042 |
| Neptune | 70783-08-16 10:19 G | 27574246.69 | 27574246.93 | 27574247.19 | 0.0090 | 0.0014 |
| Saturn | 70784-07-02 08:10 G | 27574567.61 | 27574567.84 | 27574568.08 | 0.0280 | 0.0084 |
| Neptune | 70784-08-17 15:07 G | 27574613.88 | 27574614.13 | 27574614.38 | 0.0090 | 0.0014 |
| Jupiter | 70785-02-07 03:07 G | 27574787.41 | 27574787.63 | 27574787.85 | 0.0485 | 0.0119 |

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| Neptune | 70785-08-20 08:39 G | 27574981.65 | 27574981.86 | 27574982.11 | 0.0089 | 0.0044 |
| Neptune | 70786-08-22 14:10 G | 27575348.97 | 27575349.09 | 27575349.27 | 0.0089 | 0.0071 |
| Jupiter | 70797-02-11 15:51 G | 27579175.07 | 27579175.16 | 27579175.27 | 0.0484 | 0.0437 |
| Saturn | 70800-01-07 03:51 G | 27580234.47 | 27580234.66 | 27580234.86 | 0.0280 | 0.0182 |
| Uranus | 70804-02-03 11:46 G | 27581722.85 | 27581722.99 | 27581723.17 | 0.0144 | 0.0109 |
| Uranus | 70805-02-07 12:43 G | 27582092.81 | 27582093.03 | 27582093.27 | 0.0143 | 0.0073 |
| Uranus | 70806-02-12 13:41 G | 27582462.83 | 27582463.07 | 27582463.32 | 0.0143 | 0.0016 |
| Uranus | 70807-02-17 16:34 G | 27582832.94 | 27582833.19 | 27582833.45 | 0.0143 | 0.0034 |
| Uranus | 70808-02-22 14:10 G | 27583202.88 | 27583203.09 | 27583203.30 | 0.0142 | 0.0074 |
| Uranus | 70809-02-26 17:46 G | 27583573.18 | 27583573.24 | 27583573.34 | 0.0142 | 0.0135 |
| Saturn | 70814-07-09 09:36 G | 27585531.74 | 27585531.90 | 27585532.08 | 0.0279 | 0.0191 |
| Jupiter | 70826-08-01 13:27 G | 27589938.03 | 27589938.06 | 27589938.10 | 0.0542 | 0.0533 |
| Saturn | 70828-12-31 07:41 G | 27590820.59 | 27590820.82 | 27590821.05 | 0.0279 | 0.0070 |
| Jupiter | 70838-08-06 18:43 G | 27594326.05 | 27594326.28 | 27594326.51 | 0.0543 | 0.0045 |
| Saturn | 70843-07-04 07:55 G | 27596118.59 | 27596118.83 | 27596119.09 | 0.0280 | 0.0029 |
| Uranus | 70846-08-01 19:12 G | 27597243.19 | 27597243.30 | 27597243.44 | 0.0135 | 0.0118 |
| Uranus | 70847-08-06 00:43 G | 27597612.35 | 27597612.53 | 27597612.71 | 0.0135 | 0.0089 |
| Uranus | 70848-08-09 09:07 G | 27597981.63 | 27597981.88 | 27597982.13 | 0.0135 | 0.0036 |
| Uranus | 70849-08-13 15:07 G | 27598350.89 | 27598351.13 | 27598351.37 | 0.0135 | 0.0010 |
| Jupiter | 70850-08-11 16:19 G | 27598714.11 | 27598714.18 | 27598714.26 | 0.0544 | 0.0514 |
| Uranus | 70850-08-18 00:29 G | 27598720.29 | 27598720.52 | 27598720.78 | 0.0135 | 0.0042 |
| Uranus | 70851-08-22 06:43 G | 27599089.59 | 27599089.78 | 27599089.99 | 0.0136 | 0.0075 |
| Uranus | 70852-08-25 17:31 G | 27599459.12 | 27599459.23 | 27599459.39 | 0.0136 | 0.0116 |
| Mars | 70852-11-25 15:22 G | 27599551.06 | 27599551.14 | 27599551.22 | 0.1723 | 0.1576 |
| Jupiter | 70856-02-03 03:36 G | 27600715.47 | 27600715.65 | 27600715.84 | 0.0486 | 0.0284 |
| Saturn | 70859-01-08 01:27 G | 27601785.44 | 27601785.56 | 27601785.70 | 0.0280 | 0.0240 |
| Neptune | 70864-02-11 03:22 G | 27603645.59 | 27603645.64 | 27603645.73 | 0.0088 | 0.0085 |
| Neptune | 70865-02-12 22:05 G | 27604013.21 | 27604013.42 | 27604013.63 | 0.0088 | 0.0051 |
| Neptune | 70866-02-15 02:39 G | 27604380.38 | 27604380.61 | 27604380.87 | 0.0088 | 0.0031 |
| Neptune | 70867-02-17 21:36 G | 27604748.14 | 27604748.40 | 27604748.67 | 0.0088 | 0.0004 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 70868-02-07 18:00 G | 27605103.01 | 27605103.25 | 27605103.49 | 0.0485 | 0.0068 |
| Neptune | 70868-02-20 03:36 G | 27605115.42 | 27605115.65 | 27605115.91 | 0.0088 | 0.0026 |
| Neptune | 70869-02-21 19:12 G | 27605483.12 | 27605483.30 | 27605483.52 | 0.0088 | 0.0059 |
| Neptune | 70870-02-24 05:31 G | 27605850.67 | 27605850.73 | 27605850.85 | 0.0088 | 0.0082 |
| Saturn | 70872-06-27 20:24 G | 27606705.35 | 27606705.35 | 27606705.36 | 0.0280 | 0.0279 |
| Saturn | 70873-07-10 15:51 G | 27607083.05 | 27607083.16 | 27607083.28 | 0.0279 | 0.0246 |
| Jupiter | 70880-02-11 16:48 G | 27609490.07 | 27609490.20 | 27609490.35 | 0.0485 | 0.0385 |
| Saturn | 70888-01-02 12:15 G | 27612371.77 | 27612372.01 | 27612372.26 | 0.0279 | 0.0016 |
| Uranus | 70888-02-04 00:58 G | 27612404.42 | 27612404.54 | 27612404.71 | 0.0144 | 0.0117 |
| Uranus | 70889-02-08 00:58 G | 27612774.31 | 27612774.54 | 27612774.80 | 0.0143 | 0.0054 |
| Uranus | 70890-02-13 03:36 G | 27613144.41 | 27613144.65 | 27613144.90 | 0.0143 | 0.0014 |
| Uranus | 70891-02-18 05:17 G | 27613514.47 | 27613514.72 | 27613514.99 | 0.0143 | 0.0036 |
| Uranus | 70892-02-23 03:36 G | 27613884.47 | 27613884.65 | 27613884.85 | 0.0142 | 0.0093 |
| Uranus | 70893-02-27 06:43 G | 27614254.66 | 27614254.78 | 27614254.90 | 0.0142 | 0.0127 |
| Saturn | 70902-07-06 08:39 G | 27617669.62 | 27617669.86 | 27617670.10 | 0.0280 | 0.0024 |
| Pluto | 70914-08-14 10:05 G | 27622091.80 | 27622091.92 | 27622092.11 | 0.0064 | 0.0051 |
| Pluto | 70915-08-15 18:29 G | 27622458.08 | 27622458.27 | 27622458.50 | 0.0065 | 0.0039 |
| Saturn | 70916-12-27 16:34 G | 27622958.11 | 27622958.19 | 27622958.30 | 0.0279 | 0.0257 |
| Jupiter | 70921-08-06 16:34 G | 27624640.96 | 27624641.19 | 27624641.42 | 0.0543 | 0.0111 |
| Uranus | 70930-08-03 07:55 G | 27627924.73 | 27627924.83 | 27627924.97 | 0.0134 | 0.0120 |
| Saturn | 70931-07-01 01:27 G | 27628256.43 | 27628256.56 | 27628256.71 | 0.0280 | 0.0228 |
| Uranus | 70931-08-07 14:39 G | 27628293.91 | 27628294.11 | 27628294.32 | 0.0135 | 0.0071 |
| Uranus | 70932-08-10 21:22 G | 27628663.16 | 27628663.39 | 27628663.65 | 0.0135 | 0.0044 |
| Jupiter | 70933-08-12 05:46 G | 27629029.63 | 27629029.74 | 27629029.85 | 0.0544 | 0.0470 |
| Uranus | 70933-08-15 04:05 G | 27629032.43 | 27629032.67 | 27629032.92 | 0.0135 | 0.0010 |
| Uranus | 70934-08-19 12:29 G | 27629401.78 | 27629402.02 | 27629402.28 | 0.0135 | 0.0038 |
| Uranus | 70935-08-23 19:27 G | 27629771.14 | 27629771.31 | 27629771.51 | 0.0136 | 0.0086 |
| Uranus | 70936-08-27 05:17 G | 27630140.64 | 27630140.72 | 27630140.85 | 0.0136 | 0.0124 |
| Jupiter | 70939-02-03 17:46 G | 27631031.07 | 27631031.24 | 27631031.42 | 0.0487 | 0.0326 |
| Neptune | 70945-08-11 11:17 G | 27633411.86 | 27633411.97 | 27633412.09 | 0.0090 | 0.0080 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 70946-08-14 05:17 G | 27633779.55 | 27633779.72 | 27633779.92 | 0.0090 | 0.0062 |
| Saturn | 70947-01-04 11:03 G | 27633922.71 | 27633922.96 | 27633923.21 | 0.0279 | 0.0035 |
| Neptune | 70947-08-16 10:05 G | 27634146.69 | 27634146.92 | 27634147.17 | 0.0090 | 0.0024 |
| Neptune | 70948-08-18 03:51 G | 27634514.41 | 27634514.66 | 27634514.92 | 0.0090 | 0.0005 |
| Neptune | 70949-08-20 10:05 G | 27634881.71 | 27634881.92 | 27634882.17 | 0.0090 | 0.0034 |
| Neptune | 70950-08-22 23:46 G | 27635249.29 | 27635249.49 | 27635249.72 | 0.0090 | 0.0053 |
| Jupiter | 70951-02-07 19:41 G | 27635418.08 | 27635418.32 | 27635418.55 | 0.0486 | 0.0018 |
| Saturn | 70961-07-07 12:43 G | 27639220.81 | 27639221.03 | 27639221.26 | 0.0280 | 0.0077 |
| Jupiter | 70963-02-12 11:17 G | 27639805.82 | 27639805.97 | 27639806.14 | 0.0485 | 0.0348 |
| Uranus | 70972-02-05 13:27 G | 27643085.87 | 27643086.06 | 27643086.24 | 0.0144 | 0.0095 |
| Uranus | 70973-02-09 11:46 G | 27643455.76 | 27643455.99 | 27643456.25 | 0.0143 | 0.0061 |
| Uranus | 70974-02-14 15:51 G | 27643825.91 | 27643826.16 | 27643826.41 | 0.0143 | 0.0002 |
| Uranus | 70975-02-19 16:19 G | 27644195.93 | 27644196.18 | 27644196.44 | 0.0143 | 0.0046 |
| Saturn | 70975-12-29 18:58 G | 27644509.14 | 27644509.29 | 27644509.46 | 0.0278 | 0.0207 |
| Uranus | 70976-02-24 16:19 G | 27644565.99 | 27644566.18 | 27644566.38 | 0.0143 | 0.0088 |
| Saturn | 70990-07-02 00:58 G | 27649807.35 | 27649807.54 | 27649807.74 | 0.0280 | 0.0175 |

72ND MILLENNIUM CE

This is a list of transits of Moon in the 72nd millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Pluto | 71004-02-17 09:07 G | 27654784.67 | 27654784.88 | 27654785.10 | 0.0080 | 0.0042 | | |
| Jupiter | 71004-08-07 06:15 G | 27654956.55 | 27654956.76 | 27654956.98 | 0.0542 | 0.0157 | | |
| Saturn | 71006-01-06 06:43 G | 27655473.54 | 27655473.78 | 27655474.03 | 0.0279 | 0.0089 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|----------|
| Uranus | 71014-08-04 20:24 G | 27658606.22 | 27658606.35 | 27658606.53 | 0.0134 | 0.0107 |
| Uranus | 71015-08-09 04:19 G | 27658975.49 | 27658975.68 | 27658975.89 | 0.0135 | 0.0076 |
| Jupiter | 71016-08-12 03:07 G | 27659344.46 | 27659344.63 | 27659344.81 | 0.0543 | 0.0373 |
| Uranus | 71016-08-12 10:34 G | 27659344.70 | 27659344.94 | 27659345.21 | 0.0135 | 0.0024 * |
| Uranus | 71017-08-16 18:43 G | 27659714.04 | 27659714.28 | 27659714.53 | 0.0135 | 0.0004 |
| Uranus | 71018-08-21 01:55 G | 27660083.36 | 27660083.58 | 27660083.83 | 0.0135 | 0.0055 |
| Uranus | 71019-08-25 09:51 G | 27660452.74 | 27660452.91 | 27660453.12 | 0.0136 | 0.0087 |
| Saturn | 71020-07-09 17:46 G | 27660772.02 | 27660772.24 | 27660772.45 | 0.0280 | 0.0127 |
| Uranus | 71020-08-28 18:43 G | 27660822.22 | 27660822.28 | 27660822.38 | 0.0136 | 0.0129 |
| Jupiter | 71022-02-03 21:07 G | 27661346.23 | 27661346.38 | 27661346.54 | 0.0487 | 0.0369 |
| Neptune | 71029-02-13 19:41 G | 27663913.19 | 27663913.32 | 27663913.49 | 0.0088 | 0.0071 |
| Neptune | 71030-02-16 13:41 G | 27664280.85 | 27664281.07 | 27664281.33 | 0.0088 | 0.0038 |
| Neptune | 71031-02-18 21:22 G | 27664648.15 | 27664648.39 | 27664648.65 | 0.0088 | 0.0016 |
| Neptune | 71032-02-21 12:00 G | 27665015.74 | 27665016.00 | 27665016.27 | 0.0088 | 0.0018 |
| Neptune | 71033-02-22 23:17 G | 27665383.27 | 27665383.47 | 27665383.72 | 0.0088 | 0.0040 |
| Jupiter | 71034-02-08 12:43 G | 27665733.80 | 27665734.03 | 27665734.26 | 0.0486 | 0.0031 |
| Neptune | 71034-02-25 08:53 G | 27665750.73 | 27665750.87 | 27665751.04 | 0.0088 | 0.0072 |
| Saturn | 71035-01-01 01:27 G | 27666060.36 | 27666060.56 | 27666060.76 | 0.0278 | 0.0151 |
| Jupiter | 71046-02-12 15:51 G | 27670120.97 | 27670121.16 | 27670121.35 | 0.0485 | 0.0304 |
| Saturn | 71049-07-03 22:34 G | 27671358.23 | 27671358.44 | 27671358.66 | 0.0280 | 0.0124 |
| Uranus | 71055-02-01 19:27 G | 27673397.25 | 27673397.31 | 27673397.38 | 0.0144 | 0.0139 |
| Uranus | 71056-02-07 03:36 G | 27673767.48 | 27673767.65 | 27673767.82 | 0.0144 | 0.0103 |
| Uranus | 71057-02-11 01:27 G | 27674137.31 | 27674137.56 | 27674137.82 | 0.0143 | 0.0040 |
| Uranus | 71058-02-16 06:29 G | 27674507.52 | 27674507.77 | 27674508.02 | 0.0143 | 0.0002 |
| Uranus | 71059-02-21 06:15 G | 27674877.51 | 27674877.76 | 27674878.01 | 0.0143 | 0.0050 |
| Uranus | 71060-02-26 06:43 G | 27675247.62 | 27675247.78 | 27675247.95 | 0.0143 | 0.0105 |
| Uranus | 71061-03-02 07:27 G | 27675617.77 | 27675617.81 | 27675617.87 | 0.0142 | 0.0140 |
| Saturn | 71065-01-07 06:58 G | 27677024.58 | 27677024.79 | 27677025.00 | 0.0279 | 0.0140 |
| Saturn | 71079-07-11 18:00 G | 27682323.07 | 27682323.25 | 27682323.45 | 0.0280 | 0.0178 |
| Jupiter | 71087-08-07 01:12 G | 27685271.35 | 27685271.55 | 27685271.76 | 0.0541 | 0.0255 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 71094-01-02 06:15 G | 27687611.52 | 27687611.76 | 27687612.00 | 0.0278 | 0.0096 |
| Uranus | 71098-08-05 10:19 G | 27689287.78 | 27689287.93 | 27689288.10 | 0.0134 | 0.0106 |
| Uranus | 71099-08-09 18:58 G | 27689657.07 | 27689657.29 | 27689657.51 | 0.0135 | 0.0059 |
| Jupiter | 71099-08-12 06:00 G | 27689659.57 | 27689659.75 | 27689659.94 | 0.0543 | 0.0297 |
| Uranus | 71100-08-13 23:31 G | 27690026.24 | 27690026.48 | 27690026.74 | 0.0135 | 0.0031 |
| Uranus | 71101-08-18 08:10 G | 27690395.60 | 27690395.84 | 27690396.08 | 0.0135 | 0.0022 |
| Uranus | 71102-08-22 14:10 G | 27690764.85 | 27690765.09 | 27690765.33 | 0.0135 | 0.0049 |
| Uranus | 71103-08-26 22:48 G | 27691134.30 | 27691134.45 | 27691134.63 | 0.0136 | 0.0098 |
| Uranus | 71104-08-30 06:15 G | 27691503.74 | 27691503.76 | 27691503.82 | 0.0136 | 0.0134 |
| Jupiter | 71105-02-04 13:27 G | 27691661.94 | 27691662.06 | 27691662.18 | 0.0487 | 0.0411 |
| Saturn | 71108-07-06 03:07 G | 27692909.40 | 27692909.63 | 27692909.85 | 0.0280 | 0.0070 |
| Neptune | 71110-08-15 03:07 G | 27693679.51 | 27693679.63 | 27693679.80 | 0.0090 | 0.0074 |
| Neptune | 71111-08-17 20:24 G | 27694047.13 | 27694047.35 | 27694047.59 | 0.0090 | 0.0042 |
| Neptune | 71112-08-19 04:05 G | 27694414.44 | 27694414.67 | 27694414.92 | 0.0090 | 0.0015 |
| Neptune | 71113-08-21 17:17 G | 27694781.96 | 27694782.22 | 27694782.48 | 0.0090 | 0.0015 |
| Neptune | 71114-08-24 05:31 G | 27695149.53 | 27695149.73 | 27695149.96 | 0.0090 | 0.0042 |
| Neptune | 71115-08-26 13:41 G | 27695516.93 | 27695517.07 | 27695517.25 | 0.0089 | 0.0071 |
| Jupiter | 71117-02-08 15:51 G | 27696048.92 | 27696049.16 | 27696049.40 | 0.0486 | 0.0080 |
| Saturn | 71124-01-10 13:41 G | 27698575.91 | 27698576.07 | 27698576.25 | 0.0279 | 0.0197 |
| Jupiter | 71129-02-13 03:22 G | 27700436.45 | 27700436.64 | 27700436.83 | 0.0485 | 0.0263 |
| Mars | 71136-11-28 15:36 G | 27703282.09 | 27703282.15 | 27703282.22 | 0.1715 | 0.1618 |
| Saturn | 71138-07-13 14:39 G | 27703873.99 | 27703874.11 | 27703874.26 | 0.0280 | 0.0233 |
| Uranus | 71139-02-03 06:29 G | 27704078.76 | 27704078.77 | 27704078.81 | 0.0144 | 0.0143 |
| Uranus | 71140-02-08 15:22 G | 27704448.94 | 27704449.14 | 27704449.35 | 0.0144 | 0.0082 |
| Uranus | 71141-02-12 12:29 G | 27704818.77 | 27704819.02 | 27704819.27 | 0.0144 | 0.0048 |
| Uranus | 71142-02-17 18:15 G | 27705189.02 | 27705189.26 | 27705189.51 | 0.0143 | 0.0013 |
| Uranus | 71143-02-22 16:34 G | 27705558.96 | 27705559.19 | 27705559.44 | 0.0143 | 0.0057 |
| Uranus | 71144-02-27 18:29 G | 27705929.12 | 27705929.27 | 27705929.46 | 0.0143 | 0.0102 |
| Saturn | 71153-01-04 06:58 G | 27709162.54 | 27709162.79 | 27709163.05 | 0.0278 | 0.0036 |
| Pluto | 71161-08-18 09:07 G | 27712310.64 | 27712310.88 | 27712311.13 | 0.0064 | 0.0010 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 71167-07-08 11:03 G | 27714460.73 | 27714460.96 | 27714461.20 | 0.0280 | 0.0012 |
| Jupiter | 71170-08-07 07:27 G | 27715586.63 | 27715586.81 | 27715586.99 | 0.0542 | 0.0321 |
| Uranus | 71182-08-06 23:17 G | 27719969.30 | 27719969.47 | 27719969.67 | 0.0134 | 0.0095 |
| Jupiter | 71182-08-12 16:05 G | 27719974.96 | 27719975.17 | 27719975.39 | 0.0543 | 0.0233 |
| Saturn | 71183-01-11 22:48 G | 27720127.36 | 27720127.45 | 27720127.56 | 0.0279 | 0.0256 |
| Uranus | 71183-08-11 08:53 G | 27720338.67 | 27720338.87 | 27720339.10 | 0.0135 | 0.0063 |
| Uranus | 71184-08-14 13:12 G | 27720707.79 | 27720708.05 | 27720708.30 | 0.0135 | 0.0011 |
| Uranus | 71185-08-18 22:48 G | 27721077.21 | 27721077.45 | 27721077.69 | 0.0135 | 0.0015 |
| Uranus | 71186-08-23 03:36 G | 27721446.44 | 27721446.65 | 27721446.89 | 0.0135 | 0.0067 |
| Uranus | 71187-08-27 13:12 G | 27721815.90 | 27721816.05 | 27721816.24 | 0.0136 | 0.0098 |
| Jupiter | 71188-02-04 15:22 G | 27721977.07 | 27721977.14 | 27721977.22 | 0.0488 | 0.0463 |
| Mars | 71190-06-02 04:48 G | 27722825.61 | 27722825.70 | 27722825.78 | 0.1810 | 0.1587 |
| Neptune | 71193-02-14 07:27 G | 27723813.74 | 27723813.81 | 27723813.89 | 0.0088 | 0.0084 |
| Neptune | 71194-02-16 15:07 G | 27724180.95 | 27724181.13 | 27724181.36 | 0.0088 | 0.0050 |
| Neptune | 71195-02-19 04:19 G | 27724548.43 | 27724548.68 | 27724548.94 | 0.0088 | 0.0030 |
| Neptune | 71196-02-21 17:17 G | 27724915.97 | 27724916.22 | 27724916.47 | 0.0088 | 0.0005 |
| Saturn | 71196-07-01 21:36 G | 27725047.31 | 27725047.40 | 27725047.52 | 0.0281 | 0.0253 |
| Neptune | 71197-02-23 01:27 G | 27725283.31 | 27725283.56 | 27725283.83 | 0.0088 | 0.0024 |
| Neptune | 71198-02-25 18:58 G | 27725651.12 | 27725651.29 | 27725651.49 | 0.0088 | 0.0060 |
| Neptune | 71199-02-28 00:15 G | 27726018.41 | 27726018.51 | 27726018.63 | 0.0088 | 0.0079 |
| Jupiter | 71200-02-09 01:55 G | 27726364.36 | 27726364.58 | 27726364.80 | 0.0487 | 0.0135 |
| Saturn | 71212-01-06 10:48 G | 27730713.70 | 27730713.95 | 27730714.20 | 0.0278 | 0.0027 |
| Jupiter | 71212-02-13 10:48 G | 27730751.73 | 27730751.95 | 27730752.17 | 0.0486 | 0.0215 |
| Uranus | 71223-02-03 18:58 G | 27734760.19 | 27734760.29 | 27734760.42 | 0.0144 | 0.0127 |
| Uranus | 71224-02-09 04:34 G | 27735130.51 | 27735130.69 | 27735130.90 | 0.0144 | 0.0090 |
| Uranus | 71225-02-13 01:27 G | 27735500.31 | 27735500.56 | 27735500.83 | 0.0144 | 0.0026 |
| Uranus | 71226-02-18 08:24 G | 27735870.61 | 27735870.85 | 27735871.11 | 0.0143 | 0.0012 |
| Saturn | 71226-07-09 16:48 G | 27736011.96 | 27736012.20 | 27736012.44 | 0.0280 | 0.0046 |
| Uranus | 71227-02-23 05:46 G | 27736240.52 | 27736240.74 | 27736240.99 | 0.0143 | 0.0065 |
| Uranus | 71228-02-28 08:53 G | 27736610.74 | 27736610.87 | 27736611.02 | 0.0143 | 0.0117 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 71240-12-30 23:03 G | 27741300.31 | 27741300.46 | 27741300.60 | 0.0278 | 0.0222 |
| Pluto | 71250-02-18 21:51 G | 27744637.16 | 27744637.41 | 27744637.67 | 0.0080 | 0.0016 |
| Jupiter | 71253-08-06 11:17 G | 27745901.81 | 27745901.97 | 27745902.13 | 0.0541 | 0.0396 |
| Saturn | 71255-07-04 01:41 G | 27746598.40 | 27746598.57 | 27746598.74 | 0.0281 | 0.0199 |
| Uranus | 71265-08-03 11:46 G | 27750281.94 | 27750281.99 | 27750282.06 | 0.0134 | 0.0129 |
| Jupiter | 71265-08-11 07:55 G | 27750289.61 | 27750289.83 | 27750290.05 | 0.0542 | 0.0129 |
| Uranus | 71266-08-07 13:41 G | 27750650.89 | 27750651.07 | 27750651.27 | 0.0134 | 0.0091 |
| Uranus | 71267-08-12 00:00 G | 27751020.27 | 27751020.50 | 27751020.73 | 0.0135 | 0.0046 |
| Uranus | 71268-08-15 02:39 G | 27751389.35 | 27751389.61 | 27751389.87 | 0.0135 | 0.0017 |
| Uranus | 71269-08-19 12:29 G | 27751758.80 | 27751759.02 | 27751759.27 | 0.0135 | 0.0036 |
| Uranus | 71270-08-23 16:05 G | 27752127.96 | 27752128.17 | 27752128.42 | 0.0135 | 0.0062 |
| Saturn | 71271-01-07 22:19 G | 27752265.20 | 27752265.43 | 27752265.66 | 0.0278 | 0.0089 |
| Uranus | 71271-08-28 02:53 G | 27752497.50 | 27752497.62 | 27752497.78 | 0.0136 | 0.0112 |
| Neptune | 71274-08-14 12:58 G | 27753579.96 | 27753580.04 | 27753580.17 | 0.0090 | 0.0082 |
| Neptune | 71275-08-16 21:51 G | 27753947.26 | 27753947.41 | 27753947.61 | 0.0090 | 0.0063 |
| Neptune | 71276-08-18 09:36 G | 27754314.66 | 27754314.90 | 27754315.17 | 0.0090 | 0.0026 |
| Neptune | 71277-08-20 23:31 G | 27754682.23 | 27754682.48 | 27754682.72 | 0.0090 | 0.0006 |
| Neptune | 71278-08-23 06:15 G | 27755049.52 | 27755049.76 | 27755050.01 | 0.0090 | 0.0031 |
| Neptune | 71279-08-25 23:31 G | 27755417.29 | 27755417.48 | 27755417.70 | 0.0090 | 0.0051 |
| Neptune | 71280-08-27 03:51 G | 27755784.65 | 27755784.66 | 27755784.72 | 0.0090 | 0.0089 |
| Jupiter | 71283-02-08 09:36 G | 27756679.67 | 27756679.90 | 27756680.12 | 0.0487 | 0.0192 |
| Saturn | 71285-07-10 20:24 G | 27757563.13 | 27757563.35 | 27757563.59 | 0.0280 | 0.0109 |
| Jupiter | 71295-02-12 12:43 G | 27761066.81 | 27761067.03 | 27761067.25 | 0.0486 | 0.0161 |
| Saturn | 71300-01-02 06:43 G | 27762851.57 | 27762851.78 | 27762851.99 | 0.0278 | 0.0159 |
| Uranus | 71307-02-05 05:17 G | 27765441.63 | 27765441.72 | 27765441.86 | 0.0144 | 0.0129 |
| Uranus | 71308-02-10 15:22 G | 27765811.93 | 27765812.14 | 27765812.38 | 0.0144 | 0.0069 |
| Uranus | 71309-02-14 11:17 G | 27766181.73 | 27766181.97 | 27766182.24 | 0.0144 | 0.0035 |
| Uranus | 71310-02-19 18:58 G | 27766552.05 | 27766552.29 | 27766552.55 | 0.0143 | 0.0028 |
| Uranus | 71311-02-24 15:07 G | 27766921.92 | 27766922.13 | 27766922.38 | 0.0143 | 0.0069 |
| Uranus | 71312-02-29 19:55 G | 27767292.19 | 27767292.33 | 27767292.48 | 0.0143 | 0.0115 |

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| Saturn | 71314-07-06 11:17 G | 27768149.78 | 27768149.97 | 27768150.18 | 0.0281 | 0.0139 |
| Saturn | 71330-01-10 13:27 G | 27773816.85 | 27773817.06 | 27773817.26 | 0.0278 | 0.0155 |
| Jupiter | 71336-08-06 02:53 G | 27776216.54 | 27776216.62 | 27776216.70 | 0.0540 | 0.0500 |
| Mars | 71341-11-28 08:39 G | 27778156.72 | 27778156.86 | 27778156.99 | 0.1705 | 0.1132 |
| Saturn | 71344-07-13 01:55 G | 27779114.40 | 27779114.58 | 27779114.78 | 0.0280 | 0.0171 |
| Jupiter | 71348-08-11 14:24 G | 27780604.87 | 27780605.10 | 27780605.32 | 0.0542 | 0.0040 |
| Uranus | 71349-08-05 02:10 G | 27780963.48 | 27780963.59 | 27780963.70 | 0.0134 | 0.0120 |
| Uranus | 71350-08-09 02:53 G | 27781332.43 | 27781332.62 | 27781332.84 | 0.0134 | 0.0082 |
| Uranus | 71351-08-13 14:10 G | 27781701.87 | 27781702.09 | 27781702.32 | 0.0135 | 0.0048 |
| Uranus | 71352-08-16 16:19 G | 27782070.92 | 27782071.18 | 27782071.43 | 0.0135 | 0.0003 |
| Uranus | 71353-08-21 03:36 G | 27782440.41 | 27782440.65 | 27782440.89 | 0.0135 | 0.0028 |
| Uranus | 71354-08-25 06:15 G | 27782809.57 | 27782809.76 | 27782809.99 | 0.0135 | 0.0081 |
| Uranus | 71355-08-29 17:46 G | 27783179.12 | 27783179.24 | 27783179.40 | 0.0135 | 0.0110 |
| Neptune | 71358-02-16 21:07 G | 27784081.22 | 27784081.38 | 27784081.55 | 0.0088 | 0.0068 |
| Saturn | 71359-01-04 14:24 G | 27784402.86 | 27784403.10 | 27784403.34 | 0.0278 | 0.0092 |
| Neptune | 71359-02-19 11:31 G | 27784448.76 | 27784448.98 | 27784449.22 | 0.0088 | 0.0039 |
| Neptune | 71360-02-21 18:43 G | 27784816.02 | 27784816.28 | 27784816.55 | 0.0088 | 0.0014 |
| Jupiter | 71360-08-16 13:12 G | 27784992.98 | 27784993.05 | 27784993.13 | 0.0543 | 0.0513 |
| Neptune | 71361-02-23 12:43 G | 27785183.78 | 27785184.03 | 27785184.29 | 0.0088 | 0.0017 |
| Neptune | 71362-02-25 17:17 G | 27785551.00 | 27785551.22 | 27785551.46 | 0.0088 | 0.0041 |
| Neptune | 71363-02-28 11:46 G | 27785918.86 | 27785918.99 | 27785919.16 | 0.0088 | 0.0072 |
| Jupiter | 71366-02-08 09:51 G | 27786994.72 | 27786994.91 | 27786995.10 | 0.0487 | 0.0261 |
| Saturn | 71373-07-07 23:17 G | 27789701.24 | 27789701.47 | 27789701.70 | 0.0281 | 0.0076 |
| Jupiter | 71378-02-12 22:48 G | 27791382.21 | 27791382.45 | 27791382.68 | 0.0487 | 0.0101 |
| Saturn | 71389-01-12 01:12 G | 27795368.41 | 27795368.55 | 27795368.72 | 0.0278 | 0.0220 |
| Uranus | 71391-02-05 17:46 G | 27796123.11 | 27796123.24 | 27796123.41 | 0.0144 | 0.0115 |
| Uranus | 71392-02-11 04:05 G | 27796493.47 | 27796493.67 | 27796493.90 | 0.0144 | 0.0076 |
| Uranus | 71393-02-15 00:00 G | 27796863.24 | 27796863.50 | 27796863.76 | 0.0144 | 0.0012 |
| Uranus | 71394-02-20 08:24 G | 27797233.60 | 27797233.85 | 27797234.10 | 0.0143 | 0.0023 |
| Uranus | 71395-02-25 03:51 G | 27797603.45 | 27797603.66 | 27797603.89 | 0.0143 | 0.0079 |

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| Uranus | 71396-03-01 08:53 G | 27797973.79 | 27797973.87 | 27797974.00 | 0.0143 | 0.0129 |
| Saturn | 71403-07-16 13:27 G | 27800665.94 | 27800666.06 | 27800666.19 | 0.0280 | 0.0237 |
| Pluto | 71407-08-22 06:43 G | 27802163.54 | 27802163.78 | 27802164.04 | 0.0064 | 0.0007 |
| Saturn | 71418-01-07 02:39 G | 27805954.36 | 27805954.61 | 27805954.85 | 0.0278 | 0.0024 |
| Jupiter | 71431-08-12 08:39 G | 27810919.63 | 27810919.86 | 27810920.09 | 0.0541 | 0.0044 |
| Saturn | 71432-07-10 06:43 G | 27811252.53 | 27811252.78 | 27811253.03 | 0.0281 | 0.0009 |
| Uranus | 71433-08-06 16:48 G | 27811645.10 | 27811645.20 | 27811645.34 | 0.0134 | 0.0117 |
| Uranus | 71434-08-10 17:31 G | 27812014.03 | 27812014.23 | 27812014.45 | 0.0134 | 0.0077 |
| Uranus | 71435-08-15 04:48 G | 27812383.48 | 27812383.70 | 27812383.95 | 0.0135 | 0.0033 |
| Uranus | 71436-08-18 06:00 G | 27812752.50 | 27812752.75 | 27812753.01 | 0.0135 | 0.0003 |
| Uranus | 71437-08-22 17:31 G | 27813122.01 | 27813122.23 | 27813122.47 | 0.0135 | 0.0050 |
| Uranus | 71438-08-26 19:27 G | 27813491.11 | 27813491.31 | 27813491.54 | 0.0135 | 0.0075 |
| Neptune | 71439-08-18 01:41 G | 27813847.45 | 27813847.57 | 27813847.73 | 0.0090 | 0.0076 |
| Uranus | 71439-08-31 07:55 G | 27813860.75 | 27813860.83 | 27813860.93 | 0.0135 | 0.0126 |
| Neptune | 71440-08-19 16:34 G | 27814215.00 | 27814215.19 | 27814215.43 | 0.0090 | 0.0043 |
| Neptune | 71441-08-21 23:17 G | 27814582.22 | 27814582.47 | 27814582.72 | 0.0090 | 0.0019 |
| Neptune | 71442-08-24 17:17 G | 27814949.98 | 27814950.22 | 27814950.48 | 0.0090 | 0.0015 |
| Jupiter | 71443-08-17 16:48 G | 27815308.06 | 27815308.20 | 27815308.34 | 0.0542 | 0.0416 |
| Neptune | 71443-08-26 21:36 G | 27815317.19 | 27815317.40 | 27815317.64 | 0.0090 | 0.0038 |
| Neptune | 71444-08-28 15:22 G | 27815685.01 | 27815685.14 | 27815685.33 | 0.0090 | 0.0071 |
| Saturn | 71447-01-02 05:03 G | 27816541.61 | 27816541.71 | 27816541.82 | 0.0278 | 0.0251 |
| Jupiter | 71449-02-08 18:15 G | 27817310.10 | 27817310.26 | 27817310.45 | 0.0488 | 0.0331 |
| Jupiter | 71461-02-12 20:10 G | 27821697.11 | 27821697.34 | 27821697.58 | 0.0487 | 0.0043 |
| Saturn | 71461-07-05 04:48 G | 27821839.58 | 27821839.70 | 27821839.83 | 0.0281 | 0.0234 |
| Jupiter | 71473-02-17 11:03 G | 27826084.88 | 27826084.96 | 27826085.06 | 0.0486 | 0.0449 |
| Mars | 71474-06-04 19:12 G | 27826557.19 | 27826557.30 | 27826557.42 | 0.1818 | 0.1421 |
| Uranus | 71475-02-07 05:31 G | 27826804.58 | 27826804.73 | 27826804.88 | 0.0144 | 0.0114 |
| Uranus | 71476-02-12 15:07 G | 27827174.91 | 27827175.13 | 27827175.38 | 0.0144 | 0.0056 |
| Saturn | 71477-01-08 18:29 G | 27827506.04 | 27827506.27 | 27827506.51 | 0.0278 | 0.0045 |
| Uranus | 71477-02-16 10:19 G | 27827544.69 | 27827544.93 | 27827545.20 | 0.0144 | 0.0022 |

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| Uranus | 71478-02-21 18:58 G | 27827915.06 | 27827915.29 | 27827915.54 | 0.0143 | 0.0041 |
| Uranus | 71479-02-26 13:41 G | 27828284.87 | 27828285.07 | 27828285.30 | 0.0143 | 0.0081 |
| Uranus | 71480-03-02 19:55 G | 27828655.24 | 27828655.33 | 27828655.45 | 0.0143 | 0.0129 |
| Saturn | 71491-07-12 12:15 G | 27832803.78 | 27832804.01 | 27832804.26 | 0.0281 | 0.0061 |
| Pluto | 71496-02-22 03:07 G | 27834489.48 | 27834489.63 | 27834489.82 | 0.0080 | 0.0062 |
| Saturn | 71506-01-04 10:48 G | 27838092.77 | 27838092.95 | 27838093.15 | 0.0278 | 0.0185 |
| Jupiter | 71514-08-12 08:39 G | 27841234.65 | 27841234.86 | 27841235.08 | 0.0541 | 0.0162 |
| Uranus | 71517-08-08 06:43 G | 27842326.64 | 27842326.78 | 27842326.95 | 0.0134 | 0.0106 |
| Uranus | 71518-08-12 06:29 G | 27842695.57 | 27842695.77 | 27842696.00 | 0.0134 | 0.0069 |
| Uranus | 71519-08-16 18:58 G | 27843065.05 | 27843065.29 | 27843065.53 | 0.0135 | 0.0034 |
| Saturn | 71520-07-07 19:55 G | 27843391.14 | 27843391.33 | 27843391.52 | 0.0281 | 0.0163 |
| Uranus | 71520-08-19 19:27 G | 27843434.05 | 27843434.31 | 27843434.56 | 0.0135 | 0.0016 |
| Uranus | 71521-08-24 07:55 G | 27843803.60 | 27843803.83 | 27843804.07 | 0.0135 | 0.0042 |
| Neptune | 71522-02-18 05:03 G | 27843981.67 | 27843981.71 | 27843981.79 | 0.0088 | 0.0085 |
| Uranus | 71522-08-28 09:51 G | 27844172.73 | 27844172.91 | 27844173.09 | 0.0135 | 0.0095 |
| Neptune | 71523-02-20 11:17 G | 27844348.76 | 27844348.97 | 27844349.21 | 0.0088 | 0.0048 |
| Uranus | 71523-09-01 22:34 G | 27844542.35 | 27844542.44 | 27844542.56 | 0.0135 | 0.0122 |
| Neptune | 71524-02-23 06:29 G | 27844716.52 | 27844716.77 | 27844717.01 | 0.0088 | 0.0030 |
| Neptune | 71525-02-24 11:03 G | 27845083.71 | 27845083.96 | 27845084.22 | 0.0088 | 0.0006 |
| Neptune | 71526-02-27 05:17 G | 27845451.47 | 27845451.72 | 27845451.99 | 0.0088 | 0.0024 |
| Jupiter | 71526-08-17 07:55 G | 27845622.64 | 27845622.83 | 27845623.03 | 0.0542 | 0.0302 |
| Neptune | 71527-03-01 12:00 G | 27845818.83 | 27845819.00 | 27845819.19 | 0.0088 | 0.0060 |
| Neptune | 71528-03-03 03:22 G | 27846186.53 | 27846186.64 | 27846186.77 | 0.0088 | 0.0078 |
| Jupiter | 71532-02-09 16:05 G | 27847625.03 | 27847625.17 | 27847625.31 | 0.0488 | 0.0390 |
| Saturn | 71536-01-12 08:53 G | 27849057.64 | 27849057.87 | 27849058.10 | 0.0278 | 0.0112 |
| Jupiter | 71544-02-14 08:24 G | 27852012.62 | 27852012.85 | 27852013.08 | 0.0487 | 0.0011 |
| Saturn | 71550-07-14 22:19 G | 27854355.23 | 27854355.43 | 27854355.65 | 0.0280 | 0.0128 |
| Jupiter | 71556-02-18 08:24 G | 27856399.71 | 27856399.85 | 27856400.00 | 0.0486 | 0.0387 |
| Uranus | 71559-02-08 18:15 G | 27857486.10 | 27857486.26 | 27857486.45 | 0.0144 | 0.0103 |
| Uranus | 71560-02-14 04:19 G | 27857856.45 | 27857856.68 | 27857856.92 | 0.0144 | 0.0062 |

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| Uranus | 71561-02-17 23:46 G | 27858226.23 | 27858226.49 | 27858226.75 | 0.0144 | 0.0002 |
| Uranus | 71562-02-23 08:24 G | 27858596.61 | 27858596.85 | 27858597.11 | 0.0143 | 0.0036 |
| Uranus | 71563-02-28 03:22 G | 27858966.44 | 27858966.64 | 27858966.84 | 0.0143 | 0.0093 |
| Uranus | 71564-03-04 09:51 G | 27859336.88 | 27859336.91 | 27859336.98 | 0.0143 | 0.0140 |
| Saturn | 71565-01-05 16:48 G | 27859643.98 | 27859644.20 | 27859644.42 | 0.0278 | 0.0122 |
| Saturn | 71579-07-10 07:12 G | 27864942.58 | 27864942.80 | 27864943.04 | 0.0281 | 0.0098 |
| Saturn | 71595-01-13 15:36 G | 27870608.95 | 27870609.15 | 27870609.35 | 0.0278 | 0.0173 |
| Jupiter | 71597-08-11 05:31 G | 27871549.52 | 27871549.73 | 27871549.94 | 0.0541 | 0.0249 |
| Uranus | 71600-08-04 08:53 G | 27872638.84 | 27872638.87 | 27872638.91 | 0.0134 | 0.0133 |
| Uranus | 71601-08-08 21:22 G | 27873008.24 | 27873008.39 | 27873008.55 | 0.0134 | 0.0104 |
| Uranus | 71602-08-12 20:24 G | 27873377.14 | 27873377.35 | 27873377.59 | 0.0134 | 0.0063 |
| Uranus | 71603-08-17 09:07 G | 27873746.64 | 27873746.88 | 27873747.13 | 0.0135 | 0.0020 |
| Neptune | 71603-08-18 10:48 G | 27873747.90 | 27873747.95 | 27873748.06 | 0.0090 | 0.0085 |
| Neptune | 71604-08-19 15:51 G | 27874115.00 | 27874115.16 | 27874115.37 | 0.0090 | 0.0063 |
| Uranus | 71604-08-20 08:53 G | 27874115.62 | 27874115.87 | 27874116.13 | 0.0135 | 0.0010 |
| Neptune | 71605-08-22 10:19 G | 27874482.70 | 27874482.93 | 27874483.19 | 0.0090 | 0.0028 |
| Uranus | 71605-08-24 21:36 G | 27874485.19 | 27874485.40 | 27874485.63 | 0.0135 | 0.0063 |
| Neptune | 71606-08-24 15:07 G | 27874849.88 | 27874850.13 | 27874850.38 | 0.0090 | 0.0007 |
| Uranus | 71606-08-28 22:19 G | 27874854.25 | 27874854.43 | 27874854.64 | 0.0135 | 0.0087 |
| Neptune | 71607-08-27 08:10 G | 27875217.60 | 27875217.84 | 27875218.09 | 0.0090 | 0.0029 |
| Neptune | 71608-08-28 15:07 G | 27875584.94 | 27875585.13 | 27875585.35 | 0.0090 | 0.0050 |
| Saturn | 71609-07-16 11:17 G | 27875906.81 | 27875906.97 | 27875907.15 | 0.0280 | 0.0193 |
| Jupiter | 71609-08-16 12:58 G | 27875937.84 | 27875938.04 | 27875938.24 | 0.0542 | 0.0222 |
| Neptune | 71609-08-31 04:34 G | 27875952.62 | 27875952.69 | 27875952.78 | 0.0090 | 0.0085 |
| Jupiter | 71615-02-09 02:53 G | 27877940.53 | 27877940.62 | 27877940.70 | 0.0488 | 0.0453 |
| Saturn | 71624-01-08 01:55 G | 27881195.35 | 27881195.58 | 27881195.81 | 0.0278 | 0.0065 |
| Mars | 71625-11-30 19:27 G | 27881888.13 | 27881888.31 | 27881888.49 | 0.1698 | 0.0809 |
| Jupiter | 71627-02-13 06:15 G | 27882327.52 | 27882327.76 | 27882328.00 | 0.0487 | 0.0068 |
| Saturn | 71638-07-11 12:58 G | 27886493.79 | 27886494.04 | 27886494.29 | 0.0281 | 0.0031 |
| Jupiter | 71639-02-17 18:29 G | 27886715.11 | 27886715.27 | 27886715.43 | 0.0486 | 0.0349 |

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| Uranus | 71643-02-09 06:00 G | 27888167.59 | 27888167.75 | 27888167.94 | 0.0144 | 0.0101 |
| Uranus | 71644-02-14 15:36 G | 27888537.91 | 27888538.15 | 27888538.40 | 0.0144 | 0.0043 |
| Uranus | 71645-02-18 10:34 G | 27888907.69 | 27888907.94 | 27888908.20 | 0.0144 | 0.0009 |
| Uranus | 71646-02-23 19:12 G | 27889278.08 | 27889278.30 | 27889278.55 | 0.0143 | 0.0055 |
| Uranus | 71647-02-28 13:27 G | 27889647.87 | 27889648.06 | 27889648.26 | 0.0143 | 0.0092 |
| Uranus | 71648-03-04 20:39 G | 27890018.35 | 27890018.36 | 27890018.41 | 0.0143 | 0.0142 |
| Pluto | 71653-08-23 19:41 G | 27892016.10 | 27892016.32 | 27892016.60 | 0.0064 | 0.0022 |
| Saturn | 71654-01-14 18:15 G | 27892160.13 | 27892160.26 | 27892160.41 | 0.0278 | 0.0232 |
| Saturn | 71668-07-17 22:19 G | 27897458.34 | 27897458.43 | 27897458.53 | 0.0280 | 0.0254 |
| Jupiter | 71680-08-10 11:17 G | 27901864.80 | 27901864.97 | 27901865.14 | 0.0540 | 0.0333 |
| Saturn | 71683-01-09 10:05 G | 27902746.68 | 27902746.92 | 27902747.16 | 0.0278 | 0.0009 |
| Uranus | 71685-08-09 10:19 G | 27903689.77 | 27903689.93 | 27903690.13 | 0.0134 | 0.0093 |
| Uranus | 71686-08-13 09:07 G | 27904058.67 | 27904058.88 | 27904059.13 | 0.0134 | 0.0058 |
| Neptune | 71687-02-20 00:00 G | 27904249.35 | 27904249.50 | 27904249.69 | 0.0088 | 0.0066 |
| Uranus | 71687-08-17 22:19 G | 27904428.19 | 27904428.43 | 27904428.68 | 0.0135 | 0.0021 |
| Neptune | 71688-02-22 05:31 G | 27904616.51 | 27904616.73 | 27904616.97 | 0.0088 | 0.0039 |
| Uranus | 71688-08-20 21:36 G | 27904797.16 | 27904797.40 | 27904797.66 | 0.0135 | 0.0028 |
| Neptune | 71689-02-23 23:17 G | 27904984.22 | 27904984.47 | 27904984.75 | 0.0088 | 0.0013 |
| Uranus | 71689-08-25 11:17 G | 27905166.75 | 27905166.97 | 27905167.20 | 0.0135 | 0.0054 |
| Neptune | 71690-02-26 06:58 G | 27905351.54 | 27905351.79 | 27905352.04 | 0.0088 | 0.0016 |
| Uranus | 71690-08-29 11:46 G | 27905535.85 | 27905535.99 | 27905536.16 | 0.0135 | 0.0108 |
| Neptune | 71691-02-28 20:10 G | 27905719.12 | 27905719.34 | 27905719.60 | 0.0088 | 0.0043 |
| Uranus | 71691-09-03 01:55 G | 27905905.56 | 27905905.58 | 27905905.64 | 0.0135 | 0.0133 |
| Neptune | 71692-03-02 08:24 G | 27906086.72 | 27906086.85 | 27906087.01 | 0.0088 | 0.0071 |
| Jupiter | 71692-08-15 10:48 G | 27906252.72 | 27906252.95 | 27906253.19 | 0.0541 | 0.0104 |
| Saturn | 71697-07-12 16:34 G | 27908044.95 | 27908045.19 | 27908045.43 | 0.0281 | 0.0033 |
| Jupiter | 71710-02-13 17:17 G | 27912643.00 | 27912643.22 | 27912643.44 | 0.0487 | 0.0105 |
| Saturn | 71712-01-04 16:19 G | 27913333.06 | 27913333.18 | 27913333.31 | 0.0277 | 0.0242 |
| Jupiter | 71722-02-18 03:22 G | 27917030.45 | 27917030.64 | 27917030.84 | 0.0486 | 0.0303 |
| Uranus | 71726-02-05 20:39 G | 27918479.31 | 27918479.36 | 27918479.46 | 0.0144 | 0.0138 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 71726-07-08 08:39 G | 27918631.72 | 27918631.86 | 27918632.01 | 0.0281 | 0.0221 |
| Uranus | 71727-02-10 18:43 G | 27918849.10 | 27918849.28 | 27918849.48 | 0.0144 | 0.0091 |
| Uranus | 71728-02-16 03:22 G | 27919219.40 | 27919219.64 | 27919219.90 | 0.0144 | 0.0049 |
| Uranus | 71729-02-19 23:17 G | 27919589.21 | 27919589.47 | 27919589.72 | 0.0144 | 0.0014 |
| Uranus | 71730-02-25 07:55 G | 27919959.60 | 27919959.83 | 27919960.09 | 0.0143 | 0.0047 |
| Uranus | 71731-03-02 02:10 G | 27920329.44 | 27920329.59 | 27920329.78 | 0.0143 | 0.0106 |
| Saturn | 71742-01-11 12:58 G | 27924297.79 | 27924298.04 | 27924298.29 | 0.0278 | 0.0043 |
| Saturn | 71756-07-14 23:31 G | 27929596.26 | 27929596.48 | 27929596.70 | 0.0281 | 0.0094 |
| Mars | 71758-06-06 11:17 G | 27930287.77 | 27930287.97 | 27930288.17 | 0.1827 | 0.0507 |
| Jupiter | 71763-08-11 09:22 G | 27932179.76 | 27932179.89 | 27932180.03 | 0.0540 | 0.0442 |
| Uranus | 71768-08-06 11:31 G | 27934001.88 | 27934001.98 | 27934002.10 | 0.0134 | 0.0120 |
| Neptune | 71768-08-20 04:19 G | 27934015.58 | 27934015.68 | 27934015.83 | 0.0090 | 0.0078 |
| Uranus | 71769-08-11 00:29 G | 27934371.34 | 27934371.52 | 27934371.70 | 0.0134 | 0.0092 |
| Neptune | 71769-08-22 09:22 G | 27934382.69 | 27934382.89 | 27934383.13 | 0.0090 | 0.0043 |
| Uranus | 71770-08-14 23:03 G | 27934740.23 | 27934740.46 | 27934740.70 | 0.0134 | 0.0050 |
| Neptune | 71770-08-25 01:55 G | 27934750.34 | 27934750.58 | 27934750.85 | 0.0090 | 0.0022 |
| Saturn | 71771-01-05 19:12 G | 27934884.13 | 27934884.30 | 27934884.48 | 0.0277 | 0.0189 |
| Uranus | 71771-08-19 12:15 G | 27935109.76 | 27935110.01 | 27935110.26 | 0.0135 | 0.0008 |
| Neptune | 71771-08-27 10:34 G | 27935117.70 | 27935117.94 | 27935118.19 | 0.0090 | 0.0014 |
| Uranus | 71772-08-22 11:17 G | 27935478.73 | 27935478.97 | 27935479.23 | 0.0135 | 0.0024 |
| Neptune | 71772-08-28 22:19 G | 27935485.20 | 27935485.43 | 27935485.69 | 0.0090 | 0.0036 |
| Uranus | 71773-08-27 00:58 G | 27935848.34 | 27935848.54 | 27935848.76 | 0.0135 | 0.0075 |
| Neptune | 71773-08-31 11:17 G | 27935852.83 | 27935852.97 | 27935853.14 | 0.0090 | 0.0071 |
| Uranus | 71774-08-31 00:58 G | 27936217.38 | 27936217.54 | 27936217.72 | 0.0135 | 0.0099 |
| Jupiter | 71775-08-16 09:36 G | 27936567.68 | 27936567.90 | 27936568.13 | 0.0542 | 0.0025 |
| Saturn | 71785-07-09 11:03 G | 27940182.76 | 27940182.96 | 27940183.17 | 0.0281 | 0.0160 |
| Jupiter | 71793-02-13 01:55 G | 27942958.35 | 27942958.58 | 27942958.81 | 0.0488 | 0.0149 |
| Saturn | 71801-01-13 09:22 G | 27945848.65 | 27945848.89 | 27945849.14 | 0.0278 | 0.0092 |
| Jupiter | 71805-02-18 06:58 G | 27947345.60 | 27947345.79 | 27947345.99 | 0.0487 | 0.0255 |
| Uranus | 71810-02-07 06:15 G | 27949160.71 | 27949160.76 | 27949160.84 | 0.0144 | 0.0139 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 71811-02-12 05:17 G | 27949530.53 | 27949530.72 | 27949530.93 | 0.0144 | 0.0087 |
| Uranus | 71812-02-17 13:27 G | 27949900.81 | 27949901.06 | 27949901.32 | 0.0144 | 0.0032 |
| Uranus | 71813-02-21 09:36 G | 27950270.65 | 27950270.90 | 27950271.15 | 0.0144 | 0.0004 |
| Uranus | 71814-02-26 18:00 G | 27950641.03 | 27950641.25 | 27950641.49 | 0.0143 | 0.0067 |
| Uranus | 71815-03-03 12:00 G | 27951010.84 | 27951011.00 | 27951011.20 | 0.0143 | 0.0104 |
| Saturn | 71815-07-18 06:58 G | 27951147.60 | 27951147.79 | 27951147.99 | 0.0281 | 0.0152 |
| Saturn | 71830-01-08 02:10 G | 27956435.38 | 27956435.59 | 27956435.80 | 0.0277 | 0.0138 |
| Saturn | 71844-07-11 09:36 G | 27961733.68 | 27961733.90 | 27961734.14 | 0.0281 | 0.0103 |
| Jupiter | 71846-08-11 12:58 G | 27962494.97 | 27962495.04 | 27962495.12 | 0.0540 | 0.0506 |
| Neptune | 71851-02-20 22:48 G | 27964149.40 | 27964149.45 | 27964149.55 | 0.0088 | 0.0084 |
| Neptune | 71852-02-23 16:05 G | 27964516.95 | 27964517.17 | 27964517.41 | 0.0088 | 0.0047 |
| Uranus | 71852-08-08 00:43 G | 27964683.46 | 27964683.53 | 27964683.63 | 0.0134 | 0.0126 |
| Neptune | 71853-02-25 00:58 G | 27964884.31 | 27964884.54 | 27964884.79 | 0.0088 | 0.0029 |
| Uranus | 71853-08-12 13:12 G | 27965052.86 | 27965053.05 | 27965053.27 | 0.0134 | 0.0079 |
| Neptune | 71854-02-27 13:55 G | 27965251.81 | 27965252.08 | 27965252.35 | 0.0088 | 0.0007 |
| Uranus | 71854-08-16 12:00 G | 27965421.77 | 27965422.00 | 27965422.24 | 0.0134 | 0.0045 |
| Neptune | 71855-03-02 03:51 G | 27965619.43 | 27965619.66 | 27965619.91 | 0.0088 | 0.0026 |
| Uranus | 71855-08-21 00:58 G | 27965791.30 | 27965791.54 | 27965791.80 | 0.0135 | 0.0008 |
| Neptune | 71856-03-03 11:46 G | 27965986.80 | 27965986.99 | 27965987.18 | 0.0088 | 0.0061 |
| Uranus | 71856-08-24 00:15 G | 27966160.28 | 27966160.51 | 27966160.76 | 0.0135 | 0.0040 |
| Neptune | 71857-03-06 04:48 G | 27966354.61 | 27966354.70 | 27966354.84 | 0.0088 | 0.0079 |
| Uranus | 71857-08-28 13:55 G | 27966529.88 | 27966530.08 | 27966530.31 | 0.0135 | 0.0068 |
| Jupiter | 71858-08-17 00:29 G | 27966883.29 | 27966883.52 | 27966883.75 | 0.0541 | 0.0037 |
| Uranus | 71858-09-01 14:39 G | 27966899.00 | 27966899.11 | 27966899.22 | 0.0135 | 0.0121 |
| Saturn | 71860-01-15 07:12 G | 27967399.58 | 27967399.80 | 27967400.01 | 0.0278 | 0.0138 |
| Jupiter | 71870-08-21 15:36 G | 27971271.04 | 27971271.15 | 27971271.27 | 0.0542 | 0.0466 |
| Saturn | 71874-07-19 08:39 G | 27972698.70 | 27972698.86 | 27972699.04 | 0.0281 | 0.0205 |
| Jupiter | 71876-02-14 08:10 G | 27973273.63 | 27973273.84 | 27973274.05 | 0.0488 | 0.0190 |
| Jupiter | 71888-02-18 23:46 G | 27977661.28 | 27977661.49 | 27977661.70 | 0.0487 | 0.0217 |
| Saturn | 71889-01-09 05:17 G | 27977986.49 | 27977986.72 | 27977986.97 | 0.0277 | 0.0090 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 71894-02-07 16:34 G | 27979842.07 | 27979842.19 | 27979842.34 | 0.0144 | 0.0124 |
| Uranus | 71895-02-12 16:48 G | 27980211.99 | 27980212.20 | 27980212.41 | 0.0144 | 0.0080 |
| Uranus | 71896-02-17 23:31 G | 27980582.23 | 27980582.48 | 27980582.74 | 0.0144 | 0.0035 |
| Uranus | 71897-02-21 20:39 G | 27980952.11 | 27980952.36 | 27980952.61 | 0.0144 | 0.0026 |
| Uranus | 71898-02-27 04:48 G | 27981322.47 | 27981322.70 | 27981322.95 | 0.0143 | 0.0060 |
| Uranus | 71899-03-03 23:46 G | 27981692.36 | 27981692.49 | 27981692.64 | 0.0143 | 0.0119 |
| Pluto | 71899-08-27 14:53 G | 27981868.90 | 27981869.12 | 27981869.37 | 0.0064 | 0.0022 |
| Saturn | 71903-07-14 12:15 G | 27983284.78 | 27983285.01 | 27983285.25 | 0.0281 | 0.0051 |
| Mars | 71909-12-04 06:15 G | 27985619.58 | 27985619.76 | 27985619.94 | 0.1691 | 0.0501 |
| Saturn | 71919-01-17 11:17 G | 27988950.80 | 27988950.97 | 27988951.16 | 0.0278 | 0.0183 |
| Neptune | 71932-08-21 05:03 G | 27993915.66 | 27993915.71 | 27993915.79 | 0.0090 | 0.0086 |
| Saturn | 71933-07-21 04:48 G | 27994249.60 | 27994249.70 | 27994249.81 | 0.0282 | 0.0255 |
| Neptune | 71933-08-23 20:10 G | 27994283.17 | 27994283.34 | 27994283.55 | 0.0090 | 0.0062 |
| Neptune | 71934-08-26 05:46 G | 27994650.51 | 27994650.74 | 27994650.97 | 0.0090 | 0.0029 |
| Neptune | 71935-08-28 16:05 G | 27995017.92 | 27995018.17 | 27995018.44 | 0.0090 | 0.0006 |
| Uranus | 71936-08-09 13:41 G | 27995364.93 | 27995365.07 | 27995365.23 | 0.0134 | 0.0106 |
| Neptune | 71936-08-30 06:43 G | 27995385.54 | 27995385.78 | 27995386.02 | 0.0090 | 0.0027 |
| Uranus | 71937-08-14 02:10 G | 27995734.40 | 27995734.59 | 27995734.81 | 0.0134 | 0.0079 |
| Neptune | 71937-09-01 12:58 G | 27995752.83 | 27995753.04 | 27995753.26 | 0.0090 | 0.0050 |
| Uranus | 71938-08-18 01:27 G | 27996103.32 | 27996103.56 | 27996103.80 | 0.0134 | 0.0036 |
| Neptune | 71938-09-04 06:29 G | 27996120.70 | 27996120.77 | 27996120.88 | 0.0090 | 0.0083 |
| Uranus | 71939-08-22 14:39 G | 27996472.86 | 27996473.11 | 27996473.36 | 0.0134 | 0.0005 |
| Uranus | 71940-08-25 13:55 G | 27996841.85 | 27996842.08 | 27996842.33 | 0.0135 | 0.0038 |
| Jupiter | 71941-08-16 15:51 G | 27997197.94 | 27997198.16 | 27997198.38 | 0.0540 | 0.0136 |
| Uranus | 71941-08-30 03:36 G | 27997211.48 | 27997211.65 | 27997211.86 | 0.0135 | 0.0089 |
| Uranus | 71942-09-03 04:19 G | 27997580.55 | 27997580.68 | 27997580.82 | 0.0135 | 0.0113 |
| Saturn | 71948-01-12 02:53 G | 27999537.37 | 27999537.62 | 27999537.88 | 0.0277 | 0.0045 |
| Jupiter | 71953-08-22 01:41 G | 28001586.43 | 28001586.57 | 28001586.72 | 0.0542 | 0.0407 |
| Jupiter | 71959-02-15 00:43 G | 28003589.32 | 28003589.53 | 28003589.75 | 0.0488 | 0.0221 |
| Saturn | 71962-07-15 18:15 G | 28004836.03 | 28004836.26 | 28004836.49 | 0.0282 | 0.0003 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 71971-02-19 01:41 G | 28007976.35 | 28007976.57 | 28007976.79 | 0.0487 | 0.0170 |
| Saturn | 71978-01-18 15:51 G | 28010502.02 | 28010502.16 | 28010502.30 | 0.0278 | 0.0226 |
| Uranus | 71978-02-09 01:41 G | 28010523.47 | 28010523.57 | 28010523.71 | 0.0144 | 0.0128 |
| Uranus | 71979-02-14 03:22 G | 28010893.43 | 28010893.64 | 28010893.86 | 0.0144 | 0.0073 |
| Uranus | 71980-02-19 09:07 G | 28011263.63 | 28011263.88 | 28011264.15 | 0.0144 | 0.0021 |
| Uranus | 71981-02-23 07:12 G | 28011633.55 | 28011633.80 | 28011634.05 | 0.0144 | 0.0018 |
| Uranus | 71982-02-28 14:24 G | 28012003.90 | 28012004.10 | 28012004.33 | 0.0143 | 0.0081 |
| Uranus | 71983-03-05 09:22 G | 28012373.76 | 28012373.89 | 28012374.06 | 0.0143 | 0.0115 |
| Saturn | 71991-07-10 06:00 G | 28015422.63 | 28015422.75 | 28015422.90 | 0.0283 | 0.0238 |

73RD MILLENNIUM CE

This is a list of transits of Moon in the 73rd millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Saturn | 72007-01-13 02:24 G | 28021088.35 | 28021088.60 | 28021088.86 | 0.0277 | 0.0005 | | |
| Neptune | 72016-02-23 20:24 G | 28024417.20 | 28024417.35 | 28024417.56 | 0.0088 | 0.0063 | | |
| Neptune | 72017-02-25 08:10 G | 28024784.60 | 28024784.84 | 28024785.09 | 0.0088 | 0.0038 | | |
| Neptune | 72018-02-27 23:03 G | 28025152.21 | 28025152.46 | 28025152.71 | 0.0088 | 0.0009 | | |
| Neptune | 72019-03-02 05:31 G | 28025519.48 | 28025519.73 | 28025520.01 | 0.0088 | 0.0016 | | |
| Neptune | 72020-03-04 00:00 G | 28025887.30 | 28025887.50 | 28025887.74 | 0.0088 | 0.0045 | | |
| Uranus | 72020-08-10 02:39 G | 28026046.49 | 28026046.61 | 28026046.75 | 0.0134 | 0.0113 | | |
| Neptune | 72021-03-06 04:34 G | 28026254.57 | 28026254.69 | 28026254.87 | 0.0088 | 0.0071 | | |
| Saturn | 72021-07-16 22:19 G | 28026387.19 | 28026387.43 | 28026387.67 | 0.0282 | 0.0055 | | |
| Uranus | 72021-08-14 14:39 G | 28026415.91 | 28026416.11 | 28026416.35 | 0.0134 | 0.0065 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 72022-08-18 14:10 G | 28026784.85 | 28026785.09 | 28026785.33 | 0.0134 | 0.0033 |
| Uranus | 72023-08-23 03:07 G | 28027154.38 | 28027154.63 | 28027154.88 | 0.0135 | 0.0007 |
| Jupiter | 72024-08-16 05:17 G | 28027513.51 | 28027513.72 | 28027513.93 | 0.0540 | 0.0199 |
| Uranus | 72024-08-26 02:53 G | 28027523.40 | 28027523.62 | 28027523.85 | 0.0135 | 0.0053 |
| Uranus | 72025-08-30 16:34 G | 28027892.99 | 28027893.19 | 28027893.40 | 0.0135 | 0.0081 |
| Uranus | 72026-09-03 16:48 G | 28028262.19 | 28028262.20 | 28028262.25 | 0.0135 | 0.0134 |
| Saturn | 72036-01-07 13:12 G | 28031674.94 | 28031675.05 | 28031675.19 | 0.0276 | 0.0237 |
| Jupiter | 72036-08-21 06:58 G | 28031901.62 | 28031901.79 | 28031901.98 | 0.0542 | 0.0353 |
| Saturn | 72037-01-19 15:51 G | 28032053.13 | 28032053.16 | 28032053.22 | 0.0278 | 0.0272 |
| Jupiter | 72042-02-14 01:41 G | 28033904.37 | 28033904.57 | 28033904.77 | 0.0489 | 0.0265 |
| Mars | 72042-06-08 03:36 G | 28034018.47 | 28034018.65 | 28034018.83 | 0.1836 | 0.0362 |
| Saturn | 72050-07-11 04:48 G | 28036973.53 | 28036973.70 | 28036973.89 | 0.0283 | 0.0186 |
| Jupiter | 72054-02-18 16:48 G | 28038291.98 | 28038292.20 | 28038292.42 | 0.0488 | 0.0124 |
| Uranus | 72062-02-09 12:29 G | 28041204.87 | 28041205.02 | 28041205.20 | 0.0144 | 0.0111 |
| Uranus | 72063-02-14 15:07 G | 28041574.92 | 28041575.13 | 28041575.35 | 0.0144 | 0.0069 |
| Uranus | 72064-02-19 19:41 G | 28041945.06 | 28041945.32 | 28041945.59 | 0.0144 | 0.0021 |
| Uranus | 72065-02-23 18:43 G | 28042315.04 | 28042315.28 | 28042315.53 | 0.0144 | 0.0038 |
| Saturn | 72066-01-14 08:10 G | 28042639.60 | 28042639.84 | 28042640.07 | 0.0277 | 0.0054 |
| Jupiter | 72066-02-22 21:07 G | 28042679.31 | 28042679.38 | 28042679.46 | 0.0487 | 0.0461 |
| Uranus | 72066-03-01 01:27 G | 28042685.34 | 28042685.56 | 28042685.80 | 0.0143 | 0.0072 |
| Uranus | 72067-03-05 21:36 G | 28043055.31 | 28043055.40 | 28043055.50 | 0.0143 | 0.0132 |
| Saturn | 72080-07-17 22:05 G | 28047938.20 | 28047938.42 | 28047938.66 | 0.0282 | 0.0109 |
| Saturn | 72095-01-08 16:19 G | 28053226.01 | 28053226.18 | 28053226.39 | 0.0276 | 0.0186 |
| Neptune | 72097-08-23 02:10 G | 28054183.47 | 28054183.59 | 28054183.72 | 0.0090 | 0.0077 |
| Neptune | 72098-08-25 11:31 G | 28054550.77 | 28054550.98 | 28054551.24 | 0.0090 | 0.0041 |
| Neptune | 72099-08-28 03:07 G | 28054918.40 | 28054918.63 | 28054918.88 | 0.0090 | 0.0022 |
| Neptune | 72100-08-30 08:39 G | 28055285.61 | 28055285.86 | 28055286.12 | 0.0090 | 0.0016 |
| Neptune | 72101-09-02 02:24 G | 28055653.38 | 28055653.60 | 28055653.85 | 0.0090 | 0.0035 |
| Neptune | 72102-09-04 06:29 G | 28056020.65 | 28056020.77 | 28056020.95 | 0.0090 | 0.0072 |
| Uranus | 72104-08-11 14:39 G | 28056727.95 | 28056728.11 | 28056728.30 | 0.0134 | 0.0095 |

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| Uranus | 72105-08-16 02:53 G | 28057097.40 | 28057097.62 | 28057097.84 | 0.0134 | 0.0068 |
| Uranus | 72106-08-20 02:53 G | 28057466.38 | 28057466.62 | 28057466.87 | 0.0134 | 0.0022 |
| Jupiter | 72107-08-17 04:05 G | 28057828.47 | 28057828.67 | 28057828.87 | 0.0539 | 0.0279 |
| Uranus | 72107-08-24 15:36 G | 28057835.90 | 28057836.15 | 28057836.41 | 0.0135 | 0.0016 |
| Uranus | 72108-08-27 16:05 G | 28058204.95 | 28058205.17 | 28058205.40 | 0.0135 | 0.0051 |
| Saturn | 72109-07-13 10:34 G | 28058524.74 | 28058524.94 | 28058525.15 | 0.0283 | 0.0134 |
| Uranus | 72109-09-01 05:03 G | 28058574.56 | 28058574.71 | 28058574.90 | 0.0135 | 0.0101 |
| Uranus | 72110-09-05 06:00 G | 28058943.67 | 28058943.75 | 28058943.85 | 0.0135 | 0.0125 |
| Jupiter | 72119-08-22 06:29 G | 28062216.58 | 28062216.77 | 28062216.97 | 0.0540 | 0.0260 |
| Saturn | 72125-01-16 18:00 G | 28064191.03 | 28064191.25 | 28064191.47 | 0.0277 | 0.0107 |
| Jupiter | 72125-02-14 14:24 G | 28064219.92 | 28064220.10 | 28064220.28 | 0.0489 | 0.0309 |
| Jupiter | 72137-02-18 20:24 G | 28068607.11 | 28068607.35 | 28068607.59 | 0.0488 | 0.0075 |
| Saturn | 72139-07-20 22:34 G | 28069489.25 | 28069489.44 | 28069489.64 | 0.0282 | 0.0166 |
| Pluto | 72145-08-30 18:58 G | 28071722.07 | 28071722.29 | 28071722.55 | 0.0064 | 0.0021 |
| Uranus | 72146-02-10 22:48 G | 28071886.31 | 28071886.45 | 28071886.61 | 0.0144 | 0.0117 |
| Uranus | 72147-02-16 02:24 G | 28072256.39 | 28072256.60 | 28072256.84 | 0.0144 | 0.0060 |
| Uranus | 72148-02-21 06:15 G | 28072626.50 | 28072626.76 | 28072627.03 | 0.0144 | 0.0010 |
| Jupiter | 72149-02-23 06:43 G | 28072994.67 | 28072994.78 | 28072994.91 | 0.0487 | 0.0411 |
| Uranus | 72149-02-25 06:29 G | 28072996.53 | 28072996.77 | 28072997.01 | 0.0143 | 0.0031 |
| Uranus | 72150-03-02 11:46 G | 28073366.80 | 28073366.99 | 28073367.20 | 0.0143 | 0.0093 |
| Uranus | 72151-03-07 08:10 G | 28073736.74 | 28073736.84 | 28073736.97 | 0.0143 | 0.0126 |
| Saturn | 72154-01-10 18:58 G | 28074777.07 | 28074777.29 | 28074777.51 | 0.0276 | 0.0132 |
| Saturn | 72168-07-14 18:29 G | 28080076.04 | 28080076.27 | 28080076.50 | 0.0283 | 0.0078 |
| Neptune | 72180-02-24 01:27 G | 28084317.48 | 28084317.56 | 28084317.70 | 0.0088 | 0.0080 |
| Neptune | 72181-02-25 18:00 G | 28084685.05 | 28084685.25 | 28084685.49 | 0.0088 | 0.0046 |
| Neptune | 72182-02-28 00:29 G | 28085052.27 | 28085052.52 | 28085052.78 | 0.0088 | 0.0027 |
| Neptune | 72183-03-02 19:27 G | 28085420.06 | 28085420.31 | 28085420.58 | 0.0088 | 0.0009 |
| Saturn | 72184-01-19 02:53 G | 28085742.43 | 28085742.62 | 28085742.84 | 0.0277 | 0.0164 |
| Neptune | 72184-03-04 00:15 G | 28085787.28 | 28085787.51 | 28085787.77 | 0.0088 | 0.0028 |
| Neptune | 72185-03-06 18:29 G | 28086155.11 | 28086155.27 | 28086155.48 | 0.0088 | 0.0064 |

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| Neptune | 72186-03-09 01:27 G | 28086522.50 | 28086522.56 | 28086522.68 | 0.0088 | 0.0082 |
| Uranus | 72187-08-09 02:24 G | 28087040.53 | 28087040.60 | 28087040.71 | 0.0134 | 0.0126 |
| Uranus | 72188-08-12 03:07 G | 28087409.49 | 28087409.63 | 28087409.80 | 0.0134 | 0.0103 |
| Uranus | 72189-08-16 14:24 G | 28087778.88 | 28087779.10 | 28087779.35 | 0.0134 | 0.0053 |
| Jupiter | 72190-08-16 04:19 G | 28088143.53 | 28088143.68 | 28088143.84 | 0.0539 | 0.0377 |
| Uranus | 72190-08-20 15:07 G | 28088147.89 | 28088148.13 | 28088148.38 | 0.0134 | 0.0022 |
| Uranus | 72191-08-25 03:07 G | 28088517.38 | 28088517.63 | 28088517.88 | 0.0135 | 0.0020 |
| Uranus | 72192-08-28 03:51 G | 28088886.45 | 28088886.66 | 28088886.88 | 0.0135 | 0.0064 |
| Uranus | 72193-09-01 16:19 G | 28089256.00 | 28089256.18 | 28089256.37 | 0.0135 | 0.0093 |
| Mars | 72193-12-06 12:15 G | 28089351.84 | 28089352.01 | 28089352.19 | 0.1686 | 0.0311 |
| Saturn | 72198-07-22 06:43 G | 28091040.65 | 28091040.78 | 28091040.93 | 0.0282 | 0.0223 |
| Jupiter | 72202-08-22 10:05 G | 28092531.70 | 28092531.92 | 28092532.14 | 0.0541 | 0.0178 |
| Jupiter | 72208-02-15 16:34 G | 28094535.02 | 28094535.19 | 28094535.35 | 0.0489 | 0.0361 |
| Saturn | 72213-01-13 03:51 G | 28096328.43 | 28096328.66 | 28096328.90 | 0.0276 | 0.0075 |
| Jupiter | 72220-02-20 04:19 G | 28098922.45 | 28098922.68 | 28098922.91 | 0.0488 | 0.0017 |
| Saturn | 72227-07-17 22:34 G | 28101627.19 | 28101627.44 | 28101627.69 | 0.0283 | 0.0023 |
| Uranus | 72230-02-12 09:22 G | 28102567.71 | 28102567.89 | 28102568.10 | 0.0144 | 0.0098 |
| Uranus | 72231-02-17 14:10 G | 28102937.88 | 28102938.09 | 28102938.33 | 0.0144 | 0.0059 |
| Uranus | 72232-02-22 16:34 G | 28103307.92 | 28103308.19 | 28103308.46 | 0.0144 | 0.0007 |
| Jupiter | 72232-02-24 12:00 G | 28103309.83 | 28103310.00 | 28103310.18 | 0.0488 | 0.0346 |
| Uranus | 72233-02-26 17:46 G | 28103678.01 | 28103678.24 | 28103678.48 | 0.0143 | 0.0049 |
| Uranus | 72234-03-03 22:05 G | 28104048.22 | 28104048.42 | 28104048.65 | 0.0143 | 0.0084 |
| Saturn | 72243-01-21 08:39 G | 28107293.71 | 28107293.86 | 28107294.02 | 0.0277 | 0.0218 |
| Saturn | 72256-07-11 14:53 G | 28112214.03 | 28112214.12 | 28112214.23 | 0.0283 | 0.0255 |
| Saturn | 72257-07-24 19:41 G | 28112592.32 | 28112592.32 | 28112592.32 | 0.0282 | 0.0282 |
| Neptune | 72261-08-24 06:58 G | 28114083.74 | 28114083.79 | 28114083.89 | 0.0090 | 0.0086 |
| Neptune | 72262-08-26 23:17 G | 28114451.31 | 28114451.47 | 28114451.68 | 0.0090 | 0.0060 |
| Neptune | 72263-08-29 04:34 G | 28114818.47 | 28114818.69 | 28114818.95 | 0.0090 | 0.0030 |
| Neptune | 72264-08-30 23:17 G | 28115186.22 | 28115186.47 | 28115186.73 | 0.0090 | 0.0003 |
| Neptune | 72265-09-02 03:51 G | 28115553.43 | 28115553.66 | 28115553.90 | 0.0090 | 0.0028 |

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| Neptune | 72266-09-04 20:39 G | 28115921.17 | 28115921.36 | 28115921.59 | 0.0090 | 0.0053 |
| Neptune | 72267-09-07 04:19 G | 28116288.60 | 28116288.68 | 28116288.79 | 0.0090 | 0.0083 |
| Uranus | 72271-08-10 13:41 G | 28117722.06 | 28117722.07 | 28117722.10 | 0.0134 | 0.0134 |
| Saturn | 72272-01-15 18:58 G | 28117880.05 | 28117880.29 | 28117880.53 | 0.0276 | 0.0016 |
| Uranus | 72272-08-13 15:07 G | 28118090.94 | 28118091.13 | 28118091.33 | 0.0134 | 0.0083 |
| Jupiter | 72273-08-16 09:22 G | 28118458.76 | 28118458.89 | 28118459.02 | 0.0539 | 0.0448 |
| Uranus | 72273-08-18 01:12 G | 28118460.33 | 28118460.55 | 28118460.80 | 0.0134 | 0.0058 |
| Uranus | 72274-08-22 03:22 G | 28118829.40 | 28118829.64 | 28118829.88 | 0.0134 | 0.0010 |
| Uranus | 72275-08-26 14:24 G | 28119198.86 | 28119199.10 | 28119199.36 | 0.0135 | 0.0027 |
| Uranus | 72276-08-29 16:19 G | 28119567.97 | 28119568.18 | 28119568.40 | 0.0135 | 0.0063 |
| Uranus | 72277-09-03 03:51 G | 28119937.53 | 28119937.66 | 28119937.83 | 0.0135 | 0.0111 |
| Jupiter | 72285-08-21 08:10 G | 28122846.62 | 28122846.84 | 28122847.06 | 0.0540 | 0.0104 |
| Saturn | 72286-07-19 02:39 G | 28123178.36 | 28123178.61 | 28123178.86 | 0.0283 | 0.0037 |
| Jupiter | 72291-02-14 20:39 G | 28124850.26 | 28124850.36 | 28124850.47 | 0.0490 | 0.0431 |
| Saturn | 72301-01-10 15:07 G | 28128467.00 | 28128467.13 | 28128467.29 | 0.0276 | 0.0228 |
| Saturn | 72302-01-23 16:34 G | 28128845.19 | 28128845.19 | 28128845.20 | 0.0277 | 0.0277 |
| Jupiter | 72303-02-20 07:27 G | 28129237.56 | 28129237.81 | 28129238.05 | 0.0489 | 0.0055 |
| Uranus | 72313-02-08 20:24 G | 28132879.31 | 28132879.35 | 28132879.42 | 0.0144 | 0.0140 |
| Uranus | 72314-02-13 19:12 G | 28133249.13 | 28133249.30 | 28133249.49 | 0.0144 | 0.0106 |
| Uranus | 72315-02-19 01:27 G | 28133619.33 | 28133619.56 | 28133619.80 | 0.0144 | 0.0046 |
| Jupiter | 72315-02-24 13:12 G | 28133624.87 | 28133625.05 | 28133625.24 | 0.0488 | 0.0285 |
| Saturn | 72315-07-15 04:48 G | 28133765.54 | 28133765.70 | 28133765.89 | 0.0283 | 0.0189 |
| Uranus | 72316-02-24 02:39 G | 28133989.34 | 28133989.61 | 28133989.88 | 0.0144 | 0.0001 |
| Uranus | 72317-02-28 05:03 G | 28134359.48 | 28134359.71 | 28134359.96 | 0.0143 | 0.0044 |
| Uranus | 72318-03-05 08:10 G | 28134729.66 | 28134729.84 | 28134730.03 | 0.0143 | 0.0104 |
| Uranus | 72319-03-10 06:15 G | 28135099.71 | 28135099.76 | 28135099.85 | 0.0143 | 0.0137 |
| Mars | 72326-06-11 14:24 G | 28137749.92 | 28137750.10 | 28137750.28 | 0.1843 | 0.0623 |
| Saturn | 72331-01-18 09:36 G | 28139431.66 | 28139431.90 | 28139432.15 | 0.0276 | 0.0047 |
| Neptune | 72345-02-26 19:41 G | 28144585.15 | 28144585.32 | 28144585.55 | 0.0088 | 0.0058 |
| Saturn | 72345-07-21 11:17 G | 28144729.75 | 28144729.97 | 28144730.20 | 0.0282 | 0.0100 |

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| Neptune | 72346-03-01 15:07 G | 28144952.90 | 28144953.13 | 28144953.38 | 0.0088 | 0.0036 |
| Neptune | 72347-03-03 20:10 G | 28145320.09 | 28145320.34 | 28145320.60 | 0.0088 | 0.0005 |
| Neptune | 72348-03-05 13:41 G | 28145687.82 | 28145688.07 | 28145688.34 | 0.0088 | 0.0018 |
| Neptune | 72349-03-07 21:22 G | 28146055.20 | 28146055.39 | 28146055.62 | 0.0088 | 0.0049 |
| Neptune | 72350-03-10 11:17 G | 28146422.83 | 28146422.97 | 28146423.15 | 0.0088 | 0.0071 |
| Uranus | 72355-08-12 00:15 G | 28148403.40 | 28148403.51 | 28148403.66 | 0.0134 | 0.0115 |
| Uranus | 72356-08-15 02:53 G | 28148772.46 | 28148772.62 | 28148772.82 | 0.0134 | 0.0092 |
| Uranus | 72357-08-19 12:43 G | 28149141.79 | 28149142.03 | 28149142.28 | 0.0134 | 0.0040 |
| Uranus | 72358-08-23 15:07 G | 28149510.89 | 28149511.13 | 28149511.38 | 0.0134 | 0.0012 |
| Uranus | 72359-08-28 00:58 G | 28149880.30 | 28149880.54 | 28149880.80 | 0.0135 | 0.0033 |
| Saturn | 72360-01-12 23:31 G | 28150018.28 | 28150018.48 | 28150018.68 | 0.0276 | 0.0166 |
| Uranus | 72360-08-31 03:22 G | 28150249.45 | 28150249.64 | 28150249.85 | 0.0135 | 0.0074 |
| Uranus | 72361-09-04 13:55 G | 28150618.93 | 28150619.08 | 28150619.26 | 0.0135 | 0.0105 |
| Jupiter | 72368-08-21 08:39 G | 28153161.63 | 28153161.86 | 28153162.09 | 0.0539 | 0.0005 |
| Jupiter | 72374-02-15 02:24 G | 28155165.58 | 28155165.60 | 28155165.64 | 0.0491 | 0.0486 |
| Saturn | 72374-07-16 18:29 G | 28155317.05 | 28155317.27 | 28155317.49 | 0.0283 | 0.0119 |
| Jupiter | 72380-08-26 04:34 G | 28157549.63 | 28157549.69 | 28157549.74 | 0.0541 | 0.0522 |
| Jupiter | 72386-02-19 08:24 G | 28159552.63 | 28159552.85 | 28159553.08 | 0.0489 | 0.0123 |
| Saturn | 72390-01-19 19:41 G | 28160983.09 | 28160983.32 | 28160983.56 | 0.0277 | 0.0112 |
| Pluto | 72391-09-03 22:19 G | 28161575.17 | 28161575.43 | 28161575.69 | 0.0064 | 0.0006 |
| Uranus | 72398-02-14 04:19 G | 28163930.47 | 28163930.68 | 28163930.90 | 0.0144 | 0.0085 |
| Jupiter | 72398-02-24 00:15 G | 28163940.30 | 28163940.51 | 28163940.73 | 0.0488 | 0.0218 |
| Mars | 72398-12-06 15:51 G | 28164226.10 | 28164226.16 | 28164226.23 | 0.1676 | 0.1569 |
| Uranus | 72399-02-19 11:31 G | 28164300.75 | 28164300.98 | 28164301.22 | 0.0144 | 0.0048 |
| Uranus | 72400-02-24 11:03 G | 28164670.69 | 28164670.96 | 28164671.23 | 0.0144 | 0.0006 |
| Uranus | 72401-02-28 14:53 G | 28165040.90 | 28165041.12 | 28165041.35 | 0.0143 | 0.0060 |
| Uranus | 72402-03-05 16:19 G | 28165411.00 | 28165411.18 | 28165411.39 | 0.0143 | 0.0095 |
| Saturn | 72404-07-23 01:12 G | 28166281.36 | 28166281.55 | 28166281.74 | 0.0282 | 0.0164 |
| Saturn | 72419-01-14 11:46 G | 28171569.77 | 28171569.99 | 28171570.22 | 0.0276 | 0.0105 |
| Neptune | 72426-08-27 01:55 G | 28174351.45 | 28174351.58 | 28174351.73 | 0.0090 | 0.0075 |

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| Neptune | 72427-08-29 20:10 G | 28174719.12 | 28174719.34 | 28174719.59 | 0.0090 | 0.0038 |
| Neptune | 72428-08-31 01:27 G | 28175086.33 | 28175086.56 | 28175086.81 | 0.0090 | 0.0020 |
| Neptune | 72429-09-02 17:46 G | 28175453.99 | 28175454.24 | 28175454.51 | 0.0090 | 0.0018 |
| Neptune | 72430-09-05 01:55 G | 28175821.37 | 28175821.58 | 28175821.82 | 0.0090 | 0.0037 |
| Neptune | 72431-09-07 12:58 G | 28176188.92 | 28176189.04 | 28176189.22 | 0.0090 | 0.0074 |
| Saturn | 72433-07-18 02:24 G | 28176868.35 | 28176868.60 | 28176868.85 | 0.0283 | 0.0052 |
| Uranus | 72439-08-12 11:03 G | 28179084.86 | 28179084.96 | 28179085.07 | 0.0134 | 0.0122 |
| Uranus | 72440-08-15 14:24 G | 28179453.91 | 28179454.10 | 28179454.32 | 0.0134 | 0.0071 |
| Uranus | 72441-08-19 23:03 G | 28179823.22 | 28179823.46 | 28179823.70 | 0.0134 | 0.0046 |
| Uranus | 72442-08-24 02:39 G | 28180192.37 | 28180192.61 | 28180192.86 | 0.0134 | 0.0004 |
| Uranus | 72443-08-28 11:46 G | 28180561.75 | 28180561.99 | 28180562.24 | 0.0135 | 0.0037 |
| Uranus | 72444-08-31 15:22 G | 28180930.95 | 28180931.14 | 28180931.35 | 0.0135 | 0.0076 |
| Uranus | 72445-09-05 01:27 G | 28181300.45 | 28181300.56 | 28181300.68 | 0.0135 | 0.0120 |
| Saturn | 72449-01-21 02:53 G | 28182534.43 | 28182534.62 | 28182534.83 | 0.0277 | 0.0173 |
| Jupiter | 72451-08-21 02:53 G | 28183476.39 | 28183476.62 | 28183476.85 | 0.0539 | 0.0089 |
| Saturn | 72463-07-25 15:51 G | 28187833.03 | 28187833.16 | 28187833.31 | 0.0282 | 0.0231 |
| Jupiter | 72463-08-26 14:24 G | 28187864.98 | 28187865.10 | 28187865.23 | 0.0541 | 0.0448 |
| Jupiter | 72469-02-18 16:48 G | 28189867.98 | 28189868.20 | 28189868.42 | 0.0490 | 0.0197 |
| Mars | 72477-12-09 09:07 G | 28193083.71 | 28193083.88 | 28193084.04 | 0.1680 | 0.0945 |
| Saturn | 72478-01-16 01:12 G | 28193121.31 | 28193121.55 | 28193121.79 | 0.0276 | 0.0047 |
| Uranus | 72481-02-09 15:51 G | 28194242.07 | 28194242.16 | 28194242.29 | 0.0144 | 0.0129 |
| Jupiter | 72481-02-22 18:15 G | 28194255.03 | 28194255.26 | 28194255.49 | 0.0488 | 0.0148 |
| Uranus | 72482-02-14 12:43 G | 28194611.85 | 28194612.03 | 28194612.24 | 0.0144 | 0.0095 |
| Uranus | 72483-02-19 21:07 G | 28194982.14 | 28194982.38 | 28194982.63 | 0.0144 | 0.0033 |
| Uranus | 72484-02-24 19:41 G | 28195352.06 | 28195352.32 | 28195352.59 | 0.0144 | 0.0011 |
| Uranus | 72485-03-01 00:43 G | 28195722.31 | 28195722.53 | 28195722.77 | 0.0143 | 0.0057 |
| Uranus | 72486-03-06 00:29 G | 28196092.38 | 28196092.52 | 28196092.70 | 0.0143 | 0.0115 |
| Saturn | 72492-07-19 09:51 G | 28198419.66 | 28198419.91 | 28198420.15 | 0.0283 | 0.0014 |
| Saturn | 72507-01-11 09:22 G | 28203707.85 | 28203707.89 | 28203707.94 | 0.0276 | 0.0270 |
| Saturn | 72508-01-24 12:15 G | 28204085.89 | 28204086.01 | 28204086.15 | 0.0277 | 0.0234 |

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| Neptune | 72509-02-27 11:03 G | 28204485.84 | 28204485.96 | 28204486.11 | 0.0088 | 0.0075 |
| Neptune | 72510-03-01 16:34 G | 28204852.98 | 28204853.19 | 28204853.43 | 0.0088 | 0.0042 |
| Neptune | 72511-03-04 09:51 G | 28205220.66 | 28205220.91 | 28205221.18 | 0.0088 | 0.0023 |
| Neptune | 72512-03-05 19:12 G | 28205588.05 | 28205588.30 | 28205588.56 | 0.0088 | 0.0012 |
| Neptune | 72513-03-08 07:12 G | 28205955.57 | 28205955.80 | 28205956.07 | 0.0088 | 0.0032 |
| Neptune | 72514-03-10 20:53 G | 28206323.22 | 28206323.37 | 28206323.55 | 0.0088 | 0.0066 |
| Neptune | 72515-03-13 04:34 G | 28206690.64 | 28206690.69 | 28206690.77 | 0.0088 | 0.0085 |
| Saturn | 72521-07-15 01:27 G | 28209006.44 | 28209006.56 | 28209006.70 | 0.0283 | 0.0237 |
| Uranus | 72523-08-13 21:07 G | 28209766.23 | 28209766.38 | 28209766.56 | 0.0134 | 0.0104 |
| Uranus | 72524-08-17 02:10 G | 28210135.40 | 28210135.59 | 28210135.79 | 0.0134 | 0.0079 |
| Uranus | 72525-08-21 09:36 G | 28210504.64 | 28210504.90 | 28210505.15 | 0.0134 | 0.0028 |
| Uranus | 72526-08-25 14:10 G | 28210873.85 | 28210874.09 | 28210874.34 | 0.0135 | 0.0002 |
| Uranus | 72527-08-29 21:51 G | 28211243.16 | 28211243.41 | 28211243.65 | 0.0135 | 0.0045 |
| Uranus | 72528-09-02 02:10 G | 28211612.41 | 28211612.59 | 28211612.79 | 0.0135 | 0.0084 |
| Uranus | 72529-09-06 10:34 G | 28211981.83 | 28211981.94 | 28211982.09 | 0.0135 | 0.0117 |
| Jupiter | 72534-08-21 12:15 G | 28213791.79 | 28213792.01 | 28213792.22 | 0.0539 | 0.0167 |
| Saturn | 72537-01-18 09:22 G | 28214672.64 | 28214672.89 | 28214673.14 | 0.0277 | 0.0008 |
| Jupiter | 72546-08-26 03:07 G | 28218179.44 | 28218179.63 | 28218179.82 | 0.0540 | 0.0324 |
| Saturn | 72551-07-22 21:51 G | 28219971.18 | 28219971.41 | 28219971.63 | 0.0283 | 0.0078 |
| Jupiter | 72552-02-19 15:22 G | 28220182.94 | 28220183.14 | 28220183.35 | 0.0490 | 0.0255 |
| Jupiter | 72564-02-24 08:53 G | 28224570.64 | 28224570.87 | 28224571.10 | 0.0488 | 0.0098 |
| Uranus | 72565-02-11 02:10 G | 28224923.52 | 28224923.59 | 28224923.67 | 0.0144 | 0.0137 |
| Saturn | 72566-01-12 16:48 G | 28225259.06 | 28225259.20 | 28225259.36 | 0.0276 | 0.0217 |
| Uranus | 72566-02-15 21:51 G | 28225293.20 | 28225293.41 | 28225293.65 | 0.0144 | 0.0074 |
| Uranus | 72567-02-21 06:43 G | 28225663.54 | 28225663.78 | 28225664.03 | 0.0144 | 0.0038 |
| Uranus | 72568-02-26 03:51 G | 28226033.40 | 28226033.66 | 28226033.93 | 0.0144 | 0.0019 |
| Uranus | 72569-03-02 09:36 G | 28226403.70 | 28226403.90 | 28226404.13 | 0.0143 | 0.0070 |
| Uranus | 72570-03-07 08:24 G | 28226773.69 | 28226773.85 | 28226774.04 | 0.0143 | 0.0106 |
| Saturn | 72580-07-16 09:22 G | 28230557.70 | 28230557.89 | 28230558.09 | 0.0283 | 0.0174 |
| Neptune | 72590-08-27 18:15 G | 28234252.17 | 28234252.26 | 28234252.37 | 0.0090 | 0.0082 |

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| Neptune | 72591-08-29 23:17 G | 28234619.29 | 28234619.47 | 28234619.68 | 0.0090 | 0.0055 |
| Neptune | 72592-08-31 14:39 G | 28234986.88 | 28234987.11 | 28234987.38 | 0.0090 | 0.0028 |
| Neptune | 72593-09-03 00:43 G | 28235354.28 | 28235354.53 | 28235354.78 | 0.0090 | 0.0001 |
| Neptune | 72594-09-05 11:46 G | 28235721.74 | 28235721.99 | 28235722.24 | 0.0090 | 0.0029 |
| Neptune | 72595-09-08 01:41 G | 28236089.40 | 28236089.57 | 28236089.78 | 0.0090 | 0.0058 |
| Saturn | 72596-01-20 09:51 G | 28236223.66 | 28236223.91 | 28236224.16 | 0.0277 | 0.0057 |
| Neptune | 72596-09-09 07:41 G | 28236456.77 | 28236456.82 | 28236456.94 | 0.0090 | 0.0085 |
| Uranus | 72607-08-15 06:43 G | 28240447.65 | 28240447.78 | 28240447.94 | 0.0134 | 0.0110 |
| Uranus | 72608-08-18 12:43 G | 28240816.83 | 28240817.03 | 28240817.26 | 0.0134 | 0.0061 |
| Uranus | 72609-08-22 18:43 G | 28241186.04 | 28241186.28 | 28241186.54 | 0.0134 | 0.0035 |
| Mars | 72610-06-13 00:15 G | 28241480.43 | 28241480.51 | 28241480.59 | 0.1852 | 0.1712 |
| Saturn | 72610-07-25 09:22 G | 28241522.70 | 28241522.89 | 28241523.11 | 0.0283 | 0.0138 |
| Uranus | 72610-08-27 00:58 G | 28241555.30 | 28241555.54 | 28241555.78 | 0.0135 | 0.0015 |
| Uranus | 72611-08-31 07:41 G | 28241924.58 | 28241924.82 | 28241925.07 | 0.0135 | 0.0046 |
| Uranus | 72612-09-03 13:41 G | 28242293.90 | 28242294.07 | 28242294.27 | 0.0135 | 0.0088 |
| Uranus | 72613-09-07 21:07 G | 28242663.33 | 28242663.38 | 28242663.47 | 0.0135 | 0.0130 |
| Jupiter | 72617-08-21 01:27 G | 28244106.36 | 28244106.56 | 28244106.76 | 0.0538 | 0.0284 |
| Saturn | 72625-01-15 02:39 G | 28246810.43 | 28246810.61 | 28246810.81 | 0.0276 | 0.0165 |
| Jupiter | 72629-08-26 08:24 G | 28248494.66 | 28248494.85 | 28248495.05 | 0.0540 | 0.0239 |
| Jupiter | 72635-02-20 06:15 G | 28250498.58 | 28250498.76 | 28250498.94 | 0.0490 | 0.0309 |
| Pluto | 72637-09-06 18:43 G | 28251428.02 | 28251428.28 | 28251428.54 | 0.0064 | 0.0005 |
| Saturn | 72639-07-19 12:58 G | 28252108.82 | 28252109.04 | 28252109.28 | 0.0283 | 0.0114 |
| Jupiter | 72647-02-24 08:24 G | 28254885.61 | 28254885.85 | 28254886.10 | 0.0489 | 0.0039 |
| Uranus | 72649-02-12 11:46 G | 28255604.86 | 28255604.99 | 28255605.15 | 0.0144 | 0.0118 |
| Uranus | 72650-02-17 07:27 G | 28255974.61 | 28255974.81 | 28255975.03 | 0.0144 | 0.0084 |
| Uranus | 72651-02-22 16:48 G | 28256344.96 | 28256345.20 | 28256345.46 | 0.0144 | 0.0021 |
| Uranus | 72652-02-27 13:12 G | 28256714.80 | 28256715.05 | 28256715.32 | 0.0143 | 0.0021 |
| Uranus | 72653-03-03 20:24 G | 28257085.13 | 28257085.35 | 28257085.57 | 0.0143 | 0.0069 |
| Uranus | 72654-03-08 17:17 G | 28257455.11 | 28257455.22 | 28257455.37 | 0.0143 | 0.0124 |
| Saturn | 72655-01-22 10:19 G | 28257774.70 | 28257774.93 | 28257775.16 | 0.0277 | 0.0104 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 72659-02-28 20:24 G | 28259273.26 | 28259273.35 | 28259273.44 | 0.0488 | 0.0445 |
| Saturn | 72669-07-26 16:19 G | 28263074.02 | 28263074.18 | 28263074.37 | 0.0283 | 0.0196 |
| Neptune | 72673-02-27 14:10 G | 28264386.07 | 28264386.09 | 28264386.12 | 0.0088 | 0.0087 |
| Neptune | 72674-03-02 06:00 G | 28264753.54 | 28264753.75 | 28264753.97 | 0.0088 | 0.0053 |
| Neptune | 72675-03-04 15:51 G | 28265120.93 | 28265121.16 | 28265121.40 | 0.0088 | 0.0033 |
| Neptune | 72676-03-06 03:22 G | 28265488.37 | 28265488.64 | 28265488.91 | 0.0088 | 0.0001 |
| Neptune | 72677-03-08 18:15 G | 28265856.02 | 28265856.26 | 28265856.51 | 0.0088 | 0.0021 |
| Neptune | 72678-03-11 00:58 G | 28266223.35 | 28266223.54 | 28266223.77 | 0.0088 | 0.0054 |
| Neptune | 72679-03-13 19:27 G | 28266591.19 | 28266591.31 | 28266591.47 | 0.0088 | 0.0074 |
| Mars | 72682-12-09 15:22 G | 28267958.00 | 28267958.14 | 28267958.30 | 0.1671 | 0.0914 |
| Saturn | 72684-01-17 08:39 G | 28268361.64 | 28268361.86 | 28268362.09 | 0.0276 | 0.0114 |
| Uranus | 72691-08-15 15:51 G | 28271128.99 | 28271129.16 | 28271129.36 | 0.0134 | 0.0095 |
| Uranus | 72692-08-18 23:17 G | 28271498.28 | 28271498.47 | 28271498.70 | 0.0134 | 0.0070 |
| Uranus | 72693-08-23 04:05 G | 28271867.42 | 28271867.67 | 28271867.94 | 0.0135 | 0.0018 |
| Uranus | 72694-08-27 11:31 G | 28272236.74 | 28272236.98 | 28272237.23 | 0.0135 | 0.0009 |
| Uranus | 72695-08-31 16:19 G | 28272605.96 | 28272606.18 | 28272606.43 | 0.0135 | 0.0057 |
| Uranus | 72696-09-03 23:31 G | 28272975.32 | 28272975.48 | 28272975.67 | 0.0135 | 0.0093 |
| Uranus | 72697-09-08 06:00 G | 28273344.68 | 28273344.75 | 28273344.84 | 0.0135 | 0.0128 |
| Saturn | 72698-07-20 17:31 G | 28273660.00 | 28273660.23 | 28273660.46 | 0.0283 | 0.0056 |
| Jupiter | 72700-08-21 12:15 G | 28274421.85 | 28274422.01 | 28274422.19 | 0.0538 | 0.0342 |
| Jupiter | 72712-08-26 16:34 G | 28278809.96 | 28278810.19 | 28278810.42 | 0.0540 | 0.0163 |
| Saturn | 72714-01-24 14:39 G | 28279325.92 | 28279326.11 | 28279326.31 | 0.0277 | 0.0153 |
| Jupiter | 72718-02-20 06:43 G | 28280813.62 | 28280813.78 | 28280813.94 | 0.0491 | 0.0369 |
| Pluto | 72726-03-10 15:22 G | 28283754.06 | 28283754.14 | 28283754.27 | 0.0080 | 0.0073 |
| Saturn | 72727-07-16 18:15 G | 28284247.25 | 28284247.26 | 28284247.30 | 0.0284 | 0.0282 |
| Saturn | 72728-07-28 16:48 G | 28284625.09 | 28284625.20 | 28284625.33 | 0.0283 | 0.0245 |
| Jupiter | 72730-02-24 20:10 G | 28285201.11 | 28285201.34 | 28285201.57 | 0.0490 | 0.0005 |
| Uranus | 72733-02-13 22:19 G | 28286286.31 | 28286286.43 | 28286286.56 | 0.0144 | 0.0125 |
| Uranus | 72734-02-18 17:17 G | 28286656.00 | 28286656.22 | 28286656.46 | 0.0144 | 0.0063 |
| Uranus | 72735-02-24 02:53 G | 28287026.37 | 28287026.62 | 28287026.87 | 0.0144 | 0.0028 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 72736-02-28 22:05 G | 28287396.17 | 28287396.42 | 28287396.68 | 0.0144 | 0.0032 |
| Uranus | 72737-03-05 05:31 G | 28287766.53 | 28287766.73 | 28287766.95 | 0.0143 | 0.0079 |
| Uranus | 72738-03-10 01:55 G | 28288136.45 | 28288136.58 | 28288136.74 | 0.0143 | 0.0118 |
| Jupiter | 72742-03-01 08:10 G | 28289588.71 | 28289588.84 | 28289588.97 | 0.0488 | 0.0410 |
| Saturn | 72743-01-19 08:10 G | 28289912.59 | 28289912.84 | 28289913.09 | 0.0276 | 0.0067 |
| Neptune | 72754-08-28 22:48 G | 28294152.45 | 28294152.45 | 28294152.49 | 0.0090 | 0.0089 |
| Neptune | 72755-08-31 13:12 G | 28294519.92 | 28294520.05 | 28294520.24 | 0.0090 | 0.0071 |
| Neptune | 72756-09-01 23:46 G | 28294887.27 | 28294887.49 | 28294887.73 | 0.0090 | 0.0034 |
| Saturn | 72757-07-23 01:12 G | 28295211.32 | 28295211.55 | 28295211.79 | 0.0283 | 0.0005 |
| Neptune | 72757-09-04 09:22 G | 28295254.63 | 28295254.89 | 28295255.15 | 0.0090 | 0.0015 |
| Neptune | 72758-09-07 00:15 G | 28295622.28 | 28295622.51 | 28295622.76 | 0.0090 | 0.0022 |
| Neptune | 72759-09-09 06:00 G | 28295989.53 | 28295989.75 | 28295989.99 | 0.0090 | 0.0040 |
| Neptune | 72760-09-11 00:15 G | 28296357.39 | 28296357.51 | 28296357.64 | 0.0090 | 0.0077 |
| Mars | 72761-12-12 19:27 G | 28296815.20 | 28296815.31 | 28296815.41 | 0.1674 | 0.1383 |
| Saturn | 72773-01-25 18:43 G | 28300877.11 | 28300877.28 | 28300877.45 | 0.0276 | 0.0197 |
| Uranus | 72774-08-12 22:34 G | 28301441.39 | 28301441.44 | 28301441.49 | 0.0134 | 0.0131 |
| Uranus | 72775-08-17 00:58 G | 28301810.37 | 28301810.54 | 28301810.72 | 0.0134 | 0.0100 |
| Uranus | 72776-08-20 09:36 G | 28302179.68 | 28302179.90 | 28302180.13 | 0.0134 | 0.0051 |
| Uranus | 72777-08-24 12:43 G | 28302548.79 | 28302549.03 | 28302549.29 | 0.0135 | 0.0027 |
| Uranus | 72778-08-28 21:36 G | 28302918.16 | 28302918.40 | 28302918.64 | 0.0135 | 0.0025 |
| Uranus | 72779-09-02 01:27 G | 28303287.34 | 28303287.56 | 28303287.81 | 0.0135 | 0.0054 |
| Uranus | 72780-09-05 10:19 G | 28303656.78 | 28303656.93 | 28303657.11 | 0.0135 | 0.0099 |
| Jupiter | 72783-08-21 12:58 G | 28304736.91 | 28304737.04 | 28304737.20 | 0.0537 | 0.0425 |
| Saturn | 72786-07-17 15:51 G | 28305798.03 | 28305798.16 | 28305798.30 | 0.0284 | 0.0235 |
| Jupiter | 72795-08-26 10:34 G | 28309124.72 | 28309124.94 | 28309125.16 | 0.0539 | 0.0061 |
| Jupiter | 72801-02-19 18:58 G | 28311129.17 | 28311129.29 | 28311129.40 | 0.0491 | 0.0425 |
| Saturn | 72802-01-20 05:03 G | 28311463.46 | 28311463.71 | 28311463.96 | 0.0275 | 0.0024 |
| Jupiter | 72807-08-31 20:39 G | 28313513.34 | 28313513.36 | 28313513.39 | 0.0541 | 0.0536 |
| Jupiter | 72813-02-24 08:24 G | 28315516.60 | 28315516.85 | 28315517.09 | 0.0490 | 0.0045 |
| Saturn | 72816-07-24 06:43 G | 28316762.54 | 28316762.78 | 28316763.02 | 0.0283 | 0.0044 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 72817-02-14 07:12 G | 28316967.65 | 28316967.80 | 28316967.99 | 0.0144 | 0.0108 |
| Uranus | 72818-02-19 02:53 G | 28317337.41 | 28317337.62 | 28317337.85 | 0.0144 | 0.0073 |
| Uranus | 72819-02-24 12:43 G | 28317707.78 | 28317708.03 | 28317708.29 | 0.0144 | 0.0009 |
| Uranus | 72820-02-29 07:41 G | 28318077.57 | 28318077.82 | 28318078.08 | 0.0143 | 0.0030 |
| Uranus | 72821-03-05 16:05 G | 28318447.97 | 28318448.17 | 28318448.39 | 0.0143 | 0.0081 |
| Uranus | 72822-03-10 11:31 G | 28318817.90 | 28318817.98 | 28318818.09 | 0.0143 | 0.0133 |
| Jupiter | 72825-02-28 12:00 G | 28319903.85 | 28319904.00 | 28319904.15 | 0.0488 | 0.0366 |
| Saturn | 72831-01-14 17:17 G | 28322050.15 | 28322050.22 | 28322050.30 | 0.0275 | 0.0260 |
| Saturn | 72832-01-27 18:00 G | 28322428.14 | 28322428.25 | 28322428.38 | 0.0276 | 0.0241 |
| Neptune | 72838-03-02 13:55 G | 28324653.93 | 28324654.08 | 28324654.24 | 0.0088 | 0.0069 |
| Neptune | 72839-03-05 00:15 G | 28325021.28 | 28325021.51 | 28325021.77 | 0.0088 | 0.0038 |
| Neptune | 72840-03-06 16:19 G | 28325388.94 | 28325389.18 | 28325389.45 | 0.0088 | 0.0017 |
| Neptune | 72841-03-08 22:34 G | 28325756.18 | 28325756.44 | 28325756.70 | 0.0088 | 0.0015 |
| Neptune | 72842-03-11 17:17 G | 28326123.99 | 28326124.22 | 28326124.47 | 0.0088 | 0.0036 |
| Neptune | 72843-03-13 22:05 G | 28326491.28 | 28326491.42 | 28326491.59 | 0.0088 | 0.0069 |
| Saturn | 72845-07-18 13:41 G | 28327348.90 | 28327349.07 | 28327349.25 | 0.0284 | 0.0192 |
| Uranus | 72858-08-13 07:41 G | 28332122.78 | 28332122.82 | 28332122.89 | 0.0134 | 0.0131 |
| Uranus | 72859-08-17 09:22 G | 28332491.71 | 28332491.89 | 28332492.11 | 0.0134 | 0.0087 |
| Uranus | 72860-08-20 19:27 G | 28332861.11 | 28332861.31 | 28332861.54 | 0.0134 | 0.0060 |
| Saturn | 72861-01-21 06:58 G | 28333014.55 | 28333014.79 | 28333015.03 | 0.0275 | 0.0020 |
| Uranus | 72861-08-24 21:51 G | 28333230.15 | 28333230.41 | 28333230.67 | 0.0135 | 0.0008 |
| Uranus | 72862-08-29 07:27 G | 28333599.57 | 28333599.81 | 28333600.06 | 0.0135 | 0.0018 |
| Uranus | 72863-09-02 09:51 G | 28333968.70 | 28333968.91 | 28333969.15 | 0.0135 | 0.0068 |
| Uranus | 72864-09-05 19:41 G | 28334338.18 | 28334338.32 | 28334338.50 | 0.0135 | 0.0101 |
| Jupiter | 72866-08-20 13:55 G | 28335052.01 | 28335052.08 | 28335052.16 | 0.0537 | 0.0499 |
| Saturn | 72875-07-26 05:31 G | 28338313.50 | 28338313.73 | 28338313.98 | 0.0283 | 0.0088 |
| Jupiter | 72878-08-26 00:58 G | 28339440.31 | 28339440.54 | 28339440.77 | 0.0539 | 0.0003 |
| Pluto | 72883-09-10 01:41 G | 28341281.37 | 28341281.57 | 28341281.82 | 0.0064 | 0.0027 |
| Jupiter | 72884-02-20 05:46 G | 28341444.69 | 28341444.74 | 28341444.80 | 0.0491 | 0.0477 |
| Saturn | 72890-01-15 16:34 G | 28343601.05 | 28343601.19 | 28343601.37 | 0.0275 | 0.0217 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 72890-08-30 22:05 G | 28343828.32 | 28343828.42 | 28343828.53 | 0.0540 | 0.0478 |
| Jupiter | 72896-02-24 11:46 G | 28345831.77 | 28345831.99 | 28345832.22 | 0.0490 | 0.0095 |
| Uranus | 72901-02-15 16:19 G | 28347649.03 | 28347649.18 | 28347649.35 | 0.0144 | 0.0113 |
| Uranus | 72902-02-20 12:15 G | 28348018.78 | 28348019.01 | 28348019.25 | 0.0144 | 0.0052 |
| Uranus | 72903-02-25 21:36 G | 28348389.15 | 28348389.40 | 28348389.66 | 0.0144 | 0.0018 |
| Uranus | 72904-03-01 16:05 G | 28348758.94 | 28348759.17 | 28348759.43 | 0.0143 | 0.0044 |
| Saturn | 72904-07-20 16:19 G | 28348899.99 | 28348900.18 | 28348900.38 | 0.0284 | 0.0151 |
| Uranus | 72905-03-07 00:58 G | 28349129.34 | 28349129.54 | 28349129.74 | 0.0143 | 0.0088 |
| Uranus | 72906-03-11 19:41 G | 28349499.22 | 28349499.32 | 28349499.45 | 0.0143 | 0.0129 |
| Jupiter | 72908-03-01 04:05 G | 28350219.50 | 28350219.67 | 28350219.85 | 0.0489 | 0.0330 |
| Neptune | 72919-08-31 23:03 G | 28354420.37 | 28354420.46 | 28354420.60 | 0.0090 | 0.0079 |
| Saturn | 72920-01-24 13:55 G | 28354565.85 | 28354566.08 | 28354566.32 | 0.0275 | 0.0066 |
| Neptune | 72920-09-02 08:10 G | 28354787.63 | 28354787.84 | 28354788.07 | 0.0090 | 0.0048 |
| Neptune | 72921-09-05 00:29 G | 28355155.28 | 28355155.52 | 28355155.76 | 0.0090 | 0.0024 |
| Neptune | 72922-09-07 05:31 G | 28355522.48 | 28355522.73 | 28355522.99 | 0.0090 | 0.0007 |
| Neptune | 72923-09-09 23:31 G | 28355890.25 | 28355890.48 | 28355890.73 | 0.0090 | 0.0032 |
| Neptune | 72924-09-11 04:19 G | 28356257.50 | 28356257.68 | 28356257.86 | 0.0090 | 0.0062 |
| Neptune | 72925-09-13 21:07 G | 28356625.35 | 28356625.38 | 28356625.44 | 0.0090 | 0.0088 |
| Saturn | 72934-07-28 02:53 G | 28359864.42 | 28359864.62 | 28359864.85 | 0.0283 | 0.0132 |
| Uranus | 72942-08-14 17:46 G | 28362804.16 | 28362804.24 | 28362804.35 | 0.0134 | 0.0123 |
| Uranus | 72943-08-18 18:00 G | 28363173.08 | 28363173.25 | 28363173.46 | 0.0134 | 0.0090 |
| Uranus | 72944-08-22 05:03 G | 28363542.49 | 28363542.71 | 28363542.95 | 0.0134 | 0.0042 |
| Uranus | 72945-08-26 06:15 G | 28363911.51 | 28363911.76 | 28363912.02 | 0.0135 | 0.0017 |
| Uranus | 72946-08-30 17:03 G | 28364280.98 | 28364281.21 | 28364281.45 | 0.0135 | 0.0036 |
| Uranus | 72947-09-03 18:58 G | 28364650.07 | 28364650.29 | 28364650.53 | 0.0135 | 0.0063 |
| Uranus | 72948-09-07 06:15 G | 28365019.64 | 28365019.76 | 28365019.92 | 0.0135 | 0.0110 |
| Saturn | 72949-01-17 14:10 G | 28365151.90 | 28365152.09 | 28365152.30 | 0.0275 | 0.0171 |
| Jupiter | 72961-08-25 21:22 G | 28369755.16 | 28369755.39 | 28369755.62 | 0.0538 | 0.0078 |
| Saturn | 72963-07-22 20:39 G | 28370451.15 | 28370451.36 | 28370451.59 | 0.0284 | 0.0107 |
| Mars | 72966-12-13 00:15 G | 28371690.32 | 28371690.51 | 28371690.70 | 0.1666 | 0.0105 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 72972-03-13 01:55 G | 28373607.36 | 28373607.58 | 28373607.84 | 0.0080 | 0.0034 |
| Jupiter | 72973-08-31 04:48 G | 28374143.55 | 28374143.70 | 28374143.86 | 0.0539 | 0.0389 |
| Saturn | 72979-01-25 18:29 G | 28376117.04 | 28376117.27 | 28376117.50 | 0.0275 | 0.0114 |
| Jupiter | 72979-02-25 02:39 G | 28376147.38 | 28376147.61 | 28376147.84 | 0.0491 | 0.0137 |
| Uranus | 72985-02-15 23:46 G | 28378330.30 | 28378330.49 | 28378330.68 | 0.0144 | 0.0098 |
| Uranus | 72986-02-20 20:10 G | 28378700.12 | 28378700.34 | 28378700.58 | 0.0144 | 0.0062 |
| Uranus | 72987-02-26 05:31 G | 28379070.47 | 28379070.73 | 28379070.99 | 0.0144 | 0.0002 |
| Uranus | 72988-03-02 00:29 G | 28379440.27 | 28379440.52 | 28379440.77 | 0.0143 | 0.0039 |
| Uranus | 72989-03-07 09:36 G | 28379810.72 | 28379810.90 | 28379811.11 | 0.0143 | 0.0093 |
| Uranus | 72990-03-12 04:19 G | 28380180.68 | 28380180.68 | 28380180.70 | 0.0143 | 0.0143 |
| Jupiter | 72991-03-01 06:15 G | 28380534.58 | 28380534.76 | 28380534.96 | 0.0489 | 0.0292 |
| Saturn | 72993-07-29 06:15 G | 28381415.59 | 28381415.76 | 28381415.95 | 0.0283 | 0.0181 |

74TH MILLENNIUM CE

This is a list of transits of Moon in the 74th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|-------------|-------------|-------------|--------|--------|-------|---|
| Neptune | 73002-03-03 19:55 G | 28384554.26 | 28384554.33 | 28384554.45 | 0.0088 | 0.0082 | | |
| Neptune | 73003-03-06 13:27 G | 28384921.85 | 28384922.06 | 28384922.28 | 0.0088 | 0.0047 | | |
| Neptune | 73004-03-07 19:12 G | 28385289.05 | 28385289.30 | 28385289.55 | 0.0088 | 0.0029 | | |
| Neptune | 73005-03-10 14:24 G | 28385656.85 | 28385657.10 | 28385657.37 | 0.0088 | 0.0007 | | |
| Neptune | 73006-03-12 19:41 G | 28386024.08 | 28386024.32 | 28386024.58 | 0.0088 | 0.0025 | | |
| Neptune | 73007-03-15 13:27 G | 28386391.89 | 28386392.06 | 28386392.28 | 0.0088 | 0.0060 | | |
| Saturn | 73008-01-20 18:29 G | 28386703.06 | 28386703.27 | 28386703.50 | 0.0275 | 0.0120 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 73008-03-16 21:51 G | 28386759.30 | 28386759.41 | 28386759.52 | 0.0088 | 0.0078 |
| Saturn | 73022-07-24 21:36 G | 28392002.16 | 28392002.40 | 28392002.65 | 0.0285 | 0.0060 |
| Uranus | 73026-08-16 02:53 G | 28393485.52 | 28393485.62 | 28393485.74 | 0.0134 | 0.0120 |
| Uranus | 73027-08-20 02:53 G | 28393854.42 | 28393854.62 | 28393854.84 | 0.0134 | 0.0078 |
| Uranus | 73028-08-23 14:53 G | 28394223.90 | 28394224.12 | 28394224.36 | 0.0134 | 0.0049 |
| Uranus | 73029-08-27 15:22 G | 28394592.88 | 28394593.14 | 28394593.39 | 0.0135 | 0.0003 |
| Uranus | 73030-09-01 03:07 G | 28394962.39 | 28394962.63 | 28394962.87 | 0.0135 | 0.0027 |
| Uranus | 73031-09-05 03:51 G | 28395331.46 | 28395331.66 | 28395331.87 | 0.0135 | 0.0079 |
| Uranus | 73032-09-08 16:05 G | 28395701.03 | 28395701.17 | 28395701.31 | 0.0135 | 0.0109 |
| Saturn | 73038-01-27 19:12 G | 28397668.10 | 28397668.30 | 28397668.51 | 0.0275 | 0.0167 |
| Jupiter | 73044-08-26 05:31 G | 28400070.51 | 28400070.73 | 28400070.94 | 0.0537 | 0.0172 |
| Saturn | 73052-07-31 14:24 G | 28402966.97 | 28402967.10 | 28402967.24 | 0.0284 | 0.0231 |
| Jupiter | 73056-08-31 04:19 G | 28404458.49 | 28404458.68 | 28404458.88 | 0.0539 | 0.0310 |
| Jupiter | 73062-02-25 02:53 G | 28406462.40 | 28406462.62 | 28406462.85 | 0.0491 | 0.0186 |
| Saturn | 73067-01-22 04:34 G | 28408254.46 | 28408254.69 | 28408254.93 | 0.0275 | 0.0065 |
| Uranus | 73069-02-17 06:58 G | 28409011.62 | 28409011.79 | 28409011.99 | 0.0144 | 0.0102 |
| Uranus | 73070-02-22 04:48 G | 28409381.47 | 28409381.70 | 28409381.95 | 0.0144 | 0.0043 |
| Uranus | 73071-02-27 13:12 G | 28409751.79 | 28409752.05 | 28409752.31 | 0.0143 | 0.0008 |
| Uranus | 73072-03-03 08:24 G | 28410121.63 | 28410121.85 | 28410122.10 | 0.0143 | 0.0055 |
| Uranus | 73073-03-08 17:31 G | 28410492.05 | 28410492.23 | 28410492.42 | 0.0143 | 0.0097 |
| Jupiter | 73074-03-01 19:41 G | 28410850.12 | 28410850.32 | 28410850.52 | 0.0489 | 0.0249 |
| Uranus | 73074-03-13 11:46 G | 28410861.96 | 28410861.99 | 28410862.04 | 0.0143 | 0.0141 |
| Saturn | 73081-07-25 20:39 G | 28413553.11 | 28413553.36 | 28413553.61 | 0.0284 | 0.0014 |
| Neptune | 73083-09-01 07:27 G | 28414320.75 | 28414320.81 | 28414320.93 | 0.0090 | 0.0084 |
| Neptune | 73084-09-03 00:15 G | 28414688.35 | 28414688.51 | 28414688.69 | 0.0090 | 0.0065 |
| Neptune | 73085-09-05 05:03 G | 28415055.47 | 28415055.71 | 28415055.96 | 0.0090 | 0.0029 |
| Neptune | 73086-09-07 23:03 G | 28415423.22 | 28415423.46 | 28415423.72 | 0.0090 | 0.0011 |
| Neptune | 73087-09-10 03:51 G | 28415790.43 | 28415790.66 | 28415790.90 | 0.0090 | 0.0027 |
| Neptune | 73088-09-11 20:10 G | 28416158.12 | 28416158.34 | 28416158.57 | 0.0090 | 0.0045 |
| Neptune | 73089-09-14 03:36 G | 28416525.57 | 28416525.65 | 28416525.78 | 0.0090 | 0.0082 |

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| Saturn | 73096-01-17 03:22 G | 28418841.63 | 28418841.64 | 28418841.66 | 0.0274 | 0.0273 |
| Saturn | 73097-01-28 23:46 G | 28419219.35 | 28419219.49 | 28419219.63 | 0.0275 | 0.0223 |
| Saturn | 73110-07-21 16:19 G | 28424140.07 | 28424140.18 | 28424140.30 | 0.0285 | 0.0246 |
| Uranus | 73110-08-17 12:43 G | 28424166.91 | 28424167.03 | 28424167.17 | 0.0134 | 0.0114 |
| Uranus | 73111-08-21 11:46 G | 28424535.80 | 28424535.99 | 28424536.21 | 0.0134 | 0.0079 |
| Uranus | 73112-08-25 00:29 G | 28424905.28 | 28424905.52 | 28424905.76 | 0.0134 | 0.0032 |
| Uranus | 73113-08-29 00:00 G | 28425274.25 | 28425274.50 | 28425274.76 | 0.0135 | 0.0007 |
| Uranus | 73114-09-02 12:29 G | 28425643.80 | 28425644.02 | 28425644.26 | 0.0135 | 0.0047 |
| Uranus | 73115-09-06 12:58 G | 28426012.84 | 28426013.04 | 28426013.27 | 0.0135 | 0.0072 |
| Uranus | 73116-09-10 02:10 G | 28426382.50 | 28426382.59 | 28426382.71 | 0.0135 | 0.0122 |
| Saturn | 73126-01-24 15:51 G | 28429805.91 | 28429806.16 | 28429806.41 | 0.0275 | 0.0008 |
| Jupiter | 73127-08-27 06:00 G | 28430385.55 | 28430385.75 | 28430385.97 | 0.0537 | 0.0249 |
| Pluto | 73128-09-12 16:48 G | 28430768.09 | 28430768.20 | 28430768.37 | 0.0064 | 0.0054 |
| Pluto | 73129-09-14 10:34 G | 28431134.76 | 28431134.94 | 28431135.14 | 0.0064 | 0.0043 |
| Jupiter | 73139-09-01 09:36 G | 28434773.71 | 28434773.90 | 28434774.10 | 0.0538 | 0.0237 |
| Saturn | 73140-07-28 00:29 G | 28435104.28 | 28435104.52 | 28435104.76 | 0.0284 | 0.0037 |
| Jupiter | 73145-02-25 12:29 G | 28436777.82 | 28436778.02 | 28436778.22 | 0.0492 | 0.0240 |
| Uranus | 73152-02-14 09:36 G | 28439322.86 | 28439322.90 | 28439322.99 | 0.0144 | 0.0139 |
| Uranus | 73153-02-18 14:53 G | 28439692.93 | 28439693.12 | 28439693.34 | 0.0144 | 0.0090 |
| Uranus | 73154-02-23 13:41 G | 28440062.84 | 28440063.07 | 28440063.31 | 0.0144 | 0.0051 |
| Saturn | 73155-01-19 08:39 G | 28440392.71 | 28440392.86 | 28440393.01 | 0.0274 | 0.0220 |
| Uranus | 73155-02-28 21:07 G | 28440433.13 | 28440433.38 | 28440433.65 | 0.0143 | 0.0014 |
| Uranus | 73156-03-04 17:17 G | 28440802.99 | 28440803.22 | 28440803.47 | 0.0143 | 0.0049 |
| Jupiter | 73157-03-01 18:43 G | 28441165.06 | 28441165.28 | 28441165.51 | 0.0490 | 0.0189 |
| Uranus | 73157-03-10 01:55 G | 28441173.43 | 28441173.58 | 28441173.78 | 0.0143 | 0.0105 |
| Neptune | 73166-03-04 11:31 G | 28444454.98 | 28444454.98 | 28444455.02 | 0.0088 | 0.0087 |
| Neptune | 73167-03-06 16:48 G | 28444822.03 | 28444822.20 | 28444822.39 | 0.0088 | 0.0063 |
| Neptune | 73168-03-08 12:15 G | 28445189.78 | 28445190.01 | 28445190.26 | 0.0088 | 0.0033 |
| Neptune | 73169-03-10 18:00 G | 28445557.00 | 28445557.25 | 28445557.51 | 0.0088 | 0.0010 |
| Saturn | 73169-07-23 01:55 G | 28445691.40 | 28445691.58 | 28445691.77 | 0.0285 | 0.0189 |

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| Neptune | 73170-03-13 11:03 G | 28445924.72 | 28445924.96 | 28445925.24 | 0.0088 | 0.0021 |
| Neptune | 73171-03-15 19:27 G | 28446292.11 | 28446292.31 | 28446292.55 | 0.0088 | 0.0043 |
| Neptune | 73172-03-17 08:10 G | 28446659.71 | 28446659.84 | 28446660.01 | 0.0088 | 0.0073 |
| Saturn | 73185-01-26 00:29 G | 28451357.27 | 28451357.52 | 28451357.77 | 0.0275 | 0.0053 |
| Uranus | 73194-08-17 20:53 G | 28454848.25 | 28454848.37 | 28454848.53 | 0.0134 | 0.0109 |
| Uranus | 73195-08-21 20:10 G | 28455217.14 | 28455217.34 | 28455217.57 | 0.0134 | 0.0070 |
| Uranus | 73196-08-25 09:36 G | 28455586.66 | 28455586.90 | 28455587.14 | 0.0134 | 0.0038 |
| Uranus | 73197-08-29 08:53 G | 28455955.62 | 28455955.87 | 28455956.13 | 0.0135 | 0.0012 |
| Uranus | 73198-09-02 22:05 G | 28456325.19 | 28456325.42 | 28456325.67 | 0.0135 | 0.0037 |
| Saturn | 73199-07-30 11:46 G | 28456655.77 | 28456655.99 | 28456656.21 | 0.0284 | 0.0093 |
| Uranus | 73199-09-06 22:05 G | 28456694.24 | 28456694.42 | 28456694.62 | 0.0135 | 0.0090 |
| Uranus | 73200-09-10 11:31 G | 28457063.87 | 28457063.98 | 28457064.11 | 0.0135 | 0.0118 |
| Jupiter | 73210-08-26 09:07 G | 28460700.71 | 28460700.88 | 28460701.05 | 0.0536 | 0.0343 |
| Saturn | 73214-01-20 20:10 G | 28461944.15 | 28461944.34 | 28461944.54 | 0.0274 | 0.0161 |
| Pluto | 73218-03-17 02:53 G | 28463460.35 | 28463460.62 | 28463460.89 | 0.0080 | 0.0001 |
| Jupiter | 73222-08-31 06:29 G | 28465088.54 | 28465088.77 | 28465089.01 | 0.0538 | 0.0126 |
| Jupiter | 73228-02-25 13:41 G | 28467092.88 | 28467093.07 | 28467093.27 | 0.0492 | 0.0294 |
| Saturn | 73228-07-24 08:24 G | 28467242.62 | 28467242.85 | 28467243.07 | 0.0285 | 0.0128 |
| Uranus | 73236-02-14 19:55 G | 28470004.27 | 28470004.33 | 28470004.40 | 0.0144 | 0.0138 |
| Uranus | 73237-02-19 00:00 G | 28470374.30 | 28470374.50 | 28470374.71 | 0.0144 | 0.0089 |
| Uranus | 73238-02-24 00:00 G | 28470744.26 | 28470744.50 | 28470744.75 | 0.0144 | 0.0033 |
| Uranus | 73239-03-01 06:29 G | 28471114.50 | 28471114.77 | 28471115.03 | 0.0143 | 0.0003 |
| Jupiter | 73240-03-01 01:55 G | 28471480.36 | 28471480.58 | 28471480.80 | 0.0490 | 0.0132 |
| Uranus | 73240-03-05 03:22 G | 28471484.42 | 28471484.64 | 28471484.87 | 0.0143 | 0.0067 |
| Uranus | 73241-03-10 11:03 G | 28471854.80 | 28471854.96 | 28471855.15 | 0.0143 | 0.0106 |
| Saturn | 73244-01-28 06:58 G | 28472908.56 | 28472908.79 | 28472909.03 | 0.0275 | 0.0115 |
| Neptune | 73248-09-03 04:34 G | 28474588.56 | 28474588.69 | 28474588.85 | 0.0090 | 0.0074 |
| Neptune | 73249-09-05 23:03 G | 28474956.23 | 28474956.46 | 28474956.69 | 0.0090 | 0.0041 |
| Neptune | 73250-09-08 04:05 G | 28475323.43 | 28475323.67 | 28475323.92 | 0.0090 | 0.0019 |
| Mars | 73250-12-15 14:53 G | 28475421.92 | 28475422.12 | 28475422.32 | 0.1660 | 0.0294 |

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| Neptune | 73251-09-10 20:10 G | 28475691.09 | 28475691.34 | 28475691.60 | 0.0090 | 0.0013 |
| Neptune | 73252-09-12 04:48 G | 28476058.48 | 28476058.70 | 28476058.93 | 0.0090 | 0.0036 |
| Neptune | 73253-09-14 15:22 G | 28476425.99 | 28476426.14 | 28476426.34 | 0.0090 | 0.0068 |
| Mars | 73257-06-19 11:17 G | 28477799.81 | 28477799.97 | 28477800.12 | 0.1863 | 0.0916 |
| Saturn | 73258-08-01 00:58 G | 28478207.34 | 28478207.54 | 28478207.75 | 0.0284 | 0.0152 |
| Saturn | 73273-01-22 11:03 G | 28483495.73 | 28483495.96 | 28483496.18 | 0.0275 | 0.0099 |
| Uranus | 73278-08-18 06:43 G | 28485529.63 | 28485529.78 | 28485529.93 | 0.0134 | 0.0107 |
| Uranus | 73279-08-22 05:46 G | 28485898.52 | 28485898.74 | 28485898.95 | 0.0134 | 0.0068 |
| Uranus | 73280-08-25 18:43 G | 28486268.03 | 28486268.28 | 28486268.53 | 0.0135 | 0.0023 |
| Uranus | 73281-08-29 18:00 G | 28486637.00 | 28486637.25 | 28486637.50 | 0.0135 | 0.0004 |
| Uranus | 73282-09-03 07:12 G | 28487006.58 | 28487006.80 | 28487007.04 | 0.0135 | 0.0057 |
| Uranus | 73283-09-07 06:43 G | 28487375.60 | 28487375.78 | 28487376.00 | 0.0135 | 0.0081 |
| Uranus | 73284-09-10 20:53 G | 28487745.33 | 28487745.37 | 28487745.43 | 0.0135 | 0.0132 |
| Saturn | 73287-07-26 16:48 G | 28488793.96 | 28488794.20 | 28488794.44 | 0.0284 | 0.0065 |
| Jupiter | 73293-08-25 04:48 G | 28491015.58 | 28491015.70 | 28491015.84 | 0.0536 | 0.0451 |
| Saturn | 73303-01-30 18:00 G | 28494460.08 | 28494460.25 | 28494460.45 | 0.0275 | 0.0180 |
| Jupiter | 73305-08-31 05:17 G | 28495403.50 | 28495403.72 | 28495403.94 | 0.0538 | 0.0043 |
| Jupiter | 73311-02-25 19:12 G | 28497408.14 | 28497408.30 | 28497408.46 | 0.0492 | 0.0357 |
| Saturn | 73317-08-03 10:05 G | 28499758.77 | 28499758.92 | 28499759.09 | 0.0284 | 0.0217 |
| Uranus | 73320-02-16 06:00 G | 28500685.65 | 28500685.75 | 28500685.88 | 0.0144 | 0.0127 |
| Uranus | 73321-02-20 08:39 G | 28501055.65 | 28501055.86 | 28501056.09 | 0.0144 | 0.0081 |
| Uranus | 73322-02-25 09:51 G | 28501425.67 | 28501425.91 | 28501426.15 | 0.0144 | 0.0038 |
| Jupiter | 73323-03-02 03:51 G | 28501795.41 | 28501795.66 | 28501795.90 | 0.0491 | 0.0059 |
| Uranus | 73323-03-02 15:07 G | 28501795.87 | 28501796.13 | 28501796.40 | 0.0143 | 0.0024 * |
| Uranus | 73324-03-06 12:58 G | 28502165.83 | 28502166.04 | 28502166.28 | 0.0143 | 0.0059 |
| Uranus | 73325-03-11 20:10 G | 28502536.22 | 28502536.34 | 28502536.52 | 0.0143 | 0.0117 |
| Neptune | 73331-03-07 09:22 G | 28504722.77 | 28504722.89 | 28504723.03 | 0.0088 | 0.0076 |
| Saturn | 73332-01-25 21:22 G | 28505047.14 | 28505047.39 | 28505047.64 | 0.0275 | 0.0037 |
| Neptune | 73332-03-08 15:07 G | 28505089.92 | 28505090.13 | 28505090.37 | 0.0088 | 0.0041 |
| Neptune | 73333-03-11 07:41 G | 28505457.57 | 28505457.82 | 28505458.09 | 0.0088 | 0.0024 |

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| Neptune | 73334-03-13 18:00 G | 28505825.00 | 28505825.25 | 28505825.50 | 0.0088 | 0.0012 |
| Jupiter | 73335-03-06 09:22 G | 28506182.79 | 28506182.89 | 28506183.01 | 0.0490 | 0.0429 |
| Neptune | 73335-03-16 06:00 G | 28506192.50 | 28506192.75 | 28506193.01 | 0.0088 | 0.0030 |
| Neptune | 73336-03-17 20:10 G | 28506560.20 | 28506560.34 | 28506560.54 | 0.0088 | 0.0066 |
| Neptune | 73337-03-20 03:36 G | 28506927.60 | 28506927.65 | 28506927.77 | 0.0088 | 0.0083 |
| Saturn | 73346-07-29 06:15 G | 28510345.52 | 28510345.76 | 28510345.99 | 0.0284 | 0.0007 |
| Saturn | 73361-01-19 06:29 G | 28515633.69 | 28515633.77 | 28515633.86 | 0.0274 | 0.0256 |
| Saturn | 73362-02-01 09:36 G | 28516011.81 | 28516011.90 | 28516012.02 | 0.0275 | 0.0247 |
| Uranus | 73362-08-19 14:39 G | 28516210.95 | 28516211.11 | 28516211.29 | 0.0134 | 0.0099 |
| Uranus | 73363-08-23 13:55 G | 28516579.86 | 28516580.08 | 28516580.31 | 0.0134 | 0.0062 |
| Uranus | 73364-08-27 03:07 G | 28516949.39 | 28516949.63 | 28516949.89 | 0.0135 | 0.0028 |
| Uranus | 73365-08-31 02:39 G | 28517318.36 | 28517318.61 | 28517318.86 | 0.0135 | 0.0021 |
| Uranus | 73366-09-04 16:05 G | 28517687.94 | 28517688.17 | 28517688.41 | 0.0135 | 0.0046 |
| Uranus | 73367-09-08 15:51 G | 28518056.99 | 28518057.16 | 28518057.33 | 0.0135 | 0.0099 |
| Uranus | 73368-09-12 05:03 G | 28518426.64 | 28518426.71 | 28518426.82 | 0.0135 | 0.0126 |
| Pluto | 73374-09-16 00:43 G | 28520621.32 | 28520621.53 | 28520621.77 | 0.0064 | 0.0027 |
| Saturn | 73375-07-23 18:00 G | 28520932.14 | 28520932.25 | 28520932.40 | 0.0284 | 0.0243 |
| Saturn | 73376-08-04 17:46 G | 28521310.22 | 28521310.24 | 28521310.29 | 0.0283 | 0.0281 |
| Jupiter | 73376-08-25 06:43 G | 28521330.75 | 28521330.78 | 28521330.80 | 0.0535 | 0.0531 |
| Jupiter | 73388-08-30 12:00 G | 28525718.77 | 28525719.00 | 28525719.23 | 0.0537 | 0.0037 |
| Saturn | 73391-01-27 02:24 G | 28526598.35 | 28526598.60 | 28526598.86 | 0.0275 | 0.0026 |
| Jupiter | 73394-02-24 20:24 G | 28527723.24 | 28527723.35 | 28527723.47 | 0.0493 | 0.0429 |
| Jupiter | 73400-09-05 00:29 G | 28530106.44 | 28530106.52 | 28530106.62 | 0.0538 | 0.0495 |
| Uranus | 73404-02-17 16:05 G | 28531367.09 | 28531367.17 | 28531367.30 | 0.0144 | 0.0129 |
| Uranus | 73405-02-21 18:00 G | 28531737.03 | 28531737.25 | 28531737.48 | 0.0144 | 0.0076 |
| Saturn | 73405-07-31 21:51 G | 28531897.18 | 28531897.41 | 28531897.63 | 0.0284 | 0.0071 |
| Uranus | 73406-02-26 20:39 G | 28532107.12 | 28532107.36 | 28532107.61 | 0.0144 | 0.0023 |
| Jupiter | 73406-03-02 05:03 G | 28532110.48 | 28532110.71 | 28532110.94 | 0.0491 | 0.0002 |
| Uranus | 73407-03-04 00:43 G | 28532477.27 | 28532477.53 | 28532477.80 | 0.0143 | 0.0015 |
| Uranus | 73408-03-07 23:31 G | 28532847.29 | 28532847.48 | 28532847.71 | 0.0143 | 0.0079 |

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| Uranus | 73409-03-13 05:46 G | 28533217.60 | 28533217.74 | 28533217.91 | 0.0143 | 0.0115 |
| Neptune | 73412-09-04 22:34 G | 28534489.34 | 28534489.44 | 28534489.59 | 0.0090 | 0.0078 |
| Neptune | 73413-09-07 04:19 G | 28534856.51 | 28534856.68 | 28534856.89 | 0.0090 | 0.0059 |
| Neptune | 73414-09-09 19:27 G | 28535224.07 | 28535224.31 | 28535224.58 | 0.0090 | 0.0024 |
| Neptune | 73415-09-12 05:17 G | 28535591.47 | 28535591.72 | 28535591.96 | 0.0090 | 0.0004 |
| Neptune | 73416-09-13 15:07 G | 28535958.90 | 28535959.13 | 28535959.39 | 0.0090 | 0.0032 |
| Neptune | 73417-09-16 05:31 G | 28536326.55 | 28536326.73 | 28536326.96 | 0.0090 | 0.0052 |
| Jupiter | 73418-03-06 22:05 G | 28536498.26 | 28536498.42 | 28536498.58 | 0.0490 | 0.0363 |
| Neptune | 73418-09-18 12:00 G | 28536693.94 | 28536694.00 | 28536694.08 | 0.0090 | 0.0086 |
| Saturn | 73420-01-22 19:41 G | 28537185.16 | 28537185.32 | 28537185.50 | 0.0274 | 0.0195 |
| Saturn | 73434-07-26 01:12 G | 28542483.37 | 28542483.55 | 28542483.76 | 0.0284 | 0.0181 |
| Uranus | 73445-08-16 11:31 G | 28546522.92 | 28546522.98 | 28546523.05 | 0.0134 | 0.0129 |
| Uranus | 73446-08-21 00:15 G | 28546892.34 | 28546892.51 | 28546892.68 | 0.0134 | 0.0099 |
| Uranus | 73447-08-24 23:31 G | 28547261.27 | 28547261.48 | 28547261.72 | 0.0134 | 0.0058 |
| Uranus | 73448-08-28 12:15 G | 28547630.77 | 28547631.01 | 28547631.27 | 0.0134 | 0.0016 |
| Uranus | 73449-09-01 11:46 G | 28547999.75 | 28547999.99 | 28548000.25 | 0.0135 | 0.0015 |
| Saturn | 73450-01-29 07:12 G | 28548149.57 | 28548149.80 | 28548150.04 | 0.0275 | 0.0083 |
| Uranus | 73450-09-06 00:43 G | 28548369.32 | 28548369.53 | 28548369.76 | 0.0135 | 0.0066 |
| Uranus | 73451-09-10 00:00 G | 28548738.34 | 28548738.50 | 28548738.71 | 0.0135 | 0.0090 |
| Mars | 73455-12-16 11:31 G | 28550296.92 | 28550296.98 | 28550297.05 | 0.1653 | 0.1516 |
| Pluto | 73464-03-20 10:48 G | 28553313.76 | 28553313.95 | 28553314.17 | 0.0080 | 0.0048 |
| Saturn | 73464-08-02 10:48 G | 28553448.74 | 28553448.95 | 28553449.17 | 0.0284 | 0.0134 |
| Jupiter | 73471-08-30 23:31 G | 28556033.26 | 28556033.48 | 28556033.70 | 0.0536 | 0.0156 |
| Jupiter | 73477-02-24 23:03 G | 28558038.42 | 28558038.46 | 28558038.51 | 0.0493 | 0.0483 |
| Saturn | 73479-01-24 06:58 G | 28558736.59 | 28558736.79 | 28558737.01 | 0.0274 | 0.0138 |
| Jupiter | 73483-09-05 09:07 G | 28560421.75 | 28560421.88 | 28560422.03 | 0.0539 | 0.0417 |
| Uranus | 73488-02-18 01:41 G | 28562048.43 | 28562048.57 | 28562048.73 | 0.0144 | 0.0114 |
| Uranus | 73489-02-22 01:55 G | 28562418.35 | 28562418.58 | 28562418.81 | 0.0144 | 0.0071 |
| Jupiter | 73489-03-01 17:17 G | 28562425.99 | 28562426.22 | 28562426.46 | 0.0491 | 0.0058 |
| Uranus | 73490-02-27 05:31 G | 28562788.49 | 28562788.73 | 28562788.98 | 0.0144 | 0.0026 |

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| Uranus | 73491-03-04 08:10 G | 28563158.59 | 28563158.84 | 28563159.11 | 0.0143 | 0.0035 |
| Uranus | 73492-03-08 08:39 G | 28563528.65 | 28563528.86 | 28563529.09 | 0.0143 | 0.0070 |
| Uranus | 73493-03-13 13:27 G | 28563898.97 | 28563899.06 | 28563899.20 | 0.0143 | 0.0129 |
| Saturn | 73493-07-27 10:19 G | 28564034.72 | 28564034.93 | 28564035.15 | 0.0284 | 0.0119 |
| Neptune | 73495-03-07 13:55 G | 28564623.01 | 28564623.08 | 28564623.19 | 0.0088 | 0.0082 |
| Neptune | 73496-03-09 06:00 G | 28564990.54 | 28564990.75 | 28564990.96 | 0.0088 | 0.0056 |
| Neptune | 73497-03-11 16:34 G | 28565357.95 | 28565358.19 | 28565358.43 | 0.0088 | 0.0029 |
| Neptune | 73498-03-14 02:53 G | 28565725.35 | 28565725.62 | 28565725.89 | 0.0088 | 0.0003 |
| Neptune | 73499-03-16 18:15 G | 28566093.03 | 28566093.26 | 28566093.51 | 0.0088 | 0.0025 |
| Neptune | 73500-03-19 00:43 G | 28566460.33 | 28566460.53 | 28566460.77 | 0.0088 | 0.0050 |
| Jupiter | 73501-03-06 17:31 G | 28566813.04 | 28566813.23 | 28566813.42 | 0.0490 | 0.0294 |
| Neptune | 73501-03-21 19:55 G | 28566828.22 | 28566828.33 | 28566828.46 | 0.0088 | 0.0077 |
| Saturn | 73509-01-31 14:53 G | 28569700.92 | 28569701.12 | 28569701.33 | 0.0275 | 0.0139 |
| Saturn | 73523-08-05 16:19 G | 28575000.00 | 28575000.18 | 28575000.36 | 0.0284 | 0.0193 |
| Uranus | 73530-08-22 08:10 G | 28577573.65 | 28577573.84 | 28577574.04 | 0.0134 | 0.0088 |
| Uranus | 73531-08-26 08:10 G | 28577942.62 | 28577942.84 | 28577943.08 | 0.0134 | 0.0053 |
| Uranus | 73532-08-29 20:39 G | 28578312.11 | 28578312.36 | 28578312.61 | 0.0134 | 0.0016 |
| Uranus | 73533-09-02 20:39 G | 28578681.12 | 28578681.36 | 28578681.61 | 0.0135 | 0.0030 |
| Uranus | 73534-09-07 09:07 G | 28579050.66 | 28579050.88 | 28579051.12 | 0.0135 | 0.0056 |
| Mars | 73534-12-19 09:36 G | 28579153.74 | 28579153.90 | 28579154.06 | 0.1655 | 0.0830 |
| Uranus | 73535-09-11 09:22 G | 28579419.76 | 28579419.89 | 28579420.04 | 0.0135 | 0.0109 |
| Uranus | 73536-09-14 22:05 G | 28579789.41 | 28579789.42 | 28579789.47 | 0.0135 | 0.0134 |
| Saturn | 73538-01-26 11:17 G | 28580287.73 | 28580287.97 | 28580288.22 | 0.0274 | 0.0082 |
| Mars | 73541-06-22 06:29 G | 28581530.56 | 28581530.77 | 28581530.97 | 0.1871 | 0.0245 |
| Saturn | 73552-07-29 23:03 G | 28585586.24 | 28585586.46 | 28585586.69 | 0.0284 | 0.0058 |
| Jupiter | 73554-08-31 12:43 G | 28586348.82 | 28586349.03 | 28586349.23 | 0.0536 | 0.0218 |
| Jupiter | 73566-09-05 08:24 G | 28590736.67 | 28590736.85 | 28590737.04 | 0.0538 | 0.0339 |
| Saturn | 73568-02-02 23:03 G | 28591252.29 | 28591252.46 | 28591252.64 | 0.0275 | 0.0192 |
| Uranus | 73572-02-19 10:19 G | 28592729.81 | 28592729.93 | 28592730.08 | 0.0144 | 0.0119 |
| Jupiter | 73572-03-01 13:27 G | 28592740.84 | 28592741.06 | 28592741.30 | 0.0492 | 0.0123 |

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| Uranus | 73573-02-23 09:07 G | 28593099.66 | 28593099.88 | 28593100.13 | 0.0144 | 0.0064 |
| Uranus | 73574-02-28 14:53 G | 28593469.88 | 28593470.12 | 28593470.37 | 0.0144 | 0.0013 |
| Uranus | 73575-03-05 16:05 G | 28593839.91 | 28593840.17 | 28593840.44 | 0.0143 | 0.0027 |
| Uranus | 73576-03-09 18:00 G | 28594210.06 | 28594210.25 | 28594210.45 | 0.0143 | 0.0090 |
| Uranus | 73577-03-14 21:22 G | 28594580.27 | 28594580.39 | 28594580.53 | 0.0143 | 0.0125 |
| Neptune | 73577-09-07 18:15 G | 28594757.11 | 28594757.26 | 28594757.45 | 0.0090 | 0.0069 |
| Neptune | 73578-09-10 05:31 G | 28595124.51 | 28595124.73 | 28595124.96 | 0.0090 | 0.0035 |
| Neptune | 73579-09-12 15:07 G | 28595491.87 | 28595492.13 | 28595492.39 | 0.0090 | 0.0014 |
| Neptune | 73580-09-14 06:15 G | 28595859.52 | 28595859.76 | 28595860.01 | 0.0090 | 0.0020 |
| Saturn | 73581-07-24 16:19 G | 28596173.15 | 28596173.18 | 28596173.24 | 0.0285 | 0.0280 |
| Neptune | 73581-09-16 11:17 G | 28596226.76 | 28596226.97 | 28596227.22 | 0.0090 | 0.0041 |
| Saturn | 73582-08-06 18:58 G | 28596551.17 | 28596551.29 | 28596551.41 | 0.0284 | 0.0248 |
| Neptune | 73582-09-19 05:03 G | 28596594.59 | 28596594.71 | 28596594.88 | 0.0090 | 0.0074 |
| Jupiter | 73584-03-06 08:39 G | 28597128.66 | 28597128.86 | 28597129.06 | 0.0491 | 0.0243 |
| Saturn | 73597-01-27 10:48 G | 28601838.70 | 28601838.95 | 28601839.20 | 0.0274 | 0.0027 |
| Saturn | 73611-08-01 08:24 G | 28607137.61 | 28607137.85 | 28607138.09 | 0.0284 | 0.0002 |
| Uranus | 73613-08-18 06:15 G | 28607885.66 | 28607885.76 | 28607885.89 | 0.0134 | 0.0119 |
| Uranus | 73614-08-22 17:46 G | 28608255.05 | 28608255.24 | 28608255.43 | 0.0134 | 0.0090 |
| Uranus | 73615-08-26 18:43 G | 28608624.05 | 28608624.28 | 28608624.51 | 0.0134 | 0.0046 |
| Uranus | 73616-08-30 06:00 G | 28608993.49 | 28608993.75 | 28608994.00 | 0.0134 | 0.0006 |
| Uranus | 73617-09-03 06:29 G | 28609362.53 | 28609362.77 | 28609363.01 | 0.0135 | 0.0026 |
| Uranus | 73618-09-07 17:46 G | 28609732.04 | 28609732.24 | 28609732.47 | 0.0135 | 0.0075 |
| Uranus | 73619-09-11 18:43 G | 28610101.12 | 28610101.28 | 28610101.45 | 0.0135 | 0.0099 |
| Pluto | 73620-09-19 11:31 G | 28610474.73 | 28610474.98 | 28610475.24 | 0.0064 | 0.0003 |
| Saturn | 73626-01-22 02:24 G | 28612425.52 | 28612425.60 | 28612425.69 | 0.0274 | 0.0255 |
| Saturn | 73627-02-04 01:12 G | 28612803.44 | 28612803.55 | 28612803.68 | 0.0275 | 0.0243 |
| Jupiter | 73637-08-30 05:31 G | 28616663.55 | 28616663.73 | 28616663.92 | 0.0535 | 0.0317 |
| Saturn | 73640-07-25 17:46 G | 28617724.10 | 28617724.24 | 28617724.39 | 0.0285 | 0.0230 |
| Jupiter | 73649-09-04 09:51 G | 28621051.71 | 28621051.91 | 28621052.11 | 0.0537 | 0.0237 |
| Jupiter | 73655-03-02 06:00 G | 28623056.53 | 28623056.75 | 28623056.97 | 0.0493 | 0.0169 |

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| Saturn | 73656-01-29 13:41 G | 28623389.83 | 28623390.07 | 28623390.31 | 0.0274 | 0.0025 |
| Uranus | 73656-02-19 19:12 G | 28623411.13 | 28623411.30 | 28623411.49 | 0.0144 | 0.0102 |
| Uranus | 73657-02-23 16:34 G | 28623780.97 | 28623781.19 | 28623781.44 | 0.0144 | 0.0063 |
| Uranus | 73658-02-28 23:17 G | 28624151.22 | 28624151.47 | 28624151.72 | 0.0144 | 0.0013 |
| Uranus | 73659-03-05 22:48 G | 28624521.21 | 28624521.45 | 28624521.71 | 0.0143 | 0.0045 |
| Neptune | 73659-03-08 02:10 G | 28624523.58 | 28624523.59 | 28624523.65 | 0.0088 | 0.0087 |
| Neptune | 73660-03-09 14:24 G | 28624890.97 | 28624891.10 | 28624891.27 | 0.0088 | 0.0070 |
| Uranus | 73660-03-10 02:10 G | 28624891.40 | 28624891.59 | 28624891.81 | 0.0143 | 0.0080 |
| Neptune | 73661-03-12 00:00 G | 28625258.28 | 28625258.50 | 28625258.77 | 0.0088 | 0.0035 |
| Uranus | 73661-03-15 04:19 G | 28625261.64 | 28625261.68 | 28625261.74 | 0.0143 | 0.0140 |
| Neptune | 73662-03-14 17:03 G | 28625625.97 | 28625626.21 | 28625626.47 | 0.0088 | 0.0018 |
| Neptune | 73663-03-16 23:17 G | 28625993.21 | 28625993.47 | 28625993.73 | 0.0088 | 0.0018 |
| Neptune | 73664-03-18 18:00 G | 28626361.03 | 28626361.25 | 28626361.51 | 0.0088 | 0.0035 |
| Neptune | 73665-03-20 22:48 G | 28626728.33 | 28626728.45 | 28626728.63 | 0.0088 | 0.0071 |
| Neptune | 73666-03-23 17:31 G | 28627096.23 | 28627096.23 | 28627096.25 | 0.0088 | 0.0088 |
| Jupiter | 73667-03-06 12:29 G | 28627443.80 | 28627444.02 | 28627444.25 | 0.0491 | 0.0193 |
| Saturn | 73670-08-02 10:48 G | 28628688.71 | 28628688.95 | 28628689.20 | 0.0284 | 0.0052 |
| Saturn | 73685-01-23 02:53 G | 28633976.46 | 28633976.62 | 28633976.80 | 0.0274 | 0.0206 |
| Uranus | 73697-08-18 15:36 G | 28638567.08 | 28638567.15 | 28638567.24 | 0.0134 | 0.0127 |
| Uranus | 73698-08-23 01:27 G | 28638936.36 | 28638936.56 | 28638936.78 | 0.0134 | 0.0077 |
| Saturn | 73699-07-27 21:07 G | 28639275.20 | 28639275.38 | 28639275.56 | 0.0286 | 0.0182 |
| Uranus | 73699-08-27 03:22 G | 28639305.41 | 28639305.64 | 28639305.87 | 0.0134 | 0.0044 |
| Uranus | 73700-08-31 13:41 G | 28639674.81 | 28639675.07 | 28639675.33 | 0.0134 | 0.0005 |
| Uranus | 73701-09-04 15:22 G | 28640043.92 | 28640044.14 | 28640044.38 | 0.0135 | 0.0039 |
| Uranus | 73702-09-09 02:10 G | 28640413.38 | 28640413.59 | 28640413.82 | 0.0135 | 0.0067 |
| Uranus | 73703-09-13 04:19 G | 28640782.57 | 28640782.68 | 28640782.79 | 0.0135 | 0.0118 |
| Saturn | 73715-01-31 19:12 G | 28644941.08 | 28644941.30 | 28644941.54 | 0.0274 | 0.0076 |
| Jupiter | 73720-08-30 14:10 G | 28646978.95 | 28646979.09 | 28646979.25 | 0.0535 | 0.0387 |
| Saturn | 73729-08-04 09:22 G | 28650239.66 | 28650239.89 | 28650240.12 | 0.0285 | 0.0101 |
| Jupiter | 73732-09-04 17:31 G | 28651367.00 | 28651367.23 | 28651367.45 | 0.0537 | 0.0181 |

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| Jupiter | 73738-03-02 08:53 G | 28653371.65 | 28653371.87 | 28653372.09 | 0.0493 | 0.0222 |
| Uranus | 73739-02-15 19:12 G | 28653722.27 | 28653722.30 | 28653722.35 | 0.0144 | 0.0142 |
| Mars | 73739-12-19 17:17 G | 28654029.04 | 28654029.22 | 28654029.40 | 0.1649 | 0.0644 |
| Uranus | 73740-02-21 04:48 G | 28654092.55 | 28654092.70 | 28654092.88 | 0.0144 | 0.0109 |
| Uranus | 73741-02-25 01:27 G | 28654462.33 | 28654462.56 | 28654462.82 | 0.0144 | 0.0051 |
| Neptune | 73741-09-08 05:46 G | 28654657.60 | 28654657.74 | 28654657.88 | 0.0090 | 0.0073 |
| Uranus | 73742-03-02 09:22 G | 28654832.64 | 28654832.89 | 28654833.14 | 0.0144 | 0.0004 |
| Neptune | 73742-09-10 13:55 G | 28655024.87 | 28655025.08 | 28655025.30 | 0.0090 | 0.0051 |
| Uranus | 73743-03-07 07:41 G | 28655202.58 | 28655202.82 | 28655203.09 | 0.0143 | 0.0039 |
| Neptune | 73743-09-13 06:00 G | 28655392.51 | 28655392.75 | 28655393.00 | 0.0090 | 0.0019 |
| Saturn | 73744-01-25 23:03 G | 28655527.25 | 28655527.46 | 28655527.67 | 0.0274 | 0.0157 |
| Uranus | 73744-03-11 12:15 G | 28655572.84 | 28655573.01 | 28655573.20 | 0.0143 | 0.0101 |
| Neptune | 73744-09-14 11:17 G | 28655759.72 | 28655759.97 | 28655760.23 | 0.0090 | 0.0002 |
| Uranus | 73745-03-16 12:58 G | 28655942.95 | 28655943.04 | 28655943.14 | 0.0143 | 0.0134 |
| Neptune | 73745-09-17 05:31 G | 28656127.50 | 28656127.73 | 28656127.97 | 0.0090 | 0.0036 |
| Neptune | 73746-09-19 09:51 G | 28656494.74 | 28656494.91 | 28656495.12 | 0.0090 | 0.0057 |
| Jupiter | 73750-03-06 22:34 G | 28657759.22 | 28657759.44 | 28657759.66 | 0.0491 | 0.0135 |
| Saturn | 73758-07-30 01:55 G | 28660826.38 | 28660826.58 | 28660826.79 | 0.0286 | 0.0139 |
| Saturn | 73774-02-01 22:05 G | 28666492.20 | 28666492.42 | 28666492.65 | 0.0274 | 0.0122 |
| Uranus | 73781-08-20 01:41 G | 28669248.44 | 28669248.57 | 28669248.73 | 0.0134 | 0.0109 |
| Uranus | 73782-08-24 10:34 G | 28669617.75 | 28669617.94 | 28669618.16 | 0.0134 | 0.0082 |
| Uranus | 73783-08-28 13:55 G | 28669986.84 | 28669987.08 | 28669987.31 | 0.0134 | 0.0035 |
| Uranus | 73784-08-31 22:48 G | 28670356.20 | 28670356.45 | 28670356.71 | 0.0135 | 0.0003 |
| Uranus | 73785-09-05 01:27 G | 28670725.33 | 28670725.56 | 28670725.80 | 0.0135 | 0.0036 |
| Uranus | 73786-09-09 10:48 G | 28671094.75 | 28671094.95 | 28671095.16 | 0.0135 | 0.0083 |
| Uranus | 73787-09-13 13:27 G | 28671463.93 | 28671464.06 | 28671464.21 | 0.0135 | 0.0109 |
| Saturn | 73788-08-05 09:51 G | 28671790.72 | 28671790.91 | 28671791.12 | 0.0285 | 0.0149 |
| Saturn | 73803-01-27 22:05 G | 28677078.19 | 28677078.42 | 28677078.64 | 0.0274 | 0.0112 |
| Jupiter | 73803-08-31 22:48 G | 28677294.31 | 28677294.45 | 28677294.59 | 0.0535 | 0.0427 |
| Jupiter | 73815-09-05 18:00 G | 28681682.04 | 28681682.25 | 28681682.47 | 0.0536 | 0.0109 |

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| Saturn | 73817-08-01 02:24 G | 28682377.37 | 28682377.60 | 28682377.83 | 0.0286 | 0.0095 |
| Jupiter | 73821-03-02 18:58 G | 28683687.11 | 28683687.29 | 28683687.48 | 0.0494 | 0.0281 |
| Uranus | 73824-02-22 14:39 G | 28684773.93 | 28684774.11 | 28684774.32 | 0.0144 | 0.0090 |
| Neptune | 73824-03-10 21:07 G | 28684791.28 | 28684791.38 | 28684791.54 | 0.0088 | 0.0077 |
| Uranus | 73825-02-26 10:34 G | 28685143.71 | 28685143.94 | 28685144.19 | 0.0144 | 0.0053 |
| Neptune | 73825-03-13 14:39 G | 28685158.91 | 28685159.11 | 28685159.34 | 0.0088 | 0.0049 |
| Uranus | 73826-03-03 18:58 G | 28685514.04 | 28685514.29 | 28685514.54 | 0.0144 | 0.0001 |
| Neptune | 73826-03-15 20:10 G | 28685526.10 | 28685526.34 | 28685526.60 | 0.0088 | 0.0025 |
| Uranus | 73827-03-08 15:51 G | 28685883.93 | 28685884.16 | 28685884.42 | 0.0144 | 0.0055 |
| Neptune | 73827-03-18 15:36 G | 28685893.89 | 28685894.15 | 28685894.41 | 0.0088 | 0.0003 |
| Uranus | 73828-03-12 22:05 G | 28686254.23 | 28686254.42 | 28686254.61 | 0.0143 | 0.0091 |
| Neptune | 73828-03-19 20:39 G | 28686261.12 | 28686261.36 | 28686261.61 | 0.0088 | 0.0029 |
| Neptune | 73829-03-22 13:55 G | 28686628.89 | 28686629.08 | 28686629.30 | 0.0088 | 0.0056 |
| Neptune | 73830-03-24 22:05 G | 28686996.36 | 28686996.42 | 28686996.53 | 0.0088 | 0.0082 |
| Saturn | 73833-02-03 19:55 G | 28688043.14 | 28688043.33 | 28688043.55 | 0.0274 | 0.0170 |
| Jupiter | 73833-03-07 09:36 G | 28688074.66 | 28688074.90 | 28688075.15 | 0.0492 | 0.0083 |
| Jupiter | 73845-03-11 16:05 G | 28692462.13 | 28692462.17 | 28692462.22 | 0.0491 | 0.0478 |
| Saturn | 73847-08-08 15:36 G | 28693341.99 | 28693342.15 | 28693342.32 | 0.0285 | 0.0198 |
| Saturn | 73862-01-29 02:53 G | 28698629.39 | 28698629.62 | 28698629.86 | 0.0273 | 0.0063 |
| Uranus | 73865-08-21 11:03 G | 28699929.85 | 28699929.96 | 28699930.08 | 0.0134 | 0.0118 |
| Uranus | 73866-08-25 18:00 G | 28700299.04 | 28700299.25 | 28700299.49 | 0.0134 | 0.0067 |
| Pluto | 73866-09-23 16:19 G | 28700327.97 | 28700328.18 | 28700328.44 | 0.0064 | 0.0030 |
| Uranus | 73867-08-29 22:19 G | 28700668.20 | 28700668.43 | 28700668.67 | 0.0134 | 0.0037 |
| Uranus | 73868-09-02 06:15 G | 28701037.50 | 28701037.76 | 28701038.02 | 0.0135 | 0.0006 |
| Uranus | 73869-09-06 10:05 G | 28701406.71 | 28701406.92 | 28701407.16 | 0.0135 | 0.0047 |
| Uranus | 73870-09-10 18:29 G | 28701776.08 | 28701776.27 | 28701776.50 | 0.0135 | 0.0077 |
| Uranus | 73871-09-14 22:48 G | 28702145.39 | 28702145.45 | 28702145.55 | 0.0135 | 0.0127 |
| Saturn | 73876-08-01 21:22 G | 28703928.15 | 28703928.39 | 28703928.64 | 0.0286 | 0.0049 |
| Jupiter | 73886-08-30 23:03 G | 28707609.39 | 28707609.46 | 28707609.53 | 0.0533 | 0.0502 |
| Saturn | 73891-01-24 02:24 G | 28709216.60 | 28709216.60 | 28709216.61 | 0.0273 | 0.0272 |

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| Saturn | 73892-02-05 18:43 G | 28709594.14 | 28709594.28 | 28709594.44 | 0.0273 | 0.0219 |
| Jupiter | 73898-09-05 03:22 G | 28711997.41 | 28711997.64 | 28711997.87 | 0.0536 | 0.0034 |
| Jupiter | 73904-03-03 06:58 G | 28714002.61 | 28714002.79 | 28714002.98 | 0.0494 | 0.0329 |
| Neptune | 73905-09-09 12:58 G | 28714557.97 | 28714558.04 | 28714558.17 | 0.0090 | 0.0083 |
| Saturn | 73906-08-10 19:55 G | 28714893.23 | 28714893.33 | 28714893.47 | 0.0285 | 0.0248 |
| Neptune | 73906-09-12 05:46 G | 28714925.59 | 28714925.74 | 28714925.94 | 0.0090 | 0.0065 |
| Uranus | 73907-02-18 15:07 G | 28715085.04 | 28715085.13 | 28715085.25 | 0.0144 | 0.0131 |
| Neptune | 73907-09-14 10:34 G | 28715292.71 | 28715292.94 | 28715293.19 | 0.0090 | 0.0029 |
| Uranus | 73908-02-24 01:12 G | 28715455.37 | 28715455.55 | 28715455.75 | 0.0144 | 0.0098 |
| Neptune | 73908-09-16 04:48 G | 28715660.46 | 28715660.70 | 28715660.96 | 0.0090 | 0.0010 |
| Uranus | 73909-02-27 20:39 G | 28715825.12 | 28715825.36 | 28715825.62 | 0.0144 | 0.0038 |
| Neptune | 73909-09-18 09:51 G | 28716027.68 | 28716027.91 | 28716028.15 | 0.0090 | 0.0026 |
| Uranus | 73910-03-05 06:00 G | 28716195.50 | 28716195.75 | 28716196.01 | 0.0144 | 0.0006 |
| Jupiter | 73910-09-10 22:48 G | 28716385.40 | 28716385.45 | 28716385.50 | 0.0538 | 0.0523 |
| Neptune | 73910-09-21 01:55 G | 28716395.37 | 28716395.58 | 28716395.82 | 0.0090 | 0.0046 |
| Uranus | 73911-03-10 02:39 G | 28716565.36 | 28716565.61 | 28716565.86 | 0.0144 | 0.0050 |
| Neptune | 73911-09-23 09:36 G | 28716762.81 | 28716762.90 | 28716763.04 | 0.0090 | 0.0080 |
| Uranus | 73912-03-14 08:53 G | 28716935.73 | 28716935.87 | 28716936.05 | 0.0143 | 0.0112 |
| Jupiter | 73916-03-07 13:12 G | 28718389.82 | 28718390.05 | 28718390.28 | 0.0492 | 0.0031 |
| Saturn | 73921-01-31 10:05 G | 28720180.67 | 28720180.92 | 28720181.16 | 0.0273 | 0.0011 |
| Jupiter | 73928-03-12 07:41 G | 28722777.71 | 28722777.82 | 28722777.93 | 0.0491 | 0.0433 |
| Saturn | 73935-08-04 20:39 G | 28725479.12 | 28725479.36 | 28725479.60 | 0.0286 | 0.0001 |
| Uranus | 73949-08-22 21:07 G | 28730611.24 | 28730611.38 | 28730611.56 | 0.0134 | 0.0100 |
| Saturn | 73950-01-26 02:24 G | 28730767.46 | 28730767.60 | 28730767.76 | 0.0273 | 0.0219 |
| Uranus | 73950-08-27 03:22 G | 28730980.44 | 28730980.64 | 28730980.87 | 0.0134 | 0.0073 |
| Saturn | 73951-02-07 23:46 G | 28731145.48 | 28731145.49 | 28731145.53 | 0.0273 | 0.0272 |
| Uranus | 73951-08-31 09:07 G | 28731349.64 | 28731349.88 | 28731350.12 | 0.0134 | 0.0024 |
| Uranus | 73952-09-03 15:22 G | 28731718.89 | 28731719.14 | 28731719.41 | 0.0135 | 0.0009 |
| Uranus | 73953-09-07 20:24 G | 28732088.13 | 28732088.35 | 28732088.59 | 0.0135 | 0.0047 |
| Uranus | 73954-09-12 02:53 G | 28732457.45 | 28732457.62 | 28732457.83 | 0.0135 | 0.0091 |

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| Pluto | 73955-03-27 01:27 G | 28732653.38 | 28732653.56 | 28732653.78 | 0.0080 | 0.0050 |
| Uranus | 73955-09-16 08:24 G | 28732826.75 | 28732826.85 | 28732826.97 | 0.0135 | 0.0119 |
| Saturn | 73964-07-29 14:53 G | 28736066.01 | 28736066.12 | 28736066.26 | 0.0286 | 0.0243 |
| Saturn | 73980-02-02 13:27 G | 28741731.81 | 28741732.06 | 28741732.32 | 0.0273 | 0.0045 |
| Jupiter | 73981-09-05 03:51 G | 28742312.43 | 28742312.66 | 28742312.89 | 0.0535 | 0.0029 |
| Jupiter | 73987-03-03 08:39 G | 28744317.72 | 28744317.86 | 28744318.00 | 0.0494 | 0.0389 |
| Neptune | 73988-03-11 12:00 G | 28744691.93 | 28744692.00 | 28744692.12 | 0.0088 | 0.0082 |
| Neptune | 73989-03-13 17:46 G | 28745059.07 | 28745059.24 | 28745059.42 | 0.0088 | 0.0064 |
| Neptune | 73990-03-16 12:58 G | 28745426.80 | 28745427.04 | 28745427.30 | 0.0088 | 0.0029 |
| Uranus | 73991-02-19 00:58 G | 28745766.51 | 28745766.54 | 28745766.61 | 0.0144 | 0.0141 |
| Neptune | 73991-03-18 18:58 G | 28745794.04 | 28745794.29 | 28745794.55 | 0.0088 | 0.0012 |
| Uranus | 73992-02-24 10:34 G | 28746136.74 | 28746136.94 | 28746137.18 | 0.0144 | 0.0078 |
| Neptune | 73992-03-20 11:46 G | 28746161.74 | 28746161.99 | 28746162.26 | 0.0088 | 0.0024 |
| Uranus | 73993-02-28 06:00 G | 28746506.51 | 28746506.75 | 28746507.01 | 0.0144 | 0.0043 |
| Neptune | 73993-03-22 20:53 G | 28746529.16 | 28746529.37 | 28746529.61 | 0.0088 | 0.0041 |
| Jupiter | 73993-09-10 11:17 G | 28746700.86 | 28746700.97 | 28746701.10 | 0.0537 | 0.0449 |
| Uranus | 73994-03-05 15:36 G | 28746876.90 | 28746877.15 | 28746877.40 | 0.0144 | 0.0012 |
| Neptune | 73994-03-25 08:53 G | 28746896.75 | 28746896.87 | 28746897.03 | 0.0088 | 0.0075 |
| Saturn | 73994-08-06 02:39 G | 28747030.38 | 28747030.61 | 28747030.84 | 0.0286 | 0.0051 |
| Uranus | 73995-03-10 11:03 G | 28747246.74 | 28747246.96 | 28747247.21 | 0.0144 | 0.0064 |
| Uranus | 73996-03-14 18:43 G | 28747617.12 | 28747617.28 | 28747617.47 | 0.0143 | 0.0103 |
| Jupiter | 73999-03-08 01:12 G | 28748705.31 | 28748705.55 | 28748705.79 | 0.0493 | 0.0029 |

75TH MILLENNIUM CE

This is a list of transits of Moon in the 75th millennium CE.

| | FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------|-------|---|-------------|-------------|-------------|--------|--------|---|
| | TRANSIT | | | | | | | | |
| | TIME | | | | | | | | |
| Saturn | 74009-01-27 | 10:34 | G | 28752318.76 | 28752318.94 | 28752319.14 | 0.0273 | 0.0166 | |
| Jupiter | 74011-03-12 | 04:48 | G | 28753092.55 | 28753092.70 | 28753092.86 | 0.0492 | 0.0378 | |
| Saturn | 74023-07-31 | 17:03 | G | 28757617.03 | 28757617.21 | 28757617.41 | 0.0286 | 0.0186 | |
| Mars | 74023-12-22 | 08:10 | G | 28757760.64 | 28757760.84 | 28757761.04 | 0.1644 | 0.0072 | |
| Uranus | 74032-08-18 | 23:31 | G | 28760923.46 | 28760923.48 | 28760923.56 | 0.0134 | 0.0133 | |
| Uranus | 74033-08-23 | 06:29 | G | 28761292.65 | 28761292.77 | 28761292.94 | 0.0134 | 0.0109 | |
| Uranus | 74034-08-27 | 11:03 | G | 28761661.74 | 28761661.96 | 28761662.21 | 0.0134 | 0.0056 | |
| Uranus | 74035-08-31 | 18:00 | G | 28762031.01 | 28762031.25 | 28762031.49 | 0.0134 | 0.0029 | |
| Uranus | 74036-09-03 | 22:48 | G | 28762400.20 | 28762400.45 | 28762400.72 | 0.0134 | 0.0018 | |
| Uranus | 74037-09-08 | 05:46 | G | 28762769.52 | 28762769.74 | 28762769.96 | 0.0135 | 0.0054 | |
| Uranus | 74038-09-12 | 11:03 | G | 28763138.78 | 28763138.96 | 28763139.18 | 0.0135 | 0.0088 | |
| Saturn | 74039-02-03 | 16:05 | G | 28763282.94 | 28763283.17 | 28763283.41 | 0.0273 | 0.0103 | |
| Saturn | 74053-08-07 | 11:03 | G | 28768581.74 | 28768581.96 | 28768582.18 | 0.0286 | 0.0106 | |
| Jupiter | 74064-09-04 | 13:12 | G | 28772627.83 | 28772628.05 | 28772628.28 | 0.0534 | 0.0111 | |
| Saturn | 74068-01-29 | 22:34 | G | 28773870.22 | 28773870.44 | 28773870.66 | 0.0273 | 0.0108 | |
| Jupiter | 74070-03-02 | 18:00 | G | 28774633.17 | 28774633.25 | 28774633.35 | 0.0495 | 0.0457 | |
| Neptune | 74070-09-11 | 09:51 | G | 28774825.76 | 28774825.91 | 28774826.09 | 0.0090 | 0.0069 | |
| Neptune | 74071-09-14 | 03:51 | G | 28775193.45 | 28775193.66 | 28775193.89 | 0.0090 | 0.0046 | |
| Neptune | 74072-09-15 | 09:22 | G | 28775560.64 | 28775560.89 | 28775561.13 | 0.0090 | 0.0014 | |
| Neptune | 74073-09-18 | 00:43 | G | 28775928.28 | 28775928.53 | 28775928.80 | 0.0090 | 0.0008 | |
| Neptune | 74074-09-20 | 09:36 | G | 28776295.70 | 28776295.90 | 28776296.14 | 0.0090 | 0.0040 | |
| Uranus | 74075-02-19 | 09:36 | G | 28776447.78 | 28776447.90 | 28776448.05 | 0.0144 | 0.0121 | |
| Neptune | 74075-09-22 | 20:53 | G | 28776663.20 | 28776663.37 | 28776663.58 | 0.0090 | 0.0062 | |
| Uranus | 74076-02-24 | 19:27 | G | 28776818.10 | 28776818.31 | 28776818.51 | 0.0144 | 0.0087 | |
| Jupiter | 74076-09-09 | 04:05 | G | 28777015.49 | 28777015.67 | 28777015.86 | 0.0536 | 0.0340 | |
| Uranus | 74077-02-28 | 14:53 | G | 28777187.87 | 28777188.12 | 28777188.38 | 0.0144 | 0.0026 | |
| Uranus | 74078-03-06 | 00:58 | G | 28777558.29 | 28777558.54 | 28777558.80 | 0.0144 | 0.0016 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 74079-03-10 20:24 G | 28777928.13 | 28777928.35 | 28777928.60 | 0.0144 | 0.0063 |
| Uranus | 74080-03-15 05:03 G | 28778298.59 | 28778298.71 | 28778298.85 | 0.0143 | 0.0122 |
| Jupiter | 74082-03-07 00:00 G | 28779020.27 | 28779020.50 | 28779020.74 | 0.0493 | 0.0084 |
| Saturn | 74082-08-01 20:53 G | 28779168.16 | 28779168.37 | 28779168.60 | 0.0286 | 0.0129 |
| Jupiter | 74094-03-11 18:00 G | 28783408.08 | 28783408.25 | 28783408.41 | 0.0492 | 0.0336 |
| Saturn | 74098-02-05 01:41 G | 28784834.38 | 28784834.57 | 28784834.77 | 0.0273 | 0.0161 |
| Pluto | 74111-09-26 15:22 G | 28789814.97 | 28789815.14 | 28789815.36 | 0.0064 | 0.0041 |
| Saturn | 74112-08-09 17:31 G | 28790133.02 | 28790133.23 | 28790133.43 | 0.0286 | 0.0163 |
| Pluto | 74112-09-26 19:55 G | 28790181.24 | 28790181.33 | 28790181.46 | 0.0064 | 0.0058 |
| Uranus | 74117-08-24 17:17 G | 28791974.06 | 28791974.22 | 28791974.42 | 0.0134 | 0.0090 |
| Uranus | 74118-08-28 20:39 G | 28792343.15 | 28792343.36 | 28792343.61 | 0.0134 | 0.0065 |
| Uranus | 74119-09-02 05:03 G | 28792712.47 | 28792712.71 | 28792712.96 | 0.0134 | 0.0013 |
| Uranus | 74120-09-05 08:39 G | 28793081.61 | 28793081.86 | 28793082.12 | 0.0134 | 0.0018 |
| Uranus | 74121-09-09 16:19 G | 28793450.97 | 28793451.18 | 28793451.41 | 0.0134 | 0.0059 |
| Uranus | 74122-09-13 20:10 G | 28793820.19 | 28793820.34 | 28793820.54 | 0.0135 | 0.0100 |
| Uranus | 74123-09-18 04:19 G | 28794189.64 | 28794189.68 | 28794189.76 | 0.0135 | 0.0130 |
| Saturn | 74127-02-01 08:24 G | 28795421.61 | 28795421.85 | 28795422.10 | 0.0273 | 0.0051 |
| Saturn | 74141-08-04 07:55 G | 28800719.60 | 28800719.83 | 28800720.06 | 0.0286 | 0.0065 |
| Jupiter | 74147-09-05 05:03 G | 28802942.49 | 28802942.71 | 28802942.93 | 0.0534 | 0.0217 |
| Neptune | 74153-03-14 08:39 G | 28804959.74 | 28804959.86 | 28804960.04 | 0.0088 | 0.0072 |
| Neptune | 74154-03-16 15:36 G | 28805326.93 | 28805327.15 | 28805327.38 | 0.0088 | 0.0042 |
| Neptune | 74155-03-19 07:12 G | 28805694.55 | 28805694.80 | 28805695.08 | 0.0088 | 0.0020 |
| Saturn | 74156-01-26 17:03 G | 28806008.18 | 28806008.21 | 28806008.26 | 0.0273 | 0.0269 |
| Neptune | 74156-03-20 17:46 G | 28806061.99 | 28806062.24 | 28806062.49 | 0.0088 | 0.0009 |
| Saturn | 74157-02-07 16:05 G | 28806386.04 | 28806386.17 | 28806386.32 | 0.0273 | 0.0222 |
| Neptune | 74157-03-23 04:48 G | 28806429.47 | 28806429.70 | 28806429.98 | 0.0088 | 0.0033 |
| Neptune | 74158-03-25 20:39 G | 28806797.19 | 28806797.36 | 28806797.55 | 0.0088 | 0.0062 |
| Uranus | 74159-02-20 18:29 G | 28807129.17 | 28807129.27 | 28807129.39 | 0.0144 | 0.0129 |
| Neptune | 74159-03-28 03:22 G | 28807164.60 | 28807164.64 | 28807164.72 | 0.0088 | 0.0085 |
| Jupiter | 74159-09-10 10:05 G | 28807330.73 | 28807330.92 | 28807331.12 | 0.0536 | 0.0255 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 74160-02-26 03:07 G | 28807499.42 | 28807499.63 | 28807499.88 | 0.0144 | 0.0067 |
| Uranus | 74161-03-01 23:17 G | 28807869.23 | 28807869.47 | 28807869.73 | 0.0144 | 0.0033 |
| Uranus | 74162-03-07 09:07 G | 28808239.63 | 28808239.88 | 28808240.14 | 0.0144 | 0.0025 |
| Uranus | 74163-03-12 04:05 G | 28808609.46 | 28808609.67 | 28808609.91 | 0.0144 | 0.0075 |
| Uranus | 74164-03-16 13:27 G | 28808979.93 | 28808980.06 | 28808980.23 | 0.0143 | 0.0115 |
| Jupiter | 74165-03-07 11:03 G | 28809335.74 | 28809335.96 | 28809336.18 | 0.0494 | 0.0147 |
| Saturn | 74171-08-11 22:19 G | 28811684.30 | 28811684.43 | 28811684.59 | 0.0286 | 0.0228 |
| Jupiter | 74177-03-11 14:39 G | 28813722.91 | 28813723.11 | 28813723.32 | 0.0492 | 0.0266 |
| Saturn | 74186-02-02 15:22 G | 28816972.88 | 28816973.14 | 28816973.40 | 0.0273 | 0.0011 |
| Saturn | 74200-08-06 23:46 G | 28822271.26 | 28822271.49 | 28822271.73 | 0.0286 | 0.0004 |
| Uranus | 74200-08-21 18:29 G | 28822286.17 | 28822286.27 | 28822286.38 | 0.0134 | 0.0123 |
| Pluto | 74201-03-30 17:17 G | 28822506.96 | 28822507.22 | 28822507.47 | 0.0080 | 0.0001 |
| Uranus | 74201-08-26 03:22 G | 28822655.49 | 28822655.64 | 28822655.82 | 0.0134 | 0.0098 |
| Uranus | 74202-08-30 05:17 G | 28823024.49 | 28823024.72 | 28823024.98 | 0.0134 | 0.0046 |
| Uranus | 74203-09-03 14:39 G | 28823393.87 | 28823394.11 | 28823394.36 | 0.0134 | 0.0019 |
| Uranus | 74204-09-06 17:03 G | 28823762.96 | 28823763.21 | 28823763.47 | 0.0134 | 0.0029 |
| Uranus | 74205-09-11 02:10 G | 28824132.39 | 28824132.59 | 28824132.82 | 0.0134 | 0.0064 |
| Uranus | 74206-09-15 05:17 G | 28824501.57 | 28824501.72 | 28824501.92 | 0.0135 | 0.0100 |
| Saturn | 74215-01-29 08:10 G | 28827559.69 | 28827559.84 | 28827560.00 | 0.0273 | 0.0205 |
| Mars | 74228-12-22 16:48 G | 28832636.14 | 28832636.20 | 28832636.26 | 0.1638 | 0.1535 |
| Saturn | 74229-08-01 00:43 G | 28832857.42 | 28832857.53 | 28832857.66 | 0.0286 | 0.0248 |
| Jupiter | 74230-09-05 12:43 G | 28833257.85 | 28833258.03 | 28833258.22 | 0.0533 | 0.0293 |
| Neptune | 74234-09-13 03:22 G | 28834726.51 | 28834726.64 | 28834726.78 | 0.0090 | 0.0076 |
| Neptune | 74235-09-15 09:07 G | 28835093.71 | 28835093.88 | 28835094.08 | 0.0090 | 0.0059 |
| Neptune | 74236-09-16 23:46 G | 28835461.25 | 28835461.49 | 28835461.76 | 0.0090 | 0.0024 |
| Neptune | 74237-09-19 09:36 G | 28835828.66 | 28835828.90 | 28835829.15 | 0.0090 | 0.0005 |
| Neptune | 74238-09-21 19:12 G | 28836196.06 | 28836196.30 | 28836196.56 | 0.0090 | 0.0031 |
| Neptune | 74239-09-24 09:22 G | 28836563.71 | 28836563.89 | 28836564.12 | 0.0090 | 0.0050 |
| Neptune | 74240-09-25 15:22 G | 28836931.08 | 28836931.14 | 28836931.25 | 0.0090 | 0.0085 |
| Jupiter | 74242-09-10 11:46 G | 28837645.77 | 28837645.99 | 28837646.22 | 0.0535 | 0.0163 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 74243-02-22 03:07 G | 28837810.49 | 28837810.63 | 28837810.81 | 0.0144 | 0.0112 |
| Uranus | 74244-02-27 11:17 G | 28838180.77 | 28838180.97 | 28838181.21 | 0.0144 | 0.0077 |
| Saturn | 74245-02-04 21:36 G | 28838524.16 | 28838524.40 | 28838524.64 | 0.0273 | 0.0073 |
| Uranus | 74245-03-03 08:24 G | 28838550.60 | 28838550.85 | 28838551.11 | 0.0144 | 0.0014 |
| Uranus | 74246-03-08 18:15 G | 28838921.01 | 28838921.26 | 28838921.52 | 0.0144 | 0.0026 |
| Uranus | 74247-03-13 13:41 G | 28839290.86 | 28839291.07 | 28839291.30 | 0.0144 | 0.0076 |
| Jupiter | 74248-03-07 06:00 G | 28839650.53 | 28839650.75 | 28839650.96 | 0.0494 | 0.0229 |
| Uranus | 74248-03-17 23:46 G | 28839661.40 | 28839661.49 | 28839661.59 | 0.0143 | 0.0133 |
| Saturn | 74259-08-09 13:55 G | 28843822.84 | 28843823.08 | 28843823.31 | 0.0286 | 0.0074 |
| Jupiter | 74260-03-11 20:24 G | 28844038.15 | 28844038.35 | 28844038.56 | 0.0493 | 0.0208 |
| Saturn | 74274-01-30 23:03 G | 28849111.25 | 28849111.46 | 28849111.68 | 0.0273 | 0.0140 |
| Uranus | 74284-08-22 03:51 G | 28852967.60 | 28852967.66 | 28852967.75 | 0.0134 | 0.0128 |
| Uranus | 74285-08-26 14:39 G | 28853336.92 | 28853337.11 | 28853337.32 | 0.0134 | 0.0079 |
| Uranus | 74286-08-30 15:51 G | 28853705.93 | 28853706.16 | 28853706.41 | 0.0134 | 0.0054 |
| Uranus | 74287-09-04 02:24 G | 28854075.35 | 28854075.60 | 28854075.84 | 0.0134 | 0.0002 |
| Saturn | 74288-08-02 12:58 G | 28854408.86 | 28854409.04 | 28854409.23 | 0.0286 | 0.0179 |
| Uranus | 74288-09-07 03:51 G | 28854444.41 | 28854444.66 | 28854444.91 | 0.0134 | 0.0027 |
| Uranus | 74289-09-11 13:55 G | 28854813.87 | 28854814.08 | 28854814.29 | 0.0134 | 0.0071 |
| Uranus | 74290-09-15 15:36 G | 28855183.01 | 28855183.15 | 28855183.31 | 0.0135 | 0.0109 |
| Saturn | 74304-02-08 08:39 G | 28860075.65 | 28860075.86 | 28860076.07 | 0.0274 | 0.0135 |
| Mars | 74307-12-26 13:27 G | 28861492.90 | 28861493.06 | 28861493.21 | 0.1640 | 0.0804 |
| Jupiter | 74313-09-05 06:29 G | 28863572.63 | 28863572.77 | 28863572.93 | 0.0533 | 0.0408 |
| Neptune | 74317-03-15 12:00 G | 28864859.89 | 28864860.00 | 28864860.13 | 0.0088 | 0.0077 |
| Neptune | 74318-03-18 02:53 G | 28865227.44 | 28865227.62 | 28865227.84 | 0.0088 | 0.0059 |
| Saturn | 74318-08-11 23:03 G | 28865374.25 | 28865374.46 | 28865374.68 | 0.0286 | 0.0145 |
| Neptune | 74319-03-20 14:53 G | 28865594.89 | 28865595.12 | 28865595.37 | 0.0088 | 0.0026 |
| Neptune | 74320-03-22 01:12 G | 28865962.28 | 28865962.55 | 28865962.82 | 0.0088 | 0.0007 |
| Neptune | 74321-03-24 17:17 G | 28866329.98 | 28866330.22 | 28866330.47 | 0.0088 | 0.0028 |
| Neptune | 74322-03-26 23:03 G | 28866697.26 | 28866697.46 | 28866697.71 | 0.0088 | 0.0046 |
| Neptune | 74323-03-29 17:46 G | 28867065.16 | 28867065.24 | 28867065.37 | 0.0088 | 0.0080 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 74325-09-10 03:22 G | 28867960.42 | 28867960.64 | 28867960.87 | 0.0535 | 0.0045 |
| Uranus | 74327-02-23 13:41 G | 28868491.95 | 28868492.07 | 28868492.23 | 0.0144 | 0.0118 |
| Uranus | 74328-02-28 21:22 G | 28868862.15 | 28868862.39 | 28868862.64 | 0.0144 | 0.0055 |
| Uranus | 74329-03-04 18:58 G | 28869232.04 | 28869232.29 | 28869232.54 | 0.0144 | 0.0021 |
| Uranus | 74330-03-10 04:05 G | 28869602.42 | 28869602.67 | 28869602.93 | 0.0144 | 0.0038 |
| Jupiter | 74331-03-08 12:29 G | 28869965.85 | 28869966.02 | 28869966.21 | 0.0495 | 0.0292 |
| Uranus | 74331-03-14 23:31 G | 28869972.29 | 28869972.48 | 28869972.70 | 0.0144 | 0.0085 |
| Uranus | 74332-03-19 09:22 G | 28870342.78 | 28870342.89 | 28870343.02 | 0.0143 | 0.0127 |
| Saturn | 74333-02-02 06:58 G | 28870662.55 | 28870662.79 | 28870663.04 | 0.0273 | 0.0078 |
| Jupiter | 74343-03-13 02:39 G | 28874353.37 | 28874353.61 | 28874353.84 | 0.0493 | 0.0147 |
| Saturn | 74347-08-06 05:17 G | 28875960.50 | 28875960.72 | 28875960.93 | 0.0286 | 0.0109 |
| Pluto | 74357-09-29 23:03 G | 28879668.20 | 28879668.46 | 28879668.73 | 0.0064 | 0.0007 |
| Saturn | 74363-02-09 21:22 G | 28881627.22 | 28881627.39 | 28881627.56 | 0.0274 | 0.0194 |
| Uranus | 74368-08-23 13:41 G | 28883648.96 | 28883649.07 | 28883649.22 | 0.0134 | 0.0114 |
| Uranus | 74369-08-28 00:58 G | 28884018.36 | 28884018.54 | 28884018.73 | 0.0134 | 0.0088 |
| Uranus | 74370-09-01 01:12 G | 28884387.30 | 28884387.55 | 28884387.80 | 0.0134 | 0.0035 |
| Uranus | 74371-09-05 12:29 G | 28884756.77 | 28884757.02 | 28884757.26 | 0.0134 | 0.0010 |
| Uranus | 74372-09-08 12:43 G | 28885125.80 | 28885126.03 | 28885126.28 | 0.0134 | 0.0041 |
| Uranus | 74373-09-13 00:15 G | 28885495.31 | 28885495.51 | 28885495.72 | 0.0134 | 0.0073 |
| Uranus | 74374-09-17 01:12 G | 28885864.43 | 28885864.55 | 28885864.71 | 0.0135 | 0.0112 |
| Saturn | 74377-08-13 07:27 G | 28886925.65 | 28886925.81 | 28886925.97 | 0.0286 | 0.0214 |
| Saturn | 74392-02-04 11:03 G | 28892213.70 | 28892213.96 | 28892214.21 | 0.0273 | 0.0019 |
| Jupiter | 74396-09-04 06:00 G | 28893887.69 | 28893887.75 | 28893887.83 | 0.0532 | 0.0501 |
| Neptune | 74399-09-15 21:07 G | 28894994.22 | 28894994.38 | 28894994.58 | 0.0090 | 0.0065 |
| Neptune | 74400-09-17 08:10 G | 28895361.63 | 28895361.84 | 28895362.07 | 0.0090 | 0.0040 |
| Neptune | 74401-09-19 17:31 G | 28895728.98 | 28895729.23 | 28895729.50 | 0.0090 | 0.0011 |
| Neptune | 74402-09-22 09:07 G | 28896096.64 | 28896096.88 | 28896097.13 | 0.0090 | 0.0015 |
| Neptune | 74403-09-24 14:24 G | 28896463.88 | 28896464.10 | 28896464.33 | 0.0090 | 0.0043 |
| Neptune | 74404-09-26 07:55 G | 28896831.68 | 28896831.83 | 28896832.02 | 0.0090 | 0.0067 |
| Saturn | 74406-08-07 19:55 G | 28897512.09 | 28897512.33 | 28897512.57 | 0.0286 | 0.0043 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 74408-09-09 12:58 G | 28898275.80 | 28898276.04 | 28898276.27 | 0.0534 | 0.0033 |
| Uranus | 74411-02-24 00:43 G | 28899173.37 | 28899173.53 | 28899173.73 | 0.0144 | 0.0102 |
| Uranus | 74412-02-29 07:12 G | 28899543.57 | 28899543.80 | 28899544.05 | 0.0144 | 0.0065 |
| Uranus | 74413-03-05 06:00 G | 28899913.50 | 28899913.75 | 28899914.00 | 0.0144 | 0.0002 |
| Jupiter | 74414-03-07 16:05 G | 28900281.01 | 28900281.17 | 28900281.34 | 0.0495 | 0.0363 |
| Uranus | 74414-03-10 14:39 G | 28900283.86 | 28900284.11 | 28900284.37 | 0.0144 | 0.0037 |
| Uranus | 74415-03-15 11:03 G | 28900653.77 | 28900653.96 | 28900654.17 | 0.0144 | 0.0089 |
| Jupiter | 74420-09-14 06:29 G | 28902663.67 | 28902663.77 | 28902663.88 | 0.0536 | 0.0475 |
| Saturn | 74421-01-29 07:27 G | 28902800.70 | 28902800.81 | 28902800.93 | 0.0273 | 0.0237 |
| Saturn | 74422-02-11 03:36 G | 28903178.56 | 28903178.65 | 28903178.77 | 0.0274 | 0.0248 |
| Jupiter | 74426-03-12 00:00 G | 28904668.27 | 28904668.50 | 28904668.73 | 0.0494 | 0.0076 |
| Saturn | 74435-08-02 07:55 G | 28908098.76 | 28908098.83 | 28908098.92 | 0.0287 | 0.0270 |
| Saturn | 74436-08-14 18:29 G | 28908477.22 | 28908477.27 | 28908477.33 | 0.0286 | 0.0277 |
| Pluto | 74447-04-03 07:27 G | 28912360.68 | 28912360.81 | 28912360.99 | 0.0080 | 0.0066 |
| Saturn | 74451-02-05 17:03 G | 28913764.97 | 28913765.21 | 28913765.46 | 0.0273 | 0.0035 |
| Uranus | 74452-08-24 00:00 G | 28914330.40 | 28914330.50 | 28914330.64 | 0.0134 | 0.0118 |
| Uranus | 74453-08-28 12:15 G | 28914699.82 | 28914700.01 | 28914700.24 | 0.0134 | 0.0070 |
| Uranus | 74454-09-01 12:00 G | 28915068.77 | 28915069.00 | 28915069.26 | 0.0134 | 0.0044 |
| Uranus | 74455-09-06 00:15 G | 28915438.27 | 28915438.51 | 28915438.76 | 0.0134 | 0.0010 |
| Uranus | 74456-09-09 00:00 G | 28915807.26 | 28915807.50 | 28915807.75 | 0.0134 | 0.0036 |
| Uranus | 74457-09-13 11:46 G | 28916176.81 | 28916176.99 | 28916177.19 | 0.0134 | 0.0083 |
| Uranus | 74458-09-17 11:46 G | 28916545.88 | 28916545.99 | 28916546.12 | 0.0135 | 0.0118 |
| Saturn | 74465-08-09 04:48 G | 28919063.45 | 28919063.70 | 28919063.95 | 0.0286 | 0.0022 |
| Mars | 74472-06-29 19:41 G | 28921580.15 | 28921580.32 | 28921580.49 | 0.1888 | 0.0834 |
| Saturn | 74480-01-31 12:43 G | 28924351.86 | 28924352.03 | 28924352.23 | 0.0273 | 0.0185 |
| Neptune | 74482-03-17 10:05 G | 28925127.79 | 28925127.92 | 28925128.10 | 0.0088 | 0.0069 |
| Neptune | 74483-03-19 19:12 G | 28925495.06 | 28925495.30 | 28925495.55 | 0.0088 | 0.0036 |
| Neptune | 74484-03-21 12:43 G | 28925862.79 | 28925863.03 | 28925863.29 | 0.0088 | 0.0017 |
| Neptune | 74485-03-23 18:43 G | 28926230.02 | 28926230.28 | 28926230.54 | 0.0088 | 0.0015 |
| Neptune | 74486-03-26 13:41 G | 28926597.84 | 28926598.07 | 28926598.32 | 0.0088 | 0.0035 |

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| Neptune | 74487-03-28 18:43 G | 28926965.14 | 28926965.28 | 28926965.48 | 0.0088 | 0.0067 |
| Neptune | 74488-03-30 13:27 G | 28927333.06 | 28927333.06 | 28927333.09 | 0.0088 | 0.0088 |
| Jupiter | 74491-09-09 04:05 G | 28928590.45 | 28928590.67 | 28928590.89 | 0.0533 | 0.0143 |
| Saturn | 74494-08-03 16:34 G | 28929650.04 | 28929650.19 | 28929650.37 | 0.0287 | 0.0209 |
| Uranus | 74495-02-24 13:27 G | 28929854.89 | 28929855.06 | 28929855.23 | 0.0144 | 0.0104 |
| Uranus | 74496-02-29 18:43 G | 28930225.03 | 28930225.28 | 28930225.54 | 0.0144 | 0.0043 |
| Uranus | 74497-03-05 18:29 G | 28930595.02 | 28930595.27 | 28930595.52 | 0.0144 | 0.0009 |
| Jupiter | 74497-03-06 18:15 G | 28930596.15 | 28930596.26 | 28930596.38 | 0.0496 | 0.0423 |
| Uranus | 74498-03-11 02:10 G | 28930965.35 | 28930965.59 | 28930965.84 | 0.0144 | 0.0051 |
| Uranus | 74499-03-15 22:34 G | 28931335.27 | 28931335.44 | 28931335.65 | 0.0144 | 0.0097 |
| Uranus | 74500-03-21 07:55 G | 28931705.79 | 28931705.83 | 28931705.90 | 0.0144 | 0.0140 |
| Jupiter | 74503-09-15 10:05 G | 28932978.76 | 28932978.92 | 28932979.08 | 0.0535 | 0.0370 |
| Jupiter | 74509-03-12 14:10 G | 28934983.86 | 28934984.09 | 28934984.33 | 0.0494 | 0.0039 |
| Saturn | 74510-02-08 01:12 G | 28935316.33 | 28935316.55 | 28935316.78 | 0.0273 | 0.0086 |
| Mars | 74512-12-25 19:27 G | 28936368.13 | 28936368.31 | 28936368.48 | 0.1635 | 0.0739 |
| Jupiter | 74521-03-16 19:12 G | 28939371.21 | 28939371.30 | 28939371.39 | 0.0492 | 0.0454 |
| Saturn | 74524-08-11 07:27 G | 28940614.58 | 28940614.81 | 28940615.06 | 0.0286 | 0.0086 |
| Uranus | 74536-08-25 11:17 G | 28945011.82 | 28945011.97 | 28945012.13 | 0.0134 | 0.0104 |
| Uranus | 74537-08-29 23:31 G | 28945381.28 | 28945381.48 | 28945381.69 | 0.0134 | 0.0076 |
| Uranus | 74538-09-02 22:34 G | 28945750.19 | 28945750.44 | 28945750.69 | 0.0134 | 0.0024 |
| Saturn | 74539-02-02 11:31 G | 28945902.76 | 28945902.98 | 28945903.20 | 0.0273 | 0.0133 |
| Uranus | 74539-09-07 10:48 G | 28946119.71 | 28946119.95 | 28946120.20 | 0.0134 | 0.0002 |
| Uranus | 74540-09-10 09:36 G | 28946488.68 | 28946488.90 | 28946489.15 | 0.0134 | 0.0053 |
| Uranus | 74541-09-14 22:05 G | 28946858.24 | 28946858.42 | 28946858.63 | 0.0134 | 0.0082 |
| Uranus | 74542-09-18 21:51 G | 28947227.31 | 28947227.41 | 28947227.51 | 0.0135 | 0.0123 |
| Saturn | 74553-08-06 02:39 G | 28951201.41 | 28951201.61 | 28951201.82 | 0.0287 | 0.0149 |
| Neptune | 74563-09-16 07:12 G | 28954894.66 | 28954894.80 | 28954894.95 | 0.0090 | 0.0072 |
| Neptune | 74564-09-17 14:39 G | 28955261.93 | 28955262.11 | 28955262.34 | 0.0090 | 0.0055 |
| Neptune | 74565-09-20 07:12 G | 28955629.57 | 28955629.80 | 28955630.05 | 0.0090 | 0.0019 |
| Neptune | 74566-09-22 12:15 G | 28955996.76 | 28955997.01 | 28955997.27 | 0.0090 | 0.0002 |

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| Neptune | 74567-09-25 06:15 G | 28956364.53 | 28956364.76 | 28956365.00 | 0.0090 | 0.0035 |
| Neptune | 74568-09-26 10:48 G | 28956731.75 | 28956731.95 | 28956732.16 | 0.0090 | 0.0052 |
| Saturn | 74569-02-09 07:12 G | 28956867.59 | 28956867.80 | 28956868.02 | 0.0273 | 0.0136 |
| Neptune | 74569-09-29 03:22 G | 28957099.60 | 28957099.64 | 28957099.69 | 0.0090 | 0.0088 |
| Jupiter | 74574-09-09 14:24 G | 28958905.90 | 28958906.10 | 28958906.31 | 0.0533 | 0.0227 |
| Uranus | 74578-02-20 20:10 G | 28960166.30 | 28960166.34 | 28960166.39 | 0.0144 | 0.0142 |
| Uranus | 74579-02-26 00:15 G | 28960536.32 | 28960536.51 | 28960536.70 | 0.0144 | 0.0090 |
| Uranus | 74580-03-02 04:19 G | 28960906.43 | 28960906.68 | 28960906.93 | 0.0144 | 0.0051 |
| Jupiter | 74580-03-07 09:22 G | 28960911.81 | 28960911.89 | 28960911.98 | 0.0496 | 0.0461 |
| Uranus | 74581-03-07 05:17 G | 28961276.47 | 28961276.72 | 28961276.97 | 0.0144 | 0.0012 |
| Uranus | 74582-03-12 12:00 G | 28961646.76 | 28961647.00 | 28961647.26 | 0.0144 | 0.0049 |
| Uranus | 74583-03-17 10:05 G | 28962016.76 | 28962016.92 | 28962017.11 | 0.0144 | 0.0103 |
| Saturn | 74583-08-13 11:03 G | 28962165.77 | 28962165.96 | 28962166.18 | 0.0286 | 0.0146 |
| Jupiter | 74586-09-14 10:48 G | 28963293.76 | 28963293.95 | 28963294.15 | 0.0535 | 0.0304 |
| Jupiter | 74592-03-11 13:41 G | 28965298.83 | 28965299.07 | 28965299.31 | 0.0494 | 0.0016 |
| Saturn | 74598-02-03 09:51 G | 28967453.67 | 28967453.91 | 28967454.14 | 0.0273 | 0.0085 |
| Pluto | 74603-10-04 01:12 G | 28969521.33 | 28969521.55 | 28969521.81 | 0.0064 | 0.0021 |
| Jupiter | 74604-03-17 08:39 G | 28969686.72 | 28969686.86 | 28969686.99 | 0.0493 | 0.0399 |
| Saturn | 74612-08-08 06:00 G | 28972752.52 | 28972752.75 | 28972752.98 | 0.0287 | 0.0095 |
| Uranus | 74620-08-26 22:19 G | 28975693.29 | 28975693.43 | 28975693.60 | 0.0134 | 0.0105 |
| Uranus | 74621-08-31 11:17 G | 28976062.76 | 28976062.97 | 28976063.21 | 0.0134 | 0.0058 |
| Uranus | 74622-09-04 10:19 G | 28976431.69 | 28976431.93 | 28976432.18 | 0.0134 | 0.0032 |
| Uranus | 74623-09-08 23:03 G | 28976801.21 | 28976801.46 | 28976801.70 | 0.0134 | 0.0021 |
| Uranus | 74624-09-11 21:22 G | 28977170.17 | 28977170.39 | 28977170.64 | 0.0134 | 0.0047 |
| Uranus | 74625-09-16 10:19 G | 28977539.75 | 28977539.93 | 28977540.10 | 0.0134 | 0.0095 |
| Uranus | 74626-09-20 08:39 G | 28977908.80 | 28977908.86 | 28977908.95 | 0.0134 | 0.0128 |
| Saturn | 74628-02-12 06:43 G | 28978418.59 | 28978418.78 | 28978418.97 | 0.0272 | 0.0180 |
| Saturn | 74642-08-15 18:58 G | 28983717.12 | 28983717.29 | 28983717.46 | 0.0286 | 0.0200 |
| Neptune | 74646-03-18 14:24 G | 28985027.96 | 28985028.10 | 28985028.25 | 0.0088 | 0.0073 |
| Neptune | 74647-03-21 08:10 G | 28985395.65 | 28985395.84 | 28985396.05 | 0.0088 | 0.0054 |

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| Neptune | 74648-03-22 13:12 G | 28985762.81 | 28985763.05 | 28985763.32 | 0.0088 | 0.0023 |
| Neptune | 74649-03-25 08:24 G | 28986130.59 | 28986130.85 | 28986131.12 | 0.0088 | 0.0004 |
| Neptune | 74650-03-27 13:55 G | 28986497.85 | 28986498.08 | 28986498.33 | 0.0088 | 0.0030 |
| Neptune | 74651-03-30 06:58 G | 28986865.58 | 28986865.79 | 28986866.02 | 0.0088 | 0.0049 |
| Neptune | 74652-03-31 15:51 G | 28987233.09 | 28987233.16 | 28987233.26 | 0.0088 | 0.0082 |
| Saturn | 74657-02-05 13:55 G | 28989004.84 | 28989005.08 | 28989005.32 | 0.0272 | 0.0042 |
| Jupiter | 74657-09-09 17:03 G | 28989221.02 | 28989221.21 | 28989221.42 | 0.0533 | 0.0286 |
| Uranus | 74662-02-22 05:03 G | 28990847.66 | 28990847.71 | 28990847.80 | 0.0144 | 0.0139 |
| Uranus | 74663-02-27 10:48 G | 28991217.77 | 28991217.95 | 28991218.16 | 0.0144 | 0.0091 |
| Uranus | 74664-03-03 13:55 G | 28991587.83 | 28991588.08 | 28991588.35 | 0.0144 | 0.0032 |
| Uranus | 74665-03-08 16:19 G | 28991957.94 | 28991958.18 | 28991958.43 | 0.0144 | 0.0004 |
| Uranus | 74666-03-13 22:05 G | 28992328.19 | 28992328.42 | 28992328.67 | 0.0144 | 0.0065 |
| Uranus | 74667-03-18 20:53 G | 28992698.22 | 28992698.37 | 28992698.55 | 0.0144 | 0.0108 |
| Jupiter | 74669-09-14 18:29 G | 28993609.07 | 28993609.27 | 28993609.47 | 0.0534 | 0.0231 |
| Saturn | 74671-08-10 02:24 G | 28994303.35 | 28994303.60 | 28994303.85 | 0.0287 | 0.0046 |
| Jupiter | 74675-03-13 04:05 G | 28995614.45 | 28995614.67 | 28995614.91 | 0.0495 | 0.0062 |
| Saturn | 74686-01-31 14:24 G | 28999592.00 | 28999592.10 | 28999592.22 | 0.0271 | 0.0246 |
| Saturn | 74687-02-13 02:53 G | 28999969.49 | 28999969.62 | 28999969.78 | 0.0272 | 0.0222 |
| Jupiter | 74687-03-17 12:29 G | 29000001.85 | 29000002.02 | 29000002.20 | 0.0494 | 0.0351 |
| Pluto | 74692-04-04 11:46 G | 29001846.88 | 29001846.99 | 29001847.17 | 0.0081 | 0.0067 |
| Saturn | 74701-08-17 23:03 G | 29005268.35 | 29005268.46 | 29005268.58 | 0.0286 | 0.0250 |
| Uranus | 74703-08-25 11:46 G | 29006005.98 | 29006005.99 | 29006006.03 | 0.0134 | 0.0133 |
| Uranus | 74704-08-28 10:48 G | 29006374.77 | 29006374.95 | 29006375.13 | 0.0134 | 0.0093 |
| Uranus | 74705-09-01 23:17 G | 29006744.26 | 29006744.47 | 29006744.70 | 0.0134 | 0.0064 |
| Uranus | 74706-09-05 21:51 G | 29007113.16 | 29007113.41 | 29007113.66 | 0.0134 | 0.0012 |
| Uranus | 74707-09-10 10:19 G | 29007482.68 | 29007482.93 | 29007483.18 | 0.0134 | 0.0013 |
| Uranus | 74708-09-13 08:24 G | 29007851.64 | 29007851.85 | 29007852.08 | 0.0134 | 0.0065 |
| Uranus | 74709-09-17 20:39 G | 29008221.20 | 29008221.36 | 29008221.56 | 0.0134 | 0.0093 |
| Saturn | 74716-02-08 18:43 G | 29010556.04 | 29010556.28 | 29010556.53 | 0.0272 | 0.0002 |
| Neptune | 74727-09-17 10:05 G | 29014794.90 | 29014794.92 | 29014795.01 | 0.0090 | 0.0088 |

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| Neptune | 74728-09-19 03:51 G | 29015162.50 | 29015162.66 | 29015162.86 | 0.0090 | 0.0063 |
| Neptune | 74729-09-21 08:39 G | 29015529.64 | 29015529.86 | 29015530.11 | 0.0090 | 0.0036 |
| Saturn | 74730-08-11 23:46 G | 29015854.25 | 29015854.49 | 29015854.73 | 0.0287 | 0.0001 |
| Neptune | 74730-09-24 03:22 G | 29015897.38 | 29015897.64 | 29015897.89 | 0.0090 | 0.0009 |
| Neptune | 74731-09-26 08:24 G | 29016264.62 | 29016264.85 | 29016265.10 | 0.0090 | 0.0019 |
| Neptune | 74732-09-28 00:15 G | 29016632.30 | 29016632.51 | 29016632.75 | 0.0090 | 0.0046 |
| Neptune | 74733-09-30 08:39 G | 29016999.73 | 29016999.86 | 29017000.02 | 0.0090 | 0.0072 |
| Jupiter | 74740-09-10 00:58 G | 29019536.38 | 29019536.54 | 29019536.70 | 0.0531 | 0.0363 |
| Saturn | 74745-02-02 11:31 G | 29021142.83 | 29021142.98 | 29021143.16 | 0.0271 | 0.0203 |
| Saturn | 74746-02-15 05:03 G | 29021520.66 | 29021520.71 | 29021520.78 | 0.0272 | 0.0263 |
| Uranus | 74746-02-23 13:55 G | 29021528.97 | 29021529.08 | 29021529.21 | 0.0144 | 0.0128 |
| Uranus | 74747-02-28 20:24 G | 29021899.16 | 29021899.35 | 29021899.57 | 0.0144 | 0.0081 |
| Uranus | 74748-03-04 22:05 G | 29022269.17 | 29022269.42 | 29022269.68 | 0.0144 | 0.0038 |
| Uranus | 74749-03-10 01:55 G | 29022639.33 | 29022639.58 | 29022639.82 | 0.0144 | 0.0024 |
| Uranus | 74750-03-15 06:15 G | 29023009.53 | 29023009.76 | 29023010.01 | 0.0144 | 0.0060 |
| Uranus | 74751-03-20 06:43 G | 29023379.65 | 29023379.78 | 29023379.93 | 0.0144 | 0.0117 |
| Jupiter | 74752-09-14 21:22 G | 29023924.16 | 29023924.39 | 29023924.62 | 0.0534 | 0.0160 |
| Mars | 74756-07-01 15:22 G | 29025310.00 | 29025310.14 | 29025310.28 | 0.1895 | 0.1456 |
| Jupiter | 74758-03-13 09:36 G | 29025929.66 | 29025929.90 | 29025930.14 | 0.0496 | 0.0102 |
| Saturn | 74759-08-06 12:29 G | 29026440.91 | 29026441.02 | 29026441.13 | 0.0287 | 0.0253 |
| Jupiter | 74770-03-17 23:46 G | 29030317.31 | 29030317.49 | 29030317.67 | 0.0494 | 0.0299 |
| Saturn | 74775-02-09 18:58 G | 29032107.04 | 29032107.29 | 29032107.55 | 0.0272 | 0.0043 |
| Uranus | 74787-08-26 00:29 G | 29036687.45 | 29036687.52 | 29036687.60 | 0.0134 | 0.0127 |
| Uranus | 74788-08-28 23:03 G | 29037056.29 | 29037056.46 | 29037056.65 | 0.0134 | 0.0092 |
| Saturn | 74789-08-13 01:12 G | 29037405.32 | 29037405.55 | 29037405.78 | 0.0288 | 0.0045 |
| Uranus | 74789-09-02 11:46 G | 29037425.76 | 29037425.99 | 29037426.23 | 0.0134 | 0.0046 |
| Uranus | 74790-09-06 10:19 G | 29037794.69 | 29037794.93 | 29037795.18 | 0.0134 | 0.0020 |
| Uranus | 74791-09-10 22:34 G | 29038164.20 | 29038164.44 | 29038164.69 | 0.0134 | 0.0034 |
| Uranus | 74792-09-13 21:07 G | 29038533.16 | 29038533.38 | 29038533.61 | 0.0134 | 0.0059 |
| Uranus | 74793-09-18 09:36 G | 29038902.76 | 29038902.90 | 29038903.06 | 0.0134 | 0.0108 |

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| Mars | 74796-12-28 12:43 G | 29040099.84 | 29040100.03 | 29040100.22 | 0.1631 | 0.0239 |
| Saturn | 74804-02-04 14:24 G | 29042693.91 | 29042694.10 | 29042694.31 | 0.0271 | 0.0159 |
| Neptune | 74810-03-19 02:10 G | 29044928.55 | 29044928.59 | 29044928.70 | 0.0088 | 0.0084 |
| Neptune | 74811-03-21 07:55 G | 29045295.66 | 29045295.83 | 29045296.00 | 0.0088 | 0.0066 |
| Neptune | 74812-03-23 02:39 G | 29045663.36 | 29045663.61 | 29045663.86 | 0.0088 | 0.0032 |
| Neptune | 74813-03-25 08:53 G | 29046030.62 | 29046030.87 | 29046031.13 | 0.0088 | 0.0014 |
| Neptune | 74814-03-28 00:58 G | 29046398.28 | 29046398.54 | 29046398.81 | 0.0088 | 0.0019 |
| Neptune | 74815-03-30 11:17 G | 29046765.76 | 29046765.97 | 29046766.22 | 0.0088 | 0.0038 |
| Neptune | 74816-03-31 22:34 G | 29047133.30 | 29047133.44 | 29047133.62 | 0.0088 | 0.0070 |
| Saturn | 74818-08-07 11:03 G | 29047991.79 | 29047991.96 | 29047992.15 | 0.0288 | 0.0201 |
| Jupiter | 74823-09-10 04:48 G | 29049851.56 | 29049851.70 | 29049851.84 | 0.0531 | 0.0427 |
| Uranus | 74830-02-24 00:00 G | 29052210.40 | 29052210.50 | 29052210.64 | 0.0144 | 0.0129 |
| Uranus | 74831-03-01 08:10 G | 29052580.64 | 29052580.84 | 29052581.06 | 0.0144 | 0.0078 |
| Uranus | 74832-03-05 08:53 G | 29052950.61 | 29052950.87 | 29052951.13 | 0.0144 | 0.0020 |
| Uranus | 74833-03-10 13:41 G | 29053320.82 | 29053321.07 | 29053321.32 | 0.0144 | 0.0016 |
| Saturn | 74834-02-10 17:03 G | 29053657.97 | 29053658.21 | 29053658.46 | 0.0272 | 0.0085 |
| Uranus | 74834-03-15 17:03 G | 29053690.99 | 29053691.21 | 29053691.43 | 0.0144 | 0.0078 |
| Uranus | 74835-03-20 18:00 G | 29054061.13 | 29054061.25 | 29054061.41 | 0.0144 | 0.0119 |
| Jupiter | 74835-09-15 04:19 G | 29054239.46 | 29054239.68 | 29054239.90 | 0.0534 | 0.0118 |
| Jupiter | 74841-03-12 19:41 G | 29056245.10 | 29056245.32 | 29056245.53 | 0.0496 | 0.0151 |
| Saturn | 74848-08-14 05:31 G | 29058956.51 | 29058956.73 | 29058956.96 | 0.0288 | 0.0093 |
| Pluto | 74848-10-05 04:19 G | 29059008.48 | 29059008.68 | 29059008.93 | 0.0064 | 0.0034 |
| Pluto | 74849-10-06 13:12 G | 29059374.93 | 29059375.05 | 29059375.22 | 0.0064 | 0.0053 |
| Jupiter | 74853-03-17 07:55 G | 29060632.62 | 29060632.83 | 29060633.05 | 0.0495 | 0.0236 |
| Saturn | 74863-02-05 22:05 G | 29064245.20 | 29064245.42 | 29064245.64 | 0.0271 | 0.0112 |
| Uranus | 74871-08-26 12:43 G | 29067368.93 | 29067369.03 | 29067369.15 | 0.0134 | 0.0120 |
| Uranus | 74872-08-29 11:46 G | 29067737.81 | 29067737.99 | 29067738.20 | 0.0134 | 0.0082 |
| Uranus | 74873-09-03 00:00 G | 29068107.28 | 29068107.50 | 29068107.75 | 0.0134 | 0.0051 |
| Uranus | 74874-09-06 22:48 G | 29068476.21 | 29068476.45 | 29068476.70 | 0.0134 | 0.0002 |
| Uranus | 74875-09-11 10:34 G | 29068845.70 | 29068845.94 | 29068846.20 | 0.0134 | 0.0025 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 74876-09-14 08:53 G | 29069214.69 | 29069214.87 | 29069215.09 | 0.0134 | 0.0078 |
| Saturn | 74877-08-08 08:53 G | 29069542.67 | 29069542.87 | 29069543.09 | 0.0288 | 0.0148 |
| Uranus | 74877-09-18 20:53 G | 29069584.24 | 29069584.37 | 29069584.55 | 0.0134 | 0.0105 |
| Neptune | 74892-09-18 04:34 G | 29075062.56 | 29075062.69 | 29075062.87 | 0.0090 | 0.0070 |
| Saturn | 74893-02-11 20:10 G | 29075209.13 | 29075209.34 | 29075209.56 | 0.0272 | 0.0133 |
| Neptune | 74893-09-20 22:48 G | 29075430.25 | 29075430.45 | 29075430.67 | 0.0090 | 0.0052 |
| Neptune | 74894-09-23 04:34 G | 29075797.45 | 29075797.69 | 29075797.94 | 0.0090 | 0.0016 |
| Neptune | 74895-09-25 19:27 G | 29076165.05 | 29076165.31 | 29076165.58 | 0.0090 | 0.0002 |
| Neptune | 74896-09-27 05:03 G | 29076532.50 | 29076532.71 | 29076532.95 | 0.0090 | 0.0038 |
| Neptune | 74897-09-29 15:22 G | 29076899.96 | 29076900.14 | 29076900.37 | 0.0090 | 0.0055 |
| Jupiter | 74906-09-10 10:48 G | 29080166.87 | 29080166.95 | 29080167.04 | 0.0530 | 0.0486 |
| Saturn | 74907-08-17 06:58 G | 29080507.59 | 29080507.79 | 29080508.02 | 0.0288 | 0.0143 |
| Uranus | 74914-02-25 10:34 G | 29082891.80 | 29082891.94 | 29082892.11 | 0.0144 | 0.0116 |
| Uranus | 74915-03-02 19:12 G | 29083262.10 | 29083262.30 | 29083262.54 | 0.0144 | 0.0070 |
| Uranus | 74916-03-06 18:15 G | 29083632.01 | 29083632.26 | 29083632.53 | 0.0144 | 0.0026 |
| Uranus | 74917-03-12 00:29 G | 29084002.29 | 29084002.52 | 29084002.77 | 0.0144 | 0.0037 |
| Uranus | 74918-03-17 02:39 G | 29084372.38 | 29084372.61 | 29084372.85 | 0.0144 | 0.0072 |
| Jupiter | 74918-09-15 13:55 G | 29084554.85 | 29084555.08 | 29084555.31 | 0.0532 | 0.0053 |
| Uranus | 74919-03-22 05:03 G | 29084742.63 | 29084742.71 | 29084742.84 | 0.0144 | 0.0131 |
| Saturn | 74922-02-08 04:48 G | 29085796.46 | 29085796.70 | 29085796.95 | 0.0271 | 0.0063 |
| Jupiter | 74924-03-13 01:12 G | 29086560.33 | 29086560.55 | 29086560.78 | 0.0497 | 0.0211 |
| Jupiter | 74936-03-17 10:34 G | 29090947.73 | 29090947.94 | 29090948.16 | 0.0495 | 0.0182 |
| Saturn | 74936-08-10 14:53 G | 29091093.90 | 29091094.12 | 29091094.35 | 0.0288 | 0.0093 |
| Pluto | 74938-04-09 02:24 G | 29091700.33 | 29091700.60 | 29091700.87 | 0.0080 | 0.0005 |
| Saturn | 74952-02-15 06:00 G | 29096760.57 | 29096760.75 | 29096760.93 | 0.0272 | 0.0182 |
| Uranus | 74955-08-28 01:41 G | 29098050.46 | 29098050.57 | 29098050.71 | 0.0134 | 0.0116 |
| Uranus | 74956-08-31 00:58 G | 29098419.35 | 29098419.54 | 29098419.75 | 0.0134 | 0.0079 |
| Uranus | 74957-09-04 12:29 G | 29098788.78 | 29098789.02 | 29098789.28 | 0.0134 | 0.0035 |
| Uranus | 74958-09-08 11:46 G | 29099157.74 | 29099157.99 | 29099158.24 | 0.0134 | 0.0007 |
| Uranus | 74959-09-12 23:03 G | 29099527.24 | 29099527.46 | 29099527.71 | 0.0134 | 0.0046 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 74960-09-15 22:05 G | 29099896.23 | 29099896.42 | 29099896.65 | 0.0134 | 0.0071 |
| Uranus | 74961-09-20 09:51 G | 29100265.82 | 29100265.91 | 29100266.05 | 0.0134 | 0.0121 |
| Saturn | 74966-08-18 06:15 G | 29102058.58 | 29102058.76 | 29102058.95 | 0.0287 | 0.0194 |
| Neptune | 74975-03-21 20:10 G | 29105196.20 | 29105196.34 | 29105196.51 | 0.0088 | 0.0071 |
| Neptune | 74976-03-23 03:36 G | 29105563.45 | 29105563.65 | 29105563.87 | 0.0088 | 0.0049 |
| Neptune | 74977-03-25 18:00 G | 29105930.99 | 29105931.25 | 29105931.52 | 0.0088 | 0.0020 |
| Neptune | 74978-03-28 05:31 G | 29106298.48 | 29106298.73 | 29106298.99 | 0.0088 | 0.0002 |
| Neptune | 74979-03-30 14:53 G | 29106665.88 | 29106666.12 | 29106666.39 | 0.0088 | 0.0031 |
| Neptune | 74980-04-01 06:58 G | 29107033.61 | 29107033.79 | 29107034.02 | 0.0088 | 0.0053 |
| Saturn | 74981-02-09 07:27 G | 29107347.55 | 29107347.81 | 29107348.07 | 0.0272 | 0.0015 |
| Neptune | 74981-04-03 13:12 G | 29107400.99 | 29107401.05 | 29107401.16 | 0.0088 | 0.0083 |
| Saturn | 74995-08-13 01:55 G | 29112645.35 | 29112645.58 | 29112645.82 | 0.0288 | 0.0036 |
| Uranus | 74998-02-25 23:31 G | 29113573.35 | 29113573.48 | 29113573.65 | 0.0144 | 0.0118 |
| Uranus | 74999-03-03 09:07 G | 29113943.66 | 29113943.88 | 29113944.11 | 0.0144 | 0.0063 |
| Uranus | 75000-03-08 07:41 G | 29114313.56 | 29114313.82 | 29114314.09 | 0.0144 | 0.0008 |

76TH MILLENNIUM CE

This is a list of transits of Moon in the 76th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Uranus | 75001-03-13 14:39 G | 29114683.87 | 29114684.11 | 29114684.36 | 0.0144 | 0.0029 | | |
| Jupiter | 75001-09-15 06:58 G | 29114869.56 | 29114869.79 | 29114870.02 | 0.0532 | 0.0042 | | |
| Mars | 75001-12-30 01:27 G | 29114975.44 | 29114975.56 | 29114975.68 | 0.1626 | 0.1234 | | |
| Uranus | 75002-03-18 15:22 G | 29115053.95 | 29115054.14 | 29115054.36 | 0.0144 | 0.0092 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 75003-03-23 18:58 G | 29115424.21 | 29115424.29 | 29115424.42 | 0.0144 | 0.0131 |
| Jupiter | 75007-03-14 02:53 G | 29116875.43 | 29116875.62 | 29116875.82 | 0.0497 | 0.0266 |
| Saturn | 75010-02-04 23:31 G | 29117934.34 | 29117934.48 | 29117934.61 | 0.0271 | 0.0224 |
| Saturn | 75011-02-17 18:00 G | 29118312.13 | 29118312.25 | 29118312.37 | 0.0272 | 0.0234 |
| Jupiter | 75013-09-20 15:36 G | 29119258.08 | 29119258.15 | 29119258.23 | 0.0534 | 0.0501 |
| Jupiter | 75019-03-18 23:46 G | 29121263.26 | 29121263.49 | 29121263.72 | 0.0495 | 0.0121 |
| Saturn | 75025-08-20 12:00 G | 29123609.90 | 29123610.00 | 29123610.13 | 0.0287 | 0.0251 |
| Jupiter | 75031-03-23 00:29 G | 29125650.48 | 29125650.52 | 29125650.56 | 0.0494 | 0.0484 |
| Uranus | 75039-08-29 14:24 G | 29128731.96 | 29128732.10 | 29128732.27 | 0.0134 | 0.0107 |
| Saturn | 75040-02-12 11:31 G | 29128898.73 | 29128898.98 | 29128899.23 | 0.0272 | 0.0036 |
| Uranus | 75040-09-01 14:39 G | 29129100.91 | 29129101.11 | 29129101.32 | 0.0134 | 0.0070 |
| Uranus | 75041-09-06 01:27 G | 29129470.33 | 29129470.56 | 29129470.82 | 0.0134 | 0.0038 |
| Uranus | 75042-09-10 01:12 G | 29129839.30 | 29129839.55 | 29129839.79 | 0.0134 | 0.0011 |
| Uranus | 75043-09-14 11:46 G | 29130208.75 | 29130208.99 | 29130209.24 | 0.0134 | 0.0037 |
| Uranus | 75044-09-17 10:48 G | 29130577.79 | 29130577.95 | 29130578.15 | 0.0134 | 0.0091 |
| Uranus | 75045-09-21 21:51 G | 29130947.30 | 29130947.41 | 29130947.56 | 0.0134 | 0.0116 |
| Saturn | 75054-08-15 12:15 G | 29134196.77 | 29134197.01 | 29134197.26 | 0.0288 | 0.0026 |
| Neptune | 75056-09-19 17:03 G | 29134963.14 | 29134963.21 | 29134963.32 | 0.0090 | 0.0084 |
| Neptune | 75057-09-21 23:46 G | 29135330.33 | 29135330.49 | 29135330.69 | 0.0090 | 0.0062 |
| Neptune | 75058-09-24 14:10 G | 29135697.85 | 29135698.09 | 29135698.34 | 0.0090 | 0.0032 |
| Neptune | 75059-09-27 01:27 G | 29136065.32 | 29136065.56 | 29136065.81 | 0.0090 | 0.0009 |
| Neptune | 75060-09-28 10:19 G | 29136432.68 | 29136432.93 | 29136433.19 | 0.0090 | 0.0022 |
| Neptune | 75061-10-01 01:41 G | 29136800.37 | 29136800.57 | 29136800.80 | 0.0090 | 0.0046 |
| Neptune | 75062-10-03 07:12 G | 29137167.67 | 29137167.80 | 29137167.95 | 0.0090 | 0.0075 |
| Saturn | 75069-02-06 12:00 G | 29139485.81 | 29139486.00 | 29139486.20 | 0.0271 | 0.0168 |
| Mars | 75080-12-31 23:17 G | 29143832.31 | 29143832.47 | 29143832.64 | 0.1628 | 0.0650 |
| Uranus | 75082-02-27 11:03 G | 29144254.79 | 29144254.96 | 29144255.16 | 0.0144 | 0.0102 |
| Uranus | 75083-03-04 21:07 G | 29144625.15 | 29144625.38 | 29144625.62 | 0.0144 | 0.0057 |
| Saturn | 75083-08-09 08:39 G | 29144782.72 | 29144782.86 | 29144783.01 | 0.0288 | 0.0231 |
| Uranus | 75084-03-08 18:29 G | 29144995.01 | 29144995.27 | 29144995.53 | 0.0144 | 0.0011 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 75084-09-14 20:10 G | 29145185.12 | 29145185.34 | 29145185.56 | 0.0531 | 0.0104 |
| Uranus | 75085-03-14 02:24 G | 29145365.37 | 29145365.60 | 29145365.84 | 0.0144 | 0.0050 |
| Uranus | 75086-03-19 02:10 G | 29145735.39 | 29145735.59 | 29145735.82 | 0.0144 | 0.0085 |
| Jupiter | 75090-03-13 10:05 G | 29147190.76 | 29147190.92 | 29147191.10 | 0.0498 | 0.0342 |
| Pluto | 75094-10-09 05:46 G | 29148861.49 | 29148861.74 | 29148862.00 | 0.0064 | 0.0009 |
| Jupiter | 75096-09-19 11:31 G | 29149572.84 | 29149572.98 | 29149573.13 | 0.0533 | 0.0411 |
| Saturn | 75099-02-13 22:34 G | 29150450.22 | 29150450.44 | 29150450.67 | 0.0272 | 0.0091 |
| Jupiter | 75102-03-18 15:07 G | 29151577.89 | 29151578.13 | 29151578.37 | 0.0496 | 0.0041 |
| Saturn | 75113-08-17 20:39 G | 29155748.12 | 29155748.36 | 29155748.60 | 0.0288 | 0.0089 |
| Jupiter | 75114-03-23 12:00 G | 29155965.89 | 29155966.00 | 29155966.12 | 0.0495 | 0.0427 |
| Uranus | 75123-08-31 03:51 G | 29159413.51 | 29159413.66 | 29159413.83 | 0.0134 | 0.0104 |
| Uranus | 75124-09-03 04:19 G | 29159782.47 | 29159782.68 | 29159782.89 | 0.0134 | 0.0065 |
| Uranus | 75125-09-07 14:10 G | 29160151.84 | 29160152.09 | 29160152.35 | 0.0134 | 0.0023 |
| Uranus | 75126-09-11 14:24 G | 29160520.85 | 29160521.10 | 29160521.34 | 0.0134 | 0.0006 |
| Uranus | 75127-09-16 00:15 G | 29160890.30 | 29160890.51 | 29160890.76 | 0.0134 | 0.0058 |
| Saturn | 75128-02-09 21:22 G | 29161037.15 | 29161037.39 | 29161037.62 | 0.0271 | 0.0110 |
| Uranus | 75128-09-19 00:43 G | 29161259.34 | 29161259.53 | 29161259.73 | 0.0134 | 0.0082 |
| Uranus | 75129-09-23 11:31 G | 29161628.95 | 29161628.98 | 29161629.02 | 0.0134 | 0.0132 |
| Neptune | 75139-03-22 21:22 G | 29165096.30 | 29165096.39 | 29165096.50 | 0.0088 | 0.0080 |
| Neptune | 75140-03-24 10:05 G | 29165463.77 | 29165463.92 | 29165464.14 | 0.0088 | 0.0064 |
| Neptune | 75141-03-27 00:00 G | 29165831.27 | 29165831.50 | 29165831.75 | 0.0088 | 0.0030 |
| Neptune | 75142-03-29 08:53 G | 29166198.61 | 29166198.87 | 29166199.14 | 0.0088 | 0.0013 |
| Saturn | 75142-08-12 00:00 G | 29166334.32 | 29166334.50 | 29166334.70 | 0.0287 | 0.0165 |
| Neptune | 75143-04-01 01:55 G | 29166566.34 | 29166566.58 | 29166566.84 | 0.0088 | 0.0023 |
| Neptune | 75144-04-02 06:58 G | 29166933.57 | 29166933.79 | 29166934.05 | 0.0088 | 0.0039 |
| Neptune | 75145-04-05 01:55 G | 29167301.46 | 29167301.58 | 29167301.75 | 0.0088 | 0.0073 |
| Saturn | 75158-02-16 12:15 G | 29172001.82 | 29172002.01 | 29172002.22 | 0.0272 | 0.0146 |
| Uranus | 75165-02-24 02:53 G | 29174566.60 | 29174566.62 | 29174566.70 | 0.0144 | 0.0142 |
| Uranus | 75166-02-28 23:03 G | 29174936.30 | 29174936.46 | 29174936.66 | 0.0144 | 0.0106 |
| Uranus | 75167-03-06 09:51 G | 29175306.67 | 29175306.91 | 29175307.15 | 0.0144 | 0.0049 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 75167-09-15 08:24 G | 29175499.64 | 29175499.85 | 29175500.07 | 0.0531 | 0.0222 |
| Uranus | 75168-03-10 06:58 G | 29175676.53 | 29175676.79 | 29175677.05 | 0.0144 | 0.0004 |
| Uranus | 75169-03-15 15:51 G | 29176046.93 | 29176047.16 | 29176047.41 | 0.0144 | 0.0044 |
| Uranus | 75170-03-20 14:53 G | 29176416.96 | 29176417.12 | 29176417.31 | 0.0144 | 0.0107 |
| Uranus | 75171-03-25 21:36 G | 29176787.39 | 29176787.40 | 29176787.42 | 0.0144 | 0.0144 |
| Saturn | 75172-08-19 05:31 G | 29177299.53 | 29177299.73 | 29177299.94 | 0.0288 | 0.0158 |
| Jupiter | 75173-03-13 05:46 G | 29177505.61 | 29177505.74 | 29177505.87 | 0.0499 | 0.0415 |
| Jupiter | 75179-09-20 10:34 G | 29179887.76 | 29179887.94 | 29179888.13 | 0.0533 | 0.0294 |
| Pluto | 75184-04-12 03:36 G | 29181553.41 | 29181553.65 | 29181553.90 | 0.0080 | 0.0032 |
| Jupiter | 75185-03-18 03:07 G | 29181893.40 | 29181893.63 | 29181893.86 | 0.0496 | 0.0028 |
| Saturn | 75187-02-11 04:19 G | 29182588.43 | 29182588.68 | 29182588.93 | 0.0271 | 0.0053 |
| Jupiter | 75197-03-22 11:31 G | 29186280.82 | 29186280.98 | 29186281.16 | 0.0495 | 0.0359 |
| Saturn | 75201-08-13 17:03 G | 29187885.98 | 29187886.21 | 29187886.44 | 0.0287 | 0.0093 |
| Uranus | 75207-08-31 16:34 G | 29190095.02 | 29190095.19 | 29190095.39 | 0.0134 | 0.0093 |
| Uranus | 75208-09-03 18:15 G | 29190464.04 | 29190464.26 | 29190464.48 | 0.0134 | 0.0058 |
| Uranus | 75209-09-08 03:36 G | 29190833.40 | 29190833.65 | 29190833.91 | 0.0134 | 0.0024 |
| Uranus | 75210-09-12 04:19 G | 29191202.45 | 29191202.68 | 29191202.93 | 0.0134 | 0.0024 |
| Uranus | 75211-09-16 13:41 G | 29191571.84 | 29191572.07 | 29191572.32 | 0.0134 | 0.0050 |
| Uranus | 75212-09-19 14:24 G | 29191940.95 | 29191941.10 | 29191941.26 | 0.0134 | 0.0103 |
| Uranus | 75213-09-24 00:15 G | 29192310.43 | 29192310.51 | 29192310.58 | 0.0134 | 0.0128 |
| Saturn | 75216-02-06 05:03 G | 29193175.62 | 29193175.71 | 29193175.81 | 0.0272 | 0.0250 |
| Saturn | 75217-02-17 22:34 G | 29193553.29 | 29193553.44 | 29193553.62 | 0.0272 | 0.0204 |
| Neptune | 75221-09-22 07:12 G | 29195230.66 | 29195230.80 | 29195230.99 | 0.0090 | 0.0069 |
| Neptune | 75222-09-24 19:27 G | 29195598.13 | 29195598.31 | 29195598.53 | 0.0090 | 0.0051 |
| Neptune | 75223-09-27 03:36 G | 29195965.40 | 29195965.65 | 29195965.92 | 0.0090 | 0.0016 |
| Neptune | 75224-09-28 20:24 G | 29196333.10 | 29196333.35 | 29196333.60 | 0.0090 | 0.0003 |
| Neptune | 75225-10-01 01:12 G | 29196700.33 | 29196700.55 | 29196700.79 | 0.0090 | 0.0038 |
| Neptune | 75226-10-03 19:12 G | 29197068.12 | 29197068.30 | 29197068.52 | 0.0090 | 0.0056 |
| Saturn | 75231-08-21 19:41 G | 29198851.19 | 29198851.32 | 29198851.48 | 0.0288 | 0.0227 |
| Saturn | 75246-02-12 12:58 G | 29204139.79 | 29204140.04 | 29204140.28 | 0.0271 | 0.0006 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 75250-03-01 08:39 G | 29205617.68 | 29205617.86 | 29205618.08 | 0.0144 | 0.0089 |
| Jupiter | 75250-09-14 14:10 G | 29205814.91 | 29205815.09 | 29205815.27 | 0.0530 | 0.0304 |
| Uranus | 75251-03-06 19:12 G | 29205988.07 | 29205988.30 | 29205988.56 | 0.0144 | 0.0046 |
| Uranus | 75252-03-10 15:51 G | 29206357.91 | 29206358.16 | 29206358.43 | 0.0144 | 0.0005 |
| Uranus | 75253-03-16 01:41 G | 29206728.35 | 29206728.57 | 29206728.81 | 0.0144 | 0.0063 |
| Uranus | 75254-03-21 00:00 G | 29207098.32 | 29207098.50 | 29207098.70 | 0.0144 | 0.0098 |
| Jupiter | 75256-03-12 16:48 G | 29207821.16 | 29207821.20 | 29207821.26 | 0.0499 | 0.0485 |
| Saturn | 75260-08-15 04:48 G | 29209437.46 | 29209437.70 | 29209437.95 | 0.0287 | 0.0025 |
| Jupiter | 75262-09-19 13:55 G | 29210202.87 | 29210203.08 | 29210203.30 | 0.0532 | 0.0214 |
| Jupiter | 75268-03-16 22:34 G | 29212208.20 | 29212208.44 | 29212208.68 | 0.0497 | 0.0116 |
| Saturn | 75275-02-07 15:22 G | 29214726.98 | 29214727.14 | 29214727.33 | 0.0272 | 0.0195 |
| Saturn | 75276-02-20 04:05 G | 29215104.59 | 29215104.67 | 29215104.76 | 0.0272 | 0.0257 |
| Jupiter | 75280-03-21 12:15 G | 29216595.82 | 29216596.01 | 29216596.20 | 0.0495 | 0.0278 |
| Mars | 75285-12-31 23:17 G | 29218707.28 | 29218707.47 | 29218707.67 | 0.1623 | 0.0491 |
| Saturn | 75289-08-09 19:41 G | 29220024.21 | 29220024.32 | 29220024.45 | 0.0288 | 0.0248 |
| Uranus | 75290-08-27 21:51 G | 29220407.33 | 29220407.41 | 29220407.53 | 0.0134 | 0.0122 |
| Uranus | 75291-09-01 06:15 G | 29220776.59 | 29220776.76 | 29220776.96 | 0.0134 | 0.0092 |
| Uranus | 75292-09-04 08:24 G | 29221145.63 | 29221145.85 | 29221146.08 | 0.0134 | 0.0051 |
| Uranus | 75293-09-08 16:34 G | 29221514.93 | 29221515.19 | 29221515.45 | 0.0134 | 0.0011 |
| Uranus | 75294-09-12 18:29 G | 29221884.03 | 29221884.27 | 29221884.51 | 0.0134 | 0.0020 |
| Uranus | 75295-09-17 02:39 G | 29222253.41 | 29222253.61 | 29222253.85 | 0.0134 | 0.0071 |
| Uranus | 75296-09-20 04:34 G | 29222622.53 | 29222622.69 | 29222622.87 | 0.0134 | 0.0096 |
| Neptune | 75304-03-24 17:31 G | 29225364.10 | 29225364.23 | 29225364.40 | 0.0088 | 0.0071 |
| Saturn | 75305-02-15 01:27 G | 29225691.33 | 29225691.56 | 29225691.80 | 0.0271 | 0.0059 |
| Neptune | 75305-03-27 00:43 G | 29225731.32 | 29225731.53 | 29225731.78 | 0.0088 | 0.0045 |
| Neptune | 75306-03-29 19:12 G | 29226099.05 | 29226099.30 | 29226099.55 | 0.0088 | 0.0019 |
| Neptune | 75307-04-01 00:15 G | 29226466.25 | 29226466.51 | 29226466.77 | 0.0088 | 0.0006 |
| Neptune | 75308-04-02 18:58 G | 29226834.06 | 29226834.29 | 29226834.55 | 0.0088 | 0.0032 |
| Neptune | 75309-04-05 00:29 G | 29227201.35 | 29227201.52 | 29227201.74 | 0.0088 | 0.0056 |
| Neptune | 75310-04-07 17:03 G | 29227569.15 | 29227569.21 | 29227569.33 | 0.0088 | 0.0083 |

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| Saturn | 75319-08-18 13:12 G | 29230988.80 | 29230989.05 | 29230989.29 | 0.0287 | 0.0040 |
| Uranus | 75333-02-25 23:31 G | 29235929.39 | 29235929.48 | 29235929.62 | 0.0144 | 0.0130 |
| Jupiter | 75333-09-14 16:19 G | 29236130.02 | 29236130.18 | 29236130.36 | 0.0530 | 0.0373 |
| Saturn | 75334-02-09 18:29 G | 29236278.06 | 29236278.27 | 29236278.49 | 0.0272 | 0.0145 |
| Uranus | 75334-03-02 19:55 G | 29236299.16 | 29236299.33 | 29236299.54 | 0.0144 | 0.0095 |
| Uranus | 75335-03-08 06:43 G | 29236669.54 | 29236669.78 | 29236670.04 | 0.0144 | 0.0036 |
| Uranus | 75336-03-12 03:22 G | 29237039.39 | 29237039.64 | 29237039.91 | 0.0144 | 0.0017 |
| Uranus | 75337-03-17 14:10 G | 29237409.86 | 29237410.09 | 29237410.33 | 0.0144 | 0.0057 |
| Uranus | 75338-03-22 11:31 G | 29237779.85 | 29237779.98 | 29237780.14 | 0.0144 | 0.0120 |
| Pluto | 75340-10-12 15:51 G | 29238714.94 | 29238715.16 | 29238715.41 | 0.0064 | 0.0019 |
| Jupiter | 75345-09-19 08:10 G | 29240517.62 | 29240517.84 | 29240518.06 | 0.0531 | 0.0103 |
| Saturn | 75348-08-12 10:48 G | 29241575.77 | 29241575.95 | 29241576.13 | 0.0288 | 0.0184 |
| Jupiter | 75351-03-18 04:19 G | 29242523.47 | 29242523.68 | 29242523.89 | 0.0498 | 0.0190 |
| Jupiter | 75363-03-22 20:24 G | 29246911.13 | 29246911.35 | 29246911.57 | 0.0496 | 0.0221 |
| Saturn | 75364-02-17 12:43 G | 29247242.81 | 29247243.03 | 29247243.26 | 0.0271 | 0.0109 |
| Mars | 75365-01-04 08:39 G | 29247564.80 | 29247564.86 | 29247564.93 | 0.1625 | 0.1518 |
| Uranus | 75374-08-29 11:31 G | 29251088.93 | 29251088.98 | 29251089.08 | 0.0134 | 0.0127 |
| Uranus | 75375-09-02 19:41 G | 29251458.12 | 29251458.32 | 29251458.53 | 0.0134 | 0.0079 |
| Uranus | 75376-09-05 22:48 G | 29251827.23 | 29251827.45 | 29251827.69 | 0.0134 | 0.0046 |
| Uranus | 75377-09-10 06:43 G | 29252196.52 | 29252196.78 | 29252197.04 | 0.0134 | 0.0009 |
| Saturn | 75378-08-19 22:48 G | 29252540.23 | 29252540.45 | 29252540.68 | 0.0287 | 0.0103 |
| Uranus | 75378-09-14 09:22 G | 29252565.66 | 29252565.89 | 29252566.13 | 0.0134 | 0.0037 |
| Uranus | 75379-09-18 16:48 G | 29252934.99 | 29252935.20 | 29252935.44 | 0.0134 | 0.0065 |
| Uranus | 75380-09-21 19:27 G | 29253304.20 | 29253304.31 | 29253304.44 | 0.0134 | 0.0117 |
| Neptune | 75385-09-22 14:39 G | 29255131.03 | 29255131.11 | 29255131.23 | 0.0090 | 0.0082 |
| Neptune | 75386-09-24 21:36 G | 29255498.23 | 29255498.40 | 29255498.61 | 0.0090 | 0.0062 |
| Neptune | 75387-09-27 14:53 G | 29255865.90 | 29255866.12 | 29255866.37 | 0.0090 | 0.0030 |
| Neptune | 75388-09-28 19:27 G | 29256233.06 | 29256233.31 | 29256233.57 | 0.0090 | 0.0010 |
| Neptune | 75389-10-01 13:12 G | 29256600.82 | 29256601.05 | 29256601.31 | 0.0090 | 0.0023 |
| Neptune | 75390-10-03 18:29 G | 29256968.07 | 29256968.27 | 29256968.50 | 0.0090 | 0.0044 |

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| Neptune | 75391-10-06 09:36 G | 29257335.79 | 29257335.90 | 29257336.07 | 0.0090 | 0.0076 |
| Saturn | 75393-02-10 20:10 G | 29257829.11 | 29257829.34 | 29257829.58 | 0.0272 | 0.0100 |
| Mars | 75403-07-09 12:15 G | 29261628.85 | 29261629.01 | 29261629.18 | 0.1903 | 0.0795 |
| Saturn | 75407-08-15 20:39 G | 29263127.15 | 29263127.36 | 29263127.59 | 0.0288 | 0.0123 |
| Jupiter | 75416-09-14 12:29 G | 29266444.94 | 29266445.02 | 29266445.12 | 0.0529 | 0.0479 |
| Uranus | 75417-02-27 09:51 G | 29266610.86 | 29266610.91 | 29266610.99 | 0.0144 | 0.0140 |
| Uranus | 75418-03-04 06:43 G | 29266980.57 | 29266980.78 | 29266981.00 | 0.0144 | 0.0075 |
| Uranus | 75419-03-09 17:17 G | 29267350.97 | 29267351.22 | 29267351.47 | 0.0144 | 0.0034 |
| Uranus | 75420-03-13 13:41 G | 29267720.81 | 29267721.07 | 29267721.32 | 0.0144 | 0.0018 |
| Uranus | 75421-03-19 00:00 G | 29268091.30 | 29268091.50 | 29268091.73 | 0.0144 | 0.0077 |
| Uranus | 75422-03-23 21:22 G | 29268461.23 | 29268461.39 | 29268461.56 | 0.0144 | 0.0111 |
| Saturn | 75423-02-19 15:51 G | 29268793.95 | 29268794.16 | 29268794.37 | 0.0271 | 0.0154 |
| Jupiter | 75428-09-19 14:24 G | 29270832.87 | 29270833.10 | 29270833.34 | 0.0531 | 0.0016 |
| Jupiter | 75434-03-18 13:12 G | 29272838.84 | 29272839.05 | 29272839.26 | 0.0498 | 0.0248 |
| Saturn | 75437-08-22 10:34 G | 29274091.75 | 29274091.94 | 29274092.14 | 0.0287 | 0.0161 |
| Jupiter | 75440-09-24 09:36 G | 29275220.81 | 29275220.90 | 29275220.99 | 0.0533 | 0.0485 |
| Jupiter | 75446-03-22 20:53 G | 29277226.15 | 29277226.37 | 29277226.59 | 0.0496 | 0.0157 |
| Saturn | 75452-02-14 01:41 G | 29279380.34 | 29279380.57 | 29279380.81 | 0.0272 | 0.0053 |
| Uranus | 75458-08-31 02:39 G | 29281770.49 | 29281770.61 | 29281770.77 | 0.0134 | 0.0109 |
| Uranus | 75459-09-04 09:07 G | 29282139.69 | 29282139.88 | 29282140.10 | 0.0134 | 0.0080 |
| Uranus | 75460-09-07 13:27 G | 29282508.83 | 29282509.06 | 29282509.30 | 0.0134 | 0.0037 |
| Uranus | 75461-09-11 19:55 G | 29282878.07 | 29282878.33 | 29282878.59 | 0.0134 | 0.0003 |
| Uranus | 75462-09-15 23:31 G | 29283247.25 | 29283247.48 | 29283247.72 | 0.0134 | 0.0035 |
| Uranus | 75463-09-20 06:29 G | 29283616.57 | 29283616.77 | 29283616.97 | 0.0134 | 0.0084 |
| Uranus | 75464-09-23 10:19 G | 29283985.80 | 29283985.93 | 29283986.07 | 0.0134 | 0.0110 |
| Saturn | 75466-08-16 23:03 G | 29284678.22 | 29284678.46 | 29284678.71 | 0.0288 | 0.0071 |
| Neptune | 75468-03-24 17:31 G | 29285264.11 | 29285264.23 | 29285264.36 | 0.0088 | 0.0077 |
| Neptune | 75469-03-27 12:00 G | 29285631.84 | 29285632.00 | 29285632.21 | 0.0088 | 0.0062 |
| Neptune | 75470-03-29 17:17 G | 29285998.98 | 29285999.22 | 29285999.48 | 0.0088 | 0.0027 |
| Neptune | 75471-04-01 12:15 G | 29286366.75 | 29286367.01 | 29286367.28 | 0.0088 | 0.0011 |

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| Neptune | 75472-04-02 18:58 G | 29286734.05 | 29286734.29 | 29286734.54 | 0.0088 | 0.0024 |
| Neptune | 75473-04-05 10:05 G | 29287101.70 | 29287101.92 | 29287102.18 | 0.0088 | 0.0041 |
| Neptune | 75474-04-07 20:24 G | 29287469.24 | 29287469.35 | 29287469.50 | 0.0088 | 0.0075 |
| Saturn | 75481-02-08 05:31 G | 29289967.63 | 29289967.73 | 29289967.85 | 0.0271 | 0.0244 |
| Saturn | 75482-02-20 14:10 G | 29290344.93 | 29290345.09 | 29290345.28 | 0.0271 | 0.0197 |
| Saturn | 75496-08-23 19:41 G | 29295643.17 | 29295643.32 | 29295643.48 | 0.0288 | 0.0216 |
| Uranus | 75501-02-28 23:03 G | 29297292.32 | 29297292.46 | 29297292.62 | 0.0144 | 0.0117 |
| Uranus | 75502-03-05 20:24 G | 29297662.15 | 29297662.35 | 29297662.56 | 0.0144 | 0.0082 |
| Uranus | 75503-03-11 06:29 G | 29298032.52 | 29298032.77 | 29298033.03 | 0.0144 | 0.0021 |
| Uranus | 75504-03-15 03:22 G | 29298402.39 | 29298402.64 | 29298402.89 | 0.0144 | 0.0029 |
| Uranus | 75505-03-20 14:39 G | 29298772.89 | 29298773.11 | 29298773.33 | 0.0144 | 0.0071 |
| Uranus | 75506-03-25 10:48 G | 29299142.88 | 29299142.95 | 29299143.07 | 0.0144 | 0.0135 |
| Saturn | 75511-02-16 07:41 G | 29300931.58 | 29300931.82 | 29300932.06 | 0.0271 | 0.0011 |
| Jupiter | 75511-09-20 16:19 G | 29301147.95 | 29301148.18 | 29301148.40 | 0.0531 | 0.0054 |
| Jupiter | 75517-03-18 14:10 G | 29303153.92 | 29303154.09 | 29303154.28 | 0.0498 | 0.0315 |
| Jupiter | 75523-09-25 18:43 G | 29305536.13 | 29305536.28 | 29305536.43 | 0.0532 | 0.0395 |
| Saturn | 75525-08-18 22:48 G | 29306229.21 | 29306229.45 | 29306229.70 | 0.0288 | 0.0021 |
| Jupiter | 75529-03-23 09:51 G | 29307541.68 | 29307541.91 | 29307542.15 | 0.0497 | 0.0111 |
| Saturn | 75540-02-11 02:53 G | 29311518.46 | 29311518.62 | 29311518.79 | 0.0270 | 0.0204 |
| Saturn | 75541-02-22 16:05 G | 29311896.06 | 29311896.17 | 29311896.29 | 0.0271 | 0.0239 |
| Uranus | 75542-09-01 17:03 G | 29312452.09 | 29312452.21 | 29312452.34 | 0.0134 | 0.0115 |
| Uranus | 75543-09-05 22:48 G | 29312821.23 | 29312821.45 | 29312821.68 | 0.0134 | 0.0065 |
| Uranus | 75544-09-09 04:05 G | 29313190.44 | 29313190.67 | 29313190.91 | 0.0134 | 0.0033 |
| Uranus | 75545-09-13 10:05 G | 29313559.66 | 29313559.92 | 29313560.18 | 0.0134 | 0.0006 |
| Uranus | 75546-09-17 14:53 G | 29313928.90 | 29313929.12 | 29313929.35 | 0.0134 | 0.0050 |
| Uranus | 75547-09-21 20:24 G | 29314298.16 | 29314298.35 | 29314298.58 | 0.0134 | 0.0079 |
| Uranus | 75548-09-25 00:58 G | 29314667.51 | 29314667.54 | 29314667.61 | 0.0134 | 0.0131 |
| Neptune | 75550-09-26 07:55 G | 29315398.69 | 29315398.83 | 29315399.01 | 0.0090 | 0.0069 |
| Neptune | 75551-09-28 12:29 G | 29315765.82 | 29315766.02 | 29315766.24 | 0.0090 | 0.0049 |
| Neptune | 75552-09-30 06:15 G | 29316133.51 | 29316133.76 | 29316134.02 | 0.0090 | 0.0016 |

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| Neptune | 75553-10-02 12:43 G | 29316500.78 | 29316501.03 | 29316501.27 | 0.0090 | 0.0004 |
| Saturn | 75554-08-13 09:07 G | 29316815.81 | 29316815.88 | 29316815.97 | 0.0288 | 0.0270 |
| Neptune | 75554-10-05 02:53 G | 29316868.40 | 29316868.62 | 29316868.88 | 0.0090 | 0.0037 |
| Saturn | 75555-08-26 22:05 G | 29317194.33 | 29317194.42 | 29317194.53 | 0.0288 | 0.0263 |
| Neptune | 75555-10-07 13:27 G | 29317235.88 | 29317236.06 | 29317236.26 | 0.0090 | 0.0057 |
| Neptune | 75556-10-08 22:34 G | 29317603.43 | 29317603.44 | 29317603.51 | 0.0090 | 0.0089 |
| Mars | 75570-01-04 22:34 G | 29322439.26 | 29322439.44 | 29322439.62 | 0.1621 | 0.0280 |
| Saturn | 75570-02-17 09:07 G | 29322482.63 | 29322482.88 | 29322483.14 | 0.0271 | 0.0031 |
| Saturn | 75584-08-20 01:41 G | 29327780.34 | 29327780.57 | 29327780.81 | 0.0289 | 0.0023 |
| Uranus | 75585-03-01 11:03 G | 29327973.85 | 29327973.96 | 29327974.10 | 0.0144 | 0.0126 |
| Pluto | 75585-10-15 08:39 G | 29328201.73 | 29328201.86 | 29328202.03 | 0.0064 | 0.0052 |
| Uranus | 75586-03-06 09:22 G | 29328343.67 | 29328343.89 | 29328344.12 | 0.0144 | 0.0061 |
| Pluto | 75586-10-17 02:24 G | 29328568.41 | 29328568.60 | 29328568.79 | 0.0064 | 0.0042 |
| Uranus | 75587-03-11 19:12 G | 29328714.04 | 29328714.30 | 29328714.56 | 0.0144 | 0.0020 |
| Uranus | 75588-03-15 16:05 G | 29329083.92 | 29329084.17 | 29329084.42 | 0.0144 | 0.0033 |
| Uranus | 75589-03-21 02:10 G | 29329454.41 | 29329454.59 | 29329454.81 | 0.0144 | 0.0091 |
| Uranus | 75590-03-25 22:34 G | 29329824.34 | 29329824.44 | 29329824.59 | 0.0144 | 0.0126 |
| Jupiter | 75594-09-20 01:41 G | 29331463.35 | 29331463.57 | 29331463.79 | 0.0529 | 0.0142 |
| Saturn | 75599-02-12 02:53 G | 29333069.44 | 29333069.62 | 29333069.82 | 0.0270 | 0.0166 |
| Jupiter | 75600-03-18 04:05 G | 29333469.51 | 29333469.67 | 29333469.83 | 0.0500 | 0.0367 |
| Jupiter | 75606-09-24 16:19 G | 29335851.00 | 29335851.18 | 29335851.38 | 0.0532 | 0.0314 |
| Jupiter | 75612-03-22 12:43 G | 29337856.80 | 29337857.03 | 29337857.27 | 0.0497 | 0.0072 |
| Saturn | 75613-08-14 07:55 G | 29338366.69 | 29338366.83 | 29338366.99 | 0.0289 | 0.0227 |
| Uranus | 75626-09-02 08:10 G | 29343133.68 | 29343133.84 | 29343134.02 | 0.0134 | 0.0095 |
| Uranus | 75627-09-06 12:29 G | 29343502.80 | 29343503.02 | 29343503.25 | 0.0134 | 0.0067 |
| Uranus | 75628-09-09 18:43 G | 29343872.05 | 29343872.28 | 29343872.53 | 0.0134 | 0.0023 |
| Saturn | 75629-02-18 05:17 G | 29344033.47 | 29344033.72 | 29344033.97 | 0.0271 | 0.0066 |
| Uranus | 75629-09-13 23:17 G | 29344241.21 | 29344241.47 | 29344241.73 | 0.0134 | 0.0015 |
| Uranus | 75630-09-18 05:17 G | 29344610.50 | 29344610.72 | 29344610.95 | 0.0134 | 0.0049 |
| Uranus | 75631-09-22 09:36 G | 29344979.74 | 29344979.90 | 29344980.10 | 0.0134 | 0.0098 |

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| Uranus | 75632-09-25 15:36 G | 29345349.07 | 29345349.15 | 29345349.25 | 0.0134 | 0.0124 |
| Neptune | 75633-03-27 10:05 G | 29345531.80 | 29345531.92 | 29345532.11 | 0.0088 | 0.0071 |
| Neptune | 75634-03-30 04:05 G | 29345899.46 | 29345899.67 | 29345899.93 | 0.0088 | 0.0043 |
| Neptune | 75635-04-01 12:00 G | 29346266.76 | 29346267.00 | 29346267.26 | 0.0088 | 0.0019 |
| Neptune | 75636-04-03 02:24 G | 29346634.33 | 29346634.60 | 29346634.87 | 0.0088 | 0.0009 |
| Neptune | 75637-04-05 14:24 G | 29347001.88 | 29347002.10 | 29347002.35 | 0.0088 | 0.0032 |
| Neptune | 75638-04-07 23:46 G | 29347369.31 | 29347369.49 | 29347369.71 | 0.0088 | 0.0059 |
| Neptune | 75639-04-10 17:17 G | 29347737.13 | 29347737.22 | 29347737.31 | 0.0088 | 0.0082 |
| Saturn | 75643-08-22 06:00 G | 29349331.52 | 29349331.75 | 29349331.99 | 0.0289 | 0.0061 |
| Saturn | 75658-02-13 08:24 G | 29354620.64 | 29354620.85 | 29354621.06 | 0.0270 | 0.0129 |
| Uranus | 75669-03-02 00:15 G | 29358655.34 | 29358655.51 | 29358655.71 | 0.0144 | 0.0103 |
| Uranus | 75670-03-06 23:31 G | 29359025.27 | 29359025.48 | 29359025.71 | 0.0144 | 0.0068 |
| Uranus | 75671-03-12 08:39 G | 29359395.60 | 29359395.86 | 29359396.13 | 0.0144 | 0.0006 |
| Uranus | 75672-03-16 06:00 G | 29359765.51 | 29359765.75 | 29359766.00 | 0.0144 | 0.0043 |
| Saturn | 75672-08-15 04:05 G | 29359917.49 | 29359917.67 | 29359917.87 | 0.0289 | 0.0188 |
| Uranus | 75673-03-21 16:48 G | 29360136.00 | 29360136.20 | 29360136.42 | 0.0144 | 0.0086 |
| Pluto | 75675-04-17 17:17 G | 29360893.09 | 29360893.22 | 29360893.39 | 0.0081 | 0.0067 |
| Jupiter | 75677-09-19 01:55 G | 29361778.37 | 29361778.58 | 29361778.80 | 0.0529 | 0.0213 |
| Jupiter | 75683-03-18 06:29 G | 29363784.64 | 29363784.77 | 29363784.90 | 0.0500 | 0.0419 |
| Mars | 75687-07-09 17:46 G | 29365359.08 | 29365359.24 | 29365359.41 | 0.1908 | 0.1197 |
| Saturn | 75688-02-20 03:22 G | 29365584.42 | 29365584.64 | 29365584.88 | 0.0271 | 0.0104 |
| Jupiter | 75689-09-24 06:58 G | 29366166.60 | 29366166.79 | 29366166.98 | 0.0532 | 0.0265 |
| Jupiter | 75695-03-23 03:36 G | 29368172.42 | 29368172.65 | 29368172.88 | 0.0498 | 0.0031 |
| Saturn | 75702-08-24 05:03 G | 29370882.47 | 29370882.71 | 29370882.94 | 0.0289 | 0.0097 |
| Jupiter | 75707-03-28 10:05 G | 29372559.87 | 29372559.92 | 29372559.99 | 0.0497 | 0.0479 |
| Uranus | 75709-08-30 14:10 G | 29373446.01 | 29373446.09 | 29373446.18 | 0.0134 | 0.0126 |
| Uranus | 75710-09-03 22:19 G | 29373815.28 | 29373815.43 | 29373815.59 | 0.0134 | 0.0101 |
| Uranus | 75711-09-08 01:55 G | 29374184.35 | 29374184.58 | 29374184.83 | 0.0134 | 0.0051 |
| Uranus | 75712-09-11 09:36 G | 29374553.67 | 29374553.90 | 29374554.15 | 0.0134 | 0.0020 |
| Uranus | 75713-09-15 13:27 G | 29374922.81 | 29374923.06 | 29374923.32 | 0.0134 | 0.0021 |

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| Uranus | 75714-09-19 20:24 G | 29375292.15 | 29375292.35 | 29375292.57 | 0.0134 | 0.0064 |
| Neptune | 75714-09-26 06:29 G | 29375298.69 | 29375298.77 | 29375298.90 | 0.0090 | 0.0081 |
| Uranus | 75715-09-24 00:00 G | 29375661.32 | 29375661.50 | 29375661.69 | 0.0134 | 0.0093 |
| Neptune | 75715-09-28 23:31 G | 29375666.32 | 29375666.48 | 29375666.70 | 0.0090 | 0.0063 |
| Neptune | 75716-09-30 07:12 G | 29376033.57 | 29376033.80 | 29376034.04 | 0.0090 | 0.0028 |
| Saturn | 75717-02-15 12:29 G | 29376171.79 | 29376172.02 | 29376172.25 | 0.0270 | 0.0090 |
| Neptune | 75717-10-02 20:10 G | 29376401.09 | 29376401.34 | 29376401.61 | 0.0090 | 0.0010 |
| Neptune | 75718-10-05 07:27 G | 29376768.58 | 29376768.81 | 29376769.06 | 0.0090 | 0.0024 |
| Neptune | 75719-10-07 15:36 G | 29377135.94 | 29377136.15 | 29377136.40 | 0.0090 | 0.0042 |
| Neptune | 75720-10-09 07:55 G | 29377503.71 | 29377503.83 | 29377503.97 | 0.0090 | 0.0076 |
| Saturn | 75731-08-18 06:15 G | 29381468.56 | 29381468.76 | 29381468.97 | 0.0289 | 0.0144 |
| Saturn | 75747-02-22 09:07 G | 29387135.68 | 29387135.88 | 29387136.08 | 0.0271 | 0.0146 |
| Uranus | 75753-03-03 10:48 G | 29389336.79 | 29389336.95 | 29389337.13 | 0.0144 | 0.0111 |
| Uranus | 75754-03-08 11:17 G | 29389706.74 | 29389706.97 | 29389707.21 | 0.0144 | 0.0047 |
| Uranus | 75755-03-13 19:27 G | 29390077.05 | 29390077.31 | 29390077.58 | 0.0144 | 0.0008 |
| Uranus | 75756-03-17 17:31 G | 29390447.00 | 29390447.23 | 29390447.47 | 0.0144 | 0.0048 |
| Uranus | 75757-03-23 03:36 G | 29390817.47 | 29390817.65 | 29390817.83 | 0.0144 | 0.0104 |
| Uranus | 75758-03-28 00:15 G | 29391187.45 | 29391187.51 | 29391187.57 | 0.0144 | 0.0140 |
| Jupiter | 75760-09-19 15:22 G | 29392093.95 | 29392094.14 | 29392094.33 | 0.0528 | 0.0271 |
| Saturn | 75761-08-24 23:46 G | 29392433.27 | 29392433.49 | 29392433.71 | 0.0289 | 0.0133 |
| Jupiter | 75766-03-18 17:31 G | 29394100.17 | 29394100.23 | 29394100.29 | 0.0501 | 0.0483 |
| Jupiter | 75772-09-24 10:19 G | 29396481.71 | 29396481.93 | 29396482.16 | 0.0530 | 0.0195 |
| Mars | 75775-01-05 14:10 G | 29397314.95 | 29397315.09 | 29397315.22 | 0.1617 | 0.1135 |
| Saturn | 75776-02-17 11:46 G | 29397722.74 | 29397722.99 | 29397723.25 | 0.0270 | 0.0048 |
| Jupiter | 75778-03-23 04:05 G | 29398487.42 | 29398487.67 | 29398487.91 | 0.0499 | 0.0027 |
| Jupiter | 75790-03-27 21:36 G | 29402875.30 | 29402875.40 | 29402875.51 | 0.0497 | 0.0438 |
| Saturn | 75790-08-19 12:00 G | 29403019.78 | 29403020.00 | 29403020.22 | 0.0289 | 0.0101 |
| Uranus | 75793-08-31 04:05 G | 29404127.66 | 29404127.67 | 29404127.70 | 0.0134 | 0.0134 |
| Uranus | 75794-09-04 13:12 G | 29404496.86 | 29404497.05 | 29404497.25 | 0.0134 | 0.0081 |
| Uranus | 75795-09-08 15:36 G | 29404865.92 | 29404866.15 | 29404866.40 | 0.0134 | 0.0054 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 75796-09-12 00:15 G | 29405235.26 | 29405235.51 | 29405235.75 | 0.0134 | 0.0008 |
| Neptune | 75797-03-27 20:24 G | 29405432.25 | 29405432.35 | 29405432.52 | 0.0088 | 0.0076 |
| Uranus | 75797-09-16 02:39 G | 29405604.36 | 29405604.61 | 29405604.86 | 0.0134 | 0.0028 |
| Neptune | 75798-03-30 05:46 G | 29405799.57 | 29405799.74 | 29405799.95 | 0.0088 | 0.0059 |
| Uranus | 75798-09-20 10:19 G | 29405973.72 | 29405973.93 | 29405974.15 | 0.0134 | 0.0064 |
| Neptune | 75799-04-01 18:43 G | 29406167.03 | 29406167.28 | 29406167.55 | 0.0088 | 0.0026 |
| Uranus | 75799-09-24 12:29 G | 29406342.90 | 29406343.02 | 29406343.18 | 0.0134 | 0.0111 |
| Neptune | 75800-04-04 08:24 G | 29406534.60 | 29406534.85 | 29406535.11 | 0.0088 | 0.0009 |
| Neptune | 75801-04-06 16:05 G | 29406901.92 | 29406902.17 | 29406902.44 | 0.0088 | 0.0025 |
| Neptune | 75802-04-09 09:36 G | 29407269.69 | 29407269.90 | 29407270.14 | 0.0088 | 0.0042 |
| Neptune | 75803-04-11 14:53 G | 29407637.01 | 29407637.12 | 29407637.27 | 0.0088 | 0.0076 |
| Saturn | 75805-02-12 00:15 G | 29408309.45 | 29408309.51 | 29408309.61 | 0.0270 | 0.0254 |
| Saturn | 75806-02-24 16:34 G | 29408687.02 | 29408687.19 | 29408687.37 | 0.0270 | 0.0190 |
| Saturn | 75820-08-26 23:31 G | 29413984.31 | 29413984.48 | 29413984.68 | 0.0289 | 0.0178 |
| Pluto | 75831-10-19 17:46 G | 29418055.02 | 29418055.24 | 29418055.47 | 0.0064 | 0.0027 |
| Saturn | 75835-02-19 12:15 G | 29419273.75 | 29419274.01 | 29419274.26 | 0.0270 | 0.0006 |
| Uranus | 75837-03-04 21:36 G | 29420018.21 | 29420018.40 | 29420018.62 | 0.0144 | 0.0090 |
| Uranus | 75838-03-09 23:03 G | 29420388.23 | 29420388.46 | 29420388.70 | 0.0144 | 0.0055 |
| Uranus | 75839-03-15 06:15 G | 29420758.49 | 29420758.76 | 29420759.02 | 0.0144 | 0.0009 |
| Uranus | 75840-03-19 04:48 G | 29421128.48 | 29421128.70 | 29421128.94 | 0.0144 | 0.0055 |
| Uranus | 75841-03-24 14:39 G | 29421498.93 | 29421499.11 | 29421499.30 | 0.0144 | 0.0101 |
| Jupiter | 75843-09-20 15:07 G | 29422408.95 | 29422409.13 | 29422409.30 | 0.0528 | 0.0355 |
| Saturn | 75849-08-21 17:17 G | 29424570.98 | 29424571.22 | 29424571.46 | 0.0289 | 0.0051 |
| Mars | 75854-01-08 13:27 G | 29426171.95 | 29426172.06 | 29426172.17 | 0.1618 | 0.1273 |
| Jupiter | 75855-09-25 12:00 G | 29426796.78 | 29426797.00 | 29426797.22 | 0.0530 | 0.0117 |
| Jupiter | 75861-03-23 14:24 G | 29428802.88 | 29428803.10 | 29428803.33 | 0.0499 | 0.0071 |
| Saturn | 75864-02-14 10:05 G | 29429860.77 | 29429860.92 | 29429861.08 | 0.0270 | 0.0206 |
| Saturn | 75865-02-25 20:53 G | 29430238.26 | 29430238.37 | 29430238.50 | 0.0270 | 0.0238 |
| Jupiter | 75873-03-28 06:43 G | 29433190.62 | 29433190.78 | 29433190.93 | 0.0497 | 0.0383 |
| Uranus | 75877-09-01 16:48 G | 29434809.08 | 29434809.20 | 29434809.36 | 0.0134 | 0.0114 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 75878-09-06 02:53 G | 29435178.45 | 29435178.62 | 29435178.82 | 0.0134 | 0.0088 |
| Saturn | 75879-08-29 06:15 G | 29435535.62 | 29435535.76 | 29435535.91 | 0.0289 | 0.0225 |
| Uranus | 75879-09-10 05:17 G | 29435547.47 | 29435547.72 | 29435547.97 | 0.0134 | 0.0036 |
| Neptune | 75879-09-29 00:29 G | 29435566.38 | 29435566.52 | 29435566.69 | 0.0090 | 0.0070 |
| Uranus | 75880-09-13 14:53 G | 29435916.87 | 29435917.12 | 29435917.36 | 0.0134 | 0.0007 |
| Neptune | 75880-09-30 12:43 G | 29435933.82 | 29435934.03 | 29435934.27 | 0.0090 | 0.0047 |
| Uranus | 75881-09-17 16:19 G | 29436285.94 | 29436286.18 | 29436286.44 | 0.0134 | 0.0036 |
| Neptune | 75881-10-03 02:24 G | 29436301.36 | 29436301.60 | 29436301.85 | 0.0090 | 0.0018 |
| Uranus | 75882-09-22 01:12 G | 29436655.36 | 29436655.55 | 29436655.76 | 0.0134 | 0.0077 |
| Neptune | 75882-10-05 09:51 G | 29436668.65 | 29436668.91 | 29436669.17 | 0.0090 | 0.0005 |
| Uranus | 75883-09-26 02:24 G | 29437024.47 | 29437024.60 | 29437024.77 | 0.0134 | 0.0108 |
| Neptune | 75883-10-08 02:39 G | 29437036.39 | 29437036.61 | 29437036.85 | 0.0090 | 0.0035 |
| Neptune | 75884-10-09 06:58 G | 29437403.61 | 29437403.79 | 29437404.00 | 0.0090 | 0.0058 |
| Neptune | 75885-10-12 01:12 G | 29437771.51 | 29437771.55 | 29437771.61 | 0.0090 | 0.0088 |
| Saturn | 75894-02-20 18:29 G | 29440825.03 | 29440825.27 | 29440825.51 | 0.0270 | 0.0046 |
| Saturn | 75908-08-23 20:24 G | 29446122.09 | 29446122.35 | 29446122.60 | 0.0289 | 0.0005 |
| Uranus | 75920-03-01 04:48 G | 29450329.65 | 29450329.70 | 29450329.78 | 0.0144 | 0.0138 |
| Uranus | 75921-03-06 06:58 G | 29450699.61 | 29450699.79 | 29450700.00 | 0.0144 | 0.0098 |
| Pluto | 75921-04-22 03:51 G | 29450746.42 | 29450746.66 | 29450746.91 | 0.0081 | 0.0018 |
| Uranus | 75922-03-11 09:36 G | 29451069.67 | 29451069.90 | 29451070.16 | 0.0144 | 0.0035 |
| Saturn | 75923-02-16 17:17 G | 29451412.02 | 29451412.22 | 29451412.43 | 0.0270 | 0.0155 |
| Uranus | 75923-03-16 15:36 G | 29451439.89 | 29451440.15 | 29451440.42 | 0.0144 | 0.0005 |
| Uranus | 75924-03-20 15:22 G | 29451809.92 | 29451810.14 | 29451810.37 | 0.0144 | 0.0063 |
| Uranus | 75925-03-25 23:17 G | 29452180.33 | 29452180.47 | 29452180.65 | 0.0144 | 0.0116 |
| Jupiter | 75926-09-20 20:10 G | 29452724.23 | 29452724.34 | 29452724.48 | 0.0528 | 0.0433 |
| Saturn | 75937-08-17 20:39 G | 29456708.26 | 29456708.36 | 29456708.46 | 0.0289 | 0.0258 |
| Saturn | 75938-08-31 15:51 G | 29457087.11 | 29457087.16 | 29457087.24 | 0.0289 | 0.0277 |
| Jupiter | 75938-09-26 00:15 G | 29457112.27 | 29457112.51 | 29457112.74 | 0.0529 | 0.0062 |
| Jupiter | 75944-03-23 16:48 G | 29459117.97 | 29459118.20 | 29459118.44 | 0.0500 | 0.0139 |
| Saturn | 75953-02-23 06:00 G | 29462376.53 | 29462376.75 | 29462376.97 | 0.0270 | 0.0098 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 75956-03-28 01:41 G | 29463505.40 | 29463505.57 | 29463505.76 | 0.0498 | 0.0309 |
| Neptune | 75961-03-29 00:44 G | 29465332.53 | 29465332.53 | 29465332.53 | 0.0088 | 0.0088 |
| Uranus | 75961-09-03 06:00 G | 29465490.67 | 29465490.75 | 29465490.88 | 0.0134 | 0.0121 |
| Neptune | 75962-03-31 11:03 G | 29465699.82 | 29465699.96 | 29465700.16 | 0.0088 | 0.0069 |
| Uranus | 75962-09-07 17:17 G | 29465860.02 | 29465860.22 | 29465860.44 | 0.0134 | 0.0068 |
| Neptune | 75963-04-03 02:10 G | 29466067.38 | 29466067.59 | 29466067.83 | 0.0088 | 0.0039 |
| Uranus | 75963-09-11 18:29 G | 29466229.03 | 29466229.27 | 29466229.52 | 0.0134 | 0.0041 |
| Neptune | 75964-04-04 09:22 G | 29466434.64 | 29466434.89 | 29466435.16 | 0.0088 | 0.0019 |
| Uranus | 75964-09-15 04:34 G | 29466598.45 | 29466598.69 | 29466598.94 | 0.0134 | 0.0007 |
| Neptune | 75965-04-07 03:51 G | 29466802.41 | 29466802.66 | 29466802.93 | 0.0088 | 0.0013 |
| Uranus | 75965-09-19 05:03 G | 29466967.47 | 29466967.71 | 29466967.96 | 0.0134 | 0.0041 |
| Neptune | 75966-04-09 08:53 G | 29467169.64 | 29467169.87 | 29467170.12 | 0.0088 | 0.0033 |
| Uranus | 75966-09-23 14:24 G | 29467336.92 | 29467337.10 | 29467337.31 | 0.0134 | 0.0079 |
| Neptune | 75967-04-12 03:51 G | 29467537.49 | 29467537.66 | 29467537.86 | 0.0088 | 0.0062 |
| Saturn | 75967-08-26 00:44 G | 29467673.29 | 29467673.53 | 29467673.77 | 0.0289 | 0.0053 |
| Uranus | 75967-09-27 15:08 G | 29467706.05 | 29467706.13 | 29467706.24 | 0.0134 | 0.0124 |
| Neptune | 75968-04-13 09:36 G | 29467904.85 | 29467904.90 | 29467905.01 | 0.0088 | 0.0083 |
| Saturn | 75982-02-17 21:36 G | 29472963.17 | 29472963.40 | 29472963.64 | 0.0270 | 0.0103 |
| Saturn | 75996-08-19 09:22 G | 29478259.72 | 29478259.89 | 29478260.07 | 0.0289 | 0.0200 |

77TH MILLENNIUM CE

This is a list of transits of Moon in the 77th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|------|-------------------------|---|-------|-----|-----|--------|-------|---|
|------|-------------------------|---|-------|-----|-----|--------|-------|---|

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 76004-03-01 17:46 G | 29481011.18 | 29481011.24 | 29481011.33 | 0.0144 | 0.0137 |
| Uranus | 76005-03-06 18:29 G | 29481381.05 | 29481381.27 | 29481381.50 | 0.0144 | 0.0079 |
| Uranus | 76006-03-11 21:51 G | 29481751.18 | 29481751.41 | 29481751.66 | 0.0144 | 0.0042 |
| Uranus | 76007-03-17 02:10 G | 29482121.34 | 29482121.59 | 29482121.87 | 0.0144 | 0.0024 |
| Uranus | 76008-03-21 02:53 G | 29482491.41 | 29482491.62 | 29482491.85 | 0.0144 | 0.0067 |
| Uranus | 76009-03-26 10:34 G | 29482861.79 | 29482861.94 | 29482862.11 | 0.0144 | 0.0115 |
| Jupiter | 76009-09-20 04:48 G | 29483039.66 | 29483039.70 | 29483039.76 | 0.0526 | 0.0512 |
| Saturn | 76012-02-25 16:34 G | 29483927.99 | 29483928.19 | 29483928.41 | 0.0271 | 0.0151 |
| Jupiter | 76021-09-24 14:10 G | 29487426.87 | 29487427.09 | 29487427.32 | 0.0528 | 0.0051 |
| Saturn | 76026-08-27 13:41 G | 29489224.85 | 29489225.07 | 29489225.29 | 0.0289 | 0.0114 |
| Jupiter | 76027-03-23 16:20 G | 29489432.97 | 29489433.18 | 29489433.39 | 0.0500 | 0.0201 |
| Jupiter | 76033-09-29 18:58 G | 29491815.21 | 29491815.29 | 29491815.37 | 0.0531 | 0.0497 |
| Jupiter | 76039-03-28 14:39 G | 29493820.91 | 29493821.11 | 29493821.32 | 0.0498 | 0.0251 |
| Saturn | 76041-02-19 05:46 G | 29494514.50 | 29494514.74 | 29494514.99 | 0.0270 | 0.0049 |
| Neptune | 76043-09-29 06:15 G | 29495466.66 | 29495466.76 | 29495466.90 | 0.0090 | 0.0080 |
| Neptune | 76044-09-30 20:39 G | 29495834.20 | 29495834.36 | 29495834.55 | 0.0090 | 0.0063 |
| Uranus | 76045-09-03 18:44 G | 29496172.13 | 29496172.28 | 29496172.47 | 0.0134 | 0.0102 |
| Neptune | 76045-10-03 03:08 G | 29496201.39 | 29496201.63 | 29496201.88 | 0.0090 | 0.0027 |
| Uranus | 76046-09-08 06:44 G | 29496541.58 | 29496541.78 | 29496541.99 | 0.0134 | 0.0076 |
| Neptune | 76046-10-05 20:39 G | 29496569.12 | 29496569.36 | 29496569.62 | 0.0090 | 0.0011 |
| Uranus | 76047-09-12 07:12 G | 29496910.55 | 29496910.80 | 29496911.06 | 0.0134 | 0.0023 |
| Neptune | 76047-10-08 00:58 G | 29496936.32 | 29496936.54 | 29496936.80 | 0.0090 | 0.0026 |
| Uranus | 76048-09-15 18:29 G | 29497280.02 | 29497280.27 | 29497280.51 | 0.0134 | 0.0006 |
| Neptune | 76048-10-09 18:58 G | 29497304.08 | 29497304.29 | 29497304.53 | 0.0090 | 0.0042 |
| Uranus | 76049-09-19 18:15 G | 29497649.03 | 29497649.26 | 29497649.51 | 0.0134 | 0.0050 |
| Neptune | 76049-10-12 00:29 G | 29497671.41 | 29497671.52 | 29497671.67 | 0.0090 | 0.0077 |
| Uranus | 76050-09-24 04:48 G | 29498018.53 | 29498018.70 | 29498018.89 | 0.0134 | 0.0089 |
| Uranus | 76051-09-28 04:48 G | 29498387.60 | 29498387.70 | 29498387.82 | 0.0134 | 0.0121 |
| Saturn | 76055-08-21 18:58 G | 29499811.08 | 29499811.29 | 29499811.52 | 0.0289 | 0.0136 |
| Mars | 76059-01-08 10:20 G | 29501046.75 | 29501046.93 | 29501047.12 | 0.1615 | 0.0510 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 76070-02-14 12:58 G | 29505101.93 | 29505102.04 | 29505102.15 | 0.0271 | 0.0239 |
| Saturn | 76071-02-26 22:20 G | 29505479.27 | 29505479.43 | 29505479.60 | 0.0271 | 0.0207 |
| Pluto | 76077-10-22 02:10 G | 29507908.34 | 29507908.59 | 29507908.85 | 0.0064 | 0.0009 |
| Saturn | 76085-08-29 06:58 G | 29510776.60 | 29510776.79 | 29510776.97 | 0.0289 | 0.0180 |
| Uranus | 76088-03-02 06:29 G | 29511692.67 | 29511692.77 | 29511692.90 | 0.0144 | 0.0126 |
| Uranus | 76089-03-07 06:00 G | 29512062.55 | 29512062.75 | 29512062.98 | 0.0144 | 0.0084 |
| Uranus | 76090-03-12 11:03 G | 29512432.71 | 29512432.96 | 29512433.20 | 0.0144 | 0.0020 |
| Uranus | 76091-03-17 13:56 G | 29512802.81 | 29512803.08 | 29512803.34 | 0.0144 | 0.0017 |
| Uranus | 76092-03-21 15:36 G | 29513172.94 | 29513173.15 | 29513173.36 | 0.0144 | 0.0077 |
| Uranus | 76093-03-26 21:36 G | 29513543.28 | 29513543.40 | 29513543.53 | 0.0144 | 0.0127 |
| Saturn | 76100-02-21 19:56 G | 29516066.09 | 29516066.33 | 29516066.57 | 0.0270 | 0.0011 |
| Jupiter | 76104-09-24 23:17 G | 29517742.25 | 29517742.47 | 29517742.69 | 0.0528 | 0.0135 |
| Jupiter | 76110-03-24 03:08 G | 29519748.43 | 29519748.63 | 29519748.84 | 0.0501 | 0.0261 |
| Saturn | 76114-08-24 04:48 G | 29521362.46 | 29521362.70 | 29521362.95 | 0.0289 | 0.0071 |
| Jupiter | 76116-09-29 16:05 G | 29522130.03 | 29522130.17 | 29522130.32 | 0.0530 | 0.0419 |
| Jupiter | 76122-03-28 05:46 G | 29524135.52 | 29524135.74 | 29524135.97 | 0.0499 | 0.0164 |
| Neptune | 76126-03-31 20:53 G | 29525600.26 | 29525600.37 | 29525600.53 | 0.0088 | 0.0074 |
| Neptune | 76127-04-03 02:53 G | 29525967.43 | 29525967.62 | 29525967.85 | 0.0088 | 0.0055 |
| Neptune | 76128-04-04 21:51 G | 29526335.17 | 29526335.41 | 29526335.67 | 0.0088 | 0.0023 |
| Saturn | 76129-02-16 18:29 G | 29526653.09 | 29526653.27 | 29526653.47 | 0.0271 | 0.0183 |
| Neptune | 76129-04-07 03:08 G | 29526702.37 | 29526702.63 | 29526702.89 | 0.0088 | 0.0005 |
| Uranus | 76129-09-05 07:41 G | 29526853.68 | 29526853.82 | 29526853.98 | 0.0134 | 0.0109 |
| Saturn | 76130-03-01 03:36 G | 29527030.61 | 29527030.65 | 29527030.71 | 0.0271 | 0.0264 |
| Neptune | 76130-04-09 21:22 G | 29527070.14 | 29527070.39 | 29527070.64 | 0.0088 | 0.0027 |
| Uranus | 76130-09-09 19:56 G | 29527223.12 | 29527223.33 | 29527223.57 | 0.0134 | 0.0056 |
| Neptune | 76131-04-12 03:36 G | 29527437.45 | 29527437.65 | 29527437.89 | 0.0088 | 0.0045 |
| Uranus | 76131-09-13 19:56 G | 29527592.08 | 29527592.33 | 29527592.58 | 0.0134 | 0.0029 |
| Neptune | 76132-04-13 18:15 G | 29527805.16 | 29527805.26 | 29527805.42 | 0.0088 | 0.0077 |
| Uranus | 76132-09-17 07:12 G | 29527961.56 | 29527961.80 | 29527962.05 | 0.0134 | 0.0021 |
| Uranus | 76133-09-21 06:29 G | 29528330.54 | 29528330.77 | 29528331.01 | 0.0134 | 0.0053 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 76134-09-25 17:17 G | 29528700.06 | 29528700.22 | 29528700.41 | 0.0134 | 0.0092 |
| Saturn | 76143-08-19 03:22 G | 29531949.61 | 29531949.64 | 29531949.70 | 0.0289 | 0.0284 |
| Saturn | 76144-08-31 21:22 G | 29532328.27 | 29532328.39 | 29532328.53 | 0.0289 | 0.0246 |
| Saturn | 76159-02-24 09:36 G | 29537617.67 | 29537617.90 | 29537618.14 | 0.0270 | 0.0068 |
| Pluto | 76167-04-25 13:12 G | 29540599.80 | 29540600.05 | 29540600.31 | 0.0081 | 0.0008 |
| Uranus | 76172-03-03 20:39 G | 29542374.24 | 29542374.36 | 29542374.50 | 0.0144 | 0.0122 |
| Uranus | 76173-03-08 18:44 G | 29542744.06 | 29542744.28 | 29542744.53 | 0.0144 | 0.0066 |
| Saturn | 76173-08-25 18:15 G | 29542914.03 | 29542914.26 | 29542914.50 | 0.0289 | 0.0005 |
| Uranus | 76174-03-14 00:15 G | 29543114.27 | 29543114.51 | 29543114.76 | 0.0144 | 0.0028 |
| Uranus | 76175-03-19 01:41 G | 29543484.32 | 29543484.57 | 29543484.84 | 0.0144 | 0.0037 |
| Uranus | 76176-03-23 04:48 G | 29543854.49 | 29543854.70 | 29543854.90 | 0.0144 | 0.0079 |
| Uranus | 76177-03-28 10:05 G | 29544224.80 | 29544224.92 | 29544225.04 | 0.0144 | 0.0129 |
| Jupiter | 76187-09-24 19:27 G | 29548057.10 | 29548057.31 | 29548057.52 | 0.0528 | 0.0216 |
| Saturn | 76188-02-18 23:32 G | 29548204.26 | 29548204.48 | 29548204.70 | 0.0271 | 0.0130 |
| Jupiter | 76193-03-22 17:03 G | 29550063.05 | 29550063.21 | 29550063.38 | 0.0501 | 0.0358 |
| Jupiter | 76199-09-29 16:48 G | 29552445.02 | 29552445.20 | 29552445.38 | 0.0529 | 0.0312 |
| Saturn | 76202-08-21 18:44 G | 29553501.12 | 29553501.28 | 29553501.44 | 0.0289 | 0.0216 |
| Jupiter | 76205-03-28 16:05 G | 29554450.94 | 29554451.17 | 29554451.40 | 0.0500 | 0.0090 |
| Neptune | 76208-10-01 21:36 G | 29555734.26 | 29555734.40 | 29555734.58 | 0.0090 | 0.0070 |
| Neptune | 76209-10-04 15:51 G | 29556101.95 | 29556102.16 | 29556102.39 | 0.0090 | 0.0044 |
| Neptune | 76210-10-06 20:24 G | 29556469.11 | 29556469.35 | 29556469.61 | 0.0090 | 0.0018 |
| Neptune | 76211-10-09 14:24 G | 29556836.84 | 29556837.10 | 29556837.36 | 0.0090 | 0.0007 |
| Neptune | 76212-10-10 21:08 G | 29557204.15 | 29557204.38 | 29557204.61 | 0.0090 | 0.0034 |
| Uranus | 76213-09-06 19:56 G | 29557535.16 | 29557535.33 | 29557535.54 | 0.0134 | 0.0090 |
| Neptune | 76213-10-13 10:34 G | 29557571.76 | 29557571.94 | 29557572.15 | 0.0090 | 0.0059 |
| Uranus | 76214-09-11 08:39 G | 29557904.66 | 29557904.86 | 29557905.09 | 0.0134 | 0.0064 |
| Neptune | 76214-10-15 21:22 G | 29557939.34 | 29557939.39 | 29557939.46 | 0.0090 | 0.0087 |
| Uranus | 76215-09-15 08:10 G | 29558273.59 | 29558273.84 | 29558274.09 | 0.0134 | 0.0009 |
| Uranus | 76216-09-18 20:24 G | 29558643.11 | 29558643.35 | 29558643.60 | 0.0134 | 0.0018 |
| Jupiter | 76217-04-02 02:10 G | 29558838.52 | 29558838.59 | 29558838.66 | 0.0498 | 0.0477 |

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| Uranus | 76217-09-22 19:12 G | 29559012.08 | 29559012.30 | 29559012.53 | 0.0134 | 0.0063 |
| Saturn | 76218-02-26 18:00 G | 29559169.03 | 29559169.25 | 29559169.48 | 0.0270 | 0.0123 |
| Uranus | 76218-09-27 06:44 G | 29559381.64 | 29559381.78 | 29559381.96 | 0.0134 | 0.0101 |
| Saturn | 76232-08-28 11:17 G | 29564465.74 | 29564465.97 | 29564466.20 | 0.0289 | 0.0066 |
| Saturn | 76247-02-21 07:27 G | 29569755.58 | 29569755.81 | 29569756.04 | 0.0271 | 0.0077 |
| Uranus | 76256-03-05 08:53 G | 29573055.72 | 29573055.87 | 29573056.03 | 0.0144 | 0.0113 |
| Uranus | 76257-03-10 06:00 G | 29573425.54 | 29573425.75 | 29573426.00 | 0.0144 | 0.0070 |
| Uranus | 76258-03-15 12:58 G | 29573795.79 | 29573796.04 | 29573796.29 | 0.0144 | 0.0007 |
| Uranus | 76259-03-20 13:12 G | 29574165.80 | 29574166.05 | 29574166.32 | 0.0144 | 0.0030 |
| Uranus | 76260-03-24 17:17 G | 29574536.04 | 29574536.22 | 29574536.42 | 0.0144 | 0.0091 |
| Uranus | 76261-03-29 21:22 G | 29574906.32 | 29574906.39 | 29574906.46 | 0.0144 | 0.0139 |
| Saturn | 76261-08-23 02:53 G | 29575052.41 | 29575052.62 | 29575052.83 | 0.0289 | 0.0156 |
| Mars | 76264-01-09 22:05 G | 29575922.32 | 29575922.42 | 29575922.53 | 0.1612 | 0.1276 |
| Jupiter | 76270-09-24 21:08 G | 29578372.21 | 29578372.38 | 29578372.56 | 0.0527 | 0.0320 |
| Saturn | 76276-02-16 14:24 G | 29580343.08 | 29580343.10 | 29580343.14 | 0.0270 | 0.0268 |
| Jupiter | 76276-03-23 05:32 G | 29580378.61 | 29580378.73 | 29580378.86 | 0.0502 | 0.0419 |
| Saturn | 76277-02-27 21:22 G | 29580720.21 | 29580720.39 | 29580720.60 | 0.0270 | 0.0177 |
| Jupiter | 76282-09-29 15:36 G | 29582759.94 | 29582760.15 | 29582760.37 | 0.0529 | 0.0223 |
| Jupiter | 76288-03-27 16:05 G | 29584765.93 | 29584766.17 | 29584766.42 | 0.0500 | 0.0022 |
| Neptune | 76290-03-31 20:39 G | 29585500.30 | 29585500.36 | 29585500.47 | 0.0088 | 0.0083 |
| Neptune | 76291-04-03 16:05 G | 29585868.01 | 29585868.17 | 29585868.36 | 0.0088 | 0.0066 |
| Saturn | 76291-08-31 02:39 G | 29586017.40 | 29586017.61 | 29586017.83 | 0.0289 | 0.0128 |
| Neptune | 76292-04-04 21:22 G | 29586235.16 | 29586235.39 | 29586235.64 | 0.0088 | 0.0034 |
| Neptune | 76293-04-07 15:08 G | 29586602.88 | 29586603.13 | 29586603.41 | 0.0088 | 0.0017 |
| Neptune | 76294-04-09 23:17 G | 29586970.23 | 29586970.47 | 29586970.73 | 0.0088 | 0.0016 |
| Neptune | 76295-04-12 13:12 G | 29587337.80 | 29587338.05 | 29587338.30 | 0.0088 | 0.0034 |
| Neptune | 76296-04-14 01:41 G | 29587705.42 | 29587705.57 | 29587705.75 | 0.0088 | 0.0066 |
| Uranus | 76296-09-03 08:10 G | 29587847.78 | 29587847.84 | 29587847.95 | 0.0135 | 0.0126 |
| Neptune | 76297-04-16 09:51 G | 29588072.86 | 29588072.91 | 29588073.02 | 0.0088 | 0.0084 |
| Uranus | 76297-09-07 07:41 G | 29588216.66 | 29588216.82 | 29588217.01 | 0.0134 | 0.0097 |

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| Uranus | 76298-09-11 21:22 G | 29588586.15 | 29588586.39 | 29588586.62 | 0.0134 | 0.0043 |
| Uranus | 76299-09-15 20:10 G | 29588955.09 | 29588955.34 | 29588955.59 | 0.0134 | 0.0018 |
| Jupiter | 76300-04-02 05:46 G | 29589153.61 | 29589153.74 | 29589153.88 | 0.0498 | 0.0398 |
| Uranus | 76300-09-20 08:39 G | 29589324.62 | 29589324.86 | 29589325.10 | 0.0134 | 0.0034 |
| Uranus | 76301-09-24 06:44 G | 29589693.57 | 29589693.78 | 29589694.02 | 0.0134 | 0.0064 |
| Uranus | 76302-09-28 18:44 G | 29590063.15 | 29590063.28 | 29590063.45 | 0.0134 | 0.0106 |
| Saturn | 76306-02-23 17:46 G | 29591307.00 | 29591307.24 | 29591307.48 | 0.0271 | 0.0027 |
| Saturn | 76320-08-25 09:22 G | 29596603.66 | 29596603.89 | 29596604.12 | 0.0289 | 0.0101 |
| Pluto | 76323-10-27 01:12 G | 29597761.28 | 29597761.55 | 29597761.81 | 0.0064 | 0.0005 |
| Mars | 76334-07-16 19:56 G | 29601677.14 | 29601677.33 | 29601677.51 | 0.1914 | 0.0068 |
| Saturn | 76335-02-18 15:22 G | 29601894.01 | 29601894.14 | 29601894.30 | 0.0270 | 0.0220 |
| Saturn | 76336-03-02 01:27 G | 29602271.43 | 29602271.56 | 29602271.70 | 0.0270 | 0.0225 |
| Uranus | 76340-03-06 20:10 G | 29603737.18 | 29603737.34 | 29603737.51 | 0.0144 | 0.0108 |
| Uranus | 76341-03-11 16:20 G | 29604106.95 | 29604107.18 | 29604107.44 | 0.0144 | 0.0054 |
| Uranus | 76342-03-16 23:46 G | 29604477.24 | 29604477.49 | 29604477.74 | 0.0144 | 0.0015 |
| Mars | 76343-01-12 16:20 G | 29604779.00 | 29604779.18 | 29604779.36 | 0.1613 | 0.0343 |
| Uranus | 76343-03-21 22:48 G | 29604847.21 | 29604847.45 | 29604847.71 | 0.0144 | 0.0051 |
| Uranus | 76344-03-26 04:20 G | 29605217.49 | 29605217.68 | 29605217.87 | 0.0144 | 0.0091 |
| Uranus | 76345-03-31 06:58 G | 29605587.78 | 29605587.79 | 29605587.83 | 0.0144 | 0.0143 |
| Saturn | 76350-09-02 10:34 G | 29607568.76 | 29607568.94 | 29607569.14 | 0.0289 | 0.0185 |
| Jupiter | 76353-09-24 23:17 G | 29608687.31 | 29608687.47 | 29608687.64 | 0.0526 | 0.0384 |
| Jupiter | 76359-03-24 03:36 G | 29610693.60 | 29610693.65 | 29610693.71 | 0.0502 | 0.0487 |
| Saturn | 76365-02-25 00:00 G | 29612858.25 | 29612858.50 | 29612858.75 | 0.0270 | 0.0021 |
| Jupiter | 76365-09-29 20:10 G | 29613075.14 | 29613075.34 | 29613075.56 | 0.0529 | 0.0161 |
| Jupiter | 76371-03-28 20:53 G | 29615081.15 | 29615081.37 | 29615081.60 | 0.0500 | 0.0058 |
| Neptune | 76372-10-02 11:17 G | 29615634.87 | 29615634.97 | 29615635.13 | 0.0090 | 0.0077 |
| Neptune | 76373-10-04 16:05 G | 29616002.01 | 29616002.17 | 29616002.37 | 0.0090 | 0.0061 |
| Neptune | 76374-10-07 08:53 G | 29616369.63 | 29616369.87 | 29616370.13 | 0.0090 | 0.0026 |
| Neptune | 76375-10-09 16:20 G | 29616736.94 | 29616737.18 | 29616737.43 | 0.0090 | 0.0009 |
| Neptune | 76376-10-11 05:03 G | 29617104.47 | 29617104.71 | 29617104.97 | 0.0090 | 0.0027 |

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| Neptune | 76377-10-13 17:32 G | 29617472.03 | 29617472.23 | 29617472.46 | 0.0090 | 0.0044 |
| Neptune | 76378-10-16 01:27 G | 29617839.47 | 29617839.56 | 29617839.72 | 0.0090 | 0.0079 |
| Saturn | 76379-08-27 18:15 G | 29618155.03 | 29618155.26 | 29618155.49 | 0.0290 | 0.0047 |
| Uranus | 76380-09-04 20:39 G | 29618529.30 | 29618529.36 | 29618529.45 | 0.0135 | 0.0128 |
| Uranus | 76381-09-08 19:56 G | 29618898.14 | 29618898.33 | 29618898.55 | 0.0134 | 0.0078 |
| Uranus | 76382-09-13 09:08 G | 29619267.66 | 29619267.88 | 29619268.12 | 0.0134 | 0.0052 |
| Jupiter | 76383-04-02 12:44 G | 29619468.86 | 29619469.03 | 29619469.22 | 0.0499 | 0.0330 |
| Uranus | 76383-09-17 07:56 G | 29619636.58 | 29619636.83 | 29619637.08 | 0.0134 | 0.0003 |
| Uranus | 76384-09-20 20:39 G | 29620006.12 | 29620006.36 | 29620006.61 | 0.0134 | 0.0029 |
| Uranus | 76385-09-24 18:44 G | 29620375.09 | 29620375.28 | 29620375.51 | 0.0134 | 0.0077 |
| Uranus | 76386-09-29 07:27 G | 29620744.69 | 29620744.81 | 29620744.96 | 0.0134 | 0.0112 |
| Saturn | 76394-02-19 18:15 G | 29623445.09 | 29623445.26 | 29623445.46 | 0.0270 | 0.0174 |
| Saturn | 76409-09-03 12:58 G | 29629119.91 | 29629120.04 | 29629120.19 | 0.0289 | 0.0239 |
| Pluto | 76413-04-28 15:08 G | 29630452.90 | 29630453.13 | 29630453.39 | 0.0080 | 0.0033 |
| Saturn | 76424-02-26 22:34 G | 29634409.19 | 29634409.44 | 29634409.69 | 0.0270 | 0.0068 |
| Uranus | 76424-03-07 05:32 G | 29634418.57 | 29634418.73 | 29634418.92 | 0.0144 | 0.0103 |
| Uranus | 76425-03-12 01:12 G | 29634788.32 | 29634788.55 | 29634788.80 | 0.0144 | 0.0057 |
| Uranus | 76426-03-17 09:51 G | 29635158.66 | 29635158.91 | 29635159.16 | 0.0144 | 0.0005 |
| Uranus | 76427-03-22 07:56 G | 29635528.58 | 29635528.83 | 29635529.09 | 0.0144 | 0.0041 |
| Uranus | 76428-03-26 14:24 G | 29635898.94 | 29635899.10 | 29635899.28 | 0.0144 | 0.0105 |
| Jupiter | 76436-09-24 02:10 G | 29639002.48 | 29639002.59 | 29639002.70 | 0.0525 | 0.0458 |
| Saturn | 76438-08-29 02:10 G | 29639706.35 | 29639706.59 | 29639706.83 | 0.0290 | 0.0002 |
| Jupiter | 76448-09-29 01:41 G | 29643390.34 | 29643390.57 | 29643390.81 | 0.0527 | 0.0075 |
| Saturn | 76453-02-21 00:58 G | 29644996.33 | 29644996.54 | 29644996.76 | 0.0269 | 0.0127 |
| Jupiter | 76454-03-28 05:17 G | 29645396.48 | 29645396.72 | 29645396.96 | 0.0501 | 0.0115 |
| Neptune | 76455-04-03 16:34 G | 29645768.06 | 29645768.19 | 29645768.35 | 0.0088 | 0.0071 |
| Neptune | 76456-04-05 09:22 G | 29646135.69 | 29646135.89 | 29646136.13 | 0.0088 | 0.0051 |
| Neptune | 76457-04-07 18:44 G | 29646503.04 | 29646503.28 | 29646503.54 | 0.0088 | 0.0021 |
| Neptune | 76458-04-10 06:58 G | 29646870.52 | 29646870.79 | 29646871.06 | 0.0088 | 0.0001 |
| Neptune | 76459-04-12 20:53 G | 29647238.14 | 29647238.37 | 29647238.62 | 0.0088 | 0.0030 |

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| Neptune | 76460-04-14 04:48 G | 29647605.48 | 29647605.70 | 29647605.92 | 0.0088 | 0.0049 |
| Neptune | 76461-04-16 22:34 G | 29647973.35 | 29647973.44 | 29647973.57 | 0.0088 | 0.0079 |
| Uranus | 76464-09-05 07:41 G | 29649210.69 | 29649210.82 | 29649210.95 | 0.0135 | 0.0115 |
| Uranus | 76465-09-09 06:58 G | 29649579.61 | 29649579.79 | 29649580.00 | 0.0134 | 0.0085 |
| Jupiter | 76466-04-01 17:17 G | 29649784.03 | 29649784.22 | 29649784.41 | 0.0499 | 0.0282 |
| Uranus | 76466-09-13 20:24 G | 29649949.11 | 29649949.35 | 29649949.60 | 0.0134 | 0.0031 |
| Saturn | 76467-08-22 22:48 G | 29650292.33 | 29650292.45 | 29650292.59 | 0.0290 | 0.0246 |
| Uranus | 76467-09-17 19:27 G | 29650318.07 | 29650318.31 | 29650318.57 | 0.0134 | 0.0007 |
| Uranus | 76468-09-21 08:10 G | 29650687.61 | 29650687.84 | 29650688.08 | 0.0134 | 0.0046 |
| Uranus | 76469-09-25 06:44 G | 29651056.58 | 29651056.78 | 29651056.99 | 0.0134 | 0.0075 |
| Uranus | 76470-09-29 19:12 G | 29651426.19 | 29651426.30 | 29651426.42 | 0.0134 | 0.0118 |
| Saturn | 76483-02-27 20:39 G | 29655960.14 | 29655960.36 | 29655960.59 | 0.0270 | 0.0113 |
| Saturn | 76497-08-30 04:20 G | 29661257.44 | 29661257.68 | 29661257.92 | 0.0290 | 0.0047 |
| Uranus | 76508-03-08 15:36 G | 29665099.97 | 29665100.15 | 29665100.35 | 0.0144 | 0.0096 |
| Uranus | 76509-03-13 10:48 G | 29665469.70 | 29665469.95 | 29665470.20 | 0.0144 | 0.0044 |
| Uranus | 76510-03-18 19:27 G | 29665840.06 | 29665840.31 | 29665840.56 | 0.0144 | 0.0004 |
| Uranus | 76511-03-23 16:20 G | 29666209.96 | 29666210.18 | 29666210.43 | 0.0144 | 0.0063 |
| Saturn | 76512-02-24 05:46 G | 29666547.51 | 29666547.74 | 29666547.97 | 0.0269 | 0.0084 |
| Uranus | 76512-03-28 00:00 G | 29666580.34 | 29666580.50 | 29666580.69 | 0.0144 | 0.0101 |
| Jupiter | 76519-09-25 10:20 G | 29669317.93 | 29669317.93 | 29669317.95 | 0.0525 | 0.0524 |
| Saturn | 76526-08-25 00:29 G | 29671843.36 | 29671843.52 | 29671843.70 | 0.0290 | 0.0201 |
| Jupiter | 76531-09-30 02:24 G | 29673705.38 | 29673705.60 | 29673705.83 | 0.0527 | 0.0011 |
| Jupiter | 76537-03-28 09:36 G | 29675711.69 | 29675711.90 | 29675712.12 | 0.0501 | 0.0168 |
| Neptune | 76537-10-05 05:46 G | 29675902.59 | 29675902.74 | 29675902.93 | 0.0090 | 0.0068 |
| Neptune | 76538-10-07 14:24 G | 29676269.90 | 29676270.10 | 29676270.34 | 0.0090 | 0.0040 |
| Neptune | 76539-10-10 02:10 G | 29676637.34 | 29676637.59 | 29676637.86 | 0.0090 | 0.0016 |
| Neptune | 76540-10-11 15:22 G | 29677004.89 | 29677005.14 | 29677005.38 | 0.0090 | 0.0012 |
| Neptune | 76541-10-13 21:51 G | 29677372.18 | 29677372.41 | 29677372.66 | 0.0090 | 0.0035 |
| Saturn | 76542-03-01 23:32 G | 29677511.30 | 29677511.48 | 29677511.69 | 0.0270 | 0.0157 |
| Neptune | 76542-10-16 14:53 G | 29677739.96 | 29677740.12 | 29677740.31 | 0.0090 | 0.0063 |

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| Jupiter | 76543-10-05 08:39 G | 29678093.79 | 29678093.86 | 29678093.94 | 0.0530 | 0.0494 |
| Neptune | 76543-10-18 19:12 G | 29678107.26 | 29678107.30 | 29678107.38 | 0.0090 | 0.0087 |
| Mars | 76548-01-13 07:27 G | 29679654.62 | 29679654.81 | 29679655.01 | 0.1611 | 0.0314 |
| Uranus | 76548-09-06 18:29 G | 29679892.17 | 29679892.27 | 29679892.42 | 0.0135 | 0.0117 |
| Jupiter | 76549-04-02 07:41 G | 29680099.61 | 29680099.82 | 29680100.03 | 0.0500 | 0.0227 |
| Uranus | 76549-09-10 18:29 G | 29680261.08 | 29680261.27 | 29680261.50 | 0.0135 | 0.0069 |
| Uranus | 76550-09-15 07:41 G | 29680630.58 | 29680630.82 | 29680631.07 | 0.0134 | 0.0040 |
| Uranus | 76551-09-19 06:58 G | 29680999.54 | 29680999.79 | 29681000.04 | 0.0134 | 0.0014 |
| Uranus | 76552-09-22 19:27 G | 29681369.07 | 29681369.31 | 29681369.56 | 0.0134 | 0.0040 |
| Uranus | 76553-09-26 18:29 G | 29681738.09 | 29681738.27 | 29681738.46 | 0.0134 | 0.0090 |
| Uranus | 76554-10-01 06:58 G | 29682107.70 | 29682107.79 | 29682107.89 | 0.0134 | 0.0123 |
| Saturn | 76556-08-31 23:32 G | 29682808.25 | 29682808.48 | 29682808.72 | 0.0290 | 0.0088 |
| Pluto | 76569-10-28 23:03 G | 29687614.22 | 29687614.46 | 29687614.72 | 0.0064 | 0.0012 |
| Saturn | 76571-02-25 05:03 G | 29688098.46 | 29688098.71 | 29688098.97 | 0.0269 | 0.0043 |
| Saturn | 76585-08-26 05:32 G | 29693394.54 | 29693394.73 | 29693394.93 | 0.0290 | 0.0158 |
| Uranus | 76591-03-04 17:32 G | 29695411.15 | 29695411.23 | 29695411.33 | 0.0143 | 0.0134 |
| Uranus | 76592-03-09 02:10 G | 29695781.40 | 29695781.59 | 29695781.80 | 0.0144 | 0.0093 |
| Uranus | 76593-03-13 20:53 G | 29696151.13 | 29696151.37 | 29696151.62 | 0.0144 | 0.0044 |
| Uranus | 76594-03-19 06:29 G | 29696521.52 | 29696521.77 | 29696522.03 | 0.0144 | 0.0016 |
| Uranus | 76595-03-24 02:53 G | 29696891.39 | 29696891.62 | 29696891.88 | 0.0144 | 0.0053 |
| Uranus | 76596-03-28 11:32 G | 29697261.85 | 29697261.98 | 29697262.13 | 0.0144 | 0.0118 |
| Saturn | 76600-02-19 14:39 G | 29698685.02 | 29698685.11 | 29698685.19 | 0.0269 | 0.0251 |
| Saturn | 76601-03-04 04:20 G | 29699062.52 | 29699062.68 | 29699062.85 | 0.0270 | 0.0199 |
| Jupiter | 76614-09-30 18:15 G | 29704021.03 | 29704021.26 | 29704021.49 | 0.0526 | 0.0042 |
| Saturn | 76615-09-03 19:41 G | 29704359.11 | 29704359.32 | 29704359.54 | 0.0290 | 0.0128 |
| Mars | 76618-07-18 08:39 G | 29705407.77 | 29705407.86 | 29705407.95 | 0.1916 | 0.1692 |
| Neptune | 76619-04-05 03:22 G | 29705668.53 | 29705668.64 | 29705668.77 | 0.0088 | 0.0078 |
| Jupiter | 76620-03-28 21:08 G | 29706027.17 | 29706027.38 | 29706027.60 | 0.0503 | 0.0232 |
| Neptune | 76620-04-06 13:56 G | 29706035.92 | 29706036.08 | 29706036.27 | 0.0088 | 0.0062 |
| Neptune | 76621-04-09 01:27 G | 29706403.31 | 29706403.56 | 29706403.83 | 0.0088 | 0.0029 |

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| Neptune | 76622-04-11 17:03 G | 29706770.97 | 29706771.21 | 29706771.47 | 0.0088 | 0.0013 |
| Neptune | 76623-04-13 23:46 G | 29707138.25 | 29707138.49 | 29707138.77 | 0.0088 | 0.0021 |
| Neptune | 76624-04-15 18:29 G | 29707506.04 | 29707506.27 | 29707506.52 | 0.0088 | 0.0037 |
| Neptune | 76625-04-17 22:48 G | 29707873.33 | 29707873.45 | 29707873.63 | 0.0088 | 0.0071 |
| Neptune | 76626-04-20 17:46 G | 29708241.23 | 29708241.24 | 29708241.30 | 0.0088 | 0.0087 |
| Jupiter | 76626-10-05 07:56 G | 29708408.69 | 29708408.83 | 29708408.98 | 0.0528 | 0.0416 |
| Mars | 76627-01-16 09:08 G | 29708511.79 | 29708511.88 | 29708511.98 | 0.1611 | 0.1365 |
| Saturn | 76630-02-27 01:12 G | 29709649.30 | 29709649.55 | 29709649.81 | 0.0269 | 0.0004 |
| Jupiter | 76632-04-02 06:29 G | 29710414.54 | 29710414.77 | 29710414.99 | 0.0501 | 0.0169 |
| Uranus | 76632-09-08 03:51 G | 29710573.53 | 29710573.66 | 29710573.84 | 0.0135 | 0.0107 |
| Uranus | 76633-09-12 05:03 G | 29710942.51 | 29710942.71 | 29710942.92 | 0.0135 | 0.0074 |
| Uranus | 76634-09-16 17:46 G | 29711311.99 | 29711312.24 | 29711312.50 | 0.0134 | 0.0021 |
| Uranus | 76635-09-20 17:46 G | 29711681.00 | 29711681.24 | 29711681.49 | 0.0134 | 0.0005 |
| Uranus | 76636-09-24 06:00 G | 29712050.53 | 29712050.75 | 29712050.99 | 0.0134 | 0.0058 |
| Uranus | 76637-09-28 05:32 G | 29712419.55 | 29712419.73 | 29712419.93 | 0.0134 | 0.0087 |
| Uranus | 76638-10-02 17:32 G | 29712789.20 | 29712789.23 | 29712789.30 | 0.0134 | 0.0131 |
| Saturn | 76644-08-28 07:56 G | 29714945.61 | 29714945.83 | 29714946.06 | 0.0290 | 0.0115 |
| Saturn | 76659-02-21 20:24 G | 29720236.21 | 29720236.35 | 29720236.51 | 0.0269 | 0.0207 |
| Pluto | 76659-05-02 08:39 G | 29720305.64 | 29720305.86 | 29720306.12 | 0.0080 | 0.0032 |
| Saturn | 76660-03-05 06:00 G | 29720613.64 | 29720613.75 | 29720613.87 | 0.0269 | 0.0240 |
| Saturn | 76674-09-04 21:51 G | 29725910.23 | 29725910.41 | 29725910.60 | 0.0290 | 0.0172 |
| Uranus | 76675-03-06 05:17 G | 29726092.69 | 29726092.72 | 29726092.79 | 0.0143 | 0.0141 |
| Uranus | 76676-03-10 13:56 G | 29726462.88 | 29726463.08 | 29726463.30 | 0.0144 | 0.0083 |
| Uranus | 76677-03-15 08:53 G | 29726832.62 | 29726832.87 | 29726833.12 | 0.0144 | 0.0033 |
| Uranus | 76678-03-20 18:00 G | 29727203.00 | 29727203.25 | 29727203.51 | 0.0144 | 0.0010 |
| Uranus | 76679-03-25 13:56 G | 29727572.86 | 29727573.08 | 29727573.31 | 0.0144 | 0.0075 |
| Uranus | 76680-03-29 23:03 G | 29727943.31 | 29727943.46 | 29727943.62 | 0.0144 | 0.0112 |
| Saturn | 76689-02-28 01:56 G | 29731200.34 | 29731200.58 | 29731200.82 | 0.0269 | 0.0045 |
| Jupiter | 76697-09-29 15:51 G | 29734335.93 | 29734336.16 | 29734336.39 | 0.0526 | 0.0120 |
| Neptune | 76701-10-06 12:00 G | 29735802.88 | 29735803.00 | 29735803.17 | 0.0090 | 0.0073 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 76702-10-08 22:34 G | 29736170.24 | 29736170.44 | 29736170.66 | 0.0090 | 0.0055 |
| Jupiter | 76703-03-29 23:03 G | 29736342.27 | 29736342.46 | 29736342.66 | 0.0503 | 0.0289 |
| Saturn | 76703-08-31 05:17 G | 29736496.48 | 29736496.72 | 29736496.96 | 0.0290 | 0.0067 |
| Neptune | 76703-10-11 12:58 G | 29736537.81 | 29736538.04 | 29736538.29 | 0.0090 | 0.0022 |
| Neptune | 76704-10-12 19:27 G | 29736905.05 | 29736905.31 | 29736905.57 | 0.0090 | 0.0005 |
| Neptune | 76705-10-15 13:12 G | 29737272.81 | 29737273.05 | 29737273.29 | 0.0090 | 0.0030 |
| Neptune | 76706-10-17 17:03 G | 29737640.01 | 29737640.21 | 29737640.45 | 0.0090 | 0.0047 |
| Neptune | 76707-10-20 10:48 G | 29738007.87 | 29738007.95 | 29738008.08 | 0.0090 | 0.0082 |
| Jupiter | 76709-10-05 17:32 G | 29738724.07 | 29738724.23 | 29738724.40 | 0.0528 | 0.0343 |
| Jupiter | 76715-04-03 22:20 G | 29740730.21 | 29740730.43 | 29740730.66 | 0.0501 | 0.0126 |
| Uranus | 76716-09-09 14:53 G | 29741254.98 | 29741255.12 | 29741255.30 | 0.0135 | 0.0106 |
| Uranus | 76717-09-13 16:20 G | 29741623.97 | 29741624.18 | 29741624.41 | 0.0135 | 0.0060 |
| Saturn | 76718-02-23 23:03 G | 29741787.27 | 29741787.46 | 29741787.68 | 0.0269 | 0.0161 |
| Uranus | 76718-09-18 04:20 G | 29741993.44 | 29741993.68 | 29741993.94 | 0.0134 | 0.0030 |
| Uranus | 76719-09-22 04:48 G | 29742362.46 | 29742362.70 | 29742362.95 | 0.0134 | 0.0025 |
| Uranus | 76720-09-25 16:20 G | 29742731.96 | 29742732.18 | 29742732.43 | 0.0134 | 0.0052 |
| Uranus | 76721-09-29 16:20 G | 29743101.05 | 29743101.18 | 29743101.37 | 0.0134 | 0.0103 |
| Uranus | 76722-10-04 04:20 G | 29743470.67 | 29743470.68 | 29743470.72 | 0.0134 | 0.0134 |
| Saturn | 76733-09-07 02:24 G | 29747461.45 | 29747461.60 | 29747461.76 | 0.0290 | 0.0218 |
| Saturn | 76748-03-02 09:08 G | 29752751.66 | 29752751.88 | 29752752.11 | 0.0269 | 0.0094 |
| Uranus | 76759-03-07 17:17 G | 29756774.11 | 29756774.22 | 29756774.38 | 0.0143 | 0.0122 |
| Uranus | 76760-03-12 01:27 G | 29757144.36 | 29757144.56 | 29757144.79 | 0.0143 | 0.0081 |
| Uranus | 76761-03-16 20:24 G | 29757514.11 | 29757514.35 | 29757514.61 | 0.0144 | 0.0030 |
| Uranus | 76762-03-22 06:15 G | 29757884.51 | 29757884.76 | 29757885.02 | 0.0144 | 0.0029 |
| Saturn | 76762-09-01 04:05 G | 29758047.43 | 29758047.67 | 29758047.92 | 0.0290 | 0.0016 |
| Uranus | 76763-03-27 01:41 G | 29758254.35 | 29758254.57 | 29758254.82 | 0.0144 | 0.0066 |
| Uranus | 76764-03-31 11:17 G | 29758624.88 | 29758624.97 | 29758625.08 | 0.0144 | 0.0132 |
| Saturn | 76777-02-24 22:48 G | 29763338.22 | 29763338.45 | 29763338.69 | 0.0269 | 0.0109 |
| Jupiter | 76780-09-30 04:34 G | 29764651.49 | 29764651.69 | 29764651.90 | 0.0525 | 0.0179 |
| Neptune | 76784-04-06 20:24 G | 29765936.19 | 29765936.35 | 29765936.54 | 0.0088 | 0.0067 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 76785-04-09 12:29 G | 29766303.82 | 29766304.02 | 29766304.26 | 0.0088 | 0.0045 |
| Jupiter | 76786-03-29 12:58 G | 29766657.89 | 29766658.04 | 29766658.21 | 0.0503 | 0.0353 |
| Neptune | 76786-04-11 18:58 G | 29766671.04 | 29766671.29 | 29766671.56 | 0.0088 | 0.0018 |
| Neptune | 76787-04-14 14:24 G | 29767038.84 | 29767039.10 | 29767039.36 | 0.0088 | 0.0005 |
| Neptune | 76788-04-15 19:12 G | 29767406.07 | 29767406.30 | 29767406.55 | 0.0088 | 0.0033 |
| Neptune | 76789-04-18 13:27 G | 29767773.87 | 29767774.06 | 29767774.29 | 0.0088 | 0.0055 |
| Neptune | 76790-04-20 20:39 G | 29768141.31 | 29768141.36 | 29768141.47 | 0.0088 | 0.0083 |
| Saturn | 76791-08-26 08:24 G | 29768633.79 | 29768633.85 | 29768633.94 | 0.0290 | 0.0275 |
| Saturn | 76792-09-08 03:08 G | 29769012.55 | 29769012.63 | 29769012.73 | 0.0290 | 0.0269 |
| Jupiter | 76792-10-05 00:58 G | 29769039.34 | 29769039.54 | 29769039.74 | 0.0527 | 0.0285 |
| Jupiter | 76798-04-02 20:24 G | 29771045.11 | 29771045.35 | 29771045.60 | 0.0502 | 0.0052 |
| Uranus | 76800-09-09 23:32 G | 29771936.32 | 29771936.48 | 29771936.68 | 0.0135 | 0.0098 |
| Uranus | 76801-09-14 02:10 G | 29772305.39 | 29772305.59 | 29772305.82 | 0.0135 | 0.0063 |
| Uranus | 76802-09-18 13:41 G | 29772674.82 | 29772675.07 | 29772675.33 | 0.0134 | 0.0012 |
| Uranus | 76803-09-22 15:36 G | 29773043.91 | 29773044.15 | 29773044.40 | 0.0134 | 0.0016 |
| Uranus | 76804-09-26 02:53 G | 29773413.40 | 29773413.62 | 29773413.84 | 0.0134 | 0.0070 |
| Uranus | 76805-09-30 03:36 G | 29773782.50 | 29773782.65 | 29773782.83 | 0.0134 | 0.0097 |
| Saturn | 76807-03-04 15:51 G | 29774302.96 | 29774303.16 | 29774303.38 | 0.0269 | 0.0144 |
| Pluto | 76815-11-02 02:39 G | 29777467.38 | 29777467.61 | 29777467.87 | 0.0064 | 0.0012 |
| Saturn | 76821-09-02 11:17 G | 29779598.74 | 29779598.97 | 29779599.21 | 0.0290 | 0.0040 |
| Mars | 76832-01-16 04:05 G | 29783386.48 | 29783386.67 | 29783386.87 | 0.1609 | 0.0377 |
| Saturn | 76836-02-27 03:08 G | 29784889.39 | 29784889.63 | 29784889.88 | 0.0269 | 0.0058 |
| Uranus | 76843-03-08 04:34 G | 29787455.60 | 29787455.69 | 29787455.81 | 0.0143 | 0.0129 |
| Uranus | 76844-03-12 12:15 G | 29787825.78 | 29787826.01 | 29787826.24 | 0.0143 | 0.0069 |
| Uranus | 76845-03-17 07:41 G | 29788195.57 | 29788195.82 | 29788196.07 | 0.0144 | 0.0021 |
| Uranus | 76846-03-22 17:03 G | 29788565.96 | 29788566.21 | 29788566.47 | 0.0144 | 0.0023 |
| Uranus | 76847-03-27 12:15 G | 29788935.81 | 29788936.01 | 29788936.22 | 0.0144 | 0.0088 |
| Uranus | 76848-03-31 21:36 G | 29789306.30 | 29789306.40 | 29789306.54 | 0.0144 | 0.0125 |
| Saturn | 76850-08-27 12:00 G | 29790184.85 | 29790185.00 | 29790185.18 | 0.0290 | 0.0220 |
| Jupiter | 76863-09-30 08:39 G | 29794966.66 | 29794966.86 | 29794967.08 | 0.0524 | 0.0244 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 76865-02-21 12:15 G | 29795476.93 | 29795477.01 | 29795477.10 | 0.0270 | 0.0253 |
| Neptune | 76865-10-05 21:22 G | 29795703.31 | 29795703.39 | 29795703.48 | 0.0090 | 0.0084 |
| Saturn | 76866-03-05 18:44 G | 29795854.11 | 29795854.28 | 29795854.46 | 0.0269 | 0.0195 |
| Neptune | 76866-10-08 12:00 G | 29796070.86 | 29796071.00 | 29796071.20 | 0.0090 | 0.0065 |
| Neptune | 76867-10-10 18:00 G | 29796438.01 | 29796438.25 | 29796438.49 | 0.0090 | 0.0033 |
| Neptune | 76868-10-12 12:00 G | 29796805.75 | 29796806.00 | 29796806.25 | 0.0090 | 0.0012 |
| Jupiter | 76869-03-28 07:41 G | 29796972.71 | 29796972.82 | 29796972.94 | 0.0504 | 0.0439 |
| Neptune | 76869-10-14 16:05 G | 29797172.93 | 29797173.17 | 29797173.42 | 0.0090 | 0.0018 |
| Neptune | 76870-10-17 09:22 G | 29797540.66 | 29797540.89 | 29797541.13 | 0.0090 | 0.0039 |
| Neptune | 76871-10-19 15:22 G | 29797907.99 | 29797908.14 | 29797908.31 | 0.0090 | 0.0068 |
| Neptune | 76872-10-21 05:17 G | 29798275.70 | 29798275.72 | 29798275.75 | 0.0090 | 0.0089 |
| Jupiter | 76875-10-04 23:46 G | 29799354.28 | 29799354.49 | 29799354.70 | 0.0526 | 0.0187 |
| Saturn | 76880-09-03 22:48 G | 29801150.24 | 29801150.45 | 29801150.68 | 0.0290 | 0.0099 |
| Jupiter | 76881-04-02 03:51 G | 29801360.43 | 29801360.66 | 29801360.89 | 0.0502 | 0.0009 |
| Uranus | 76884-09-10 10:20 G | 29802617.75 | 29802617.93 | 29802618.12 | 0.0135 | 0.0094 |
| Uranus | 76885-09-14 13:56 G | 29802986.86 | 29802987.08 | 29802987.31 | 0.0135 | 0.0050 |
| Uranus | 76886-09-19 00:00 G | 29803356.25 | 29803356.50 | 29803356.76 | 0.0134 | 0.0018 |
| Uranus | 76887-09-23 02:24 G | 29803725.37 | 29803725.60 | 29803725.84 | 0.0134 | 0.0036 |
| Uranus | 76888-09-26 12:15 G | 29804094.79 | 29804095.01 | 29804095.25 | 0.0134 | 0.0062 |
| Uranus | 76889-09-30 13:56 G | 29804463.97 | 29804464.08 | 29804464.23 | 0.0134 | 0.0114 |
| Jupiter | 76893-04-06 21:36 G | 29805748.32 | 29805748.40 | 29805748.49 | 0.0500 | 0.0469 |
| Saturn | 76895-02-28 13:56 G | 29806440.84 | 29806441.08 | 29806441.32 | 0.0269 | 0.0005 |
| Pluto | 76905-05-05 10:34 G | 29810158.72 | 29810158.94 | 29810159.20 | 0.0081 | 0.0027 |
| Saturn | 76909-08-29 17:17 G | 29811736.02 | 29811736.22 | 29811736.43 | 0.0290 | 0.0159 |
| Saturn | 76924-02-24 17:17 G | 29817028.06 | 29817028.22 | 29817028.41 | 0.0270 | 0.0199 |
| Saturn | 76925-03-07 22:34 G | 29817405.36 | 29817405.44 | 29817405.54 | 0.0270 | 0.0251 |
| Uranus | 76927-03-09 14:10 G | 29818136.95 | 29818137.09 | 29818137.27 | 0.0143 | 0.0109 |
| Uranus | 76928-03-13 20:39 G | 29818507.15 | 29818507.36 | 29818507.60 | 0.0143 | 0.0071 |
| Uranus | 76929-03-18 16:48 G | 29818876.95 | 29818877.20 | 29818877.46 | 0.0144 | 0.0017 |
| Uranus | 76930-03-24 01:56 G | 29819247.33 | 29819247.58 | 29819247.83 | 0.0144 | 0.0040 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 76931-03-28 21:22 G | 29819617.19 | 29819617.39 | 29819617.62 | 0.0144 | 0.0079 |
| Saturn | 76939-09-07 10:05 G | 29822701.72 | 29822701.92 | 29822702.13 | 0.0290 | 0.0158 |
| Jupiter | 76946-09-30 06:44 G | 29825281.62 | 29825281.78 | 29825281.95 | 0.0524 | 0.0350 |
| Neptune | 76948-04-07 08:53 G | 29825836.75 | 29825836.87 | 29825837.04 | 0.0088 | 0.0073 |
| Neptune | 76949-04-09 14:24 G | 29826203.93 | 29826204.10 | 29826204.33 | 0.0088 | 0.0058 |
| Neptune | 76950-04-12 10:20 G | 29826571.68 | 29826571.93 | 29826572.19 | 0.0088 | 0.0023 |
| Neptune | 76951-04-14 15:36 G | 29826938.90 | 29826939.15 | 29826939.41 | 0.0088 | 0.0008 |
| Neptune | 76952-04-16 09:36 G | 29827306.65 | 29827306.90 | 29827307.16 | 0.0088 | 0.0026 |
| Neptune | 76953-04-18 17:32 G | 29827674.02 | 29827674.23 | 29827674.47 | 0.0088 | 0.0042 |
| Saturn | 76954-03-03 03:22 G | 29827992.40 | 29827992.64 | 29827992.88 | 0.0269 | 0.0052 |
| Neptune | 76954-04-21 06:58 G | 29828041.67 | 29828041.79 | 29828041.96 | 0.0088 | 0.0075 |
| Jupiter | 76958-10-05 06:44 G | 29829669.55 | 29829669.78 | 29829670.02 | 0.0526 | 0.0098 |
| Jupiter | 76964-04-02 09:22 G | 29831675.64 | 29831675.89 | 29831676.13 | 0.0502 | 0.0071 |
| Uranus | 76967-09-08 08:53 G | 29832929.80 | 29832929.87 | 29832929.98 | 0.0135 | 0.0126 |
| Saturn | 76968-08-31 04:05 G | 29833287.45 | 29833287.67 | 29833287.90 | 0.0290 | 0.0095 |
| Uranus | 76968-09-11 18:29 G | 29833299.08 | 29833299.27 | 29833299.47 | 0.0135 | 0.0089 |
| Uranus | 76969-09-15 23:17 G | 29833668.26 | 29833668.47 | 29833668.71 | 0.0135 | 0.0051 |
| Uranus | 76970-09-20 08:39 G | 29834037.61 | 29834037.86 | 29834038.12 | 0.0134 | 0.0003 |
| Uranus | 76971-09-24 12:44 G | 29834406.80 | 29834407.03 | 29834407.27 | 0.0134 | 0.0028 |
| Uranus | 76972-09-27 21:36 G | 29834776.21 | 29834776.40 | 29834776.62 | 0.0134 | 0.0081 |
| Uranus | 76973-10-02 00:44 G | 29835145.39 | 29835145.53 | 29835145.68 | 0.0134 | 0.0108 |
| Jupiter | 76976-04-06 16:05 G | 29836063.03 | 29836063.17 | 29836063.32 | 0.0501 | 0.0390 |
| Mars | 76981-07-22 16:20 G | 29837996.00 | 29837996.18 | 29837996.36 | 0.1918 | 0.1089 |
| Saturn | 76983-02-25 21:36 G | 29838579.19 | 29838579.40 | 29838579.62 | 0.0270 | 0.0141 |
| Saturn | 76998-09-08 19:56 G | 29844253.18 | 29844253.33 | 29844253.49 | 0.0290 | 0.0226 |

78TH MILLENNIUM CE

This is a list of transits of Moon in the 78th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Uranus | 77011-03-10 23:17 | G | 29848818.35 | 29848818.47 | 29848818.62 | 0.0143 | 0.0119 | |
| Uranus | 77012-03-15 04:48 | G | 29849188.46 | 29849188.70 | 29849188.95 | 0.0143 | 0.0057 | |
| Saturn | 77013-03-05 13:56 | G | 29849543.85 | 29849544.08 | 29849544.31 | 0.0269 | 0.0108 | |
| Uranus | 77013-03-20 01:56 | G | 29849558.33 | 29849558.58 | 29849558.83 | 0.0144 | 0.0012 | |
| Uranus | 77014-03-25 09:51 | G | 29849928.67 | 29849928.91 | 29849929.17 | 0.0144 | 0.0036 | |
| Uranus | 77015-03-30 05:17 | G | 29850298.55 | 29850298.72 | 29850298.92 | 0.0144 | 0.0099 | |
| Uranus | 77016-04-03 14:39 | G | 29850669.04 | 29850669.11 | 29850669.22 | 0.0144 | 0.0135 | |
| Saturn | 77027-09-03 21:51 | G | 29854839.18 | 29854839.41 | 29854839.65 | 0.0290 | 0.0024 | |
| Jupiter | 77029-09-30 14:39 | G | 29855596.98 | 29855597.11 | 29855597.25 | 0.0523 | 0.0428 | |
| Neptune | 77030-10-09 15:51 | G | 29855971.02 | 29855971.16 | 29855971.35 | 0.0090 | 0.0068 | |
| Neptune | 77031-10-12 10:48 | G | 29856338.74 | 29856338.95 | 29856339.16 | 0.0090 | 0.0049 | |
| Neptune | 77032-10-13 15:22 | G | 29856705.89 | 29856706.14 | 29856706.39 | 0.0090 | 0.0016 | |
| Neptune | 77033-10-16 08:24 | G | 29857073.59 | 29857073.85 | 29857074.11 | 0.0090 | 0.0001 | |
| Neptune | 77034-10-18 15:36 | G | 29857440.93 | 29857441.15 | 29857441.39 | 0.0090 | 0.0035 | |
| Neptune | 77035-10-21 04:34 | G | 29857808.49 | 29857808.69 | 29857808.91 | 0.0090 | 0.0052 | |
| Neptune | 77036-10-22 16:05 | G | 29858176.12 | 29858176.17 | 29858176.26 | 0.0090 | 0.0086 | |
| Mars | 77037-01-16 19:56 | G | 29858262.19 | 29858262.33 | 29858262.46 | 0.1608 | 0.1037 | |
| Jupiter | 77041-10-05 04:05 | G | 29859984.44 | 29859984.67 | 29859984.90 | 0.0526 | 0.0013 | |
| Saturn | 77042-02-28 06:58 | G | 29860130.57 | 29860130.79 | 29860131.03 | 0.0270 | 0.0083 | |
| Jupiter | 77047-04-03 02:10 | G | 29861990.38 | 29861990.59 | 29861990.81 | 0.0503 | 0.0166 | |
| Uranus | 77051-09-09 20:24 | G | 29863611.28 | 29863611.35 | 29863611.42 | 0.0135 | 0.0128 | |
| Uranus | 77052-09-13 04:34 | G | 29863980.49 | 29863980.69 | 29863980.90 | 0.0135 | 0.0082 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 77053-09-17 10:48 G | 29864349.72 | 29864349.95 | 29864350.18 | 0.0135 | 0.0041 |
| Jupiter | 77053-10-10 02:53 G | 29864372.54 | 29864372.62 | 29864372.70 | 0.0527 | 0.0493 |
| Uranus | 77054-09-21 18:29 G | 29864719.01 | 29864719.27 | 29864719.53 | 0.0134 | 0.0006 |
| Uranus | 77055-09-25 23:03 G | 29865088.25 | 29865088.46 | 29865088.70 | 0.0134 | 0.0047 |
| Saturn | 77056-08-28 12:29 G | 29865425.90 | 29865426.02 | 29865426.16 | 0.0290 | 0.0244 |
| Uranus | 77056-09-29 06:44 G | 29865457.57 | 29865457.78 | 29865458.00 | 0.0134 | 0.0073 |
| Uranus | 77057-10-03 10:34 G | 29865826.88 | 29865826.94 | 29865827.04 | 0.0134 | 0.0126 |
| Jupiter | 77059-04-08 01:27 G | 29866378.38 | 29866378.56 | 29866378.74 | 0.0501 | 0.0325 |
| Pluto | 77061-11-05 00:15 G | 29867320.25 | 29867320.51 | 29867320.78 | 0.0064 | 0.0006 |
| Saturn | 77072-03-06 19:41 G | 29871095.13 | 29871095.32 | 29871095.53 | 0.0269 | 0.0169 |
| Saturn | 77086-09-05 15:51 G | 29876390.92 | 29876391.16 | 29876391.40 | 0.0290 | 0.0048 |
| Uranus | 77095-03-11 08:24 G | 29879499.69 | 29879499.85 | 29879500.05 | 0.0143 | 0.0099 |
| Uranus | 77096-03-15 12:29 G | 29879869.79 | 29879870.02 | 29879870.27 | 0.0143 | 0.0061 |
| Uranus | 77097-03-20 10:34 G | 29880239.69 | 29880239.94 | 29880240.19 | 0.0144 | 0.0005 |
| Uranus | 77098-03-25 17:32 G | 29880609.99 | 29880610.23 | 29880610.48 | 0.0144 | 0.0049 |
| Uranus | 77099-03-30 13:41 G | 29880979.89 | 29880980.07 | 29880980.28 | 0.0144 | 0.0090 |
| Saturn | 77101-03-02 20:39 G | 29881682.12 | 29881682.36 | 29881682.60 | 0.0270 | 0.0025 |
| Neptune | 77112-04-08 11:32 G | 29885736.94 | 29885736.98 | 29885737.08 | 0.0088 | 0.0085 |
| Neptune | 77113-04-11 07:12 G | 29886104.62 | 29886104.80 | 29886105.00 | 0.0088 | 0.0061 |
| Neptune | 77114-04-13 12:29 G | 29886471.80 | 29886472.02 | 29886472.27 | 0.0088 | 0.0037 |
| Neptune | 77115-04-16 05:32 G | 29886839.47 | 29886839.73 | 29886840.00 | 0.0088 | 0.0013 |
| Saturn | 77115-09-01 00:29 G | 29886977.33 | 29886977.52 | 29886977.71 | 0.0290 | 0.0175 |
| Mars | 77116-01-20 13:41 G | 29887118.97 | 29887119.07 | 29887119.18 | 0.1608 | 0.1258 |
| Neptune | 77116-04-17 14:39 G | 29887206.87 | 29887207.11 | 29887207.37 | 0.0088 | 0.0012 |
| Neptune | 77117-04-20 03:22 G | 29887574.40 | 29887574.64 | 29887574.90 | 0.0088 | 0.0037 |
| Neptune | 77118-04-22 17:32 G | 29887942.07 | 29887942.23 | 29887942.43 | 0.0088 | 0.0062 |
| Neptune | 77119-04-25 01:41 G | 29888309.53 | 29888309.57 | 29888309.63 | 0.0088 | 0.0086 |
| Jupiter | 77124-10-05 07:12 G | 29890299.58 | 29890299.80 | 29890300.03 | 0.0525 | 0.0103 |
| Saturn | 77130-02-25 20:10 G | 29892269.20 | 29892269.34 | 29892269.51 | 0.0269 | 0.0217 |
| Jupiter | 77130-04-03 12:44 G | 29892305.82 | 29892306.03 | 29892306.24 | 0.0504 | 0.0228 |

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| Saturn | 77131-03-10 03:08 G | 29892646.51 | 29892646.63 | 29892646.77 | 0.0269 | 0.0228 |
| Uranus | 77135-09-11 05:03 G | 29894292.60 | 29894292.71 | 29894292.85 | 0.0135 | 0.0115 |
| Uranus | 77136-09-14 12:00 G | 29894661.80 | 29894662.00 | 29894662.21 | 0.0135 | 0.0081 |
| Jupiter | 77136-10-09 19:27 G | 29894687.16 | 29894687.31 | 29894687.47 | 0.0527 | 0.0393 |
| Uranus | 77137-09-18 19:27 G | 29895031.09 | 29895031.31 | 29895031.56 | 0.0135 | 0.0040 |
| Uranus | 77138-09-23 02:24 G | 29895400.34 | 29895400.60 | 29895400.86 | 0.0135 | 0.0007 |
| Uranus | 77139-09-27 08:53 G | 29895769.65 | 29895769.87 | 29895770.11 | 0.0134 | 0.0039 |
| Uranus | 77140-09-30 15:08 G | 29896138.96 | 29896139.13 | 29896139.34 | 0.0134 | 0.0091 |
| Uranus | 77141-10-04 20:39 G | 29896508.26 | 29896508.36 | 29896508.49 | 0.0134 | 0.0118 |
| Jupiter | 77142-04-07 21:22 G | 29896693.19 | 29896693.39 | 29896693.60 | 0.0502 | 0.0254 |
| Saturn | 77145-09-08 03:51 G | 29897942.44 | 29897942.66 | 29897942.89 | 0.0290 | 0.0117 |
| Pluto | 77151-05-09 03:22 G | 29900011.37 | 29900011.64 | 29900011.91 | 0.0081 | 0.0002 |
| Saturn | 77160-03-04 06:44 G | 29903233.53 | 29903233.78 | 29903234.02 | 0.0270 | 0.0031 |
| Saturn | 77174-09-02 15:22 G | 29908528.93 | 29908529.14 | 29908529.37 | 0.0290 | 0.0112 |
| Uranus | 77179-03-12 18:58 G | 29910181.14 | 29910181.29 | 29910181.46 | 0.0143 | 0.0108 |
| Uranus | 77180-03-16 21:51 G | 29910551.16 | 29910551.41 | 29910551.66 | 0.0143 | 0.0045 |
| Uranus | 77181-03-21 20:53 G | 29910921.12 | 29910921.37 | 29910921.62 | 0.0144 | 0.0002 |
| Uranus | 77182-03-27 02:39 G | 29911291.36 | 29911291.61 | 29911291.86 | 0.0144 | 0.0048 |
| Uranus | 77183-03-31 23:03 G | 29911661.32 | 29911661.46 | 29911661.64 | 0.0144 | 0.0109 |
| Saturn | 77189-02-27 02:24 G | 29913820.41 | 29913820.60 | 29913820.80 | 0.0269 | 0.0163 |
| Neptune | 77194-10-10 09:36 G | 29915871.79 | 29915871.90 | 29915872.04 | 0.0090 | 0.0077 |
| Neptune | 77195-10-12 14:39 G | 29916238.94 | 29916239.11 | 29916239.31 | 0.0090 | 0.0059 |
| Neptune | 77196-10-14 07:27 G | 29916606.56 | 29916606.81 | 29916607.06 | 0.0090 | 0.0027 |
| Neptune | 77197-10-16 15:08 G | 29916973.89 | 29916974.13 | 29916974.38 | 0.0090 | 0.0008 |
| Neptune | 77198-10-19 02:39 G | 29917341.37 | 29917341.61 | 29917341.88 | 0.0090 | 0.0025 |
| Neptune | 77199-10-21 15:51 G | 29917708.95 | 29917709.16 | 29917709.38 | 0.0090 | 0.0044 |
| Neptune | 77200-10-22 22:48 G | 29918076.33 | 29918076.45 | 29918076.61 | 0.0090 | 0.0075 |
| Saturn | 77204-09-09 12:58 G | 29919493.86 | 29919494.04 | 29919494.24 | 0.0290 | 0.0186 |
| Jupiter | 77207-10-05 03:22 G | 29920614.42 | 29920614.64 | 29920614.85 | 0.0524 | 0.0182 |
| Jupiter | 77213-04-02 06:15 G | 29922620.58 | 29922620.76 | 29922620.95 | 0.0504 | 0.0313 |

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| Saturn | 77219-03-06 10:20 G | 29924784.68 | 29924784.93 | 29924785.17 | 0.0270 | 0.0081 |
| Uranus | 77219-09-11 15:22 G | 29924974.06 | 29924974.14 | 29924974.27 | 0.0135 | 0.0121 |
| Jupiter | 77219-10-10 05:32 G | 29925002.57 | 29925002.73 | 29925002.91 | 0.0527 | 0.0329 |
| Uranus | 77220-09-14 21:22 G | 29925343.18 | 29925343.39 | 29925343.62 | 0.0135 | 0.0071 |
| Uranus | 77221-09-19 06:00 G | 29925712.52 | 29925712.75 | 29925712.99 | 0.0135 | 0.0033 |
| Uranus | 77222-09-23 11:03 G | 29926081.71 | 29926081.96 | 29926082.23 | 0.0135 | 0.0006 |
| Uranus | 77223-09-27 18:29 G | 29926451.06 | 29926451.27 | 29926451.51 | 0.0135 | 0.0056 |
| Uranus | 77224-09-30 23:17 G | 29926820.28 | 29926820.47 | 29926820.69 | 0.0134 | 0.0083 |
| Jupiter | 77225-04-07 05:17 G | 29927008.50 | 29927008.72 | 29927008.94 | 0.0502 | 0.0173 |
| Saturn | 77233-09-04 06:15 G | 29930080.53 | 29930080.76 | 29930081.00 | 0.0290 | 0.0049 |
| Saturn | 77248-02-29 11:17 G | 29935371.75 | 29935371.97 | 29935372.19 | 0.0269 | 0.0113 |
| Uranus | 77263-03-13 06:15 G | 29940862.57 | 29940862.76 | 29940862.96 | 0.0143 | 0.0087 |
| Saturn | 77263-09-11 23:03 G | 29941045.35 | 29941045.46 | 29941045.60 | 0.0290 | 0.0246 |
| Uranus | 77264-03-17 07:27 G | 29941232.56 | 29941232.81 | 29941233.06 | 0.0143 | 0.0051 |
| Uranus | 77265-03-22 07:27 G | 29941602.56 | 29941602.81 | 29941603.06 | 0.0144 | 0.0008 |
| Mars | 77265-07-22 20:24 G | 29941725.24 | 29941725.35 | 29941725.45 | 0.1919 | 0.1613 |
| Uranus | 77266-03-27 11:46 G | 29941972.75 | 29941972.99 | 29941973.24 | 0.0144 | 0.0059 |
| Uranus | 77267-04-01 09:51 G | 29942342.74 | 29942342.91 | 29942343.09 | 0.0144 | 0.0102 |
| Neptune | 77277-04-10 10:20 G | 29946004.78 | 29946004.93 | 29946005.11 | 0.0088 | 0.0066 |
| Saturn | 77278-03-07 11:17 G | 29946335.75 | 29946335.97 | 29946336.19 | 0.0269 | 0.0130 |
| Neptune | 77278-04-13 02:10 G | 29946372.40 | 29946372.59 | 29946372.84 | 0.0088 | 0.0051 |
| Neptune | 77279-04-15 13:12 G | 29946739.80 | 29946740.05 | 29946740.30 | 0.0088 | 0.0017 |
| Neptune | 77280-04-17 00:15 G | 29947107.24 | 29947107.51 | 29947107.79 | 0.0088 | 0.0002 |
| Neptune | 77281-04-19 14:53 G | 29947474.90 | 29947475.12 | 29947475.37 | 0.0088 | 0.0033 |
| Neptune | 77282-04-21 21:22 G | 29947842.19 | 29947842.39 | 29947842.64 | 0.0088 | 0.0048 |
| Neptune | 77283-04-24 16:20 G | 29948210.10 | 29948210.18 | 29948210.29 | 0.0088 | 0.0081 |
| Jupiter | 77290-10-04 10:48 G | 29950929.76 | 29950929.95 | 29950930.15 | 0.0523 | 0.0266 |
| Saturn | 77292-09-05 15:51 G | 29951631.91 | 29951632.16 | 29951632.40 | 0.0291 | 0.0009 |
| Jupiter | 77296-04-01 16:34 G | 29952936.04 | 29952936.19 | 29952936.34 | 0.0505 | 0.0382 |
| Jupiter | 77302-10-10 02:24 G | 29955317.39 | 29955317.60 | 29955317.81 | 0.0525 | 0.0235 |

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| Uranus | 77303-09-13 00:15 G | 29955655.38 | 29955655.51 | 29955655.68 | 0.0135 | 0.0105 |
| Uranus | 77304-09-16 04:20 G | 29956024.48 | 29956024.68 | 29956024.91 | 0.0135 | 0.0074 |
| Uranus | 77305-09-20 14:53 G | 29956393.88 | 29956394.12 | 29956394.36 | 0.0135 | 0.0028 |
| Uranus | 77306-09-24 18:44 G | 29956763.03 | 29956763.28 | 29956763.55 | 0.0135 | 0.0016 |
| Saturn | 77307-03-03 20:24 G | 29956923.11 | 29956923.35 | 29956923.59 | 0.0269 | 0.0063 |
| Uranus | 77307-09-29 04:05 G | 29957132.45 | 29957132.67 | 29957132.90 | 0.0135 | 0.0049 |
| Pluto | 77307-11-08 13:27 G | 29957172.81 | 29957173.06 | 29957173.33 | 0.0064 | 0.0009 |
| Jupiter | 77308-04-07 04:20 G | 29957323.45 | 29957323.68 | 29957323.92 | 0.0503 | 0.0110 |
| Uranus | 77308-10-02 07:27 G | 29957501.66 | 29957501.81 | 29957502.00 | 0.0135 | 0.0101 |
| Uranus | 77309-10-06 15:51 G | 29957871.10 | 29957871.16 | 29957871.26 | 0.0134 | 0.0127 |
| Mars | 77321-01-20 00:58 G | 29961994.34 | 29961994.54 | 29961994.74 | 0.1607 | 0.0207 |
| Saturn | 77321-08-31 10:48 G | 29962217.82 | 29962217.95 | 29962218.09 | 0.0290 | 0.0237 |
| Saturn | 77336-02-26 05:46 G | 29967509.69 | 29967509.74 | 29967509.80 | 0.0269 | 0.0262 |
| Saturn | 77337-03-09 14:39 G | 29967886.94 | 29967887.11 | 29967887.31 | 0.0269 | 0.0176 |
| Uranus | 77346-03-09 13:41 G | 29971173.99 | 29971174.07 | 29971174.18 | 0.0143 | 0.0133 |
| Uranus | 77347-03-14 17:17 G | 29971544.05 | 29971544.22 | 29971544.41 | 0.0143 | 0.0096 |
| Uranus | 77348-03-18 17:32 G | 29971913.97 | 29971914.23 | 29971914.49 | 0.0143 | 0.0032 |
| Uranus | 77349-03-23 18:44 G | 29972284.04 | 29972284.28 | 29972284.53 | 0.0144 | 0.0009 |
| Uranus | 77350-03-28 22:05 G | 29972654.18 | 29972654.42 | 29972654.67 | 0.0144 | 0.0061 |
| Uranus | 77351-04-02 20:39 G | 29973024.24 | 29973024.36 | 29973024.52 | 0.0144 | 0.0120 |
| Saturn | 77351-09-08 16:20 G | 29973182.94 | 29973183.18 | 29973183.43 | 0.0291 | 0.0064 |
| Neptune | 77359-10-13 05:46 G | 29976139.57 | 29976139.74 | 29976139.95 | 0.0090 | 0.0062 |
| Neptune | 77360-10-14 15:22 G | 29976506.92 | 29976507.14 | 29976507.36 | 0.0090 | 0.0042 |
| Neptune | 77361-10-17 02:39 G | 29976874.35 | 29976874.61 | 29976874.87 | 0.0090 | 0.0011 |
| Neptune | 77362-10-19 16:48 G | 29977241.96 | 29977242.20 | 29977242.45 | 0.0090 | 0.0009 |
| Neptune | 77363-10-21 23:03 G | 29977609.24 | 29977609.46 | 29977609.70 | 0.0090 | 0.0040 |
| Neptune | 77364-10-23 16:05 G | 29977977.00 | 29977977.17 | 29977977.38 | 0.0090 | 0.0059 |
| Saturn | 77366-03-04 23:46 G | 29978474.24 | 29978474.49 | 29978474.74 | 0.0269 | 0.0015 |
| Jupiter | 77373-10-04 10:34 G | 29981244.77 | 29981244.94 | 29981245.12 | 0.0523 | 0.0346 |
| Jupiter | 77379-04-02 18:15 G | 29983251.14 | 29983251.26 | 29983251.39 | 0.0506 | 0.0432 |

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| Saturn | 77380-09-01 20:10 G | 29983769.17 | 29983769.34 | 29983769.54 | 0.0290 | 0.0182 |
| Jupiter | 77385-10-09 06:58 G | 29985632.59 | 29985632.79 | 29985633.01 | 0.0525 | 0.0175 |
| Uranus | 77387-09-13 10:48 G | 29986336.82 | 29986336.95 | 29986337.09 | 0.0135 | 0.0112 |
| Uranus | 77388-09-16 13:41 G | 29986705.85 | 29986706.07 | 29986706.32 | 0.0135 | 0.0061 |
| Uranus | 77389-09-21 01:12 G | 29987075.31 | 29987075.55 | 29987075.79 | 0.0135 | 0.0025 |
| Uranus | 77390-09-25 03:22 G | 29987444.39 | 29987444.64 | 29987444.91 | 0.0135 | 0.0017 |
| Jupiter | 77391-04-07 14:10 G | 29987638.87 | 29987639.09 | 29987639.32 | 0.0503 | 0.0060 |
| Uranus | 77391-09-29 13:27 G | 29987813.86 | 29987814.06 | 29987814.29 | 0.0135 | 0.0064 |
| Uranus | 77392-10-02 15:36 G | 29988182.98 | 29988183.15 | 29988183.35 | 0.0134 | 0.0093 |
| Saturn | 77395-02-27 08:53 G | 29989060.73 | 29989060.87 | 29989061.02 | 0.0269 | 0.0217 |
| Saturn | 77396-03-10 20:53 G | 29989438.24 | 29989438.37 | 29989438.52 | 0.0269 | 0.0219 |
| Pluto | 77397-05-10 11:32 G | 29989863.76 | 29989863.98 | 29989864.24 | 0.0081 | 0.0036 |
| Jupiter | 77403-04-13 07:41 G | 29992026.77 | 29992026.82 | 29992026.89 | 0.0501 | 0.0483 |
| Saturn | 77410-09-10 15:36 G | 29994733.93 | 29994734.15 | 29994734.37 | 0.0291 | 0.0115 |
| Saturn | 77425-03-06 20:24 G | 30000025.10 | 30000025.35 | 30000025.61 | 0.0268 | 0.0029 |
| Uranus | 77430-03-10 22:48 G | 30001855.38 | 30001855.45 | 30001855.52 | 0.0143 | 0.0137 |
| Uranus | 77431-03-16 02:53 G | 30002225.42 | 30002225.62 | 30002225.84 | 0.0143 | 0.0076 |
| Uranus | 77432-03-20 01:12 G | 30002595.30 | 30002595.55 | 30002595.82 | 0.0143 | 0.0040 |
| Uranus | 77433-03-25 04:05 G | 30002965.43 | 30002965.67 | 30002965.92 | 0.0144 | 0.0021 |
| Uranus | 77434-03-30 05:46 G | 30003335.52 | 30003335.74 | 30003335.98 | 0.0144 | 0.0069 |
| Uranus | 77435-04-04 06:29 G | 30003705.63 | 30003705.77 | 30003705.93 | 0.0144 | 0.0115 |
| Saturn | 77439-09-05 00:29 G | 30005320.31 | 30005320.52 | 30005320.75 | 0.0291 | 0.0131 |
| Neptune | 77441-04-11 23:32 G | 30005905.37 | 30005905.48 | 30005905.62 | 0.0088 | 0.0077 |
| Neptune | 77442-04-14 10:34 G | 30006272.76 | 30006272.94 | 30006273.15 | 0.0088 | 0.0056 |
| Neptune | 77443-04-16 20:53 G | 30006640.12 | 30006640.37 | 30006640.63 | 0.0088 | 0.0028 |
| Neptune | 77444-04-18 13:27 G | 30007007.81 | 30007008.06 | 30007008.31 | 0.0088 | 0.0007 |
| Neptune | 77445-04-20 19:27 G | 30007375.06 | 30007375.31 | 30007375.58 | 0.0088 | 0.0020 |
| Neptune | 77446-04-23 14:10 G | 30007742.88 | 30007743.09 | 30007743.34 | 0.0088 | 0.0042 |
| Neptune | 77447-04-25 19:12 G | 30008110.16 | 30008110.30 | 30008110.48 | 0.0088 | 0.0068 |
| Saturn | 77454-03-01 15:08 G | 30010611.95 | 30010612.13 | 30010612.31 | 0.0269 | 0.0173 |

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| Saturn | 77455-03-13 23:46 G | 30010989.44 | 30010989.49 | 30010989.57 | 0.0269 | 0.0260 |
| Jupiter | 77456-10-04 20:10 G | 30011560.20 | 30011560.34 | 30011560.48 | 0.0523 | 0.0402 |
| Jupiter | 77462-04-03 04:48 G | 30013566.63 | 30013566.70 | 30013566.77 | 0.0506 | 0.0478 |
| Jupiter | 77468-10-09 19:12 G | 30015948.07 | 30015948.30 | 30015948.53 | 0.0524 | 0.0123 |
| Saturn | 77469-09-11 18:29 G | 30016285.08 | 30016285.27 | 30016285.47 | 0.0291 | 0.0160 |
| Uranus | 77471-09-14 18:58 G | 30017018.14 | 30017018.29 | 30017018.49 | 0.0135 | 0.0095 |
| Uranus | 77472-09-17 20:53 G | 30017387.16 | 30017387.37 | 30017387.61 | 0.0135 | 0.0066 |
| Uranus | 77473-09-22 09:36 G | 30017756.65 | 30017756.90 | 30017757.14 | 0.0135 | 0.0017 |
| Jupiter | 77474-04-07 20:10 G | 30017954.10 | 30017954.34 | 30017954.59 | 0.0504 | 0.0003 |
| Uranus | 77474-09-26 11:17 G | 30018125.72 | 30018125.97 | 30018126.22 | 0.0135 | 0.0023 |
| Uranus | 77475-09-30 22:34 G | 30018495.23 | 30018495.44 | 30018495.67 | 0.0134 | 0.0060 |
| Uranus | 77476-10-03 23:46 G | 30018864.36 | 30018864.49 | 30018864.66 | 0.0134 | 0.0110 |
| Saturn | 77484-03-07 19:41 G | 30021576.09 | 30021576.32 | 30021576.57 | 0.0268 | 0.0072 |
| Jupiter | 77486-04-12 09:08 G | 30022341.76 | 30022341.88 | 30022341.99 | 0.0503 | 0.0429 |
| Saturn | 77498-09-05 22:20 G | 30026871.19 | 30026871.43 | 30026871.68 | 0.0291 | 0.0085 |
| Saturn | 77513-03-03 17:32 G | 30032163.02 | 30032163.23 | 30032163.45 | 0.0269 | 0.0132 |
| Uranus | 77514-03-12 05:32 G | 30032536.61 | 30032536.73 | 30032536.87 | 0.0143 | 0.0124 |
| Uranus | 77515-03-17 11:03 G | 30032906.78 | 30032906.96 | 30032907.18 | 0.0143 | 0.0086 |
| Uranus | 77516-03-21 08:39 G | 30033276.60 | 30033276.86 | 30033277.13 | 0.0143 | 0.0021 |
| Uranus | 77517-03-26 12:44 G | 30033646.79 | 30033647.03 | 30033647.28 | 0.0143 | 0.0018 |
| Uranus | 77518-03-31 13:12 G | 30034016.84 | 30034017.05 | 30034017.29 | 0.0144 | 0.0074 |
| Uranus | 77519-04-05 14:53 G | 30034387.04 | 30034387.12 | 30034387.25 | 0.0144 | 0.0130 |
| Neptune | 77523-10-14 15:22 G | 30036040.00 | 30036040.14 | 30036040.31 | 0.0090 | 0.0070 |
| Neptune | 77524-10-16 00:58 G | 30036407.35 | 30036407.54 | 30036407.78 | 0.0090 | 0.0053 |
| Neptune | 77525-10-18 15:51 G | 30036774.93 | 30036775.16 | 30036775.41 | 0.0090 | 0.0020 |
| Mars | 77526-01-21 01:27 G | 30036869.43 | 30036869.56 | 30036869.70 | 0.1607 | 0.1078 |
| Neptune | 77526-10-20 22:05 G | 30037142.16 | 30037142.42 | 30037142.68 | 0.0090 | 0.0002 |
| Neptune | 77527-10-23 16:05 G | 30037509.93 | 30037510.17 | 30037510.40 | 0.0090 | 0.0031 |
| Saturn | 77528-09-13 20:39 G | 30037836.20 | 30037836.36 | 30037836.55 | 0.0291 | 0.0203 |
| Neptune | 77528-10-24 20:10 G | 30037877.14 | 30037877.34 | 30037877.56 | 0.0090 | 0.0049 |

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| Neptune | 77529-10-27 13:41 G | 30038244.99 | 30038245.07 | 30038245.20 | 0.0090 | 0.0082 |
| Jupiter | 77539-10-06 07:41 G | 30041875.72 | 30041875.82 | 30041875.94 | 0.0521 | 0.0456 |
| Saturn | 77543-03-11 00:15 G | 30043127.30 | 30043127.51 | 30043127.74 | 0.0268 | 0.0111 |
| Jupiter | 77551-10-10 18:00 G | 30046263.02 | 30046263.25 | 30046263.48 | 0.0523 | 0.0050 |
| Pluto | 77553-11-11 09:22 G | 30047025.68 | 30047025.89 | 30047026.12 | 0.0063 | 0.0028 |
| Uranus | 77554-09-11 14:53 G | 30047330.06 | 30047330.12 | 30047330.20 | 0.0135 | 0.0130 |
| Pluto | 77554-11-12 17:46 G | 30047392.20 | 30047392.24 | 30047392.35 | 0.0064 | 0.0061 |
| Uranus | 77555-09-16 04:48 G | 30047699.56 | 30047699.70 | 30047699.88 | 0.0135 | 0.0104 |
| Uranus | 77556-09-19 06:15 G | 30048068.53 | 30048068.76 | 30048069.01 | 0.0135 | 0.0050 |
| Jupiter | 77557-04-08 01:27 G | 30048269.33 | 30048269.56 | 30048269.79 | 0.0505 | 0.0043 |
| Saturn | 77557-09-07 18:15 G | 30048422.02 | 30048422.26 | 30048422.51 | 0.0291 | 0.0041 |
| Uranus | 77557-09-23 19:27 G | 30048438.07 | 30048438.31 | 30048438.56 | 0.0135 | 0.0017 |
| Uranus | 77558-09-27 19:56 G | 30048807.09 | 30048807.33 | 30048807.59 | 0.0135 | 0.0028 |
| Uranus | 77559-10-02 07:56 G | 30049176.64 | 30049176.83 | 30049177.05 | 0.0134 | 0.0072 |
| Uranus | 77560-10-05 08:10 G | 30049545.69 | 30049545.84 | 30049546.02 | 0.0134 | 0.0103 |
| Jupiter | 77569-04-13 01:56 G | 30052657.43 | 30052657.58 | 30052657.74 | 0.0503 | 0.0382 |
| Saturn | 77572-03-04 15:36 G | 30053713.91 | 30053714.15 | 30053714.39 | 0.0268 | 0.0091 |
| Saturn | 77587-09-15 18:58 G | 30059387.15 | 30059387.29 | 30059387.43 | 0.0291 | 0.0241 |
| Uranus | 77598-03-12 12:15 G | 30063217.91 | 30063218.01 | 30063218.14 | 0.0143 | 0.0127 |
| Uranus | 77599-03-17 18:44 G | 30063588.07 | 30063588.28 | 30063588.51 | 0.0143 | 0.0068 |
| Uranus | 77600-03-21 14:39 G | 30063957.86 | 30063958.11 | 30063958.37 | 0.0143 | 0.0031 |
| Uranus | 77601-03-26 20:10 G | 30064328.10 | 30064328.34 | 30064328.58 | 0.0143 | 0.0033 |
| Saturn | 77602-03-12 04:34 G | 30064678.49 | 30064678.69 | 30064678.90 | 0.0268 | 0.0151 |
| Uranus | 77602-03-31 18:58 G | 30064698.08 | 30064698.29 | 30064698.53 | 0.0144 | 0.0077 |
| Uranus | 77603-04-05 23:03 G | 30065068.35 | 30065068.46 | 30065068.58 | 0.0144 | 0.0127 |
| Mars | 77605-01-22 23:03 G | 30065726.29 | 30065726.46 | 30065726.65 | 0.1607 | 0.0497 |
| Neptune | 77606-04-14 18:29 G | 30066173.09 | 30066173.27 | 30066173.49 | 0.0088 | 0.0059 |
| Neptune | 77607-04-17 11:46 G | 30066540.78 | 30066540.99 | 30066541.22 | 0.0088 | 0.0043 |
| Neptune | 77608-04-18 17:17 G | 30066907.97 | 30066908.22 | 30066908.49 | 0.0088 | 0.0011 |
| Neptune | 77609-04-21 12:29 G | 30067275.77 | 30067276.02 | 30067276.29 | 0.0088 | 0.0006 |

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| Neptune | 77610-04-23 17:32 G | 30067643.01 | 30067643.23 | 30067643.47 | 0.0088 | 0.0039 |
| Neptune | 77611-04-26 11:32 G | 30068010.78 | 30068010.98 | 30068011.20 | 0.0088 | 0.0054 |
| Neptune | 77612-04-27 19:12 G | 30068378.28 | 30068378.30 | 30068378.33 | 0.0088 | 0.0087 |
| Saturn | 77616-09-08 19:41 G | 30069973.08 | 30069973.32 | 30069973.55 | 0.0291 | 0.0005 |
| Mars | 77628-07-28 11:17 G | 30074313.87 | 30074313.97 | 30074314.07 | 0.1920 | 0.1609 |
| Saturn | 77631-03-06 14:24 G | 30075264.85 | 30075265.10 | 30075265.35 | 0.0268 | 0.0046 |
| Jupiter | 77634-10-10 11:03 G | 30076578.73 | 30076578.96 | 30076579.19 | 0.0523 | 0.0010 |
| Uranus | 77639-09-16 13:27 G | 30078380.88 | 30078381.06 | 30078381.26 | 0.0135 | 0.0085 |
| Jupiter | 77640-04-07 16:48 G | 30078584.96 | 30078585.20 | 30078585.44 | 0.0505 | 0.0090 |
| Uranus | 77640-09-19 13:56 G | 30078749.86 | 30078750.08 | 30078750.32 | 0.0135 | 0.0058 |
| Uranus | 77641-09-24 03:51 G | 30079119.41 | 30079119.66 | 30079119.91 | 0.0135 | 0.0006 |
| Uranus | 77642-09-28 03:51 G | 30079488.42 | 30079488.66 | 30079488.92 | 0.0135 | 0.0031 |
| Uranus | 77643-10-02 16:48 G | 30079858.00 | 30079858.20 | 30079858.42 | 0.0134 | 0.0071 |
| Uranus | 77644-10-05 17:03 G | 30080227.09 | 30080227.21 | 30080227.33 | 0.0134 | 0.0119 |
| Saturn | 77645-09-02 18:44 G | 30080559.17 | 30080559.28 | 30080559.41 | 0.0291 | 0.0253 |
| Saturn | 77646-09-16 13:41 G | 30080938.03 | 30080938.07 | 30080938.14 | 0.0291 | 0.0283 |
| Jupiter | 77652-04-11 21:51 G | 30082972.23 | 30082972.41 | 30082972.61 | 0.0504 | 0.0311 |
| Saturn | 77660-03-01 00:00 G | 30085852.38 | 30085852.50 | 30085852.62 | 0.0269 | 0.0232 |
| Saturn | 77661-03-13 05:03 G | 30086229.54 | 30086229.71 | 30086229.90 | 0.0268 | 0.0191 |
| Saturn | 77675-09-11 01:56 G | 30091524.35 | 30091524.58 | 30091524.81 | 0.0291 | 0.0052 |
| Uranus | 77682-03-12 19:41 G | 30093899.19 | 30093899.32 | 30093899.48 | 0.0143 | 0.0117 |
| Uranus | 77683-03-18 02:53 G | 30094269.42 | 30094269.62 | 30094269.85 | 0.0143 | 0.0077 |
| Uranus | 77684-03-21 22:20 G | 30094639.17 | 30094639.43 | 30094639.70 | 0.0143 | 0.0012 |
| Uranus | 77685-03-27 05:03 G | 30095009.47 | 30095009.71 | 30095009.96 | 0.0143 | 0.0026 |
| Uranus | 77686-04-01 03:08 G | 30095379.42 | 30095379.63 | 30095379.85 | 0.0144 | 0.0086 |
| Uranus | 77687-04-06 07:56 G | 30095749.78 | 30095749.83 | 30095749.91 | 0.0144 | 0.0138 |
| Neptune | 77687-10-14 00:58 G | 30095940.47 | 30095940.54 | 30095940.65 | 0.0090 | 0.0084 |
| Neptune | 77688-10-15 17:03 G | 30096308.02 | 30096308.21 | 30096308.41 | 0.0090 | 0.0056 |
| Neptune | 77689-10-17 22:20 G | 30096675.20 | 30096675.43 | 30096675.68 | 0.0090 | 0.0035 |
| Saturn | 77690-03-07 19:27 G | 30096816.07 | 30096816.31 | 30096816.55 | 0.0268 | 0.0003 |

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| Neptune | 77690-10-20 16:34 G | 30097042.94 | 30097043.19 | 30097043.44 | 0.0090 | 0.0005 |
| Neptune | 77691-10-22 20:53 G | 30097410.12 | 30097410.37 | 30097410.62 | 0.0090 | 0.0016 |
| Neptune | 77692-10-24 14:10 G | 30097777.87 | 30097778.09 | 30097778.31 | 0.0090 | 0.0046 |
| Neptune | 77693-10-26 20:39 G | 30098145.20 | 30098145.36 | 30098145.54 | 0.0090 | 0.0066 |
| Saturn | 77704-09-04 16:05 G | 30102110.00 | 30102110.17 | 30102110.35 | 0.0291 | 0.0203 |
| Jupiter | 77717-10-10 12:29 G | 30106893.79 | 30106894.02 | 30106894.26 | 0.0522 | 0.0043 |
| Saturn | 77719-03-04 01:41 G | 30107403.39 | 30107403.57 | 30107403.75 | 0.0269 | 0.0185 |
| Saturn | 77720-03-15 03:51 G | 30107780.56 | 30107780.66 | 30107780.80 | 0.0268 | 0.0235 |
| Uranus | 77722-09-13 07:12 G | 30108692.72 | 30108692.80 | 30108692.93 | 0.0135 | 0.0122 |
| Jupiter | 77723-04-08 10:05 G | 30108899.70 | 30108899.92 | 30108900.15 | 0.0506 | 0.0174 |
| Uranus | 77723-09-17 22:34 G | 30109062.27 | 30109062.44 | 30109062.62 | 0.0135 | 0.0095 |
| Uranus | 77724-09-20 23:03 G | 30109431.22 | 30109431.46 | 30109431.70 | 0.0135 | 0.0040 |
| Uranus | 77725-09-25 13:12 G | 30109800.80 | 30109801.05 | 30109801.30 | 0.0135 | 0.0010 |
| Uranus | 77726-09-29 12:44 G | 30110169.80 | 30110170.03 | 30110170.28 | 0.0135 | 0.0039 |
| Uranus | 77727-10-04 02:10 G | 30110539.40 | 30110539.59 | 30110539.80 | 0.0135 | 0.0081 |
| Uranus | 77728-10-07 01:27 G | 30110908.45 | 30110908.56 | 30110908.71 | 0.0134 | 0.0115 |
| Jupiter | 77729-10-15 08:24 G | 30111281.74 | 30111281.85 | 30111281.97 | 0.0524 | 0.0449 |
| Saturn | 77734-09-13 06:58 G | 30113075.56 | 30113075.79 | 30113076.02 | 0.0291 | 0.0103 |
| Jupiter | 77735-04-13 11:46 G | 30113287.80 | 30113287.99 | 30113288.20 | 0.0504 | 0.0246 |
| Saturn | 77749-03-10 05:17 G | 30118367.48 | 30118367.72 | 30118367.96 | 0.0268 | 0.0045 |
| Saturn | 77763-09-06 21:22 G | 30123661.19 | 30123661.39 | 30123661.59 | 0.0291 | 0.0152 |
| Uranus | 77766-03-14 05:03 G | 30124580.58 | 30124580.71 | 30124580.87 | 0.0143 | 0.0117 |
| Uranus | 77767-03-19 12:44 G | 30124950.81 | 30124951.03 | 30124951.27 | 0.0143 | 0.0058 |
| Uranus | 77768-03-23 06:58 G | 30125320.54 | 30125320.79 | 30125321.05 | 0.0143 | 0.0021 |
| Uranus | 77769-03-28 14:10 G | 30125690.86 | 30125691.09 | 30125691.34 | 0.0143 | 0.0045 |
| Uranus | 77770-04-02 11:03 G | 30126060.76 | 30126060.96 | 30126061.18 | 0.0144 | 0.0086 |
| Neptune | 77770-04-15 09:08 G | 30126073.73 | 30126073.88 | 30126074.05 | 0.0088 | 0.0069 |
| Uranus | 77771-04-07 17:17 G | 30126431.18 | 30126431.22 | 30126431.29 | 0.0144 | 0.0140 |
| Neptune | 77771-04-17 14:39 G | 30126440.90 | 30126441.11 | 30126441.33 | 0.0088 | 0.0050 |
| Neptune | 77772-04-19 09:51 G | 30126808.66 | 30126808.91 | 30126809.18 | 0.0088 | 0.0021 |

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| Neptune | 77773-04-21 15:36 G | 30127175.89 | 30127176.15 | 30127176.41 | 0.0088 | 0.0001 |
| Neptune | 77774-04-24 08:53 G | 30127543.63 | 30127543.87 | 30127544.14 | 0.0088 | 0.0028 |
| Neptune | 77775-04-26 17:46 G | 30127911.05 | 30127911.24 | 30127911.47 | 0.0088 | 0.0048 |
| Neptune | 77776-04-28 06:44 G | 30128278.66 | 30128278.78 | 30128278.94 | 0.0088 | 0.0075 |
| Saturn | 77778-03-05 01:27 G | 30128954.35 | 30128954.56 | 30128954.79 | 0.0269 | 0.0138 |
| Saturn | 77793-09-14 09:36 G | 30134626.69 | 30134626.90 | 30134627.12 | 0.0291 | 0.0156 |
| Pluto | 77799-11-14 02:53 G | 30136878.54 | 30136878.62 | 30136878.76 | 0.0063 | 0.0058 |
| Jupiter | 77800-10-10 18:29 G | 30137209.05 | 30137209.27 | 30137209.49 | 0.0522 | 0.0124 |
| Pluto | 77800-11-15 07:41 G | 30137244.63 | 30137244.82 | 30137245.05 | 0.0064 | 0.0034 |
| Jupiter | 77806-04-09 00:00 G | 30139215.30 | 30139215.50 | 30139215.71 | 0.0507 | 0.0235 |
| Uranus | 77806-09-14 15:51 G | 30139374.12 | 30139374.16 | 30139374.23 | 0.0135 | 0.0132 |
| Uranus | 77807-09-19 06:44 G | 30139743.58 | 30139743.78 | 30139744.00 | 0.0135 | 0.0076 |
| Saturn | 77808-03-12 12:29 G | 30139918.79 | 30139919.02 | 30139919.26 | 0.0268 | 0.0093 |
| Uranus | 77808-09-22 06:58 G | 30140112.57 | 30140112.79 | 30140113.04 | 0.0135 | 0.0050 |
| Uranus | 77809-09-26 21:22 G | 30140482.14 | 30140482.39 | 30140482.64 | 0.0135 | 0.0004 |
| Mars | 77810-01-24 18:15 G | 30140602.07 | 30140602.26 | 30140602.44 | 0.1607 | 0.0043 |
| Uranus | 77810-09-30 21:08 G | 30140851.14 | 30140851.38 | 30140851.62 | 0.0135 | 0.0039 |
| Uranus | 77811-10-05 10:48 G | 30141220.76 | 30141220.95 | 30141221.16 | 0.0135 | 0.0082 |
| Uranus | 77812-10-08 10:20 G | 30141589.86 | 30141589.93 | 30141590.01 | 0.0134 | 0.0128 |
| Jupiter | 77812-10-15 12:00 G | 30141596.84 | 30141597.00 | 30141597.17 | 0.0524 | 0.0373 |
| Jupiter | 77818-04-13 13:12 G | 30143602.83 | 30143603.05 | 30143603.28 | 0.0504 | 0.0177 |
| Saturn | 77822-09-09 09:51 G | 30145212.69 | 30145212.91 | 30145213.13 | 0.0291 | 0.0097 |
| Saturn | 77837-03-07 07:56 G | 30150505.60 | 30150505.83 | 30150506.06 | 0.0269 | 0.0090 |
| Uranus | 77850-03-15 15:22 G | 30155261.99 | 30155262.14 | 30155262.32 | 0.0143 | 0.0108 |
| Uranus | 77851-03-20 23:17 G | 30155632.25 | 30155632.47 | 30155632.71 | 0.0143 | 0.0064 |
| Uranus | 77852-03-24 17:46 G | 30156001.98 | 30156002.24 | 30156002.50 | 0.0143 | 0.0001 |
| Saturn | 77852-09-16 16:20 G | 30156178.03 | 30156178.18 | 30156178.35 | 0.0291 | 0.0214 |
| Neptune | 77852-10-16 21:36 G | 30156208.24 | 30156208.40 | 30156208.61 | 0.0090 | 0.0062 |
| Uranus | 77853-03-30 01:41 G | 30156372.34 | 30156372.57 | 30156372.82 | 0.0143 | 0.0037 |
| Neptune | 77853-10-19 15:51 G | 30156575.96 | 30156576.16 | 30156576.40 | 0.0090 | 0.0046 |

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| Uranus | 77854-04-03 21:36 G | 30156742.23 | 30156742.40 | 30156742.61 | 0.0144 | 0.0100 |
| Neptune | 77854-10-21 20:39 G | 30156943.12 | 30156943.36 | 30156943.62 | 0.0090 | 0.0012 |
| Neptune | 77855-10-24 13:27 G | 30157310.80 | 30157311.06 | 30157311.32 | 0.0090 | 0.0004 |
| Neptune | 77856-10-25 20:53 G | 30157678.16 | 30157678.37 | 30157678.60 | 0.0090 | 0.0038 |
| Neptune | 77857-10-28 09:22 G | 30158045.70 | 30158045.89 | 30158046.12 | 0.0090 | 0.0055 |
| Neptune | 77858-10-30 22:05 G | 30158413.39 | 30158413.42 | 30158413.47 | 0.0090 | 0.0088 |
| Saturn | 77867-03-14 16:20 G | 30161469.97 | 30161470.18 | 30161470.41 | 0.0268 | 0.0141 |
| Saturn | 77881-09-10 23:03 G | 30166764.22 | 30166764.46 | 30166764.70 | 0.0291 | 0.0034 |
| Jupiter | 77883-10-10 22:34 G | 30167524.22 | 30167524.44 | 30167524.66 | 0.0521 | 0.0185 |
| Mars | 77889-01-26 14:24 G | 30169459.04 | 30169459.10 | 30169459.15 | 0.1606 | 0.1510 |
| Jupiter | 77889-04-07 17:32 G | 30169530.05 | 30169530.23 | 30169530.43 | 0.0507 | 0.0328 |
| Pluto | 77890-05-18 09:51 G | 30169935.73 | 30169935.91 | 30169936.15 | 0.0081 | 0.0047 |
| Uranus | 77890-09-15 00:58 G | 30170055.42 | 30170055.54 | 30170055.68 | 0.0135 | 0.0114 |
| Uranus | 77891-09-19 15:51 G | 30170424.97 | 30170425.16 | 30170425.36 | 0.0135 | 0.0086 |
| Uranus | 77892-09-22 16:34 G | 30170793.96 | 30170794.19 | 30170794.44 | 0.0135 | 0.0031 |
| Uranus | 77893-09-27 06:58 G | 30171163.54 | 30171163.79 | 30171164.05 | 0.0135 | 0.0002 |
| Uranus | 77894-10-01 06:44 G | 30171532.56 | 30171532.78 | 30171533.02 | 0.0135 | 0.0049 |
| Uranus | 77895-10-05 20:39 G | 30171902.17 | 30171902.36 | 30171902.55 | 0.0135 | 0.0089 |
| Jupiter | 77895-10-15 16:20 G | 30171912.00 | 30171912.18 | 30171912.36 | 0.0523 | 0.0300 |
| Saturn | 77896-03-08 19:12 G | 30172057.06 | 30172057.30 | 30172057.54 | 0.0269 | 0.0040 |
| Uranus | 77896-10-08 19:41 G | 30172271.25 | 30172271.32 | 30172271.43 | 0.0134 | 0.0126 |
| Jupiter | 77901-04-13 12:29 G | 30173917.80 | 30173918.02 | 30173918.25 | 0.0505 | 0.0081 |
| Saturn | 77910-09-06 06:29 G | 30177350.66 | 30177350.77 | 30177350.90 | 0.0291 | 0.0252 |
| Saturn | 77911-09-20 07:27 G | 30177729.74 | 30177729.81 | 30177729.88 | 0.0291 | 0.0276 |
| Mars | 77912-07-30 21:22 G | 30178044.19 | 30178044.39 | 30178044.60 | 0.1921 | 0.0256 |
| Saturn | 77925-03-04 19:56 G | 30182644.19 | 30182644.33 | 30182644.48 | 0.0269 | 0.0222 |
| Saturn | 77926-03-16 23:32 G | 30183021.33 | 30183021.48 | 30183021.67 | 0.0268 | 0.0194 |
| Uranus | 77934-03-17 01:56 G | 30185943.42 | 30185943.58 | 30185943.76 | 0.0143 | 0.0104 |
| Neptune | 77934-04-16 12:29 G | 30185973.96 | 30185974.02 | 30185974.12 | 0.0088 | 0.0083 |
| Uranus | 77935-03-22 09:51 G | 30186313.67 | 30186313.91 | 30186314.16 | 0.0143 | 0.0047 |

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| Neptune | 77935-04-19 07:27 G | 30186341.62 | 30186341.81 | 30186342.05 | 0.0088 | 0.0052 |
| Uranus | 77936-03-26 03:36 G | 30186683.40 | 30186683.65 | 30186683.91 | 0.0143 | 0.0009 |
| Neptune | 77936-04-20 13:56 G | 30186708.85 | 30186709.08 | 30186709.32 | 0.0088 | 0.0035 |
| Uranus | 77937-03-31 12:00 G | 30187053.78 | 30187054.00 | 30187054.24 | 0.0143 | 0.0058 |
| Neptune | 77937-04-23 06:29 G | 30187076.50 | 30187076.77 | 30187077.04 | 0.0088 | 0.0004 |
| Uranus | 77938-04-05 07:27 G | 30187423.63 | 30187423.81 | 30187424.01 | 0.0144 | 0.0097 |
| Neptune | 77938-04-25 16:05 G | 30187443.93 | 30187444.17 | 30187444.43 | 0.0088 | 0.0013 |
| Neptune | 77939-04-28 03:22 G | 30187811.43 | 30187811.64 | 30187811.90 | 0.0088 | 0.0045 |
| Neptune | 77940-04-29 18:15 G | 30188179.10 | 30188179.26 | 30188179.46 | 0.0088 | 0.0062 |
| Saturn | 77940-09-13 10:05 G | 30188315.67 | 30188315.92 | 30188316.17 | 0.0291 | 0.0029 |
| Saturn | 77955-03-12 06:58 G | 30193608.54 | 30193608.79 | 30193609.03 | 0.0269 | 0.0016 |
| Jupiter | 77966-10-10 20:10 G | 30197839.17 | 30197839.34 | 30197839.53 | 0.0520 | 0.0291 |
| Saturn | 77969-09-07 23:03 G | 30198902.29 | 30198902.46 | 30198902.65 | 0.0291 | 0.0187 |
| Jupiter | 77972-04-07 21:22 G | 30199845.27 | 30199845.39 | 30199845.53 | 0.0508 | 0.0415 |
| Uranus | 77974-09-16 10:34 G | 30200736.85 | 30200736.94 | 30200737.06 | 0.0135 | 0.0122 |
| Uranus | 77975-09-21 00:44 G | 30201106.32 | 30201106.53 | 30201106.76 | 0.0135 | 0.0067 |
| Uranus | 77976-09-24 01:56 G | 30201475.35 | 30201475.58 | 30201475.82 | 0.0135 | 0.0040 |
| Uranus | 77977-09-28 15:22 G | 30201844.89 | 30201845.14 | 30201845.40 | 0.0135 | 0.0015 |
| Uranus | 77978-10-02 15:36 G | 30202213.93 | 30202214.15 | 30202214.39 | 0.0135 | 0.0048 |
| Jupiter | 77978-10-15 16:20 G | 30202226.96 | 30202227.18 | 30202227.41 | 0.0523 | 0.0183 |
| Uranus | 77979-10-07 05:03 G | 30202583.53 | 30202583.71 | 30202583.90 | 0.0134 | 0.0093 |
| Saturn | 77984-03-06 02:24 G | 30204195.41 | 30204195.60 | 30204195.80 | 0.0269 | 0.0167 |
| Jupiter | 77984-04-12 16:48 G | 30204232.95 | 30204233.20 | 30204233.44 | 0.0506 | 0.0011 |
| Saturn | 77985-03-18 12:00 G | 30204572.92 | 30204573.00 | 30204573.10 | 0.0268 | 0.0247 |
| Jupiter | 77996-04-17 06:29 G | 30208620.68 | 30208620.77 | 30208620.87 | 0.0504 | 0.0454 |
| Saturn | 77999-09-15 21:22 G | 30209867.16 | 30209867.39 | 30209867.63 | 0.0291 | 0.0098 |

79TH MILLENNIUM CE

This is a list of transits of Moon in the 79th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 78014-03-13 14:10 | G | 30215159.84 | 30215160.09 | 30215160.34 | 0.0269 | 0.0066 | |
| Neptune | 78016-10-17 15:51 | G | 30216109.05 | 30216109.16 | 30216109.32 | 0.0090 | 0.0076 | |
| Neptune | 78017-10-19 21:08 | G | 30216476.18 | 30216476.38 | 30216476.60 | 0.0090 | 0.0049 | |
| Uranus | 78018-03-17 10:48 | G | 30216624.78 | 30216624.95 | 30216625.14 | 0.0143 | 0.0099 | |
| Neptune | 78018-10-22 13:41 | G | 30216843.82 | 30216844.07 | 30216844.32 | 0.0090 | 0.0027 | |
| Uranus | 78019-03-22 18:29 | G | 30216995.03 | 30216995.27 | 30216995.52 | 0.0143 | 0.0052 | |
| Neptune | 78019-10-24 22:05 | G | 30217211.17 | 30217211.42 | 30217211.67 | 0.0090 | 0.0000 | |
| Uranus | 78020-03-26 12:44 | G | 30217364.78 | 30217365.03 | 30217365.29 | 0.0143 | 0.0013 | |
| Neptune | 78020-10-26 09:22 | G | 30217578.64 | 30217578.89 | 30217579.15 | 0.0090 | 0.0023 | |
| Uranus | 78021-03-31 21:51 | G | 30217735.17 | 30217735.41 | 30217735.65 | 0.0143 | 0.0049 | |
| Neptune | 78021-10-28 22:20 | G | 30217946.23 | 30217946.43 | 30217946.63 | 0.0090 | 0.0051 | |
| Uranus | 78022-04-05 17:03 | G | 30218105.05 | 30218105.21 | 30218105.37 | 0.0144 | 0.0113 | |
| Neptune | 78022-10-31 04:20 | G | 30218313.57 | 30218313.68 | 30218313.86 | 0.0090 | 0.0074 | |
| Saturn | 78028-09-09 17:46 | G | 30220454.02 | 30220454.24 | 30220454.45 | 0.0291 | 0.0119 | |
| Saturn | 78043-03-08 14:24 | G | 30225746.89 | 30225747.10 | 30225747.32 | 0.0269 | 0.0114 | |
| Pluto | 78046-11-18 01:27 | G | 30227097.31 | 30227097.56 | 30227097.82 | 0.0063 | 0.0001 | |
| Jupiter | 78049-10-09 23:03 | G | 30228154.30 | 30228154.46 | 30228154.63 | 0.0520 | 0.0379 | |
| Jupiter | 78055-04-08 00:44 | G | 30230160.46 | 30230160.53 | 30230160.60 | 0.0508 | 0.0487 | |
| Uranus | 78058-09-16 19:56 | G | 30231418.20 | 30231418.33 | 30231418.50 | 0.0135 | 0.0106 | |
| Saturn | 78058-09-17 12:00 | G | 30231418.81 | 30231419.00 | 30231419.20 | 0.0291 | 0.0165 | |
| Uranus | 78059-09-21 09:36 | G | 30231787.70 | 30231787.90 | 30231788.13 | 0.0135 | 0.0076 | |
| Uranus | 78060-09-24 11:46 | G | 30232156.75 | 30232156.99 | 30232157.24 | 0.0135 | 0.0021 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 78061-09-29 01:12 G | 30232526.29 | 30232526.55 | 30232526.81 | 0.0135 | 0.0008 |
| Jupiter | 78061-10-14 13:27 G | 30232541.84 | 30232542.06 | 30232542.29 | 0.0522 | 0.0096 |
| Uranus | 78062-10-03 01:56 G | 30232895.37 | 30232895.58 | 30232895.81 | 0.0134 | 0.0061 |
| Uranus | 78063-10-07 14:24 G | 30233264.94 | 30233265.10 | 30233265.29 | 0.0134 | 0.0098 |
| Jupiter | 78067-04-12 12:58 G | 30234547.82 | 30234548.04 | 30234548.27 | 0.0506 | 0.0085 |
| Saturn | 78073-03-14 17:46 G | 30236711.02 | 30236711.24 | 30236711.48 | 0.0269 | 0.0116 |
| Jupiter | 78079-04-17 10:48 G | 30238935.80 | 30238935.95 | 30238936.12 | 0.0504 | 0.0367 |
| Saturn | 78087-09-12 08:10 G | 30242005.60 | 30242005.84 | 30242006.09 | 0.0291 | 0.0055 |
| Mars | 78094-01-26 20:24 G | 30244334.18 | 30244334.35 | 30244334.53 | 0.1606 | 0.0756 |
| Neptune | 78099-04-18 11:03 G | 30246241.79 | 30246241.96 | 30246242.15 | 0.0088 | 0.0061 |
| Neptune | 78100-04-21 02:24 G | 30246609.38 | 30246609.60 | 30246609.85 | 0.0088 | 0.0044 |
| Neptune | 78101-04-23 14:10 G | 30246976.84 | 30246977.09 | 30246977.34 | 0.0088 | 0.0013 |
| Saturn | 78102-03-11 04:05 G | 30247298.44 | 30247298.67 | 30247298.91 | 0.0269 | 0.0063 |
| Uranus | 78102-03-18 19:12 G | 30247306.12 | 30247306.30 | 30247306.50 | 0.0143 | 0.0093 |
| Neptune | 78102-04-26 00:58 G | 30247344.27 | 30247344.54 | 30247344.81 | 0.0088 | 0.0005 |
| Uranus | 78103-03-24 02:24 G | 30247676.35 | 30247676.60 | 30247676.86 | 0.0143 | 0.0038 |
| Neptune | 78103-04-28 16:34 G | 30247711.97 | 30247712.19 | 30247712.43 | 0.0088 | 0.0036 |
| Uranus | 78104-03-27 20:53 G | 30248046.11 | 30248046.37 | 30248046.62 | 0.0143 | 0.0003 |
| Neptune | 78104-04-29 23:03 G | 30248079.26 | 30248079.46 | 30248079.68 | 0.0088 | 0.0053 |
| Uranus | 78105-04-02 05:17 G | 30248416.51 | 30248416.72 | 30248416.95 | 0.0144 | 0.0070 |
| Neptune | 78105-05-02 17:46 G | 30248447.18 | 30248447.24 | 30248447.35 | 0.0088 | 0.0083 |
| Uranus | 78106-04-06 23:46 G | 30248786.34 | 30248786.49 | 30248786.68 | 0.0144 | 0.0108 |
| Saturn | 78117-09-20 06:00 G | 30252970.61 | 30252970.75 | 30252970.90 | 0.0291 | 0.0228 |
| Saturn | 78131-03-05 18:00 G | 30257885.18 | 30257885.25 | 30257885.35 | 0.0270 | 0.0252 |
| Saturn | 78132-03-17 00:58 G | 30258262.36 | 30258262.54 | 30258262.75 | 0.0269 | 0.0163 |
| Jupiter | 78132-10-09 22:20 G | 30258469.33 | 30258469.43 | 30258469.55 | 0.0520 | 0.0454 |
| Pluto | 78136-05-20 15:36 G | 30259787.95 | 30259788.15 | 30259788.39 | 0.0081 | 0.0042 |
| Uranus | 78142-09-18 06:15 G | 30262099.65 | 30262099.76 | 30262099.92 | 0.0135 | 0.0112 |
| Uranus | 78143-09-22 19:27 G | 30262469.07 | 30262469.31 | 30262469.54 | 0.0135 | 0.0057 |
| Uranus | 78144-09-25 21:51 G | 30262838.18 | 30262838.41 | 30262838.66 | 0.0135 | 0.0030 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 78144-10-14 20:39 G | 30262857.13 | 30262857.36 | 30262857.58 | 0.0521 | 0.0010 |
| Uranus | 78145-09-30 09:51 G | 30263207.66 | 30263207.91 | 30263208.17 | 0.0135 | 0.0026 |
| Saturn | 78146-09-14 15:22 G | 30263556.89 | 30263557.14 | 30263557.40 | 0.0291 | 0.0006 |
| Uranus | 78146-10-04 11:17 G | 30263576.75 | 30263576.97 | 30263577.20 | 0.0134 | 0.0058 |
| Uranus | 78147-10-08 23:03 G | 30263946.31 | 30263946.46 | 30263946.63 | 0.0134 | 0.0105 |
| Jupiter | 78150-04-12 19:41 G | 30264863.10 | 30264863.32 | 30264863.55 | 0.0507 | 0.0170 |
| Jupiter | 78156-10-19 06:29 G | 30267244.64 | 30267244.77 | 30267244.89 | 0.0523 | 0.0439 |
| Saturn | 78161-03-12 12:15 G | 30268849.76 | 30268850.01 | 30268850.26 | 0.0268 | 0.0015 |
| Jupiter | 78162-04-17 06:44 G | 30269250.60 | 30269250.78 | 30269250.98 | 0.0505 | 0.0298 |
| Saturn | 78175-09-08 20:24 G | 30274143.22 | 30274143.35 | 30274143.49 | 0.0291 | 0.0238 |
| Saturn | 78176-09-21 21:22 G | 30274522.36 | 30274522.39 | 30274522.44 | 0.0291 | 0.0287 |
| Neptune | 78180-10-17 21:08 G | 30276009.36 | 30276009.38 | 30276009.41 | 0.0090 | 0.0089 |
| Neptune | 78181-10-20 12:15 G | 30276376.82 | 30276377.01 | 30276377.24 | 0.0090 | 0.0055 |
| Neptune | 78182-10-22 21:36 G | 30276744.19 | 30276744.40 | 30276744.63 | 0.0090 | 0.0039 |
| Neptune | 78183-10-25 08:39 G | 30277111.60 | 30277111.86 | 30277112.12 | 0.0090 | 0.0005 |
| Neptune | 78184-10-26 23:03 G | 30277479.21 | 30277479.46 | 30277479.70 | 0.0090 | 0.0011 |
| Uranus | 78185-03-14 06:44 G | 30277617.72 | 30277617.78 | 30277617.89 | 0.0143 | 0.0135 |
| Neptune | 78185-10-29 05:17 G | 30277846.50 | 30277846.72 | 30277846.95 | 0.0090 | 0.0045 |
| Uranus | 78186-03-19 03:08 G | 30277987.45 | 30277987.63 | 30277987.83 | 0.0143 | 0.0091 |
| Neptune | 78186-10-31 22:34 G | 30278214.27 | 30278214.44 | 30278214.64 | 0.0090 | 0.0060 |
| Uranus | 78187-03-24 09:08 G | 30278357.63 | 30278357.88 | 30278358.14 | 0.0143 | 0.0040 |
| Uranus | 78188-03-28 04:20 G | 30278727.43 | 30278727.68 | 30278727.94 | 0.0143 | 0.0021 |
| Uranus | 78189-04-02 12:44 G | 30279097.80 | 30279098.03 | 30279098.28 | 0.0144 | 0.0059 |
| Saturn | 78190-03-07 00:00 G | 30279436.35 | 30279436.50 | 30279436.67 | 0.0269 | 0.0205 |
| Uranus | 78190-04-07 07:27 G | 30279467.70 | 30279467.81 | 30279467.95 | 0.0144 | 0.0125 |
| Saturn | 78191-03-19 11:17 G | 30279813.83 | 30279813.97 | 30279814.14 | 0.0269 | 0.0206 |
| Saturn | 78205-09-16 22:20 G | 30285108.19 | 30285108.43 | 30285108.67 | 0.0291 | 0.0056 |
| Saturn | 78220-03-14 14:10 G | 30290400.83 | 30290401.09 | 30290401.34 | 0.0268 | 0.0027 |
| Uranus | 78226-09-19 16:34 G | 30292781.03 | 30292781.19 | 30292781.36 | 0.0135 | 0.0097 |
| Uranus | 78227-09-24 04:20 G | 30293150.45 | 30293150.68 | 30293150.91 | 0.0135 | 0.0065 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 78227-10-15 14:39 G | 30293171.89 | 30293172.11 | 30293172.35 | 0.0521 | 0.0090 |
| Uranus | 78228-09-27 07:56 G | 30293519.59 | 30293519.83 | 30293520.08 | 0.0135 | 0.0011 |
| Uranus | 78229-10-01 19:12 G | 30293889.05 | 30293889.30 | 30293889.56 | 0.0135 | 0.0019 |
| Uranus | 78230-10-05 21:36 G | 30294258.21 | 30294258.40 | 30294258.62 | 0.0135 | 0.0073 |
| Uranus | 78231-10-10 08:39 G | 30294627.71 | 30294627.86 | 30294628.02 | 0.0134 | 0.0107 |
| Jupiter | 78233-04-12 18:29 G | 30295178.06 | 30295178.27 | 30295178.48 | 0.0508 | 0.0237 |
| Saturn | 78234-09-11 06:58 G | 30295694.61 | 30295694.79 | 30295694.99 | 0.0291 | 0.0181 |
| Jupiter | 78239-10-20 16:34 G | 30297560.04 | 30297560.19 | 30297560.36 | 0.0523 | 0.0368 |
| Jupiter | 78245-04-17 19:12 G | 30299566.10 | 30299566.30 | 30299566.51 | 0.0505 | 0.0237 |
| Saturn | 78249-03-09 08:24 G | 30300987.66 | 30300987.85 | 30300988.04 | 0.0269 | 0.0162 |
| Saturn | 78250-03-21 18:15 G | 30301365.16 | 30301365.26 | 30301365.36 | 0.0268 | 0.0245 |
| Neptune | 78263-04-20 00:00 G | 30306142.38 | 30306142.50 | 30306142.65 | 0.0088 | 0.0075 |
| Neptune | 78264-04-21 12:00 G | 30306509.79 | 30306510.00 | 30306510.22 | 0.0088 | 0.0046 |
| Saturn | 78264-09-18 06:58 G | 30306659.57 | 30306659.79 | 30306660.01 | 0.0292 | 0.0105 |
| Neptune | 78265-04-23 21:08 G | 30306877.13 | 30306877.38 | 30306877.65 | 0.0088 | 0.0027 |
| Neptune | 78266-04-26 13:56 G | 30307244.82 | 30307245.08 | 30307245.34 | 0.0088 | 0.0002 |
| Neptune | 78267-04-28 19:27 G | 30307612.07 | 30307612.31 | 30307612.58 | 0.0088 | 0.0021 |
| Neptune | 78268-04-30 14:53 G | 30307979.92 | 30307980.12 | 30307980.35 | 0.0088 | 0.0050 |
| Uranus | 78269-03-15 14:53 G | 30308299.11 | 30308299.12 | 30308299.18 | 0.0143 | 0.0142 |
| Neptune | 78269-05-02 19:41 G | 30308347.18 | 30308347.32 | 30308347.51 | 0.0088 | 0.0068 |
| Uranus | 78270-03-20 12:15 G | 30308668.82 | 30308669.01 | 30308669.23 | 0.0143 | 0.0082 |
| Uranus | 78271-03-25 17:32 G | 30309038.98 | 30309039.23 | 30309039.49 | 0.0143 | 0.0030 |
| Uranus | 78272-03-29 13:12 G | 30309408.81 | 30309409.05 | 30309409.31 | 0.0143 | 0.0015 |
| Uranus | 78273-04-03 20:39 G | 30309779.16 | 30309779.36 | 30309779.59 | 0.0144 | 0.0080 |
| Uranus | 78274-04-08 15:22 G | 30310149.01 | 30310149.14 | 30310149.31 | 0.0144 | 0.0117 |
| Saturn | 78279-03-16 15:08 G | 30311951.89 | 30311952.13 | 30311952.37 | 0.0268 | 0.0069 |
| Pluto | 78292-11-20 05:03 G | 30316949.58 | 30316949.71 | 30316949.92 | 0.0063 | 0.0049 |
| Saturn | 78293-09-12 10:20 G | 30317245.71 | 30317245.93 | 30317246.16 | 0.0291 | 0.0132 |
| Pluto | 78293-11-21 17:46 G | 30317316.05 | 30317316.24 | 30317316.47 | 0.0064 | 0.0034 |
| Mars | 78299-01-28 02:24 G | 30319209.45 | 30319209.60 | 30319209.76 | 0.1607 | 0.0767 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 78308-03-11 14:24 G | 30322538.89 | 30322539.10 | 30322539.33 | 0.0269 | 0.0119 |
| Uranus | 78310-09-21 02:53 G | 30323462.47 | 30323462.62 | 30323462.80 | 0.0135 | 0.0101 |
| Jupiter | 78310-10-16 05:17 G | 30323487.51 | 30323487.72 | 30323487.93 | 0.0521 | 0.0151 |
| Uranus | 78311-09-25 13:41 G | 30323831.82 | 30323832.07 | 30323832.31 | 0.0135 | 0.0048 |
| Uranus | 78312-09-28 18:15 G | 30324201.02 | 30324201.26 | 30324201.50 | 0.0135 | 0.0019 |
| Uranus | 78313-10-03 03:36 G | 30324570.41 | 30324570.65 | 30324570.91 | 0.0135 | 0.0037 |
| Uranus | 78314-10-07 07:12 G | 30324939.60 | 30324939.80 | 30324940.02 | 0.0135 | 0.0067 |
| Uranus | 78315-10-11 16:20 G | 30325309.08 | 30325309.18 | 30325309.33 | 0.0134 | 0.0117 |
| Jupiter | 78316-04-13 07:27 G | 30325493.63 | 30325493.81 | 30325494.00 | 0.0508 | 0.0301 |
| Jupiter | 78322-10-20 19:27 G | 30327875.12 | 30327875.31 | 30327875.51 | 0.0522 | 0.0300 |
| Saturn | 78323-09-21 13:12 G | 30328210.86 | 30328211.05 | 30328211.27 | 0.0292 | 0.0149 |
| Jupiter | 78328-04-17 16:34 G | 30329880.96 | 30329881.19 | 30329881.42 | 0.0506 | 0.0168 |
| Saturn | 78338-03-18 19:12 G | 30333503.09 | 30333503.30 | 30333503.53 | 0.0268 | 0.0108 |
| Neptune | 78345-10-21 21:22 G | 30336277.24 | 30336277.39 | 30336277.56 | 0.0090 | 0.0068 |
| Neptune | 78346-10-24 07:12 G | 30336644.59 | 30336644.80 | 30336645.05 | 0.0090 | 0.0044 |
| Neptune | 78347-10-26 22:34 G | 30337012.20 | 30337012.44 | 30337012.68 | 0.0090 | 0.0019 |
| Neptune | 78348-10-28 04:05 G | 30337379.42 | 30337379.67 | 30337379.93 | 0.0090 | 0.0006 |
| Neptune | 78349-10-30 21:51 G | 30337747.18 | 30337747.41 | 30337747.66 | 0.0090 | 0.0030 |
| Neptune | 78350-11-02 02:10 G | 30338114.40 | 30338114.59 | 30338114.80 | 0.0090 | 0.0056 |
| Neptune | 78351-11-04 19:12 G | 30338482.21 | 30338482.30 | 30338482.44 | 0.0090 | 0.0080 |
| Saturn | 78352-09-14 09:08 G | 30338796.65 | 30338796.88 | 30338797.12 | 0.0291 | 0.0089 |
| Uranus | 78353-03-17 00:15 G | 30338980.40 | 30338980.51 | 30338980.67 | 0.0143 | 0.0124 |
| Uranus | 78354-03-21 22:48 G | 30339350.26 | 30339350.45 | 30339350.66 | 0.0143 | 0.0082 |
| Uranus | 78355-03-27 02:24 G | 30339720.35 | 30339720.60 | 30339720.87 | 0.0143 | 0.0028 |
| Uranus | 78356-03-30 23:17 G | 30340090.23 | 30340090.47 | 30340090.72 | 0.0143 | 0.0031 |
| Uranus | 78357-04-05 06:00 G | 30340460.54 | 30340460.75 | 30340460.99 | 0.0144 | 0.0070 |
| Uranus | 78358-04-10 01:27 G | 30340830.51 | 30340830.56 | 30340830.66 | 0.0144 | 0.0137 |
| Saturn | 78367-03-13 13:41 G | 30344089.83 | 30344090.07 | 30344090.32 | 0.0268 | 0.0084 |
| Mars | 78378-01-30 22:20 G | 30348066.40 | 30348066.43 | 30348066.47 | 0.1607 | 0.1568 |
| Saturn | 78382-09-22 13:56 G | 30349761.90 | 30349762.08 | 30349762.28 | 0.0292 | 0.0188 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 78383-05-25 15:22 G | 30350006.93 | 30350007.14 | 30350007.38 | 0.0081 | 0.0036 |
| Uranus | 78393-09-17 05:32 G | 30353774.70 | 30353774.73 | 30353774.79 | 0.0135 | 0.0134 |
| Jupiter | 78393-10-15 08:39 G | 30353802.64 | 30353802.86 | 30353803.07 | 0.0519 | 0.0216 |
| Uranus | 78394-09-21 13:12 G | 30354143.88 | 30354144.05 | 30354144.25 | 0.0135 | 0.0089 |
| Uranus | 78395-09-25 22:34 G | 30354513.20 | 30354513.44 | 30354513.68 | 0.0135 | 0.0054 |
| Saturn | 78396-03-07 14:39 G | 30354677.06 | 30354677.11 | 30354677.16 | 0.0269 | 0.0263 |
| Uranus | 78396-09-29 04:34 G | 30354882.45 | 30354882.69 | 30354882.94 | 0.0135 | 0.0002 |
| Saturn | 78397-03-20 00:15 G | 30355054.31 | 30355054.51 | 30355054.72 | 0.0268 | 0.0143 |
| Uranus | 78397-10-03 13:27 G | 30355251.80 | 30355252.06 | 30355252.31 | 0.0135 | 0.0028 |
| Uranus | 78398-10-07 18:15 G | 30355621.08 | 30355621.26 | 30355621.46 | 0.0135 | 0.0083 |
| Jupiter | 78399-04-13 04:48 G | 30355808.53 | 30355808.70 | 30355808.87 | 0.0509 | 0.0368 |
| Uranus | 78399-10-12 02:24 G | 30355990.49 | 30355990.60 | 30355990.75 | 0.0134 | 0.0115 |
| Jupiter | 78405-10-20 00:00 G | 30358190.30 | 30358190.50 | 30358190.70 | 0.0521 | 0.0229 |
| Jupiter | 78411-04-18 05:17 G | 30360196.50 | 30360196.72 | 30360196.94 | 0.0507 | 0.0133 |
| Saturn | 78411-09-16 10:34 G | 30360347.71 | 30360347.94 | 30360348.18 | 0.0292 | 0.0051 |
| Saturn | 78426-03-14 09:51 G | 30365640.66 | 30365640.91 | 30365641.16 | 0.0268 | 0.0050 |
| Neptune | 78427-04-20 08:53 G | 30366042.83 | 30366042.87 | 30366042.95 | 0.0088 | 0.0085 |
| Neptune | 78428-04-21 17:32 G | 30366410.04 | 30366410.23 | 30366410.47 | 0.0088 | 0.0053 |
| Neptune | 78429-04-24 11:17 G | 30366777.75 | 30366777.97 | 30366778.22 | 0.0088 | 0.0038 |
| Neptune | 78430-04-26 16:48 G | 30367144.94 | 30367145.20 | 30367145.46 | 0.0088 | 0.0006 |
| Neptune | 78431-04-29 11:46 G | 30367512.74 | 30367512.99 | 30367513.27 | 0.0088 | 0.0011 |
| Neptune | 78432-04-30 17:03 G | 30367880.01 | 30367880.21 | 30367880.46 | 0.0088 | 0.0043 |
| Neptune | 78433-05-03 10:34 G | 30368247.76 | 30368247.94 | 30368248.16 | 0.0088 | 0.0059 |
| Uranus | 78437-03-17 11:03 G | 30369661.87 | 30369661.96 | 30369662.08 | 0.0143 | 0.0131 |
| Uranus | 78438-03-22 10:34 G | 30370031.74 | 30370031.94 | 30370032.17 | 0.0143 | 0.0070 |
| Uranus | 78439-03-27 13:27 G | 30370401.80 | 30370402.06 | 30370402.33 | 0.0143 | 0.0020 |
| Uranus | 78440-03-31 11:17 G | 30370771.73 | 30370771.97 | 30370772.22 | 0.0144 | 0.0027 |
| Uranus | 78441-04-05 16:34 G | 30371142.01 | 30371142.19 | 30371142.41 | 0.0144 | 0.0092 |
| Saturn | 78441-09-23 07:41 G | 30371312.66 | 30371312.82 | 30371312.99 | 0.0292 | 0.0218 |
| Uranus | 78442-04-10 12:44 G | 30371511.94 | 30371512.03 | 30371512.16 | 0.0144 | 0.0129 |

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| Saturn | 78455-03-09 19:12 G | 30376228.18 | 30376228.30 | 30376228.44 | 0.0268 | 0.0228 |
| Saturn | 78456-03-21 00:15 G | 30376605.33 | 30376605.51 | 30376605.71 | 0.0268 | 0.0175 |
| Saturn | 78470-09-17 15:08 G | 30381898.89 | 30381899.13 | 30381899.36 | 0.0292 | 0.0016 |
| Jupiter | 78476-10-14 15:22 G | 30384117.96 | 30384118.14 | 30384118.32 | 0.0519 | 0.0293 |
| Uranus | 78477-09-17 15:36 G | 30384456.10 | 30384456.15 | 30384456.24 | 0.0135 | 0.0130 |
| Uranus | 78478-09-22 00:29 G | 30384825.36 | 30384825.52 | 30384825.72 | 0.0135 | 0.0089 |
| Uranus | 78479-09-26 08:24 G | 30385194.60 | 30385194.85 | 30385195.10 | 0.0135 | 0.0039 |
| Uranus | 78480-09-29 15:22 G | 30385563.90 | 30385564.14 | 30385564.39 | 0.0135 | 0.0009 |
| Uranus | 78481-10-03 22:20 G | 30385933.19 | 30385933.43 | 30385933.68 | 0.0135 | 0.0047 |
| Jupiter | 78482-04-12 18:58 G | 30386124.17 | 30386124.29 | 30386124.43 | 0.0509 | 0.0410 |
| Uranus | 78482-10-08 04:05 G | 30386302.48 | 30386302.67 | 30386302.88 | 0.0135 | 0.0077 |
| Uranus | 78483-10-12 10:48 G | 30386671.89 | 30386671.95 | 30386672.05 | 0.0134 | 0.0128 |
| Saturn | 78485-03-15 11:32 G | 30387191.74 | 30387191.98 | 30387192.22 | 0.0268 | 0.0017 |
| Jupiter | 78488-10-19 14:39 G | 30388505.89 | 30388506.11 | 30388506.34 | 0.0521 | 0.0181 |
| Jupiter | 78494-04-17 14:53 G | 30390511.88 | 30390512.12 | 30390512.37 | 0.0507 | 0.0096 |
| Saturn | 78499-09-11 03:22 G | 30392484.57 | 30392484.64 | 30392484.74 | 0.0291 | 0.0271 |
| Saturn | 78500-09-25 03:51 G | 30392863.55 | 30392863.66 | 30392863.79 | 0.0292 | 0.0252 |
| Mars | 78504-01-29 11:32 G | 30394084.89 | 30394084.98 | 30394085.07 | 0.1608 | 0.1443 |
| Neptune | 78509-10-22 04:48 G | 30396177.62 | 30396177.70 | 30396177.83 | 0.0090 | 0.0082 |
| Neptune | 78510-10-24 20:53 G | 30396545.18 | 30396545.37 | 30396545.60 | 0.0090 | 0.0049 |
| Neptune | 78511-10-27 02:39 G | 30396912.38 | 30396912.61 | 30396912.85 | 0.0090 | 0.0033 |
| Neptune | 78512-10-28 21:08 G | 30397280.12 | 30397280.38 | 30397280.63 | 0.0090 | 0.0002 |
| Neptune | 78513-10-31 01:41 G | 30397647.33 | 30397647.57 | 30397647.82 | 0.0090 | 0.0017 |
| Saturn | 78514-03-11 18:58 G | 30397779.12 | 30397779.29 | 30397779.47 | 0.0268 | 0.0191 |
| Neptune | 78514-11-02 18:58 G | 30398015.08 | 30398015.29 | 30398015.51 | 0.0090 | 0.0051 |
| Saturn | 78515-03-23 19:12 G | 30398156.15 | 30398156.30 | 30398156.48 | 0.0268 | 0.0206 |
| Neptune | 78515-11-05 01:41 G | 30398382.43 | 30398382.57 | 30398382.76 | 0.0090 | 0.0067 |
| Uranus | 78521-03-18 19:56 G | 30400343.19 | 30400343.33 | 30400343.52 | 0.0143 | 0.0112 |
| Uranus | 78522-03-23 20:53 G | 30400713.17 | 30400713.37 | 30400713.60 | 0.0143 | 0.0073 |
| Uranus | 78523-03-28 22:34 G | 30401083.17 | 30401083.44 | 30401083.70 | 0.0143 | 0.0014 |

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| Uranus | 78524-04-01 21:36 G | 30401453.17 | 30401453.40 | 30401453.64 | 0.0144 | 0.0042 |
| Uranus | 78525-04-07 02:24 G | 30401823.40 | 30401823.60 | 30401823.83 | 0.0144 | 0.0083 |
| Saturn | 78529-09-19 14:53 G | 30403449.88 | 30403450.12 | 30403450.37 | 0.0292 | 0.0021 |
| Pluto | 78539-11-24 23:03 G | 30407168.23 | 30407168.46 | 30407168.73 | 0.0063 | 0.0021 |
| Saturn | 78544-03-17 17:32 G | 30408742.99 | 30408743.23 | 30408743.47 | 0.0268 | 0.0019 |
| Saturn | 78558-09-13 02:53 G | 30414035.50 | 30414035.62 | 30414035.77 | 0.0291 | 0.0234 |
| Mars | 78559-08-05 10:34 G | 30414361.75 | 30414361.94 | 30414362.13 | 0.1920 | 0.0441 |
| Saturn | 78559-09-27 06:58 G | 30414414.77 | 30414414.79 | 30414414.84 | 0.0292 | 0.0289 |
| Jupiter | 78559-10-16 06:44 G | 30414433.61 | 30414433.78 | 30414433.96 | 0.0518 | 0.0340 |
| Uranus | 78561-09-19 01:27 G | 30415137.46 | 30415137.56 | 30415137.69 | 0.0135 | 0.0122 |
| Uranus | 78562-09-23 11:17 G | 30415506.79 | 30415506.97 | 30415507.18 | 0.0135 | 0.0080 |
| Uranus | 78563-09-27 17:46 G | 30415876.00 | 30415876.24 | 30415876.49 | 0.0135 | 0.0043 |
| Uranus | 78564-10-01 02:24 G | 30416245.36 | 30416245.60 | 30416245.84 | 0.0135 | 0.0010 |
| Jupiter | 78565-04-12 21:51 G | 30416439.33 | 30416439.41 | 30416439.50 | 0.0510 | 0.0478 |
| Uranus | 78565-10-05 08:24 G | 30416614.61 | 30416614.85 | 30416615.11 | 0.0135 | 0.0039 |
| Uranus | 78566-10-09 15:36 G | 30416984.00 | 30416984.15 | 30416984.34 | 0.0134 | 0.0095 |
| Uranus | 78567-10-13 21:22 G | 30417353.31 | 30417353.39 | 30417353.50 | 0.0134 | 0.0125 |
| Jupiter | 78571-10-20 17:46 G | 30418821.03 | 30418821.24 | 30418821.47 | 0.0520 | 0.0129 |
| Saturn | 78573-03-12 15:36 G | 30419329.95 | 30419330.15 | 30419330.37 | 0.0268 | 0.0155 |
| Saturn | 78574-03-24 19:12 G | 30419707.21 | 30419707.30 | 30419707.41 | 0.0268 | 0.0242 |
| Jupiter | 78577-04-17 12:58 G | 30420826.81 | 30420827.04 | 30420827.27 | 0.0508 | 0.0026 |
| Mars | 78583-01-31 17:17 G | 30422942.04 | 30422942.22 | 30422942.41 | 0.1608 | 0.0233 |
| Saturn | 78588-09-20 11:32 G | 30425000.73 | 30425000.98 | 30425001.22 | 0.0292 | 0.0059 |
| Neptune | 78592-04-22 07:41 G | 30426310.68 | 30426310.82 | 30426311.00 | 0.0088 | 0.0068 |
| Neptune | 78593-04-24 12:58 G | 30426677.81 | 30426678.04 | 30426678.27 | 0.0088 | 0.0041 |
| Neptune | 78594-04-27 07:41 G | 30427045.58 | 30427045.82 | 30427046.09 | 0.0088 | 0.0021 |
| Neptune | 78595-04-29 13:41 G | 30427412.82 | 30427413.07 | 30427413.33 | 0.0088 | 0.0007 |
| Neptune | 78596-05-01 06:15 G | 30427780.50 | 30427780.76 | 30427781.02 | 0.0088 | 0.0027 |
| Neptune | 78597-05-03 15:22 G | 30428147.96 | 30428148.14 | 30428148.36 | 0.0088 | 0.0055 |
| Neptune | 78598-05-06 03:36 G | 30428515.53 | 30428515.65 | 30428515.82 | 0.0088 | 0.0074 |

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| Saturn | 78603-03-20 21:08 G | 30430294.14 | 30430294.38 | 30430294.63 | 0.0268 | 0.0059 |
| Uranus | 78605-03-20 04:48 G | 30431024.57 | 30431024.70 | 30431024.85 | 0.0143 | 0.0121 |
| Uranus | 78606-03-25 06:58 G | 30431394.58 | 30431394.79 | 30431395.03 | 0.0143 | 0.0058 |
| Uranus | 78607-03-30 07:27 G | 30431764.55 | 30431764.81 | 30431765.08 | 0.0143 | 0.0010 |
| Uranus | 78608-04-03 08:10 G | 30432134.60 | 30432134.84 | 30432135.08 | 0.0144 | 0.0040 |
| Uranus | 78609-04-08 11:17 G | 30432504.80 | 30432504.97 | 30432505.17 | 0.0144 | 0.0103 |
| Uranus | 78610-04-13 09:51 G | 30432874.88 | 30432874.91 | 30432874.98 | 0.0144 | 0.0141 |
| Saturn | 78617-09-15 07:41 G | 30435586.65 | 30435586.82 | 30435587.00 | 0.0291 | 0.0193 |
| Saturn | 78632-03-14 16:20 G | 30440880.97 | 30440881.18 | 30440881.42 | 0.0269 | 0.0115 |
| Jupiter | 78642-10-16 05:03 G | 30444748.58 | 30444748.71 | 30444748.84 | 0.0517 | 0.0418 |
| Uranus | 78645-09-20 12:29 G | 30445818.91 | 30445819.02 | 30445819.14 | 0.0135 | 0.0121 |
| Uranus | 78646-09-24 23:32 G | 30446188.28 | 30446188.48 | 30446188.69 | 0.0135 | 0.0076 |
| Saturn | 78647-09-23 11:32 G | 30446551.76 | 30446551.98 | 30446552.21 | 0.0292 | 0.0104 |
| Uranus | 78647-09-29 04:05 G | 30446557.43 | 30446557.67 | 30446557.94 | 0.0135 | 0.0030 |
| Uranus | 78648-10-02 13:56 G | 30446926.83 | 30446927.08 | 30446927.32 | 0.0135 | 0.0003 |
| Uranus | 78649-10-06 18:00 G | 30447296.03 | 30447296.25 | 30447296.50 | 0.0134 | 0.0058 |
| Uranus | 78650-10-11 02:24 G | 30447665.42 | 30447665.60 | 30447665.79 | 0.0134 | 0.0087 |
| Jupiter | 78654-10-21 05:17 G | 30449136.49 | 30449136.72 | 30449136.95 | 0.0520 | 0.0056 |
| Jupiter | 78660-04-18 04:34 G | 30451142.45 | 30451142.69 | 30451142.93 | 0.0508 | 0.0018 |
| Saturn | 78662-03-21 21:51 G | 30451845.18 | 30451845.41 | 30451845.65 | 0.0268 | 0.0101 |
| Jupiter | 78672-04-22 15:36 G | 30455530.06 | 30455530.15 | 30455530.26 | 0.0506 | 0.0460 |
| Neptune | 78673-10-22 19:41 G | 30456078.31 | 30456078.32 | 30456078.37 | 0.0090 | 0.0089 |
| Neptune | 78674-10-25 00:15 G | 30456445.34 | 30456445.51 | 30456445.72 | 0.0090 | 0.0061 |
| Neptune | 78675-10-27 18:29 G | 30456813.06 | 30456813.27 | 30456813.52 | 0.0090 | 0.0039 |
| Saturn | 78676-09-16 13:56 G | 30457137.87 | 30457138.08 | 30457138.29 | 0.0291 | 0.0145 |
| Neptune | 78676-10-28 23:46 G | 30457180.25 | 30457180.49 | 30457180.74 | 0.0090 | 0.0012 |
| Neptune | 78677-10-31 16:05 G | 30457547.92 | 30457548.17 | 30457548.44 | 0.0090 | 0.0012 |
| Neptune | 78678-11-03 00:00 G | 30457915.29 | 30457915.50 | 30457915.73 | 0.0090 | 0.0037 |
| Neptune | 78679-11-05 12:00 G | 30458282.83 | 30458283.00 | 30458283.22 | 0.0090 | 0.0060 |
| Neptune | 78680-11-07 00:44 G | 30458650.50 | 30458650.53 | 30458650.63 | 0.0090 | 0.0087 |

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| Uranus | 78689-03-20 11:17 G | 30461705.80 | 30461705.97 | 30461706.17 | 0.0143 | 0.0102 |
| Uranus | 78690-03-25 15:08 G | 30462075.91 | 30462076.13 | 30462076.36 | 0.0143 | 0.0064 |
| Saturn | 78691-03-16 23:46 G | 30462432.26 | 30462432.49 | 30462432.72 | 0.0269 | 0.0073 |
| Uranus | 78691-03-30 13:56 G | 30462445.81 | 30462446.08 | 30462446.34 | 0.0143 | 0.0003 |
| Uranus | 78692-04-03 15:36 G | 30462815.93 | 30462816.15 | 30462816.40 | 0.0144 | 0.0052 |
| Uranus | 78693-04-08 18:00 G | 30463186.07 | 30463186.25 | 30463186.47 | 0.0144 | 0.0095 |
| Saturn | 78706-09-25 19:27 G | 30468103.12 | 30468103.31 | 30468103.51 | 0.0292 | 0.0155 |
| Saturn | 78720-03-11 23:17 G | 30473019.39 | 30473019.47 | 30473019.56 | 0.0269 | 0.0252 |
| Saturn | 78721-03-24 00:44 G | 30473396.33 | 30473396.53 | 30473396.75 | 0.0268 | 0.0145 |
| Jupiter | 78725-10-16 18:15 G | 30475064.19 | 30475064.26 | 30475064.34 | 0.0517 | 0.0485 |
| Uranus | 78729-09-21 22:34 G | 30476500.30 | 30476500.44 | 30476500.60 | 0.0135 | 0.0110 |
| Uranus | 78730-09-26 10:34 G | 30476869.74 | 30476869.94 | 30476870.16 | 0.0135 | 0.0070 |
| Uranus | 78731-09-30 14:24 G | 30477238.85 | 30477239.10 | 30477239.36 | 0.0135 | 0.0031 |
| Uranus | 78732-10-04 01:12 G | 30477608.32 | 30477608.55 | 30477608.80 | 0.0135 | 0.0021 |
| Uranus | 78733-10-08 04:48 G | 30477977.47 | 30477977.70 | 30477977.95 | 0.0134 | 0.0050 |
| Uranus | 78734-10-12 14:24 G | 30478346.97 | 30478347.10 | 30478347.26 | 0.0134 | 0.0106 |
| Saturn | 78735-09-19 18:00 G | 30478689.01 | 30478689.25 | 30478689.49 | 0.0291 | 0.0094 |
| Jupiter | 78737-10-21 06:44 G | 30479451.54 | 30479451.78 | 30479452.01 | 0.0519 | 0.0004 |
| Jupiter | 78743-04-18 20:39 G | 30481457.13 | 30481457.36 | 30481457.59 | 0.0509 | 0.0110 |
| Saturn | 78750-03-19 09:22 G | 30483983.65 | 30483983.89 | 30483984.14 | 0.0269 | 0.0029 |
| Jupiter | 78755-04-23 21:08 G | 30485845.23 | 30485845.38 | 30485845.54 | 0.0507 | 0.0366 |
| Neptune | 78756-04-23 08:53 G | 30486210.77 | 30486210.87 | 30486210.99 | 0.0088 | 0.0079 |
| Neptune | 78757-04-26 03:51 G | 30486578.44 | 30486578.66 | 30486578.89 | 0.0088 | 0.0046 |
| Neptune | 78758-04-28 10:20 G | 30486945.71 | 30486945.93 | 30486946.18 | 0.0088 | 0.0032 |
| Neptune | 78759-05-01 02:24 G | 30487313.33 | 30487313.60 | 30487313.87 | 0.0088 | 0.0001 |
| Neptune | 78760-05-02 12:44 G | 30487680.79 | 30487681.03 | 30487681.28 | 0.0088 | 0.0016 |
| Neptune | 78761-05-04 22:48 G | 30488048.25 | 30488048.45 | 30488048.70 | 0.0088 | 0.0048 |
| Neptune | 78762-05-07 14:24 G | 30488415.93 | 30488416.10 | 30488416.29 | 0.0088 | 0.0063 |
| Saturn | 78765-09-27 08:24 G | 30489654.70 | 30489654.85 | 30489655.03 | 0.0292 | 0.0211 |
| Uranus | 78773-03-21 19:12 G | 30492387.15 | 30492387.30 | 30492387.47 | 0.0143 | 0.0113 |

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| Uranus | 78774-03-27 00:29 G | 30492757.28 | 30492757.52 | 30492757.75 | 0.0143 | 0.0047 |
| Uranus | 78775-03-31 21:51 G | 30493127.15 | 30493127.41 | 30493127.68 | 0.0143 | 0.0003 |
| Uranus | 78776-04-05 01:27 G | 30493497.33 | 30493497.56 | 30493497.80 | 0.0144 | 0.0052 |
| Uranus | 78777-04-10 02:10 G | 30493867.44 | 30493867.59 | 30493867.77 | 0.0144 | 0.0112 |
| Saturn | 78779-03-14 02:53 G | 30494570.47 | 30494570.62 | 30494570.79 | 0.0269 | 0.0208 |
| Saturn | 78780-03-25 09:51 G | 30494947.76 | 30494947.91 | 30494948.09 | 0.0268 | 0.0194 |
| Pluto | 78786-11-28 12:29 G | 30497386.76 | 30497387.02 | 30497387.28 | 0.0063 | 0.0002 |
| Mars | 78788-02-01 11:03 G | 30497816.79 | 30497816.96 | 30497817.13 | 0.1609 | 0.0682 |
| Saturn | 78794-09-21 00:15 G | 30500240.27 | 30500240.51 | 30500240.76 | 0.0291 | 0.0039 |
| Saturn | 78809-03-20 15:22 G | 30505534.89 | 30505535.14 | 30505535.40 | 0.0269 | 0.0019 |
| Uranus | 78813-09-22 09:22 G | 30507181.75 | 30507181.89 | 30507182.04 | 0.0135 | 0.0112 |
| Uranus | 78814-09-26 22:34 G | 30507551.23 | 30507551.44 | 30507551.66 | 0.0135 | 0.0064 |
| Uranus | 78815-10-01 01:12 G | 30507920.30 | 30507920.55 | 30507920.81 | 0.0135 | 0.0020 |
| Uranus | 78816-10-04 12:58 G | 30508289.80 | 30508290.04 | 30508290.29 | 0.0135 | 0.0015 |
| Uranus | 78817-10-08 15:08 G | 30508658.92 | 30508659.13 | 30508659.36 | 0.0134 | 0.0069 |
| Uranus | 78818-10-13 01:41 G | 30509028.41 | 30509028.57 | 30509028.74 | 0.0134 | 0.0098 |
| Jupiter | 78820-10-20 11:46 G | 30509766.77 | 30509766.99 | 30509767.21 | 0.0518 | 0.0082 |
| Saturn | 78823-09-15 20:39 G | 30510827.25 | 30510827.36 | 30510827.49 | 0.0291 | 0.0252 |
| Saturn | 78824-09-28 20:39 G | 30511206.27 | 30511206.36 | 30511206.47 | 0.0292 | 0.0268 |
| Jupiter | 78826-04-18 06:00 G | 30511772.53 | 30511772.75 | 30511772.97 | 0.0510 | 0.0182 |
| Jupiter | 78832-10-25 01:41 G | 30514154.45 | 30514154.57 | 30514154.71 | 0.0521 | 0.0437 |
| Saturn | 78838-03-15 13:41 G | 30516121.88 | 30516122.07 | 30516122.27 | 0.0269 | 0.0158 |
| Jupiter | 78838-04-22 20:39 G | 30516160.16 | 30516160.36 | 30516160.56 | 0.0508 | 0.0292 |
| Neptune | 78838-10-25 15:51 G | 30516346.05 | 30516346.16 | 30516346.32 | 0.0090 | 0.0076 |
| Saturn | 78839-03-27 23:46 G | 30516499.40 | 30516499.49 | 30516499.60 | 0.0268 | 0.0243 |
| Neptune | 78839-10-27 21:22 G | 30516713.18 | 30516713.39 | 30516713.62 | 0.0090 | 0.0043 |
| Neptune | 78840-10-29 12:58 G | 30517080.81 | 30517081.04 | 30517081.31 | 0.0090 | 0.0028 |
| Neptune | 78841-10-31 22:34 G | 30517448.20 | 30517448.44 | 30517448.69 | 0.0090 | 0.0006 |
| Neptune | 78842-11-03 09:36 G | 30517815.66 | 30517815.90 | 30517816.17 | 0.0090 | 0.0022 |
| Mars | 78843-08-06 21:08 G | 30518092.26 | 30518092.38 | 30518092.50 | 0.1918 | 0.1496 |

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| Neptune | 78843-11-05 23:03 G | 30518183.29 | 30518183.46 | 30518183.67 | 0.0090 | 0.0056 |
| Neptune | 78844-11-07 05:46 G | 30518550.60 | 30518550.74 | 30518550.91 | 0.0090 | 0.0071 |
| Saturn | 78853-09-22 14:53 G | 30521791.88 | 30521792.12 | 30521792.36 | 0.0291 | 0.0025 |
| Uranus | 78857-03-22 03:36 G | 30523068.46 | 30523068.65 | 30523068.86 | 0.0143 | 0.0093 |
| Uranus | 78858-03-27 09:22 G | 30523438.67 | 30523438.89 | 30523439.13 | 0.0143 | 0.0055 |
| Uranus | 78859-04-01 05:46 G | 30523808.47 | 30523808.74 | 30523809.00 | 0.0143 | 0.0009 |
| Uranus | 78860-04-05 10:34 G | 30524178.72 | 30524178.94 | 30524179.17 | 0.0144 | 0.0060 |
| Uranus | 78861-04-10 10:05 G | 30524548.76 | 30524548.92 | 30524549.12 | 0.0144 | 0.0107 |
| Mars | 78867-02-03 15:22 G | 30526673.98 | 30526674.14 | 30526674.30 | 0.1608 | 0.0941 |
| Saturn | 78868-03-21 19:12 G | 30527086.05 | 30527086.30 | 30527086.55 | 0.0269 | 0.0066 |
| Pluto | 78876-05-29 18:58 G | 30530077.16 | 30530077.29 | 30530077.49 | 0.0081 | 0.0063 |
| Saturn | 78882-09-17 09:51 G | 30532378.72 | 30532378.91 | 30532379.10 | 0.0291 | 0.0187 |
| Saturn | 78897-03-17 03:22 G | 30537673.43 | 30537673.64 | 30537673.87 | 0.0269 | 0.0108 |
| Uranus | 78897-09-22 19:41 G | 30537863.17 | 30537863.32 | 30537863.52 | 0.0135 | 0.0099 |
| Uranus | 78898-09-27 09:51 G | 30538232.69 | 30538232.91 | 30538233.13 | 0.0135 | 0.0061 |
| Uranus | 78899-10-01 11:46 G | 30538601.74 | 30538601.99 | 30538602.25 | 0.0135 | 0.0019 |
| Uranus | 78900-10-06 00:44 G | 30538971.29 | 30538971.53 | 30538971.77 | 0.0135 | 0.0031 |
| Uranus | 78901-10-10 02:10 G | 30539340.38 | 30539340.59 | 30539340.83 | 0.0134 | 0.0062 |
| Uranus | 78902-10-14 14:24 G | 30539709.98 | 30539710.10 | 30539710.22 | 0.0134 | 0.0118 |
| Jupiter | 78903-10-21 10:05 G | 30540081.69 | 30540081.92 | 30540082.14 | 0.0518 | 0.0170 |
| Jupiter | 78909-04-18 03:08 G | 30542087.43 | 30542087.63 | 30542087.85 | 0.0510 | 0.0254 |
| Saturn | 78912-09-25 10:20 G | 30543343.71 | 30543343.93 | 30543344.15 | 0.0291 | 0.0092 |
| Jupiter | 78915-10-26 04:20 G | 30544469.53 | 30544469.68 | 30544469.84 | 0.0520 | 0.0362 |
| Neptune | 78920-04-23 22:05 G | 30546111.36 | 30546111.42 | 30546111.53 | 0.0088 | 0.0083 |
| Jupiter | 78921-04-22 21:36 G | 30546475.19 | 30546475.40 | 30546475.61 | 0.0508 | 0.0198 |
| Neptune | 78921-04-26 05:03 G | 30546478.56 | 30546478.71 | 30546478.92 | 0.0088 | 0.0061 |
| Neptune | 78922-04-28 19:41 G | 30546846.09 | 30546846.32 | 30546846.58 | 0.0088 | 0.0037 |
| Neptune | 78923-05-01 07:56 G | 30547213.59 | 30547213.83 | 30547214.08 | 0.0088 | 0.0014 |
| Neptune | 78924-05-02 17:46 G | 30547580.97 | 30547581.24 | 30547581.51 | 0.0088 | 0.0011 |
| Neptune | 78925-05-05 10:34 G | 30547948.70 | 30547948.94 | 30547949.18 | 0.0088 | 0.0034 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 78926-05-07 16:05 G | 30548315.99 | 30548316.17 | 30548316.38 | 0.0088 | 0.0059 |
| Saturn | 78927-03-25 03:36 G | 30548637.43 | 30548637.65 | 30548637.87 | 0.0269 | 0.0117 |
| Neptune | 78927-05-10 11:03 G | 30548683.87 | 30548683.96 | 30548684.08 | 0.0088 | 0.0080 |
| Uranus | 78940-03-18 22:05 G | 30553380.40 | 30553380.42 | 30553380.49 | 0.0143 | 0.0141 |
| Uranus | 78941-03-23 15:22 G | 30553749.96 | 30553750.14 | 30553750.32 | 0.0143 | 0.0102 |
| Saturn | 78941-09-19 20:39 G | 30553930.14 | 30553930.36 | 30553930.60 | 0.0291 | 0.0124 |
| Uranus | 78942-03-28 22:05 G | 30554120.18 | 30554120.42 | 30554120.67 | 0.0143 | 0.0035 |
| Uranus | 78943-04-02 17:32 G | 30554489.97 | 30554490.23 | 30554490.50 | 0.0143 | 0.0008 |
| Uranus | 78944-04-06 23:17 G | 30554860.26 | 30554860.47 | 30554860.71 | 0.0144 | 0.0066 |
| Uranus | 78945-04-11 22:05 G | 30555230.29 | 30555230.42 | 30555230.56 | 0.0144 | 0.0123 |
| Saturn | 78956-03-19 15:08 G | 30559224.89 | 30559225.13 | 30559225.38 | 0.0268 | 0.0054 |
| Saturn | 78971-09-28 04:05 G | 30564895.47 | 30564895.67 | 30564895.88 | 0.0291 | 0.0159 |
| Uranus | 78980-09-20 05:03 G | 30568175.71 | 30568175.71 | 30568175.76 | 0.0135 | 0.0135 |
| Uranus | 78981-09-24 07:27 G | 30568544.66 | 30568544.81 | 30568544.99 | 0.0135 | 0.0102 |
| Uranus | 78982-09-28 22:20 G | 30568914.20 | 30568914.43 | 30568914.66 | 0.0135 | 0.0052 |
| Uranus | 78983-10-02 23:46 G | 30569283.24 | 30569283.49 | 30569283.75 | 0.0135 | 0.0010 |
| Uranus | 78984-10-06 12:58 G | 30569652.81 | 30569653.04 | 30569653.29 | 0.0135 | 0.0028 |
| Saturn | 78985-03-14 05:03 G | 30569811.60 | 30569811.71 | 30569811.84 | 0.0270 | 0.0234 |
| Uranus | 78985-10-10 13:41 G | 30570021.88 | 30570022.07 | 30570022.29 | 0.0134 | 0.0081 |
| Saturn | 78986-03-26 15:36 G | 30570188.98 | 30570189.15 | 30570189.35 | 0.0269 | 0.0169 |
| Uranus | 78986-10-15 01:56 G | 30570391.45 | 30570391.58 | 30570391.74 | 0.0134 | 0.0110 |
| Jupiter | 78986-10-20 13:27 G | 30570396.87 | 30570397.06 | 30570397.26 | 0.0518 | 0.0247 |
| Jupiter | 78992-04-17 03:36 G | 30572402.49 | 30572402.65 | 30572402.82 | 0.0511 | 0.0351 |
| Jupiter | 78998-10-25 06:29 G | 30574784.57 | 30574784.77 | 30574784.97 | 0.0519 | 0.0262 |
| Saturn | 79000-09-22 10:05 G | 30575481.68 | 30575481.92 | 30575482.16 | 0.0291 | 0.0060 |

80TH MILLENNIUM CE

This is a list of transits of Moon in the 80th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Neptune | 79002-10-26 18:58 | G | 30576246.21 | 30576246.29 | 30576246.38 | 0.0090 | 0.0084 | |
| Neptune | 79003-10-29 09:36 | G | 30576613.71 | 30576613.90 | 30576614.12 | 0.0090 | 0.0055 | |
| Jupiter | 79004-04-22 21:08 | G | 30576790.14 | 30576790.38 | 30576790.62 | 0.0509 | 0.0110 | |
| Neptune | 79004-10-30 19:41 | G | 30576981.10 | 30576981.32 | 30576981.55 | 0.0090 | 0.0035 | |
| Neptune | 79005-11-02 05:32 | G | 30577348.47 | 30577348.73 | 30577348.99 | 0.0090 | 0.0005 | |
| Neptune | 79006-11-04 20:10 | G | 30577716.10 | 30577716.34 | 30577716.59 | 0.0090 | 0.0015 | |
| Neptune | 79007-11-07 02:24 | G | 30578083.38 | 30578083.60 | 30578083.83 | 0.0090 | 0.0043 | |
| Neptune | 79008-11-08 19:56 | G | 30578451.17 | 30578451.33 | 30578451.53 | 0.0090 | 0.0063 | |
| Saturn | 79015-03-22 21:36 | G | 30580776.14 | 30580776.40 | 30580776.65 | 0.0268 | 0.0006 | |
| Uranus | 79025-03-25 02:39 | G | 30584431.40 | 30584431.61 | 30584431.83 | 0.0143 | 0.0081 | |
| Uranus | 79026-03-30 09:36 | G | 30584801.67 | 30584801.90 | 30584802.15 | 0.0143 | 0.0043 | |
| Uranus | 79027-04-04 04:34 | G | 30585171.43 | 30585171.69 | 30585171.95 | 0.0143 | 0.0024 | |
| Uranus | 79028-04-08 11:03 | G | 30585541.76 | 30585541.96 | 30585542.19 | 0.0144 | 0.0073 | |
| Uranus | 79029-04-13 09:08 | G | 30585911.75 | 30585911.88 | 30585912.03 | 0.0144 | 0.0121 | |
| Saturn | 79030-09-30 17:03 | G | 30586447.05 | 30586447.21 | 30586447.37 | 0.0292 | 0.0224 | |
| Pluto | 79033-12-01 22:48 | G | 30587605.23 | 30587605.45 | 30587605.70 | 0.0063 | 0.0022 | |
| Saturn | 79044-03-16 16:48 | G | 30591363.04 | 30591363.20 | 30591363.38 | 0.0269 | 0.0188 | |
| Saturn | 79045-03-29 02:53 | G | 30591740.48 | 30591740.62 | 30591740.77 | 0.0268 | 0.0215 | |
| Saturn | 79059-09-25 01:27 | G | 30597033.33 | 30597033.56 | 30597033.80 | 0.0292 | 0.0006 | |
| Uranus | 79065-09-25 19:41 | G | 30599226.14 | 30599226.32 | 30599226.53 | 0.0135 | 0.0086 | |
| Uranus | 79066-09-30 10:48 | G | 30599595.72 | 30599595.95 | 30599596.18 | 0.0135 | 0.0049 | |
| Uranus | 79067-10-04 11:46 | G | 30599964.74 | 30599964.99 | 30599965.25 | 0.0135 | 0.0005 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 79068-10-08 01:41 G | 30600334.34 | 30600334.57 | 30600334.81 | 0.0135 | 0.0043 |
| Uranus | 79069-10-12 01:56 G | 30600703.38 | 30600703.58 | 30600703.81 | 0.0134 | 0.0075 |
| Jupiter | 79069-10-20 15:22 G | 30600711.96 | 30600712.14 | 30600712.32 | 0.0516 | 0.0337 |
| Uranus | 79070-10-16 15:22 G | 30601073.09 | 30601073.14 | 30601073.20 | 0.0134 | 0.0131 |
| Mars | 79072-02-05 02:10 G | 30601549.41 | 30601549.59 | 30601549.76 | 0.1610 | 0.0281 |
| Saturn | 79074-03-24 01:41 G | 30602327.32 | 30602327.57 | 30602327.82 | 0.0268 | 0.0039 |
| Jupiter | 79075-04-18 04:05 G | 30602717.54 | 30602717.67 | 30602717.81 | 0.0512 | 0.0428 |
| Jupiter | 79081-10-25 00:58 G | 30605099.33 | 30605099.54 | 30605099.76 | 0.0519 | 0.0168 |
| Neptune | 79085-04-26 14:10 G | 30606378.97 | 30606379.09 | 30606379.26 | 0.0088 | 0.0074 |
| Neptune | 79086-04-29 03:36 G | 30606746.44 | 30606746.65 | 30606746.89 | 0.0088 | 0.0042 |
| Jupiter | 79087-04-22 22:48 G | 30607105.22 | 30607105.45 | 30607105.68 | 0.0509 | 0.0036 |
| Neptune | 79087-05-01 12:00 G | 30607113.75 | 30607114.00 | 30607114.26 | 0.0088 | 0.0027 |
| Neptune | 79088-05-03 05:32 G | 30607481.47 | 30607481.73 | 30607481.99 | 0.0088 | 0.0006 |
| Saturn | 79088-09-18 05:32 G | 30607619.59 | 30607619.73 | 30607619.89 | 0.0291 | 0.0232 |
| Neptune | 79089-05-05 10:48 G | 30607848.70 | 30607848.95 | 30607849.21 | 0.0088 | 0.0020 |
| Saturn | 79089-10-02 02:24 G | 30607998.56 | 30607998.60 | 30607998.67 | 0.0292 | 0.0284 |
| Neptune | 79090-05-08 05:32 G | 30608216.54 | 30608216.73 | 30608216.96 | 0.0088 | 0.0053 |
| Neptune | 79091-05-10 10:34 G | 30608583.80 | 30608583.94 | 30608584.13 | 0.0088 | 0.0067 |
| Jupiter | 79099-04-27 21:22 G | 30611493.29 | 30611493.39 | 30611493.50 | 0.0507 | 0.0451 |
| Saturn | 79103-03-20 04:05 G | 30612914.46 | 30612914.67 | 30612914.88 | 0.0269 | 0.0144 |
| Saturn | 79104-03-31 08:10 G | 30613291.79 | 30613291.84 | 30613291.92 | 0.0268 | 0.0259 |
| Uranus | 79108-03-21 21:51 G | 30614743.31 | 30614743.41 | 30614743.52 | 0.0143 | 0.0129 |
| Uranus | 79109-03-26 14:39 G | 30615112.92 | 30615113.11 | 30615113.31 | 0.0143 | 0.0089 |
| Uranus | 79110-03-31 22:20 G | 30615483.19 | 30615483.43 | 30615483.69 | 0.0143 | 0.0022 |
| Uranus | 79111-04-05 16:48 G | 30615852.95 | 30615853.20 | 30615853.46 | 0.0144 | 0.0021 |
| Uranus | 79112-04-10 00:29 G | 30616223.32 | 30616223.52 | 30616223.74 | 0.0144 | 0.0081 |
| Uranus | 79113-04-14 21:08 G | 30616593.32 | 30616593.38 | 30616593.48 | 0.0144 | 0.0137 |
| Saturn | 79118-09-27 15:36 G | 30618584.92 | 30618585.15 | 30618585.39 | 0.0292 | 0.0055 |
| Pluto | 79123-06-04 05:17 G | 30620295.50 | 30620295.72 | 30620295.97 | 0.0081 | 0.0035 |
| Saturn | 79133-03-26 09:36 G | 30623878.68 | 30623878.90 | 30623879.14 | 0.0268 | 0.0084 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 79147-09-21 11:17 G | 30629170.79 | 30629170.97 | 30629171.17 | 0.0291 | 0.0179 |
| Uranus | 79148-09-23 06:44 G | 30629538.69 | 30629538.78 | 30629538.90 | 0.0135 | 0.0122 |
| Uranus | 79149-09-27 08:10 G | 30629907.67 | 30629907.84 | 30629908.05 | 0.0135 | 0.0091 |
| Uranus | 79150-10-01 23:46 G | 30630277.26 | 30630277.49 | 30630277.74 | 0.0135 | 0.0039 |
| Uranus | 79151-10-06 00:58 G | 30630646.28 | 30630646.54 | 30630646.79 | 0.0135 | 0.0003 |
| Uranus | 79152-10-09 15:08 G | 30631015.89 | 30631016.13 | 30631016.37 | 0.0134 | 0.0041 |
| Jupiter | 79152-10-20 13:56 G | 30631026.94 | 30631027.08 | 30631027.21 | 0.0516 | 0.0412 |
| Uranus | 79153-10-13 14:39 G | 30631384.95 | 30631385.11 | 30631385.31 | 0.0134 | 0.0094 |
| Uranus | 79154-10-18 03:51 G | 30631754.58 | 30631754.66 | 30631754.78 | 0.0134 | 0.0123 |
| Jupiter | 79158-04-18 06:44 G | 30633032.74 | 30633032.78 | 30633032.82 | 0.0512 | 0.0501 |
| Saturn | 79162-03-21 07:41 G | 30634465.60 | 30634465.82 | 30634466.07 | 0.0269 | 0.0102 |
| Jupiter | 79164-10-25 14:10 G | 30635414.87 | 30635415.09 | 30635415.32 | 0.0519 | 0.0106 |
| Neptune | 79166-10-27 04:05 G | 30636146.64 | 30636146.67 | 30636146.74 | 0.0090 | 0.0088 |
| Neptune | 79167-10-29 15:36 G | 30636514.02 | 30636514.15 | 30636514.32 | 0.0090 | 0.0071 |
| Neptune | 79168-10-31 00:58 G | 30636881.31 | 30636881.54 | 30636881.79 | 0.0090 | 0.0039 |
| Neptune | 79169-11-02 17:03 G | 30637248.97 | 30637249.21 | 30637249.45 | 0.0090 | 0.0022 |
| Jupiter | 79170-04-23 06:44 G | 30637420.53 | 30637420.78 | 30637421.02 | 0.0510 | 0.0048 |
| Neptune | 79170-11-04 22:05 G | 30637616.18 | 30637616.42 | 30637616.69 | 0.0090 | 0.0010 |
| Neptune | 79171-11-07 16:05 G | 30637983.94 | 30637984.17 | 30637984.43 | 0.0090 | 0.0026 |
| Neptune | 79172-11-08 20:39 G | 30638351.18 | 30638351.36 | 30638351.56 | 0.0090 | 0.0058 |
| Neptune | 79173-11-11 13:12 G | 30638718.94 | 30638719.05 | 30638719.23 | 0.0090 | 0.0075 |
| Saturn | 79177-09-28 22:48 G | 30640136.22 | 30640136.45 | 30640136.69 | 0.0292 | 0.0106 |
| Jupiter | 79182-04-27 15:51 G | 30641808.00 | 30641808.16 | 30641808.32 | 0.0508 | 0.0371 |
| Uranus | 79192-03-22 07:27 G | 30645424.73 | 30645424.81 | 30645424.91 | 0.0143 | 0.0133 |
| Saturn | 79192-03-27 18:58 G | 30645430.08 | 30645430.29 | 30645430.50 | 0.0268 | 0.0125 |
| Uranus | 79193-03-27 00:15 G | 30645794.30 | 30645794.51 | 30645794.74 | 0.0143 | 0.0070 |
| Uranus | 79194-04-01 07:56 G | 30646164.59 | 30646164.83 | 30646165.08 | 0.0143 | 0.0031 |
| Uranus | 79195-04-06 01:56 G | 30646534.33 | 30646534.58 | 30646534.83 | 0.0144 | 0.0037 |
| Uranus | 79196-04-10 09:51 G | 30646904.72 | 30646904.91 | 30646905.13 | 0.0144 | 0.0085 |
| Uranus | 79197-04-15 06:00 G | 30647274.68 | 30647274.75 | 30647274.85 | 0.0144 | 0.0136 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 79206-09-22 19:27 G | 30650722.10 | 30650722.31 | 30650722.52 | 0.0291 | 0.0129 |
| Saturn | 79221-03-22 07:27 G | 30656016.57 | 30656016.81 | 30656017.06 | 0.0268 | 0.0061 |
| Uranus | 79232-09-23 20:10 G | 30660220.30 | 30660220.34 | 30660220.43 | 0.0135 | 0.0131 |
| Uranus | 79233-09-27 21:51 G | 30660589.22 | 30660589.41 | 30660589.64 | 0.0135 | 0.0073 |
| Uranus | 79234-10-02 13:27 G | 30660958.82 | 30660959.06 | 30660959.30 | 0.0135 | 0.0037 |
| Uranus | 79235-10-06 13:56 G | 30661327.83 | 30661328.08 | 30661328.34 | 0.0135 | 0.0010 |
| Jupiter | 79235-10-21 03:22 G | 30661342.54 | 30661342.64 | 30661342.75 | 0.0515 | 0.0457 |
| Saturn | 79236-09-29 21:36 G | 30661687.19 | 30661687.40 | 30661687.62 | 0.0292 | 0.0152 |
| Uranus | 79236-10-10 04:20 G | 30661697.46 | 30661697.68 | 30661697.91 | 0.0134 | 0.0056 |
| Uranus | 79237-10-14 03:51 G | 30662066.48 | 30662066.66 | 30662066.86 | 0.0134 | 0.0089 |
| Jupiter | 79247-10-25 12:15 G | 30665729.78 | 30665730.01 | 30665730.25 | 0.0517 | 0.0037 |
| Neptune | 79249-04-26 21:51 G | 30666279.33 | 30666279.41 | 30666279.53 | 0.0088 | 0.0080 |
| Saturn | 79250-03-17 16:05 G | 30666604.07 | 30666604.17 | 30666604.30 | 0.0269 | 0.0234 |
| Neptune | 79250-04-29 04:34 G | 30666646.51 | 30666646.69 | 30666646.93 | 0.0088 | 0.0054 |
| Saturn | 79251-03-29 22:20 G | 30666981.24 | 30666981.43 | 30666981.64 | 0.0267 | 0.0165 |
| Neptune | 79251-05-01 23:03 G | 30667014.24 | 30667014.46 | 30667014.72 | 0.0088 | 0.0034 |
| Neptune | 79252-05-03 04:34 G | 30667381.43 | 30667381.69 | 30667381.95 | 0.0088 | 0.0008 |
| Jupiter | 79253-04-22 02:10 G | 30667735.37 | 30667735.59 | 30667735.82 | 0.0511 | 0.0127 |
| Neptune | 79253-05-05 23:32 G | 30667749.23 | 30667749.48 | 30667749.75 | 0.0088 | 0.0014 |
| Neptune | 79254-05-08 05:32 G | 30668116.51 | 30668116.73 | 30668116.97 | 0.0088 | 0.0039 |
| Neptune | 79255-05-10 21:51 G | 30668484.25 | 30668484.41 | 30668484.63 | 0.0088 | 0.0062 |
| Neptune | 79256-05-12 07:41 G | 30668851.79 | 30668851.82 | 30668851.89 | 0.0088 | 0.0086 |
| Jupiter | 79259-10-30 08:53 G | 30670117.80 | 30670117.87 | 30670117.96 | 0.0520 | 0.0480 |
| Jupiter | 79265-04-27 06:58 G | 30672123.62 | 30672123.79 | 30672123.98 | 0.0509 | 0.0318 |
| Saturn | 79265-09-24 03:36 G | 30672273.43 | 30672273.65 | 30672273.88 | 0.0292 | 0.0080 |
| Uranus | 79276-03-22 17:03 G | 30676106.09 | 30676106.21 | 30676106.37 | 0.0143 | 0.0120 |
| Mars | 79277-02-04 06:15 G | 30676424.64 | 30676424.76 | 30676424.88 | 0.1613 | 0.1265 |
| Uranus | 79277-03-27 10:20 G | 30676475.73 | 30676475.93 | 30676476.16 | 0.0143 | 0.0078 |
| Uranus | 79278-04-01 18:15 G | 30676846.01 | 30676846.26 | 30676846.52 | 0.0143 | 0.0009 |
| Uranus | 79279-04-06 12:00 G | 30677215.76 | 30677216.00 | 30677216.26 | 0.0144 | 0.0032 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 79279-12-03 14:10 G | 30677457.06 | 30677457.09 | 30677457.18 | 0.0063 | 0.0061 |
| Saturn | 79280-03-23 09:22 G | 30677567.65 | 30677567.89 | 30677568.13 | 0.0268 | 0.0022 |
| Uranus | 79280-04-10 20:53 G | 30677586.19 | 30677586.37 | 30677586.57 | 0.0144 | 0.0094 |
| Pluto | 79280-12-04 04:48 G | 30677823.47 | 30677823.70 | 30677823.95 | 0.0063 | 0.0019 |
| Saturn | 79295-10-01 20:53 G | 30683238.20 | 30683238.37 | 30683238.55 | 0.0292 | 0.0196 |
| Saturn | 79309-03-19 19:41 G | 30688155.16 | 30688155.32 | 30688155.50 | 0.0268 | 0.0196 |
| Saturn | 79310-03-31 19:56 G | 30688532.17 | 30688532.33 | 30688532.50 | 0.0267 | 0.0204 |
| Uranus | 79316-09-25 09:22 G | 30690901.75 | 30690901.89 | 30690902.05 | 0.0135 | 0.0110 |
| Uranus | 79317-09-29 11:17 G | 30691270.77 | 30691270.97 | 30691271.18 | 0.0135 | 0.0078 |
| Uranus | 79318-10-04 02:39 G | 30691640.37 | 30691640.61 | 30691640.87 | 0.0135 | 0.0025 |
| Uranus | 79319-10-08 03:36 G | 30692009.40 | 30692009.65 | 30692009.90 | 0.0135 | 0.0016 |
| Uranus | 79320-10-11 17:32 G | 30692379.01 | 30692379.23 | 30692379.47 | 0.0134 | 0.0056 |
| Uranus | 79321-10-15 17:17 G | 30692748.08 | 30692748.22 | 30692748.38 | 0.0134 | 0.0107 |
| Saturn | 79324-09-26 05:17 G | 30693824.48 | 30693824.72 | 30693824.97 | 0.0292 | 0.0039 |
| Jupiter | 79330-10-26 00:44 G | 30696045.31 | 30696045.53 | 30696045.76 | 0.0517 | 0.0030 |
| Neptune | 79331-10-29 19:12 G | 30696414.20 | 30696414.30 | 30696414.42 | 0.0090 | 0.0081 |
| Neptune | 79332-10-31 12:00 G | 30696781.80 | 30696782.00 | 30696782.22 | 0.0090 | 0.0050 |
| Neptune | 79333-11-02 17:03 G | 30697148.98 | 30697149.21 | 30697149.45 | 0.0090 | 0.0033 |
| Neptune | 79334-11-05 11:32 G | 30697516.72 | 30697516.98 | 30697517.23 | 0.0090 | 0.0002 |
| Neptune | 79335-11-07 16:05 G | 30697883.93 | 30697884.17 | 30697884.42 | 0.0090 | 0.0017 |
| Jupiter | 79336-04-22 19:27 G | 30698051.09 | 30698051.31 | 30698051.53 | 0.0511 | 0.0179 |
| Neptune | 79336-11-09 08:39 G | 30698251.64 | 30698251.86 | 30698252.08 | 0.0090 | 0.0047 |
| Neptune | 79337-11-11 16:34 G | 30698619.04 | 30698619.19 | 30698619.37 | 0.0090 | 0.0065 |
| Saturn | 79339-03-26 14:24 G | 30699118.86 | 30699119.10 | 30699119.33 | 0.0268 | 0.0017 |
| Jupiter | 79342-10-30 15:36 G | 30700433.02 | 30700433.15 | 30700433.29 | 0.0519 | 0.0421 |
| Jupiter | 79348-04-27 08:53 G | 30702438.67 | 30702438.87 | 30702439.09 | 0.0509 | 0.0264 |
| Saturn | 79353-09-19 17:46 G | 30704410.21 | 30704410.24 | 30704410.28 | 0.0291 | 0.0287 |
| Saturn | 79354-10-03 23:32 G | 30704789.35 | 30704789.48 | 30704789.62 | 0.0292 | 0.0239 |
| Mars | 79356-02-08 12:58 G | 30705281.92 | 30705282.04 | 30705282.17 | 0.1611 | 0.1219 |
| Uranus | 79360-03-24 02:10 G | 30706787.46 | 30706787.59 | 30706787.73 | 0.0143 | 0.0121 |

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| Uranus | 79361-03-28 19:56 G | 30707157.11 | 30707157.33 | 30707157.56 | 0.0143 | 0.0060 |
| Uranus | 79362-04-03 02:39 G | 30707527.37 | 30707527.61 | 30707527.88 | 0.0143 | 0.0021 |
| Uranus | 79363-04-07 20:39 G | 30707897.12 | 30707897.36 | 30707897.60 | 0.0144 | 0.0050 |
| Uranus | 79364-04-12 04:48 G | 30708267.53 | 30708267.70 | 30708267.91 | 0.0144 | 0.0095 |
| Saturn | 79368-03-20 16:34 G | 30709706.00 | 30709706.19 | 30709706.41 | 0.0268 | 0.0160 |
| Saturn | 79369-04-01 17:32 G | 30710083.14 | 30710083.23 | 30710083.35 | 0.0267 | 0.0241 |
| Pluto | 79370-06-06 09:36 G | 30710513.68 | 30710513.90 | 30710514.15 | 0.0081 | 0.0036 |
| Saturn | 79383-09-28 00:58 G | 30715375.29 | 30715375.54 | 30715375.80 | 0.0292 | 0.0005 |
| Saturn | 79398-03-27 18:00 G | 30720670.02 | 30720670.25 | 30720670.50 | 0.0268 | 0.0053 |
| Uranus | 79400-09-26 22:48 G | 30721583.34 | 30721583.45 | 30721583.59 | 0.0135 | 0.0118 |
| Uranus | 79401-10-01 01:12 G | 30721952.33 | 30721952.55 | 30721952.78 | 0.0135 | 0.0059 |
| Uranus | 79402-10-05 16:20 G | 30722321.93 | 30722322.18 | 30722322.43 | 0.0135 | 0.0024 |
| Uranus | 79403-10-09 16:48 G | 30722690.96 | 30722691.20 | 30722691.45 | 0.0135 | 0.0024 |
| Uranus | 79404-10-13 06:44 G | 30723060.57 | 30723060.78 | 30723061.01 | 0.0135 | 0.0069 |
| Uranus | 79405-10-17 06:29 G | 30723429.62 | 30723429.77 | 30723429.94 | 0.0134 | 0.0103 |
| Saturn | 79412-09-21 19:27 G | 30725961.20 | 30725961.31 | 30725961.44 | 0.0291 | 0.0249 |
| Neptune | 79413-04-27 23:32 G | 30726179.41 | 30726179.48 | 30726179.57 | 0.0088 | 0.0083 |
| Saturn | 79413-10-06 00:00 G | 30726340.44 | 30726340.50 | 30726340.59 | 0.0293 | 0.0277 |
| Jupiter | 79413-10-26 08:53 G | 30726360.63 | 30726360.87 | 30726361.11 | 0.0516 | 0.0072 |
| Neptune | 79414-04-30 18:00 G | 30726547.10 | 30726547.25 | 30726547.42 | 0.0088 | 0.0069 |
| Neptune | 79415-05-02 22:34 G | 30726914.22 | 30726914.44 | 30726914.69 | 0.0088 | 0.0038 |
| Neptune | 79416-05-04 17:17 G | 30727281.97 | 30727282.22 | 30727282.48 | 0.0088 | 0.0023 |
| Neptune | 79417-05-06 23:46 G | 30727649.24 | 30727649.49 | 30727649.75 | 0.0088 | 0.0010 |
| Neptune | 79418-05-09 14:24 G | 30728016.85 | 30728017.10 | 30728017.38 | 0.0088 | 0.0025 |
| Jupiter | 79419-04-23 15:36 G | 30728365.94 | 30728366.15 | 30728366.36 | 0.0512 | 0.0253 |
| Neptune | 79419-05-12 01:27 G | 30728384.38 | 30728384.56 | 30728384.76 | 0.0088 | 0.0056 |
| Neptune | 79420-05-13 12:15 G | 30728751.86 | 30728752.01 | 30728752.18 | 0.0088 | 0.0070 |
| Jupiter | 79425-10-31 01:27 G | 30730748.41 | 30730748.56 | 30730748.72 | 0.0518 | 0.0366 |
| Saturn | 79427-03-23 12:58 G | 30731256.83 | 30731257.04 | 30731257.27 | 0.0268 | 0.0126 |
| Jupiter | 79431-04-28 16:05 G | 30732753.96 | 30732754.17 | 30732754.38 | 0.0510 | 0.0199 |

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| Saturn | 79442-09-29 20:39 G | 30736926.12 | 30736926.36 | 30736926.61 | 0.0292 | 0.0044 |
| Uranus | 79444-03-25 13:56 G | 30737468.93 | 30737469.08 | 30737469.27 | 0.0143 | 0.0110 |
| Uranus | 79445-03-30 08:10 G | 30737838.63 | 30737838.84 | 30737839.07 | 0.0143 | 0.0066 |
| Uranus | 79446-04-04 14:53 G | 30738208.86 | 30738209.12 | 30738209.38 | 0.0143 | 0.0003 |
| Uranus | 79447-04-09 08:53 G | 30738578.63 | 30738578.87 | 30738579.12 | 0.0144 | 0.0043 |
| Uranus | 79448-04-13 17:17 G | 30738949.07 | 30738949.22 | 30738949.41 | 0.0144 | 0.0108 |
| Saturn | 79457-03-29 16:34 G | 30742220.95 | 30742221.19 | 30742221.44 | 0.0267 | 0.0091 |
| Saturn | 79471-09-23 20:39 G | 30747512.21 | 30747512.36 | 30747512.55 | 0.0291 | 0.0208 |
| Uranus | 79484-09-27 11:46 G | 30752264.82 | 30752264.99 | 30752265.18 | 0.0135 | 0.0097 |
| Uranus | 79485-10-01 14:39 G | 30752633.89 | 30752634.11 | 30752634.33 | 0.0135 | 0.0066 |
| Saturn | 79486-03-24 16:05 G | 30752807.95 | 30752808.17 | 30752808.40 | 0.0268 | 0.0086 |
| Uranus | 79486-10-06 05:17 G | 30753003.47 | 30753003.72 | 30753003.98 | 0.0135 | 0.0011 |
| Uranus | 79487-10-10 06:29 G | 30753372.53 | 30753372.77 | 30753373.02 | 0.0135 | 0.0029 |
| Uranus | 79488-10-13 20:10 G | 30753742.14 | 30753742.34 | 30753742.57 | 0.0135 | 0.0070 |
| Uranus | 79489-10-17 20:24 G | 30754111.25 | 30754111.35 | 30754111.47 | 0.0134 | 0.0120 |
| Mars | 79490-08-12 07:41 G | 30754409.62 | 30754409.82 | 30754410.01 | 0.1914 | 0.0721 |
| Neptune | 79495-10-30 05:32 G | 30756314.69 | 30756314.73 | 30756314.82 | 0.0090 | 0.0087 |
| Jupiter | 79496-10-25 15:36 G | 30756675.94 | 30756676.15 | 30756676.36 | 0.0515 | 0.0145 |
| Neptune | 79496-10-31 10:34 G | 30756681.78 | 30756681.94 | 30756682.12 | 0.0090 | 0.0067 |
| Neptune | 79497-11-03 04:48 G | 30757049.49 | 30757049.70 | 30757049.95 | 0.0090 | 0.0038 |
| Neptune | 79498-11-05 11:03 G | 30757416.72 | 30757416.96 | 30757417.21 | 0.0090 | 0.0018 |
| Neptune | 79499-11-08 02:24 G | 30757784.35 | 30757784.60 | 30757784.87 | 0.0090 | 0.0012 |
| Neptune | 79500-11-10 11:32 G | 30758151.76 | 30758151.98 | 30758152.22 | 0.0090 | 0.0030 |
| Saturn | 79501-10-01 22:34 G | 30758477.22 | 30758477.44 | 30758477.67 | 0.0292 | 0.0089 |
| Neptune | 79501-11-12 22:05 G | 30758519.24 | 30758519.42 | 30758519.63 | 0.0090 | 0.0059 |
| Jupiter | 79502-04-24 04:34 G | 30758681.51 | 30758681.69 | 30758681.87 | 0.0513 | 0.0313 |
| Neptune | 79502-11-15 12:00 G | 30758886.90 | 30758887.00 | 30758887.14 | 0.0090 | 0.0078 |
| Jupiter | 79508-10-31 11:46 G | 30761063.80 | 30761063.99 | 30761064.19 | 0.0518 | 0.0286 |
| Jupiter | 79514-04-29 02:10 G | 30763069.36 | 30763069.59 | 30763069.83 | 0.0510 | 0.0158 |
| Saturn | 79516-03-31 13:12 G | 30763771.84 | 30763772.05 | 30763772.28 | 0.0267 | 0.0133 |

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| Pluto | 79527-12-09 08:10 G | 30768041.62 | 30768041.84 | 30768042.09 | 0.0063 | 0.0020 |
| Uranus | 79528-03-27 02:24 G | 30768150.44 | 30768150.60 | 30768150.79 | 0.0143 | 0.0107 |
| Uranus | 79529-03-31 21:36 G | 30768520.17 | 30768520.40 | 30768520.64 | 0.0143 | 0.0047 |
| Uranus | 79530-04-06 03:08 G | 30768890.37 | 30768890.63 | 30768890.89 | 0.0143 | 0.0006 |
| Saturn | 79530-09-25 17:03 G | 30769063.00 | 30769063.21 | 30769063.42 | 0.0291 | 0.0160 |
| Uranus | 79531-04-10 21:22 G | 30769260.17 | 30769260.39 | 30769260.62 | 0.0144 | 0.0064 |
| Uranus | 79532-04-15 05:32 G | 30769630.56 | 30769630.73 | 30769630.90 | 0.0144 | 0.0107 |
| Saturn | 79545-03-26 21:36 G | 30774359.16 | 30774359.40 | 30774359.64 | 0.0268 | 0.0044 |
| Saturn | 79560-10-03 04:48 G | 30780028.49 | 30780028.70 | 30780028.91 | 0.0292 | 0.0138 |
| Mars | 79561-02-08 09:36 G | 30780156.73 | 30780156.90 | 30780157.07 | 0.1614 | 0.0468 |
| Uranus | 79568-09-29 01:56 G | 30782946.43 | 30782946.58 | 30782946.75 | 0.0136 | 0.0105 |
| Uranus | 79569-10-03 05:03 G | 30783315.49 | 30783315.71 | 30783315.96 | 0.0135 | 0.0046 |
| Uranus | 79570-10-07 19:27 G | 30783685.05 | 30783685.31 | 30783685.56 | 0.0135 | 0.0011 |
| Uranus | 79571-10-11 20:39 G | 30784054.13 | 30784054.36 | 30784054.60 | 0.0135 | 0.0038 |
| Uranus | 79572-10-15 09:36 G | 30784423.71 | 30784423.90 | 30784424.12 | 0.0135 | 0.0082 |
| Uranus | 79573-10-19 09:51 G | 30784792.81 | 30784792.91 | 30784793.05 | 0.0134 | 0.0118 |
| Saturn | 79574-03-21 12:00 G | 30784945.87 | 30784946.00 | 30784946.13 | 0.0269 | 0.0229 |
| Saturn | 79575-04-02 17:03 G | 30785323.04 | 30785323.21 | 30785323.40 | 0.0267 | 0.0178 |
| Neptune | 79578-04-30 16:20 G | 30786447.08 | 30786447.18 | 30786447.32 | 0.0088 | 0.0077 |
| Neptune | 79579-05-03 10:20 G | 30786814.72 | 30786814.93 | 30786815.16 | 0.0088 | 0.0048 |
| Jupiter | 79579-10-27 03:36 G | 30786991.44 | 30786991.65 | 30786991.87 | 0.0515 | 0.0209 |
| Neptune | 79580-05-04 18:00 G | 30787182.02 | 30787182.25 | 30787182.49 | 0.0088 | 0.0030 |
| Neptune | 79581-05-07 08:10 G | 30787549.57 | 30787549.84 | 30787550.11 | 0.0088 | 0.0002 |
| Neptune | 79582-05-09 20:24 G | 30787917.11 | 30787917.35 | 30787917.60 | 0.0088 | 0.0016 |
| Neptune | 79583-05-12 05:03 G | 30788284.50 | 30788284.71 | 30788284.97 | 0.0088 | 0.0044 |
| Neptune | 79584-05-13 21:51 G | 30788652.24 | 30788652.41 | 30788652.60 | 0.0088 | 0.0063 |
| Jupiter | 79585-04-23 11:46 G | 30788996.82 | 30788996.99 | 30788997.16 | 0.0513 | 0.0372 |
| Saturn | 79589-09-26 15:36 G | 30790613.92 | 30790614.15 | 30790614.38 | 0.0291 | 0.0109 |
| Jupiter | 79591-10-31 15:51 G | 30791378.96 | 30791379.16 | 30791379.36 | 0.0517 | 0.0236 |
| Jupiter | 79597-04-28 00:00 G | 30793384.27 | 30793384.50 | 30793384.73 | 0.0511 | 0.0077 |

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| Saturn | 79604-03-27 23:32 G | 30795910.23 | 30795910.48 | 30795910.73 | 0.0268 | 0.0001 |
| Uranus | 79612-03-27 16:34 G | 30798832.00 | 30798832.19 | 30798832.39 | 0.0143 | 0.0096 |
| Uranus | 79613-04-01 12:00 G | 30799201.78 | 30799202.00 | 30799202.24 | 0.0143 | 0.0050 |
| Uranus | 79614-04-06 17:03 G | 30799571.95 | 30799572.21 | 30799572.48 | 0.0143 | 0.0017 |
| Uranus | 79615-04-11 12:00 G | 30799941.78 | 30799942.00 | 30799942.24 | 0.0144 | 0.0058 |
| Uranus | 79616-04-15 19:56 G | 30800312.21 | 30800312.33 | 30800312.48 | 0.0144 | 0.0123 |
| Pluto | 79617-06-09 08:10 G | 30800731.70 | 30800731.84 | 30800732.04 | 0.0081 | 0.0060 |
| Saturn | 79619-10-05 07:56 G | 30801579.65 | 30801579.83 | 30801580.02 | 0.0292 | 0.0190 |
| Saturn | 79633-03-22 16:48 G | 30806497.03 | 30806497.20 | 30806497.38 | 0.0269 | 0.0185 |
| Saturn | 79634-04-04 02:10 G | 30806874.47 | 30806874.59 | 30806874.73 | 0.0267 | 0.0226 |
| Saturn | 79648-09-27 23:17 G | 30812165.24 | 30812165.47 | 30812165.71 | 0.0291 | 0.0056 |
| Uranus | 79652-09-29 15:08 G | 30813627.95 | 30813628.13 | 30813628.35 | 0.0135 | 0.0084 |
| Uranus | 79653-10-03 19:12 G | 30813997.08 | 30813997.30 | 30813997.54 | 0.0135 | 0.0052 |
| Uranus | 79654-10-08 08:53 G | 30814366.61 | 30814366.87 | 30814367.13 | 0.0135 | 0.0005 |
| Uranus | 79655-10-12 11:03 G | 30814735.73 | 30814735.96 | 30814736.20 | 0.0135 | 0.0042 |
| Uranus | 79656-10-15 23:46 G | 30815105.30 | 30815105.49 | 30815105.70 | 0.0135 | 0.0085 |
| Uranus | 79657-10-20 00:44 G | 30815474.52 | 30815474.53 | 30815474.58 | 0.0134 | 0.0134 |
| Neptune | 79660-10-31 22:20 G | 30816582.31 | 30816582.43 | 30816582.55 | 0.0090 | 0.0079 |
| Neptune | 79661-11-03 04:20 G | 30816949.48 | 30816949.68 | 30816949.90 | 0.0090 | 0.0047 |
| Jupiter | 79662-10-26 06:15 G | 30817306.57 | 30817306.76 | 30817306.96 | 0.0515 | 0.0267 |
| Neptune | 79662-11-05 18:29 G | 30817317.04 | 30817317.27 | 30817317.54 | 0.0090 | 0.0032 |
| Saturn | 79663-03-29 23:32 G | 30817461.23 | 30817461.48 | 30817461.74 | 0.0269 | 0.0047 |
| Neptune | 79663-11-08 05:46 G | 30817684.50 | 30817684.74 | 30817684.99 | 0.0090 | 0.0002 |
| Neptune | 79664-11-09 15:51 G | 30818051.90 | 30818052.16 | 30818052.42 | 0.0090 | 0.0017 |
| Neptune | 79665-11-12 06:58 G | 30818419.60 | 30818419.79 | 30818420.01 | 0.0090 | 0.0050 |
| Neptune | 79666-11-14 12:44 G | 30818786.86 | 30818787.03 | 30818787.22 | 0.0090 | 0.0065 |
| Jupiter | 79668-04-22 06:58 G | 30819311.72 | 30819311.79 | 30819311.88 | 0.0513 | 0.0480 |
| Jupiter | 79674-10-31 02:24 G | 30821694.38 | 30821694.60 | 30821694.82 | 0.0517 | 0.0154 |
| Saturn | 79677-09-22 13:41 G | 30822752.00 | 30822752.07 | 30822752.16 | 0.0291 | 0.0275 |
| Saturn | 79678-10-06 11:03 G | 30823130.84 | 30823130.96 | 30823131.10 | 0.0292 | 0.0248 |

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| Jupiter | 79680-04-27 10:05 G | 30823699.68 | 30823699.92 | 30823700.16 | 0.0512 | 0.0010 |
| Saturn | 79692-03-24 03:08 G | 30828048.43 | 30828048.63 | 30828048.84 | 0.0269 | 0.0137 |
| Uranus | 79696-03-28 03:36 G | 30829513.47 | 30829513.65 | 30829513.87 | 0.0143 | 0.0092 |
| Uranus | 79697-04-02 00:44 G | 30829883.30 | 30829883.53 | 30829883.78 | 0.0143 | 0.0034 |
| Uranus | 79698-04-07 04:48 G | 30830253.44 | 30830253.70 | 30830253.96 | 0.0143 | 0.0009 |
| Uranus | 79699-04-12 00:29 G | 30830623.32 | 30830623.52 | 30830623.74 | 0.0144 | 0.0079 |
| Uranus | 79700-04-17 07:12 G | 30830993.69 | 30830993.80 | 30830993.96 | 0.0144 | 0.0122 |
| Saturn | 79707-10-01 12:29 G | 30833716.78 | 30833717.02 | 30833717.25 | 0.0291 | 0.0006 |
| Saturn | 79722-04-01 04:05 G | 30839012.45 | 30839012.67 | 30839012.91 | 0.0269 | 0.0094 |
| Uranus | 79735-09-27 16:20 G | 30843940.09 | 30843940.18 | 30843940.30 | 0.0136 | 0.0123 |
| Saturn | 79736-09-24 20:24 G | 30844303.19 | 30844303.35 | 30844303.53 | 0.0291 | 0.0214 |
| Uranus | 79736-10-01 05:46 G | 30844309.56 | 30844309.74 | 30844309.95 | 0.0135 | 0.0091 |
| Uranus | 79737-10-05 10:34 G | 30844678.71 | 30844678.94 | 30844679.19 | 0.0135 | 0.0031 |
| Uranus | 79738-10-09 23:17 G | 30845048.21 | 30845048.47 | 30845048.73 | 0.0135 | 0.0003 |
| Uranus | 79739-10-14 01:56 G | 30845417.36 | 30845417.58 | 30845417.81 | 0.0135 | 0.0053 |
| Uranus | 79740-10-17 13:27 G | 30845786.90 | 30845787.06 | 30845787.26 | 0.0135 | 0.0096 |
| Uranus | 79741-10-21 15:08 G | 30846156.11 | 30846156.13 | 30846156.18 | 0.0134 | 0.0133 |
| Neptune | 79742-05-01 03:22 G | 30846347.56 | 30846347.64 | 30846347.78 | 0.0088 | 0.0080 |
| Neptune | 79743-05-03 12:15 G | 30846714.86 | 30846715.01 | 30846715.21 | 0.0088 | 0.0064 |
| Neptune | 79744-05-05 00:15 G | 30847082.28 | 30847082.51 | 30847082.78 | 0.0088 | 0.0035 |
| Neptune | 79745-05-07 13:56 G | 30847449.84 | 30847450.08 | 30847450.34 | 0.0088 | 0.0018 |
| Jupiter | 79745-10-26 13:56 G | 30847621.92 | 30847622.08 | 30847622.25 | 0.0514 | 0.0359 |
| Neptune | 79746-05-09 21:36 G | 30847817.14 | 30847817.40 | 30847817.67 | 0.0088 | 0.0012 |
| Neptune | 79747-05-12 15:22 G | 30848184.90 | 30848185.14 | 30848185.39 | 0.0088 | 0.0028 |
| Neptune | 79748-05-13 20:10 G | 30848552.16 | 30848552.34 | 30848552.55 | 0.0088 | 0.0059 |
| Neptune | 79749-05-16 15:08 G | 30848920.01 | 30848920.13 | 30848920.29 | 0.0088 | 0.0074 |
| Saturn | 79751-03-27 14:10 G | 30849599.86 | 30849600.09 | 30849600.33 | 0.0269 | 0.0088 |
| Jupiter | 79757-10-30 21:36 G | 30852009.17 | 30852009.40 | 30852009.63 | 0.0516 | 0.0069 |
| Jupiter | 79763-04-28 06:44 G | 30854014.55 | 30854014.78 | 30854015.02 | 0.0512 | 0.0067 |
| Mars | 79766-02-09 03:22 G | 30855032.49 | 30855032.64 | 30855032.80 | 0.1618 | 0.0973 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 79766-10-03 02:39 G | 30855268.37 | 30855268.61 | 30855268.85 | 0.0291 | 0.0064 |
| Pluto | 79774-12-11 06:58 G | 30858259.55 | 30858259.79 | 30858260.04 | 0.0063 | 0.0004 |
| Jupiter | 79775-05-03 06:00 G | 30858402.64 | 30858402.75 | 30858402.87 | 0.0510 | 0.0440 |
| Uranus | 79779-03-25 16:05 G | 30859825.10 | 30859825.17 | 30859825.28 | 0.0142 | 0.0133 |
| Saturn | 79780-03-21 05:32 G | 30860186.70 | 30860186.73 | 30860186.78 | 0.0270 | 0.0266 |
| Uranus | 79780-03-29 15:08 G | 30860194.93 | 30860195.13 | 30860195.35 | 0.0143 | 0.0085 |
| Saturn | 79781-04-02 14:53 G | 30860563.93 | 30860564.12 | 30860564.33 | 0.0269 | 0.0146 |
| Uranus | 79781-04-03 12:58 G | 30860564.81 | 30860565.04 | 30860565.29 | 0.0143 | 0.0036 |
| Uranus | 79782-04-08 15:51 G | 30860934.91 | 30860935.16 | 30860935.43 | 0.0143 | 0.0030 |
| Uranus | 79783-04-13 12:58 G | 30861304.83 | 30861305.04 | 30861305.26 | 0.0144 | 0.0071 |
| Uranus | 79784-04-17 19:12 G | 30861675.25 | 30861675.30 | 30861675.39 | 0.0144 | 0.0138 |
| Saturn | 79795-09-27 08:24 G | 30865854.65 | 30865854.85 | 30865855.06 | 0.0291 | 0.0153 |
| Saturn | 79810-03-29 21:08 G | 30871151.12 | 30871151.38 | 30871151.63 | 0.0268 | 0.0033 |
| Uranus | 79819-09-29 06:44 G | 30874621.72 | 30874621.78 | 30874621.89 | 0.0136 | 0.0128 |
| Uranus | 79820-10-02 19:12 G | 30874991.09 | 30874991.30 | 30874991.54 | 0.0136 | 0.0069 |
| Uranus | 79821-10-07 00:44 G | 30875360.30 | 30875360.53 | 30875360.77 | 0.0135 | 0.0038 |
| Uranus | 79822-10-11 12:29 G | 30875729.77 | 30875730.02 | 30875730.28 | 0.0135 | 0.0019 |
| Uranus | 79823-10-15 16:20 G | 30876098.96 | 30876099.18 | 30876099.41 | 0.0135 | 0.0056 |
| Uranus | 79824-10-19 03:51 G | 30876468.49 | 30876468.66 | 30876468.84 | 0.0135 | 0.0100 |
| Neptune | 79824-11-01 21:51 G | 30876482.36 | 30876482.41 | 30876482.50 | 0.0090 | 0.0086 |
| Saturn | 79825-10-05 14:24 G | 30876819.88 | 30876820.10 | 30876820.33 | 0.0292 | 0.0130 |
| Neptune | 79825-11-04 11:03 G | 30876849.80 | 30876849.96 | 30876850.17 | 0.0090 | 0.0064 |
| Neptune | 79826-11-06 23:32 G | 30877217.27 | 30877217.48 | 30877217.72 | 0.0090 | 0.0038 |
| Neptune | 79827-11-09 07:56 G | 30877584.58 | 30877584.83 | 30877585.09 | 0.0090 | 0.0015 |
| Jupiter | 79828-10-26 10:05 G | 30877936.81 | 30877936.92 | 30877937.05 | 0.0514 | 0.0439 |
| Neptune | 79828-11-11 00:15 G | 30877952.27 | 30877952.51 | 30877952.76 | 0.0090 | 0.0012 |
| Neptune | 79829-11-13 05:17 G | 30878319.50 | 30878319.72 | 30878319.97 | 0.0090 | 0.0034 |
| Neptune | 79830-11-15 23:32 G | 30878687.31 | 30878687.48 | 30878687.69 | 0.0090 | 0.0060 |
| Neptune | 79831-11-18 04:20 G | 30879054.59 | 30879054.68 | 30879054.81 | 0.0090 | 0.0080 |
| Saturn | 79839-03-24 18:15 G | 30881738.12 | 30881738.26 | 30881738.41 | 0.0270 | 0.0213 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 79840-04-05 04:05 G | 30882115.52 | 30882115.67 | 30882115.85 | 0.0268 | 0.0198 |
| Jupiter | 79840-10-31 07:41 G | 30882324.60 | 30882324.82 | 30882325.04 | 0.0516 | 0.0006 |
| Mars | 79845-02-12 03:08 G | 30883889.47 | 30883889.63 | 30883889.80 | 0.1616 | 0.0599 |
| Jupiter | 79846-04-28 10:48 G | 30884329.73 | 30884329.95 | 30884330.17 | 0.0512 | 0.0167 |
| Jupiter | 79852-11-04 18:29 G | 30886712.18 | 30886712.27 | 30886712.35 | 0.0518 | 0.0480 |
| Saturn | 79854-09-30 03:36 G | 30887406.43 | 30887406.65 | 30887406.88 | 0.0291 | 0.0086 |
| Jupiter | 79858-05-02 23:17 G | 30888717.30 | 30888717.47 | 30888717.65 | 0.0511 | 0.0351 |
| Uranus | 79863-03-27 02:53 G | 30890506.56 | 30890506.62 | 30890506.69 | 0.0142 | 0.0137 |
| Uranus | 79864-03-31 00:00 G | 30890876.30 | 30890876.50 | 30890876.74 | 0.0143 | 0.0079 |
| Uranus | 79865-04-04 23:32 G | 30891246.24 | 30891246.48 | 30891246.73 | 0.0143 | 0.0023 |
| Uranus | 79866-04-10 01:27 G | 30891616.29 | 30891616.56 | 30891616.82 | 0.0143 | 0.0022 |
| Uranus | 79867-04-14 23:03 G | 30891986.28 | 30891986.46 | 30891986.66 | 0.0143 | 0.0092 |
| Uranus | 79868-04-19 04:05 G | 30892356.60 | 30892356.67 | 30892356.79 | 0.0144 | 0.0134 |
| Saturn | 79869-03-31 03:08 G | 30892702.38 | 30892702.63 | 30892702.88 | 0.0268 | 0.0022 |
| Saturn | 79884-10-07 02:53 G | 30898371.45 | 30898371.62 | 30898371.81 | 0.0292 | 0.0199 |
| Saturn | 79898-03-26 07:41 G | 30903289.63 | 30903289.82 | 30903290.02 | 0.0270 | 0.0161 |
| Saturn | 79899-04-07 12:58 G | 30903666.95 | 30903667.04 | 30903667.13 | 0.0268 | 0.0250 |
| Uranus | 79903-09-30 21:08 G | 30905303.25 | 30905303.38 | 30905303.54 | 0.0136 | 0.0110 |
| Uranus | 79904-10-04 08:53 G | 30905672.66 | 30905672.87 | 30905673.09 | 0.0136 | 0.0077 |
| Uranus | 79905-10-08 15:36 G | 30906041.90 | 30906042.15 | 30906042.39 | 0.0135 | 0.0018 |
| Uranus | 79906-10-13 02:10 G | 30906411.34 | 30906411.59 | 30906411.86 | 0.0135 | 0.0016 |
| Neptune | 79907-05-04 17:03 G | 30906615.09 | 30906615.21 | 30906615.38 | 0.0088 | 0.0074 |
| Uranus | 79907-10-17 06:58 G | 30906780.58 | 30906780.79 | 30906781.00 | 0.0135 | 0.0068 |
| Neptune | 79908-05-06 08:24 G | 30906982.65 | 30906982.85 | 30906983.09 | 0.0088 | 0.0044 |
| Uranus | 79908-10-20 17:03 G | 30907150.07 | 30907150.21 | 30907150.37 | 0.0135 | 0.0109 |
| Neptune | 79909-05-08 15:22 G | 30907349.90 | 30907350.14 | 30907350.41 | 0.0088 | 0.0028 |
| Neptune | 79910-05-11 09:51 G | 30907717.66 | 30907717.91 | 30907718.17 | 0.0088 | 0.0003 |
| Neptune | 79911-05-13 14:24 G | 30908084.86 | 30908085.10 | 30908085.37 | 0.0088 | 0.0019 |
| Neptune | 79912-05-15 08:53 G | 30908452.66 | 30908452.87 | 30908453.11 | 0.0088 | 0.0048 |
| Neptune | 79913-05-17 15:08 G | 30908819.96 | 30908820.13 | 30908820.31 | 0.0088 | 0.0064 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 79913-10-02 22:34 G | 30908958.20 | 30908958.44 | 30908958.68 | 0.0291 | 0.0020 |
| Jupiter | 79923-11-01 03:08 G | 30912639.40 | 30912639.63 | 30912639.87 | 0.0515 | 0.0108 |
| Saturn | 79928-04-02 14:24 G | 30914253.87 | 30914254.10 | 30914254.34 | 0.0268 | 0.0074 |
| Jupiter | 79929-04-28 04:20 G | 30914644.47 | 30914644.68 | 30914644.89 | 0.0513 | 0.0249 |
| Jupiter | 79935-11-05 16:34 G | 30917027.05 | 30917027.19 | 30917027.34 | 0.0517 | 0.0387 |
| Jupiter | 79941-05-03 05:32 G | 30919032.54 | 30919032.73 | 30919032.92 | 0.0511 | 0.0284 |
| Saturn | 79942-09-26 18:15 G | 30919544.14 | 30919544.26 | 30919544.40 | 0.0290 | 0.0246 |
| Saturn | 79943-10-10 20:24 G | 30919923.27 | 30919923.35 | 30919923.45 | 0.0292 | 0.0267 |
| Uranus | 79947-03-28 14:53 G | 30921188.00 | 30921188.12 | 30921188.26 | 0.0142 | 0.0121 |
| Uranus | 79948-04-01 10:48 G | 30921557.74 | 30921557.95 | 30921558.19 | 0.0143 | 0.0076 |
| Uranus | 79949-04-06 11:17 G | 30921927.73 | 30921927.97 | 30921928.22 | 0.0143 | 0.0023 |
| Uranus | 79950-04-11 11:32 G | 30922297.74 | 30922297.98 | 30922298.24 | 0.0143 | 0.0041 |
| Uranus | 79951-04-16 10:34 G | 30922667.76 | 30922667.94 | 30922668.16 | 0.0143 | 0.0084 |
| Saturn | 79957-03-28 16:34 G | 30924840.97 | 30924841.19 | 30924841.43 | 0.0269 | 0.0111 |
| Saturn | 79972-10-04 11:17 G | 30930509.72 | 30930509.97 | 30930510.22 | 0.0292 | 0.0043 |
| Saturn | 79987-04-05 03:22 G | 30935805.44 | 30935805.64 | 30935805.86 | 0.0268 | 0.0125 |
| Uranus | 79987-10-01 10:34 G | 30935984.83 | 30935984.94 | 30935985.09 | 0.0136 | 0.0115 |
| Uranus | 79988-10-04 21:08 G | 30936354.15 | 30936354.38 | 30936354.63 | 0.0136 | 0.0057 |
| Uranus | 79989-10-09 04:48 G | 30936723.46 | 30936723.70 | 30936723.94 | 0.0135 | 0.0025 |
| Neptune | 79989-11-04 17:03 G | 30936750.10 | 30936750.21 | 30936750.34 | 0.0090 | 0.0078 |
| Uranus | 79990-10-13 14:39 G | 30937092.86 | 30937093.11 | 30937093.37 | 0.0135 | 0.0033 |
| Neptune | 79990-11-07 00:00 G | 30937117.30 | 30937117.50 | 30937117.75 | 0.0090 | 0.0045 |
| Uranus | 79991-10-17 20:53 G | 30937462.16 | 30937462.37 | 30937462.58 | 0.0135 | 0.0069 |
| Neptune | 79991-11-09 18:00 G | 30937485.01 | 30937485.25 | 30937485.48 | 0.0090 | 0.0030 |
| Uranus | 79992-10-21 06:15 G | 30937831.65 | 30937831.76 | 30937831.91 | 0.0135 | 0.0116 |
| Neptune | 79992-11-10 22:34 G | 30937852.19 | 30937852.44 | 30937852.70 | 0.0090 | 0.0004 |
| Neptune | 79993-11-13 16:48 G | 30938219.95 | 30938220.20 | 30938220.46 | 0.0090 | 0.0017 |
| Neptune | 79994-11-15 22:20 G | 30938587.23 | 30938587.43 | 30938587.64 | 0.0090 | 0.0051 |
| Neptune | 79995-11-18 14:10 G | 30938954.94 | 30938955.09 | 30938955.29 | 0.0090 | 0.0066 |

81ST MILLENNIUM CE

This is a list of transits of Moon in the 81st millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 80001-09-28 10:05 | G | 30941095.75 | 30941095.92 | 30941096.11 | 0.0291 | 0.0188 | |
| Jupiter | 80006-10-31 04:48 | G | 30942954.50 | 30942954.70 | 30942954.91 | 0.0514 | 0.0195 | |
| Jupiter | 80012-04-27 10:34 | G | 30944959.76 | 30944959.94 | 30944960.12 | 0.0514 | 0.0322 | |
| Saturn | 80016-03-29 20:53 | G | 30946392.12 | 30946392.37 | 30946392.62 | 0.0269 | 0.0061 | |
| Jupiter | 80018-11-05 00:29 | G | 30947342.34 | 30947342.52 | 30947342.71 | 0.0517 | 0.0315 | |
| Pluto | 80021-12-14 02:39 | G | 30948477.40 | 30948477.61 | 30948477.85 | 0.0063 | 0.0027 | |
| Jupiter | 80024-05-02 04:48 | G | 30949347.48 | 30949347.70 | 30949347.93 | 0.0511 | 0.0197 | |
| Uranus | 80031-03-29 03:51 | G | 30951869.56 | 30951869.66 | 30951869.79 | 0.0142 | 0.0126 | |
| Saturn | 80031-10-06 18:44 | G | 30952061.05 | 30952061.28 | 30952061.52 | 0.0292 | 0.0102 | |
| Uranus | 80032-04-01 22:48 | G | 30952239.23 | 30952239.45 | 30952239.70 | 0.0143 | 0.0065 | |
| Uranus | 80033-04-07 00:29 | G | 30952609.28 | 30952609.52 | 30952609.77 | 0.0143 | 0.0012 | |
| Uranus | 80034-04-11 23:46 | G | 30952979.23 | 30952979.49 | 30952979.75 | 0.0143 | 0.0035 | |
| Uranus | 80035-04-16 23:46 | G | 30953349.32 | 30953349.49 | 30953349.66 | 0.0143 | 0.0105 | |
| Saturn | 80045-03-25 04:48 | G | 30956979.60 | 30956979.70 | 30956979.81 | 0.0269 | 0.0239 | |
| Saturn | 80046-04-06 12:58 | G | 30957356.86 | 30957357.04 | 30957357.24 | 0.0268 | 0.0170 | |
| Mars | 80050-02-12 01:27 | G | 30958764.36 | 30958764.56 | 30958764.75 | 0.1620 | 0.0268 | |
| Saturn | 80060-09-30 01:41 | G | 30962647.37 | 30962647.57 | 30962647.79 | 0.0291 | 0.0128 | |
| Neptune | 80071-05-04 01:41 | G | 30966515.48 | 30966515.57 | 30966515.72 | 0.0088 | 0.0078 | |
| Uranus | 80071-10-02 00:00 | G | 30966666.35 | 30966666.50 | 30966666.68 | 0.0136 | 0.0099 | |
| Neptune | 80072-05-05 07:41 | G | 30966882.64 | 30966882.82 | 30966883.03 | 0.0088 | 0.0058 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 80072-10-05 09:51 G | 30967035.68 | 30967035.91 | 30967036.15 | 0.0136 | 0.0064 |
| Neptune | 80073-05-08 02:53 G | 30967250.38 | 30967250.62 | 30967250.87 | 0.0088 | 0.0031 |
| Uranus | 80073-10-09 18:44 G | 30967405.04 | 30967405.28 | 30967405.53 | 0.0135 | 0.0005 |
| Neptune | 80074-05-10 07:27 G | 30967617.57 | 30967617.81 | 30967618.08 | 0.0088 | 0.0014 |
| Uranus | 80074-10-14 03:51 G | 30967774.40 | 30967774.66 | 30967774.92 | 0.0135 | 0.0028 |
| Saturn | 80075-04-01 00:44 G | 30967943.28 | 30967943.53 | 30967943.77 | 0.0269 | 0.0016 |
| Neptune | 80075-05-13 01:41 G | 30967985.31 | 30967985.57 | 30967985.84 | 0.0088 | 0.0014 |
| Uranus | 80075-10-18 10:34 G | 30968143.76 | 30968143.94 | 30968144.15 | 0.0135 | 0.0083 |
| Neptune | 80076-05-14 08:24 G | 30968352.63 | 30968352.85 | 30968353.11 | 0.0088 | 0.0033 |
| Uranus | 80076-10-21 18:58 G | 30968513.20 | 30968513.29 | 30968513.42 | 0.0135 | 0.0122 |
| Neptune | 80077-05-16 23:17 G | 30968720.29 | 30968720.47 | 30968720.68 | 0.0088 | 0.0061 |
| Neptune | 80078-05-19 10:34 G | 30969087.86 | 30969087.94 | 30969088.08 | 0.0088 | 0.0079 |
| Jupiter | 80089-10-30 12:00 G | 30973269.80 | 30973270.00 | 30973270.21 | 0.0514 | 0.0264 |
| Saturn | 80090-10-08 01:41 G | 30973612.36 | 30973612.57 | 30973612.77 | 0.0292 | 0.0154 |
| Jupiter | 80095-04-27 08:10 G | 30975274.70 | 30975274.84 | 30975274.99 | 0.0515 | 0.0407 |
| Jupiter | 80101-11-04 21:51 G | 30977657.21 | 30977657.41 | 30977657.61 | 0.0515 | 0.0238 |
| Saturn | 80104-03-27 13:41 G | 30978530.90 | 30978531.07 | 30978531.24 | 0.0269 | 0.0192 |
| Saturn | 80105-04-08 15:22 G | 30978908.00 | 30978908.14 | 30978908.31 | 0.0268 | 0.0215 |
| Jupiter | 80107-05-03 03:51 G | 30979662.44 | 30979662.66 | 30979662.89 | 0.0513 | 0.0118 |
| Pluto | 80112-06-16 16:48 G | 30981533.95 | 30981534.20 | 30981534.47 | 0.0081 | 0.0021 |
| Uranus | 80115-03-30 18:44 G | 30982551.14 | 30982551.28 | 30982551.46 | 0.0142 | 0.0107 |
| Uranus | 80116-04-03 12:58 G | 30982920.81 | 30982921.04 | 30982921.29 | 0.0143 | 0.0063 |
| Uranus | 80117-04-08 15:22 G | 30983290.90 | 30983291.14 | 30983291.39 | 0.0143 | 0.0008 |
| Uranus | 80118-04-13 13:12 G | 30983660.82 | 30983661.05 | 30983661.30 | 0.0143 | 0.0055 |
| Uranus | 80119-04-18 14:24 G | 30984030.94 | 30984031.10 | 30984031.29 | 0.0143 | 0.0099 |
| Saturn | 80119-10-03 11:17 G | 30984198.73 | 30984198.97 | 30984199.20 | 0.0291 | 0.0076 |
| Mars | 80129-02-15 10:05 G | 30987621.84 | 30987621.92 | 30987622.01 | 0.1618 | 0.1440 |
| Saturn | 80134-04-03 08:24 G | 30989494.62 | 30989494.85 | 30989495.09 | 0.0268 | 0.0030 |
| Mars | 80137-08-19 12:00 G | 30990728.90 | 30990729.00 | 30990729.10 | 0.1909 | 0.1627 |
| Saturn | 80149-10-10 09:36 G | 30995163.74 | 30995163.90 | 30995164.07 | 0.0292 | 0.0203 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 80153-11-04 18:15 G | 30996650.17 | 30996650.26 | 30996650.35 | 0.0090 | 0.0084 |
| Neptune | 80154-11-07 11:32 G | 30997017.82 | 30997017.98 | 30997018.19 | 0.0090 | 0.0060 |
| Uranus | 80155-10-03 13:41 G | 30997347.93 | 30997348.07 | 30997348.25 | 0.0136 | 0.0102 |
| Neptune | 80155-11-09 16:20 G | 30997384.97 | 30997385.18 | 30997385.42 | 0.0090 | 0.0038 |
| Uranus | 80156-10-06 22:05 G | 30997717.18 | 30997717.42 | 30997717.68 | 0.0136 | 0.0045 |
| Neptune | 80156-11-11 10:20 G | 30997752.68 | 30997752.93 | 30997753.19 | 0.0090 | 0.0013 |
| Uranus | 80157-10-11 08:24 G | 30998086.61 | 30998086.85 | 30998087.09 | 0.0135 | 0.0012 |
| Neptune | 80157-11-13 16:20 G | 30998119.93 | 30998120.18 | 30998120.43 | 0.0090 | 0.0011 |
| Uranus | 80158-10-15 16:20 G | 30998455.94 | 30998456.18 | 30998456.43 | 0.0135 | 0.0047 |
| Neptune | 80158-11-16 06:44 G | 30998487.56 | 30998487.78 | 30998488.04 | 0.0090 | 0.0036 |
| Uranus | 80159-10-20 00:58 G | 30998825.35 | 30998825.54 | 30998825.73 | 0.0135 | 0.0082 |
| Neptune | 80159-11-18 16:34 G | 30998855.04 | 30998855.19 | 30998855.40 | 0.0090 | 0.0060 |
| Uranus | 80160-10-23 08:24 G | 30999194.81 | 30999194.85 | 30999194.94 | 0.0135 | 0.0131 |
| Neptune | 80160-11-20 03:08 G | 30999222.56 | 30999222.63 | 30999222.76 | 0.0090 | 0.0083 |
| Saturn | 80163-03-29 13:56 G | 31000081.87 | 31000082.08 | 31000082.30 | 0.0269 | 0.0147 |
| Saturn | 80164-04-09 14:10 G | 31000459.04 | 31000459.09 | 31000459.17 | 0.0267 | 0.0258 |
| Jupiter | 80172-10-30 11:17 G | 31003584.81 | 31003584.97 | 31003585.14 | 0.0513 | 0.0338 |
| Jupiter | 80178-04-27 13:41 G | 31005589.97 | 31005590.07 | 31005590.16 | 0.0515 | 0.0469 |
| Saturn | 80178-10-04 11:46 G | 31005749.74 | 31005749.99 | 31005750.24 | 0.0292 | 0.0025 |
| Jupiter | 80184-11-04 10:05 G | 31007972.70 | 31007972.92 | 31007973.13 | 0.0515 | 0.0180 |
| Jupiter | 80190-05-02 16:20 G | 31009977.94 | 31009978.18 | 31009978.42 | 0.0513 | 0.0065 |
| Saturn | 80193-04-04 15:22 G | 31011045.91 | 31011046.14 | 31011046.38 | 0.0268 | 0.0074 |
| Uranus | 80199-03-31 09:22 G | 31013232.73 | 31013232.89 | 31013233.04 | 0.0142 | 0.0112 |
| Uranus | 80200-04-05 02:39 G | 31013602.37 | 31013602.61 | 31013602.86 | 0.0142 | 0.0049 |
| Uranus | 80201-04-10 06:15 G | 31013972.51 | 31013972.76 | 31013973.00 | 0.0143 | 0.0004 |
| Uranus | 80202-04-15 02:53 G | 31014342.39 | 31014342.62 | 31014342.88 | 0.0143 | 0.0052 |
| Uranus | 80203-04-20 05:17 G | 31014712.59 | 31014712.72 | 31014712.85 | 0.0143 | 0.0121 |
| Saturn | 80207-09-29 09:36 G | 31016335.82 | 31016335.90 | 31016336.01 | 0.0291 | 0.0265 |
| Saturn | 80208-10-12 14:24 G | 31016714.99 | 31016715.10 | 31016715.24 | 0.0292 | 0.0248 |
| Saturn | 80222-03-31 12:00 G | 31021632.77 | 31021633.00 | 31021633.24 | 0.0269 | 0.0103 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 80235-05-05 00:58 G | 31026415.48 | 31026415.54 | 31026415.63 | 0.0088 | 0.0084 |
| Neptune | 80236-05-06 19:56 G | 31026783.20 | 31026783.33 | 31026783.51 | 0.0088 | 0.0071 |
| Neptune | 80237-05-09 01:41 G | 31027150.34 | 31027150.57 | 31027150.80 | 0.0088 | 0.0039 |
| Saturn | 80237-10-06 09:22 G | 31027300.65 | 31027300.89 | 31027301.13 | 0.0292 | 0.0020 |
| Neptune | 80238-05-11 19:12 G | 31027518.05 | 31027518.30 | 31027518.56 | 0.0088 | 0.0025 |
| Neptune | 80239-05-14 03:36 G | 31027885.40 | 31027885.65 | 31027885.90 | 0.0088 | 0.0007 |
| Uranus | 80239-10-05 03:22 G | 31028029.46 | 31028029.64 | 31028029.84 | 0.0136 | 0.0087 |
| Neptune | 80240-05-15 16:34 G | 31028252.94 | 31028253.19 | 31028253.46 | 0.0088 | 0.0022 |
| Uranus | 80240-10-08 11:03 G | 31028398.73 | 31028398.96 | 31028399.21 | 0.0136 | 0.0051 |
| Neptune | 80241-05-18 04:48 G | 31028620.52 | 31028620.70 | 31028620.92 | 0.0088 | 0.0053 |
| Uranus | 80241-10-12 22:34 G | 31028768.19 | 31028768.44 | 31028768.68 | 0.0135 | 0.0009 |
| Neptune | 80242-05-20 12:58 G | 31028987.89 | 31028988.04 | 31028988.24 | 0.0088 | 0.0067 |
| Uranus | 80242-10-17 05:46 G | 31029137.49 | 31029137.74 | 31029137.99 | 0.0135 | 0.0042 |
| Uranus | 80243-10-21 14:39 G | 31029506.97 | 31029507.11 | 31029507.30 | 0.0135 | 0.0098 |
| Uranus | 80244-10-24 21:36 G | 31029876.40 | 31029876.40 | 31029876.40 | 0.0135 | 0.0135 |
| Saturn | 80252-04-06 15:08 G | 31032596.90 | 31032597.13 | 31032597.37 | 0.0268 | 0.0114 |
| Jupiter | 80255-11-01 03:36 G | 31033900.50 | 31033900.65 | 31033900.81 | 0.0513 | 0.0380 |
| Jupiter | 80261-04-28 01:41 G | 31035905.55 | 31035905.57 | 31035905.60 | 0.0516 | 0.0512 |
| Saturn | 80266-09-30 11:17 G | 31037886.82 | 31037886.97 | 31037887.14 | 0.0291 | 0.0222 |
| Saturn | 80267-10-14 12:00 G | 31038265.97 | 31038266.00 | 31038266.07 | 0.0293 | 0.0286 |
| Jupiter | 80267-11-05 13:27 G | 31038287.84 | 31038288.06 | 31038288.29 | 0.0515 | 0.0141 |
| Pluto | 80269-12-18 06:44 G | 31039061.53 | 31039061.78 | 31039062.03 | 0.0063 | 0.0021 |
| Jupiter | 80273-05-02 12:00 G | 31040292.77 | 31040293.00 | 31040293.23 | 0.0514 | 0.0014 |
| Saturn | 80281-04-01 13:56 G | 31043183.85 | 31043184.08 | 31043184.31 | 0.0269 | 0.0065 |
| Uranus | 80283-04-01 22:34 G | 31043914.26 | 31043914.44 | 31043914.64 | 0.0142 | 0.0091 |
| Uranus | 80284-04-05 15:22 G | 31044283.89 | 31044284.14 | 31044284.38 | 0.0142 | 0.0049 |
| Uranus | 80285-04-10 19:27 G | 31044654.06 | 31044654.31 | 31044654.56 | 0.0143 | 0.0008 |
| Jupiter | 80285-05-07 16:05 G | 31044681.05 | 31044681.17 | 31044681.29 | 0.0512 | 0.0436 |
| Uranus | 80286-04-15 14:53 G | 31045023.90 | 31045024.12 | 31045024.36 | 0.0143 | 0.0070 |
| Uranus | 80287-04-20 18:29 G | 31045394.12 | 31045394.27 | 31045394.42 | 0.0143 | 0.0114 |

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| Saturn | 80296-10-07 11:03 G | 31048851.73 | 31048851.96 | 31048852.19 | 0.0292 | 0.0059 |
| Saturn | 80310-03-28 12:00 G | 31053770.94 | 31053771.00 | 31053771.10 | 0.0269 | 0.0256 |
| Saturn | 80311-04-09 11:03 G | 31054147.77 | 31054147.96 | 31054148.18 | 0.0267 | 0.0155 |
| Neptune | 80317-11-06 05:32 G | 31056550.73 | 31056550.73 | 31056550.77 | 0.0090 | 0.0089 |
| Neptune | 80318-11-08 10:34 G | 31056917.81 | 31056917.94 | 31056918.08 | 0.0090 | 0.0075 |
| Neptune | 80319-11-11 03:51 G | 31057285.44 | 31057285.66 | 31057285.90 | 0.0090 | 0.0042 |
| Neptune | 80320-11-12 10:48 G | 31057652.73 | 31057652.95 | 31057653.20 | 0.0090 | 0.0028 |
| Neptune | 80321-11-15 00:58 G | 31058020.28 | 31058020.54 | 31058020.81 | 0.0090 | 0.0005 |
| Uranus | 80322-10-02 03:22 G | 31058341.57 | 31058341.64 | 31058341.72 | 0.0136 | 0.0130 |
| Neptune | 80322-11-17 12:29 G | 31058387.78 | 31058388.02 | 31058388.26 | 0.0090 | 0.0020 |
| Uranus | 80323-10-06 17:17 G | 31058711.05 | 31058711.22 | 31058711.42 | 0.0136 | 0.0088 |
| Neptune | 80323-11-19 21:08 G | 31058755.17 | 31058755.38 | 31058755.59 | 0.0090 | 0.0052 |
| Uranus | 80324-10-09 23:46 G | 31059080.24 | 31059080.49 | 31059080.75 | 0.0136 | 0.0032 |
| Neptune | 80324-11-21 12:29 G | 31059122.87 | 31059123.02 | 31059123.20 | 0.0090 | 0.0067 |
| Saturn | 80325-10-02 05:17 G | 31059437.53 | 31059437.72 | 31059437.92 | 0.0291 | 0.0186 |
| Uranus | 80325-10-14 12:15 G | 31059449.76 | 31059450.01 | 31059450.25 | 0.0135 | 0.0002 |
| Uranus | 80326-10-18 18:29 G | 31059819.03 | 31059819.27 | 31059819.50 | 0.0135 | 0.0062 |
| Uranus | 80327-10-23 04:34 G | 31060188.54 | 31060188.69 | 31060188.88 | 0.0135 | 0.0096 |
| Mars | 80334-02-16 08:24 G | 31062496.68 | 31062496.85 | 31062497.01 | 0.1622 | 0.0592 |
| Jupiter | 80338-11-01 08:39 G | 31064215.73 | 31064215.86 | 31064216.00 | 0.0512 | 0.0416 |
| Saturn | 80340-04-03 18:00 G | 31064735.02 | 31064735.25 | 31064735.49 | 0.0268 | 0.0025 |
| Jupiter | 80350-11-06 02:39 G | 31068603.39 | 31068603.61 | 31068603.83 | 0.0514 | 0.0086 |
| Saturn | 80355-10-10 13:56 G | 31070402.86 | 31070403.08 | 31070403.31 | 0.0292 | 0.0097 |
| Jupiter | 80356-05-03 03:51 G | 31070608.43 | 31070608.66 | 31070608.90 | 0.0515 | 0.0066 |
| Pluto | 80359-06-19 21:36 G | 31071751.29 | 31071751.40 | 31071751.58 | 0.0081 | 0.0069 |
| Uranus | 80366-03-29 05:17 G | 31074225.67 | 31074225.72 | 31074225.80 | 0.0142 | 0.0137 |
| Uranus | 80367-04-03 10:05 G | 31074595.74 | 31074595.92 | 31074596.10 | 0.0142 | 0.0099 |
| Uranus | 80368-04-07 02:10 G | 31074965.34 | 31074965.59 | 31074965.84 | 0.0142 | 0.0034 |
| Jupiter | 80368-05-07 20:39 G | 31074996.21 | 31074996.36 | 31074996.53 | 0.0512 | 0.0388 |
| Saturn | 80369-03-29 08:24 G | 31075321.70 | 31075321.85 | 31075322.01 | 0.0269 | 0.0212 |

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| Uranus | 80369-04-12 06:58 G | 31075335.54 | 31075335.79 | 31075336.04 | 0.0143 | 0.0016 |
| Saturn | 80370-04-10 11:32 G | 31075698.81 | 31075698.98 | 31075699.15 | 0.0267 | 0.0192 |
| Uranus | 80370-04-17 01:27 G | 31075705.35 | 31075705.56 | 31075705.81 | 0.0143 | 0.0067 |
| Uranus | 80371-04-22 05:46 G | 31076075.67 | 31076075.74 | 31076075.83 | 0.0143 | 0.0135 |
| Saturn | 80384-10-02 23:03 G | 31080988.25 | 31080988.46 | 31080988.67 | 0.0291 | 0.0149 |
| Saturn | 80399-04-05 19:56 G | 31086286.08 | 31086286.33 | 31086286.58 | 0.0268 | 0.0015 |
| Neptune | 80400-05-06 19:27 G | 31086683.19 | 31086683.31 | 31086683.45 | 0.0088 | 0.0075 |
| Neptune | 80401-05-09 11:46 G | 31087050.78 | 31087050.99 | 31087051.21 | 0.0088 | 0.0053 |
| Neptune | 80402-05-11 20:53 G | 31087418.14 | 31087418.37 | 31087418.62 | 0.0088 | 0.0029 |
| Neptune | 80403-05-14 08:53 G | 31087785.61 | 31087785.87 | 31087786.15 | 0.0088 | 0.0008 |
| Neptune | 80404-05-15 23:32 G | 31088153.24 | 31088153.48 | 31088153.74 | 0.0088 | 0.0017 |
| Neptune | 80405-05-18 07:27 G | 31088520.57 | 31088520.81 | 31088521.05 | 0.0088 | 0.0037 |
| Neptune | 80406-05-21 00:44 G | 31088888.38 | 31088888.53 | 31088888.74 | 0.0088 | 0.0063 |
| Uranus | 80406-10-02 14:10 G | 31089023.01 | 31089023.09 | 31089023.22 | 0.0136 | 0.0125 |
| Neptune | 80407-05-23 06:00 G | 31089255.69 | 31089255.75 | 31089255.85 | 0.0088 | 0.0083 |
| Uranus | 80407-10-07 06:00 G | 31089392.56 | 31089392.75 | 31089392.96 | 0.0136 | 0.0075 |
| Uranus | 80408-10-10 11:46 G | 31089761.75 | 31089761.99 | 31089762.25 | 0.0136 | 0.0038 |
| Uranus | 80409-10-15 01:27 G | 31090131.33 | 31090131.56 | 31090131.81 | 0.0135 | 0.0023 |
| Uranus | 80410-10-19 06:44 G | 31090500.55 | 31090500.78 | 31090501.02 | 0.0135 | 0.0055 |
| Uranus | 80411-10-23 18:15 G | 31090870.13 | 31090870.26 | 31090870.40 | 0.0135 | 0.0112 |
| Saturn | 80414-10-11 11:17 G | 31091953.76 | 31091953.97 | 31091954.20 | 0.0292 | 0.0133 |
| Mars | 80421-08-19 19:56 G | 31094458.14 | 31094458.33 | 31094458.53 | 0.1903 | 0.0929 |
| Jupiter | 80421-10-31 21:08 G | 31094531.30 | 31094531.38 | 31094531.46 | 0.0511 | 0.0475 |
| Saturn | 80428-03-30 08:10 G | 31096872.65 | 31096872.84 | 31096873.03 | 0.0269 | 0.0170 |
| Saturn | 80429-04-11 16:05 G | 31097250.07 | 31097250.17 | 31097250.31 | 0.0267 | 0.0232 |
| Jupiter | 80433-11-05 09:22 G | 31098918.65 | 31098918.89 | 31098919.13 | 0.0514 | 0.0036 |
| Jupiter | 80439-05-03 06:58 G | 31100923.56 | 31100923.79 | 31100924.03 | 0.0515 | 0.0116 |
| Saturn | 80443-10-04 23:46 G | 31102539.27 | 31102539.49 | 31102539.71 | 0.0291 | 0.0111 |
| Uranus | 80451-04-03 20:39 G | 31105277.16 | 31105277.36 | 31105277.58 | 0.0142 | 0.0079 |
| Jupiter | 80451-05-08 03:36 G | 31105311.47 | 31105311.65 | 31105311.83 | 0.0513 | 0.0312 |

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| Uranus | 80452-04-07 11:46 G | 31105646.75 | 31105646.99 | 31105647.25 | 0.0142 | 0.0039 |
| Uranus | 80453-04-12 17:17 G | 31106016.97 | 31106017.22 | 31106017.46 | 0.0143 | 0.0022 |
| Uranus | 80454-04-17 10:20 G | 31106386.73 | 31106386.93 | 31106387.16 | 0.0143 | 0.0081 |
| Uranus | 80455-04-22 15:36 G | 31106757.05 | 31106757.15 | 31106757.28 | 0.0143 | 0.0127 |
| Saturn | 80458-04-06 16:34 G | 31107836.94 | 31107837.19 | 31107837.44 | 0.0268 | 0.0057 |
| Saturn | 80473-10-12 07:27 G | 31113504.61 | 31113504.81 | 31113505.01 | 0.0292 | 0.0171 |
| Neptune | 80482-11-07 22:34 G | 31116818.36 | 31116818.44 | 31116818.58 | 0.0090 | 0.0082 |
| Neptune | 80483-11-10 07:12 G | 31117185.60 | 31117185.80 | 31117185.99 | 0.0090 | 0.0054 |
| Neptune | 80484-11-11 19:12 G | 31117553.06 | 31117553.30 | 31117553.55 | 0.0090 | 0.0035 |
| Neptune | 80485-11-14 07:41 G | 31117920.58 | 31117920.82 | 31117921.07 | 0.0090 | 0.0008 |
| Neptune | 80486-11-16 15:36 G | 31118287.89 | 31118288.15 | 31118288.41 | 0.0090 | 0.0012 |
| Saturn | 80487-04-01 14:24 G | 31118423.90 | 31118424.10 | 31118424.32 | 0.0269 | 0.0126 |
| Neptune | 80487-11-19 08:10 G | 31118655.63 | 31118655.84 | 31118656.08 | 0.0090 | 0.0040 |
| Neptune | 80488-11-20 12:58 G | 31119022.86 | 31119023.04 | 31119023.24 | 0.0090 | 0.0060 |
| Neptune | 80489-11-23 06:58 G | 31119390.75 | 31119390.79 | 31119390.88 | 0.0090 | 0.0087 |
| Uranus | 80490-10-03 02:39 G | 31119704.50 | 31119704.61 | 31119704.74 | 0.0136 | 0.0120 |
| Uranus | 80491-10-07 18:44 G | 31120074.09 | 31120074.28 | 31120074.50 | 0.0136 | 0.0076 |
| Uranus | 80492-10-10 23:46 G | 31120443.23 | 31120443.49 | 31120443.74 | 0.0136 | 0.0020 |
| Uranus | 80493-10-15 14:10 G | 31120812.84 | 31120813.09 | 31120813.33 | 0.0136 | 0.0015 |
| Uranus | 80494-10-19 18:00 G | 31121182.05 | 31121182.25 | 31121182.48 | 0.0135 | 0.0076 |
| Uranus | 80495-10-24 06:44 G | 31121551.64 | 31121551.78 | 31121551.93 | 0.0135 | 0.0108 |
| Saturn | 80502-10-07 05:03 G | 31124090.48 | 31124090.71 | 31124090.94 | 0.0291 | 0.0069 |
| Jupiter | 80516-11-05 20:39 G | 31129234.14 | 31129234.36 | 31129234.58 | 0.0513 | 0.0006 |
| Pluto | 80516-12-20 21:36 G | 31129279.18 | 31129279.40 | 31129279.64 | 0.0063 | 0.0029 |
| Saturn | 80517-04-08 15:08 G | 31129387.91 | 31129388.13 | 31129388.36 | 0.0269 | 0.0102 |
| Pluto | 80517-12-22 06:15 G | 31129645.74 | 31129645.76 | 31129645.82 | 0.0063 | 0.0063 |
| Jupiter | 80522-05-03 11:17 G | 31131238.76 | 31131238.97 | 31131239.18 | 0.0515 | 0.0209 |
| Jupiter | 80528-11-10 12:58 G | 31133621.92 | 31133622.04 | 31133622.16 | 0.0515 | 0.0438 |
| Saturn | 80531-10-01 08:24 G | 31134676.79 | 31134676.85 | 31134676.92 | 0.0290 | 0.0279 |
| Saturn | 80532-10-14 09:08 G | 31135055.73 | 31135055.88 | 31135056.05 | 0.0292 | 0.0218 |

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| Uranus | 80534-03-31 02:53 G | 31135588.53 | 31135588.62 | 31135588.75 | 0.0142 | 0.0127 |
| Jupiter | 80534-05-08 07:56 G | 31135626.62 | 31135626.83 | 31135627.05 | 0.0513 | 0.0242 |
| Uranus | 80535-04-05 07:41 G | 31135958.63 | 31135958.82 | 31135959.02 | 0.0142 | 0.0088 |
| Uranus | 80536-04-08 22:34 G | 31136328.19 | 31136328.44 | 31136328.70 | 0.0142 | 0.0022 |
| Uranus | 80537-04-14 04:05 G | 31136698.42 | 31136698.67 | 31136698.92 | 0.0143 | 0.0026 |
| Uranus | 80538-04-18 21:08 G | 31137068.16 | 31137068.38 | 31137068.60 | 0.0143 | 0.0079 |
| Mars | 80539-02-16 21:22 G | 31137372.23 | 31137372.39 | 31137372.56 | 0.1627 | 0.0866 |
| Saturn | 80546-04-03 21:22 G | 31139975.16 | 31139975.39 | 31139975.63 | 0.0269 | 0.0079 |
| Saturn | 80561-10-08 11:03 G | 31145641.71 | 31145641.96 | 31145642.20 | 0.0291 | 0.0021 |
| Neptune | 80564-05-07 05:03 G | 31146583.62 | 31146583.71 | 31146583.85 | 0.0088 | 0.0079 |
| Neptune | 80565-05-09 16:05 G | 31146951.02 | 31146951.17 | 31146951.35 | 0.0088 | 0.0066 |
| Neptune | 80566-05-12 02:24 G | 31147318.37 | 31147318.60 | 31147318.87 | 0.0088 | 0.0035 |
| Neptune | 80567-05-14 18:15 G | 31147686.01 | 31147686.26 | 31147686.51 | 0.0088 | 0.0021 |
| Neptune | 80568-05-16 00:29 G | 31148053.26 | 31148053.52 | 31148053.78 | 0.0088 | 0.0011 |
| Neptune | 80569-05-18 18:44 G | 31148421.04 | 31148421.28 | 31148421.54 | 0.0088 | 0.0025 |
| Neptune | 80570-05-20 23:46 G | 31148788.30 | 31148788.49 | 31148788.70 | 0.0088 | 0.0057 |
| Neptune | 80571-05-23 18:15 G | 31149156.12 | 31149156.26 | 31149156.44 | 0.0088 | 0.0070 |
| Uranus | 80574-10-04 12:00 G | 31150385.87 | 31150386.00 | 31150386.16 | 0.0137 | 0.0113 |
| Saturn | 80575-03-29 12:44 G | 31150561.96 | 31150562.03 | 31150562.11 | 0.0271 | 0.0257 |
| Uranus | 80575-10-09 05:32 G | 31150755.52 | 31150755.73 | 31150755.95 | 0.0136 | 0.0065 |
| Saturn | 80576-04-09 21:36 G | 31150939.21 | 31150939.40 | 31150939.61 | 0.0269 | 0.0146 |
| Uranus | 80576-10-12 10:05 G | 31151124.67 | 31151124.92 | 31151125.18 | 0.0136 | 0.0025 |
| Uranus | 80577-10-17 01:41 G | 31151494.33 | 31151494.57 | 31151494.81 | 0.0136 | 0.0034 |
| Uranus | 80578-10-21 04:48 G | 31151863.48 | 31151863.70 | 31151863.93 | 0.0135 | 0.0066 |
| Uranus | 80579-10-25 18:15 G | 31152233.18 | 31152233.26 | 31152233.36 | 0.0135 | 0.0126 |
| Saturn | 80590-10-02 14:39 G | 31156227.97 | 31156228.11 | 31156228.25 | 0.0290 | 0.0232 |
| Saturn | 80591-10-16 18:58 G | 31156607.19 | 31156607.29 | 31156607.39 | 0.0293 | 0.0265 |
| Jupiter | 80599-11-06 03:08 G | 31159549.40 | 31159549.63 | 31159549.87 | 0.0512 | 0.0084 |
| Saturn | 80605-04-06 00:29 G | 31161526.27 | 31161526.52 | 31161526.78 | 0.0269 | 0.0033 |
| Jupiter | 80605-05-03 15:22 G | 31161553.94 | 31161554.14 | 31161554.35 | 0.0516 | 0.0276 |

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| Pluto | 80607-06-24 03:51 G | 31162335.41 | 31162335.66 | 31162335.92 | 0.0081 | 0.0001 |
| Jupiter | 80611-11-11 11:03 G | 31163936.80 | 31163936.96 | 31163937.13 | 0.0515 | 0.0362 |
| Jupiter | 80617-05-08 12:00 G | 31165941.78 | 31165942.00 | 31165942.21 | 0.0514 | 0.0171 |
| Mars | 80618-02-20 00:00 G | 31166229.48 | 31166229.50 | 31166229.52 | 0.1625 | 0.1610 |
| Uranus | 80618-04-01 16:20 G | 31166270.12 | 31166270.18 | 31166270.27 | 0.0142 | 0.0135 |
| Uranus | 80619-04-06 20:24 G | 31166640.14 | 31166640.35 | 31166640.59 | 0.0142 | 0.0067 |
| Uranus | 80620-04-10 11:03 G | 31167009.71 | 31167009.96 | 31167010.21 | 0.0142 | 0.0026 |
| Saturn | 80620-10-10 15:08 G | 31167192.88 | 31167193.13 | 31167193.38 | 0.0291 | 0.0028 |
| Uranus | 80621-04-15 16:20 G | 31167379.94 | 31167380.18 | 31167380.43 | 0.0143 | 0.0036 |
| Uranus | 80622-04-20 08:10 G | 31167749.65 | 31167749.84 | 31167750.05 | 0.0143 | 0.0092 |
| Uranus | 80623-04-25 14:10 G | 31168120.05 | 31168120.09 | 31168120.17 | 0.0143 | 0.0139 |
| Saturn | 80634-03-31 20:24 G | 31172113.20 | 31172113.35 | 31172113.49 | 0.0271 | 0.0213 |
| Saturn | 80635-04-13 07:12 G | 31172490.64 | 31172490.80 | 31172490.98 | 0.0269 | 0.0191 |
| Neptune | 80646-11-09 02:10 G | 31176718.54 | 31176718.59 | 31176718.67 | 0.0090 | 0.0086 |
| Neptune | 80647-11-11 13:41 G | 31177085.92 | 31177086.07 | 31177086.25 | 0.0090 | 0.0070 |
| Neptune | 80648-11-13 04:05 G | 31177453.46 | 31177453.67 | 31177453.91 | 0.0090 | 0.0039 |
| Saturn | 80649-10-05 05:03 G | 31177779.53 | 31177779.71 | 31177779.90 | 0.0290 | 0.0180 |
| Neptune | 80649-11-15 11:17 G | 31177820.73 | 31177820.97 | 31177821.23 | 0.0090 | 0.0023 |
| Neptune | 80650-11-18 04:48 G | 31178188.45 | 31178188.70 | 31178188.95 | 0.0090 | 0.0009 |
| Neptune | 80651-11-20 09:08 G | 31178555.65 | 31178555.88 | 31178556.13 | 0.0090 | 0.0025 |
| Neptune | 80652-11-22 03:22 G | 31178923.45 | 31178923.64 | 31178923.85 | 0.0090 | 0.0056 |
| Neptune | 80653-11-24 08:24 G | 31179290.72 | 31179290.85 | 31179291.02 | 0.0090 | 0.0071 |
| Uranus | 80658-10-05 23:46 G | 31181067.34 | 31181067.49 | 31181067.64 | 0.0137 | 0.0111 |
| Uranus | 80659-10-10 17:17 G | 31181437.01 | 31181437.22 | 31181437.45 | 0.0136 | 0.0064 |
| Uranus | 80660-10-13 21:08 G | 31181806.12 | 31181806.38 | 31181806.63 | 0.0136 | 0.0010 |
| Uranus | 80661-10-18 12:44 G | 31182175.80 | 31182176.03 | 31182176.28 | 0.0136 | 0.0027 |
| Uranus | 80662-10-22 15:22 G | 31182544.96 | 31182545.14 | 31182545.35 | 0.0136 | 0.0087 |
| Uranus | 80663-10-27 05:32 G | 31182914.64 | 31182914.73 | 31182914.86 | 0.0135 | 0.0120 |
| Saturn | 80664-04-07 03:51 G | 31183077.41 | 31183077.66 | 31183077.91 | 0.0269 | 0.0015 |
| Saturn | 80679-10-13 00:00 G | 31188744.27 | 31188744.50 | 31188744.74 | 0.0291 | 0.0083 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 80682-11-06 02:24 G | 31189864.39 | 31189864.60 | 31189864.82 | 0.0512 | 0.0152 |
| Jupiter | 80688-05-02 13:12 G | 31191868.91 | 31191869.05 | 31191869.21 | 0.0516 | 0.0380 |
| Saturn | 80693-04-02 07:27 G | 31193664.62 | 31193664.81 | 31193665.00 | 0.0271 | 0.0163 |
| Saturn | 80694-04-14 13:56 G | 31194041.97 | 31194042.08 | 31194042.21 | 0.0269 | 0.0236 |
| Jupiter | 80694-11-11 01:12 G | 31194252.37 | 31194252.55 | 31194252.75 | 0.0514 | 0.0295 |
| Jupiter | 80700-05-08 13:56 G | 31196256.84 | 31196257.08 | 31196257.32 | 0.0514 | 0.0061 |
| Uranus | 80702-04-03 05:46 G | 31196951.61 | 31196951.74 | 31196951.91 | 0.0141 | 0.0114 |
| Uranus | 80703-04-08 09:22 G | 31197321.69 | 31197321.89 | 31197322.12 | 0.0142 | 0.0075 |
| Uranus | 80704-04-12 00:15 G | 31197691.26 | 31197691.51 | 31197691.77 | 0.0142 | 0.0007 |
| Uranus | 80705-04-17 05:32 G | 31198061.50 | 31198061.73 | 31198061.99 | 0.0142 | 0.0040 |
| Uranus | 80706-04-21 21:36 G | 31198431.22 | 31198431.40 | 31198431.60 | 0.0143 | 0.0094 |
| Saturn | 80708-10-07 20:24 G | 31199331.13 | 31199331.35 | 31199331.57 | 0.0291 | 0.0122 |
| Saturn | 80723-04-10 12:44 G | 31204628.80 | 31204629.03 | 31204629.27 | 0.0269 | 0.0063 |
| Neptune | 80729-05-10 20:39 G | 31206851.21 | 31206851.36 | 31206851.52 | 0.0088 | 0.0071 |
| Neptune | 80730-05-13 12:58 G | 31207218.84 | 31207219.04 | 31207219.27 | 0.0088 | 0.0047 |
| Neptune | 80731-05-15 18:44 G | 31207586.05 | 31207586.28 | 31207586.55 | 0.0088 | 0.0026 |
| Neptune | 80732-05-17 13:56 G | 31207953.82 | 31207954.08 | 31207954.34 | 0.0088 | 0.0002 |
| Neptune | 80733-05-19 18:44 G | 31208321.04 | 31208321.28 | 31208321.54 | 0.0088 | 0.0021 |
| Neptune | 80734-05-22 12:58 G | 31208688.82 | 31208689.04 | 31208689.29 | 0.0088 | 0.0043 |
| Neptune | 80735-05-24 20:53 G | 31209056.20 | 31209056.37 | 31209056.54 | 0.0088 | 0.0065 |
| Neptune | 80736-05-26 10:34 G | 31209423.94 | 31209423.94 | 31209423.99 | 0.0088 | 0.0088 |
| Saturn | 80738-10-15 17:32 G | 31210296.03 | 31210296.23 | 31210296.44 | 0.0291 | 0.0144 |
| Uranus | 80742-10-07 09:36 G | 31211748.74 | 31211748.90 | 31211749.08 | 0.0137 | 0.0101 |
| Uranus | 80743-10-12 03:36 G | 31212118.43 | 31212118.65 | 31212118.89 | 0.0136 | 0.0056 |
| Uranus | 80744-10-15 07:27 G | 31212487.55 | 31212487.81 | 31212488.06 | 0.0136 | 0.0013 |
| Uranus | 80745-10-20 00:00 G | 31212857.26 | 31212857.50 | 31212857.74 | 0.0136 | 0.0045 |
| Uranus | 80746-10-24 01:56 G | 31213226.38 | 31213226.58 | 31213226.80 | 0.0136 | 0.0078 |
| Saturn | 80752-04-04 17:03 G | 31215215.99 | 31215216.21 | 31215216.45 | 0.0270 | 0.0113 |
| Pluto | 80764-12-24 14:53 G | 31219862.88 | 31219863.12 | 31219863.37 | 0.0063 | 0.0004 |
| Jupiter | 80765-11-06 10:48 G | 31220179.74 | 31220179.95 | 31220180.15 | 0.0511 | 0.0237 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 80767-10-10 09:36 G | 31220882.65 | 31220882.90 | 31220883.14 | 0.0291 | 0.0061 |
| Jupiter | 80771-05-03 15:51 G | 31222184.07 | 31222184.16 | 31222184.25 | 0.0517 | 0.0479 |
| Jupiter | 80777-11-10 16:20 G | 31224566.96 | 31224567.18 | 31224567.40 | 0.0513 | 0.0194 |
| Saturn | 80782-04-12 02:24 G | 31226180.38 | 31226180.60 | 31226180.82 | 0.0269 | 0.0114 |
| Jupiter | 80783-05-08 07:12 G | 31226571.57 | 31226571.80 | 31226572.04 | 0.0515 | 0.0028 |
| Mars | 80784-08-25 01:56 G | 31227046.53 | 31227046.58 | 31227046.62 | 0.1902 | 0.1847 |
| Uranus | 80786-04-03 18:58 G | 31227633.18 | 31227633.29 | 31227633.43 | 0.0141 | 0.0121 |
| Uranus | 80787-04-08 22:05 G | 31228003.20 | 31228003.42 | 31228003.68 | 0.0142 | 0.0053 |
| Uranus | 80788-04-12 12:58 G | 31228372.80 | 31228373.04 | 31228373.30 | 0.0142 | 0.0013 |
| Uranus | 80789-04-17 18:15 G | 31228743.03 | 31228743.26 | 31228743.51 | 0.0142 | 0.0050 |
| Uranus | 80790-04-22 09:51 G | 31229112.75 | 31229112.91 | 31229113.09 | 0.0143 | 0.0105 |
| Jupiter | 80795-05-13 12:58 G | 31230959.96 | 31230960.04 | 31230960.13 | 0.0513 | 0.0477 |
| Saturn | 80796-10-03 09:22 G | 31231468.85 | 31231468.89 | 31231468.96 | 0.0289 | 0.0281 |
| Saturn | 80797-10-17 13:56 G | 31231847.91 | 31231848.08 | 31231848.25 | 0.0292 | 0.0206 |
| Saturn | 80811-04-06 22:48 G | 31236767.21 | 31236767.45 | 31236767.70 | 0.0270 | 0.0062 |
| Neptune | 80811-11-12 00:29 G | 31236986.43 | 31236986.52 | 31236986.66 | 0.0090 | 0.0079 |
| Neptune | 80812-11-13 06:44 G | 31237353.58 | 31237353.78 | 31237354.02 | 0.0090 | 0.0048 |
| Neptune | 80813-11-16 01:12 G | 31237721.32 | 31237721.55 | 31237721.79 | 0.0090 | 0.0031 |
| Neptune | 80814-11-18 05:46 G | 31238088.49 | 31238088.74 | 31238089.00 | 0.0090 | 0.0002 |
| Neptune | 80815-11-20 23:32 G | 31238456.24 | 31238456.48 | 31238456.75 | 0.0090 | 0.0016 |
| Neptune | 80816-11-22 05:46 G | 31238823.54 | 31238823.74 | 31238823.97 | 0.0090 | 0.0045 |
| Neptune | 80817-11-24 20:24 G | 31239191.18 | 31239191.35 | 31239191.56 | 0.0090 | 0.0063 |
| Mars | 80823-02-19 16:05 G | 31241103.98 | 31241104.17 | 31241104.36 | 0.1630 | 0.0207 |
| Uranus | 80826-10-07 21:22 G | 31242430.24 | 31242430.39 | 31242430.58 | 0.0137 | 0.0102 |
| Saturn | 80826-10-11 21:22 G | 31242434.14 | 31242434.39 | 31242434.64 | 0.0291 | 0.0004 |
| Uranus | 80827-10-12 15:36 G | 31242799.93 | 31242800.15 | 31242800.39 | 0.0136 | 0.0052 |
| Uranus | 80828-10-15 18:58 G | 31243169.04 | 31243169.29 | 31243169.54 | 0.0136 | 0.0001 |
| Uranus | 80829-10-20 11:17 G | 31243538.74 | 31243538.97 | 31243539.22 | 0.0136 | 0.0038 |
| Uranus | 80830-10-24 12:58 G | 31243907.88 | 31243908.04 | 31243908.23 | 0.0136 | 0.0099 |
| Uranus | 80831-10-29 04:05 G | 31244277.63 | 31244277.67 | 31244277.76 | 0.0135 | 0.0131 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 80840-04-01 06:00 G | 31247354.64 | 31247354.75 | 31247354.87 | 0.0270 | 0.0235 |
| Saturn | 80841-04-13 15:36 G | 31247731.96 | 31247732.15 | 31247732.35 | 0.0268 | 0.0165 |
| Jupiter | 80848-11-05 02:39 G | 31250494.44 | 31250494.61 | 31250494.79 | 0.0511 | 0.0333 |
| Pluto | 80855-06-27 01:27 G | 31252919.34 | 31252919.56 | 31252919.79 | 0.0081 | 0.0044 |
| Saturn | 80855-10-06 06:15 G | 31253020.61 | 31253020.76 | 31253020.93 | 0.0290 | 0.0217 |
| Saturn | 80856-10-19 07:56 G | 31253399.75 | 31253399.83 | 31253399.92 | 0.0292 | 0.0272 |
| Jupiter | 80860-11-09 23:46 G | 31254882.27 | 31254882.49 | 31254882.71 | 0.0513 | 0.0103 |
| Jupiter | 80866-05-07 15:08 G | 31256886.91 | 31256887.13 | 31256887.36 | 0.0515 | 0.0114 |
| Uranus | 80870-04-04 06:44 G | 31258314.61 | 31258314.78 | 31258314.96 | 0.0141 | 0.0102 |
| Saturn | 80870-04-08 05:32 G | 31258318.49 | 31258318.73 | 31258318.98 | 0.0270 | 0.0013 |
| Uranus | 80871-04-09 08:53 G | 31258684.64 | 31258684.87 | 31258685.11 | 0.0142 | 0.0062 |
| Uranus | 80872-04-13 00:15 G | 31259054.26 | 31259054.51 | 31259054.76 | 0.0142 | 0.0006 |
| Uranus | 80873-04-18 05:03 G | 31259424.48 | 31259424.71 | 31259424.96 | 0.0142 | 0.0052 |
| Uranus | 80874-04-22 21:08 G | 31259794.23 | 31259794.38 | 31259794.56 | 0.0143 | 0.0109 |
| Jupiter | 80878-05-12 03:36 G | 31261274.49 | 31261274.65 | 31261274.81 | 0.0513 | 0.0376 |
| Saturn | 80885-10-13 10:48 G | 31263985.71 | 31263985.95 | 31263986.19 | 0.0291 | 0.0059 |
| Neptune | 80893-05-10 08:53 G | 31266751.76 | 31266751.87 | 31266752.03 | 0.0088 | 0.0074 |
| Neptune | 80894-05-12 13:56 G | 31267118.91 | 31267119.08 | 31267119.29 | 0.0088 | 0.0060 |
| Neptune | 80895-05-15 08:53 G | 31267486.64 | 31267486.87 | 31267487.14 | 0.0088 | 0.0029 |
| Neptune | 80896-05-16 14:10 G | 31267853.85 | 31267854.09 | 31267854.36 | 0.0088 | 0.0016 |
| Neptune | 80897-05-19 07:27 G | 31268221.55 | 31268221.81 | 31268222.08 | 0.0088 | 0.0016 |
| Neptune | 80898-05-21 15:36 G | 31268588.92 | 31268589.15 | 31268589.40 | 0.0088 | 0.0030 |
| Saturn | 80899-04-03 19:27 G | 31268906.13 | 31268906.31 | 31268906.49 | 0.0270 | 0.0183 |
| Neptune | 80899-05-24 04:34 G | 31268956.50 | 31268956.69 | 31268956.89 | 0.0088 | 0.0061 |
| Saturn | 80900-04-15 23:17 G | 31269283.31 | 31269283.47 | 31269283.63 | 0.0268 | 0.0211 |
| Neptune | 80900-05-26 18:00 G | 31269324.13 | 31269324.25 | 31269324.39 | 0.0088 | 0.0075 |
| Uranus | 80910-10-09 07:27 G | 31273111.64 | 31273111.81 | 31273112.02 | 0.0137 | 0.0090 |
| Uranus | 80911-10-14 01:41 G | 31273481.33 | 31273481.57 | 31273481.81 | 0.0136 | 0.0045 |
| Uranus | 80912-10-17 05:03 G | 31273850.46 | 31273850.71 | 31273850.96 | 0.0136 | 0.0001 |
| Uranus | 80913-10-21 21:36 G | 31274220.18 | 31274220.40 | 31274220.64 | 0.0136 | 0.0056 |

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| Saturn | 80914-10-08 22:05 G | 31274572.21 | 31274572.42 | 31274572.63 | 0.0290 | 0.0157 |
| Uranus | 80914-10-25 23:17 G | 31274589.30 | 31274589.47 | 31274589.68 | 0.0136 | 0.0090 |
| Saturn | 80929-04-10 17:32 G | 31279870.00 | 31279870.23 | 31279870.47 | 0.0269 | 0.0035 |
| Jupiter | 80931-11-06 12:29 G | 31280809.89 | 31280810.02 | 31280810.16 | 0.0510 | 0.0412 |
| Jupiter | 80943-11-10 22:34 G | 31285197.20 | 31285197.44 | 31285197.68 | 0.0512 | 0.0016 |
| Saturn | 80944-10-16 03:22 G | 31285537.43 | 31285537.64 | 31285537.87 | 0.0292 | 0.0114 |
| Jupiter | 80949-05-07 04:48 G | 31287201.48 | 31287201.70 | 31287201.92 | 0.0516 | 0.0213 |
| Uranus | 80954-04-05 16:20 G | 31288996.05 | 31288996.18 | 31288996.36 | 0.0141 | 0.0110 |
| Uranus | 80955-04-10 18:15 G | 31289366.01 | 31289366.26 | 31289366.51 | 0.0142 | 0.0042 |
| Jupiter | 80955-11-15 12:00 G | 31289584.90 | 31289585.00 | 31289585.10 | 0.0514 | 0.0458 |
| Uranus | 80956-04-14 10:20 G | 31289735.68 | 31289735.93 | 31289736.18 | 0.0142 | 0.0002 |
| Uranus | 80957-04-19 14:24 G | 31290105.88 | 31290106.10 | 31290106.34 | 0.0142 | 0.0063 |
| Saturn | 80958-04-06 02:24 G | 31290457.39 | 31290457.60 | 31290457.83 | 0.0270 | 0.0137 |
| Uranus | 80958-04-24 06:44 G | 31290475.64 | 31290475.78 | 31290475.93 | 0.0143 | 0.0116 |
| Saturn | 80959-04-18 02:53 G | 31290834.56 | 31290834.62 | 31290834.71 | 0.0268 | 0.0254 |
| Jupiter | 80961-05-12 07:41 G | 31291589.64 | 31291589.82 | 31291590.01 | 0.0514 | 0.0302 |
| Saturn | 80973-10-10 06:00 G | 31296123.52 | 31296123.75 | 31296123.99 | 0.0291 | 0.0106 |
| Neptune | 80975-11-12 04:20 G | 31296886.57 | 31296886.68 | 31296886.80 | 0.0090 | 0.0080 |
| Neptune | 80976-11-13 22:20 G | 31297254.27 | 31297254.43 | 31297254.63 | 0.0090 | 0.0063 |
| Neptune | 80977-11-16 03:22 G | 31297621.41 | 31297621.64 | 31297621.88 | 0.0090 | 0.0034 |
| Neptune | 80978-11-18 21:08 G | 31297989.12 | 31297989.38 | 31297989.63 | 0.0090 | 0.0017 |
| Neptune | 80979-11-21 04:05 G | 31298356.43 | 31298356.67 | 31298356.92 | 0.0090 | 0.0013 |
| Neptune | 80980-11-22 17:32 G | 31298723.99 | 31298724.23 | 31298724.49 | 0.0090 | 0.0031 |
| Neptune | 80981-11-25 04:34 G | 31299091.53 | 31299091.69 | 31299091.89 | 0.0090 | 0.0061 |
| Neptune | 80982-11-27 13:12 G | 31299458.94 | 31299459.05 | 31299459.21 | 0.0090 | 0.0077 |
| Saturn | 80988-04-12 05:17 G | 31301421.49 | 31301421.72 | 31301421.96 | 0.0269 | 0.0080 |
| Uranus | 80993-10-05 13:27 G | 31303424.00 | 31303424.06 | 31303424.17 | 0.0137 | 0.0129 |
| Uranus | 80994-10-09 18:44 G | 31303793.11 | 31303793.28 | 31303793.48 | 0.0137 | 0.0092 |
| Uranus | 80995-10-14 12:44 G | 31304162.79 | 31304163.03 | 31304163.28 | 0.0136 | 0.0039 |
| Uranus | 80996-10-17 16:20 G | 31304531.93 | 31304532.18 | 31304532.43 | 0.0136 | 0.0010 |

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| Uranus | 80997-10-22 08:10 G | 31304901.62 | 31304901.84 | 31304902.09 | 0.0136 | 0.0050 |
| Uranus | 80998-10-26 10:05 G | 31305270.79 | 31305270.92 | 31305271.09 | 0.0136 | 0.0110 |

82ND MILLENNIUM CE

This is a list of transits of Moon in the 82nd millennium CE.

| | FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------------------|-------------|-------------|--------|--------|--------|-------|---|
| Saturn | 81003-10-19 16:20 G | 31307088.98 | 31307089.18 | 31307089.38 | 0.0292 | 0.0161 | | | |
| Pluto | 81012-12-28 09:22 G | 31310446.64 | 31310446.89 | 31310447.15 | 0.0063 | 0.0018 | | | |
| Jupiter | 81014-11-06 13:12 G | 31311124.98 | 31311125.05 | 31311125.12 | 0.0509 | 0.0485 | | | |
| Saturn | 81017-04-08 05:46 G | 31312008.50 | 31312008.74 | 31312008.98 | 0.0270 | 0.0090 | | | |
| Jupiter | 81026-11-11 00:29 G | 31315512.31 | 31315512.52 | 31315512.75 | 0.0511 | 0.0077 | | | |
| Mars | 81028-02-21 06:00 G | 31315979.60 | 31315979.75 | 31315979.90 | 0.1636 | 0.0862 | | | |
| Jupiter | 81032-05-07 14:39 G | 31317516.92 | 31317517.11 | 31317517.30 | 0.0517 | 0.0285 | | | |
| Saturn | 81032-10-12 12:44 G | 31317674.79 | 31317675.03 | 31317675.27 | 0.0291 | 0.0059 | | | |
| Uranus | 81038-04-07 02:10 G | 31319677.41 | 31319677.59 | 31319677.78 | 0.0141 | 0.0094 | | | |
| Jupiter | 81038-11-15 19:12 G | 31319900.14 | 31319900.30 | 31319900.46 | 0.0514 | 0.0377 | | | |
| Uranus | 81039-04-12 02:10 G | 31320047.34 | 31320047.59 | 31320047.83 | 0.0142 | 0.0052 | | | |
| Uranus | 81040-04-15 18:58 G | 31320417.05 | 31320417.29 | 31320417.55 | 0.0142 | 0.0017 | | | |
| Uranus | 81041-04-20 22:34 G | 31320787.21 | 31320787.44 | 31320787.69 | 0.0142 | 0.0061 | | | |
| Uranus | 81042-04-25 15:36 G | 31321157.03 | 31321157.15 | 31321157.29 | 0.0143 | 0.0121 | | | |
| Jupiter | 81044-05-12 11:32 G | 31321904.77 | 31321904.98 | 31321905.20 | 0.0514 | 0.0242 | | | |
| Saturn | 81047-04-15 11:17 G | 31322972.75 | 31322972.97 | 31322973.20 | 0.0269 | 0.0122 | | | |
| Neptune | 81057-05-11 09:51 G | 31326651.85 | 31326651.91 | 31326652.01 | 0.0088 | 0.0083 | | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 81058-05-14 04:34 G | 31327019.54 | 31327019.69 | 31327019.89 | 0.0088 | 0.0066 |
| Neptune | 81059-05-16 10:34 G | 31327386.73 | 31327386.94 | 31327387.18 | 0.0088 | 0.0040 |
| Neptune | 81060-05-18 03:08 G | 31327754.38 | 31327754.63 | 31327754.90 | 0.0088 | 0.0021 |
| Neptune | 81061-05-20 12:58 G | 31328121.80 | 31328122.04 | 31328122.30 | 0.0088 | 0.0006 |
| Saturn | 81061-10-06 20:10 G | 31328261.29 | 31328261.34 | 31328261.40 | 0.0290 | 0.0281 |
| Neptune | 81062-05-23 00:44 G | 31328489.28 | 31328489.53 | 31328489.80 | 0.0088 | 0.0025 |
| Saturn | 81062-10-20 19:41 G | 31328640.15 | 31328640.32 | 31328640.51 | 0.0292 | 0.0203 |
| Neptune | 81063-05-25 14:39 G | 31328856.92 | 31328857.11 | 31328857.34 | 0.0088 | 0.0051 |
| Neptune | 81064-05-26 21:36 G | 31329224.26 | 31329224.40 | 31329224.59 | 0.0088 | 0.0069 |
| Mars | 81068-08-26 12:29 G | 31330776.85 | 31330777.02 | 31330777.20 | 0.1896 | 0.0491 |
| Saturn | 81076-04-09 09:36 G | 31333559.67 | 31333559.90 | 31333560.14 | 0.0269 | 0.0047 |
| Uranus | 81078-10-11 03:36 G | 31334474.46 | 31334474.65 | 31334474.86 | 0.0137 | 0.0079 |
| Uranus | 81079-10-15 20:53 G | 31334844.13 | 31334844.37 | 31334844.62 | 0.0136 | 0.0037 |
| Uranus | 81080-10-19 00:58 G | 31335213.29 | 31335213.54 | 31335213.79 | 0.0136 | 0.0010 |
| Uranus | 81081-10-23 17:03 G | 31335583.00 | 31335583.21 | 31335583.45 | 0.0136 | 0.0065 |
| Uranus | 81082-10-27 19:41 G | 31335952.17 | 31335952.32 | 31335952.50 | 0.0136 | 0.0101 |
| Saturn | 81091-10-14 20:10 G | 31339226.10 | 31339226.34 | 31339226.57 | 0.0291 | 0.0015 |
| Pluto | 81103-07-01 23:03 G | 31343503.35 | 31343503.46 | 31343503.59 | 0.0081 | 0.0071 |
| Saturn | 81105-04-05 10:05 G | 31344146.80 | 31344146.92 | 31344147.07 | 0.0270 | 0.0228 |
| Saturn | 81106-04-17 11:03 G | 31344523.77 | 31344523.96 | 31344524.18 | 0.0268 | 0.0159 |
| Mars | 81107-02-24 02:10 G | 31344836.43 | 31344836.59 | 31344836.75 | 0.1633 | 0.0702 |
| Jupiter | 81109-11-11 11:46 G | 31345827.77 | 31345827.99 | 31345828.22 | 0.0511 | 0.0139 |
| Jupiter | 81115-05-08 18:15 G | 31347832.08 | 31347832.26 | 31347832.45 | 0.0517 | 0.0349 |
| Saturn | 81120-10-08 19:27 G | 31349812.19 | 31349812.31 | 31349812.47 | 0.0290 | 0.0242 |
| Saturn | 81121-10-22 17:46 G | 31350191.11 | 31350191.24 | 31350191.39 | 0.0292 | 0.0239 |
| Jupiter | 81121-11-15 21:36 G | 31350215.23 | 31350215.40 | 31350215.58 | 0.0513 | 0.0324 |
| Uranus | 81122-04-08 12:29 G | 31350358.86 | 31350359.02 | 31350359.21 | 0.0141 | 0.0099 |
| Uranus | 81123-04-13 11:32 G | 31350728.73 | 31350728.98 | 31350729.24 | 0.0142 | 0.0032 |
| Uranus | 81124-04-17 05:46 G | 31351098.49 | 31351098.74 | 31351098.98 | 0.0142 | 0.0008 |
| Uranus | 81125-04-22 07:41 G | 31351468.62 | 31351468.82 | 31351469.06 | 0.0142 | 0.0076 |

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| Uranus | 81126-04-27 01:12 G | 31351838.46 | 31351838.55 | 31351838.69 | 0.0143 | 0.0126 |
| Jupiter | 81127-05-13 10:34 G | 31352219.72 | 31352219.94 | 31352220.16 | 0.0515 | 0.0161 |
| Saturn | 81135-04-12 16:34 G | 31355110.95 | 31355111.19 | 31355111.43 | 0.0269 | 0.0007 |
| Neptune | 81139-11-13 20:10 G | 31356787.31 | 31356787.34 | 31356787.42 | 0.0090 | 0.0088 |
| Neptune | 81140-11-15 01:12 G | 31357154.42 | 31357154.55 | 31357154.71 | 0.0090 | 0.0073 |
| Neptune | 81141-11-17 17:32 G | 31357522.02 | 31357522.23 | 31357522.49 | 0.0090 | 0.0042 |
| Neptune | 81142-11-20 01:41 G | 31357889.35 | 31357889.57 | 31357889.82 | 0.0090 | 0.0026 |
| Neptune | 81143-11-22 14:39 G | 31358256.85 | 31358257.11 | 31358257.38 | 0.0090 | 0.0006 |
| Neptune | 81144-11-24 03:36 G | 31358624.41 | 31358624.65 | 31358624.89 | 0.0090 | 0.0021 |
| Neptune | 81145-11-26 11:17 G | 31358991.77 | 31358991.97 | 31358992.20 | 0.0090 | 0.0052 |
| Neptune | 81146-11-29 04:20 G | 31359359.52 | 31359359.68 | 31359359.85 | 0.0090 | 0.0067 |
| Saturn | 81150-10-17 01:41 G | 31360777.34 | 31360777.57 | 31360777.81 | 0.0291 | 0.0025 |
| Uranus | 81161-10-08 06:29 G | 31364786.66 | 31364786.77 | 31364786.90 | 0.0137 | 0.0120 |
| Uranus | 81162-10-12 13:27 G | 31365155.88 | 31365156.06 | 31365156.27 | 0.0137 | 0.0085 |
| Uranus | 81163-10-17 06:00 G | 31365525.51 | 31365525.75 | 31365526.01 | 0.0137 | 0.0030 |
| Saturn | 81164-04-06 07:56 G | 31365697.65 | 31365697.83 | 31365698.01 | 0.0270 | 0.0188 |
| Uranus | 81164-10-20 11:03 G | 31365894.72 | 31365894.96 | 31365895.21 | 0.0136 | 0.0018 |
| Saturn | 81165-04-18 10:05 G | 31366074.77 | 31366074.92 | 31366075.10 | 0.0268 | 0.0196 |
| Uranus | 81165-10-25 02:39 G | 31366264.38 | 31366264.61 | 31366264.84 | 0.0136 | 0.0060 |
| Uranus | 81166-10-29 05:32 G | 31366633.63 | 31366633.73 | 31366633.86 | 0.0136 | 0.0120 |
| Saturn | 81179-10-10 14:39 G | 31371362.95 | 31371363.11 | 31371363.29 | 0.0290 | 0.0209 |
| Saturn | 81180-10-23 17:03 G | 31371742.15 | 31371742.21 | 31371742.30 | 0.0292 | 0.0277 |
| Jupiter | 81192-11-10 17:03 G | 31376143.00 | 31376143.21 | 31376143.42 | 0.0510 | 0.0186 |
| Saturn | 81194-04-13 20:24 G | 31376662.10 | 31376662.35 | 31376662.59 | 0.0269 | 0.0030 |
| Jupiter | 81198-05-07 18:29 G | 31378147.15 | 31378147.27 | 31378147.39 | 0.0518 | 0.0437 |
| Jupiter | 81204-11-15 12:00 G | 31380530.81 | 31380531.00 | 31380531.20 | 0.0512 | 0.0270 |
| Uranus | 81205-04-04 05:17 G | 31380670.72 | 31380670.72 | 31380670.72 | 0.0141 | 0.0141 |
| Uranus | 81206-04-09 00:29 G | 31381040.34 | 31381040.52 | 31381040.73 | 0.0141 | 0.0084 |
| Uranus | 81207-04-13 21:51 G | 31381410.17 | 31381410.41 | 31381410.68 | 0.0142 | 0.0041 |
| Uranus | 81208-04-17 17:17 G | 31381779.98 | 31381780.22 | 31381780.47 | 0.0142 | 0.0029 |

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| Uranus | 81209-04-22 18:44 G | 31382150.06 | 31382150.28 | 31382150.51 | 0.0142 | 0.0071 |
| Saturn | 81209-10-18 00:58 G | 31382328.30 | 31382328.54 | 31382328.79 | 0.0292 | 0.0060 |
| Uranus | 81210-04-27 12:58 G | 31382519.98 | 31382520.04 | 31382520.14 | 0.0142 | 0.0135 |
| Jupiter | 81210-05-12 22:48 G | 31382535.21 | 31382535.45 | 31382535.69 | 0.0516 | 0.0111 |
| Neptune | 81222-05-14 07:41 G | 31386919.68 | 31386919.82 | 31386920.00 | 0.0088 | 0.0068 |
| Saturn | 81223-04-08 06:15 G | 31387248.57 | 31387248.76 | 31387248.97 | 0.0270 | 0.0152 |
| Neptune | 81223-05-16 22:48 G | 31387287.26 | 31387287.45 | 31387287.69 | 0.0088 | 0.0053 |
| Saturn | 81224-04-19 13:56 G | 31387625.97 | 31387626.08 | 31387626.21 | 0.0268 | 0.0228 |
| Neptune | 81224-05-18 09:36 G | 31387654.67 | 31387654.90 | 31387655.16 | 0.0088 | 0.0023 |
| Neptune | 81225-05-20 20:10 G | 31388022.08 | 31388022.34 | 31388022.61 | 0.0088 | 0.0008 |
| Neptune | 81226-05-23 11:32 G | 31388389.74 | 31388389.98 | 31388390.23 | 0.0088 | 0.0023 |
| Neptune | 81227-05-25 18:15 G | 31388757.02 | 31388757.26 | 31388757.50 | 0.0088 | 0.0036 |
| Neptune | 81228-05-27 12:44 G | 31389124.88 | 31389125.03 | 31389125.21 | 0.0088 | 0.0067 |
| Neptune | 81229-05-29 17:17 G | 31389492.15 | 31389492.22 | 31389492.35 | 0.0088 | 0.0081 |
| Saturn | 81238-10-11 12:44 G | 31392913.86 | 31392914.03 | 31392914.23 | 0.0290 | 0.0179 |
| Uranus | 81245-10-08 13:41 G | 31395468.02 | 31395468.07 | 31395468.17 | 0.0137 | 0.0131 |
| Uranus | 81246-10-12 21:51 G | 31395837.21 | 31395837.41 | 31395837.64 | 0.0137 | 0.0070 |
| Uranus | 81247-10-17 13:27 G | 31396206.81 | 31396207.06 | 31396207.32 | 0.0137 | 0.0030 |
| Uranus | 81248-10-20 19:27 G | 31396576.07 | 31396576.31 | 31396576.56 | 0.0136 | 0.0021 |
| Uranus | 81249-10-25 10:34 G | 31396945.73 | 31396945.94 | 31396946.16 | 0.0136 | 0.0073 |
| Uranus | 81250-10-29 14:39 G | 31397315.00 | 31397315.11 | 31397315.27 | 0.0136 | 0.0112 |
| Saturn | 81253-04-14 16:20 G | 31398212.94 | 31398213.18 | 31398213.43 | 0.0269 | 0.0062 |
| Pluto | 81259-12-30 14:53 G | 31400664.10 | 31400664.12 | 31400664.15 | 0.0063 | 0.0062 |
| Pluto | 81260-12-31 00:58 G | 31401030.34 | 31401030.54 | 31401030.79 | 0.0063 | 0.0028 |
| Saturn | 81268-10-18 18:00 G | 31403879.02 | 31403879.25 | 31403879.50 | 0.0292 | 0.0089 |
| Jupiter | 81275-11-11 07:56 G | 31406458.63 | 31406458.83 | 31406459.03 | 0.0510 | 0.0248 |
| Jupiter | 81281-05-07 09:08 G | 31408462.79 | 31408462.88 | 31408462.98 | 0.0519 | 0.0476 |
| Saturn | 81282-04-09 09:22 G | 31408799.68 | 31408799.89 | 31408800.11 | 0.0269 | 0.0118 |
| Saturn | 81283-04-21 18:00 G | 31409177.19 | 31409177.25 | 31409177.31 | 0.0267 | 0.0258 |
| Jupiter | 81287-11-15 15:51 G | 31410845.95 | 31410846.16 | 31410846.37 | 0.0512 | 0.0226 |

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| Uranus | 81289-04-04 15:51 G | 31411352.12 | 31411352.16 | 31411352.25 | 0.0141 | 0.0136 |
| Uranus | 81290-04-09 13:12 G | 31411721.86 | 31411722.05 | 31411722.25 | 0.0141 | 0.0085 |
| Uranus | 81291-04-14 09:51 G | 31412091.66 | 31412091.91 | 31412092.18 | 0.0142 | 0.0021 |
| Uranus | 81292-04-18 06:29 G | 31412461.53 | 31412461.77 | 31412462.02 | 0.0142 | 0.0021 |
| Uranus | 81293-04-23 06:29 G | 31412831.58 | 31412831.77 | 31412831.99 | 0.0142 | 0.0089 |
| Jupiter | 81293-05-12 02:53 G | 31412850.39 | 31412850.62 | 31412850.85 | 0.0516 | 0.0069 |
| Uranus | 81294-04-28 02:10 G | 31413201.53 | 31413201.59 | 31413201.65 | 0.0142 | 0.0138 |
| Saturn | 81297-10-12 14:10 G | 31414464.89 | 31414465.09 | 31414465.30 | 0.0290 | 0.0150 |
| Neptune | 81304-11-15 16:20 G | 31417055.06 | 31417055.18 | 31417055.36 | 0.0090 | 0.0074 |
| Neptune | 81305-11-18 01:27 G | 31417422.39 | 31417422.56 | 31417422.78 | 0.0090 | 0.0055 |
| Neptune | 81306-11-20 13:27 G | 31417789.82 | 31417790.06 | 31417790.32 | 0.0090 | 0.0028 |
| Neptune | 81307-11-23 02:53 G | 31418157.37 | 31418157.62 | 31418157.86 | 0.0090 | 0.0009 |
| Neptune | 81308-11-24 09:36 G | 31418524.65 | 31418524.90 | 31418525.16 | 0.0090 | 0.0018 |
| Neptune | 81309-11-27 02:53 G | 31418892.40 | 31418892.62 | 31418892.85 | 0.0090 | 0.0037 |
| Neptune | 81310-11-29 06:58 G | 31419259.65 | 31419259.79 | 31419259.99 | 0.0090 | 0.0066 |
| Neptune | 81311-12-02 01:12 G | 31419627.49 | 31419627.55 | 31419627.68 | 0.0090 | 0.0084 |
| Mars | 81312-02-24 07:56 G | 31419711.63 | 31419711.83 | 31419712.03 | 0.1639 | 0.0126 |
| Saturn | 81312-04-16 11:32 G | 31419763.75 | 31419763.98 | 31419764.22 | 0.0269 | 0.0093 |
| Saturn | 81327-10-21 13:56 G | 31425429.86 | 31425430.08 | 31425430.30 | 0.0292 | 0.0121 |
| Uranus | 81329-10-09 22:48 G | 31426149.32 | 31426149.45 | 31426149.62 | 0.0137 | 0.0112 |
| Uranus | 81330-10-14 08:39 G | 31426518.67 | 31426518.86 | 31426519.07 | 0.0137 | 0.0077 |
| Uranus | 81331-10-18 23:17 G | 31426888.22 | 31426888.47 | 31426888.74 | 0.0136 | 0.0019 |
| Uranus | 81332-10-22 06:29 G | 31427257.54 | 31427257.77 | 31427258.02 | 0.0136 | 0.0027 |
| Uranus | 81333-10-26 20:39 G | 31427627.14 | 31427627.36 | 31427627.58 | 0.0136 | 0.0071 |
| Uranus | 81334-10-31 01:27 G | 31427996.50 | 31427996.56 | 31427996.65 | 0.0136 | 0.0129 |
| Saturn | 81341-04-11 12:58 G | 31430350.81 | 31430351.04 | 31430351.27 | 0.0269 | 0.0083 |
| Mars | 81352-08-27 12:58 G | 31434506.86 | 31434507.04 | 31434507.23 | 0.1889 | 0.1056 |
| Saturn | 81356-10-14 12:29 G | 31436015.80 | 31436016.02 | 31436016.26 | 0.0290 | 0.0117 |
| Jupiter | 81358-11-11 13:56 G | 31436773.89 | 31436774.08 | 31436774.28 | 0.0509 | 0.0290 |
| Saturn | 81370-04-06 04:34 G | 31440937.61 | 31440937.69 | 31440937.79 | 0.0271 | 0.0252 |

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| Jupiter | 81370-11-16 09:51 G | 31441161.70 | 31441161.91 | 31441162.12 | 0.0511 | 0.0201 |
| Saturn | 81371-04-18 12:29 G | 31441314.81 | 31441315.02 | 31441315.23 | 0.0269 | 0.0126 |
| Uranus | 81373-04-06 02:39 G | 31442033.51 | 31442033.61 | 31442033.73 | 0.0141 | 0.0128 |
| Uranus | 81374-04-11 00:44 G | 31442403.34 | 31442403.53 | 31442403.76 | 0.0141 | 0.0073 |
| Uranus | 81375-04-15 20:10 G | 31442773.09 | 31442773.34 | 31442773.61 | 0.0142 | 0.0027 |
| Uranus | 81376-04-19 18:00 G | 31443143.02 | 31443143.25 | 31443143.49 | 0.0142 | 0.0042 |
| Jupiter | 81376-05-12 11:03 G | 31443165.73 | 31443165.96 | 31443166.19 | 0.0517 | 0.0006 |
| Uranus | 81377-04-24 16:48 G | 31443513.01 | 31443513.20 | 31443513.43 | 0.0142 | 0.0085 |
| Neptune | 81386-05-14 18:44 G | 31446820.16 | 31446820.28 | 31446820.44 | 0.0088 | 0.0075 |
| Saturn | 81386-10-22 16:34 G | 31446980.99 | 31446981.19 | 31446981.39 | 0.0292 | 0.0158 |
| Neptune | 81387-05-17 07:27 G | 31447187.63 | 31447187.81 | 31447188.00 | 0.0088 | 0.0059 |
| Jupiter | 81388-05-17 04:05 G | 31447553.62 | 31447553.67 | 31447553.71 | 0.0515 | 0.0504 |
| Neptune | 81388-05-18 17:03 G | 31447554.96 | 31447555.21 | 31447555.47 | 0.0088 | 0.0031 |
| Neptune | 81389-05-21 09:36 G | 31447922.65 | 31447922.90 | 31447923.16 | 0.0088 | 0.0015 |
| Neptune | 81390-05-23 15:08 G | 31448289.88 | 31448290.13 | 31448290.41 | 0.0088 | 0.0014 |
| Neptune | 81391-05-26 10:05 G | 31448657.69 | 31448657.92 | 31448658.18 | 0.0088 | 0.0031 |
| Neptune | 81392-05-27 14:39 G | 31449024.95 | 31449025.11 | 31449025.33 | 0.0088 | 0.0059 |
| Neptune | 81393-05-30 09:22 G | 31449392.75 | 31449392.89 | 31449393.02 | 0.0088 | 0.0075 |
| Saturn | 81400-04-13 13:27 G | 31451901.81 | 31451902.06 | 31451902.31 | 0.0269 | 0.0045 |
| Uranus | 81413-10-11 07:27 G | 31456830.71 | 31456830.81 | 31456830.95 | 0.0137 | 0.0122 |
| Uranus | 81414-10-15 18:15 G | 31457200.05 | 31457200.26 | 31457200.49 | 0.0137 | 0.0060 |
| Saturn | 81415-10-17 07:27 G | 31457566.57 | 31457566.81 | 31457567.06 | 0.0290 | 0.0079 |
| Uranus | 81415-10-20 07:27 G | 31457569.56 | 31457569.81 | 31457570.08 | 0.0136 | 0.0021 |
| Uranus | 81416-10-23 15:36 G | 31457938.92 | 31457939.15 | 31457939.40 | 0.0136 | 0.0033 |
| Uranus | 81417-10-28 04:20 G | 31458308.50 | 31458308.68 | 31458308.91 | 0.0136 | 0.0083 |
| Uranus | 81418-11-01 11:32 G | 31458677.88 | 31458677.98 | 31458678.08 | 0.0136 | 0.0123 |
| Saturn | 81429-04-08 05:32 G | 31462488.60 | 31462488.73 | 31462488.89 | 0.0271 | 0.0216 |
| Saturn | 81430-04-20 17:17 G | 31462866.03 | 31462866.22 | 31462866.41 | 0.0269 | 0.0160 |
| Jupiter | 81441-11-12 02:24 G | 31467089.45 | 31467089.60 | 31467089.77 | 0.0509 | 0.0352 |
| Saturn | 81444-10-10 18:15 G | 31468153.23 | 31468153.26 | 31468153.31 | 0.0289 | 0.0285 |

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| Saturn | 81445-10-24 21:22 G | 31468532.22 | 31468532.39 | 31468532.58 | 0.0292 | 0.0198 |
| Jupiter | 81453-11-16 13:27 G | 31471476.83 | 31471477.06 | 31471477.29 | 0.0511 | 0.0131 |
| Uranus | 81457-04-07 11:32 G | 31472714.88 | 31472714.98 | 31472715.11 | 0.0141 | 0.0127 |
| Uranus | 81458-04-12 11:32 G | 31473084.77 | 31473084.98 | 31473085.19 | 0.0141 | 0.0073 |
| Saturn | 81459-04-15 11:03 G | 31473452.71 | 31473452.96 | 31473453.22 | 0.0269 | 0.0011 |
| Uranus | 81459-04-17 05:46 G | 31473454.48 | 31473454.74 | 31473455.00 | 0.0142 | 0.0009 |
| Jupiter | 81459-05-13 12:58 G | 31473480.80 | 31473481.04 | 31473481.28 | 0.0518 | 0.0056 |
| Uranus | 81460-04-21 04:48 G | 31473824.46 | 31473824.70 | 31473824.94 | 0.0142 | 0.0033 |
| Uranus | 81461-04-26 02:10 G | 31474194.42 | 31474194.59 | 31474194.79 | 0.0142 | 0.0103 |
| Neptune | 81468-11-16 00:44 G | 31476955.42 | 31476955.53 | 31476955.65 | 0.0090 | 0.0079 |
| Neptune | 81469-11-18 11:03 G | 31477322.80 | 31477322.96 | 31477323.16 | 0.0090 | 0.0065 |
| Neptune | 81470-11-21 01:41 G | 31477690.36 | 31477690.57 | 31477690.82 | 0.0090 | 0.0034 |
| Jupiter | 81471-05-18 16:48 G | 31477869.10 | 31477869.20 | 31477869.32 | 0.0515 | 0.0453 |
| Neptune | 81471-11-23 08:24 G | 31478057.61 | 31478057.85 | 31478058.11 | 0.0090 | 0.0019 |
| Neptune | 81472-11-25 02:10 G | 31478425.35 | 31478425.59 | 31478425.85 | 0.0090 | 0.0014 |
| Neptune | 81473-11-27 06:44 G | 31478792.55 | 31478792.78 | 31478793.03 | 0.0090 | 0.0028 |
| Saturn | 81474-10-18 08:24 G | 31479117.61 | 31479117.85 | 31479118.09 | 0.0290 | 0.0036 |
| Neptune | 81474-11-30 00:58 G | 31479160.35 | 31479160.54 | 31479160.74 | 0.0090 | 0.0059 |
| Neptune | 81475-12-02 06:15 G | 31479527.65 | 31479527.76 | 31479527.93 | 0.0090 | 0.0074 |
| Saturn | 81488-04-09 12:58 G | 31484039.87 | 31484040.04 | 31484040.23 | 0.0271 | 0.0178 |
| Saturn | 81489-04-21 21:08 G | 31484417.22 | 31484417.38 | 31484417.55 | 0.0269 | 0.0199 |
| Uranus | 81497-10-11 16:48 G | 31487512.05 | 31487512.20 | 31487512.39 | 0.0137 | 0.0103 |
| Uranus | 81498-10-16 05:03 G | 31487881.52 | 31487881.71 | 31487881.94 | 0.0137 | 0.0068 |
| Uranus | 81499-10-20 17:32 G | 31488250.97 | 31488251.23 | 31488251.49 | 0.0136 | 0.0007 |
| Uranus | 81500-10-25 02:53 G | 31488620.40 | 31488620.62 | 31488620.87 | 0.0136 | 0.0036 |
| Uranus | 81501-10-29 14:24 G | 31488989.91 | 31488990.10 | 31488990.33 | 0.0136 | 0.0084 |
| Saturn | 81503-10-14 00:58 G | 31489704.41 | 31489704.54 | 31489704.68 | 0.0289 | 0.0240 |
| Saturn | 81504-10-26 23:32 G | 31490083.35 | 31490083.48 | 31490083.62 | 0.0292 | 0.0245 |
| Pluto | 81508-01-04 03:08 G | 31491247.54 | 31491247.63 | 31491247.76 | 0.0063 | 0.0056 |
| Pluto | 81509-01-04 11:03 G | 31491613.72 | 31491613.96 | 31491614.20 | 0.0063 | 0.0027 |

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| Saturn | 81518-04-17 14:10 G | 31495003.85 | 31495004.09 | 31495004.34 | 0.0269 | 0.0030 |
| Jupiter | 81524-11-12 06:15 G | 31497404.63 | 31497404.76 | 31497404.90 | 0.0508 | 0.0419 |
| Saturn | 81533-10-20 18:15 G | 31500669.03 | 31500669.26 | 31500669.50 | 0.0291 | 0.0017 |
| Jupiter | 81536-11-16 21:08 G | 31501792.16 | 31501792.38 | 31501792.60 | 0.0511 | 0.0080 |
| Uranus | 81541-04-08 18:58 G | 31503396.17 | 31503396.29 | 31503396.45 | 0.0141 | 0.0118 |
| Uranus | 81542-04-13 19:56 G | 31503766.12 | 31503766.33 | 31503766.56 | 0.0141 | 0.0065 |
| Jupiter | 81542-05-13 18:44 G | 31503796.06 | 31503796.28 | 31503796.50 | 0.0517 | 0.0142 |
| Uranus | 81543-04-18 12:29 G | 31504135.77 | 31504136.02 | 31504136.29 | 0.0142 | 0.0016 |
| Uranus | 81544-04-22 12:44 G | 31504505.81 | 31504506.03 | 31504506.27 | 0.0142 | 0.0053 |
| Uranus | 81545-04-27 08:39 G | 31504875.68 | 31504875.86 | 31504876.08 | 0.0142 | 0.0095 |
| Saturn | 81547-04-12 18:58 G | 31505591.08 | 31505591.29 | 31505591.51 | 0.0271 | 0.0138 |
| Saturn | 81548-04-23 21:51 G | 31505968.30 | 31505968.41 | 31505968.54 | 0.0269 | 0.0235 |
| Neptune | 81551-05-18 13:41 G | 31507087.89 | 31507088.07 | 31507088.28 | 0.0088 | 0.0061 |
| Neptune | 81552-05-20 06:44 G | 31507455.58 | 31507455.78 | 31507456.02 | 0.0088 | 0.0045 |
| Neptune | 81553-05-22 12:29 G | 31507822.76 | 31507823.02 | 31507823.28 | 0.0088 | 0.0016 |
| Jupiter | 81554-05-18 12:44 G | 31508183.86 | 31508184.03 | 31508184.22 | 0.0516 | 0.0347 |
| Neptune | 81554-05-25 07:27 G | 31508190.55 | 31508190.81 | 31508191.08 | 0.0088 | 0.0001 |
| Neptune | 81555-05-27 12:29 G | 31508557.79 | 31508558.02 | 31508558.28 | 0.0088 | 0.0030 |
| Neptune | 81556-05-29 06:15 G | 31508925.54 | 31508925.76 | 31508926.00 | 0.0088 | 0.0044 |
| Neptune | 81557-05-31 14:39 G | 31509292.98 | 31509293.11 | 31509293.26 | 0.0088 | 0.0073 |
| Neptune | 81558-06-03 04:20 G | 31509660.68 | 31509660.68 | 31509660.69 | 0.0088 | 0.0088 |
| Saturn | 81562-10-15 06:58 G | 31511255.60 | 31511255.79 | 31511255.99 | 0.0290 | 0.0189 |
| Saturn | 81577-04-19 01:12 G | 31516555.32 | 31516555.55 | 31516555.78 | 0.0269 | 0.0071 |
| Uranus | 81581-10-13 01:12 G | 31518193.41 | 31518193.55 | 31518193.71 | 0.0137 | 0.0112 |
| Uranus | 81582-10-17 14:24 G | 31518562.88 | 31518563.10 | 31518563.34 | 0.0137 | 0.0050 |
| Uranus | 81583-10-22 00:58 G | 31518932.28 | 31518932.54 | 31518932.81 | 0.0136 | 0.0013 |
| Uranus | 81584-10-25 12:15 G | 31519301.78 | 31519302.01 | 31519302.24 | 0.0136 | 0.0044 |
| Uranus | 81585-10-29 22:20 G | 31519671.25 | 31519671.43 | 31519671.63 | 0.0136 | 0.0091 |
| Uranus | 81586-11-03 07:27 G | 31520040.80 | 31520040.81 | 31520040.84 | 0.0136 | 0.0135 |
| Saturn | 81592-10-22 08:24 G | 31522220.62 | 31522220.85 | 31522221.09 | 0.0291 | 0.0070 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Mars | 81596-02-27 05:17 G | 31523443.54 | 31523443.72 | 31523443.89 | 0.1643 | 0.0559 |
| Saturn | 81606-04-13 21:36 G | 31527142.17 | 31527142.40 | 31527142.65 | 0.0271 | 0.0098 |
| Jupiter | 81607-11-12 12:44 G | 31527719.97 | 31527720.03 | 31527720.10 | 0.0508 | 0.0483 |
| Jupiter | 81619-11-17 03:36 G | 31532107.41 | 31532107.65 | 31532107.89 | 0.0510 | 0.0009 |
| Saturn | 81621-10-16 15:36 G | 31532806.93 | 31532807.15 | 31532807.37 | 0.0290 | 0.0135 |
| Uranus | 81625-04-09 02:24 G | 31534077.49 | 31534077.60 | 31534077.75 | 0.0141 | 0.0121 |
| Jupiter | 81625-05-12 15:08 G | 31534110.92 | 31534111.13 | 31534111.35 | 0.0519 | 0.0234 |
| Uranus | 81626-04-14 04:20 G | 31534447.46 | 31534447.68 | 31534447.91 | 0.0141 | 0.0062 |
| Uranus | 81627-04-18 19:56 G | 31534817.07 | 31534817.33 | 31534817.60 | 0.0142 | 0.0003 |
| Uranus | 81628-04-22 21:22 G | 31535187.16 | 31535187.39 | 31535187.63 | 0.0142 | 0.0043 |
| Uranus | 81629-04-27 15:36 G | 31535557.01 | 31535557.15 | 31535557.33 | 0.0142 | 0.0113 |
| Jupiter | 81631-11-21 09:36 G | 31536494.85 | 31536494.90 | 31536494.97 | 0.0512 | 0.0493 |
| Neptune | 81633-11-19 01:56 G | 31537223.44 | 31537223.58 | 31537223.77 | 0.0090 | 0.0068 |
| Neptune | 81634-11-21 07:41 G | 31537590.62 | 31537590.82 | 31537591.06 | 0.0090 | 0.0046 |
| Saturn | 81635-04-09 01:27 G | 31537729.51 | 31537729.56 | 31537729.61 | 0.0272 | 0.0264 |
| Neptune | 81635-11-24 01:56 G | 31537958.34 | 31537958.58 | 31537958.84 | 0.0090 | 0.0021 |
| Saturn | 81636-04-20 13:12 G | 31538106.83 | 31538107.05 | 31538107.28 | 0.0269 | 0.0113 |
| Neptune | 81636-11-25 06:44 G | 31538325.53 | 31538325.78 | 31538326.03 | 0.0090 | 0.0000 |
| Jupiter | 81637-05-17 14:10 G | 31538498.90 | 31538499.09 | 31538499.29 | 0.0517 | 0.0265 |
| Neptune | 81637-11-28 00:00 G | 31538693.26 | 31538693.50 | 31538693.76 | 0.0090 | 0.0026 |
| Neptune | 81638-11-30 06:29 G | 31539060.56 | 31539060.77 | 31539060.99 | 0.0090 | 0.0045 |
| Neptune | 81639-12-02 19:56 G | 31539428.20 | 31539428.33 | 31539428.52 | 0.0090 | 0.0071 |
| Saturn | 81651-10-24 23:17 G | 31543772.25 | 31543772.47 | 31543772.69 | 0.0291 | 0.0129 |
| Saturn | 81665-04-15 03:36 G | 31548693.41 | 31548693.65 | 31548693.90 | 0.0271 | 0.0054 |
| Uranus | 81665-10-13 08:39 G | 31548874.70 | 31548874.86 | 31548875.07 | 0.0137 | 0.0096 |
| Uranus | 81666-10-18 00:15 G | 31549244.29 | 31549244.51 | 31549244.73 | 0.0137 | 0.0059 |
| Uranus | 81667-10-22 09:36 G | 31549613.64 | 31549613.90 | 31549614.16 | 0.0136 | 0.0004 |
| Uranus | 81668-10-25 21:51 G | 31549983.19 | 31549983.41 | 31549983.66 | 0.0136 | 0.0045 |
| Uranus | 81669-10-30 06:58 G | 31550352.61 | 31550352.79 | 31550352.98 | 0.0136 | 0.0095 |
| Saturn | 81680-10-18 06:29 G | 31554358.54 | 31554358.77 | 31554359.00 | 0.0290 | 0.0076 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 81694-04-10 14:53 G | 31559280.98 | 31559281.12 | 31559281.27 | 0.0272 | 0.0215 |
| Saturn | 81695-04-22 21:08 G | 31559658.19 | 31559658.38 | 31559658.60 | 0.0269 | 0.0160 |
| Jupiter | 81702-11-16 21:22 G | 31562422.17 | 31562422.39 | 31562422.62 | 0.0509 | 0.0080 |
| Jupiter | 81708-05-12 17:46 G | 31564426.06 | 31564426.24 | 31564426.42 | 0.0519 | 0.0316 |
| Uranus | 81709-04-10 11:17 G | 31564758.82 | 31564758.97 | 31564759.15 | 0.0141 | 0.0108 |
| Saturn | 81709-10-13 16:05 G | 31564945.15 | 31564945.17 | 31564945.21 | 0.0288 | 0.0286 |
| Uranus | 81710-04-15 13:27 G | 31565128.84 | 31565129.06 | 31565129.30 | 0.0141 | 0.0057 |
| Saturn | 81710-10-27 12:00 G | 31565323.82 | 31565324.00 | 31565324.19 | 0.0291 | 0.0192 |
| Uranus | 81711-04-20 03:51 G | 31565498.40 | 31565498.66 | 31565498.92 | 0.0142 | 0.0005 |
| Uranus | 81712-04-24 05:46 G | 31565868.52 | 31565868.74 | 31565868.97 | 0.0142 | 0.0062 |
| Uranus | 81713-04-28 22:48 G | 31566238.29 | 31566238.45 | 31566238.65 | 0.0142 | 0.0103 |
| Jupiter | 81714-11-21 19:41 G | 31566810.19 | 31566810.32 | 31566810.46 | 0.0511 | 0.0413 |
| Neptune | 81715-05-19 05:17 G | 31566988.57 | 31566988.72 | 31566988.90 | 0.0088 | 0.0066 |
| Mars | 81715-09-02 21:22 G | 31567095.33 | 31567095.39 | 31567095.45 | 0.1886 | 0.1795 |
| Neptune | 81716-05-20 10:05 G | 31567355.73 | 31567355.92 | 31567356.15 | 0.0088 | 0.0052 |
| Neptune | 81717-05-23 05:17 G | 31567723.47 | 31567723.72 | 31567723.98 | 0.0088 | 0.0022 |
| Neptune | 81718-05-25 11:03 G | 31568090.71 | 31568090.96 | 31568091.22 | 0.0088 | 0.0008 |
| Neptune | 81719-05-28 03:51 G | 31568458.40 | 31568458.66 | 31568458.92 | 0.0088 | 0.0021 |
| Jupiter | 81720-05-17 17:46 G | 31568814.01 | 31568814.24 | 31568814.47 | 0.0516 | 0.0164 |
| Neptune | 81720-05-29 12:29 G | 31568825.81 | 31568826.02 | 31568826.26 | 0.0088 | 0.0037 |
| Neptune | 81721-06-01 00:15 G | 31569193.35 | 31569193.51 | 31569193.71 | 0.0088 | 0.0066 |
| Neptune | 81722-06-03 14:10 G | 31569561.03 | 31569561.09 | 31569561.22 | 0.0088 | 0.0082 |
| Saturn | 81724-04-17 15:36 G | 31570244.91 | 31570245.15 | 31570245.39 | 0.0271 | 0.0007 |
| Saturn | 81739-10-22 03:08 G | 31575910.39 | 31575910.63 | 31575910.86 | 0.0290 | 0.0014 |
| Uranus | 81749-10-14 15:51 G | 31579556.01 | 31579556.16 | 31579556.34 | 0.0137 | 0.0104 |
| Uranus | 81750-10-19 07:56 G | 31579925.61 | 31579925.83 | 31579926.08 | 0.0137 | 0.0041 |
| Uranus | 81751-10-23 16:05 G | 31580294.91 | 31580295.17 | 31580295.43 | 0.0137 | 0.0005 |
| Uranus | 81752-10-27 05:46 G | 31580664.53 | 31580664.74 | 31580664.97 | 0.0136 | 0.0055 |
| Saturn | 81753-04-13 01:27 G | 31580832.36 | 31580832.56 | 31580832.76 | 0.0271 | 0.0166 |
| Uranus | 81753-10-31 12:58 G | 31581033.88 | 31581034.04 | 31581034.24 | 0.0136 | 0.0099 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 81754-04-25 03:36 G | 31581209.50 | 31581209.65 | 31581209.83 | 0.0269 | 0.0204 |
| Pluto | 81756-01-06 12:00 G | 31581830.91 | 31581831.00 | 31581831.15 | 0.0063 | 0.0056 |
| Pluto | 81757-01-07 02:53 G | 31582197.39 | 31582197.62 | 31582197.87 | 0.0063 | 0.0021 |
| Saturn | 81768-10-15 05:17 G | 31586496.56 | 31586496.72 | 31586496.88 | 0.0289 | 0.0223 |
| Saturn | 81769-10-29 02:53 G | 31586875.51 | 31586875.62 | 31586875.74 | 0.0291 | 0.0257 |
| Saturn | 81783-04-20 06:00 G | 31591796.51 | 31591796.75 | 31591796.98 | 0.0270 | 0.0040 |
| Jupiter | 81785-11-16 07:56 G | 31592737.61 | 31592737.83 | 31592738.05 | 0.0509 | 0.0150 |
| Jupiter | 81791-05-12 18:00 G | 31594741.11 | 31594741.25 | 31594741.40 | 0.0519 | 0.0411 |
| Uranus | 81793-04-10 21:22 G | 31595440.26 | 31595440.39 | 31595440.56 | 0.0141 | 0.0112 |
| Uranus | 81794-04-16 00:15 G | 31595810.28 | 31595810.51 | 31595810.75 | 0.0141 | 0.0051 |
| Uranus | 81795-04-20 14:10 G | 31596179.83 | 31596180.09 | 31596180.35 | 0.0142 | 0.0008 |
| Uranus | 81796-04-24 17:03 G | 31596549.98 | 31596550.21 | 31596550.45 | 0.0142 | 0.0054 |
| Uranus | 81797-04-29 08:53 G | 31596919.76 | 31596919.87 | 31596920.02 | 0.0142 | 0.0124 |
| Neptune | 81797-11-19 06:29 G | 31597123.62 | 31597123.77 | 31597123.94 | 0.0090 | 0.0070 |
| Jupiter | 81797-11-20 12:44 G | 31597124.85 | 31597125.03 | 31597125.22 | 0.0511 | 0.0323 |
| Saturn | 81798-10-23 20:53 G | 31597462.13 | 31597462.37 | 31597462.61 | 0.0290 | 0.0046 |
| Neptune | 81798-11-22 01:12 G | 31597491.36 | 31597491.55 | 31597491.75 | 0.0090 | 0.0057 |
| Neptune | 81799-11-24 06:00 G | 31597858.52 | 31597858.75 | 31597859.00 | 0.0090 | 0.0025 |
| Neptune | 81800-11-26 23:32 G | 31598226.23 | 31598226.48 | 31598226.75 | 0.0090 | 0.0012 |
| Mars | 81801-02-27 19:56 G | 31598319.17 | 31598319.33 | 31598319.48 | 0.1650 | 0.0898 |
| Neptune | 81801-11-29 07:12 G | 31598593.56 | 31598593.80 | 31598594.04 | 0.0090 | 0.0021 |
| Neptune | 81802-12-01 20:24 G | 31598961.11 | 31598961.35 | 31598961.60 | 0.0090 | 0.0035 |
| Jupiter | 81803-05-18 07:12 G | 31599128.57 | 31599128.80 | 31599129.03 | 0.0518 | 0.0059 |
| Neptune | 81803-12-04 07:56 G | 31599328.68 | 31599328.83 | 31599329.01 | 0.0090 | 0.0067 |
| Neptune | 81804-12-05 16:05 G | 31599696.07 | 31599696.17 | 31599696.30 | 0.0090 | 0.0080 |
| Saturn | 81812-04-15 07:41 G | 31602383.60 | 31602383.82 | 31602384.05 | 0.0271 | 0.0121 |
| Saturn | 81813-04-27 13:12 G | 31602760.98 | 31602761.05 | 31602761.15 | 0.0269 | 0.0252 |
| Saturn | 81827-10-18 19:56 G | 31608048.13 | 31608048.33 | 31608048.53 | 0.0289 | 0.0164 |
| Uranus | 81833-10-15 23:46 G | 31610237.31 | 31610237.49 | 31610237.71 | 0.0137 | 0.0088 |
| Uranus | 81834-10-20 17:17 G | 31610607.01 | 31610607.22 | 31610607.46 | 0.0137 | 0.0051 |

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| Uranus | 81835-10-25 00:29 G | 31610976.26 | 31610976.52 | 31610976.78 | 0.0137 | 0.0013 |
| Uranus | 81836-10-28 15:22 G | 31611345.92 | 31611346.14 | 31611346.38 | 0.0136 | 0.0052 |
| Uranus | 81837-11-01 21:36 G | 31611715.25 | 31611715.40 | 31611715.57 | 0.0136 | 0.0106 |
| Saturn | 81842-04-22 17:17 G | 31613347.99 | 31613348.22 | 31613348.46 | 0.0270 | 0.0085 |
| Pluto | 81847-07-11 02:39 G | 31615253.54 | 31615253.61 | 31615253.73 | 0.0081 | 0.0075 |
| Saturn | 81857-10-26 08:24 G | 31619013.62 | 31619013.85 | 31619014.10 | 0.0291 | 0.0105 |
| Jupiter | 81868-11-16 02:10 G | 31623052.38 | 31623052.59 | 31623052.80 | 0.0508 | 0.0235 |
| Saturn | 81871-04-17 16:05 G | 31623934.94 | 31623935.17 | 31623935.40 | 0.0271 | 0.0078 |
| Jupiter | 81874-05-12 09:08 G | 31625055.85 | 31625055.88 | 31625055.91 | 0.0520 | 0.0515 |
| Uranus | 81877-04-12 08:10 G | 31626121.67 | 31626121.84 | 31626122.04 | 0.0141 | 0.0096 |
| Uranus | 81878-04-17 10:48 G | 31626491.72 | 31626491.95 | 31626492.20 | 0.0141 | 0.0047 |
| Uranus | 81879-04-22 00:15 G | 31626861.25 | 31626861.51 | 31626861.77 | 0.0142 | 0.0008 |
| Neptune | 81879-05-19 08:53 G | 31626888.77 | 31626888.87 | 31626889.01 | 0.0088 | 0.0078 |
| Mars | 81880-03-01 18:15 G | 31627176.19 | 31627176.26 | 31627176.33 | 0.1647 | 0.1505 |
| Uranus | 81880-04-26 03:22 G | 31627231.43 | 31627231.64 | 31627231.86 | 0.0142 | 0.0073 |
| Neptune | 81880-05-21 03:36 G | 31627256.44 | 31627256.65 | 31627256.87 | 0.0088 | 0.0052 |
| Jupiter | 81880-11-20 19:12 G | 31627440.10 | 31627440.30 | 31627440.50 | 0.0510 | 0.0231 |
| Uranus | 81881-04-30 19:12 G | 31627601.15 | 31627601.30 | 31627601.45 | 0.0142 | 0.0115 |
| Neptune | 81881-05-23 09:22 G | 31627623.67 | 31627623.89 | 31627624.14 | 0.0088 | 0.0036 |
| Neptune | 81882-05-26 01:12 G | 31627991.28 | 31627991.55 | 31627991.82 | 0.0088 | 0.0009 |
| Neptune | 81883-05-28 11:17 G | 31628358.72 | 31628358.97 | 31628359.23 | 0.0088 | 0.0009 |
| Neptune | 81884-05-29 22:05 G | 31628726.19 | 31628726.42 | 31628726.69 | 0.0088 | 0.0036 |
| Neptune | 81885-06-01 13:41 G | 31629093.88 | 31629094.07 | 31629094.28 | 0.0088 | 0.0053 |
| Jupiter | 81886-05-17 17:03 G | 31629443.98 | 31629444.21 | 31629444.45 | 0.0518 | 0.0024 |
| Neptune | 81886-06-03 19:56 G | 31629461.25 | 31629461.33 | 31629461.47 | 0.0088 | 0.0080 |
| Saturn | 81886-10-20 11:32 G | 31629599.77 | 31629599.98 | 31629600.21 | 0.0290 | 0.0108 |
| Jupiter | 81898-05-22 07:56 G | 31633831.71 | 31633831.83 | 31633831.96 | 0.0516 | 0.0438 |
| Saturn | 81900-04-12 17:46 G | 31634522.16 | 31634522.24 | 31634522.35 | 0.0272 | 0.0250 |
| Saturn | 81901-04-24 22:05 G | 31634899.20 | 31634899.42 | 31634899.65 | 0.0270 | 0.0125 |
| Saturn | 81916-10-28 15:22 G | 31640564.94 | 31640565.14 | 31640565.36 | 0.0291 | 0.0158 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 81917-10-17 08:10 G | 31640918.68 | 31640918.84 | 31640919.05 | 0.0137 | 0.0095 |
| Uranus | 81918-10-22 02:10 G | 31641288.36 | 31641288.59 | 31641288.85 | 0.0137 | 0.0032 |
| Uranus | 81919-10-26 08:10 G | 31641657.58 | 31641657.84 | 31641658.10 | 0.0136 | 0.0004 |
| Uranus | 81920-10-29 23:46 G | 31642027.29 | 31642027.49 | 31642027.72 | 0.0136 | 0.0066 |
| Uranus | 81921-11-03 05:03 G | 31642396.55 | 31642396.71 | 31642396.87 | 0.0136 | 0.0106 |
| Saturn | 81930-04-20 04:05 G | 31645486.43 | 31645486.67 | 31645486.90 | 0.0270 | 0.0036 |
| Saturn | 81945-10-23 01:56 G | 31651151.35 | 31651151.58 | 31651151.82 | 0.0290 | 0.0056 |
| Jupiter | 81951-11-17 11:17 G | 31653367.79 | 31653367.97 | 31653368.15 | 0.0508 | 0.0312 |
| Saturn | 81959-04-14 22:05 G | 31656073.26 | 31656073.42 | 31656073.59 | 0.0271 | 0.0208 |
| Saturn | 81960-04-26 01:27 G | 31656450.37 | 31656450.56 | 31656450.76 | 0.0269 | 0.0162 |
| Uranus | 81961-04-13 17:32 G | 31656803.08 | 31656803.23 | 31656803.42 | 0.0141 | 0.0103 |
| Neptune | 81961-11-21 00:00 G | 31657024.43 | 31657024.50 | 31657024.63 | 0.0090 | 0.0083 |
| Uranus | 81962-04-18 20:39 G | 31657173.12 | 31657173.36 | 31657173.61 | 0.0141 | 0.0038 |
| Neptune | 81962-11-23 05:32 G | 31657391.57 | 31657391.73 | 31657391.93 | 0.0090 | 0.0061 |
| Uranus | 81963-04-23 09:51 G | 31657542.65 | 31657542.91 | 31657543.16 | 0.0142 | 0.0018 |
| Jupiter | 81963-11-21 21:22 G | 31657755.16 | 31657755.39 | 31657755.61 | 0.0510 | 0.0155 |
| Neptune | 81963-11-25 22:20 G | 31657759.21 | 31657759.43 | 31657759.69 | 0.0090 | 0.0038 |
| Uranus | 81964-04-27 13:56 G | 31657912.86 | 31657913.08 | 31657913.31 | 0.0142 | 0.0066 |
| Neptune | 81964-11-27 06:29 G | 31658126.54 | 31658126.77 | 31658127.03 | 0.0090 | 0.0015 |
| Uranus | 81965-05-02 04:34 G | 31658282.64 | 31658282.69 | 31658282.79 | 0.0142 | 0.0137 |
| Neptune | 81965-11-29 18:58 G | 31658494.03 | 31658494.29 | 31658494.56 | 0.0090 | 0.0009 |
| Neptune | 81966-12-02 08:10 G | 31658861.61 | 31658861.84 | 31658862.07 | 0.0090 | 0.0032 |
| Neptune | 81967-12-04 15:51 G | 31659228.96 | 31659229.16 | 31659229.37 | 0.0090 | 0.0054 |
| Neptune | 81968-12-06 08:39 G | 31659596.75 | 31659596.86 | 31659597.00 | 0.0090 | 0.0077 |
| Jupiter | 81969-05-17 12:15 G | 31659758.78 | 31659759.01 | 31659759.24 | 0.0518 | 0.0100 |
| Saturn | 81974-10-16 20:53 G | 31661737.31 | 31661737.37 | 31661737.46 | 0.0289 | 0.0275 |
| Saturn | 81975-10-30 21:51 G | 31662116.25 | 31662116.41 | 31662116.58 | 0.0291 | 0.0205 |
| Jupiter | 81981-05-22 12:15 G | 31664146.85 | 31664147.01 | 31664147.18 | 0.0517 | 0.0349 |
| Saturn | 81989-04-21 13:27 G | 31667037.81 | 31667038.06 | 31667038.30 | 0.0270 | 0.0005 |
| Mars | 81999-09-04 01:12 G | 31670825.36 | 31670825.55 | 31670825.73 | 0.1879 | 0.0287 |

83RD MILLENNIUM CE

This is a list of transits of Moon in the 83rd millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Uranus | 82001-10-17 17:32 | G | 31671600.03 | 31671600.23 | 31671600.45 | 0.0137 | 0.0079 | |
| Uranus | 82002-10-22 12:15 | G | 31671969.78 | 31671970.01 | 31671970.26 | 0.0137 | 0.0041 | |
| Uranus | 82003-10-26 17:32 | G | 31672338.98 | 31672339.23 | 31672339.49 | 0.0136 | 0.0024 | |
| Saturn | 82004-10-24 08:10 | G | 31672702.59 | 31672702.84 | 31672703.09 | 0.0290 | 0.0009 | |
| Uranus | 82004-10-30 10:20 | G | 31672708.71 | 31672708.93 | 31672709.15 | 0.0136 | 0.0060 | |
| Pluto | 82005-01-10 05:17 | G | 31672780.47 | 31672780.72 | 31672780.97 | 0.0063 | 0.0014 | |
| Uranus | 82005-11-03 14:24 | G | 31673077.98 | 31673078.10 | 31673078.23 | 0.0136 | 0.0117 | |
| Saturn | 82018-04-16 00:15 | G | 31677624.33 | 31677624.51 | 31677624.71 | 0.0271 | 0.0169 | |
| Saturn | 82019-04-28 08:39 | G | 31678001.71 | 31678001.86 | 31678002.03 | 0.0269 | 0.0201 | |
| Saturn | 82033-10-18 01:27 | G | 31683288.43 | 31683288.56 | 31683288.71 | 0.0289 | 0.0231 | |
| Saturn | 82034-11-01 05:32 | G | 31683667.62 | 31683667.73 | 31683667.85 | 0.0292 | 0.0252 | |
| Jupiter | 82034-11-16 15:51 | G | 31683683.00 | 31683683.16 | 31683683.33 | 0.0507 | 0.0360 | |
| Neptune | 82043-05-20 01:27 | G | 31686789.56 | 31686789.56 | 31686789.58 | 0.0088 | 0.0088 | |
| Neptune | 82044-05-21 08:10 | G | 31687156.67 | 31687156.84 | 31687157.05 | 0.0088 | 0.0058 | |
| Uranus | 82045-04-14 02:24 | G | 31687484.41 | 31687484.60 | 31687484.80 | 0.0141 | 0.0086 | |
| Neptune | 82045-05-23 23:03 | G | 31687524.25 | 31687524.46 | 31687524.71 | 0.0088 | 0.0044 | |
| Uranus | 82046-04-19 04:34 | G | 31687854.46 | 31687854.69 | 31687854.95 | 0.0141 | 0.0040 | |
| Neptune | 82046-05-26 10:34 | G | 31687891.70 | 31687891.94 | 31687892.20 | 0.0088 | 0.0014 | |
| Jupiter | 82046-11-21 05:17 | G | 31688070.50 | 31688070.72 | 31688070.94 | 0.0509 | 0.0096 | |

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| Uranus | 82047-04-23 17:46 G | 31688224.00 | 31688224.24 | 31688224.50 | 0.0142 | 0.0020 |
| Neptune | 82047-05-28 20:10 G | 31688259.07 | 31688259.34 | 31688259.61 | 0.0088 | 0.0001 |
| Saturn | 82048-04-22 15:22 G | 31688588.89 | 31688589.14 | 31688589.39 | 0.0270 | 0.0043 |
| Uranus | 82048-04-27 21:36 G | 31688594.21 | 31688594.40 | 31688594.62 | 0.0142 | 0.0083 |
| Neptune | 82048-05-30 12:00 G | 31688626.76 | 31688627.00 | 31688627.24 | 0.0088 | 0.0030 |
| Uranus | 82049-05-02 12:15 G | 31688963.92 | 31688964.01 | 31688964.15 | 0.0142 | 0.0126 |
| Neptune | 82049-06-01 17:46 G | 31688994.02 | 31688994.24 | 31688994.48 | 0.0088 | 0.0043 |
| Neptune | 82050-06-04 12:15 G | 31689361.90 | 31689362.01 | 31689362.17 | 0.0088 | 0.0074 |
| Neptune | 82051-06-06 17:03 G | 31689729.21 | 31689729.21 | 31689729.26 | 0.0088 | 0.0088 |
| Jupiter | 82052-05-16 18:00 G | 31690074.04 | 31690074.25 | 31690074.47 | 0.0520 | 0.0197 |
| Jupiter | 82058-11-25 20:53 G | 31692458.36 | 31692458.37 | 31692458.40 | 0.0511 | 0.0509 |
| Saturn | 82063-10-26 05:17 G | 31694253.47 | 31694253.72 | 31694253.97 | 0.0291 | 0.0037 |
| Jupiter | 82064-05-21 15:36 G | 31694461.95 | 31694462.15 | 31694462.36 | 0.0518 | 0.0283 |
| Saturn | 82077-04-17 05:03 G | 31699175.51 | 31699175.71 | 31699175.93 | 0.0271 | 0.0131 |
| Saturn | 82078-04-29 16:05 G | 31699553.06 | 31699553.17 | 31699553.28 | 0.0268 | 0.0237 |
| Uranus | 82084-10-13 21:22 G | 31701912.32 | 31701912.39 | 31701912.48 | 0.0137 | 0.0130 |
| Mars | 82085-03-01 15:36 G | 31702050.95 | 31702051.15 | 31702051.35 | 0.1654 | 0.0217 |
| Uranus | 82085-10-18 02:53 G | 31702281.43 | 31702281.62 | 31702281.83 | 0.0137 | 0.0084 |
| Uranus | 82086-10-22 21:51 G | 31702651.16 | 31702651.41 | 31702651.66 | 0.0137 | 0.0022 |
| Uranus | 82087-10-27 02:10 G | 31703020.34 | 31703020.59 | 31703020.84 | 0.0136 | 0.0013 |
| Uranus | 82088-10-30 19:12 G | 31703390.10 | 31703390.30 | 31703390.51 | 0.0136 | 0.0077 |
| Uranus | 82089-11-03 22:20 G | 31703759.31 | 31703759.43 | 31703759.58 | 0.0136 | 0.0115 |
| Saturn | 82092-10-19 05:32 G | 31704839.56 | 31704839.73 | 31704839.92 | 0.0289 | 0.0189 |
| Pluto | 82095-07-13 12:44 G | 31705836.81 | 31705837.03 | 31705837.28 | 0.0081 | 0.0039 |
| Saturn | 82107-04-25 12:44 G | 31710139.79 | 31710140.03 | 31710140.28 | 0.0270 | 0.0076 |
| Jupiter | 82117-11-16 23:46 G | 31713998.37 | 31713998.49 | 31713998.62 | 0.0506 | 0.0413 |
| Saturn | 82122-10-28 03:22 G | 31715804.42 | 31715804.64 | 31715804.88 | 0.0291 | 0.0080 |
| Neptune | 82126-11-23 21:08 G | 31717292.20 | 31717292.38 | 31717292.58 | 0.0090 | 0.0062 |
| Neptune | 82127-11-26 06:15 G | 31717659.57 | 31717659.76 | 31717659.99 | 0.0090 | 0.0049 |
| Uranus | 82128-04-10 20:10 G | 31717796.28 | 31717796.34 | 31717796.41 | 0.0141 | 0.0136 |

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| Neptune | 82128-11-27 18:15 G | 31718027.01 | 31718027.26 | 31718027.53 | 0.0090 | 0.0017 |
| Uranus | 82129-04-15 08:53 G | 31718165.70 | 31718165.87 | 31718166.07 | 0.0141 | 0.0096 |
| Jupiter | 82129-11-21 16:48 G | 31718385.96 | 31718386.20 | 31718386.44 | 0.0508 | 0.0031 |
| Neptune | 82129-11-30 08:24 G | 31718394.61 | 31718394.85 | 31718395.10 | 0.0090 | 0.0003 |
| Uranus | 82130-04-20 11:03 G | 31718535.71 | 31718535.96 | 31718536.22 | 0.0141 | 0.0029 |
| Neptune | 82130-12-02 15:08 G | 31718761.90 | 31718762.13 | 31718762.39 | 0.0090 | 0.0029 |
| Uranus | 82131-04-25 00:29 G | 31718905.28 | 31718905.52 | 31718905.78 | 0.0142 | 0.0025 |
| Neptune | 82131-12-05 08:53 G | 31719129.65 | 31719129.87 | 31719130.10 | 0.0090 | 0.0042 |
| Uranus | 82132-04-29 05:03 G | 31719275.50 | 31719275.71 | 31719275.93 | 0.0142 | 0.0076 |
| Neptune | 82132-12-06 12:58 G | 31719496.93 | 31719497.04 | 31719497.20 | 0.0090 | 0.0075 |
| Neptune | 82133-12-09 06:58 G | 31719864.77 | 31719864.79 | 31719864.88 | 0.0090 | 0.0088 |
| Jupiter | 82135-05-18 00:15 G | 31720389.30 | 31720389.51 | 31720389.73 | 0.0520 | 0.0254 |
| Saturn | 82136-04-19 11:03 G | 31720726.74 | 31720726.96 | 31720727.19 | 0.0270 | 0.0098 |
| Jupiter | 82141-11-26 00:00 G | 31722773.41 | 31722773.50 | 31722773.61 | 0.0511 | 0.0457 |
| Jupiter | 82147-05-23 00:00 G | 31724777.30 | 31724777.50 | 31724777.71 | 0.0518 | 0.0234 |
| Saturn | 82151-10-22 03:36 G | 31726390.44 | 31726390.65 | 31726390.86 | 0.0289 | 0.0151 |
| Saturn | 82165-04-14 04:48 G | 31731313.65 | 31731313.70 | 31731313.77 | 0.0272 | 0.0264 |
| Saturn | 82166-04-26 12:00 G | 31731690.78 | 31731691.00 | 31731691.23 | 0.0270 | 0.0110 |
| Uranus | 82168-10-15 05:46 G | 31732593.67 | 31732593.74 | 31732593.85 | 0.0137 | 0.0129 |
| Uranus | 82169-10-19 11:32 G | 31732962.77 | 31732962.98 | 31732963.21 | 0.0137 | 0.0071 |
| Uranus | 82170-10-24 06:58 G | 31733332.54 | 31733332.79 | 31733333.04 | 0.0137 | 0.0031 |
| Uranus | 82171-10-28 11:03 G | 31733701.72 | 31733701.96 | 31733702.22 | 0.0136 | 0.0034 |
| Uranus | 82172-11-01 04:48 G | 31734071.49 | 31734071.70 | 31734071.92 | 0.0136 | 0.0068 |
| Uranus | 82173-11-05 07:27 G | 31734440.76 | 31734440.81 | 31734440.91 | 0.0136 | 0.0129 |
| Saturn | 82181-10-29 04:34 G | 31737355.48 | 31737355.69 | 31737355.91 | 0.0291 | 0.0118 |
| Saturn | 82195-04-21 12:29 G | 31742277.78 | 31742278.02 | 31742278.27 | 0.0270 | 0.0065 |
| Jupiter | 82200-11-17 14:24 G | 31744314.00 | 31744314.10 | 31744314.21 | 0.0506 | 0.0452 |
| Neptune | 82208-05-22 20:24 G | 31747057.21 | 31747057.35 | 31747057.55 | 0.0088 | 0.0069 |
| Neptune | 82209-05-25 09:08 G | 31747424.67 | 31747424.88 | 31747425.11 | 0.0088 | 0.0045 |
| Neptune | 82210-05-27 18:00 G | 31747792.00 | 31747792.25 | 31747792.51 | 0.0088 | 0.0025 |

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| Saturn | 82210-10-23 20:10 G | 31747941.10 | 31747941.34 | 31747941.57 | 0.0289 | 0.0112 |
| Neptune | 82211-05-30 11:03 G | 31748159.71 | 31748159.96 | 31748160.22 | 0.0088 | 0.0002 |
| Neptune | 82212-05-31 16:20 G | 31748526.93 | 31748527.18 | 31748527.45 | 0.0088 | 0.0018 |
| Jupiter | 82212-11-21 23:03 G | 31748701.23 | 31748701.46 | 31748701.69 | 0.0508 | 0.0008 |
| Uranus | 82213-04-16 16:48 G | 31748847.01 | 31748847.20 | 31748847.42 | 0.0141 | 0.0079 |
| Neptune | 82213-06-03 11:32 G | 31748894.75 | 31748894.98 | 31748895.21 | 0.0088 | 0.0042 |
| Uranus | 82214-04-21 18:00 G | 31749217.00 | 31749217.25 | 31749217.50 | 0.0141 | 0.0033 |
| Neptune | 82214-06-05 16:05 G | 31749262.00 | 31749262.17 | 31749262.36 | 0.0088 | 0.0061 |
| Uranus | 82215-04-26 08:10 G | 31749586.60 | 31749586.84 | 31749587.09 | 0.0142 | 0.0029 |
| Neptune | 82215-06-08 09:22 G | 31749629.88 | 31749629.89 | 31749629.97 | 0.0088 | 0.0087 |
| Uranus | 82216-04-30 11:17 G | 31749956.79 | 31749956.97 | 31749957.19 | 0.0142 | 0.0090 |
| Uranus | 82217-05-05 02:24 G | 31750326.54 | 31750326.60 | 31750326.68 | 0.0142 | 0.0136 |
| Jupiter | 82218-05-18 03:08 G | 31750704.46 | 31750704.63 | 31750704.80 | 0.0520 | 0.0343 |
| Saturn | 82224-04-16 03:51 G | 31752864.54 | 31752864.66 | 31752864.78 | 0.0272 | 0.0234 |
| Jupiter | 82224-11-26 21:08 G | 31753089.26 | 31753089.38 | 31753089.52 | 0.0510 | 0.0421 |
| Saturn | 82225-04-28 15:36 G | 31753241.95 | 31753242.15 | 31753242.35 | 0.0269 | 0.0142 |
| Jupiter | 82230-05-23 05:32 G | 31755092.50 | 31755092.73 | 31755092.96 | 0.0518 | 0.0148 |
| Saturn | 82240-10-31 04:34 G | 31758906.49 | 31758906.69 | 31758906.90 | 0.0291 | 0.0156 |
| Uranus | 82252-10-16 13:56 G | 31763274.99 | 31763275.08 | 31763275.21 | 0.0137 | 0.0124 |
| Pluto | 82253-01-13 19:12 G | 31763364.05 | 31763364.30 | 31763364.57 | 0.0063 | 0.0004 |
| Uranus | 82253-10-20 19:41 G | 31763644.13 | 31763644.32 | 31763644.55 | 0.0137 | 0.0076 |
| Saturn | 82254-04-23 07:27 G | 31763828.56 | 31763828.81 | 31763829.07 | 0.0270 | 0.0034 |
| Uranus | 82254-10-25 15:08 G | 31764013.88 | 31764014.13 | 31764014.38 | 0.0137 | 0.0014 |
| Uranus | 82255-10-29 19:12 G | 31764383.05 | 31764383.30 | 31764383.55 | 0.0136 | 0.0022 |
| Uranus | 82256-11-02 12:44 G | 31764752.85 | 31764753.03 | 31764753.23 | 0.0136 | 0.0087 |
| Uranus | 82257-11-06 15:22 G | 31765122.06 | 31765122.14 | 31765122.27 | 0.0136 | 0.0124 |
| Saturn | 82269-10-24 13:56 G | 31769491.85 | 31769492.08 | 31769492.32 | 0.0289 | 0.0077 |
| Saturn | 82283-04-18 06:44 G | 31774415.63 | 31774415.78 | 31774415.95 | 0.0272 | 0.0202 |
| Mars | 82283-09-05 19:12 G | 31774556.11 | 31774556.30 | 31774556.50 | 0.1871 | 0.0509 |
| Jupiter | 82283-11-17 21:51 G | 31774629.36 | 31774629.41 | 31774629.48 | 0.0506 | 0.0487 |

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| Saturn | 82284-04-29 17:17 G | 31774793.04 | 31774793.22 | 31774793.42 | 0.0270 | 0.0174 |
| Mars | 82290-03-02 18:58 G | 31776926.18 | 31776926.29 | 31776926.41 | 0.1662 | 0.1228 |
| Neptune | 82290-11-24 06:00 G | 31777192.63 | 31777192.75 | 31777192.92 | 0.0090 | 0.0073 |
| Neptune | 82291-11-26 16:34 G | 31777559.98 | 31777560.19 | 31777560.41 | 0.0090 | 0.0053 |
| Neptune | 82292-11-28 07:12 G | 31777927.57 | 31777927.80 | 31777928.04 | 0.0090 | 0.0028 |
| Neptune | 82293-11-30 13:41 G | 31778294.81 | 31778295.07 | 31778295.33 | 0.0090 | 0.0008 |
| Neptune | 82294-12-03 07:56 G | 31778662.58 | 31778662.83 | 31778663.08 | 0.0090 | 0.0018 |
| Jupiter | 82295-11-22 16:20 G | 31779016.95 | 31779017.18 | 31779017.41 | 0.0507 | 0.0064 |
| Neptune | 82295-12-05 12:15 G | 31779029.79 | 31779030.01 | 31779030.25 | 0.0090 | 0.0039 |
| Uranus | 82296-04-12 11:03 G | 31779158.86 | 31779158.96 | 31779159.06 | 0.0141 | 0.0129 |
| Neptune | 82296-12-07 06:15 G | 31779397.60 | 31779397.76 | 31779397.97 | 0.0090 | 0.0063 |
| Uranus | 82297-04-17 01:41 G | 31779528.39 | 31779528.57 | 31779528.77 | 0.0141 | 0.0089 |
| Neptune | 82297-12-09 12:58 G | 31779764.97 | 31779765.04 | 31779765.14 | 0.0090 | 0.0084 |
| Uranus | 82298-04-22 01:56 G | 31779898.32 | 31779898.58 | 31779898.84 | 0.0141 | 0.0020 |
| Saturn | 82298-10-19 03:36 G | 31780078.62 | 31780078.65 | 31780078.70 | 0.0288 | 0.0283 |
| Uranus | 82299-04-26 16:48 G | 31780267.96 | 31780268.20 | 31780268.45 | 0.0142 | 0.0032 |
| Saturn | 82299-11-02 00:44 G | 31780457.34 | 31780457.53 | 31780457.72 | 0.0291 | 0.0193 |
| Uranus | 82300-05-01 19:56 G | 31780638.14 | 31780638.33 | 31780638.55 | 0.0142 | 0.0087 |
| Jupiter | 82301-05-18 13:27 G | 31781019.91 | 31781020.06 | 31781020.21 | 0.0521 | 0.0407 |
| Jupiter | 82307-11-27 22:20 G | 31783404.26 | 31783404.43 | 31783404.60 | 0.0509 | 0.0356 |
| Saturn | 82313-04-25 05:32 G | 31785379.49 | 31785379.73 | 31785379.98 | 0.0270 | 0.0003 |
| Jupiter | 82313-05-23 09:51 G | 31785407.68 | 31785407.91 | 31785408.14 | 0.0519 | 0.0103 |
| Saturn | 82328-10-26 15:36 G | 31791042.92 | 31791043.15 | 31791043.39 | 0.0289 | 0.0036 |
| Uranus | 82336-10-17 21:22 G | 31793956.29 | 31793956.39 | 31793956.54 | 0.0137 | 0.0120 |
| Uranus | 82337-10-22 04:05 G | 31794325.46 | 31794325.67 | 31794325.90 | 0.0137 | 0.0065 |
| Uranus | 82338-10-26 23:03 G | 31794695.21 | 31794695.46 | 31794695.71 | 0.0137 | 0.0022 |
| Uranus | 82339-10-31 03:36 G | 31795064.42 | 31795064.65 | 31795064.90 | 0.0136 | 0.0042 |
| Uranus | 82340-11-03 21:08 G | 31795434.19 | 31795434.38 | 31795434.61 | 0.0136 | 0.0078 |
| Saturn | 82342-04-20 08:24 G | 31795966.66 | 31795966.85 | 31795967.05 | 0.0272 | 0.0168 |
| Saturn | 82343-05-02 12:58 G | 31796343.89 | 31796344.04 | 31796344.22 | 0.0270 | 0.0209 |

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| Pluto | 82343-07-17 10:20 G | 31796419.68 | 31796419.93 | 31796420.19 | 0.0081 | 0.0010 |
| Saturn | 82357-10-21 00:15 G | 31801629.38 | 31801629.51 | 31801629.66 | 0.0288 | 0.0238 |
| Saturn | 82358-11-03 20:24 G | 31802008.21 | 31802008.35 | 31802008.50 | 0.0291 | 0.0235 |
| Mars | 82369-03-05 15:08 G | 31805782.96 | 31805783.13 | 31805783.30 | 0.1659 | 0.0511 |
| Saturn | 82372-04-26 10:05 G | 31806930.69 | 31806930.92 | 31806931.16 | 0.0270 | 0.0038 |
| Neptune | 82372-05-23 07:56 G | 31806957.74 | 31806957.83 | 31806957.95 | 0.0088 | 0.0079 |
| Neptune | 82373-05-25 16:05 G | 31807324.95 | 31807325.17 | 31807325.39 | 0.0088 | 0.0048 |
| Neptune | 82374-05-28 09:22 G | 31807692.66 | 31807692.89 | 31807693.13 | 0.0088 | 0.0036 |
| Neptune | 82375-05-30 14:39 G | 31808059.85 | 31808060.11 | 31808060.37 | 0.0088 | 0.0005 |
| Neptune | 82376-06-01 09:22 G | 31808427.63 | 31808427.89 | 31808428.16 | 0.0088 | 0.0008 |
| Neptune | 82377-06-03 14:24 G | 31808794.88 | 31808795.10 | 31808795.34 | 0.0088 | 0.0039 |
| Neptune | 82378-06-06 07:12 G | 31809162.59 | 31809162.80 | 31809163.02 | 0.0088 | 0.0051 |
| Jupiter | 82378-11-22 17:46 G | 31809332.02 | 31809332.24 | 31809332.47 | 0.0507 | 0.0131 |
| Neptune | 82379-06-08 15:22 G | 31809530.08 | 31809530.14 | 31809530.26 | 0.0088 | 0.0082 |
| Uranus | 82380-04-13 20:24 G | 31809840.33 | 31809840.35 | 31809840.42 | 0.0141 | 0.0139 |
| Uranus | 82381-04-18 13:12 G | 31810209.85 | 31810210.05 | 31810210.27 | 0.0141 | 0.0069 |
| Uranus | 82382-04-23 12:15 G | 31810579.76 | 31810580.01 | 31810580.27 | 0.0141 | 0.0024 |
| Uranus | 82383-04-28 04:20 G | 31810949.45 | 31810949.68 | 31810949.92 | 0.0142 | 0.0041 |
| Uranus | 82384-05-02 06:29 G | 31811319.59 | 31811319.77 | 31811319.96 | 0.0142 | 0.0099 |
| Jupiter | 82384-05-17 17:17 G | 31811335.12 | 31811335.22 | 31811335.32 | 0.0521 | 0.0466 |
| Saturn | 82387-10-28 21:22 G | 31812594.15 | 31812594.39 | 31812594.63 | 0.0289 | 0.0010 |
| Jupiter | 82390-11-27 13:27 G | 31813719.89 | 31813720.06 | 31813720.25 | 0.0509 | 0.0313 |
| Jupiter | 82396-05-22 19:27 G | 31815723.08 | 31815723.31 | 31815723.55 | 0.0519 | 0.0030 |
| Saturn | 82401-04-21 06:44 G | 31817517.57 | 31817517.78 | 31817518.02 | 0.0272 | 0.0132 |
| Saturn | 82402-05-03 10:34 G | 31817894.86 | 31817894.94 | 31817895.05 | 0.0270 | 0.0248 |
| Saturn | 82416-10-21 23:46 G | 31823180.31 | 31823180.49 | 31823180.68 | 0.0288 | 0.0191 |
| Saturn | 82417-11-04 23:46 G | 31823559.44 | 31823559.49 | 31823559.56 | 0.0291 | 0.0281 |
| Uranus | 82420-10-18 06:00 G | 31824637.64 | 31824637.75 | 31824637.91 | 0.0137 | 0.0118 |
| Uranus | 82421-10-22 13:41 G | 31825006.86 | 31825007.07 | 31825007.30 | 0.0137 | 0.0065 |
| Uranus | 82422-10-27 08:10 G | 31825376.58 | 31825376.84 | 31825377.10 | 0.0137 | 0.0006 |

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| Uranus | 82423-10-31 12:58 G | 31825745.81 | 31825746.04 | 31825746.29 | 0.0136 | 0.0032 |
| Uranus | 82424-11-04 06:15 G | 31826115.59 | 31826115.76 | 31826115.95 | 0.0136 | 0.0096 |
| Uranus | 82425-11-08 09:36 G | 31826484.87 | 31826484.90 | 31826484.97 | 0.0136 | 0.0133 |
| Saturn | 82431-04-28 16:20 G | 31828481.96 | 31828482.18 | 31828482.42 | 0.0270 | 0.0077 |
| Saturn | 82446-10-30 01:41 G | 31834145.33 | 31834145.57 | 31834145.82 | 0.0290 | 0.0058 |
| Neptune | 82454-11-24 15:08 G | 31837093.07 | 31837093.13 | 31837093.23 | 0.0090 | 0.0085 |
| Neptune | 82455-11-27 07:12 G | 31837460.62 | 31837460.80 | 31837461.01 | 0.0090 | 0.0055 |
| Neptune | 82456-11-28 12:58 G | 31837827.82 | 31837828.04 | 31837828.29 | 0.0090 | 0.0041 |
| Neptune | 82457-12-01 07:41 G | 31838195.57 | 31838195.82 | 31838196.07 | 0.0090 | 0.0009 |
| Neptune | 82458-12-03 12:15 G | 31838562.76 | 31838563.01 | 31838563.26 | 0.0090 | 0.0005 |
| Neptune | 82459-12-06 05:32 G | 31838930.51 | 31838930.73 | 31838930.98 | 0.0090 | 0.0037 |
| Saturn | 82460-04-22 05:46 G | 31839068.52 | 31839068.74 | 31839068.99 | 0.0272 | 0.0096 |
| Neptune | 82460-12-07 12:15 G | 31839297.82 | 31839298.01 | 31839298.23 | 0.0090 | 0.0050 |
| Jupiter | 82461-11-22 08:10 G | 31839647.64 | 31839647.84 | 31839648.05 | 0.0507 | 0.0192 |
| Neptune | 82461-12-10 01:56 G | 31839665.49 | 31839665.58 | 31839665.71 | 0.0090 | 0.0081 |
| Uranus | 82464-04-14 06:15 G | 31840521.63 | 31840521.76 | 31840521.90 | 0.0141 | 0.0120 |
| Uranus | 82465-04-19 00:00 G | 31840891.30 | 31840891.50 | 31840891.70 | 0.0141 | 0.0078 |
| Uranus | 82466-04-23 21:51 G | 31841261.15 | 31841261.41 | 31841261.68 | 0.0141 | 0.0008 |
| Uranus | 82467-04-28 15:08 G | 31841630.90 | 31841631.13 | 31841631.37 | 0.0142 | 0.0043 |
| Uranus | 82468-05-02 16:20 G | 31842001.02 | 31842001.18 | 31842001.39 | 0.0142 | 0.0101 |
| Jupiter | 82473-11-26 18:00 G | 31844035.04 | 31844035.25 | 31844035.47 | 0.0508 | 0.0240 |
| Saturn | 82475-10-24 08:39 G | 31844731.66 | 31844731.86 | 31844732.07 | 0.0288 | 0.0144 |
| Jupiter | 82479-05-22 14:24 G | 31846037.87 | 31846038.10 | 31846038.34 | 0.0520 | 0.0052 |
| Saturn | 82489-04-17 12:00 G | 31849655.95 | 31849656.00 | 31849656.05 | 0.0273 | 0.0266 |
| Saturn | 82490-04-29 21:08 G | 31850033.16 | 31850033.38 | 31850033.61 | 0.0270 | 0.0117 |
| Jupiter | 82491-05-27 19:56 G | 31850426.31 | 31850426.33 | 31850426.36 | 0.0518 | 0.0514 |
| Pluto | 82501-01-16 17:17 G | 31853947.00 | 31853947.22 | 31853947.48 | 0.0063 | 0.0021 |
| Pluto | 82502-01-18 07:56 G | 31854313.78 | 31854313.83 | 31854313.88 | 0.0063 | 0.0062 |
| Uranus | 82504-10-19 15:51 G | 31855319.01 | 31855319.16 | 31855319.33 | 0.0137 | 0.0109 |
| Uranus | 82505-10-24 00:00 G | 31855688.28 | 31855688.50 | 31855688.73 | 0.0137 | 0.0057 |

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| Saturn | 82505-11-01 06:29 G | 31855696.54 | 31855696.77 | 31855697.01 | 0.0290 | 0.0111 |
| Uranus | 82506-10-28 17:17 G | 31856057.97 | 31856058.22 | 31856058.48 | 0.0137 | 0.0011 |
| Uranus | 82507-11-01 23:17 G | 31856427.25 | 31856427.47 | 31856427.71 | 0.0136 | 0.0051 |
| Uranus | 82508-11-05 16:05 G | 31856796.98 | 31856797.17 | 31856797.38 | 0.0136 | 0.0087 |
| Saturn | 82519-04-25 12:15 G | 31860619.78 | 31860620.01 | 31860620.25 | 0.0272 | 0.0054 |
| Saturn | 82534-10-26 23:46 G | 31866283.27 | 31866283.49 | 31866283.73 | 0.0288 | 0.0091 |
| Neptune | 82536-05-23 12:15 G | 31866857.95 | 31866858.01 | 31866858.13 | 0.0088 | 0.0083 |
| Neptune | 82537-05-26 06:29 G | 31867225.61 | 31867225.77 | 31867225.98 | 0.0088 | 0.0060 |
| Neptune | 82538-05-28 11:46 G | 31867592.76 | 31867592.99 | 31867593.23 | 0.0088 | 0.0038 |
| Neptune | 82539-05-31 06:44 G | 31867960.52 | 31867960.78 | 31867961.04 | 0.0088 | 0.0016 |
| Neptune | 82540-06-01 12:44 G | 31868327.77 | 31868328.03 | 31868328.28 | 0.0088 | 0.0006 |
| Neptune | 82541-06-04 05:03 G | 31868695.45 | 31868695.71 | 31868695.97 | 0.0088 | 0.0026 |
| Neptune | 82542-06-06 14:24 G | 31869062.91 | 31869063.10 | 31869063.33 | 0.0088 | 0.0049 |
| Neptune | 82543-06-09 01:27 G | 31869430.42 | 31869430.56 | 31869430.75 | 0.0088 | 0.0070 |
| Jupiter | 82544-11-22 09:08 G | 31869962.68 | 31869962.88 | 31869963.08 | 0.0506 | 0.0275 |
| Uranus | 82548-04-15 15:22 G | 31871203.05 | 31871203.14 | 31871203.27 | 0.0141 | 0.0128 |
| Saturn | 82548-04-19 18:44 G | 31871207.15 | 31871207.28 | 31871207.44 | 0.0273 | 0.0223 |
| Uranus | 82549-04-20 10:48 G | 31871572.74 | 31871572.95 | 31871573.19 | 0.0141 | 0.0059 |
| Saturn | 82549-05-02 00:15 G | 31871584.32 | 31871584.51 | 31871584.72 | 0.0270 | 0.0161 |
| Uranus | 82550-04-25 07:41 G | 31871942.56 | 31871942.82 | 31871943.09 | 0.0141 | 0.0014 |
| Uranus | 82551-04-30 02:24 G | 31872312.37 | 31872312.60 | 31872312.83 | 0.0142 | 0.0054 |
| Uranus | 82552-05-04 02:10 G | 31872682.44 | 31872682.59 | 31872682.77 | 0.0142 | 0.0110 |
| Jupiter | 82556-11-26 18:44 G | 31874350.07 | 31874350.28 | 31874350.49 | 0.0508 | 0.0159 |
| Jupiter | 82562-05-22 23:46 G | 31876353.27 | 31876353.49 | 31876353.72 | 0.0520 | 0.0120 |
| Saturn | 82564-11-02 18:44 G | 31877248.08 | 31877248.28 | 31877248.48 | 0.0290 | 0.0167 |
| Mars | 82574-03-06 01:27 G | 31880658.37 | 31880658.56 | 31880658.75 | 0.1667 | 0.0408 |
| Jupiter | 82574-05-27 17:17 G | 31880741.08 | 31880741.22 | 31880741.36 | 0.0518 | 0.0418 |
| Saturn | 82578-04-27 01:12 G | 31882171.31 | 31882171.55 | 31882171.79 | 0.0272 | 0.0010 |
| Uranus | 82588-10-20 02:10 G | 31886000.45 | 31886000.59 | 31886000.76 | 0.0137 | 0.0108 |
| Uranus | 82589-10-24 11:17 G | 31886369.76 | 31886369.97 | 31886370.21 | 0.0137 | 0.0054 |

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| Uranus | 82590-10-29 04:05 G | 31886739.41 | 31886739.67 | 31886739.93 | 0.0137 | 0.0004 |
| Pluto | 82591-07-19 08:24 G | 31887002.64 | 31887002.85 | 31887003.10 | 0.0081 | 0.0043 |
| Uranus | 82591-11-02 10:34 G | 31887108.71 | 31887108.94 | 31887109.18 | 0.0136 | 0.0044 |
| Uranus | 82592-11-06 02:24 G | 31887478.45 | 31887478.60 | 31887478.76 | 0.0136 | 0.0107 |
| Saturn | 82593-10-28 14:53 G | 31887834.88 | 31887835.12 | 31887835.37 | 0.0289 | 0.0035 |
| Saturn | 82607-04-23 00:15 G | 31892758.32 | 31892758.51 | 31892758.71 | 0.0273 | 0.0176 |
| Saturn | 82608-05-04 08:24 G | 31893135.70 | 31893135.85 | 31893136.01 | 0.0270 | 0.0207 |
| Neptune | 82619-11-28 10:48 G | 31897360.79 | 31897360.95 | 31897361.16 | 0.0090 | 0.0063 |
| Neptune | 82620-11-30 05:46 G | 31897728.53 | 31897728.74 | 31897728.97 | 0.0090 | 0.0045 |
| Neptune | 82621-12-02 10:34 G | 31898095.70 | 31898095.94 | 31898096.20 | 0.0090 | 0.0019 |
| Saturn | 82622-10-23 13:56 G | 31898420.95 | 31898421.08 | 31898421.21 | 0.0287 | 0.0239 |
| Neptune | 82622-12-05 03:51 G | 31898463.40 | 31898463.66 | 31898463.92 | 0.0090 | 0.0001 |
| Saturn | 82623-11-06 14:24 G | 31898799.95 | 31898800.10 | 31898800.24 | 0.0290 | 0.0226 |
| Neptune | 82623-12-07 11:32 G | 31898830.75 | 31898830.98 | 31898831.22 | 0.0090 | 0.0026 |
| Neptune | 82624-12-09 00:29 G | 31899198.31 | 31899198.52 | 31899198.77 | 0.0090 | 0.0045 |
| Neptune | 82625-12-11 12:58 G | 31899565.92 | 31899566.04 | 31899566.21 | 0.0090 | 0.0072 |
| Neptune | 82626-12-13 21:08 G | 31899933.38 | 31899933.38 | 31899933.42 | 0.0090 | 0.0089 |
| Jupiter | 82627-11-23 10:20 G | 31900277.77 | 31900277.93 | 31900278.09 | 0.0506 | 0.0361 |
| Uranus | 82632-04-16 22:34 G | 31901884.30 | 31901884.44 | 31901884.62 | 0.0141 | 0.0113 |
| Uranus | 82633-04-21 19:12 G | 31902254.10 | 31902254.30 | 31902254.53 | 0.0141 | 0.0069 |
| Uranus | 82634-04-26 14:39 G | 31902623.85 | 31902624.11 | 31902624.38 | 0.0141 | 0.0005 |
| Uranus | 82635-05-01 10:34 G | 31902993.72 | 31902993.94 | 31902994.18 | 0.0142 | 0.0052 |
| Uranus | 82636-05-05 09:36 G | 31903363.75 | 31903363.90 | 31903364.07 | 0.0142 | 0.0113 |
| Saturn | 82637-04-29 12:29 G | 31903722.78 | 31903723.02 | 31903723.27 | 0.0272 | 0.0038 |
| Jupiter | 82639-11-28 02:24 G | 31904665.37 | 31904665.60 | 31904665.84 | 0.0508 | 0.0088 |
| Jupiter | 82645-05-22 16:48 G | 31906667.99 | 31906668.20 | 31906668.42 | 0.0520 | 0.0226 |
| Saturn | 82652-10-31 03:36 G | 31909386.40 | 31909386.65 | 31909386.90 | 0.0289 | 0.0023 |
| Mars | 82653-03-09 04:20 G | 31909515.62 | 31909515.68 | 31909515.74 | 0.1663 | 0.1548 |
| Jupiter | 82657-05-27 13:56 G | 31911055.90 | 31911056.08 | 31911056.26 | 0.0519 | 0.0318 |
| Saturn | 82666-04-24 10:34 G | 31914309.72 | 31914309.94 | 31914310.15 | 0.0273 | 0.0128 |

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| Saturn | 82667-05-06 23:03 G | 31914687.40 | 31914687.46 | 31914687.54 | 0.0270 | 0.0258 |
| Uranus | 82672-10-21 12:15 G | 31916681.84 | 31916682.01 | 31916682.21 | 0.0137 | 0.0097 |
| Uranus | 82673-10-25 22:20 G | 31917051.22 | 31917051.43 | 31917051.68 | 0.0137 | 0.0048 |
| Uranus | 82674-10-30 13:56 G | 31917420.82 | 31917421.08 | 31917421.34 | 0.0137 | 0.0002 |
| Uranus | 82675-11-03 21:36 G | 31917790.19 | 31917790.40 | 31917790.63 | 0.0136 | 0.0062 |
| Uranus | 82676-11-07 12:29 G | 31918159.86 | 31918160.02 | 31918160.22 | 0.0136 | 0.0099 |
| Saturn | 82681-10-25 10:05 G | 31919972.74 | 31919972.92 | 31919973.11 | 0.0287 | 0.0179 |
| Saturn | 82682-11-08 10:48 G | 31920351.93 | 31920351.95 | 31920352.00 | 0.0291 | 0.0288 |
| Saturn | 82696-04-30 20:10 G | 31925274.10 | 31925274.34 | 31925274.59 | 0.0271 | 0.0087 |
| Neptune | 82700-05-25 04:48 G | 31926758.64 | 31926758.70 | 31926758.80 | 0.0088 | 0.0083 |
| Neptune | 82701-05-27 09:36 G | 31927125.76 | 31927125.90 | 31927126.06 | 0.0088 | 0.0071 |
| Neptune | 82702-05-30 04:05 G | 31927493.44 | 31927493.67 | 31927493.91 | 0.0088 | 0.0040 |
| Neptune | 82703-06-01 10:34 G | 31927860.71 | 31927860.94 | 31927861.19 | 0.0088 | 0.0028 |
| Neptune | 82704-06-03 01:27 G | 31928228.30 | 31928228.56 | 31928228.84 | 0.0088 | 0.0003 |
| Neptune | 82705-06-05 12:00 G | 31928595.76 | 31928596.00 | 31928596.26 | 0.0088 | 0.0016 |
| Neptune | 82706-06-07 22:20 G | 31928963.21 | 31928963.43 | 31928963.67 | 0.0088 | 0.0046 |
| Neptune | 82707-06-10 13:56 G | 31929330.92 | 31929331.08 | 31929331.29 | 0.0088 | 0.0059 |
| Jupiter | 82710-11-23 14:53 G | 31930593.01 | 31930593.12 | 31930593.24 | 0.0505 | 0.0443 |
| Saturn | 82711-11-03 16:05 G | 31930937.94 | 31930938.17 | 31930938.42 | 0.0289 | 0.0085 |
| Uranus | 82716-04-18 06:00 G | 31932565.62 | 31932565.75 | 31932565.90 | 0.0141 | 0.0119 |
| Uranus | 82717-04-23 04:05 G | 31932935.45 | 31932935.67 | 31932935.91 | 0.0141 | 0.0051 |
| Uranus | 82718-04-27 22:05 G | 31933305.16 | 31933305.42 | 31933305.68 | 0.0141 | 0.0006 |
| Uranus | 82719-05-02 18:58 G | 31933675.09 | 31933675.29 | 31933675.53 | 0.0142 | 0.0065 |
| Uranus | 82720-05-06 16:20 G | 31934045.05 | 31934045.18 | 31934045.34 | 0.0142 | 0.0117 |
| Jupiter | 82722-11-27 20:39 G | 31934980.13 | 31934980.36 | 31934980.59 | 0.0507 | 0.0002 |
| Saturn | 82725-04-27 01:12 G | 31935861.32 | 31935861.55 | 31935861.78 | 0.0272 | 0.0077 |
| Jupiter | 82728-05-22 14:53 G | 31936982.94 | 31936983.12 | 31936983.29 | 0.0522 | 0.0329 |
| Jupiter | 82734-12-02 14:10 G | 31939368.05 | 31939368.09 | 31939368.14 | 0.0509 | 0.0498 |
| Jupiter | 82740-05-27 17:32 G | 31941371.01 | 31941371.23 | 31941371.45 | 0.0520 | 0.0233 |
| Saturn | 82740-10-28 06:44 G | 31941524.56 | 31941524.78 | 31941525.00 | 0.0288 | 0.0117 |

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| Pluto | 82749-01-20 01:41 G | 31944530.43 | 31944530.57 | 31944530.75 | 0.0063 | 0.0050 |
| Pluto | 82750-01-21 09:51 G | 31944896.73 | 31944896.91 | 31944897.12 | 0.0063 | 0.0039 |
| Saturn | 82754-04-21 21:51 G | 31946448.32 | 31946448.41 | 31946448.52 | 0.0274 | 0.0251 |
| Saturn | 82755-05-04 04:05 G | 31946825.46 | 31946825.67 | 31946825.89 | 0.0271 | 0.0136 |
| Uranus | 82756-10-22 22:20 G | 31947363.26 | 31947363.43 | 31947363.62 | 0.0137 | 0.0099 |
| Uranus | 82757-10-27 09:51 G | 31947732.68 | 31947732.91 | 31947733.15 | 0.0137 | 0.0042 |
| Uranus | 82758-11-01 00:15 G | 31948102.25 | 31948102.51 | 31948102.77 | 0.0137 | 0.0013 |
| Uranus | 82759-11-05 08:53 G | 31948471.65 | 31948471.87 | 31948472.10 | 0.0136 | 0.0056 |
| Uranus | 82760-11-08 22:05 G | 31948841.32 | 31948841.42 | 31948841.57 | 0.0136 | 0.0119 |
| Saturn | 82770-11-05 07:27 G | 31952489.61 | 31952489.81 | 31952490.02 | 0.0290 | 0.0142 |
| Neptune | 82783-11-29 03:36 G | 31957261.55 | 31957261.65 | 31957261.81 | 0.0090 | 0.0077 |
| Saturn | 82784-04-28 16:05 G | 31957412.93 | 31957413.17 | 31957413.41 | 0.0272 | 0.0030 |
| Neptune | 82784-11-30 09:36 G | 31957628.70 | 31957628.90 | 31957629.12 | 0.0090 | 0.0047 |
| Neptune | 82785-12-03 01:56 G | 31957996.36 | 31957996.58 | 31957996.85 | 0.0090 | 0.0033 |
| Neptune | 82786-12-05 11:03 G | 31958363.71 | 31958363.96 | 31958364.21 | 0.0090 | 0.0002 |
| Neptune | 82787-12-07 22:48 G | 31958731.19 | 31958731.45 | 31958731.71 | 0.0090 | 0.0013 |
| Neptune | 82788-12-09 11:32 G | 31959098.78 | 31959098.98 | 31959099.22 | 0.0090 | 0.0044 |
| Neptune | 82789-12-11 18:29 G | 31959466.10 | 31959466.27 | 31959466.50 | 0.0090 | 0.0058 |
| Neptune | 82790-12-14 11:46 G | 31959833.97 | 31959833.99 | 31959834.07 | 0.0090 | 0.0088 |
| Saturn | 82799-10-30 20:10 G | 31963076.10 | 31963076.34 | 31963076.59 | 0.0288 | 0.0060 |
| Uranus | 82800-04-18 12:44 G | 31963246.88 | 31963247.03 | 31963247.22 | 0.0141 | 0.0107 |
| Uranus | 82801-04-23 11:32 G | 31963616.78 | 31963616.98 | 31963617.22 | 0.0141 | 0.0061 |
| Uranus | 82802-04-28 04:05 G | 31963986.41 | 31963986.67 | 31963986.94 | 0.0141 | 0.0012 |
| Uranus | 82803-05-03 02:39 G | 31964356.40 | 31964356.61 | 31964356.85 | 0.0142 | 0.0059 |
| Uranus | 82804-05-06 22:05 G | 31964726.32 | 31964726.42 | 31964726.57 | 0.0142 | 0.0124 |
| Jupiter | 82805-11-27 05:03 G | 31965295.48 | 31965295.71 | 31965295.94 | 0.0506 | 0.0079 |
| Jupiter | 82811-05-22 18:15 G | 31967298.11 | 31967298.26 | 31967298.42 | 0.0522 | 0.0400 |
| Saturn | 82813-04-23 04:48 G | 31967999.54 | 31967999.70 | 31967999.87 | 0.0273 | 0.0205 |
| Saturn | 82814-05-05 15:22 G | 31968376.97 | 31968377.14 | 31968377.32 | 0.0270 | 0.0181 |
| Jupiter | 82817-12-01 10:20 G | 31969682.80 | 31969682.93 | 31969683.06 | 0.0509 | 0.0417 |

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| Jupiter | 82823-05-27 12:15 G | 31971685.78 | 31971686.01 | 31971686.23 | 0.0520 | 0.0146 |
| Saturn | 82828-10-23 23:03 G | 31973662.38 | 31973662.46 | 31973662.55 | 0.0287 | 0.0267 |
| Saturn | 82829-11-07 00:00 G | 31974041.34 | 31974041.50 | 31974041.68 | 0.0290 | 0.0195 |
| Uranus | 82840-10-23 06:58 G | 31978044.60 | 31978044.79 | 31978045.01 | 0.0137 | 0.0086 |
| Uranus | 82841-10-27 19:56 G | 31978414.10 | 31978414.33 | 31978414.57 | 0.0137 | 0.0039 |
| Uranus | 82842-11-01 08:39 G | 31978783.61 | 31978783.86 | 31978784.13 | 0.0137 | 0.0014 |
| Saturn | 82843-05-01 01:41 G | 31978964.31 | 31978964.57 | 31978964.82 | 0.0271 | 0.0016 |
| Uranus | 82843-11-05 18:44 G | 31979153.09 | 31979153.28 | 31979153.50 | 0.0136 | 0.0073 |
| Uranus | 82844-11-09 07:27 G | 31979522.67 | 31979522.81 | 31979522.98 | 0.0136 | 0.0110 |
| Mars | 82858-03-08 16:05 G | 31984389.98 | 31984390.17 | 31984390.37 | 0.1672 | 0.0062 |
| Saturn | 82858-11-01 02:53 G | 31984627.37 | 31984627.62 | 31984627.87 | 0.0289 | 0.0009 |
| Neptune | 82865-05-27 00:00 G | 31987026.39 | 31987026.50 | 31987026.67 | 0.0088 | 0.0075 |
| Neptune | 82866-05-29 07:27 G | 31987393.62 | 31987393.81 | 31987394.03 | 0.0088 | 0.0051 |
| Neptune | 82867-05-31 21:22 G | 31987761.15 | 31987761.39 | 31987761.66 | 0.0088 | 0.0032 |
| Neptune | 82868-06-02 09:36 G | 31988128.66 | 31988128.90 | 31988129.16 | 0.0088 | 0.0008 |
| Neptune | 82869-06-04 18:58 G | 31988496.03 | 31988496.29 | 31988496.56 | 0.0088 | 0.0012 |
| Neptune | 82870-06-07 11:03 G | 31988863.75 | 31988863.96 | 31988864.22 | 0.0088 | 0.0036 |
| Neptune | 82871-06-09 16:34 G | 31989231.00 | 31989231.19 | 31989231.41 | 0.0088 | 0.0054 |
| Saturn | 82872-04-24 14:24 G | 31989550.91 | 31989551.10 | 31989551.30 | 0.0273 | 0.0160 |
| Neptune | 82872-06-11 11:32 G | 31989598.87 | 31989598.98 | 31989599.12 | 0.0088 | 0.0077 |
| Saturn | 82873-05-07 03:36 G | 31989928.53 | 31989928.65 | 31989928.78 | 0.0270 | 0.0226 |
| Uranus | 82884-04-18 22:48 G | 31993928.30 | 31993928.45 | 31993928.63 | 0.0141 | 0.0109 |
| Uranus | 82885-04-23 22:48 G | 31994298.23 | 31994298.45 | 31994298.70 | 0.0141 | 0.0042 |
| Uranus | 82886-04-28 14:10 G | 31994667.83 | 31994668.09 | 31994668.36 | 0.0141 | 0.0003 |
| Uranus | 82887-05-03 13:27 G | 31995037.87 | 31995038.06 | 31995038.28 | 0.0142 | 0.0076 |
| Saturn | 82887-10-26 10:34 G | 31995213.80 | 31995213.94 | 31995214.10 | 0.0287 | 0.0219 |
| Uranus | 82888-05-07 07:27 G | 31995407.71 | 31995407.81 | 31995407.96 | 0.0142 | 0.0125 |
| Saturn | 82888-11-08 10:20 G | 31995592.81 | 31995592.93 | 31995593.07 | 0.0290 | 0.0243 |
| Jupiter | 82888-11-26 03:08 G | 31995610.40 | 31995610.63 | 31995610.85 | 0.0506 | 0.0146 |
| Jupiter | 82894-05-21 10:20 G | 31997612.88 | 31997612.93 | 31997612.99 | 0.0523 | 0.0504 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 82900-12-01 21:51 G | 31999998.25 | 31999998.41 | 31999998.57 | 0.0508 | 0.0357 |
| Saturn | 82902-05-03 04:20 G | 32000515.43 | 32000515.68 | 32000515.93 | 0.0271 | 0.0061 |
| Jupiter | 82906-05-27 16:48 G | 32002000.96 | 32002001.20 | 32002001.43 | 0.0521 | 0.0050 |
| Saturn | 82917-11-03 09:08 G | 32006178.64 | 32006178.88 | 32006179.12 | 0.0289 | 0.0038 |
| Uranus | 82923-10-21 04:05 G | 32008356.63 | 32008356.67 | 32008356.75 | 0.0138 | 0.0134 |
| Uranus | 82924-10-24 16:34 G | 32008726.01 | 32008726.19 | 32008726.40 | 0.0137 | 0.0091 |
| Uranus | 82925-10-29 06:58 G | 32009095.55 | 32009095.79 | 32009096.03 | 0.0137 | 0.0030 |
| Uranus | 82926-11-02 18:44 G | 32009465.02 | 32009465.28 | 32009465.54 | 0.0137 | 0.0022 |
| Uranus | 82927-11-07 05:46 G | 32009834.54 | 32009834.74 | 32009834.97 | 0.0136 | 0.0068 |
| Uranus | 82928-11-10 16:34 G | 32010204.13 | 32010204.19 | 32010204.30 | 0.0136 | 0.0129 |
| Mars | 82930-09-11 21:22 G | 32010874.21 | 32010874.39 | 32010874.56 | 0.1858 | 0.0833 |
| Saturn | 82931-04-28 01:12 G | 32011102.34 | 32011102.55 | 32011102.78 | 0.0272 | 0.0116 |
| Saturn | 82932-05-09 11:17 G | 32011479.94 | 32011479.97 | 32011480.01 | 0.0269 | 0.0266 |
| Saturn | 82946-10-28 15:51 G | 32016764.98 | 32016765.16 | 32016765.37 | 0.0287 | 0.0176 |
| Saturn | 82947-11-11 11:17 G | 32017143.92 | 32017143.97 | 32017144.04 | 0.0291 | 0.0282 |
| Neptune | 82947-11-29 06:58 G | 32017161.71 | 32017161.79 | 32017161.88 | 0.0089 | 0.0084 |
| Neptune | 82948-11-30 22:20 G | 32017529.24 | 32017529.43 | 32017529.66 | 0.0089 | 0.0055 |
| Neptune | 82949-12-03 08:10 G | 32017896.63 | 32017896.84 | 32017897.08 | 0.0090 | 0.0039 |
| Neptune | 82950-12-05 19:41 G | 32018264.06 | 32018264.32 | 32018264.58 | 0.0090 | 0.0010 |
| Neptune | 82951-12-08 10:34 G | 32018631.70 | 32018631.94 | 32018632.19 | 0.0090 | 0.0006 |
| Neptune | 82952-12-09 16:48 G | 32018998.98 | 32018999.20 | 32018999.46 | 0.0090 | 0.0035 |
| Neptune | 82953-12-12 10:34 G | 32019366.75 | 32019366.94 | 32019367.17 | 0.0090 | 0.0051 |
| Neptune | 82954-12-14 15:08 G | 32019734.04 | 32019734.13 | 32019734.27 | 0.0090 | 0.0079 |
| Saturn | 82961-05-04 06:29 G | 32022066.55 | 32022066.77 | 32022067.00 | 0.0271 | 0.0104 |
| Uranus | 82968-04-20 08:53 G | 32024609.71 | 32024609.87 | 32024610.08 | 0.0141 | 0.0098 |
| Uranus | 82969-04-25 09:51 G | 32024979.68 | 32024979.91 | 32024980.14 | 0.0141 | 0.0049 |
| Uranus | 82970-04-29 23:46 G | 32025349.24 | 32025349.49 | 32025349.75 | 0.0141 | 0.0024 |
| Uranus | 82971-05-05 00:29 G | 32025719.31 | 32025719.52 | 32025719.74 | 0.0142 | 0.0069 |
| Jupiter | 82971-11-27 15:22 G | 32025925.93 | 32025926.14 | 32025926.34 | 0.0505 | 0.0206 |
| Uranus | 82972-05-08 17:17 G | 32026089.18 | 32026089.22 | 32026089.32 | 0.0142 | 0.0138 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 82976-11-04 15:08 G | 32027729.91 | 32027730.13 | 32027730.36 | 0.0290 | 0.0079 |
| Jupiter | 82983-12-02 00:29 G | 32030313.32 | 32030313.52 | 32030313.72 | 0.0507 | 0.0286 |
| Jupiter | 82989-05-26 16:48 G | 32032315.96 | 32032316.20 | 32032316.44 | 0.0521 | 0.0008 |
| Saturn | 82990-04-29 06:58 G | 32032653.56 | 32032653.79 | 32032654.04 | 0.0272 | 0.0074 |
| Pluto | 82998-01-23 09:36 G | 32035479.64 | 32035479.90 | 32035480.16 | 0.0063 | 0.0004 |

84TH MILLENNIUM CE

This is a list of transits of Moon in the 84th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 83001-06-01 23:46 G | | 32036704.41 | 32036704.49 | 32036704.59 | 0.0519 | 0.0475 | |
| Saturn | 83005-10-30 12:29 G | | 32038315.80 | 32038316.02 | 32038316.25 | 0.0288 | 0.0137 | |
| Uranus | 83008-10-26 02:53 G | | 32039407.41 | 32039407.62 | 32039407.85 | 0.0137 | 0.0075 | |
| Uranus | 83009-10-30 18:15 G | | 32039777.02 | 32039777.26 | 32039777.50 | 0.0137 | 0.0029 | |
| Uranus | 83010-11-04 04:20 G | | 32040146.43 | 32040146.68 | 32040146.95 | 0.0137 | 0.0026 | |
| Uranus | 83011-11-08 16:48 G | | 32040516.02 | 32040516.20 | 32040516.41 | 0.0136 | 0.0083 | |
| Uranus | 83012-11-12 02:53 G | | 32040885.52 | 32040885.62 | 32040885.75 | 0.0136 | 0.0122 | |
| Saturn | 83019-04-24 22:34 G | | 32043240.34 | 32043240.44 | 32043240.56 | 0.0274 | 0.0243 | |
| Saturn | 83020-05-06 12:15 G | | 32043617.81 | 32043618.01 | 32043618.21 | 0.0271 | 0.0145 | |
| Neptune | 83029-05-28 06:00 G | | 32046926.64 | 32046926.75 | 32046926.88 | 0.0088 | 0.0076 | |
| Neptune | 83030-05-30 18:44 G | | 32047294.09 | 32047294.28 | 32047294.47 | 0.0088 | 0.0062 | |
| Neptune | 83031-06-02 07:12 G | | 32047661.57 | 32047661.80 | 32047662.04 | 0.0088 | 0.0033 | |
| Neptune | 83032-06-03 14:39 G | | 32048028.86 | 32048029.11 | 32048029.38 | 0.0088 | 0.0020 | |
| Neptune | 83033-06-06 08:10 G | | 32048396.59 | 32048396.84 | 32048397.10 | 0.0088 | 0.0010 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 83034-06-08 12:58 G | 32048763.79 | 32048764.04 | 32048764.30 | 0.0088 | 0.0022 |
| Neptune | 83035-06-11 07:27 G | 32049131.62 | 32049131.81 | 32049132.04 | 0.0088 | 0.0053 |
| Saturn | 83035-11-07 18:29 G | 32049281.05 | 32049281.27 | 32049281.49 | 0.0290 | 0.0116 |
| Neptune | 83036-06-12 12:58 G | 32049498.88 | 32049499.04 | 32049499.23 | 0.0088 | 0.0065 |
| Saturn | 83049-05-01 05:03 G | 32054204.46 | 32054204.71 | 32054204.96 | 0.0272 | 0.0034 |
| Uranus | 83052-04-21 20:24 G | 32055291.18 | 32055291.35 | 32055291.55 | 0.0141 | 0.0097 |
| Uranus | 83053-04-26 22:20 G | 32055661.18 | 32055661.43 | 32055661.67 | 0.0141 | 0.0031 |
| Uranus | 83054-05-01 11:46 G | 32056030.73 | 32056030.99 | 32056031.25 | 0.0141 | 0.0014 |
| Jupiter | 83054-11-27 21:08 G | 32056241.18 | 32056241.38 | 32056241.60 | 0.0505 | 0.0252 |
| Uranus | 83055-05-06 12:58 G | 32056400.86 | 32056401.04 | 32056401.25 | 0.0142 | 0.0089 |
| Uranus | 83056-05-10 05:17 G | 32056770.66 | 32056770.72 | 32056770.81 | 0.0142 | 0.0136 |
| Mars | 83063-03-09 21:08 G | 32059265.33 | 32059265.38 | 32059265.44 | 0.1682 | 0.1590 |
| Saturn | 83064-10-31 06:00 G | 32059866.52 | 32059866.75 | 32059866.98 | 0.0288 | 0.0104 |
| Jupiter | 83066-12-02 11:03 G | 32060628.77 | 32060628.96 | 32060629.16 | 0.0507 | 0.0252 |
| Jupiter | 83072-05-27 01:41 G | 32062631.34 | 32062631.57 | 32062631.79 | 0.0522 | 0.0093 |
| Saturn | 83078-04-26 01:56 G | 32064791.43 | 32064791.58 | 32064791.74 | 0.0274 | 0.0205 |
| Saturn | 83079-05-08 15:22 G | 32065168.98 | 32065169.14 | 32065169.33 | 0.0270 | 0.0184 |
| Jupiter | 83084-05-31 20:24 G | 32067019.19 | 32067019.35 | 32067019.52 | 0.0520 | 0.0378 |
| Pluto | 83088-07-26 04:34 G | 32068535.43 | 32068535.69 | 32068535.95 | 0.0081 | 0.0003 |
| Uranus | 83091-10-23 04:34 G | 32069719.60 | 32069719.69 | 32069719.83 | 0.0138 | 0.0122 |
| Uranus | 83092-10-26 14:39 G | 32070088.91 | 32070089.11 | 32070089.33 | 0.0137 | 0.0080 |
| Uranus | 83093-10-31 06:58 G | 32070458.55 | 32070458.79 | 32070459.04 | 0.0137 | 0.0017 |
| Uranus | 83094-11-04 16:05 G | 32070827.92 | 32070828.17 | 32070828.43 | 0.0137 | 0.0033 |
| Saturn | 83094-11-08 13:56 G | 32070831.87 | 32070832.08 | 32070832.30 | 0.0290 | 0.0146 |
| Uranus | 83095-11-09 06:00 G | 32071197.55 | 32071197.75 | 32071197.95 | 0.0136 | 0.0081 |
| Saturn | 83108-05-03 01:41 G | 32075755.32 | 32075755.57 | 32075755.82 | 0.0271 | 0.0005 |
| Neptune | 83111-11-30 18:15 G | 32077062.20 | 32077062.26 | 32077062.37 | 0.0089 | 0.0085 |
| Neptune | 83112-12-02 06:00 G | 32077429.59 | 32077429.75 | 32077429.91 | 0.0090 | 0.0068 |
| Neptune | 83113-12-04 15:36 G | 32077796.93 | 32077797.15 | 32077797.40 | 0.0090 | 0.0041 |
| Neptune | 83114-12-07 07:12 G | 32078164.57 | 32078164.80 | 32078165.05 | 0.0090 | 0.0025 |

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|---------|---------------------|-------------|-------------|-------------|--------|----------|
| Neptune | 83115-12-09 13:27 G | 32078531.80 | 32078532.06 | 32078532.32 | 0.0090 | 0.0003 |
| Neptune | 83116-12-11 07:41 G | 32078899.58 | 32078899.82 | 32078900.07 | 0.0090 | 0.0020 |
| Neptune | 83117-12-13 12:15 G | 32079266.81 | 32079267.01 | 32079267.23 | 0.0090 | 0.0049 |
| Neptune | 83118-12-16 05:32 G | 32079634.58 | 32079634.73 | 32079634.94 | 0.0090 | 0.0065 |
| Saturn | 83123-11-03 05:03 G | 32081417.49 | 32081417.71 | 32081417.94 | 0.0288 | 0.0076 |
| Uranus | 83136-04-23 06:15 G | 32085972.57 | 32085972.76 | 32085972.97 | 0.0141 | 0.0088 |
| Saturn | 83137-04-28 04:34 G | 32086342.50 | 32086342.69 | 32086342.88 | 0.0274 | 0.0171 |
| Uranus | 83137-04-28 07:41 G | 32086342.59 | 32086342.82 | 32086343.07 | 0.0141 | 0.0038 * |
| Jupiter | 83137-11-28 10:48 G | 32086556.77 | 32086556.95 | 32086557.15 | 0.0505 | 0.0272 |
| Uranus | 83138-05-02 20:39 G | 32086712.11 | 32086712.36 | 32086712.61 | 0.0142 | 0.0035 |
| Saturn | 83138-05-10 12:15 G | 32086719.86 | 32086720.01 | 32086720.16 | 0.0270 | 0.0217 |
| Uranus | 83139-05-07 23:03 G | 32087082.26 | 32087082.46 | 32087082.67 | 0.0142 | 0.0080 |
| Mars | 83142-03-12 19:41 G | 32088122.16 | 32088122.32 | 32088122.48 | 0.1678 | 0.0731 |
| Jupiter | 83149-12-03 02:39 G | 32090944.39 | 32090944.61 | 32090944.82 | 0.0506 | 0.0208 |
| Saturn | 83152-10-27 11:03 G | 32092003.89 | 32092003.96 | 32092004.04 | 0.0286 | 0.0273 |
| Saturn | 83153-11-10 04:48 G | 32092382.50 | 32092382.70 | 32092382.90 | 0.0290 | 0.0173 |
| Jupiter | 83155-05-28 04:05 G | 32092946.44 | 32092946.67 | 32092946.91 | 0.0522 | 0.0159 |
| Saturn | 83167-05-05 02:39 G | 32097306.37 | 32097306.61 | 32097306.84 | 0.0271 | 0.0039 |
| Jupiter | 83167-06-02 07:56 G | 32097334.65 | 32097334.83 | 32097335.00 | 0.0520 | 0.0327 |
| Uranus | 83175-10-24 18:15 G | 32100401.19 | 32100401.26 | 32100401.36 | 0.0138 | 0.0130 |
| Uranus | 83176-10-28 02:39 G | 32100770.39 | 32100770.61 | 32100770.85 | 0.0137 | 0.0061 |
| Uranus | 83177-11-01 19:41 G | 32101140.08 | 32101140.32 | 32101140.57 | 0.0137 | 0.0018 |
| Uranus | 83178-11-06 03:51 G | 32101509.41 | 32101509.66 | 32101509.91 | 0.0137 | 0.0040 |
| Uranus | 83179-11-10 18:15 G | 32101879.10 | 32101879.26 | 32101879.45 | 0.0136 | 0.0094 |
| Uranus | 83180-11-14 01:56 G | 32102248.57 | 32102248.58 | 32102248.62 | 0.0136 | 0.0135 |
| Saturn | 83182-11-04 05:03 G | 32102968.47 | 32102968.71 | 32102968.95 | 0.0288 | 0.0048 |
| Neptune | 83193-05-28 13:41 G | 32106826.99 | 32106827.07 | 32106827.16 | 0.0088 | 0.0083 |
| Neptune | 83194-05-31 03:51 G | 32107194.52 | 32107194.66 | 32107194.83 | 0.0088 | 0.0068 |
| Neptune | 83195-06-02 10:48 G | 32107561.73 | 32107561.95 | 32107562.20 | 0.0088 | 0.0042 |
| Saturn | 83196-04-29 01:27 G | 32107893.34 | 32107893.56 | 32107893.78 | 0.0274 | 0.0134 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 83196-06-04 05:03 G | 32107929.47 | 32107929.71 | 32107929.96 | 0.0088 | 0.0026 |
| Saturn | 83197-05-11 06:00 G | 32108270.69 | 32108270.75 | 32108270.85 | 0.0270 | 0.0255 |
| Neptune | 83197-06-06 09:36 G | 32108296.64 | 32108296.90 | 32108297.16 | 0.0088 | 0.0000 |
| Neptune | 83198-06-09 03:51 G | 32108664.42 | 32108664.66 | 32108664.93 | 0.0088 | 0.0018 |
| Neptune | 83199-06-11 09:51 G | 32109031.69 | 32109031.91 | 32109032.13 | 0.0088 | 0.0043 |
| Neptune | 83200-06-13 01:41 G | 32109399.38 | 32109399.57 | 32109399.77 | 0.0088 | 0.0060 |
| Neptune | 83201-06-15 10:34 G | 32109766.90 | 32109766.94 | 32109767.02 | 0.0088 | 0.0085 |
| Saturn | 83211-10-29 04:34 G | 32113554.57 | 32113554.69 | 32113554.82 | 0.0286 | 0.0245 |
| Saturn | 83212-11-11 02:10 G | 32113933.43 | 32113933.59 | 32113933.77 | 0.0290 | 0.0201 |
| Mars | 83214-09-13 22:34 G | 32114605.26 | 32114605.44 | 32114605.63 | 0.1850 | 0.0273 |
| Uranus | 83220-04-23 15:36 G | 32116653.96 | 32116654.15 | 32116654.36 | 0.0141 | 0.0086 |
| Jupiter | 83220-11-28 00:58 G | 32116872.35 | 32116872.54 | 32116872.72 | 0.0504 | 0.0311 |
| Uranus | 83221-04-28 17:46 G | 32117023.99 | 32117024.24 | 32117024.49 | 0.0141 | 0.0022 |
| Uranus | 83222-05-03 06:29 G | 32117393.51 | 32117393.77 | 32117394.02 | 0.0142 | 0.0025 |
| Uranus | 83223-05-08 09:22 G | 32117763.72 | 32117763.89 | 32117764.07 | 0.0142 | 0.0100 |
| Saturn | 83226-05-06 06:15 G | 32118857.54 | 32118857.76 | 32118858.00 | 0.0271 | 0.0077 |
| Jupiter | 83232-12-02 05:17 G | 32121259.51 | 32121259.72 | 32121259.94 | 0.0506 | 0.0158 |
| Jupiter | 83238-05-27 16:20 G | 32123261.98 | 32123262.18 | 32123262.39 | 0.0522 | 0.0211 |
| Saturn | 83241-11-05 00:15 G | 32124519.26 | 32124519.51 | 32124519.76 | 0.0288 | 0.0020 |
| Pluto | 83246-01-26 14:10 G | 32126062.90 | 32126063.09 | 32126063.32 | 0.0063 | 0.0034 |
| Pluto | 83247-01-27 17:32 G | 32126429.14 | 32126429.23 | 32126429.38 | 0.0063 | 0.0056 |
| Jupiter | 83250-06-01 15:08 G | 32127649.92 | 32127650.13 | 32127650.35 | 0.0520 | 0.0243 |
| Saturn | 83255-04-30 19:12 G | 32129444.07 | 32129444.30 | 32129444.54 | 0.0274 | 0.0095 |
| Uranus | 83259-10-25 06:58 G | 32131082.65 | 32131082.79 | 32131082.95 | 0.0138 | 0.0109 |
| Uranus | 83260-10-28 14:53 G | 32131451.90 | 32131452.12 | 32131452.35 | 0.0137 | 0.0069 |
| Uranus | 83261-11-02 09:08 G | 32131821.63 | 32131821.88 | 32131822.13 | 0.0137 | 0.0003 |
| Uranus | 83262-11-06 16:05 G | 32132190.93 | 32132191.17 | 32132191.43 | 0.0137 | 0.0044 |
| Uranus | 83263-11-11 07:27 G | 32132560.66 | 32132560.81 | 32132561.01 | 0.0136 | 0.0095 |
| Saturn | 83270-10-30 04:48 G | 32135105.55 | 32135105.70 | 32135105.86 | 0.0286 | 0.0213 |
| Saturn | 83271-11-13 05:17 G | 32135484.59 | 32135484.72 | 32135484.88 | 0.0290 | 0.0230 |

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| Neptune | 83276-12-01 10:34 G | 32137329.82 | 32137329.94 | 32137330.07 | 0.0089 | 0.0078 |
| Neptune | 83277-12-04 03:08 G | 32137697.43 | 32137697.63 | 32137697.86 | 0.0090 | 0.0048 |
| Neptune | 83278-12-06 08:53 G | 32138064.64 | 32138064.87 | 32138065.12 | 0.0090 | 0.0034 |
| Neptune | 83279-12-09 03:51 G | 32138432.41 | 32138432.66 | 32138432.92 | 0.0090 | 0.0003 |
| Neptune | 83280-12-10 08:39 G | 32138799.62 | 32138799.86 | 32138800.12 | 0.0090 | 0.0012 |
| Neptune | 83281-12-13 02:24 G | 32139167.38 | 32139167.60 | 32139167.84 | 0.0090 | 0.0041 |
| Neptune | 83282-12-15 09:51 G | 32139534.74 | 32139534.91 | 32139535.13 | 0.0090 | 0.0056 |
| Neptune | 83283-12-17 22:34 G | 32139902.39 | 32139902.44 | 32139902.56 | 0.0090 | 0.0085 |
| Saturn | 83284-04-24 19:27 G | 32140031.31 | 32140031.31 | 32140031.32 | 0.0275 | 0.0274 |
| Saturn | 83285-05-07 07:27 G | 32140408.59 | 32140408.81 | 32140409.05 | 0.0271 | 0.0116 |
| Saturn | 83300-11-06 20:10 G | 32146070.09 | 32146070.34 | 32146070.59 | 0.0288 | 0.0012 |
| Uranus | 83303-04-21 12:00 G | 32146965.95 | 32146966.00 | 32146966.10 | 0.0140 | 0.0135 |
| Jupiter | 83303-11-29 05:03 G | 32147187.56 | 32147187.71 | 32147187.88 | 0.0504 | 0.0356 |
| Uranus | 83304-04-24 23:17 G | 32147335.27 | 32147335.47 | 32147335.68 | 0.0141 | 0.0081 |
| Uranus | 83305-04-30 00:58 G | 32147705.30 | 32147705.54 | 32147705.79 | 0.0141 | 0.0028 |
| Uranus | 83306-05-04 12:58 G | 32148074.81 | 32148075.04 | 32148075.29 | 0.0141 | 0.0044 |
| Uranus | 83307-05-09 16:34 G | 32148445.00 | 32148445.19 | 32148445.39 | 0.0142 | 0.0089 |
| Saturn | 83314-05-02 19:56 G | 32150995.09 | 32150995.33 | 32150995.57 | 0.0274 | 0.0055 |
| Jupiter | 83315-12-04 01:56 G | 32151575.36 | 32151575.58 | 32151575.81 | 0.0506 | 0.0119 |
| Jupiter | 83321-05-27 19:27 G | 32153577.12 | 32153577.31 | 32153577.52 | 0.0522 | 0.0303 |
| Saturn | 83329-11-01 10:48 G | 32156656.77 | 32156656.95 | 32156657.14 | 0.0286 | 0.0177 |
| Saturn | 83330-11-15 08:39 G | 32157035.76 | 32157035.86 | 32157035.96 | 0.0290 | 0.0265 |
| Jupiter | 83333-06-01 13:56 G | 32157964.87 | 32157965.08 | 32157965.30 | 0.0521 | 0.0171 |
| Pluto | 83336-07-28 11:32 G | 32159117.95 | 32159117.98 | 32159118.05 | 0.0081 | 0.0080 |
| Saturn | 83343-04-27 21:08 G | 32161582.26 | 32161582.38 | 32161582.52 | 0.0275 | 0.0235 |
| Uranus | 83343-10-26 19:12 G | 32161764.18 | 32161764.30 | 32161764.44 | 0.0138 | 0.0118 |
| Saturn | 83344-05-09 05:17 G | 32161959.51 | 32161959.72 | 32161959.92 | 0.0271 | 0.0158 |
| Uranus | 83344-10-30 02:10 G | 32162133.36 | 32162133.59 | 32162133.84 | 0.0137 | 0.0049 |
| Uranus | 83345-11-03 21:08 G | 32162503.13 | 32162503.38 | 32162503.62 | 0.0137 | 0.0006 |
| Uranus | 83346-11-08 03:08 G | 32162872.40 | 32162872.63 | 32162872.88 | 0.0137 | 0.0054 |

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| Mars | 83347-03-12 20:10 G | 32162997.18 | 32162997.34 | 32162997.51 | 0.1687 | 0.0884 |
| Uranus | 83347-11-12 19:27 G | 32163242.18 | 32163242.31 | 32163242.49 | 0.0136 | 0.0107 |
| Neptune | 83358-05-31 06:15 G | 32167094.63 | 32167094.76 | 32167094.95 | 0.0088 | 0.0070 |
| Neptune | 83359-06-03 00:29 G | 32167462.35 | 32167462.52 | 32167462.75 | 0.0088 | 0.0056 |
| Saturn | 83359-11-08 23:32 G | 32167621.24 | 32167621.48 | 32167621.72 | 0.0288 | 0.0053 |
| Neptune | 83360-06-04 05:32 G | 32167829.49 | 32167829.73 | 32167829.98 | 0.0088 | 0.0027 |
| Neptune | 83361-06-06 23:32 G | 32168197.22 | 32168197.48 | 32168197.75 | 0.0088 | 0.0013 |
| Neptune | 83362-06-09 05:32 G | 32168564.49 | 32168564.73 | 32168564.99 | 0.0088 | 0.0016 |
| Neptune | 83363-06-11 20:39 G | 32168932.11 | 32168932.36 | 32168932.62 | 0.0088 | 0.0029 |
| Neptune | 83364-06-13 06:58 G | 32169299.63 | 32169299.79 | 32169300.00 | 0.0088 | 0.0058 |
| Neptune | 83365-06-15 17:17 G | 32169667.08 | 32169667.22 | 32169667.39 | 0.0088 | 0.0071 |
| Saturn | 83373-05-04 02:53 G | 32172546.38 | 32172546.62 | 32172546.86 | 0.0274 | 0.0014 |
| Jupiter | 83386-11-28 19:56 G | 32177503.21 | 32177503.33 | 32177503.47 | 0.0504 | 0.0410 |
| Uranus | 83387-04-21 21:51 G | 32177647.37 | 32177647.41 | 32177647.49 | 0.0140 | 0.0137 |
| Uranus | 83388-04-25 09:36 G | 32178016.69 | 32178016.90 | 32178017.11 | 0.0141 | 0.0076 |
| Saturn | 83388-11-02 17:46 G | 32178208.03 | 32178208.24 | 32178208.47 | 0.0287 | 0.0134 |
| Uranus | 83389-04-30 10:48 G | 32178386.70 | 32178386.95 | 32178387.21 | 0.0141 | 0.0014 |
| Uranus | 83390-05-04 23:32 G | 32178756.23 | 32178756.48 | 32178756.73 | 0.0141 | 0.0035 |
| Uranus | 83391-05-10 02:53 G | 32179126.47 | 32179126.62 | 32179126.79 | 0.0142 | 0.0110 |
| Jupiter | 83398-12-03 00:15 G | 32181890.27 | 32181890.51 | 32181890.75 | 0.0505 | 0.0044 |
| Saturn | 83402-04-29 21:36 G | 32183133.23 | 32183133.40 | 32183133.59 | 0.0275 | 0.0191 |
| Saturn | 83403-05-12 07:56 G | 32183510.67 | 32183510.83 | 32183511.00 | 0.0271 | 0.0201 |
| Jupiter | 83404-05-27 18:44 G | 32183892.13 | 32183892.28 | 32183892.45 | 0.0523 | 0.0378 |
| Jupiter | 83410-12-08 15:22 G | 32186278.05 | 32186278.14 | 32186278.24 | 0.0507 | 0.0454 |
| Jupiter | 83416-06-02 03:36 G | 32188280.42 | 32188280.65 | 32188280.89 | 0.0521 | 0.0106 |
| Saturn | 83418-11-11 11:32 G | 32189172.76 | 32189172.98 | 32189173.21 | 0.0288 | 0.0099 |
| Mars | 83426-03-16 05:32 G | 32191854.67 | 32191854.73 | 32191854.79 | 0.1683 | 0.1583 |
| Uranus | 83427-10-28 06:00 G | 32192445.58 | 32192445.75 | 32192445.93 | 0.0138 | 0.0098 |
| Uranus | 83428-10-31 12:44 G | 32192814.81 | 32192815.03 | 32192815.28 | 0.0137 | 0.0059 |
| Uranus | 83429-11-05 08:53 G | 32193184.62 | 32193184.87 | 32193185.12 | 0.0137 | 0.0009 |

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| Uranus | 83430-11-09 14:24 G | 32193553.88 | 32193554.10 | 32193554.35 | 0.0137 | 0.0056 |
| Uranus | 83431-11-14 07:56 G | 32193923.70 | 32193923.83 | 32193924.00 | 0.0136 | 0.0109 |
| Saturn | 83432-05-06 09:22 G | 32194097.65 | 32194097.89 | 32194098.14 | 0.0274 | 0.0028 |
| Neptune | 83440-12-02 22:34 G | 32197230.35 | 32197230.44 | 32197230.56 | 0.0090 | 0.0081 |
| Neptune | 83441-12-05 03:36 G | 32197597.47 | 32197597.65 | 32197597.85 | 0.0090 | 0.0061 |
| Neptune | 83442-12-07 22:20 G | 32197965.20 | 32197965.43 | 32197965.68 | 0.0090 | 0.0036 |
| Neptune | 83443-12-10 03:36 G | 32198332.41 | 32198332.65 | 32198332.91 | 0.0090 | 0.0018 |
| Neptune | 83444-12-11 20:10 G | 32198700.08 | 32198700.34 | 32198700.61 | 0.0090 | 0.0008 |
| Neptune | 83445-12-14 05:03 G | 32199067.48 | 32199067.71 | 32199067.95 | 0.0090 | 0.0026 |
| Neptune | 83446-12-16 17:03 G | 32199435.00 | 32199435.21 | 32199435.43 | 0.0090 | 0.0052 |
| Saturn | 83447-11-05 23:32 G | 32199759.25 | 32199759.48 | 32199759.73 | 0.0287 | 0.0091 |
| Neptune | 83447-12-19 06:44 G | 32199802.65 | 32199802.78 | 32199802.95 | 0.0090 | 0.0071 |
| Saturn | 83461-05-01 02:10 G | 32204684.40 | 32204684.59 | 32204684.81 | 0.0275 | 0.0149 |
| Saturn | 83462-05-13 18:00 G | 32205062.15 | 32205062.25 | 32205062.36 | 0.0271 | 0.0242 |
| Jupiter | 83469-11-28 16:20 G | 32207818.13 | 32207818.18 | 32207818.24 | 0.0503 | 0.0488 |
| Uranus | 83471-04-23 08:24 G | 32208328.75 | 32208328.85 | 32208329.00 | 0.0140 | 0.0124 |
| Uranus | 83472-04-26 20:53 G | 32208698.16 | 32208698.37 | 32208698.59 | 0.0141 | 0.0072 |
| Uranus | 83473-05-01 21:36 G | 32209068.15 | 32209068.40 | 32209068.66 | 0.0141 | 0.0016 |
| Uranus | 83474-05-06 10:05 G | 32209437.70 | 32209437.92 | 32209438.16 | 0.0141 | 0.0054 |
| Uranus | 83475-05-11 13:12 G | 32209807.89 | 32209808.05 | 32209808.25 | 0.0142 | 0.0101 |
| Saturn | 83477-11-13 03:08 G | 32210724.44 | 32210724.63 | 32210724.85 | 0.0289 | 0.0150 |
| Jupiter | 83481-12-03 09:22 G | 32212205.66 | 32212205.89 | 32212206.11 | 0.0505 | 0.0034 |
| Jupiter | 83487-05-28 02:39 G | 32214207.51 | 32214207.61 | 32214207.72 | 0.0523 | 0.0464 |
| Saturn | 83491-05-08 14:24 G | 32215648.86 | 32215649.10 | 32215649.35 | 0.0273 | 0.0070 |
| Jupiter | 83493-12-07 20:39 G | 32216593.21 | 32216593.36 | 32216593.53 | 0.0507 | 0.0379 |
| Pluto | 83495-01-31 00:00 G | 32217012.25 | 32217012.50 | 32217012.75 | 0.0063 | 0.0013 |
| Mars | 83498-09-15 05:46 G | 32218335.54 | 32218335.74 | 32218335.94 | 0.1841 | 0.0718 |
| Jupiter | 83499-06-01 17:46 G | 32218595.00 | 32218595.24 | 32218595.48 | 0.0521 | 0.0001 |
| Saturn | 83506-11-08 10:05 G | 32221310.68 | 32221310.92 | 32221311.16 | 0.0287 | 0.0042 |
| Uranus | 83511-10-29 18:15 G | 32223127.11 | 32223127.26 | 32223127.42 | 0.0138 | 0.0107 |

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| Uranus | 83512-11-02 00:44 G | 32223496.29 | 32223496.53 | 32223496.79 | 0.0137 | 0.0038 |
| Uranus | 83513-11-06 20:53 G | 32223866.12 | 32223866.37 | 32223866.62 | 0.0137 | 0.0005 |
| Uranus | 83514-11-11 02:24 G | 32224235.38 | 32224235.60 | 32224235.82 | 0.0137 | 0.0067 |
| Uranus | 83515-11-15 20:24 G | 32224605.23 | 32224605.35 | 32224605.47 | 0.0136 | 0.0118 |
| Saturn | 83520-05-03 13:56 G | 32226235.87 | 32226236.08 | 32226236.31 | 0.0274 | 0.0102 |
| Neptune | 83522-06-01 19:41 G | 32226995.22 | 32226995.32 | 32226995.47 | 0.0088 | 0.0076 |
| Neptune | 83523-06-04 01:12 G | 32227362.37 | 32227362.55 | 32227362.73 | 0.0088 | 0.0062 |
| Neptune | 83524-06-05 18:44 G | 32227730.04 | 32227730.28 | 32227730.53 | 0.0088 | 0.0034 |
| Neptune | 83525-06-08 01:56 G | 32228097.35 | 32228097.58 | 32228097.84 | 0.0088 | 0.0021 |
| Neptune | 83526-06-10 15:51 G | 32228464.90 | 32228465.16 | 32228465.44 | 0.0088 | 0.0007 |
| Neptune | 83527-06-13 03:36 G | 32228832.41 | 32228832.65 | 32228832.90 | 0.0088 | 0.0022 |
| Neptune | 83528-06-14 11:46 G | 32229199.78 | 32229199.99 | 32229200.22 | 0.0088 | 0.0050 |
| Neptune | 83529-06-17 03:51 G | 32229567.51 | 32229567.66 | 32229567.86 | 0.0088 | 0.0065 |
| Saturn | 83535-11-03 00:44 G | 32231897.40 | 32231897.53 | 32231897.68 | 0.0285 | 0.0233 |
| Saturn | 83536-11-15 17:17 G | 32232276.05 | 32232276.22 | 32232276.41 | 0.0289 | 0.0202 |
| Saturn | 83550-05-10 20:10 G | 32237200.12 | 32237200.34 | 32237200.57 | 0.0273 | 0.0117 |
| Uranus | 83555-04-24 21:36 G | 32239010.30 | 32239010.40 | 32239010.53 | 0.0140 | 0.0125 |
| Uranus | 83556-04-28 10:20 G | 32239379.72 | 32239379.93 | 32239380.17 | 0.0141 | 0.0063 |
| Uranus | 83557-05-03 11:03 G | 32239749.70 | 32239749.96 | 32239750.22 | 0.0141 | 0.0002 |
| Uranus | 83558-05-08 00:15 G | 32240119.29 | 32240119.51 | 32240119.76 | 0.0141 | 0.0049 |
| Uranus | 83559-05-13 03:22 G | 32240489.53 | 32240489.64 | 32240489.78 | 0.0142 | 0.0124 |
| Jupiter | 83564-12-03 09:51 G | 32242520.68 | 32242520.91 | 32242521.15 | 0.0504 | 0.0118 |
| Saturn | 83565-11-10 03:51 G | 32242862.42 | 32242862.66 | 32242862.90 | 0.0287 | 0.0012 |
| Jupiter | 83576-12-07 18:58 G | 32246908.11 | 32246908.29 | 32246908.48 | 0.0506 | 0.0291 |
| Saturn | 83579-05-06 05:46 G | 32247787.51 | 32247787.74 | 32247787.98 | 0.0274 | 0.0050 |
| Jupiter | 83582-06-01 21:22 G | 32248910.16 | 32248910.39 | 32248910.61 | 0.0522 | 0.0104 |
| Pluto | 83585-08-02 06:15 G | 32250067.52 | 32250067.76 | 32250068.02 | 0.0081 | 0.0011 |
| Jupiter | 83594-06-06 18:15 G | 32253298.13 | 32253298.26 | 32253298.40 | 0.0521 | 0.0433 |
| Saturn | 83594-11-04 16:05 G | 32253448.97 | 32253449.17 | 32253449.37 | 0.0286 | 0.0175 |
| Uranus | 83595-10-30 06:44 G | 32253808.58 | 32253808.78 | 32253808.98 | 0.0138 | 0.0086 |

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| Saturn | 83595-11-18 06:44 G | 32253827.68 | 32253827.78 | 32253827.90 | 0.0289 | 0.0257 |
| Uranus | 83596-11-02 13:41 G | 32254177.83 | 32254178.07 | 32254178.31 | 0.0137 | 0.0046 |
| Uranus | 83597-11-07 09:51 G | 32254547.67 | 32254547.91 | 32254548.17 | 0.0137 | 0.0023 |
| Uranus | 83598-11-11 15:08 G | 32254916.92 | 32254917.13 | 32254917.36 | 0.0137 | 0.0068 |
| Uranus | 83599-11-16 09:36 G | 32255286.82 | 32255286.90 | 32255287.03 | 0.0136 | 0.0124 |
| Neptune | 83604-12-02 21:36 G | 32257130.34 | 32257130.40 | 32257130.49 | 0.0089 | 0.0085 |
| Neptune | 83605-12-05 16:05 G | 32257498.04 | 32257498.17 | 32257498.33 | 0.0090 | 0.0073 |
| Neptune | 83606-12-07 21:51 G | 32257865.22 | 32257865.41 | 32257865.66 | 0.0090 | 0.0043 |
| Neptune | 83607-12-10 13:56 G | 32258232.84 | 32258233.08 | 32258233.34 | 0.0090 | 0.0030 |
| Saturn | 83608-04-29 16:34 G | 32258374.06 | 32258374.19 | 32258374.35 | 0.0276 | 0.0226 |
| Neptune | 83608-12-12 00:29 G | 32258600.27 | 32258600.52 | 32258600.77 | 0.0090 | 0.0002 |
| Saturn | 83609-05-12 07:27 G | 32258751.63 | 32258751.81 | 32258752.01 | 0.0273 | 0.0165 |
| Neptune | 83609-12-14 11:17 G | 32258967.71 | 32258967.97 | 32258968.23 | 0.0090 | 0.0015 |
| Neptune | 83610-12-17 01:27 G | 32259335.37 | 32259335.56 | 32259335.79 | 0.0090 | 0.0047 |
| Neptune | 83611-12-19 07:56 G | 32259702.65 | 32259702.83 | 32259703.04 | 0.0090 | 0.0059 |
| Neptune | 83612-12-21 02:10 G | 32260070.59 | 32260070.59 | 32260070.61 | 0.0090 | 0.0090 |
| Saturn | 83624-11-12 00:29 G | 32264414.29 | 32264414.52 | 32264414.75 | 0.0288 | 0.0067 |
| Mars | 83631-03-15 10:34 G | 32266728.75 | 32266728.94 | 32266729.12 | 0.1694 | 0.0259 |
| Saturn | 83638-05-07 17:46 G | 32269338.99 | 32269339.24 | 32269339.49 | 0.0274 | 0.0001 |
| Uranus | 83639-04-25 09:36 G | 32269691.76 | 32269691.90 | 32269692.08 | 0.0140 | 0.0110 |
| Uranus | 83640-04-28 23:32 G | 32270061.27 | 32270061.48 | 32270061.71 | 0.0141 | 0.0059 |
| Uranus | 83641-05-03 23:17 G | 32270431.21 | 32270431.47 | 32270431.73 | 0.0141 | 0.0001 |
| Uranus | 83642-05-08 12:58 G | 32270800.83 | 32270801.04 | 32270801.27 | 0.0141 | 0.0068 |
| Uranus | 83643-05-13 14:53 G | 32271171.00 | 32271171.12 | 32271171.29 | 0.0142 | 0.0116 |
| Jupiter | 83647-12-03 07:41 G | 32272835.62 | 32272835.82 | 32272836.03 | 0.0504 | 0.0212 |
| Saturn | 83653-11-06 05:03 G | 32275000.49 | 32275000.71 | 32275000.94 | 0.0286 | 0.0121 |
| Jupiter | 83659-12-07 23:46 G | 32277223.27 | 32277223.49 | 32277223.71 | 0.0506 | 0.0199 |
| Jupiter | 83665-05-31 17:17 G | 32279225.00 | 32279225.22 | 32279225.45 | 0.0522 | 0.0195 |
| Saturn | 83667-05-02 06:29 G | 32279925.60 | 32279925.77 | 32279925.96 | 0.0275 | 0.0175 |
| Saturn | 83668-05-13 23:46 G | 32280303.36 | 32280303.49 | 32280303.65 | 0.0272 | 0.0214 |

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| Jupiter | 83677-06-05 17:17 G | 32283613.06 | 32283613.22 | 32283613.40 | 0.0521 | 0.0340 |
| Uranus | 83678-10-25 23:17 G | 32284120.46 | 32284120.47 | 32284120.51 | 0.0138 | 0.0137 |
| Uranus | 83679-10-30 20:53 G | 32284490.20 | 32284490.37 | 32284490.58 | 0.0138 | 0.0094 |
| Uranus | 83680-11-03 04:05 G | 32284859.43 | 32284859.67 | 32284859.92 | 0.0137 | 0.0023 |
| Uranus | 83681-11-08 00:15 G | 32285229.26 | 32285229.51 | 32285229.77 | 0.0137 | 0.0019 |
| Uranus | 83682-11-12 05:17 G | 32285598.53 | 32285598.72 | 32285598.93 | 0.0137 | 0.0083 |
| Saturn | 83683-11-14 16:48 G | 32285965.98 | 32285966.20 | 32285966.42 | 0.0288 | 0.0123 |
| Uranus | 83683-11-16 23:46 G | 32285968.45 | 32285968.49 | 32285968.57 | 0.0136 | 0.0132 |
| Neptune | 83687-06-03 12:44 G | 32287262.86 | 32287263.03 | 32287263.23 | 0.0088 | 0.0064 |
| Neptune | 83688-06-04 20:53 G | 32287630.16 | 32287630.37 | 32287630.58 | 0.0088 | 0.0048 |
| Neptune | 83689-06-07 08:53 G | 32287997.62 | 32287997.87 | 32287998.14 | 0.0088 | 0.0023 |
| Neptune | 83690-06-09 22:34 G | 32288365.19 | 32288365.44 | 32288365.70 | 0.0088 | 0.0006 |
| Neptune | 83691-06-12 06:00 G | 32288732.51 | 32288732.75 | 32288733.03 | 0.0088 | 0.0021 |
| Neptune | 83692-06-13 23:32 G | 32289100.26 | 32289100.48 | 32289100.73 | 0.0088 | 0.0037 |
| Neptune | 83693-06-16 03:51 G | 32289467.51 | 32289467.66 | 32289467.88 | 0.0088 | 0.0063 |
| Neptune | 83694-06-18 23:03 G | 32289835.35 | 32289835.46 | 32289835.60 | 0.0088 | 0.0077 |
| Saturn | 83697-05-09 01:27 G | 32290890.31 | 32290890.56 | 32290890.81 | 0.0273 | 0.0051 |
| Saturn | 83712-11-08 19:41 G | 32296552.09 | 32296552.32 | 32296552.56 | 0.0287 | 0.0065 |
| Uranus | 83723-04-26 21:51 G | 32300373.27 | 32300373.41 | 32300373.58 | 0.0140 | 0.0113 |
| Uranus | 83724-04-30 12:29 G | 32300742.80 | 32300743.02 | 32300743.27 | 0.0141 | 0.0049 |
| Uranus | 83725-05-05 11:32 G | 32301112.72 | 32301112.98 | 32301113.24 | 0.0141 | 0.0011 |
| Saturn | 83726-05-04 22:34 G | 32301477.23 | 32301477.44 | 32301477.66 | 0.0275 | 0.0126 |
| Uranus | 83726-05-10 02:10 G | 32301482.38 | 32301482.59 | 32301482.82 | 0.0141 | 0.0064 |
| Uranus | 83727-05-15 04:05 G | 32301852.63 | 32301852.67 | 32301852.74 | 0.0142 | 0.0138 |
| Saturn | 83727-05-17 13:27 G | 32301854.99 | 32301855.06 | 32301855.13 | 0.0272 | 0.0260 |
| Jupiter | 83730-12-03 13:56 G | 32303150.89 | 32303151.08 | 32303151.27 | 0.0504 | 0.0292 |
| Saturn | 83741-11-03 11:03 G | 32307138.87 | 32307138.96 | 32307139.08 | 0.0285 | 0.0256 |
| Saturn | 83742-11-17 02:24 G | 32307517.40 | 32307517.60 | 32307517.81 | 0.0289 | 0.0174 |
| Jupiter | 83742-12-07 19:56 G | 32307538.10 | 32307538.33 | 32307538.55 | 0.0505 | 0.0119 |
| Pluto | 83743-02-02 17:32 G | 32307595.03 | 32307595.23 | 32307595.48 | 0.0063 | 0.0027 |

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| Pluto | 83744-02-04 06:58 G | 32307961.77 | 32307961.79 | 32307961.85 | 0.0063 | 0.0062 |
| Jupiter | 83748-05-31 14:10 G | 32309539.91 | 32309540.09 | 32309540.27 | 0.0523 | 0.0311 |
| Saturn | 83756-05-11 10:34 G | 32312441.71 | 32312441.94 | 32312442.17 | 0.0273 | 0.0100 |
| Jupiter | 83760-06-05 14:10 G | 32313927.87 | 32313928.09 | 32313928.31 | 0.0522 | 0.0232 |
| Uranus | 83763-11-01 11:17 G | 32315171.76 | 32315171.97 | 32315172.20 | 0.0138 | 0.0072 |
| Uranus | 83764-11-04 18:15 G | 32315541.03 | 32315541.26 | 32315541.52 | 0.0137 | 0.0032 |
| Uranus | 83765-11-09 14:39 G | 32315910.87 | 32315911.11 | 32315911.37 | 0.0137 | 0.0039 |
| Uranus | 83766-11-13 19:56 G | 32316280.14 | 32316280.33 | 32316280.54 | 0.0137 | 0.0083 |
| Neptune | 83769-12-05 16:20 G | 32317398.07 | 32317398.18 | 32317398.32 | 0.0089 | 0.0078 |
| Neptune | 83770-12-08 06:29 G | 32317765.58 | 32317765.77 | 32317766.00 | 0.0090 | 0.0056 |
| Saturn | 83771-11-11 11:17 G | 32318103.73 | 32318103.97 | 32318104.20 | 0.0287 | 0.0017 |
| Neptune | 83771-12-10 17:46 G | 32318133.03 | 32318133.24 | 32318133.49 | 0.0090 | 0.0034 |
| Neptune | 83772-12-12 03:36 G | 32318500.39 | 32318500.65 | 32318500.91 | 0.0090 | 0.0011 |
| Neptune | 83773-12-14 19:41 G | 32318868.07 | 32318868.32 | 32318868.57 | 0.0090 | 0.0011 |
| Neptune | 83774-12-17 01:12 G | 32319235.32 | 32319235.55 | 32319235.80 | 0.0090 | 0.0032 |
| Neptune | 83775-12-19 19:27 G | 32319603.14 | 32319603.31 | 32319603.54 | 0.0090 | 0.0055 |
| Neptune | 83776-12-21 00:44 G | 32319970.41 | 32319970.53 | 32319970.68 | 0.0090 | 0.0075 |
| Mars | 83782-09-16 12:58 G | 32322065.94 | 32322066.04 | 32322066.14 | 0.1832 | 0.1545 |
| Saturn | 83785-05-06 11:46 G | 32323028.76 | 32323028.99 | 32323029.23 | 0.0274 | 0.0077 |
| Saturn | 83800-11-05 16:20 G | 32328690.01 | 32328690.18 | 32328690.35 | 0.0285 | 0.0214 |
| Saturn | 83801-11-19 08:24 G | 32329068.71 | 32329068.85 | 32329069.03 | 0.0289 | 0.0219 |
| Uranus | 83807-04-28 07:56 G | 32331054.65 | 32331054.83 | 32331055.03 | 0.0140 | 0.0097 |
| Uranus | 83808-05-01 23:46 G | 32331424.26 | 32331424.49 | 32331424.73 | 0.0141 | 0.0048 |
| Uranus | 83809-05-06 21:08 G | 32331794.12 | 32331794.38 | 32331794.65 | 0.0141 | 0.0013 |
| Uranus | 83810-05-11 12:29 G | 32332163.83 | 32332164.02 | 32332164.24 | 0.0141 | 0.0081 |
| Uranus | 83811-05-16 12:58 G | 32332533.95 | 32332534.04 | 32332534.16 | 0.0142 | 0.0129 |
| Jupiter | 83813-12-03 14:10 G | 32333465.93 | 32333466.09 | 32333466.25 | 0.0503 | 0.0362 |
| Saturn | 83814-05-02 05:17 G | 32333615.62 | 32333615.72 | 32333615.84 | 0.0276 | 0.0244 |
| Saturn | 83815-05-14 21:51 G | 32333993.21 | 32333993.41 | 32333993.61 | 0.0272 | 0.0143 |
| Jupiter | 83825-12-08 06:44 G | 32337853.55 | 32337853.78 | 32337854.01 | 0.0504 | 0.0041 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 83830-11-13 22:48 G | 32339655.21 | 32339655.45 | 32339655.70 | 0.0288 | 0.0027 |
| Jupiter | 83831-06-01 16:05 G | 32339855.01 | 32339855.17 | 32339855.33 | 0.0524 | 0.0392 |
| Pluto | 83833-08-04 19:41 G | 32340650.29 | 32340650.32 | 32340650.40 | 0.0081 | 0.0079 |
| Jupiter | 83837-12-12 11:46 G | 32342240.99 | 32342240.99 | 32342241.00 | 0.0506 | 0.0506 |
| Jupiter | 83843-06-06 15:08 G | 32344242.92 | 32344243.13 | 32344243.35 | 0.0522 | 0.0172 |
| Saturn | 83844-05-08 18:00 G | 32344580.00 | 32344580.25 | 32344580.51 | 0.0274 | 0.0032 |
| Uranus | 83846-10-29 04:34 G | 32345483.58 | 32345483.69 | 32345483.80 | 0.0138 | 0.0124 |
| Uranus | 83847-11-03 01:12 G | 32345853.36 | 32345853.55 | 32345853.78 | 0.0138 | 0.0079 |
| Uranus | 83848-11-06 09:22 G | 32346222.64 | 32346222.89 | 32346223.14 | 0.0137 | 0.0008 |
| Uranus | 83849-11-11 04:48 G | 32346592.47 | 32346592.70 | 32346592.96 | 0.0137 | 0.0034 |
| Uranus | 83850-11-15 10:20 G | 32346961.77 | 32346961.93 | 32346962.11 | 0.0137 | 0.0099 |
| Neptune | 83851-06-04 16:34 G | 32347163.05 | 32347163.19 | 32347163.34 | 0.0088 | 0.0070 |
| Neptune | 83852-06-06 03:08 G | 32347530.45 | 32347530.63 | 32347530.86 | 0.0088 | 0.0058 |
| Neptune | 83853-06-08 18:00 G | 32347898.02 | 32347898.25 | 32347898.49 | 0.0088 | 0.0028 |
| Neptune | 83854-06-11 00:15 G | 32348265.26 | 32348265.51 | 32348265.78 | 0.0088 | 0.0016 |
| Neptune | 83855-06-13 18:15 G | 32348633.01 | 32348633.26 | 32348633.52 | 0.0088 | 0.0014 |
| Neptune | 83856-06-14 22:48 G | 32349000.21 | 32349000.45 | 32349000.71 | 0.0088 | 0.0026 |
| Neptune | 83857-06-17 16:48 G | 32349368.02 | 32349368.20 | 32349368.43 | 0.0088 | 0.0056 |
| Neptune | 83858-06-19 22:34 G | 32349735.31 | 32349735.44 | 32349735.62 | 0.0088 | 0.0069 |
| Saturn | 83859-11-07 17:46 G | 32350241.06 | 32350241.24 | 32350241.44 | 0.0286 | 0.0178 |
| Saturn | 83860-11-20 15:22 G | 32350620.04 | 32350620.14 | 32350620.25 | 0.0289 | 0.0260 |
| Saturn | 83873-05-03 14:39 G | 32355166.96 | 32355167.11 | 32355167.29 | 0.0276 | 0.0198 |
| Saturn | 83874-05-16 07:56 G | 32355544.66 | 32355544.83 | 32355545.01 | 0.0272 | 0.0187 |
| Saturn | 83889-11-15 00:58 G | 32361206.30 | 32361206.54 | 32361206.79 | 0.0288 | 0.0065 |
| Uranus | 83891-04-28 18:00 G | 32361736.08 | 32361736.25 | 32361736.44 | 0.0140 | 0.0103 |
| Uranus | 83892-05-02 11:03 G | 32362105.72 | 32362105.96 | 32362106.20 | 0.0141 | 0.0036 |
| Uranus | 83893-05-07 06:58 G | 32362475.53 | 32362475.79 | 32362476.05 | 0.0141 | 0.0021 |
| Uranus | 83894-05-11 23:32 G | 32362845.28 | 32362845.48 | 32362845.70 | 0.0141 | 0.0077 |
| Jupiter | 83896-12-03 02:39 G | 32363781.50 | 32363781.61 | 32363781.72 | 0.0502 | 0.0438 |
| Saturn | 83903-05-11 19:12 G | 32366131.05 | 32366131.30 | 32366131.55 | 0.0273 | 0.0014 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 83908-12-08 06:58 G | 32368168.55 | 32368168.79 | 32368169.03 | 0.0504 | 0.0025 |
| Jupiter | 83914-06-01 19:56 G | 32370170.22 | 32370170.33 | 32370170.44 | 0.0524 | 0.0457 |
| Mars | 83915-03-19 18:15 G | 32370461.10 | 32370461.26 | 32370461.43 | 0.1700 | 0.0605 |
| Saturn | 83918-11-09 21:36 G | 32371792.21 | 32371792.40 | 32371792.62 | 0.0286 | 0.0142 |
| Jupiter | 83920-12-13 01:41 G | 32372556.49 | 32372556.57 | 32372556.67 | 0.0506 | 0.0464 |
| Jupiter | 83926-06-06 21:22 G | 32374558.16 | 32374558.39 | 32374558.62 | 0.0523 | 0.0088 |
| Uranus | 83930-10-30 17:03 G | 32376165.13 | 32376165.21 | 32376165.34 | 0.0138 | 0.0126 |
| Uranus | 83931-11-04 13:41 G | 32376534.85 | 32376535.07 | 32376535.32 | 0.0138 | 0.0059 |
| Saturn | 83932-05-05 22:48 G | 32376718.26 | 32376718.45 | 32376718.66 | 0.0275 | 0.0154 |
| Uranus | 83932-11-07 22:05 G | 32376904.18 | 32376904.42 | 32376904.68 | 0.0138 | 0.0017 |
| Saturn | 83933-05-18 11:17 G | 32377095.84 | 32377095.97 | 32377096.12 | 0.0272 | 0.0225 |
| Uranus | 83933-11-12 17:32 G | 32377274.01 | 32377274.23 | 32377274.48 | 0.0137 | 0.0054 |
| Neptune | 83933-12-06 22:20 G | 32377298.33 | 32377298.43 | 32377298.55 | 0.0089 | 0.0081 |
| Uranus | 83934-11-16 23:32 G | 32377643.32 | 32377643.48 | 32377643.67 | 0.0137 | 0.0098 |
| Neptune | 83934-12-09 11:17 G | 32377665.84 | 32377665.97 | 32377666.15 | 0.0089 | 0.0069 |
| Neptune | 83935-12-11 19:56 G | 32378033.11 | 32378033.33 | 32378033.59 | 0.0090 | 0.0038 |
| Neptune | 83936-12-13 13:12 G | 32378400.82 | 32378401.05 | 32378401.30 | 0.0090 | 0.0026 |
| Neptune | 83937-12-15 18:29 G | 32378768.01 | 32378768.27 | 32378768.53 | 0.0090 | 0.0006 |
| Neptune | 83938-12-18 13:12 G | 32379135.80 | 32379136.05 | 32379136.30 | 0.0090 | 0.0018 |
| Neptune | 83939-12-20 18:00 G | 32379503.06 | 32379503.25 | 32379503.47 | 0.0090 | 0.0050 |
| Neptune | 83940-12-22 10:48 G | 32379870.77 | 32379870.95 | 32379871.15 | 0.0090 | 0.0062 |
| Saturn | 83948-11-16 20:24 G | 32382757.12 | 32382757.35 | 32382757.59 | 0.0288 | 0.0097 |
| Saturn | 83962-05-12 22:20 G | 32387682.20 | 32387682.43 | 32387682.67 | 0.0273 | 0.0054 |
| Uranus | 83975-04-30 05:03 G | 32392417.52 | 32392417.71 | 32392417.93 | 0.0140 | 0.0085 |
| Uranus | 83976-05-03 22:48 G | 32392787.23 | 32392787.45 | 32392787.70 | 0.0140 | 0.0038 |
| Uranus | 83977-05-08 17:32 G | 32393156.98 | 32393157.23 | 32393157.49 | 0.0141 | 0.0027 |
| Saturn | 83977-11-10 23:46 G | 32393343.27 | 32393343.49 | 32393343.71 | 0.0286 | 0.0111 |
| Uranus | 83978-05-13 10:48 G | 32393526.77 | 32393526.95 | 32393527.15 | 0.0141 | 0.0091 |
| Uranus | 83979-05-18 08:39 G | 32393896.85 | 32393896.86 | 32393896.89 | 0.0142 | 0.0141 |
| Jupiter | 83979-12-04 06:58 G | 32394096.75 | 32394096.79 | 32394096.85 | 0.0502 | 0.0488 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 83991-02-05 20:53 G | 32398178.37 | 32398178.37 | 32398178.40 | 0.0062 | 0.0062 |
| Saturn | 83991-05-07 23:17 G | 32398269.25 | 32398269.47 | 32398269.71 | 0.0275 | 0.0115 |
| Jupiter | 83991-12-09 01:12 G | 32398484.32 | 32398484.55 | 32398484.77 | 0.0504 | 0.0059 |
| Pluto | 83992-02-07 06:00 G | 32398544.53 | 32398544.75 | 32398545.00 | 0.0063 | 0.0019 |
| Saturn | 83992-05-19 07:12 G | 32398646.74 | 32398646.80 | 32398646.88 | 0.0272 | 0.0260 |

85TH MILLENNIUM CE

This is a list of transits of Moon in the 85th millennium CE.

| | FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------------------|-------------|-------------|--------|--------|--------|-------|---|
| Jupiter | 84003-12-13 09:36 G | 32402871.77 | 32402871.90 | 32402872.04 | 0.0505 | 0.0415 | | | |
| Saturn | 84007-11-18 18:29 G | 32404308.06 | 32404308.27 | 32404308.48 | 0.0288 | 0.0130 | | | |
| Jupiter | 84009-06-05 20:10 G | 32404873.11 | 32404873.34 | 32404873.58 | 0.0523 | 0.0024 | | | |
| Uranus | 84014-10-31 05:46 G | 32406846.61 | 32406846.74 | 32406846.89 | 0.0138 | 0.0113 | | | |
| Neptune | 84015-06-04 19:56 G | 32407063.27 | 32407063.33 | 32407063.46 | 0.0088 | 0.0082 | | | |
| Uranus | 84015-11-05 01:56 G | 32407216.36 | 32407216.58 | 32407216.82 | 0.0138 | 0.0065 | | | |
| Neptune | 84016-06-06 12:00 G | 32407430.83 | 32407431.00 | 32407431.19 | 0.0088 | 0.0060 | | | |
| Uranus | 84016-11-08 11:17 G | 32407585.72 | 32407585.97 | 32407586.22 | 0.0138 | 0.0005 | | | |
| Neptune | 84017-06-08 17:32 G | 32407798.01 | 32407798.23 | 32407798.48 | 0.0088 | 0.0041 | | | |
| Uranus | 84017-11-13 06:00 G | 32407955.52 | 32407955.75 | 32407956.00 | 0.0137 | 0.0047 | | | |
| Neptune | 84018-06-11 12:15 G | 32408165.76 | 32408166.01 | 32408166.27 | 0.0088 | 0.0019 | | | |
| Uranus | 84018-11-17 12:15 G | 32408324.89 | 32408325.01 | 32408325.17 | 0.0137 | 0.0114 | | | |
| Neptune | 84019-06-13 16:48 G | 32408532.94 | 32408533.20 | 32408533.46 | 0.0088 | 0.0001 | | | |
| Neptune | 84020-06-15 10:34 G | 32408900.70 | 32408900.94 | 32408901.21 | 0.0088 | 0.0024 | | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 84021-05-14 03:08 G | 32409233.42 | 32409233.63 | 32409233.87 | 0.0273 | 0.0089 |
| Neptune | 84021-06-17 17:46 G | 32409268.02 | 32409268.24 | 32409268.47 | 0.0088 | 0.0042 |
| Neptune | 84022-06-20 07:56 G | 32409635.67 | 32409635.83 | 32409636.02 | 0.0088 | 0.0066 |
| Neptune | 84023-06-22 18:44 G | 32410003.23 | 32410003.28 | 32410003.38 | 0.0088 | 0.0084 |
| Saturn | 84036-11-11 18:44 G | 32414894.04 | 32414894.28 | 32414894.53 | 0.0286 | 0.0081 |
| Saturn | 84050-05-08 17:32 G | 32419819.99 | 32419820.23 | 32419820.47 | 0.0275 | 0.0080 |
| Uranus | 84058-04-26 05:03 G | 32422729.65 | 32422729.71 | 32422729.78 | 0.0140 | 0.0134 |
| Uranus | 84059-04-30 18:44 G | 32423099.09 | 32423099.28 | 32423099.49 | 0.0140 | 0.0090 |
| Uranus | 84060-05-04 13:27 G | 32423468.82 | 32423469.06 | 32423469.31 | 0.0140 | 0.0021 |
| Uranus | 84061-05-09 06:44 G | 32423838.53 | 32423838.78 | 32423839.04 | 0.0141 | 0.0034 |
| Uranus | 84062-05-14 00:58 G | 32424208.38 | 32424208.54 | 32424208.75 | 0.0141 | 0.0093 |
| Saturn | 84065-11-05 20:39 G | 32425480.30 | 32425480.36 | 32425480.44 | 0.0285 | 0.0271 |
| Mars | 84066-09-18 21:22 G | 32425797.27 | 32425797.39 | 32425797.51 | 0.1823 | 0.1433 |
| Saturn | 84066-11-19 18:29 G | 32425859.07 | 32425859.27 | 32425859.46 | 0.0289 | 0.0161 |
| Jupiter | 84074-12-08 08:39 G | 32428799.63 | 32428799.86 | 32428800.10 | 0.0503 | 0.0108 |
| Saturn | 84079-05-03 11:03 G | 32430406.90 | 32430406.96 | 32430407.05 | 0.0276 | 0.0262 |
| Saturn | 84080-05-15 03:36 G | 32430784.43 | 32430784.65 | 32430784.88 | 0.0273 | 0.0121 |
| Pluto | 84082-08-08 10:05 G | 32431599.66 | 32431599.92 | 32431600.19 | 0.0081 | 0.0012 |
| Jupiter | 84086-12-12 18:44 G | 32433187.14 | 32433187.28 | 32433187.43 | 0.0505 | 0.0379 |
| Jupiter | 84092-06-05 15:08 G | 32435188.90 | 32435189.13 | 32435189.36 | 0.0524 | 0.0015 |
| Saturn | 84095-11-13 09:36 G | 32436444.65 | 32436444.90 | 32436445.15 | 0.0286 | 0.0052 |
| Uranus | 84098-10-31 19:12 G | 32437528.16 | 32437528.30 | 32437528.45 | 0.0138 | 0.0112 |
| Neptune | 84098-12-08 11:17 G | 32437565.86 | 32437565.97 | 32437566.14 | 0.0089 | 0.0076 |
| Uranus | 84099-11-05 14:10 G | 32437897.85 | 32437898.09 | 32437898.34 | 0.0138 | 0.0047 |
| Neptune | 84099-12-11 05:32 G | 32437933.54 | 32437933.73 | 32437933.96 | 0.0089 | 0.0051 |
| Uranus | 84100-11-10 00:00 G | 32438267.25 | 32438267.50 | 32438267.75 | 0.0138 | 0.0003 |
| Neptune | 84100-12-13 10:34 G | 32438300.72 | 32438300.94 | 32438301.19 | 0.0089 | 0.0032 |
| Uranus | 84101-11-14 18:15 G | 32438637.04 | 32438637.26 | 32438637.49 | 0.0137 | 0.0068 |
| Neptune | 84101-12-16 05:32 G | 32438668.47 | 32438668.73 | 32438668.99 | 0.0090 | 0.0006 |
| Uranus | 84102-11-19 01:27 G | 32439006.43 | 32439006.56 | 32439006.72 | 0.0137 | 0.0111 |

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| Neptune | 84102-12-18 11:17 G | 32439035.73 | 32439035.97 | 32439036.22 | 0.0090 | 0.0013 |
| Neptune | 84103-12-21 03:22 G | 32439403.41 | 32439403.64 | 32439403.89 | 0.0090 | 0.0037 |
| Jupiter | 84104-06-11 05:46 G | 32439576.68 | 32439576.74 | 32439576.81 | 0.0521 | 0.0499 |
| Neptune | 84104-12-22 13:12 G | 32439770.86 | 32439771.05 | 32439771.24 | 0.0090 | 0.0056 |
| Neptune | 84105-12-25 00:15 G | 32440138.41 | 32440138.51 | 32440138.65 | 0.0090 | 0.0079 |
| Saturn | 84109-05-10 13:41 G | 32441370.83 | 32441371.07 | 32441371.31 | 0.0275 | 0.0049 |
| Mars | 84120-03-18 03:36 G | 32445335.56 | 32445335.65 | 32445335.74 | 0.1711 | 0.1513 |
| Saturn | 84124-11-07 21:08 G | 32447031.27 | 32447031.38 | 32447031.51 | 0.0285 | 0.0244 |
| Saturn | 84125-11-21 16:05 G | 32447409.98 | 32447410.17 | 32447410.35 | 0.0289 | 0.0189 |
| Saturn | 84138-05-05 11:03 G | 32451957.83 | 32451957.96 | 32451958.10 | 0.0276 | 0.0227 |
| Saturn | 84139-05-17 21:36 G | 32452335.20 | 32452335.40 | 32452335.62 | 0.0273 | 0.0148 |
| Uranus | 84143-05-02 08:39 G | 32453780.65 | 32453780.86 | 32453781.10 | 0.0140 | 0.0069 |
| Uranus | 84144-05-06 04:34 G | 32454150.45 | 32454150.69 | 32454150.94 | 0.0140 | 0.0023 |
| Uranus | 84145-05-10 20:39 G | 32454520.12 | 32454520.36 | 32454520.62 | 0.0141 | 0.0043 |
| Uranus | 84146-05-15 15:51 G | 32454890.02 | 32454890.16 | 32454890.34 | 0.0141 | 0.0106 |
| Saturn | 84154-11-15 04:05 G | 32457995.43 | 32457995.67 | 32457995.91 | 0.0286 | 0.0023 |
| Jupiter | 84157-12-08 20:10 G | 32459115.13 | 32459115.34 | 32459115.56 | 0.0503 | 0.0141 |
| Saturn | 84168-05-11 14:53 G | 32462921.88 | 32462922.12 | 32462922.36 | 0.0275 | 0.0019 |
| Jupiter | 84169-12-13 14:39 G | 32463502.95 | 32463503.11 | 32463503.28 | 0.0505 | 0.0363 |
| Jupiter | 84175-06-06 11:17 G | 32465503.74 | 32465503.97 | 32465504.21 | 0.0524 | 0.0101 |
| Neptune | 84180-06-06 12:00 G | 32467330.84 | 32467331.00 | 32467331.20 | 0.0088 | 0.0064 |
| Neptune | 84181-06-09 06:29 G | 32467698.58 | 32467698.77 | 32467699.00 | 0.0088 | 0.0053 |
| Neptune | 84182-06-11 11:17 G | 32468065.73 | 32468065.97 | 32468066.23 | 0.0088 | 0.0023 |
| Uranus | 84182-11-02 09:08 G | 32468209.72 | 32468209.88 | 32468210.06 | 0.0138 | 0.0101 |
| Neptune | 84183-06-14 04:34 G | 32468433.42 | 32468433.69 | 32468433.95 | 0.0088 | 0.0011 |
| Uranus | 84183-11-07 03:22 G | 32468579.40 | 32468579.64 | 32468579.89 | 0.0138 | 0.0051 |
| Saturn | 84183-11-09 19:27 G | 32468582.15 | 32468582.31 | 32468582.48 | 0.0285 | 0.0212 |
| Neptune | 84184-06-15 11:46 G | 32468800.75 | 32468800.99 | 32468801.24 | 0.0088 | 0.0019 |
| Uranus | 84184-11-10 14:24 G | 32468948.86 | 32468949.10 | 32468949.35 | 0.0138 | 0.0019 |
| Saturn | 84184-11-22 09:22 G | 32468960.75 | 32468960.89 | 32468961.07 | 0.0289 | 0.0223 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 84185-06-18 00:15 G | 32469168.27 | 32469168.51 | 32469168.78 | 0.0088 | 0.0031 |
| Uranus | 84185-11-15 07:27 G | 32469318.59 | 32469318.81 | 32469319.06 | 0.0137 | 0.0062 |
| Neptune | 84186-06-20 13:12 G | 32469535.87 | 32469536.05 | 32469536.23 | 0.0088 | 0.0060 |
| Uranus | 84186-11-19 15:36 G | 32469688.08 | 32469688.15 | 32469688.25 | 0.0137 | 0.0129 |
| Jupiter | 84187-06-11 14:10 G | 32469891.97 | 32469892.09 | 32469892.21 | 0.0522 | 0.0434 |
| Neptune | 84187-06-22 21:08 G | 32469903.25 | 32469903.38 | 32469903.56 | 0.0088 | 0.0072 |
| Saturn | 84197-05-06 06:00 G | 32473508.58 | 32473508.75 | 32473508.94 | 0.0276 | 0.0194 |
| Saturn | 84198-05-18 17:46 G | 32473886.06 | 32473886.24 | 32473886.43 | 0.0273 | 0.0179 |
| Mars | 84199-03-21 20:53 G | 32474193.25 | 32474193.37 | 32474193.49 | 0.1706 | 0.1325 |
| Saturn | 84213-11-17 06:44 G | 32479546.54 | 32479546.78 | 32479547.02 | 0.0286 | 0.0013 |
| Uranus | 84226-04-29 10:34 G | 32484092.84 | 32484092.94 | 32484093.09 | 0.0140 | 0.0120 |
| Uranus | 84227-05-03 22:34 G | 32484462.23 | 32484462.44 | 32484462.67 | 0.0140 | 0.0076 |
| Saturn | 84227-05-14 16:34 G | 32484472.95 | 32484473.19 | 32484473.43 | 0.0275 | 0.0014 |
| Uranus | 84228-05-07 19:27 G | 32484832.06 | 32484832.31 | 32484832.55 | 0.0140 | 0.0005 |
| Uranus | 84229-05-12 10:34 G | 32485201.70 | 32485201.94 | 32485202.19 | 0.0141 | 0.0048 |
| Uranus | 84230-05-17 07:12 G | 32485571.65 | 32485571.80 | 32485571.96 | 0.0141 | 0.0109 |
| Pluto | 84240-02-10 03:36 G | 32489127.42 | 32489127.65 | 32489127.92 | 0.0063 | 0.0019 |
| Jupiter | 84240-12-09 11:32 G | 32489430.76 | 32489430.98 | 32489431.20 | 0.0503 | 0.0179 |
| Saturn | 84242-11-11 14:10 G | 32490132.90 | 32490133.09 | 32490133.30 | 0.0285 | 0.0176 |
| Saturn | 84243-11-25 05:32 G | 32490511.63 | 32490511.73 | 32490511.85 | 0.0289 | 0.0259 |
| Jupiter | 84252-12-13 14:53 G | 32493817.95 | 32493818.12 | 32493818.31 | 0.0504 | 0.0307 |
| Saturn | 84256-05-08 02:39 G | 32495059.42 | 32495059.61 | 32495059.82 | 0.0276 | 0.0160 |
| Saturn | 84257-05-20 20:39 G | 32495437.21 | 32495437.36 | 32495437.51 | 0.0273 | 0.0211 |
| Jupiter | 84258-06-06 21:36 G | 32495819.18 | 32495819.40 | 32495819.61 | 0.0524 | 0.0152 |
| Neptune | 84262-12-09 21:36 G | 32497466.31 | 32497466.40 | 32497466.56 | 0.0089 | 0.0079 |
| Neptune | 84263-12-12 02:53 G | 32497833.46 | 32497833.62 | 32497833.81 | 0.0089 | 0.0065 |
| Neptune | 84264-12-13 21:22 G | 32498201.17 | 32498201.39 | 32498201.65 | 0.0089 | 0.0035 |
| Neptune | 84265-12-16 04:20 G | 32498568.46 | 32498568.68 | 32498568.94 | 0.0089 | 0.0022 |
| Uranus | 84266-11-04 00:29 G | 32498891.35 | 32498891.52 | 32498891.71 | 0.0138 | 0.0097 |
| Neptune | 84266-12-18 19:41 G | 32498936.05 | 32498936.32 | 32498936.58 | 0.0090 | 0.0009 |

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| Uranus | 84267-11-08 17:32 G | 32499260.98 | 32499261.23 | 32499261.49 | 0.0138 | 0.0032 |
| Neptune | 84267-12-21 06:15 G | 32499303.52 | 32499303.76 | 32499304.00 | 0.0090 | 0.0022 |
| Uranus | 84268-11-12 05:03 G | 32499630.46 | 32499630.71 | 32499630.96 | 0.0138 | 0.0013 |
| Neptune | 84268-12-22 15:36 G | 32499670.95 | 32499671.15 | 32499671.38 | 0.0090 | 0.0052 |
| Uranus | 84269-11-16 21:36 G | 32500000.19 | 32500000.40 | 32500000.61 | 0.0137 | 0.0083 |
| Neptune | 84269-12-25 06:58 G | 32500038.65 | 32500038.79 | 32500038.99 | 0.0090 | 0.0066 |
| Jupiter | 84270-06-12 02:10 G | 32500207.42 | 32500207.59 | 32500207.76 | 0.0522 | 0.0374 |
| Uranus | 84270-11-21 06:15 G | 32500369.68 | 32500369.76 | 32500369.87 | 0.0137 | 0.0126 |
| Saturn | 84272-11-18 11:32 G | 32501097.74 | 32501097.98 | 32501098.22 | 0.0286 | 0.0053 |
| Saturn | 84286-05-15 15:22 G | 32506023.89 | 32506024.14 | 32506024.39 | 0.0275 | 0.0046 |
| Saturn | 84301-11-13 16:05 G | 32511683.97 | 32511684.17 | 32511684.39 | 0.0285 | 0.0135 |
| Uranus | 84310-05-01 00:15 G | 32514774.42 | 32514774.51 | 32514774.61 | 0.0140 | 0.0127 |
| Uranus | 84311-05-05 11:17 G | 32515143.74 | 32515143.97 | 32515144.22 | 0.0140 | 0.0055 |
| Uranus | 84312-05-09 09:08 G | 32515513.63 | 32515513.88 | 32515514.13 | 0.0140 | 0.0009 |
| Uranus | 84313-05-13 23:03 G | 32515883.23 | 32515883.46 | 32515883.71 | 0.0141 | 0.0059 |
| Uranus | 84314-05-18 20:24 G | 32516253.24 | 32516253.35 | 32516253.49 | 0.0141 | 0.0121 |
| Saturn | 84315-05-11 08:10 G | 32516610.63 | 32516610.84 | 32516611.06 | 0.0276 | 0.0125 |
| Saturn | 84316-05-23 03:22 G | 32516988.55 | 32516988.64 | 32516988.76 | 0.0273 | 0.0245 |
| Jupiter | 84323-12-10 10:20 G | 32519745.73 | 32519745.93 | 32519746.13 | 0.0502 | 0.0247 |
| Pluto | 84330-08-12 07:12 G | 32522182.71 | 32522182.80 | 32522182.93 | 0.0081 | 0.0074 |
| Saturn | 84331-11-21 14:10 G | 32522648.86 | 32522649.09 | 32522649.34 | 0.0287 | 0.0100 |
| Jupiter | 84335-12-15 06:44 G | 32524133.59 | 32524133.78 | 32524133.98 | 0.0504 | 0.0253 |
| Jupiter | 84341-06-07 02:10 G | 32526134.37 | 32526134.59 | 32526134.81 | 0.0524 | 0.0222 |
| Neptune | 84344-06-07 23:46 G | 32527231.39 | 32527231.49 | 32527231.65 | 0.0088 | 0.0076 |
| Saturn | 84345-05-17 14:24 G | 32527574.86 | 32527575.10 | 32527575.34 | 0.0275 | 0.0079 |
| Neptune | 84345-06-10 05:03 G | 32527598.53 | 32527598.71 | 32527598.92 | 0.0088 | 0.0056 |
| Neptune | 84346-06-12 21:22 G | 32527966.15 | 32527966.39 | 32527966.64 | 0.0088 | 0.0034 |
| Neptune | 84347-06-15 06:29 G | 32528333.53 | 32528333.77 | 32528334.02 | 0.0088 | 0.0015 |
| Neptune | 84348-06-16 18:15 G | 32528701.00 | 32528701.26 | 32528701.53 | 0.0088 | 0.0007 |
| Neptune | 84349-06-19 08:10 G | 32529068.60 | 32529068.84 | 32529069.08 | 0.0088 | 0.0026 |

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| Neptune | 84350-06-21 14:39 G | 32529435.90 | 32529436.11 | 32529436.35 | 0.0088 | 0.0048 |
| Uranus | 84350-11-05 14:53 G | 32529572.93 | 32529573.12 | 32529573.32 | 0.0139 | 0.0087 |
| Neptune | 84351-06-24 08:10 G | 32529803.70 | 32529803.84 | 32529804.02 | 0.0088 | 0.0069 |
| Uranus | 84351-11-10 06:44 G | 32529942.53 | 32529942.78 | 32529943.04 | 0.0138 | 0.0035 |
| Uranus | 84352-11-13 19:41 G | 32530312.09 | 32530312.32 | 32530312.56 | 0.0138 | 0.0034 |
| Jupiter | 84353-06-11 19:56 G | 32530522.15 | 32530522.33 | 32530522.53 | 0.0522 | 0.0281 |
| Uranus | 84353-11-18 11:03 G | 32530681.76 | 32530681.96 | 32530682.20 | 0.0137 | 0.0077 |
| Saturn | 84360-11-15 02:39 G | 32533235.40 | 32533235.61 | 32533235.84 | 0.0285 | 0.0090 |
| Saturn | 84374-05-12 18:29 G | 32538162.05 | 32538162.27 | 32538162.50 | 0.0276 | 0.0087 |
| Saturn | 84389-11-09 11:03 G | 32543821.93 | 32543821.96 | 32543822.02 | 0.0283 | 0.0278 |
| Saturn | 84390-11-22 21:36 G | 32544200.20 | 32544200.40 | 32544200.62 | 0.0287 | 0.0152 |
| Uranus | 84394-05-01 12:15 G | 32545455.87 | 32545456.01 | 32545456.18 | 0.0140 | 0.0108 |
| Uranus | 84395-05-05 22:20 G | 32545825.21 | 32545825.43 | 32545825.67 | 0.0140 | 0.0064 |
| Uranus | 84396-05-09 20:39 G | 32546195.12 | 32546195.36 | 32546195.61 | 0.0140 | 0.0009 |
| Uranus | 84397-05-14 09:51 G | 32546564.68 | 32546564.91 | 32546565.15 | 0.0141 | 0.0060 |
| Uranus | 84398-05-19 08:39 G | 32546934.75 | 32546934.86 | 32546934.98 | 0.0141 | 0.0123 |
| Saturn | 84403-05-07 01:56 G | 32548748.52 | 32548748.58 | 32548748.68 | 0.0279 | 0.0263 |
| Mars | 84404-03-20 20:53 G | 32549067.24 | 32549067.37 | 32549067.51 | 0.1718 | 0.1091 |
| Saturn | 84404-05-18 21:36 G | 32549126.18 | 32549126.40 | 32549126.62 | 0.0275 | 0.0115 |
| Jupiter | 84406-12-10 00:00 G | 32550061.33 | 32550061.50 | 32550061.69 | 0.0503 | 0.0305 |
| Jupiter | 84418-12-14 03:51 G | 32554448.44 | 32554448.66 | 32554448.88 | 0.0504 | 0.0178 |
| Saturn | 84419-11-17 18:15 G | 32554787.02 | 32554787.26 | 32554787.49 | 0.0285 | 0.0041 |
| Jupiter | 84424-06-05 19:41 G | 32556449.14 | 32556449.32 | 32556449.50 | 0.0525 | 0.0322 |
| Neptune | 84426-12-09 20:10 G | 32557366.30 | 32557366.34 | 32557366.42 | 0.0089 | 0.0087 |
| Neptune | 84427-12-12 13:41 G | 32557733.93 | 32557734.07 | 32557734.25 | 0.0089 | 0.0072 |
| Neptune | 84428-12-13 21:22 G | 32558101.19 | 32558101.39 | 32558101.62 | 0.0089 | 0.0045 |
| Mars | 84429-09-24 15:36 G | 32558386.05 | 32558386.15 | 32558386.25 | 0.1820 | 0.1583 |
| Neptune | 84429-12-16 11:17 G | 32558468.72 | 32558468.97 | 32558469.22 | 0.0089 | 0.0029 |
| Neptune | 84430-12-19 00:00 G | 32558836.25 | 32558836.50 | 32558836.75 | 0.0089 | 0.0002 |
| Neptune | 84431-12-21 08:53 G | 32559203.62 | 32559203.87 | 32559204.14 | 0.0089 | 0.0015 |

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| Neptune | 84432-12-23 01:56 G | 32559571.36 | 32559571.58 | 32559571.80 | 0.0090 | 0.0042 |
| Saturn | 84433-05-14 03:08 G | 32559713.38 | 32559713.63 | 32559713.88 | 0.0276 | 0.0045 |
| Neptune | 84433-12-25 06:58 G | 32559938.61 | 32559938.79 | 32559939.00 | 0.0090 | 0.0058 |
| Uranus | 84434-11-06 04:48 G | 32560254.51 | 32560254.70 | 32560254.91 | 0.0139 | 0.0082 |
| Neptune | 84434-12-28 01:12 G | 32560306.49 | 32560306.55 | 32560306.66 | 0.0090 | 0.0084 |
| Uranus | 84435-11-10 19:41 G | 32560624.06 | 32560624.32 | 32560624.58 | 0.0138 | 0.0019 |
| Jupiter | 84436-06-11 02:53 G | 32560837.40 | 32560837.62 | 32560837.84 | 0.0523 | 0.0191 |
| Uranus | 84436-11-14 09:22 G | 32560993.65 | 32560993.89 | 32560994.14 | 0.0138 | 0.0028 |
| Uranus | 84437-11-19 00:00 G | 32561363.32 | 32561363.50 | 32561363.69 | 0.0137 | 0.0098 |
| Saturn | 84448-11-10 21:22 G | 32565373.25 | 32565373.39 | 32565373.54 | 0.0283 | 0.0228 |
| Saturn | 84449-11-24 12:29 G | 32565751.86 | 32565752.02 | 32565752.20 | 0.0287 | 0.0203 |
| Saturn | 84462-05-08 12:44 G | 32570299.89 | 32570300.03 | 32570300.19 | 0.0278 | 0.0218 |
| Saturn | 84463-05-21 11:32 G | 32570677.79 | 32570677.98 | 32570678.18 | 0.0275 | 0.0156 |
| Uranus | 84478-05-01 23:46 G | 32576137.36 | 32576137.49 | 32576137.64 | 0.0139 | 0.0116 |
| Saturn | 84478-11-19 09:36 G | 32576338.65 | 32576338.90 | 32576339.15 | 0.0285 | 0.0013 |
| Uranus | 84479-05-06 09:22 G | 32576506.66 | 32576506.89 | 32576507.15 | 0.0140 | 0.0043 |
| Uranus | 84480-05-10 08:39 G | 32576876.61 | 32576876.86 | 32576877.11 | 0.0140 | 0.0002 |
| Uranus | 84481-05-14 20:24 G | 32577246.14 | 32577246.35 | 32577246.59 | 0.0141 | 0.0073 |
| Uranus | 84482-05-19 20:10 G | 32577616.26 | 32577616.34 | 32577616.43 | 0.0141 | 0.0131 |
| Pluto | 84488-02-12 08:39 G | 32579710.74 | 32579710.86 | 32579711.01 | 0.0062 | 0.0053 |
| Pluto | 84489-02-12 11:32 G | 32580076.77 | 32580076.98 | 32580077.23 | 0.0063 | 0.0027 |
| Jupiter | 84489-12-08 19:12 G | 32580376.15 | 32580376.30 | 32580376.46 | 0.0502 | 0.0384 |
| Saturn | 84492-05-15 10:34 G | 32581264.69 | 32581264.94 | 32581265.20 | 0.0276 | 0.0004 |
| Jupiter | 84501-12-14 08:39 G | 32584763.64 | 32584763.86 | 32584764.08 | 0.0503 | 0.0094 |
| Jupiter | 84507-06-07 02:39 G | 32586764.46 | 32586764.61 | 32586764.76 | 0.0525 | 0.0407 |
| Saturn | 84507-11-14 14:24 G | 32586924.92 | 32586925.10 | 32586925.30 | 0.0284 | 0.0173 |
| Saturn | 84508-11-27 09:22 G | 32587303.81 | 32587303.89 | 32587304.00 | 0.0288 | 0.0261 |
| Neptune | 84509-06-10 14:53 G | 32587498.95 | 32587499.12 | 32587499.34 | 0.0088 | 0.0059 |
| Neptune | 84510-06-13 01:12 G | 32587866.35 | 32587866.55 | 32587866.77 | 0.0088 | 0.0047 |
| Neptune | 84511-06-15 11:17 G | 32588233.71 | 32588233.97 | 32588234.24 | 0.0088 | 0.0018 |

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| Neptune | 84512-06-17 02:10 G | 32588601.34 | 32588601.59 | 32588601.84 | 0.0088 | 0.0006 |
| Neptune | 84513-06-19 07:56 G | 32588968.59 | 32588968.83 | 32588969.09 | 0.0088 | 0.0024 |
| Neptune | 84514-06-22 02:24 G | 32589336.37 | 32589336.60 | 32589336.84 | 0.0088 | 0.0035 |
| Neptune | 84515-06-24 06:29 G | 32589703.62 | 32589703.77 | 32589703.96 | 0.0088 | 0.0065 |
| Neptune | 84516-06-26 00:29 G | 32590071.42 | 32590071.52 | 32590071.68 | 0.0088 | 0.0076 |
| Uranus | 84517-11-02 20:39 G | 32590566.30 | 32590566.36 | 32590566.48 | 0.0139 | 0.0130 |
| Uranus | 84518-11-07 16:05 G | 32590935.97 | 32590936.17 | 32590936.38 | 0.0139 | 0.0076 |
| Jupiter | 84519-06-11 19:41 G | 32591152.09 | 32591152.32 | 32591152.55 | 0.0523 | 0.0098 |
| Uranus | 84519-11-12 06:00 G | 32591305.49 | 32591305.75 | 32591306.01 | 0.0138 | 0.0022 |
| Uranus | 84520-11-15 21:22 G | 32591675.17 | 32591675.39 | 32591675.63 | 0.0138 | 0.0046 |
| Saturn | 84521-05-11 04:48 G | 32591851.52 | 32591851.70 | 32591851.89 | 0.0278 | 0.0171 |
| Uranus | 84521-11-20 10:48 G | 32592044.77 | 32592044.95 | 32592045.17 | 0.0138 | 0.0090 |
| Saturn | 84522-05-24 00:58 G | 32592229.38 | 32592229.54 | 32592229.72 | 0.0274 | 0.0200 |
| Saturn | 84537-11-21 21:51 G | 32597890.17 | 32597890.41 | 32597890.66 | 0.0286 | 0.0070 |
| Saturn | 84551-05-18 21:08 G | 32602816.14 | 32602816.38 | 32602816.63 | 0.0275 | 0.0048 |
| Uranus | 84562-05-03 12:44 G | 32606818.87 | 32606819.03 | 32606819.23 | 0.0139 | 0.0096 |
| Uranus | 84563-05-07 21:51 G | 32607188.18 | 32607188.41 | 32607188.65 | 0.0140 | 0.0052 |
| Uranus | 84564-05-11 20:53 G | 32607558.13 | 32607558.37 | 32607558.62 | 0.0140 | 0.0022 |
| Uranus | 84565-05-16 08:10 G | 32607927.63 | 32607927.84 | 32607928.08 | 0.0140 | 0.0072 |
| Uranus | 84566-05-21 08:39 G | 32608297.81 | 32608297.86 | 32608297.92 | 0.0141 | 0.0137 |
| Saturn | 84566-11-16 12:44 G | 32608476.81 | 32608477.03 | 32608477.24 | 0.0284 | 0.0114 |
| Jupiter | 84572-12-09 00:15 G | 32610691.43 | 32610691.51 | 32610691.59 | 0.0501 | 0.0465 |
| Pluto | 84579-08-16 00:00 G | 32613132.26 | 32613132.50 | 32613132.78 | 0.0081 | 0.0025 |
| Saturn | 84580-05-12 21:51 G | 32613403.19 | 32613403.41 | 32613403.63 | 0.0277 | 0.0119 |
| Saturn | 84581-05-25 11:32 G | 32613780.88 | 32613780.98 | 32613781.10 | 0.0274 | 0.0245 |
| Jupiter | 84584-12-13 08:39 G | 32615078.62 | 32615078.86 | 32615079.11 | 0.0503 | 0.0016 |
| Jupiter | 84590-06-05 17:17 G | 32617079.18 | 32617079.22 | 32617079.28 | 0.0525 | 0.0511 |
| Neptune | 84591-12-12 15:36 G | 32617634.04 | 32617634.15 | 32617634.30 | 0.0089 | 0.0075 |
| Neptune | 84592-12-14 04:20 G | 32618001.49 | 32618001.68 | 32618001.88 | 0.0089 | 0.0059 |
| Neptune | 84593-12-16 17:46 G | 32618369.02 | 32618369.24 | 32618369.49 | 0.0089 | 0.0032 |

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| Neptune | 84594-12-19 01:12 G | 32618736.30 | 32618736.55 | 32618736.82 | 0.0089 | 0.0016 |
| Neptune | 84595-12-21 18:58 G | 32619104.04 | 32619104.29 | 32619104.54 | 0.0089 | 0.0012 |
| Saturn | 84596-11-23 11:32 G | 32619441.76 | 32619441.98 | 32619442.20 | 0.0286 | 0.0127 |
| Jupiter | 84596-12-17 17:46 G | 32619466.14 | 32619466.24 | 32619466.34 | 0.0504 | 0.0447 |
| Neptune | 84596-12-23 00:00 G | 32619471.26 | 32619471.50 | 32619471.75 | 0.0089 | 0.0027 |
| Neptune | 84597-12-25 18:15 G | 32619839.09 | 32619839.26 | 32619839.49 | 0.0089 | 0.0056 |
| Neptune | 84598-12-28 00:29 G | 32620206.36 | 32620206.52 | 32620206.68 | 0.0090 | 0.0069 |
| Uranus | 84601-11-04 07:41 G | 32621247.76 | 32621247.82 | 32621247.90 | 0.0139 | 0.0133 |
| Jupiter | 84602-06-11 20:24 G | 32621467.12 | 32621467.35 | 32621467.58 | 0.0524 | 0.0027 |
| Uranus | 84602-11-09 03:36 G | 32621617.44 | 32621617.65 | 32621617.86 | 0.0139 | 0.0070 |
| Uranus | 84603-11-13 16:05 G | 32621986.91 | 32621987.17 | 32621987.44 | 0.0138 | 0.0010 |
| Uranus | 84604-11-17 08:39 G | 32622356.64 | 32622356.86 | 32622357.11 | 0.0138 | 0.0040 |
| Uranus | 84605-11-21 21:08 G | 32622726.24 | 32622726.38 | 32622726.56 | 0.0138 | 0.0110 |
| Saturn | 84610-05-21 12:00 G | 32624367.78 | 32624368.00 | 32624368.23 | 0.0275 | 0.0095 |
| Jupiter | 84614-06-16 14:39 G | 32625854.99 | 32625855.11 | 32625855.24 | 0.0523 | 0.0448 |
| Saturn | 84625-11-19 07:12 G | 32630028.56 | 32630028.80 | 32630029.04 | 0.0285 | 0.0057 |
| Saturn | 84639-05-16 08:53 G | 32634954.62 | 32634954.87 | 32634955.11 | 0.0276 | 0.0073 |
| Uranus | 84646-05-05 02:39 G | 32637500.46 | 32637500.61 | 32637500.80 | 0.0139 | 0.0102 |
| Uranus | 84647-05-09 12:00 G | 32637869.75 | 32637870.00 | 32637870.25 | 0.0140 | 0.0029 |
| Uranus | 84648-05-13 11:46 G | 32638239.74 | 32638239.99 | 32638240.24 | 0.0140 | 0.0016 |
| Uranus | 84649-05-17 22:34 G | 32638609.25 | 32638609.44 | 32638609.65 | 0.0140 | 0.0088 |
| Saturn | 84654-11-13 11:32 G | 32640614.86 | 32640614.98 | 32640615.10 | 0.0283 | 0.0243 |
| Saturn | 84655-11-27 04:05 G | 32640993.50 | 32640993.67 | 32640993.87 | 0.0287 | 0.0184 |
| Jupiter | 84667-12-14 09:51 G | 32645393.69 | 32645393.91 | 32645394.14 | 0.0502 | 0.0060 |
| Saturn | 84668-05-10 06:44 G | 32645541.66 | 32645541.78 | 32645541.92 | 0.0278 | 0.0232 |
| Saturn | 84669-05-23 04:48 G | 32645919.50 | 32645919.70 | 32645919.91 | 0.0275 | 0.0140 |
| Neptune | 84673-06-10 19:12 G | 32647399.17 | 32647399.30 | 32647399.47 | 0.0088 | 0.0069 |
| Neptune | 84674-06-13 04:20 G | 32647766.50 | 32647766.68 | 32647766.92 | 0.0088 | 0.0053 |
| Neptune | 84675-06-15 21:22 G | 32648134.15 | 32648134.39 | 32648134.64 | 0.0088 | 0.0027 |
| Neptune | 84676-06-17 02:39 G | 32648501.35 | 32648501.61 | 32648501.87 | 0.0088 | 0.0011 |

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| Neptune | 84677-06-19 21:08 G | 32648869.13 | 32648869.38 | 32648869.65 | 0.0088 | 0.0014 |
| Neptune | 84678-06-22 01:41 G | 32649236.34 | 32649236.57 | 32649236.82 | 0.0088 | 0.0030 |
| Neptune | 84679-06-24 18:44 G | 32649604.10 | 32649604.28 | 32649604.52 | 0.0088 | 0.0054 |
| Jupiter | 84679-12-19 00:15 G | 32649781.34 | 32649781.51 | 32649781.67 | 0.0504 | 0.0359 |
| Neptune | 84680-06-26 01:41 G | 32649971.45 | 32649971.57 | 32649971.74 | 0.0088 | 0.0072 |
| Saturn | 84684-11-20 18:15 G | 32651580.01 | 32651580.26 | 32651580.51 | 0.0285 | 0.0004 |
| Jupiter | 84685-06-10 14:10 G | 32651781.86 | 32651782.09 | 32651782.33 | 0.0525 | 0.0128 |
| Uranus | 84685-11-04 16:34 G | 32651929.07 | 32651929.19 | 32651929.34 | 0.0139 | 0.0119 |
| Uranus | 84686-11-09 13:56 G | 32652298.88 | 32652299.08 | 32652299.31 | 0.0139 | 0.0068 |
| Uranus | 84687-11-14 02:10 G | 32652668.32 | 32652668.59 | 32652668.85 | 0.0138 | 0.0010 |
| Mars | 84688-03-24 03:08 G | 32652799.46 | 32652799.63 | 32652799.81 | 0.1725 | 0.0366 |
| Uranus | 84688-11-17 20:24 G | 32653038.13 | 32653038.35 | 32653038.58 | 0.0138 | 0.0056 |
| Uranus | 84689-11-22 07:41 G | 32653407.66 | 32653407.82 | 32653408.02 | 0.0138 | 0.0102 |
| Jupiter | 84697-06-15 18:58 G | 32656170.14 | 32656170.29 | 32656170.45 | 0.0523 | 0.0371 |
| Saturn | 84698-05-17 16:05 G | 32656505.93 | 32656506.17 | 32656506.42 | 0.0276 | 0.0030 |
| Mars | 84713-09-26 18:58 G | 32662116.09 | 32662116.29 | 32662116.49 | 0.1809 | 0.0577 |
| Saturn | 84713-11-16 00:00 G | 32662166.34 | 32662166.50 | 32662166.68 | 0.0283 | 0.0196 |
| Saturn | 84714-11-29 19:12 G | 32662545.18 | 32662545.30 | 32662545.45 | 0.0287 | 0.0236 |
| Saturn | 84727-05-13 21:36 G | 32667093.23 | 32667093.40 | 32667093.58 | 0.0278 | 0.0186 |
| Saturn | 84728-05-25 15:08 G | 32667470.95 | 32667471.13 | 32667471.32 | 0.0274 | 0.0181 |
| Uranus | 84730-05-06 17:17 G | 32668182.04 | 32668182.22 | 32668182.44 | 0.0139 | 0.0083 |
| Uranus | 84731-05-11 02:24 G | 32668551.36 | 32668551.60 | 32668551.85 | 0.0140 | 0.0037 |
| Uranus | 84732-05-15 01:56 G | 32668921.35 | 32668921.58 | 32668921.83 | 0.0140 | 0.0038 |
| Uranus | 84733-05-19 12:29 G | 32669290.83 | 32669291.02 | 32669291.23 | 0.0140 | 0.0087 |
| Pluto | 84737-02-16 19:41 G | 32670660.07 | 32670660.32 | 32670660.59 | 0.0063 | 0.0009 |
| Saturn | 84743-11-23 23:17 G | 32673131.23 | 32673131.47 | 32673131.72 | 0.0286 | 0.0046 |
| Jupiter | 84750-12-14 17:32 G | 32675709.00 | 32675709.23 | 32675709.46 | 0.0502 | 0.0135 |
| Neptune | 84755-12-13 21:08 G | 32677534.30 | 32677534.38 | 32677534.53 | 0.0089 | 0.0081 |
| Neptune | 84756-12-15 12:29 G | 32677901.88 | 32677902.02 | 32677902.20 | 0.0089 | 0.0068 |
| Saturn | 84757-05-20 02:10 G | 32678057.35 | 32678057.59 | 32678057.84 | 0.0275 | 0.0015 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 84757-12-17 19:27 G | 32678269.08 | 32678269.31 | 32678269.55 | 0.0089 | 0.0038 |
| Neptune | 84758-12-20 13:41 G | 32678636.83 | 32678637.07 | 32678637.32 | 0.0089 | 0.0025 |
| Neptune | 84759-12-22 18:44 G | 32679004.03 | 32679004.28 | 32679004.54 | 0.0089 | 0.0004 |
| Neptune | 84760-12-24 13:12 G | 32679371.80 | 32679372.05 | 32679372.31 | 0.0089 | 0.0018 |
| Neptune | 84761-12-26 18:58 G | 32679739.11 | 32679739.29 | 32679739.53 | 0.0089 | 0.0048 |
| Jupiter | 84762-12-18 21:08 G | 32680096.19 | 32680096.38 | 32680096.57 | 0.0504 | 0.0282 |
| Neptune | 84762-12-29 10:34 G | 32680106.77 | 32680106.94 | 32680107.15 | 0.0090 | 0.0062 |
| Neptune | 84763-12-31 21:08 G | 32680474.38 | 32680474.38 | 32680474.38 | 0.0090 | 0.0090 |
| Jupiter | 84768-06-10 21:08 G | 32682097.18 | 32682097.38 | 32682097.59 | 0.0525 | 0.0209 |
| Uranus | 84769-11-06 05:03 G | 32682610.62 | 32682610.71 | 32682610.85 | 0.0139 | 0.0125 |
| Uranus | 84770-11-11 03:08 G | 32682980.41 | 32682980.63 | 32682980.87 | 0.0139 | 0.0058 |
| Uranus | 84771-11-15 14:10 G | 32683349.83 | 32683350.09 | 32683350.35 | 0.0138 | 0.0001 |
| Saturn | 84772-11-17 10:05 G | 32683717.72 | 32683717.92 | 32683718.13 | 0.0284 | 0.0152 |
| Uranus | 84772-11-19 09:08 G | 32683719.66 | 32683719.88 | 32683720.12 | 0.0138 | 0.0053 |
| Uranus | 84773-11-23 19:41 G | 32684089.21 | 32684089.32 | 32684089.44 | 0.0138 | 0.0122 |
| Saturn | 84773-12-01 02:24 G | 32684096.55 | 32684096.60 | 32684096.67 | 0.0288 | 0.0278 |
| Jupiter | 84780-06-15 16:05 G | 32686484.97 | 32686485.17 | 32686485.39 | 0.0523 | 0.0263 |
| Saturn | 84786-05-15 06:00 G | 32688644.54 | 32688644.75 | 32688644.97 | 0.0277 | 0.0141 |
| Saturn | 84787-05-27 17:46 G | 32689022.09 | 32689022.24 | 32689022.40 | 0.0274 | 0.0217 |
| Saturn | 84802-11-25 04:05 G | 32694682.45 | 32694682.67 | 32694682.91 | 0.0286 | 0.0088 |
| Uranus | 84813-05-02 08:53 G | 32698493.86 | 32698493.87 | 32698493.92 | 0.0139 | 0.0138 |
| Uranus | 84814-05-07 07:12 G | 32698863.61 | 32698863.80 | 32698864.01 | 0.0139 | 0.0087 |
| Uranus | 84815-05-11 16:05 G | 32699232.93 | 32699233.17 | 32699233.43 | 0.0140 | 0.0015 |
| Uranus | 84816-05-15 16:05 G | 32699602.93 | 32699603.17 | 32699603.43 | 0.0140 | 0.0031 |
| Saturn | 84816-05-21 12:44 G | 32699608.80 | 32699609.03 | 32699609.26 | 0.0275 | 0.0053 |
| Uranus | 84817-05-20 02:10 G | 32699972.44 | 32699972.59 | 32699972.78 | 0.0140 | 0.0105 |
| Pluto | 84827-08-18 14:10 G | 32703714.91 | 32703715.09 | 32703715.28 | 0.0081 | 0.0055 |
| Saturn | 84831-11-19 11:32 G | 32705268.76 | 32705268.98 | 32705269.22 | 0.0284 | 0.0112 |
| Jupiter | 84833-12-13 18:58 G | 32706024.09 | 32706024.29 | 32706024.51 | 0.0502 | 0.0195 |
| Neptune | 84837-06-10 22:20 G | 32707299.35 | 32707299.43 | 32707299.55 | 0.0088 | 0.0081 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 84838-06-13 15:08 G | 32707666.96 | 32707667.13 | 32707667.36 | 0.0088 | 0.0054 |
| Neptune | 84839-06-15 19:56 G | 32708034.12 | 32708034.33 | 32708034.58 | 0.0088 | 0.0041 |
| Neptune | 84840-06-17 14:53 G | 32708401.87 | 32708402.12 | 32708402.39 | 0.0088 | 0.0013 |
| Neptune | 84841-06-19 20:10 G | 32708769.08 | 32708769.34 | 32708769.60 | 0.0088 | 0.0000 |
| Neptune | 84842-06-22 12:58 G | 32709136.78 | 32709137.04 | 32709137.29 | 0.0088 | 0.0028 |
| Neptune | 84843-06-24 20:53 G | 32709504.17 | 32709504.37 | 32709504.61 | 0.0088 | 0.0042 |
| Neptune | 84844-06-26 09:22 G | 32709871.75 | 32709871.89 | 32709872.08 | 0.0088 | 0.0070 |
| Saturn | 84845-05-16 07:27 G | 32710195.57 | 32710195.81 | 32710196.04 | 0.0277 | 0.0104 |
| Neptune | 84845-06-28 23:03 G | 32710239.39 | 32710239.46 | 32710239.56 | 0.0088 | 0.0082 |
| Jupiter | 84845-12-18 14:53 G | 32710411.92 | 32710412.12 | 32710412.33 | 0.0503 | 0.0227 |
| Saturn | 84846-05-28 19:56 G | 32710573.25 | 32710573.33 | 32710573.44 | 0.0273 | 0.0252 |
| Jupiter | 84851-06-10 17:46 G | 32712412.06 | 32712412.24 | 32712412.45 | 0.0526 | 0.0314 |
| Uranus | 84853-11-06 16:34 G | 32713292.03 | 32713292.19 | 32713292.36 | 0.0139 | 0.0107 |
| Uranus | 84854-11-11 15:22 G | 32713661.92 | 32713662.14 | 32713662.37 | 0.0139 | 0.0056 |
| Uranus | 84855-11-16 01:41 G | 32714031.31 | 32714031.57 | 32714031.84 | 0.0138 | 0.0005 |
| Uranus | 84856-11-19 21:51 G | 32714401.21 | 32714401.41 | 32714401.63 | 0.0138 | 0.0069 |
| Uranus | 84857-11-24 07:27 G | 32714770.68 | 32714770.81 | 32714770.97 | 0.0138 | 0.0115 |
| Saturn | 84861-11-26 08:53 G | 32716233.67 | 32716233.87 | 32716234.09 | 0.0287 | 0.0128 |
| Jupiter | 84863-06-15 17:46 G | 32716800.02 | 32716800.24 | 32716800.45 | 0.0524 | 0.0191 |
| Saturn | 84874-05-10 21:36 G | 32720782.40 | 32720782.40 | 32720782.42 | 0.0278 | 0.0278 |
| Saturn | 84875-05-23 18:58 G | 32721160.06 | 32721160.29 | 32721160.52 | 0.0275 | 0.0090 |
| Saturn | 84890-11-20 05:03 G | 32726819.47 | 32726819.71 | 32726819.96 | 0.0284 | 0.0072 |
| Uranus | 84897-05-02 21:51 G | 32729175.37 | 32729175.41 | 32729175.46 | 0.0139 | 0.0136 |
| Uranus | 84898-05-07 19:27 G | 32729545.09 | 32729545.31 | 32729545.54 | 0.0139 | 0.0069 |
| Uranus | 84899-05-12 04:34 G | 32729914.45 | 32729914.69 | 32729914.94 | 0.0140 | 0.0023 |
| Uranus | 84900-05-17 03:51 G | 32730284.43 | 32730284.66 | 32730284.90 | 0.0140 | 0.0052 |
| Uranus | 84901-05-21 13:56 G | 32730653.92 | 32730654.08 | 32730654.27 | 0.0140 | 0.0101 |
| Saturn | 84904-05-18 06:00 G | 32731746.51 | 32731746.75 | 32731746.99 | 0.0277 | 0.0070 |
| Jupiter | 84916-12-14 12:44 G | 32736339.84 | 32736340.03 | 32736340.24 | 0.0501 | 0.0242 |
| Saturn | 84919-11-15 18:00 G | 32737406.16 | 32737406.25 | 32737406.35 | 0.0282 | 0.0256 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 84920-11-28 09:08 G | 32737784.68 | 32737784.88 | 32737785.08 | 0.0287 | 0.0163 |
| Neptune | 84920-12-15 14:10 G | 32737801.95 | 32737802.09 | 32737802.28 | 0.0089 | 0.0069 |
| Neptune | 84921-12-18 09:22 G | 32738169.68 | 32738169.89 | 32738170.10 | 0.0089 | 0.0052 |
| Neptune | 84922-12-20 13:56 G | 32738536.85 | 32738537.08 | 32738537.34 | 0.0089 | 0.0027 |
| Neptune | 84923-12-23 08:10 G | 32738904.58 | 32738904.84 | 32738905.10 | 0.0089 | 0.0010 |
| Neptune | 84924-12-24 14:53 G | 32739271.88 | 32739272.12 | 32739272.37 | 0.0089 | 0.0017 |
| Neptune | 84925-12-27 04:48 G | 32739639.47 | 32739639.70 | 32739639.96 | 0.0089 | 0.0034 |
| Neptune | 84926-12-29 16:05 G | 32740007.01 | 32740007.17 | 32740007.38 | 0.0089 | 0.0060 |
| Neptune | 84928-01-01 02:24 G | 32740374.47 | 32740374.60 | 32740374.75 | 0.0089 | 0.0075 |
| Jupiter | 84928-12-18 17:17 G | 32740727.00 | 32740727.22 | 32740727.45 | 0.0502 | 0.0162 |
| Saturn | 84933-05-13 02:10 G | 32742333.48 | 32742333.59 | 32742333.71 | 0.0278 | 0.0245 |
| Saturn | 84934-05-25 17:46 G | 32742711.02 | 32742711.24 | 32742711.48 | 0.0274 | 0.0121 |
| Jupiter | 84934-06-11 01:27 G | 32742727.40 | 32742727.56 | 32742727.72 | 0.0526 | 0.0373 |
| Uranus | 84937-11-08 05:03 G | 32743973.58 | 32743973.71 | 32743973.88 | 0.0139 | 0.0113 |
| Uranus | 84938-11-13 04:34 G | 32744343.46 | 32744343.69 | 32744343.94 | 0.0139 | 0.0044 |
| Uranus | 84939-11-17 14:10 G | 32744712.83 | 32744713.09 | 32744713.35 | 0.0138 | 0.0013 |
| Uranus | 84940-11-21 10:34 G | 32745082.74 | 32745082.94 | 32745083.18 | 0.0138 | 0.0067 |
| Uranus | 84941-11-25 18:58 G | 32745452.27 | 32745452.29 | 32745452.36 | 0.0138 | 0.0136 |
| Jupiter | 84946-06-16 09:51 G | 32747115.68 | 32747115.91 | 32747116.14 | 0.0524 | 0.0147 |
| Saturn | 84949-11-21 23:17 G | 32748370.23 | 32748370.47 | 32748370.71 | 0.0284 | 0.0037 |
| Saturn | 84963-05-20 08:24 G | 32753297.61 | 32753297.85 | 32753298.08 | 0.0277 | 0.0042 |
| Mars | 84972-03-26 17:03 G | 32756531.00 | 32756531.21 | 32756531.41 | 0.1732 | 0.0038 |
| Saturn | 84978-11-16 14:24 G | 32758956.96 | 32758957.10 | 32758957.27 | 0.0282 | 0.0223 |
| Saturn | 84979-11-30 01:12 G | 32759335.37 | 32759335.55 | 32759335.74 | 0.0287 | 0.0197 |
| Uranus | 84981-05-04 08:39 G | 32759856.78 | 32759856.86 | 32759856.97 | 0.0139 | 0.0128 |
| Uranus | 84982-05-09 05:17 G | 32760226.52 | 32760226.72 | 32760226.95 | 0.0139 | 0.0076 |
| Uranus | 84983-05-13 15:08 G | 32760595.88 | 32760596.13 | 32760596.38 | 0.0140 | 0.0003 |
| Uranus | 84984-05-17 13:56 G | 32760965.85 | 32760966.08 | 32760966.34 | 0.0140 | 0.0043 |
| Pluto | 84985-02-18 14:24 G | 32761242.94 | 32761243.10 | 32761243.31 | 0.0062 | 0.0042 |
| Uranus | 84985-05-22 00:29 G | 32761335.40 | 32761335.52 | 32761335.67 | 0.0140 | 0.0117 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 84986-02-20 02:24 G | 32761609.39 | 32761609.60 | 32761609.81 | 0.0063 | 0.0037 |
| Saturn | 84992-05-13 22:05 G | 32763884.27 | 32763884.42 | 32763884.58 | 0.0278 | 0.0217 |
| Saturn | 84993-05-26 12:44 G | 32764261.82 | 32764262.03 | 32764262.24 | 0.0274 | 0.0147 |
| Mars | 84997-09-27 21:51 G | 32765847.24 | 32765847.41 | 32765847.59 | 0.1800 | 0.0464 |
| Jupiter | 84999-12-14 17:03 G | 32766655.02 | 32766655.21 | 32766655.40 | 0.0501 | 0.0295 |

86TH MILLENNIUM CE

This is a list of transits of Moon in the 86th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Neptune | 85002-06-14 15:36 G | | 32767566.97 | 32767567.15 | 32767567.34 | 0.0088 | 0.0061 | |
| Neptune | 85003-06-17 09:51 G | | 32767934.71 | 32767934.91 | 32767935.15 | 0.0088 | 0.0048 | |
| Neptune | 85004-06-18 15:36 G | | 32768301.92 | 32768302.15 | 32768302.41 | 0.0088 | 0.0021 | |
| Neptune | 85005-06-21 07:56 G | | 32768669.57 | 32768669.83 | 32768670.10 | 0.0088 | 0.0006 | |
| Neptune | 85006-06-23 17:17 G | | 32769036.98 | 32769037.22 | 32769037.47 | 0.0088 | 0.0021 | |
| Neptune | 85007-06-26 04:05 G | | 32769404.43 | 32769404.67 | 32769404.93 | 0.0088 | 0.0035 | |
| Neptune | 85008-06-27 18:15 G | | 32769772.09 | 32769772.26 | 32769772.46 | 0.0088 | 0.0061 | |
| Saturn | 85008-11-23 22:34 G | | 32769921.20 | 32769921.44 | 32769921.68 | 0.0284 | 0.0006 | |
| Neptune | 85009-06-30 00:58 G | | 32770139.42 | 32770139.54 | 32770139.69 | 0.0088 | 0.0075 | |
| Jupiter | 85011-12-20 10:05 G | | 32771042.71 | 32771042.92 | 32771043.14 | 0.0502 | 0.0120 | |
| Jupiter | 85017-06-11 11:03 G | | 32773042.85 | 32773042.96 | 32773043.08 | 0.0526 | 0.0454 | |
| Uranus | 85021-11-09 14:24 G | | 32774654.93 | 32774655.10 | 32774655.31 | 0.0139 | 0.0095 | |
| Saturn | 85022-05-22 10:48 G | | 32774848.71 | 32774848.95 | 32774849.19 | 0.0277 | 0.0017 | |
| Uranus | 85022-11-14 14:39 G | | 32775024.88 | 32775025.11 | 32775025.36 | 0.0139 | 0.0046 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 85023-11-19 00:00 G | 32775394.25 | 32775394.50 | 32775394.76 | 0.0138 | 0.0018 |
| Uranus | 85024-11-22 21:51 G | 32775764.20 | 32775764.41 | 32775764.61 | 0.0138 | 0.0080 |
| Uranus | 85025-11-27 05:32 G | 32776133.65 | 32776133.73 | 32776133.84 | 0.0138 | 0.0128 |
| Jupiter | 85029-06-16 04:20 G | 32777430.45 | 32777430.68 | 32777430.92 | 0.0524 | 0.0060 |
| Saturn | 85037-11-18 05:17 G | 32780507.54 | 32780507.72 | 32780507.91 | 0.0282 | 0.0191 |
| Saturn | 85038-12-01 16:20 G | 32780886.04 | 32780886.18 | 32780886.33 | 0.0287 | 0.0228 |
| Saturn | 85051-05-16 16:20 G | 32785435.02 | 32785435.18 | 32785435.37 | 0.0278 | 0.0194 |
| Saturn | 85052-05-28 12:15 G | 32785812.83 | 32785813.01 | 32785813.20 | 0.0274 | 0.0175 |
| Uranus | 85065-05-05 19:56 G | 32790538.23 | 32790538.33 | 32790538.44 | 0.0139 | 0.0125 |
| Uranus | 85066-05-10 15:36 G | 32790907.93 | 32790908.15 | 32790908.39 | 0.0139 | 0.0060 |
| Uranus | 85067-05-15 01:41 G | 32791277.32 | 32791277.57 | 32791277.82 | 0.0140 | 0.0012 |
| Saturn | 85067-11-25 20:53 G | 32791472.13 | 32791472.37 | 32791472.62 | 0.0284 | 0.0026 |
| Uranus | 85068-05-18 23:46 G | 32791647.26 | 32791647.49 | 32791647.72 | 0.0140 | 0.0063 |
| Uranus | 85069-05-23 10:05 G | 32792016.78 | 32792016.92 | 32792017.08 | 0.0140 | 0.0111 |
| Pluto | 85076-08-22 12:44 G | 32794664.83 | 32794665.03 | 32794665.26 | 0.0081 | 0.0045 |
| Saturn | 85081-05-23 06:44 G | 32796399.53 | 32796399.78 | 32796400.03 | 0.0277 | 0.0009 |
| Jupiter | 85082-12-15 11:17 G | 32796970.81 | 32796970.97 | 32796971.14 | 0.0501 | 0.0330 |
| Neptune | 85084-12-16 04:20 G | 32797702.57 | 32797702.68 | 32797702.86 | 0.0089 | 0.0074 |
| Neptune | 85085-12-18 09:36 G | 32798069.75 | 32798069.90 | 32798070.11 | 0.0089 | 0.0062 |
| Neptune | 85086-12-21 03:22 G | 32798437.41 | 32798437.64 | 32798437.90 | 0.0089 | 0.0031 |
| Neptune | 85087-12-23 11:46 G | 32798804.76 | 32798804.99 | 32798805.24 | 0.0089 | 0.0019 |
| Neptune | 85088-12-25 00:58 G | 32799172.29 | 32799172.54 | 32799172.81 | 0.0089 | 0.0012 |
| Neptune | 85089-12-27 13:41 G | 32799539.83 | 32799540.07 | 32799540.31 | 0.0089 | 0.0023 |
| Neptune | 85090-12-29 21:36 G | 32799907.21 | 32799907.40 | 32799907.63 | 0.0089 | 0.0053 |
| Neptune | 85092-01-01 14:24 G | 32800274.94 | 32800275.10 | 32800275.28 | 0.0089 | 0.0066 |
| Jupiter | 85094-12-19 21:36 G | 32801358.16 | 32801358.40 | 32801358.64 | 0.0502 | 0.0076 |
| Saturn | 85096-11-18 23:32 G | 32802058.28 | 32802058.48 | 32802058.68 | 0.0282 | 0.0160 |
| Saturn | 85097-12-02 15:36 G | 32802437.05 | 32802437.15 | 32802437.26 | 0.0287 | 0.0256 |
| Uranus | 85105-11-11 00:15 G | 32805336.36 | 32805336.51 | 32805336.70 | 0.0139 | 0.0105 |
| Uranus | 85106-11-16 00:44 G | 32805706.29 | 32805706.53 | 32805706.78 | 0.0139 | 0.0033 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 85107-11-20 09:36 G | 32806075.65 | 32806075.90 | 32806076.15 | 0.0139 | 0.0022 |
| Uranus | 85108-11-24 07:27 G | 32806445.61 | 32806445.81 | 32806446.02 | 0.0138 | 0.0078 |
| Saturn | 85110-05-18 16:20 G | 32806986.00 | 32806986.18 | 32806986.38 | 0.0278 | 0.0165 |
| Saturn | 85111-05-31 15:22 G | 32807363.99 | 32807364.14 | 32807364.31 | 0.0274 | 0.0202 |
| Jupiter | 85112-06-16 21:22 G | 32807746.16 | 32807746.39 | 32807746.62 | 0.0525 | 0.0019 |
| Saturn | 85126-11-27 15:22 G | 32813022.89 | 32813023.14 | 32813023.39 | 0.0284 | 0.0055 |
| Saturn | 85140-05-24 23:46 G | 32817950.25 | 32817950.49 | 32817950.75 | 0.0277 | 0.0035 |
| Uranus | 85149-05-07 07:41 G | 32821219.71 | 32821219.82 | 32821219.96 | 0.0139 | 0.0119 |
| Uranus | 85150-05-12 02:24 G | 32821589.38 | 32821589.60 | 32821589.84 | 0.0139 | 0.0063 |
| Uranus | 85151-05-16 12:58 G | 32821958.80 | 32821959.04 | 32821959.29 | 0.0139 | 0.0009 |
| Uranus | 85152-05-20 10:34 G | 32822328.70 | 32822328.94 | 32822329.18 | 0.0140 | 0.0054 |
| Uranus | 85153-05-24 21:36 G | 32822698.32 | 32822698.40 | 32822698.50 | 0.0140 | 0.0129 |
| Saturn | 85155-11-22 01:27 G | 32823609.35 | 32823609.56 | 32823609.77 | 0.0282 | 0.0128 |
| Jupiter | 85165-12-15 20:10 G | 32827286.20 | 32827286.34 | 32827286.51 | 0.0500 | 0.0380 |
| Neptune | 85166-06-15 05:32 G | 32827467.61 | 32827467.73 | 32827467.89 | 0.0088 | 0.0075 |
| Neptune | 85167-06-17 11:46 G | 32827834.79 | 32827834.99 | 32827835.21 | 0.0088 | 0.0048 |
| Neptune | 85168-06-19 01:56 G | 32828202.35 | 32828202.58 | 32828202.85 | 0.0088 | 0.0033 |
| Saturn | 85169-05-19 20:24 G | 32828537.14 | 32828537.35 | 32828537.56 | 0.0279 | 0.0136 |
| Neptune | 85169-06-21 12:58 G | 32828569.79 | 32828570.04 | 32828570.29 | 0.0088 | 0.0007 |
| Saturn | 85170-06-01 15:36 G | 32828915.03 | 32828915.15 | 32828915.30 | 0.0274 | 0.0232 |
| Neptune | 85170-06-23 22:48 G | 32828937.19 | 32828937.45 | 32828937.72 | 0.0088 | 0.0008 |
| Neptune | 85171-06-26 14:39 G | 32829304.88 | 32829305.11 | 32829305.35 | 0.0088 | 0.0033 |
| Neptune | 85172-06-27 20:24 G | 32829672.15 | 32829672.35 | 32829672.60 | 0.0088 | 0.0048 |
| Neptune | 85173-06-30 14:53 G | 32830040.01 | 32830040.12 | 32830040.27 | 0.0088 | 0.0075 |
| Jupiter | 85177-12-20 03:51 G | 32831673.44 | 32831673.66 | 32831673.89 | 0.0502 | 0.0020 |
| Saturn | 85185-11-28 12:29 G | 32834573.78 | 32834574.02 | 32834574.26 | 0.0284 | 0.0090 |
| Uranus | 85189-11-11 07:41 G | 32836017.63 | 32836017.82 | 32836018.02 | 0.0139 | 0.0087 |
| Jupiter | 85189-12-24 22:20 G | 32836061.38 | 32836061.43 | 32836061.50 | 0.0503 | 0.0483 |
| Uranus | 85190-11-16 07:56 G | 32836387.59 | 32836387.83 | 32836388.08 | 0.0139 | 0.0038 |
| Uranus | 85191-11-20 16:48 G | 32836756.96 | 32836757.20 | 32836757.46 | 0.0139 | 0.0028 |

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| Uranus | 85192-11-24 15:22 G | 32837126.94 | 32837127.14 | 32837127.33 | 0.0138 | 0.0089 |
| Jupiter | 85195-06-16 20:39 G | 32838061.12 | 32838061.36 | 32838061.60 | 0.0525 | 0.0056 |
| Saturn | 85199-05-26 23:03 G | 32839501.23 | 32839501.46 | 32839501.70 | 0.0277 | 0.0065 |
| Jupiter | 85207-06-21 23:03 G | 32842449.42 | 32842449.46 | 32842449.50 | 0.0523 | 0.0513 |
| Saturn | 85214-11-23 07:41 G | 32845160.60 | 32845160.82 | 32845161.06 | 0.0282 | 0.0090 |
| Saturn | 85228-05-20 22:34 G | 32850088.21 | 32850088.44 | 32850088.67 | 0.0279 | 0.0103 |
| Saturn | 85229-06-02 13:12 G | 32850465.99 | 32850466.05 | 32850466.11 | 0.0274 | 0.0265 |
| Uranus | 85233-05-07 21:08 G | 32851901.24 | 32851901.38 | 32851901.53 | 0.0139 | 0.0112 |
| Pluto | 85234-02-23 05:32 G | 32852192.49 | 32852192.73 | 32852192.99 | 0.0063 | 0.0004 |
| Uranus | 85234-05-12 14:39 G | 32852270.88 | 32852271.11 | 32852271.37 | 0.0139 | 0.0049 |
| Uranus | 85235-05-17 02:24 G | 32852640.36 | 32852640.60 | 32852640.85 | 0.0139 | 0.0002 |
| Uranus | 85236-05-20 22:34 G | 32853010.24 | 32853010.44 | 32853010.67 | 0.0140 | 0.0076 |
| Uranus | 85237-05-25 10:05 G | 32853379.82 | 32853379.92 | 32853380.05 | 0.0140 | 0.0123 |
| Saturn | 85243-11-17 06:58 G | 32855746.73 | 32855746.79 | 32855746.86 | 0.0280 | 0.0270 |
| Saturn | 85244-11-29 17:32 G | 32856125.03 | 32856125.23 | 32856125.46 | 0.0285 | 0.0130 |
| Jupiter | 85248-12-15 02:10 G | 32857601.49 | 32857601.59 | 32857601.70 | 0.0500 | 0.0444 |
| Neptune | 85248-12-16 06:58 G | 32857602.73 | 32857602.79 | 32857602.90 | 0.0089 | 0.0084 |
| Neptune | 85249-12-19 00:15 G | 32857970.33 | 32857970.51 | 32857970.71 | 0.0089 | 0.0062 |
| Neptune | 85250-12-21 09:08 G | 32858337.68 | 32858337.88 | 32858338.11 | 0.0089 | 0.0043 |
| Neptune | 85251-12-23 21:08 G | 32858705.13 | 32858705.38 | 32858705.64 | 0.0089 | 0.0021 |
| Neptune | 85252-12-25 11:03 G | 32859072.71 | 32859072.96 | 32859073.21 | 0.0089 | 0.0001 |
| Neptune | 85253-12-27 18:29 G | 32859440.02 | 32859440.27 | 32859440.53 | 0.0089 | 0.0022 |
| Neptune | 85254-12-30 12:15 G | 32859807.79 | 32859808.01 | 32859808.24 | 0.0089 | 0.0042 |
| Neptune | 85256-01-01 17:03 G | 32860175.04 | 32860175.21 | 32860175.40 | 0.0089 | 0.0065 |
| Mars | 85256-03-29 03:51 G | 32860262.47 | 32860262.66 | 32860262.84 | 0.1740 | 0.0283 |
| Neptune | 85257-01-03 11:17 G | 32860542.90 | 32860542.97 | 32860543.09 | 0.0089 | 0.0083 |
| Saturn | 85258-05-28 05:17 G | 32861052.51 | 32861052.72 | 32861052.95 | 0.0277 | 0.0099 |
| Jupiter | 85260-12-19 18:44 G | 32861989.04 | 32861989.28 | 32861989.51 | 0.0502 | 0.0037 |
| Jupiter | 85272-12-23 22:05 G | 32866376.30 | 32866376.42 | 32866376.54 | 0.0503 | 0.0426 |
| Uranus | 85273-11-11 18:00 G | 32866699.08 | 32866699.25 | 32866699.44 | 0.0139 | 0.0097 |

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| Saturn | 85273-11-24 13:41 G | 32866711.82 | 32866712.07 | 32866712.32 | 0.0283 | 0.0048 |
| Uranus | 85274-11-16 17:46 G | 32867068.99 | 32867069.24 | 32867069.50 | 0.0139 | 0.0023 |
| Uranus | 85275-11-21 02:39 G | 32867438.37 | 32867438.61 | 32867438.86 | 0.0139 | 0.0030 |
| Uranus | 85276-11-25 00:29 G | 32867808.35 | 32867808.52 | 32867808.74 | 0.0138 | 0.0090 |
| Jupiter | 85278-06-16 01:27 G | 32868376.35 | 32868376.56 | 32868376.78 | 0.0525 | 0.0135 |
| Mars | 85281-09-30 05:03 G | 32869578.52 | 32869578.71 | 32869578.91 | 0.1792 | 0.0469 |
| Saturn | 85287-05-22 22:48 G | 32871639.21 | 32871639.45 | 32871639.70 | 0.0278 | 0.0069 |
| Jupiter | 85290-06-21 03:22 G | 32872764.51 | 32872764.64 | 32872764.77 | 0.0524 | 0.0441 |
| Saturn | 85302-11-19 18:00 G | 32877298.12 | 32877298.25 | 32877298.40 | 0.0281 | 0.0228 |
| Saturn | 85303-12-03 07:27 G | 32877676.63 | 32877676.81 | 32877677.01 | 0.0285 | 0.0174 |
| Saturn | 85316-05-17 12:00 G | 32882225.89 | 32882226.00 | 32882226.12 | 0.0281 | 0.0247 |
| Uranus | 85317-05-09 09:36 G | 32882582.77 | 32882582.90 | 32882583.07 | 0.0139 | 0.0108 |
| Saturn | 85317-05-30 13:12 G | 32882603.85 | 32882604.05 | 32882604.27 | 0.0277 | 0.0134 |
| Uranus | 85318-05-14 02:24 G | 32882952.36 | 32882952.60 | 32882952.85 | 0.0139 | 0.0049 |
| Uranus | 85319-05-18 14:53 G | 32883321.88 | 32883322.12 | 32883322.37 | 0.0139 | 0.0021 |
| Uranus | 85320-05-22 10:20 G | 32883691.72 | 32883691.93 | 32883692.18 | 0.0140 | 0.0068 |
| Pluto | 85324-08-24 22:48 G | 32885247.22 | 32885247.45 | 32885247.71 | 0.0081 | 0.0033 |
| Neptune | 85330-06-15 08:53 G | 32887367.80 | 32887367.87 | 32887367.99 | 0.0088 | 0.0082 |
| Neptune | 85331-06-17 22:48 G | 32887735.26 | 32887735.45 | 32887735.68 | 0.0088 | 0.0053 |
| Neptune | 85332-06-19 10:48 G | 32888102.74 | 32888102.95 | 32888103.18 | 0.0088 | 0.0041 |
| Saturn | 85332-11-26 18:58 G | 32888263.04 | 32888263.29 | 32888263.54 | 0.0283 | 0.0005 |
| Neptune | 85333-06-21 19:12 G | 32888470.05 | 32888470.30 | 32888470.58 | 0.0088 | 0.0013 |
| Neptune | 85334-06-24 11:32 G | 32888837.73 | 32888837.98 | 32888838.24 | 0.0088 | 0.0001 |
| Neptune | 85335-06-26 16:48 G | 32889204.95 | 32889205.20 | 32889205.44 | 0.0088 | 0.0028 |
| Neptune | 85336-06-28 10:48 G | 32889572.74 | 32889572.95 | 32889573.20 | 0.0088 | 0.0041 |
| Neptune | 85337-06-30 15:22 G | 32889940.01 | 32889940.14 | 32889940.33 | 0.0088 | 0.0069 |
| Neptune | 85338-07-03 08:53 G | 32890307.79 | 32890307.87 | 32890308.00 | 0.0088 | 0.0081 |
| Jupiter | 85343-12-20 15:36 G | 32892303.92 | 32892304.15 | 32892304.38 | 0.0501 | 0.0111 |
| Saturn | 85346-05-25 03:36 G | 32893190.41 | 32893190.65 | 32893190.90 | 0.0278 | 0.0031 |
| Jupiter | 85355-12-25 08:10 G | 32896691.68 | 32896691.84 | 32896692.00 | 0.0503 | 0.0352 |

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| Uranus | 85357-11-13 04:05 G | 32897380.46 | 32897380.67 | 32897380.88 | 0.0139 | 0.0077 |
| Uranus | 85358-11-18 02:39 G | 32897750.37 | 32897750.61 | 32897750.88 | 0.0139 | 0.0029 |
| Uranus | 85359-11-22 12:15 G | 32898119.77 | 32898120.01 | 32898120.25 | 0.0139 | 0.0040 |
| Uranus | 85360-11-26 10:05 G | 32898489.75 | 32898489.92 | 32898490.11 | 0.0138 | 0.0098 |
| Jupiter | 85361-06-16 04:20 G | 32898691.46 | 32898691.68 | 32898691.91 | 0.0526 | 0.0205 |
| Saturn | 85361-11-21 11:17 G | 32898849.79 | 32898849.97 | 32898850.15 | 0.0281 | 0.0180 |
| Saturn | 85362-12-04 22:48 G | 32899228.31 | 32899228.45 | 32899228.61 | 0.0285 | 0.0222 |
| Jupiter | 85373-06-21 00:29 G | 32903079.36 | 32903079.52 | 32903079.69 | 0.0524 | 0.0362 |
| Saturn | 85375-05-20 00:00 G | 32903777.34 | 32903777.50 | 32903777.67 | 0.0280 | 0.0206 |
| Saturn | 85376-05-31 19:41 G | 32904155.13 | 32904155.32 | 32904155.53 | 0.0276 | 0.0174 |
| Saturn | 85391-11-29 07:41 G | 32909814.58 | 32909814.82 | 32909815.06 | 0.0283 | 0.0044 |
| Uranus | 85401-05-10 22:20 G | 32913264.26 | 32913264.43 | 32913264.60 | 0.0139 | 0.0099 |
| Uranus | 85402-05-15 13:41 G | 32913633.83 | 32913634.07 | 32913634.33 | 0.0139 | 0.0038 |
| Uranus | 85403-05-20 03:36 G | 32914003.41 | 32914003.65 | 32914003.90 | 0.0139 | 0.0015 |
| Uranus | 85404-05-23 21:51 G | 32914373.22 | 32914373.41 | 32914373.63 | 0.0140 | 0.0089 |
| Saturn | 85405-05-27 16:48 G | 32914741.96 | 32914742.20 | 32914742.44 | 0.0278 | 0.0013 |
| Uranus | 85405-05-28 11:17 G | 32914742.94 | 32914742.97 | 32914743.05 | 0.0140 | 0.0137 |
| Neptune | 85413-12-20 06:00 G | 32917870.60 | 32917870.75 | 32917870.93 | 0.0089 | 0.0066 |
| Neptune | 85414-12-22 17:17 G | 32918238.03 | 32918238.22 | 32918238.45 | 0.0089 | 0.0054 |
| Neptune | 85415-12-25 08:39 G | 32918605.63 | 32918605.86 | 32918606.11 | 0.0089 | 0.0024 |
| Neptune | 85416-12-26 15:36 G | 32918972.90 | 32918973.15 | 32918973.42 | 0.0089 | 0.0011 |
| Neptune | 85417-12-29 09:51 G | 32919340.67 | 32919340.91 | 32919341.17 | 0.0089 | 0.0020 |
| Neptune | 85418-12-31 14:39 G | 32919707.88 | 32919708.11 | 32919708.36 | 0.0089 | 0.0031 |
| Neptune | 85420-01-03 09:08 G | 32920075.69 | 32920075.88 | 32920076.07 | 0.0089 | 0.0061 |
| Saturn | 85420-11-24 03:22 G | 32920401.43 | 32920401.64 | 32920401.87 | 0.0282 | 0.0130 |
| Neptune | 85421-01-04 14:39 G | 32920442.99 | 32920443.11 | 32920443.27 | 0.0089 | 0.0073 |
| Saturn | 85421-12-07 11:32 G | 32920779.91 | 32920779.98 | 32920780.07 | 0.0286 | 0.0270 |
| Jupiter | 85426-12-21 00:29 G | 32922619.31 | 32922619.52 | 32922619.73 | 0.0501 | 0.0193 |
| Saturn | 85434-05-22 09:22 G | 32925328.69 | 32925328.89 | 32925329.11 | 0.0280 | 0.0158 |
| Saturn | 85435-06-04 02:53 G | 32925706.47 | 32925706.62 | 32925706.78 | 0.0276 | 0.0218 |

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| Jupiter | 85438-12-25 03:22 G | 32927006.44 | 32927006.64 | 32927006.85 | 0.0503 | 0.0269 |
| Uranus | 85440-11-10 02:24 G | 32927692.55 | 32927692.60 | 32927692.70 | 0.0140 | 0.0134 |
| Uranus | 85441-11-14 15:36 G | 32928061.97 | 32928062.15 | 32928062.36 | 0.0139 | 0.0086 |
| Uranus | 85442-11-19 14:10 G | 32928431.83 | 32928432.09 | 32928432.35 | 0.0139 | 0.0011 |
| Uranus | 85443-11-23 23:46 G | 32928801.26 | 32928801.49 | 32928801.74 | 0.0139 | 0.0040 |
| Jupiter | 85444-06-15 23:32 G | 32929006.30 | 32929006.48 | 32929006.67 | 0.0526 | 0.0300 |
| Uranus | 85444-11-27 20:53 G | 32929171.22 | 32929171.37 | 32929171.57 | 0.0138 | 0.0101 |
| Saturn | 85450-12-02 02:39 G | 32931366.39 | 32931366.61 | 32931366.84 | 0.0284 | 0.0094 |
| Jupiter | 85456-06-21 01:41 G | 32933394.37 | 32933394.57 | 32933394.78 | 0.0524 | 0.0251 |
| Mars | 85461-03-29 22:48 G | 32935137.32 | 32935137.45 | 32935137.59 | 0.1753 | 0.1232 |
| Saturn | 85464-05-29 10:05 G | 32936293.69 | 32936293.92 | 32936294.16 | 0.0278 | 0.0061 |
| Saturn | 85479-11-26 18:00 G | 32941953.01 | 32941953.25 | 32941953.50 | 0.0282 | 0.0077 |
| Pluto | 85482-02-26 01:27 G | 32942775.33 | 32942775.56 | 32942775.80 | 0.0062 | 0.0029 |
| Pluto | 85483-02-27 16:48 G | 32943142.06 | 32943142.20 | 32943142.38 | 0.0063 | 0.0049 |
| Uranus | 85485-05-11 08:10 G | 32943945.69 | 32943945.84 | 32943946.03 | 0.0139 | 0.0099 |
| Uranus | 85486-05-15 22:34 G | 32944315.19 | 32944315.44 | 32944315.70 | 0.0139 | 0.0037 |
| Uranus | 85487-05-20 13:41 G | 32944684.83 | 32944685.07 | 32944685.31 | 0.0140 | 0.0030 |
| Uranus | 85488-05-24 06:44 G | 32945054.58 | 32945054.78 | 32945055.01 | 0.0140 | 0.0080 |
| Saturn | 85493-05-23 19:41 G | 32946880.10 | 32946880.32 | 32946880.56 | 0.0279 | 0.0109 |
| Saturn | 85494-06-05 16:20 G | 32947258.12 | 32947258.18 | 32947258.24 | 0.0275 | 0.0266 |
| Neptune | 85494-06-15 19:12 G | 32947268.24 | 32947268.30 | 32947268.43 | 0.0088 | 0.0082 |
| Neptune | 85495-06-18 08:10 G | 32947635.69 | 32947635.84 | 32947636.03 | 0.0088 | 0.0065 |
| Neptune | 85496-06-19 15:36 G | 32948002.94 | 32948003.15 | 32948003.41 | 0.0088 | 0.0042 |
| Neptune | 85497-06-22 09:08 G | 32948370.64 | 32948370.88 | 32948371.13 | 0.0088 | 0.0024 |
| Neptune | 85498-06-24 14:10 G | 32948737.83 | 32948738.09 | 32948738.35 | 0.0088 | 0.0001 |
| Neptune | 85499-06-27 08:39 G | 32949105.60 | 32949105.86 | 32949106.12 | 0.0088 | 0.0016 |
| Neptune | 85500-06-29 13:27 G | 32949472.85 | 32949473.06 | 32949473.30 | 0.0088 | 0.0040 |
| Neptune | 85501-07-02 06:29 G | 32949840.57 | 32949840.77 | 32949840.98 | 0.0088 | 0.0055 |
| Neptune | 85502-07-04 14:53 G | 32950208.03 | 32950208.12 | 32950208.23 | 0.0088 | 0.0080 |
| Saturn | 85508-11-21 08:39 G | 32952539.77 | 32952539.86 | 32952539.99 | 0.0280 | 0.0248 |

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| Saturn | 85509-12-04 21:51 G | 32952918.21 | 32952918.41 | 32952918.62 | 0.0284 | 0.0148 |
| Jupiter | 85509-12-20 18:15 G | 32952934.07 | 32952934.26 | 32952934.46 | 0.0501 | 0.0277 |
| Jupiter | 85521-12-25 09:51 G | 32957321.71 | 32957321.91 | 32957322.12 | 0.0502 | 0.0197 |
| Saturn | 85522-05-20 00:29 G | 32957467.46 | 32957467.52 | 32957467.60 | 0.0281 | 0.0267 |
| Saturn | 85523-06-02 00:15 G | 32957845.29 | 32957845.51 | 32957845.75 | 0.0277 | 0.0111 |
| Uranus | 85525-11-16 01:41 G | 32958743.37 | 32958743.57 | 32958743.81 | 0.0139 | 0.0067 |
| Uranus | 85526-11-20 22:48 G | 32959113.20 | 32959113.45 | 32959113.72 | 0.0139 | 0.0019 |
| Jupiter | 85527-06-16 22:20 G | 32959321.29 | 32959321.43 | 32959321.58 | 0.0527 | 0.0420 |
| Uranus | 85527-11-25 09:36 G | 32959482.68 | 32959482.90 | 32959483.14 | 0.0139 | 0.0052 |
| Uranus | 85528-11-29 06:15 G | 32959852.61 | 32959852.76 | 32959852.94 | 0.0138 | 0.0107 |
| Saturn | 85538-11-29 06:29 G | 32963504.53 | 32963504.77 | 32963505.02 | 0.0283 | 0.0024 |
| Jupiter | 85539-06-21 16:34 G | 32963708.97 | 32963709.19 | 32963709.42 | 0.0525 | 0.0148 |
| Mars | 85540-04-02 08:24 G | 32963994.71 | 32963994.85 | 32963994.99 | 0.1747 | 0.1037 |
| Saturn | 85552-05-26 10:48 G | 32968431.72 | 32968431.95 | 32968432.19 | 0.0279 | 0.0058 |
| Mars | 85565-10-02 15:36 G | 32973308.94 | 32973309.15 | 32973309.35 | 0.1781 | 0.0108 |
| Saturn | 85567-11-24 03:22 G | 32974091.47 | 32974091.64 | 32974091.81 | 0.0281 | 0.0196 |
| Saturn | 85568-12-06 13:12 G | 32974469.88 | 32974470.05 | 32974470.24 | 0.0285 | 0.0200 |
| Uranus | 85569-05-12 18:00 G | 32974627.08 | 32974627.25 | 32974627.45 | 0.0139 | 0.0089 |
| Uranus | 85570-05-17 07:12 G | 32974996.54 | 32974996.80 | 32974997.05 | 0.0139 | 0.0031 |
| Uranus | 85571-05-21 23:32 G | 32975366.24 | 32975366.48 | 32975366.72 | 0.0139 | 0.0026 |
| Uranus | 85572-05-25 15:08 G | 32975735.96 | 32975736.13 | 32975736.33 | 0.0140 | 0.0098 |
| Pluto | 85573-08-29 19:56 G | 32976197.23 | 32976197.33 | 32976197.49 | 0.0081 | 0.0070 |
| Neptune | 85577-12-20 14:24 G | 32977770.98 | 32977771.10 | 32977771.27 | 0.0089 | 0.0075 |
| Neptune | 85578-12-23 06:15 G | 32978138.59 | 32978138.76 | 32978138.98 | 0.0089 | 0.0056 |
| Neptune | 85579-12-25 12:29 G | 32978505.79 | 32978506.02 | 32978506.27 | 0.0089 | 0.0033 |
| Neptune | 85580-12-27 07:27 G | 32978873.57 | 32978873.81 | 32978874.07 | 0.0089 | 0.0014 |
| Saturn | 85581-05-21 16:20 G | 32979019.03 | 32979019.18 | 32979019.35 | 0.0281 | 0.0216 |
| Neptune | 85581-12-29 12:29 G | 32979240.77 | 32979241.02 | 32979241.28 | 0.0089 | 0.0008 |
| Saturn | 85582-06-03 10:05 G | 32979396.73 | 32979396.92 | 32979397.14 | 0.0277 | 0.0161 |
| Neptune | 85583-01-01 06:29 G | 32979608.53 | 32979608.77 | 32979609.03 | 0.0089 | 0.0029 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 85584-01-03 13:41 G | 32979975.87 | 32979976.07 | 32979976.28 | 0.0089 | 0.0050 |
| Neptune | 85585-01-05 04:05 G | 32980343.54 | 32980343.67 | 32980343.86 | 0.0089 | 0.0072 |
| Jupiter | 85592-12-20 00:44 G | 32983249.38 | 32983249.53 | 32983249.69 | 0.0500 | 0.0356 |
| Saturn | 85597-11-30 21:08 G | 32985056.14 | 32985056.38 | 32985056.62 | 0.0283 | 0.0027 |
| Jupiter | 85604-12-24 09:36 G | 32987636.66 | 32987636.90 | 32987637.13 | 0.0501 | 0.0117 |
| Uranus | 85608-11-11 20:39 G | 32989055.25 | 32989055.36 | 32989055.48 | 0.0140 | 0.0125 |
| Uranus | 85609-11-16 11:46 G | 32989424.80 | 32989424.99 | 32989425.21 | 0.0139 | 0.0076 |
| Jupiter | 85610-06-15 16:48 G | 32989636.15 | 32989636.20 | 32989636.26 | 0.0527 | 0.0510 |
| Uranus | 85610-11-21 08:10 G | 32989794.58 | 32989794.84 | 32989795.11 | 0.0139 | 0.0002 |
| Saturn | 85611-05-29 04:05 G | 32989983.44 | 32989983.67 | 32989983.91 | 0.0278 | 0.0009 |
| Uranus | 85611-11-25 19:56 G | 32990164.11 | 32990164.33 | 32990164.57 | 0.0139 | 0.0049 |
| Uranus | 85612-11-29 15:36 G | 32990534.02 | 32990534.15 | 32990534.32 | 0.0138 | 0.0113 |
| Jupiter | 85622-06-21 01:12 G | 32994024.32 | 32994024.55 | 32994024.78 | 0.0525 | 0.0063 |
| Saturn | 85626-11-25 13:27 G | 32995642.86 | 32995643.06 | 32995643.28 | 0.0281 | 0.0150 |
| Saturn | 85627-12-08 20:53 G | 32996021.25 | 32996021.37 | 32996021.51 | 0.0285 | 0.0246 |
| Saturn | 85640-05-23 01:41 G | 33000570.37 | 33000570.57 | 33000570.78 | 0.0280 | 0.0167 |
| Saturn | 85641-06-04 19:41 G | 33000948.16 | 33000948.32 | 33000948.49 | 0.0276 | 0.0205 |
| Uranus | 85653-05-13 03:22 G | 33005308.47 | 33005308.64 | 33005308.83 | 0.0139 | 0.0092 |
| Uranus | 85654-05-17 14:53 G | 33005677.86 | 33005678.12 | 33005678.37 | 0.0139 | 0.0026 |
| Uranus | 85655-05-22 08:24 G | 33006047.62 | 33006047.85 | 33006048.09 | 0.0139 | 0.0038 |
| Uranus | 85656-05-25 22:34 G | 33006417.26 | 33006417.44 | 33006417.66 | 0.0140 | 0.0090 |
| Saturn | 85656-12-02 12:15 G | 33006607.78 | 33006608.01 | 33006608.24 | 0.0284 | 0.0073 |
| Neptune | 85658-06-16 06:44 G | 33007168.75 | 33007168.78 | 33007168.88 | 0.0088 | 0.0085 |
| Neptune | 85659-06-18 13:56 G | 33007535.95 | 33007536.08 | 33007536.24 | 0.0088 | 0.0073 |
| Neptune | 85660-06-20 07:27 G | 33007903.61 | 33007903.81 | 33007904.05 | 0.0088 | 0.0044 |
| Neptune | 85661-06-22 12:00 G | 33008270.77 | 33008271.00 | 33008271.25 | 0.0088 | 0.0033 |
| Neptune | 85662-06-25 06:44 G | 33008638.52 | 33008638.78 | 33008639.04 | 0.0088 | 0.0004 |
| Neptune | 85663-06-27 12:00 G | 33009005.75 | 33009006.00 | 33009006.25 | 0.0088 | 0.0007 |
| Neptune | 85664-06-29 03:08 G | 33009373.40 | 33009373.63 | 33009373.89 | 0.0088 | 0.0036 |
| Neptune | 85665-07-01 12:15 G | 33009740.82 | 33009741.01 | 33009741.24 | 0.0088 | 0.0048 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 85666-07-03 23:32 G | 33010108.36 | 33010108.48 | 33010108.63 | 0.0088 | 0.0076 |
| Saturn | 85670-05-30 19:12 G | 33011535.06 | 33011535.30 | 33011535.55 | 0.0277 | 0.0037 |
| Jupiter | 85675-12-20 01:56 G | 33013564.46 | 33013564.58 | 33013564.70 | 0.0500 | 0.0429 |
| Saturn | 85685-11-26 16:20 G | 33017193.95 | 33017194.18 | 33017194.42 | 0.0282 | 0.0110 |
| Jupiter | 85687-12-24 11:32 G | 33017951.76 | 33017951.98 | 33017952.21 | 0.0501 | 0.0054 |
| Uranus | 85692-11-12 02:24 G | 33019736.53 | 33019736.60 | 33019736.69 | 0.0140 | 0.0133 |
| Uranus | 85693-11-16 18:58 G | 33020106.08 | 33020106.29 | 33020106.53 | 0.0139 | 0.0059 |
| Uranus | 85694-11-21 13:41 G | 33020475.81 | 33020476.07 | 33020476.34 | 0.0139 | 0.0011 |
| Uranus | 85695-11-26 03:08 G | 33020845.41 | 33020845.63 | 33020845.86 | 0.0139 | 0.0062 |
| Uranus | 85696-11-29 22:05 G | 33021215.28 | 33021215.42 | 33021215.57 | 0.0138 | 0.0115 |
| Saturn | 85699-05-25 08:10 G | 33022121.62 | 33022121.84 | 33022122.06 | 0.0280 | 0.0124 |
| Saturn | 85700-06-07 06:15 G | 33022499.67 | 33022499.76 | 33022499.87 | 0.0276 | 0.0250 |
| Jupiter | 85705-06-20 13:41 G | 33024338.83 | 33024339.07 | 33024339.30 | 0.0526 | 0.0059 |
| Saturn | 85714-11-22 10:05 G | 33027780.89 | 33027780.92 | 33027780.95 | 0.0280 | 0.0277 |
| Saturn | 85715-12-05 20:24 G | 33028159.12 | 33028159.35 | 33028159.58 | 0.0284 | 0.0111 |
| Jupiter | 85717-06-25 18:58 G | 33028727.17 | 33028727.29 | 33028727.41 | 0.0525 | 0.0441 |
| Saturn | 85729-06-02 01:27 G | 33033086.33 | 33033086.56 | 33033086.81 | 0.0277 | 0.0081 |
| Pluto | 85730-03-01 09:51 G | 33033358.83 | 33033358.91 | 33033359.04 | 0.0062 | 0.0057 |
| Pluto | 85731-03-02 12:58 G | 33033724.81 | 33033725.04 | 33033725.30 | 0.0063 | 0.0017 |
| Uranus | 85737-05-14 14:10 G | 33035989.90 | 33035990.09 | 33035990.31 | 0.0139 | 0.0079 |
| Uranus | 85738-05-19 00:58 G | 33036359.29 | 33036359.54 | 33036359.80 | 0.0139 | 0.0023 |
| Uranus | 85739-05-23 19:41 G | 33036729.09 | 33036729.32 | 33036729.56 | 0.0139 | 0.0037 |
| Uranus | 85740-05-27 08:39 G | 33037098.71 | 33037098.86 | 33037099.05 | 0.0140 | 0.0108 |
| Neptune | 85741-12-21 04:48 G | 33037671.64 | 33037671.70 | 33037671.78 | 0.0089 | 0.0086 |
| Neptune | 85742-12-23 10:05 G | 33038038.74 | 33038038.92 | 33038039.15 | 0.0089 | 0.0056 |
| Neptune | 85743-12-26 05:32 G | 33038406.51 | 33038406.73 | 33038406.96 | 0.0089 | 0.0045 |
| Saturn | 85744-11-28 18:15 G | 33038745.02 | 33038745.26 | 33038745.49 | 0.0282 | 0.0074 |
| Neptune | 85744-12-27 11:03 G | 33038773.71 | 33038773.96 | 33038774.20 | 0.0089 | 0.0015 |
| Mars | 85745-04-01 02:39 G | 33038868.46 | 33038868.61 | 33038868.76 | 0.1762 | 0.1150 |
| Neptune | 85745-12-30 04:34 G | 33039141.43 | 33039141.69 | 33039141.95 | 0.0089 | 0.0003 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 85747-01-01 12:15 G | 33039508.78 | 33039509.01 | 33039509.25 | 0.0089 | 0.0027 |
| Neptune | 85748-01-04 01:27 G | 33039876.34 | 33039876.56 | 33039876.82 | 0.0089 | 0.0040 |
| Neptune | 85749-01-05 13:41 G | 33040243.94 | 33040244.07 | 33040244.25 | 0.0089 | 0.0070 |
| Neptune | 85750-01-07 22:34 G | 33040611.35 | 33040611.44 | 33040611.58 | 0.0089 | 0.0081 |
| Saturn | 85758-05-27 17:17 G | 33043672.99 | 33043673.22 | 33043673.45 | 0.0279 | 0.0081 |
| Jupiter | 85758-12-20 09:51 G | 33043879.85 | 33043879.91 | 33043879.98 | 0.0499 | 0.0476 |
| Jupiter | 85770-12-25 01:27 G | 33048267.32 | 33048267.56 | 33048267.80 | 0.0501 | 0.0006 |
| Saturn | 85773-11-23 13:12 G | 33049331.94 | 33049332.05 | 33049332.18 | 0.0280 | 0.0241 |
| Saturn | 85774-12-06 18:44 G | 33049710.07 | 33049710.28 | 33049710.51 | 0.0284 | 0.0143 |
| Uranus | 85776-11-13 08:53 G | 33050417.75 | 33050417.87 | 33050418.01 | 0.0140 | 0.0121 |
| Uranus | 85777-11-18 03:08 G | 33050787.43 | 33050787.63 | 33050787.86 | 0.0139 | 0.0070 |
| Uranus | 85778-11-22 21:08 G | 33051157.11 | 33051157.38 | 33051157.64 | 0.0139 | 0.0007 |
| Uranus | 85779-11-27 12:15 G | 33051526.78 | 33051527.01 | 33051527.23 | 0.0139 | 0.0055 |
| Uranus | 85780-12-01 05:46 G | 33051896.62 | 33051896.74 | 33051896.86 | 0.0138 | 0.0123 |
| Jupiter | 85782-12-29 04:48 G | 33052654.61 | 33052654.70 | 33052654.79 | 0.0502 | 0.0462 |
| Saturn | 85787-05-22 06:58 G | 33054259.70 | 33054259.79 | 33054259.91 | 0.0281 | 0.0256 |
| Saturn | 85788-06-03 01:27 G | 33054637.34 | 33054637.56 | 33054637.79 | 0.0277 | 0.0121 |
| Jupiter | 85788-06-20 00:58 G | 33054654.32 | 33054654.54 | 33054654.76 | 0.0527 | 0.0120 |
| Jupiter | 85800-06-26 02:53 G | 33059042.46 | 33059042.62 | 33059042.79 | 0.0525 | 0.0376 |
| Saturn | 85803-12-01 20:39 G | 33060296.13 | 33060296.36 | 33060296.60 | 0.0282 | 0.0045 |
| Saturn | 85817-05-29 23:46 G | 33065224.26 | 33065224.49 | 33065224.73 | 0.0279 | 0.0043 |
| Uranus | 85820-05-11 06:29 G | 33066301.71 | 33066301.77 | 33066301.87 | 0.0138 | 0.0131 |
| Uranus | 85821-05-16 01:41 G | 33066671.39 | 33066671.57 | 33066671.78 | 0.0139 | 0.0083 |
| Pluto | 85821-09-01 17:46 G | 33066779.97 | 33066780.24 | 33066780.51 | 0.0081 | 0.0006 |
| Uranus | 85822-05-20 11:17 G | 33067040.72 | 33067040.97 | 33067041.23 | 0.0139 | 0.0014 |
| Uranus | 85823-05-25 07:12 G | 33067410.58 | 33067410.80 | 33067411.04 | 0.0139 | 0.0049 |
| Neptune | 85823-06-20 06:15 G | 33067436.62 | 33067436.76 | 33067436.90 | 0.0088 | 0.0074 |
| Mars | 85824-04-05 00:15 G | 33067726.40 | 33067726.51 | 33067726.63 | 0.1755 | 0.1446 |
| Uranus | 85824-05-28 19:12 G | 33067780.14 | 33067780.30 | 33067780.49 | 0.0140 | 0.0103 |
| Neptune | 85824-06-21 10:34 G | 33067803.74 | 33067803.94 | 33067804.14 | 0.0088 | 0.0054 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 85825-06-24 04:20 G | 33068171.46 | 33068171.68 | 33068171.94 | 0.0088 | 0.0034 |
| Neptune | 85826-06-26 10:48 G | 33068538.71 | 33068538.95 | 33068539.21 | 0.0088 | 0.0015 |
| Neptune | 85827-06-29 01:56 G | 33068906.31 | 33068906.58 | 33068906.85 | 0.0088 | 0.0007 |
| Neptune | 85828-06-30 12:15 G | 33069273.78 | 33069274.01 | 33069274.26 | 0.0088 | 0.0026 |
| Neptune | 85829-07-02 22:20 G | 33069641.21 | 33069641.43 | 33069641.66 | 0.0088 | 0.0047 |
| Neptune | 85830-07-05 13:12 G | 33070008.89 | 33070009.05 | 33070009.23 | 0.0088 | 0.0065 |
| Neptune | 85831-07-07 18:44 G | 33070376.25 | 33070376.28 | 33070376.35 | 0.0088 | 0.0086 |
| Saturn | 85832-11-25 07:27 G | 33070882.65 | 33070882.81 | 33070882.98 | 0.0280 | 0.0213 |
| Saturn | 85833-12-08 13:12 G | 33071260.86 | 33071261.05 | 33071261.25 | 0.0285 | 0.0169 |
| Saturn | 85846-05-24 05:17 G | 33075810.57 | 33075810.72 | 33075810.87 | 0.0281 | 0.0221 |
| Saturn | 85847-06-06 03:51 G | 33076188.46 | 33076188.66 | 33076188.86 | 0.0276 | 0.0159 |
| Mars | 85849-10-05 01:12 G | 33077040.37 | 33077040.55 | 33077040.72 | 0.1773 | 0.0354 |
| Jupiter | 85853-12-25 02:53 G | 33078582.39 | 33078582.62 | 33078582.85 | 0.0500 | 0.0051 |
| Uranus | 85860-11-14 16:05 G | 33081099.07 | 33081099.17 | 33081099.31 | 0.0140 | 0.0125 |
| Uranus | 85861-11-19 12:00 G | 33081468.78 | 33081469.00 | 33081469.24 | 0.0139 | 0.0052 |
| Uranus | 85862-11-24 04:05 G | 33081838.40 | 33081838.67 | 33081838.93 | 0.0139 | 0.0004 |
| Saturn | 85862-12-02 20:10 G | 33081847.10 | 33081847.34 | 33081847.59 | 0.0282 | 0.0017 |
| Uranus | 85863-11-28 20:10 G | 33082208.15 | 33082208.34 | 33082208.57 | 0.0139 | 0.0072 |
| Uranus | 85864-12-02 12:15 G | 33082577.91 | 33082578.01 | 33082578.16 | 0.0138 | 0.0122 |
| Jupiter | 85865-12-29 23:17 G | 33082970.35 | 33082970.47 | 33082970.60 | 0.0502 | 0.0417 |
| Jupiter | 85871-06-21 02:53 G | 33084969.39 | 33084969.62 | 33084969.84 | 0.0526 | 0.0200 |
| Saturn | 85876-05-30 23:17 G | 33086775.22 | 33086775.47 | 33086775.72 | 0.0279 | 0.0011 |
| Jupiter | 85883-06-26 01:27 G | 33089357.37 | 33089357.56 | 33089357.75 | 0.0525 | 0.0285 |
| Saturn | 85891-11-26 23:17 G | 33092433.29 | 33092433.47 | 33092433.66 | 0.0280 | 0.0189 |
| Saturn | 85892-12-09 10:34 G | 33092811.77 | 33092811.94 | 33092812.11 | 0.0285 | 0.0195 |
| Uranus | 85905-05-17 13:27 G | 33097352.85 | 33097353.06 | 33097353.29 | 0.0139 | 0.0067 |
| Saturn | 85905-05-26 03:36 G | 33097361.49 | 33097361.65 | 33097361.84 | 0.0281 | 0.0191 |
| Uranus | 85906-05-21 22:34 G | 33097722.19 | 33097722.44 | 33097722.71 | 0.0139 | 0.0013 |
| Saturn | 85906-06-08 06:44 G | 33097739.62 | 33097739.78 | 33097739.96 | 0.0276 | 0.0194 |
| Neptune | 85906-12-25 03:22 G | 33097939.49 | 33097939.64 | 33097939.84 | 0.0089 | 0.0065 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 85907-05-26 19:27 G | 33098092.08 | 33098092.31 | 33098092.55 | 0.0139 | 0.0051 |
| Neptune | 85907-12-27 08:53 G | 33098306.68 | 33098306.87 | 33098307.10 | 0.0089 | 0.0048 |
| Uranus | 85908-05-30 06:44 G | 33098461.65 | 33098461.78 | 33098461.92 | 0.0140 | 0.0119 |
| Neptune | 85908-12-29 01:56 G | 33098674.33 | 33098674.58 | 33098674.84 | 0.0089 | 0.0023 |
| Neptune | 85909-12-31 10:48 G | 33099041.70 | 33099041.95 | 33099042.20 | 0.0089 | 0.0005 |
| Neptune | 85911-01-02 23:17 G | 33099409.23 | 33099409.47 | 33099409.75 | 0.0089 | 0.0019 |
| Neptune | 85912-01-05 13:12 G | 33099776.83 | 33099777.05 | 33099777.28 | 0.0089 | 0.0036 |
| Neptune | 85913-01-06 20:53 G | 33100144.20 | 33100144.37 | 33100144.59 | 0.0089 | 0.0059 |
| Neptune | 85914-01-09 14:24 G | 33100511.99 | 33100512.10 | 33100512.24 | 0.0089 | 0.0078 |
| Saturn | 85921-12-04 12:29 G | 33103397.76 | 33103398.02 | 33103398.27 | 0.0282 | 0.0005 |
| Saturn | 85935-06-02 16:34 G | 33108325.94 | 33108326.19 | 33108326.44 | 0.0279 | 0.0022 |
| Jupiter | 85936-12-26 01:27 G | 33108898.34 | 33108898.56 | 33108898.79 | 0.0500 | 0.0069 |
| Uranus | 85944-11-16 01:41 G | 33111780.43 | 33111780.57 | 33111780.73 | 0.0140 | 0.0114 |
| Uranus | 85945-11-20 22:48 G | 33112150.24 | 33112150.45 | 33112150.68 | 0.0139 | 0.0060 |
| Uranus | 85946-11-25 13:56 G | 33112519.82 | 33112520.08 | 33112520.34 | 0.0139 | 0.0016 |
| Uranus | 85947-11-30 07:27 G | 33112889.61 | 33112889.81 | 33112890.04 | 0.0138 | 0.0065 |
| Uranus | 85948-12-03 22:20 G | 33113259.38 | 33113259.43 | 33113259.50 | 0.0138 | 0.0134 |
| Jupiter | 85948-12-30 06:15 G | 33113285.61 | 33113285.76 | 33113285.93 | 0.0501 | 0.0372 |
| Saturn | 85950-11-28 20:24 G | 33113984.16 | 33113984.35 | 33113984.54 | 0.0280 | 0.0169 |
| Saturn | 85951-12-12 09:08 G | 33114362.73 | 33114362.88 | 33114363.04 | 0.0285 | 0.0216 |
| Jupiter | 85954-06-21 08:10 G | 33115284.65 | 33115284.84 | 33115285.04 | 0.0527 | 0.0267 |
| Saturn | 85964-05-27 05:46 G | 33118912.54 | 33118912.74 | 33118912.93 | 0.0281 | 0.0160 |
| Saturn | 85965-06-09 06:15 G | 33119290.62 | 33119290.76 | 33119290.91 | 0.0276 | 0.0222 |
| Jupiter | 85966-06-26 16:48 G | 33119672.99 | 33119673.20 | 33119673.42 | 0.0526 | 0.0231 |
| Pluto | 85979-03-05 20:10 G | 33124308.10 | 33124308.34 | 33124308.61 | 0.0063 | 0.0014 |
| Saturn | 85980-12-05 02:10 G | 33124948.34 | 33124948.59 | 33124948.84 | 0.0282 | 0.0023 |
| Neptune | 85987-06-20 09:08 G | 33127336.77 | 33127336.88 | 33127337.03 | 0.0088 | 0.0075 |
| Uranus | 85988-05-13 03:08 G | 33127664.52 | 33127664.63 | 33127664.77 | 0.0138 | 0.0121 |
| Neptune | 85988-06-22 03:08 G | 33127704.46 | 33127704.63 | 33127704.81 | 0.0088 | 0.0065 |
| Uranus | 85989-05-18 00:00 G | 33128034.29 | 33128034.50 | 33128034.72 | 0.0139 | 0.0073 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 85989-06-24 10:05 G | 33128071.70 | 33128071.92 | 33128072.16 | 0.0088 | 0.0035 |
| Uranus | 85990-05-22 08:10 G | 33128403.59 | 33128403.84 | 33128404.10 | 0.0139 | 0.0002 |
| Neptune | 85990-06-26 23:32 G | 33128439.24 | 33128439.48 | 33128439.75 | 0.0088 | 0.0024 |
| Uranus | 85991-05-27 05:32 G | 33128773.51 | 33128773.73 | 33128773.96 | 0.0139 | 0.0059 |
| Neptune | 85991-06-29 11:03 G | 33128806.71 | 33128806.96 | 33128807.21 | 0.0088 | 0.0005 |
| Uranus | 85992-05-30 15:36 G | 33129143.03 | 33129143.15 | 33129143.31 | 0.0140 | 0.0116 |
| Neptune | 85992-06-30 19:56 G | 33129174.07 | 33129174.33 | 33129174.60 | 0.0088 | 0.0016 |
| Neptune | 85993-07-03 12:00 G | 33129541.79 | 33129542.00 | 33129542.22 | 0.0088 | 0.0045 |
| Saturn | 85994-06-03 10:34 G | 33129876.70 | 33129876.94 | 33129877.18 | 0.0279 | 0.0050 |
| Neptune | 85994-07-05 17:03 G | 33129909.03 | 33129909.21 | 33129909.44 | 0.0088 | 0.0056 |
| Neptune | 85995-07-08 11:46 G | 33130276.95 | 33130276.99 | 33130277.07 | 0.0088 | 0.0085 |

87TH MILLENNIUM CE

This is a list of transits of Moon in the 87th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 86009-11-29 19:27 G | | 33135535.11 | 33135535.31 | 33135535.52 | 0.0280 | 0.0150 | |
| Saturn | 86010-12-13 04:05 G | | 33135913.55 | 33135913.67 | 33135913.82 | 0.0285 | 0.0236 | |
| Jupiter | 86019-12-26 06:58 G | | 33139213.55 | 33139213.79 | 33139214.02 | 0.0500 | 0.0109 | |
| Saturn | 86023-05-29 05:03 G | | 33140463.50 | 33140463.71 | 33140463.93 | 0.0281 | 0.0129 | |
| Saturn | 86024-06-10 00:29 G | | 33140841.43 | 33140841.52 | 33140841.63 | 0.0276 | 0.0254 | |
| Uranus | 86028-11-16 11:17 G | | 33142461.84 | 33142461.97 | 33142462.14 | 0.0139 | 0.0114 | |
| Mars | 86029-04-03 18:15 G | | 33142600.11 | 33142600.26 | 33142600.41 | 0.1770 | 0.0897 | |
| Uranus | 86029-11-21 09:36 G | | 33142831.67 | 33142831.90 | 33142832.14 | 0.0139 | 0.0043 | |

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| Uranus | 86030-11-25 23:03 G | 33143201.20 | 33143201.46 | 33143201.73 | 0.0139 | 0.0008 |
| Uranus | 86031-11-30 17:32 G | 33143571.06 | 33143571.23 | 33143571.45 | 0.0138 | 0.0084 |
| Jupiter | 86031-12-30 19:41 G | 33143601.15 | 33143601.32 | 33143601.50 | 0.0501 | 0.0320 |
| Uranus | 86032-12-04 07:27 G | 33143940.74 | 33143940.81 | 33143940.89 | 0.0138 | 0.0132 |
| Jupiter | 86037-06-21 00:44 G | 33145600.34 | 33145600.53 | 33145600.72 | 0.0527 | 0.0313 |
| Saturn | 86039-12-06 22:48 G | 33146499.21 | 33146499.45 | 33146499.69 | 0.0282 | 0.0045 |
| Jupiter | 86049-06-25 16:34 G | 33149987.97 | 33149988.19 | 33149988.42 | 0.0525 | 0.0158 |
| Saturn | 86053-06-04 11:03 G | 33151427.74 | 33151427.96 | 33151428.19 | 0.0279 | 0.0083 |
| Saturn | 86068-11-30 15:36 G | 33157085.93 | 33157086.15 | 33157086.38 | 0.0280 | 0.0126 |
| Saturn | 86069-12-13 20:39 G | 33157464.26 | 33157464.36 | 33157464.48 | 0.0285 | 0.0257 |
| Neptune | 86069-12-22 01:41 G | 33157472.55 | 33157472.57 | 33157472.62 | 0.0089 | 0.0088 |
| Neptune | 86070-12-24 07:41 G | 33157839.72 | 33157839.82 | 33157839.98 | 0.0089 | 0.0076 |
| Neptune | 86071-12-27 00:44 G | 33158207.31 | 33158207.53 | 33158207.76 | 0.0089 | 0.0047 |
| Uranus | 86072-05-13 11:03 G | 33158345.92 | 33158345.96 | 33158346.06 | 0.0138 | 0.0133 |
| Neptune | 86072-12-28 10:20 G | 33158574.71 | 33158574.93 | 33158575.17 | 0.0089 | 0.0035 |
| Uranus | 86073-05-18 08:39 G | 33158715.64 | 33158715.86 | 33158716.10 | 0.0139 | 0.0057 |
| Neptune | 86073-12-30 21:51 G | 33158942.15 | 33158942.41 | 33158942.68 | 0.0089 | 0.0007 |
| Uranus | 86074-05-22 16:48 G | 33159084.94 | 33159085.20 | 33159085.45 | 0.0139 | 0.0004 |
| Neptune | 86075-01-02 12:15 G | 33159309.76 | 33159310.01 | 33159310.26 | 0.0089 | 0.0006 |
| Uranus | 86075-05-27 14:24 G | 33159454.89 | 33159455.10 | 33159455.34 | 0.0140 | 0.0063 |
| Neptune | 86076-01-04 18:58 G | 33159677.07 | 33159677.29 | 33159677.55 | 0.0089 | 0.0036 |
| Uranus | 86076-05-31 00:00 G | 33159824.42 | 33159824.50 | 33159824.62 | 0.0140 | 0.0129 |
| Neptune | 86077-01-06 12:58 G | 33160044.84 | 33160045.04 | 33160045.27 | 0.0089 | 0.0048 |
| Neptune | 86078-01-08 17:46 G | 33160412.14 | 33160412.24 | 33160412.39 | 0.0089 | 0.0078 |
| Neptune | 86079-01-11 12:44 G | 33160780.01 | 33160780.03 | 33160780.08 | 0.0089 | 0.0089 |
| Saturn | 86082-05-29 22:48 G | 33162014.22 | 33162014.45 | 33162014.69 | 0.0281 | 0.0094 |
| Saturn | 86098-12-08 02:10 G | 33168050.36 | 33168050.59 | 33168050.83 | 0.0282 | 0.0071 |
| Jupiter | 86102-12-26 20:39 G | 33169529.15 | 33169529.36 | 33169529.58 | 0.0500 | 0.0149 |
| Mars | 86108-04-07 03:36 G | 33171457.57 | 33171457.65 | 33171457.73 | 0.1764 | 0.1584 |
| Saturn | 86111-05-25 06:44 G | 33172600.74 | 33172600.78 | 33172600.83 | 0.0284 | 0.0278 |

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| Saturn | 86112-06-06 13:12 G | 33172978.84 | 33172979.05 | 33172979.28 | 0.0279 | 0.0116 |
| Uranus | 86112-11-17 20:53 G | 33173143.22 | 33173143.37 | 33173143.56 | 0.0140 | 0.0106 |
| Uranus | 86113-11-22 20:24 G | 33173513.12 | 33173513.35 | 33173513.59 | 0.0139 | 0.0048 |
| Uranus | 86114-11-27 09:08 G | 33173882.63 | 33173882.88 | 33173883.14 | 0.0139 | 0.0027 |
| Jupiter | 86114-12-31 08:53 G | 33173916.67 | 33173916.87 | 33173917.07 | 0.0502 | 0.0277 |
| Uranus | 86115-12-02 05:17 G | 33174252.52 | 33174252.72 | 33174252.93 | 0.0138 | 0.0075 |
| Jupiter | 86120-06-20 21:22 G | 33175915.25 | 33175915.39 | 33175915.55 | 0.0527 | 0.0398 |
| Saturn | 86127-12-03 11:17 G | 33178636.73 | 33178636.97 | 33178637.20 | 0.0280 | 0.0100 |
| Jupiter | 86132-06-26 04:20 G | 33180303.46 | 33180303.68 | 33180303.91 | 0.0526 | 0.0085 |
| Mars | 86133-10-07 11:46 G | 33180771.80 | 33180771.99 | 33180772.18 | 0.1764 | 0.0551 |
| Saturn | 86141-05-31 20:10 G | 33183565.10 | 33183565.34 | 33183565.58 | 0.0281 | 0.0057 |
| Neptune | 86151-06-21 01:27 G | 33187237.51 | 33187237.56 | 33187237.67 | 0.0088 | 0.0084 |
| Neptune | 86152-06-22 09:22 G | 33187604.73 | 33187604.89 | 33187605.06 | 0.0088 | 0.0066 |
| Neptune | 86153-06-24 21:36 G | 33187972.19 | 33187972.40 | 33187972.65 | 0.0088 | 0.0044 |
| Neptune | 86154-06-27 10:34 G | 33188339.71 | 33188339.94 | 33188340.19 | 0.0088 | 0.0026 |
| Neptune | 86155-06-29 18:58 G | 33188707.03 | 33188707.29 | 33188707.56 | 0.0088 | 0.0005 |
| Uranus | 86156-05-14 19:27 G | 33189027.18 | 33189027.31 | 33189027.47 | 0.0138 | 0.0114 |
| Neptune | 86156-07-01 11:46 G | 33189074.74 | 33189074.99 | 33189075.25 | 0.0088 | 0.0014 |
| Saturn | 86156-11-27 00:15 G | 33189223.46 | 33189223.51 | 33189223.58 | 0.0278 | 0.0268 |
| Uranus | 86157-05-19 16:34 G | 33189396.97 | 33189397.19 | 33189397.41 | 0.0139 | 0.0066 |
| Neptune | 86157-07-03 16:20 G | 33189441.96 | 33189442.18 | 33189442.44 | 0.0088 | 0.0036 |
| Saturn | 86157-12-10 06:15 G | 33189601.53 | 33189601.76 | 33189601.99 | 0.0282 | 0.0103 |
| Uranus | 86158-05-23 23:46 G | 33189766.24 | 33189766.49 | 33189766.74 | 0.0139 | 0.0008 |
| Neptune | 86158-07-06 11:03 G | 33189809.77 | 33189809.96 | 33189810.17 | 0.0088 | 0.0055 |
| Uranus | 86159-05-28 21:51 G | 33190136.19 | 33190136.41 | 33190136.63 | 0.0139 | 0.0066 |
| Neptune | 86159-07-08 16:05 G | 33190177.04 | 33190177.17 | 33190177.30 | 0.0088 | 0.0075 |
| Uranus | 86160-06-01 06:29 G | 33190505.68 | 33190505.77 | 33190505.90 | 0.0140 | 0.0126 |
| Saturn | 86170-05-26 10:20 G | 33194151.82 | 33194151.93 | 33194152.07 | 0.0283 | 0.0243 |
| Saturn | 86171-06-08 12:00 G | 33194529.79 | 33194530.00 | 33194530.21 | 0.0279 | 0.0151 |
| Jupiter | 86185-12-26 05:03 G | 33199844.50 | 33199844.71 | 33199844.94 | 0.0500 | 0.0198 |

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| Saturn | 86186-12-04 15:08 G | 33200187.90 | 33200188.13 | 33200188.37 | 0.0280 | 0.0065 |
| Uranus | 86196-11-18 05:17 G | 33203824.54 | 33203824.72 | 33203824.89 | 0.0140 | 0.0103 |
| Uranus | 86197-11-23 05:03 G | 33204194.47 | 33204194.71 | 33204194.96 | 0.0139 | 0.0034 |
| Jupiter | 86197-12-30 12:29 G | 33204231.82 | 33204232.02 | 33204232.23 | 0.0501 | 0.0216 |
| Uranus | 86198-11-27 16:20 G | 33204563.93 | 33204564.18 | 33204564.45 | 0.0139 | 0.0018 |
| Uranus | 86199-12-02 13:27 G | 33204933.88 | 33204934.06 | 33204934.24 | 0.0139 | 0.0094 |
| Saturn | 86200-06-03 02:10 G | 33205116.35 | 33205116.59 | 33205116.82 | 0.0281 | 0.0021 |
| Jupiter | 86203-06-22 07:56 G | 33206230.74 | 33206230.83 | 33206230.93 | 0.0528 | 0.0480 |
| Jupiter | 86215-06-27 04:34 G | 33210618.45 | 33210618.69 | 33210618.93 | 0.0526 | 0.0015 |
| Saturn | 86215-11-30 08:24 G | 33210774.73 | 33210774.85 | 33210775.01 | 0.0278 | 0.0230 |
| Saturn | 86216-12-12 09:36 G | 33211152.68 | 33211152.90 | 33211153.12 | 0.0283 | 0.0142 |
| Pluto | 86227-03-08 19:56 G | 33214891.15 | 33214891.33 | 33214891.55 | 0.0062 | 0.0037 |
| Pluto | 86228-03-09 06:15 G | 33215257.57 | 33215257.76 | 33215258.00 | 0.0063 | 0.0038 |
| Saturn | 86229-05-28 12:58 G | 33215702.87 | 33215703.04 | 33215703.22 | 0.0283 | 0.0204 |
| Saturn | 86230-06-10 12:00 G | 33216080.83 | 33216081.00 | 33216081.19 | 0.0279 | 0.0191 |
| Neptune | 86234-12-25 21:36 G | 33217740.31 | 33217740.40 | 33217740.55 | 0.0089 | 0.0080 |
| Neptune | 86235-12-28 08:39 G | 33218107.68 | 33218107.86 | 33218108.07 | 0.0089 | 0.0055 |
| Neptune | 86236-12-29 19:12 G | 33218475.08 | 33218475.30 | 33218475.55 | 0.0089 | 0.0040 |
| Neptune | 86238-01-01 11:03 G | 33218842.72 | 33218842.96 | 33218843.22 | 0.0089 | 0.0013 |
| Neptune | 86239-01-03 18:00 G | 33219209.99 | 33219210.25 | 33219210.51 | 0.0089 | 0.0002 |
| Neptune | 86240-01-06 12:00 G | 33219577.77 | 33219578.00 | 33219578.26 | 0.0089 | 0.0029 |
| Uranus | 86240-05-16 03:08 G | 33219708.55 | 33219708.63 | 33219708.76 | 0.0138 | 0.0126 |
| Neptune | 86241-01-07 17:03 G | 33219945.00 | 33219945.21 | 33219945.44 | 0.0089 | 0.0044 |
| Uranus | 86241-05-20 23:46 G | 33220078.27 | 33220078.49 | 33220078.74 | 0.0139 | 0.0049 |
| Neptune | 86242-01-10 11:17 G | 33220312.83 | 33220312.97 | 33220313.16 | 0.0089 | 0.0068 |
| Uranus | 86242-05-25 07:27 G | 33220447.56 | 33220447.81 | 33220448.07 | 0.0139 | 0.0004 |
| Neptune | 86243-01-12 18:00 G | 33220680.18 | 33220680.25 | 33220680.34 | 0.0089 | 0.0085 |
| Uranus | 86243-05-30 05:32 G | 33220817.53 | 33220817.73 | 33220817.96 | 0.0139 | 0.0072 |
| Uranus | 86244-06-02 14:39 G | 33221187.05 | 33221187.11 | 33221187.17 | 0.0140 | 0.0135 |
| Saturn | 86245-12-07 03:36 G | 33221739.42 | 33221739.65 | 33221739.89 | 0.0280 | 0.0025 |

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| Saturn | 86259-06-05 12:58 G | 33226667.80 | 33226668.04 | 33226668.28 | 0.0281 | 0.0022 |
| Jupiter | 86268-12-26 05:46 G | 33230159.55 | 33230159.74 | 33230159.93 | 0.0499 | 0.0273 |
| Saturn | 86274-12-01 16:34 G | 33232326.02 | 33232326.19 | 33232326.39 | 0.0279 | 0.0189 |
| Saturn | 86275-12-14 18:58 G | 33232704.11 | 33232704.29 | 33232704.48 | 0.0283 | 0.0186 |
| Uranus | 86280-11-19 11:03 G | 33234505.80 | 33234505.96 | 33234506.16 | 0.0140 | 0.0101 |
| Jupiter | 86280-12-30 22:20 G | 33234547.21 | 33234547.43 | 33234547.66 | 0.0501 | 0.0137 |
| Uranus | 86281-11-24 12:15 G | 33234875.78 | 33234876.01 | 33234876.26 | 0.0139 | 0.0040 |
| Uranus | 86282-11-28 23:03 G | 33235245.22 | 33235245.46 | 33235245.72 | 0.0139 | 0.0035 |
| Uranus | 86283-12-03 21:22 G | 33235615.20 | 33235615.39 | 33235615.60 | 0.0139 | 0.0083 |
| Saturn | 86288-05-29 17:17 G | 33237254.02 | 33237254.22 | 33237254.43 | 0.0283 | 0.0160 |
| Saturn | 86289-06-11 20:10 G | 33237632.22 | 33237632.34 | 33237632.49 | 0.0279 | 0.0231 |
| Jupiter | 86298-06-26 09:08 G | 33240933.66 | 33240933.88 | 33240934.11 | 0.0526 | 0.0072 |
| Saturn | 86304-12-09 19:41 G | 33243291.07 | 33243291.32 | 33243291.56 | 0.0281 | 0.0020 |
| Jupiter | 86310-07-02 05:03 G | 33245321.60 | 33245321.71 | 33245321.83 | 0.0525 | 0.0460 |
| Mars | 86313-04-07 16:20 G | 33246332.00 | 33246332.18 | 33246332.37 | 0.1778 | 0.0484 |
| Neptune | 86316-06-23 21:08 G | 33247505.22 | 33247505.38 | 33247505.57 | 0.0088 | 0.0066 |
| Neptune | 86317-06-26 10:05 G | 33247872.75 | 33247872.92 | 33247873.14 | 0.0088 | 0.0055 |
| Saturn | 86318-06-07 23:17 G | 33248219.23 | 33248219.47 | 33248219.72 | 0.0280 | 0.0064 |
| Neptune | 86318-06-28 17:03 G | 33248239.97 | 33248240.21 | 33248240.47 | 0.0088 | 0.0027 |
| Pluto | 86318-09-09 13:56 G | 33248312.85 | 33248313.08 | 33248313.31 | 0.0081 | 0.0037 |
| Neptune | 86319-07-01 10:34 G | 33248607.69 | 33248607.94 | 33248608.19 | 0.0088 | 0.0015 |
| Neptune | 86320-07-02 15:08 G | 33248974.88 | 33248975.13 | 33248975.39 | 0.0088 | 0.0014 |
| Neptune | 86321-07-05 09:22 G | 33249342.65 | 33249342.89 | 33249343.15 | 0.0088 | 0.0025 |
| Neptune | 86322-07-07 14:39 G | 33249709.92 | 33249710.11 | 33249710.32 | 0.0088 | 0.0054 |
| Neptune | 86323-07-10 07:12 G | 33250077.63 | 33250077.80 | 33250077.99 | 0.0088 | 0.0064 |
| Uranus | 86324-05-17 13:12 G | 33250389.92 | 33250390.05 | 33250390.23 | 0.0138 | 0.0107 |
| Uranus | 86325-05-22 09:22 G | 33250759.67 | 33250759.89 | 33250760.13 | 0.0139 | 0.0059 |
| Uranus | 86326-05-26 17:03 G | 33251128.96 | 33251129.21 | 33251129.46 | 0.0139 | 0.0017 |
| Uranus | 86327-05-31 14:24 G | 33251498.90 | 33251499.10 | 33251499.33 | 0.0139 | 0.0074 |
| Uranus | 86328-06-03 23:17 G | 33251868.43 | 33251868.47 | 33251868.53 | 0.0140 | 0.0136 |

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| Saturn | 86333-12-04 04:05 G | 33253877.46 | 33253877.67 | 33253877.88 | 0.0279 | 0.0144 |
| Saturn | 86334-12-17 12:00 G | 33254255.87 | 33254256.00 | 33254256.13 | 0.0283 | 0.0237 |
| Saturn | 86347-06-02 05:17 G | 33258805.50 | 33258805.72 | 33258805.94 | 0.0282 | 0.0113 |
| Saturn | 86348-06-14 11:17 G | 33259183.94 | 33259183.97 | 33259184.02 | 0.0278 | 0.0274 |
| Jupiter | 86351-12-27 12:29 G | 33260474.86 | 33260475.02 | 33260475.19 | 0.0500 | 0.0353 |
| Saturn | 86363-12-12 09:51 G | 33264842.67 | 33264842.91 | 33264843.16 | 0.0281 | 0.0068 |
| Jupiter | 86363-12-31 16:20 G | 33264861.95 | 33264862.18 | 33264862.41 | 0.0501 | 0.0049 |
| Uranus | 86364-11-20 18:29 G | 33265187.10 | 33265187.27 | 33265187.47 | 0.0140 | 0.0096 |
| Uranus | 86365-11-25 19:41 G | 33265557.08 | 33265557.32 | 33265557.57 | 0.0139 | 0.0029 |
| Uranus | 86366-11-30 05:46 G | 33265926.49 | 33265926.74 | 33265927.00 | 0.0139 | 0.0026 |
| Uranus | 86367-12-05 04:05 G | 33266296.51 | 33266296.67 | 33266296.85 | 0.0139 | 0.0102 |
| Jupiter | 86376-01-05 10:20 G | 33269249.85 | 33269249.93 | 33269250.00 | 0.0502 | 0.0471 |
| Saturn | 86376-05-27 06:44 G | 33269392.75 | 33269392.78 | 33269392.84 | 0.0284 | 0.0280 |
| Saturn | 86377-06-09 08:10 G | 33269770.62 | 33269770.84 | 33269771.08 | 0.0280 | 0.0113 |
| Jupiter | 86381-06-26 01:41 G | 33271248.35 | 33271248.57 | 33271248.81 | 0.0527 | 0.0188 |
| Saturn | 86392-12-05 22:34 G | 33275429.22 | 33275429.44 | 33275429.67 | 0.0280 | 0.0095 |
| Jupiter | 86393-07-01 01:12 G | 33275636.39 | 33275636.55 | 33275636.71 | 0.0525 | 0.0372 |
| Neptune | 86398-12-26 07:56 G | 33277640.74 | 33277640.83 | 33277640.95 | 0.0089 | 0.0080 |
| Neptune | 86399-12-28 17:46 G | 33278008.07 | 33278008.24 | 33278008.43 | 0.0089 | 0.0066 |
| Neptune | 86400-12-30 10:20 G | 33278375.71 | 33278375.93 | 33278376.17 | 0.0089 | 0.0039 |
| Neptune | 86402-01-01 16:20 G | 33278742.94 | 33278743.18 | 33278743.44 | 0.0089 | 0.0024 |
| Neptune | 86403-01-04 11:17 G | 33279110.71 | 33279110.97 | 33279111.22 | 0.0089 | 0.0004 |
| Neptune | 86404-01-06 16:05 G | 33279477.93 | 33279478.17 | 33279478.43 | 0.0089 | 0.0016 |
| Neptune | 86405-01-08 09:36 G | 33279845.69 | 33279845.90 | 33279846.15 | 0.0089 | 0.0045 |
| Neptune | 86406-01-10 17:17 G | 33280213.03 | 33280213.22 | 33280213.41 | 0.0089 | 0.0057 |
| Saturn | 86406-06-03 23:46 G | 33280357.26 | 33280357.49 | 33280357.72 | 0.0282 | 0.0060 |
| Neptune | 86407-01-13 07:27 G | 33280580.74 | 33280580.81 | 33280580.90 | 0.0089 | 0.0085 |
| Uranus | 86408-05-17 23:32 G | 33281071.35 | 33281071.48 | 33281071.62 | 0.0138 | 0.0116 |
| Uranus | 86409-05-22 18:44 G | 33281441.03 | 33281441.28 | 33281441.53 | 0.0139 | 0.0039 |
| Uranus | 86410-05-27 03:08 G | 33281810.38 | 33281810.63 | 33281810.88 | 0.0139 | 0.0011 |

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| Uranus | 86411-06-01 00:29 G | 33282180.33 | 33282180.52 | 33282180.74 | 0.0139 | 0.0083 |
| Mars | 86417-10-09 01:41 G | 33284502.37 | 33284502.57 | 33284502.77 | 0.1754 | 0.0293 |
| Saturn | 86421-11-30 21:22 G | 33286016.29 | 33286016.39 | 33286016.51 | 0.0278 | 0.0250 |
| Saturn | 86422-12-13 21:36 G | 33286394.17 | 33286394.40 | 33286394.63 | 0.0282 | 0.0117 |
| Jupiter | 86434-12-26 08:10 G | 33290789.73 | 33290789.84 | 33290789.96 | 0.0499 | 0.0434 |
| Saturn | 86435-05-29 18:29 G | 33290944.12 | 33290944.27 | 33290944.43 | 0.0284 | 0.0223 |
| Saturn | 86436-06-10 19:56 G | 33291322.13 | 33291322.33 | 33291322.53 | 0.0279 | 0.0165 |
| Jupiter | 86446-12-31 00:00 G | 33295177.28 | 33295177.50 | 33295177.73 | 0.0500 | 0.0042 |
| Uranus | 86448-11-21 03:08 G | 33295868.46 | 33295868.63 | 33295868.83 | 0.0140 | 0.0095 |
| Uranus | 86449-11-26 04:20 G | 33296238.44 | 33296238.68 | 33296238.94 | 0.0139 | 0.0030 |
| Uranus | 86450-11-30 14:10 G | 33296607.85 | 33296608.09 | 33296608.34 | 0.0139 | 0.0042 |
| Uranus | 86451-12-05 13:27 G | 33296977.88 | 33296978.06 | 33296978.26 | 0.0139 | 0.0091 |
| Saturn | 86451-12-08 19:41 G | 33296981.08 | 33296981.32 | 33296981.56 | 0.0280 | 0.0043 |
| Jupiter | 86459-01-04 03:36 G | 33299564.51 | 33299564.65 | 33299564.82 | 0.0501 | 0.0377 |
| Jupiter | 86464-06-25 00:58 G | 33301563.35 | 33301563.54 | 33301563.73 | 0.0527 | 0.0279 |
| Saturn | 86465-06-05 18:15 G | 33301909.01 | 33301909.26 | 33301909.50 | 0.0281 | 0.0008 |
| Pluto | 86476-03-11 12:15 G | 33305840.78 | 33305841.01 | 33305841.26 | 0.0063 | 0.0015 |
| Jupiter | 86476-06-30 06:15 G | 33305951.57 | 33305951.76 | 33305951.97 | 0.0525 | 0.0284 |
| Neptune | 86480-06-23 09:51 G | 33307405.79 | 33307405.91 | 33307406.07 | 0.0088 | 0.0074 |
| Saturn | 86480-12-02 07:56 G | 33307567.67 | 33307567.83 | 33307568.01 | 0.0278 | 0.0203 |
| Neptune | 86481-06-25 16:20 G | 33307772.99 | 33307773.18 | 33307773.39 | 0.0088 | 0.0057 |
| Saturn | 86481-12-15 12:00 G | 33307945.82 | 33307946.00 | 33307946.21 | 0.0282 | 0.0168 |
| Neptune | 86482-06-28 10:05 G | 33308140.70 | 33308140.92 | 33308141.17 | 0.0088 | 0.0034 |
| Neptune | 86483-06-30 14:39 G | 33308507.86 | 33308508.11 | 33308508.37 | 0.0088 | 0.0017 |
| Neptune | 86484-07-02 08:53 G | 33308875.60 | 33308875.87 | 33308876.13 | 0.0088 | 0.0005 |
| Neptune | 86485-07-04 14:24 G | 33309242.86 | 33309243.10 | 33309243.35 | 0.0088 | 0.0022 |
| Neptune | 86486-07-07 05:32 G | 33309610.51 | 33309610.73 | 33309610.97 | 0.0088 | 0.0044 |
| Neptune | 86487-07-09 15:08 G | 33309977.96 | 33309978.13 | 33309978.31 | 0.0088 | 0.0062 |
| Neptune | 86488-07-11 00:58 G | 33310345.50 | 33310345.54 | 33310345.64 | 0.0088 | 0.0085 |
| Uranus | 86492-05-18 10:05 G | 33311752.76 | 33311752.92 | 33311753.11 | 0.0138 | 0.0098 |

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| Uranus | 86493-05-23 04:48 G | 33312122.46 | 33312122.70 | 33312122.95 | 0.0139 | 0.0049 |
| Uranus | 86494-05-27 13:41 G | 33312491.83 | 33312492.07 | 33312492.32 | 0.0139 | 0.0028 |
| Saturn | 86494-05-31 07:41 G | 33312495.63 | 33312495.82 | 33312496.02 | 0.0283 | 0.0169 |
| Uranus | 86495-06-01 10:20 G | 33312861.74 | 33312861.93 | 33312862.15 | 0.0139 | 0.0083 |
| Saturn | 86495-06-13 12:29 G | 33312873.88 | 33312874.02 | 33312874.18 | 0.0279 | 0.0216 |
| Saturn | 86510-12-11 11:17 G | 33318532.72 | 33318532.97 | 33318533.22 | 0.0281 | 0.0006 |
| Saturn | 86524-06-08 07:12 G | 33323460.55 | 33323460.80 | 33323461.05 | 0.0280 | 0.0045 |
| Jupiter | 86529-12-30 17:46 G | 33325492.01 | 33325492.24 | 33325492.47 | 0.0500 | 0.0131 |
| Uranus | 86532-11-22 13:56 G | 33326549.89 | 33326550.08 | 33326550.29 | 0.0140 | 0.0085 |
| Uranus | 86533-11-27 14:39 G | 33326919.86 | 33326920.11 | 33326920.36 | 0.0139 | 0.0020 |
| Uranus | 86534-12-02 00:00 G | 33327289.26 | 33327289.50 | 33327289.75 | 0.0139 | 0.0037 |
| Uranus | 86535-12-06 22:48 G | 33327659.32 | 33327659.45 | 33327659.62 | 0.0138 | 0.0112 |
| Saturn | 86539-12-05 18:29 G | 33329119.08 | 33329119.27 | 33329119.48 | 0.0279 | 0.0158 |
| Saturn | 86540-12-18 04:34 G | 33329497.54 | 33329497.69 | 33329497.84 | 0.0283 | 0.0218 |
| Jupiter | 86542-01-04 09:22 G | 33329879.72 | 33329879.89 | 33329880.07 | 0.0501 | 0.0300 |
| Jupiter | 86547-06-25 22:48 G | 33331878.31 | 33331878.45 | 33331878.61 | 0.0527 | 0.0404 |
| Saturn | 86553-06-03 00:15 G | 33334047.31 | 33334047.51 | 33334047.73 | 0.0283 | 0.0120 |
| Saturn | 86554-06-16 06:15 G | 33334425.70 | 33334425.76 | 33334425.85 | 0.0278 | 0.0265 |
| Jupiter | 86559-06-30 15:36 G | 33336265.93 | 33336266.15 | 33336266.37 | 0.0526 | 0.0150 |
| Neptune | 86562-12-26 13:56 G | 33337541.02 | 33337541.08 | 33337541.20 | 0.0089 | 0.0084 |
| Neptune | 86563-12-29 07:56 G | 33337908.69 | 33337908.83 | 33337908.99 | 0.0089 | 0.0072 |
| Neptune | 86564-12-30 13:41 G | 33338275.85 | 33338276.07 | 33338276.30 | 0.0089 | 0.0044 |
| Neptune | 86566-01-02 08:39 G | 33338643.64 | 33338643.86 | 33338644.12 | 0.0089 | 0.0032 |
| Pluto | 86566-09-11 03:22 G | 33338895.39 | 33338895.64 | 33338895.90 | 0.0081 | 0.0022 |
| Neptune | 86567-01-04 14:39 G | 33339010.86 | 33339011.11 | 33339011.36 | 0.0089 | 0.0003 |
| Neptune | 86568-01-07 08:24 G | 33339378.59 | 33339378.85 | 33339379.11 | 0.0089 | 0.0011 |
| Neptune | 86569-01-08 16:34 G | 33339745.98 | 33339746.19 | 33339746.43 | 0.0089 | 0.0038 |
| Saturn | 86569-12-12 19:56 G | 33340084.09 | 33340084.33 | 33340084.59 | 0.0281 | 0.0053 |
| Neptune | 86570-01-11 05:46 G | 33340113.54 | 33340113.74 | 33340113.97 | 0.0089 | 0.0053 |
| Neptune | 86571-01-13 18:29 G | 33340481.16 | 33340481.27 | 33340481.39 | 0.0089 | 0.0079 |

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| Uranus | 86576-05-19 18:58 G | 33342434.15 | 33342434.29 | 33342434.46 | 0.0139 | 0.0107 |
| Uranus | 86577-05-24 12:29 G | 33342803.77 | 33342804.02 | 33342804.28 | 0.0139 | 0.0030 |
| Uranus | 86578-05-28 22:48 G | 33343173.21 | 33343173.45 | 33343173.70 | 0.0139 | 0.0019 |
| Uranus | 86579-06-02 18:58 G | 33343543.11 | 33343543.29 | 33343543.49 | 0.0140 | 0.0094 |
| Saturn | 86583-06-10 16:20 G | 33345011.95 | 33345012.18 | 33345012.42 | 0.0280 | 0.0096 |
| Mars | 86597-04-08 16:34 G | 33350063.00 | 33350063.19 | 33350063.38 | 0.1787 | 0.0656 |
| Saturn | 86598-12-07 05:46 G | 33350670.53 | 33350670.74 | 33350670.96 | 0.0279 | 0.0118 |
| Saturn | 86599-12-20 16:34 G | 33351049.11 | 33351049.19 | 33351049.29 | 0.0283 | 0.0261 |
| Saturn | 86612-06-05 16:20 G | 33355598.95 | 33355599.18 | 33355599.41 | 0.0282 | 0.0069 |
| Jupiter | 86612-12-31 05:03 G | 33355807.50 | 33355807.71 | 33355807.92 | 0.0499 | 0.0194 |
| Uranus | 86616-11-24 00:44 G | 33357231.33 | 33357231.53 | 33357231.73 | 0.0140 | 0.0085 |
| Uranus | 86617-11-29 00:44 G | 33357601.28 | 33357601.53 | 33357601.80 | 0.0139 | 0.0019 |
| Uranus | 86618-12-03 10:34 G | 33357970.71 | 33357970.94 | 33357971.18 | 0.0139 | 0.0052 |
| Uranus | 86619-12-08 09:36 G | 33358340.75 | 33358340.90 | 33358341.09 | 0.0138 | 0.0102 |
| Jupiter | 86625-01-04 13:41 G | 33360194.86 | 33360195.07 | 33360195.28 | 0.0500 | 0.0235 |
| Saturn | 86627-12-02 22:34 G | 33361257.42 | 33361257.44 | 33361257.49 | 0.0277 | 0.0275 |
| Saturn | 86628-12-14 23:17 G | 33361635.24 | 33361635.47 | 33361635.71 | 0.0282 | 0.0091 |
| Jupiter | 86630-06-25 15:51 G | 33362193.10 | 33362193.16 | 33362193.22 | 0.0528 | 0.0506 |
| Saturn | 86641-05-30 23:03 G | 33366185.34 | 33366185.46 | 33366185.59 | 0.0283 | 0.0246 |
| Saturn | 86642-06-13 02:24 G | 33366563.40 | 33366563.60 | 33366563.81 | 0.0279 | 0.0140 |
| Jupiter | 86642-07-01 03:22 G | 33366581.41 | 33366581.64 | 33366581.87 | 0.0527 | 0.0081 |
| Neptune | 86644-06-24 15:36 G | 33367306.08 | 33367306.15 | 33367306.25 | 0.0088 | 0.0083 |
| Neptune | 86645-06-27 09:22 G | 33367673.72 | 33367673.89 | 33367674.11 | 0.0088 | 0.0056 |
| Neptune | 86646-06-29 14:10 G | 33368040.87 | 33368041.09 | 33368041.31 | 0.0088 | 0.0044 |
| Neptune | 86647-07-02 07:27 G | 33368408.56 | 33368408.81 | 33368409.08 | 0.0088 | 0.0017 |
| Neptune | 86648-07-03 13:56 G | 33368775.83 | 33368776.08 | 33368776.33 | 0.0088 | 0.0006 |
| Neptune | 86649-07-06 03:36 G | 33369143.41 | 33369143.65 | 33369143.92 | 0.0088 | 0.0023 |
| Neptune | 86650-07-08 14:24 G | 33369510.89 | 33369511.10 | 33369511.35 | 0.0088 | 0.0035 |
| Neptune | 86651-07-11 00:15 G | 33369878.34 | 33369878.51 | 33369878.71 | 0.0088 | 0.0062 |
| Neptune | 86652-07-12 15:36 G | 33370246.04 | 33370246.15 | 33370246.31 | 0.0088 | 0.0074 |

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| Saturn | 86657-12-09 14:10 G | 33372221.86 | 33372222.09 | 33372222.32 | 0.0280 | 0.0083 |
| Uranus | 86660-05-21 03:51 G | 33373115.49 | 33373115.66 | 33373115.85 | 0.0139 | 0.0092 |
| Uranus | 86661-05-25 19:56 G | 33373485.10 | 33373485.33 | 33373485.59 | 0.0139 | 0.0042 |
| Uranus | 86662-05-30 07:41 G | 33373854.58 | 33373854.82 | 33373855.06 | 0.0139 | 0.0037 |
| Uranus | 86663-06-04 02:10 G | 33374224.41 | 33374224.59 | 33374224.81 | 0.0140 | 0.0090 |
| Saturn | 86671-06-08 01:56 G | 33377150.34 | 33377150.58 | 33377150.83 | 0.0282 | 0.0025 |
| Saturn | 86686-12-03 21:22 G | 33382808.28 | 33382808.39 | 33382808.51 | 0.0278 | 0.0245 |
| Saturn | 86687-12-17 03:08 G | 33383186.42 | 33383186.63 | 33383186.84 | 0.0282 | 0.0127 |
| Jupiter | 86695-12-31 09:51 G | 33386122.71 | 33386122.91 | 33386123.12 | 0.0499 | 0.0261 |
| Saturn | 86700-06-02 05:32 G | 33387736.58 | 33387736.73 | 33387736.91 | 0.0283 | 0.0202 |
| Uranus | 86700-11-25 11:17 G | 33387912.77 | 33387912.97 | 33387913.19 | 0.0140 | 0.0074 |
| Saturn | 86701-06-15 12:44 G | 33388114.86 | 33388115.03 | 33388115.22 | 0.0279 | 0.0182 |
| Mars | 86701-10-12 14:39 G | 33388233.94 | 33388234.11 | 33388234.29 | 0.1746 | 0.0567 |
| Uranus | 86701-11-30 11:03 G | 33388282.70 | 33388282.96 | 33388283.22 | 0.0139 | 0.0011 |
| Uranus | 86702-12-04 21:08 G | 33388652.15 | 33388652.38 | 33388652.62 | 0.0139 | 0.0049 |
| Uranus | 86703-12-09 19:56 G | 33389022.21 | 33389022.33 | 33389022.45 | 0.0138 | 0.0122 |
| Jupiter | 86708-01-05 16:34 G | 33390509.98 | 33390510.19 | 33390510.40 | 0.0500 | 0.0173 |
| Saturn | 86716-12-11 12:15 G | 33393772.77 | 33393773.01 | 33393773.26 | 0.0280 | 0.0052 |
| Pluto | 86724-03-15 15:08 G | 33396423.87 | 33396424.13 | 33396424.39 | 0.0063 | 0.0001 |
| Jupiter | 86725-06-30 20:10 G | 33396896.11 | 33396896.34 | 33396896.58 | 0.0527 | 0.0017 |
| Neptune | 86727-12-30 11:46 G | 33397808.85 | 33397808.99 | 33397809.16 | 0.0089 | 0.0071 |
| Neptune | 86729-01-01 06:44 G | 33398176.60 | 33398176.78 | 33398177.00 | 0.0089 | 0.0057 |
| Neptune | 86730-01-03 12:58 G | 33398543.81 | 33398544.04 | 33398544.29 | 0.0089 | 0.0031 |
| Saturn | 86730-06-10 02:39 G | 33398701.36 | 33398701.61 | 33398701.87 | 0.0282 | 0.0018 |
| Neptune | 86731-01-06 05:32 G | 33398911.48 | 33398911.73 | 33398912.00 | 0.0089 | 0.0016 |
| Neptune | 86732-01-08 14:53 G | 33399278.88 | 33399279.12 | 33399279.37 | 0.0089 | 0.0011 |
| Neptune | 86733-01-10 03:08 G | 33399646.39 | 33399646.63 | 33399646.89 | 0.0089 | 0.0026 |
| Neptune | 86734-01-12 16:48 G | 33400014.02 | 33400014.20 | 33400014.43 | 0.0089 | 0.0053 |
| Neptune | 86735-01-15 00:44 G | 33400381.38 | 33400381.53 | 33400381.73 | 0.0089 | 0.0067 |
| Uranus | 86744-05-22 11:03 G | 33403796.80 | 33403796.96 | 33403797.14 | 0.0138 | 0.0100 |

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| Uranus | 86745-05-27 01:27 G | 33404166.31 | 33404166.56 | 33404166.83 | 0.0139 | 0.0025 |
| Saturn | 86745-12-05 23:03 G | 33404359.31 | 33404359.46 | 33404359.61 | 0.0278 | 0.0215 |
| Uranus | 86746-05-31 14:24 G | 33404535.87 | 33404536.10 | 33404536.35 | 0.0139 | 0.0026 |
| Saturn | 86746-12-19 07:12 G | 33404737.61 | 33404737.80 | 33404738.00 | 0.0282 | 0.0159 |
| Uranus | 86747-06-05 08:10 G | 33404905.68 | 33404905.84 | 33404906.03 | 0.0140 | 0.0103 |
| Saturn | 86759-06-04 13:56 G | 33409287.89 | 33409288.08 | 33409288.28 | 0.0283 | 0.0160 |
| Saturn | 86760-06-16 19:41 G | 33409666.17 | 33409666.32 | 33409666.47 | 0.0279 | 0.0220 |
| Saturn | 86775-12-13 04:20 G | 33415323.43 | 33415323.68 | 33415323.94 | 0.0280 | 0.0023 |
| Jupiter | 86778-12-31 17:32 G | 33416438.06 | 33416438.23 | 33416438.41 | 0.0499 | 0.0317 |
| Uranus | 86783-11-22 05:32 G | 33418224.66 | 33418224.73 | 33418224.83 | 0.0140 | 0.0132 |
| Uranus | 86784-11-25 19:41 G | 33418594.12 | 33418594.32 | 33418594.54 | 0.0140 | 0.0078 |
| Uranus | 86785-11-30 18:44 G | 33418964.02 | 33418964.28 | 33418964.54 | 0.0139 | 0.0007 |
| Uranus | 86786-12-05 05:32 G | 33419333.52 | 33419333.73 | 33419333.97 | 0.0139 | 0.0061 |
| Uranus | 86787-12-10 04:05 G | 33419703.54 | 33419703.67 | 33419703.84 | 0.0138 | 0.0113 |
| Saturn | 86789-06-11 00:15 G | 33420252.27 | 33420252.51 | 33420252.75 | 0.0281 | 0.0055 |
| Jupiter | 86791-01-05 12:29 G | 33420825.79 | 33420826.02 | 33420826.24 | 0.0500 | 0.0146 |
| Saturn | 86804-12-06 23:03 G | 33425910.30 | 33425910.46 | 33425910.65 | 0.0278 | 0.0189 |
| Saturn | 86805-12-20 03:51 G | 33426288.48 | 33426288.66 | 33426288.85 | 0.0282 | 0.0187 |
| Neptune | 86808-06-25 08:24 G | 33427206.85 | 33427206.85 | 33427206.87 | 0.0088 | 0.0088 |
| Jupiter | 86808-06-30 06:58 G | 33427211.57 | 33427211.79 | 33427212.01 | 0.0527 | 0.0071 |
| Neptune | 86809-06-27 12:29 G | 33427573.87 | 33427574.02 | 33427574.22 | 0.0088 | 0.0063 |
| Neptune | 86810-06-30 05:46 G | 33427941.54 | 33427941.74 | 33427941.98 | 0.0088 | 0.0049 |
| Neptune | 86811-07-02 13:41 G | 33428308.83 | 33428309.07 | 33428309.31 | 0.0088 | 0.0024 |
| Neptune | 86812-07-04 02:39 G | 33428676.35 | 33428676.61 | 33428676.89 | 0.0088 | 0.0009 |
| Neptune | 86813-07-06 14:24 G | 33429043.86 | 33429044.10 | 33429044.35 | 0.0088 | 0.0016 |
| Neptune | 86814-07-08 22:20 G | 33429411.19 | 33429411.43 | 33429411.69 | 0.0088 | 0.0030 |
| Pluto | 86814-09-14 10:48 G | 33429478.79 | 33429478.95 | 33429479.16 | 0.0081 | 0.0058 |
| Neptune | 86815-07-11 14:10 G | 33429778.91 | 33429779.09 | 33429779.31 | 0.0088 | 0.0055 |
| Neptune | 86816-07-12 19:12 G | 33430146.16 | 33430146.30 | 33430146.48 | 0.0088 | 0.0069 |
| Saturn | 86818-06-05 16:34 G | 33430838.97 | 33430839.19 | 33430839.41 | 0.0283 | 0.0124 |

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| Saturn | 86819-06-18 17:03 G | 33431217.12 | 33431217.21 | 33431217.34 | 0.0278 | 0.0252 |
| Jupiter | 86820-07-05 09:36 G | 33431599.81 | 33431599.90 | 33431599.99 | 0.0526 | 0.0486 |
| Uranus | 86828-05-22 20:39 G | 33434478.18 | 33434478.36 | 33434478.56 | 0.0138 | 0.0087 |
| Uranus | 86829-05-27 10:05 G | 33434847.67 | 33434847.92 | 33434848.17 | 0.0139 | 0.0034 |
| Uranus | 86830-06-01 00:00 G | 33435217.28 | 33435217.50 | 33435217.74 | 0.0139 | 0.0044 |
| Uranus | 86831-06-05 16:05 G | 33435586.99 | 33435587.17 | 33435587.37 | 0.0139 | 0.0096 |
| Saturn | 86834-12-14 00:00 G | 33436874.26 | 33436874.50 | 33436874.74 | 0.0280 | 0.0007 |
| Saturn | 86848-06-12 01:41 G | 33441803.35 | 33441803.57 | 33441803.80 | 0.0281 | 0.0085 |
| Jupiter | 86861-12-31 12:44 G | 33446753.86 | 33446754.03 | 33446754.20 | 0.0499 | 0.0352 |
| Saturn | 86863-12-08 17:46 G | 33447461.04 | 33447461.24 | 33447461.45 | 0.0278 | 0.0163 |
| Saturn | 86864-12-20 17:46 G | 33447839.08 | 33447839.24 | 33447839.40 | 0.0282 | 0.0217 |
| Uranus | 86868-11-26 04:05 G | 33449275.46 | 33449275.67 | 33449275.90 | 0.0140 | 0.0066 |
| Uranus | 86869-12-01 02:10 G | 33449645.32 | 33449645.59 | 33449645.85 | 0.0139 | 0.0006 |
| Uranus | 86870-12-05 14:24 G | 33450014.88 | 33450015.10 | 33450015.33 | 0.0139 | 0.0058 |
| Uranus | 86871-12-10 12:00 G | 33450384.92 | 33450385.00 | 33450385.09 | 0.0138 | 0.0130 |
| Jupiter | 86874-01-04 15:51 G | 33451140.93 | 33451141.16 | 33451141.39 | 0.0500 | 0.0102 |
| Saturn | 86877-06-06 10:48 G | 33452389.71 | 33452389.95 | 33452390.19 | 0.0283 | 0.0096 |
| Saturn | 86878-06-19 10:20 G | 33452767.93 | 33452767.93 | 33452767.94 | 0.0279 | 0.0278 |
| Mars | 86881-04-11 01:27 G | 33453794.40 | 33453794.56 | 33453794.73 | 0.1796 | 0.0684 |
| Jupiter | 86891-06-30 17:32 G | 33457526.99 | 33457527.23 | 33457527.47 | 0.0528 | 0.0104 |
| Neptune | 86891-12-30 03:51 G | 33457709.53 | 33457709.66 | 33457709.82 | 0.0089 | 0.0075 |
| Neptune | 86892-12-31 10:05 G | 33458076.77 | 33458076.92 | 33458077.12 | 0.0089 | 0.0063 |
| Saturn | 86893-12-14 22:48 G | 33458425.21 | 33458425.45 | 33458425.69 | 0.0280 | 0.0034 |
| Neptune | 86894-01-03 02:10 G | 33458444.36 | 33458444.59 | 33458444.85 | 0.0089 | 0.0034 |
| Neptune | 86895-01-05 12:58 G | 33458811.81 | 33458812.04 | 33458812.29 | 0.0089 | 0.0022 |
| Neptune | 86896-01-08 00:44 G | 33459179.27 | 33459179.53 | 33459179.80 | 0.0089 | 0.0007 |
| Neptune | 86897-01-09 15:51 G | 33459546.91 | 33459547.16 | 33459547.40 | 0.0089 | 0.0019 |
| Neptune | 86898-01-11 22:20 G | 33459914.23 | 33459914.43 | 33459914.67 | 0.0089 | 0.0048 |
| Neptune | 86899-01-14 16:34 G | 33460282.03 | 33460282.19 | 33460282.40 | 0.0089 | 0.0061 |
| Neptune | 86900-01-16 21:36 G | 33460649.39 | 33460649.40 | 33460649.47 | 0.0089 | 0.0089 |

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| Jupiter | 86903-07-06 13:56 G | 33461914.95 | 33461915.08 | 33461915.22 | 0.0526 | 0.0422 |
| Saturn | 86906-06-01 13:41 G | 33462976.03 | 33462976.07 | 33462976.12 | 0.0286 | 0.0280 |
| Saturn | 86907-06-15 01:56 G | 33463354.36 | 33463354.58 | 33463354.81 | 0.0282 | 0.0110 |
| Uranus | 86912-05-24 06:15 G | 33465159.58 | 33465159.76 | 33465159.95 | 0.0138 | 0.0091 |
| Uranus | 86913-05-28 18:15 G | 33465529.00 | 33465529.26 | 33465529.52 | 0.0139 | 0.0017 |
| Uranus | 86914-06-02 09:51 G | 33465898.68 | 33465898.91 | 33465899.15 | 0.0139 | 0.0035 |
| Uranus | 86915-06-07 00:44 G | 33466268.39 | 33466268.53 | 33466268.69 | 0.0139 | 0.0113 |
| Saturn | 86922-12-10 07:56 G | 33469011.62 | 33469011.83 | 33469012.06 | 0.0278 | 0.0137 |
| Saturn | 86923-12-23 10:34 G | 33469389.83 | 33469389.94 | 33469390.07 | 0.0282 | 0.0245 |
| Saturn | 86936-06-08 03:36 G | 33473940.42 | 33473940.65 | 33473940.90 | 0.0283 | 0.0068 |
| Jupiter | 86944-12-31 15:51 G | 33477069.02 | 33477069.16 | 33477069.30 | 0.0498 | 0.0399 |
| Uranus | 86951-11-23 19:56 G | 33479587.22 | 33479587.33 | 33479587.45 | 0.0140 | 0.0125 |
| Uranus | 86952-11-27 12:44 G | 33479956.82 | 33479957.03 | 33479957.25 | 0.0140 | 0.0072 |
| Saturn | 86952-12-16 19:41 G | 33479976.08 | 33479976.32 | 33479976.57 | 0.0280 | 0.0060 |
| Uranus | 86953-12-02 09:22 G | 33480326.63 | 33480326.89 | 33480327.16 | 0.0139 | 0.0003 |
| Uranus | 86954-12-06 23:17 G | 33480696.25 | 33480696.47 | 33480696.69 | 0.0139 | 0.0067 |
| Uranus | 86955-12-11 19:56 G | 33481066.22 | 33481066.33 | 33481066.46 | 0.0138 | 0.0123 |
| Jupiter | 86957-01-05 12:00 G | 33481456.77 | 33481457.00 | 33481457.23 | 0.0500 | 0.0075 |
| Saturn | 86965-06-02 12:58 G | 33484526.93 | 33484527.04 | 33484527.15 | 0.0286 | 0.0252 |
| Saturn | 86966-06-15 20:24 G | 33484905.13 | 33484905.35 | 33484905.57 | 0.0282 | 0.0133 |
| Pluto | 86972-03-18 04:34 G | 33487007.47 | 33487007.69 | 33487007.95 | 0.0062 | 0.0020 |
| Neptune | 86972-06-25 12:00 G | 33487106.99 | 33487107.00 | 33487107.05 | 0.0088 | 0.0088 |
| Pluto | 86973-03-19 07:41 G | 33487373.82 | 33487373.82 | 33487373.87 | 0.0063 | 0.0063 |
| Neptune | 86973-06-28 04:20 G | 33487474.57 | 33487474.68 | 33487474.85 | 0.0088 | 0.0074 |
| Neptune | 86974-06-30 12:15 G | 33487841.82 | 33487842.01 | 33487842.24 | 0.0088 | 0.0048 |
| Jupiter | 86974-06-30 21:08 G | 33487842.17 | 33487842.38 | 33487842.59 | 0.0527 | 0.0172 * |
| Neptune | 86975-07-03 00:15 G | 33488209.28 | 33488209.51 | 33488209.77 | 0.0088 | 0.0034 |
| Neptune | 86976-07-04 13:27 G | 33488576.81 | 33488577.06 | 33488577.31 | 0.0088 | 0.0008 |
| Neptune | 86977-07-06 21:08 G | 33488944.12 | 33488944.38 | 33488944.65 | 0.0088 | 0.0004 |
| Neptune | 86978-07-09 13:41 G | 33489311.85 | 33489312.07 | 33489312.33 | 0.0088 | 0.0031 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 86979-07-11 18:29 G | 33489679.05 | 33489679.27 | 33489679.51 | 0.0088 | 0.0043 |
| Neptune | 86980-07-13 12:29 G | 33490046.89 | 33490047.02 | 33490047.20 | 0.0088 | 0.0071 |
| Neptune | 86981-07-15 17:17 G | 33490414.17 | 33490414.22 | 33490414.34 | 0.0088 | 0.0083 |
| Saturn | 86981-12-11 02:24 G | 33490562.38 | 33490562.60 | 33490562.83 | 0.0277 | 0.0111 |
| Saturn | 86982-12-24 10:05 G | 33490940.87 | 33490940.92 | 33490940.99 | 0.0282 | 0.0273 |
| Mars | 86985-10-14 07:41 G | 33491965.65 | 33491965.82 | 33491965.99 | 0.1738 | 0.0930 |
| Jupiter | 86986-07-06 01:41 G | 33492230.39 | 33492230.57 | 33492230.74 | 0.0526 | 0.0355 |
| Saturn | 86995-06-10 01:27 G | 33495491.33 | 33495491.56 | 33495491.80 | 0.0283 | 0.0042 |
| Uranus | 86996-05-24 18:15 G | 33495841.07 | 33495841.26 | 33495841.47 | 0.0138 | 0.0079 |
| Uranus | 86997-05-29 05:17 G | 33496210.47 | 33496210.72 | 33496210.99 | 0.0139 | 0.0024 |
| Uranus | 86998-06-02 22:05 G | 33496580.20 | 33496580.42 | 33496580.65 | 0.0139 | 0.0055 |
| Uranus | 86999-06-07 11:32 G | 33496949.82 | 33496949.98 | 33496950.16 | 0.0139 | 0.0106 |

88TH MILLENNIUM CE

This is a list of transits of Moon in the 88th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 87011-12-19 13:12 G | | 33501526.82 | 33501527.05 | 33501527.30 | 0.0280 | 0.0091 | |
| Saturn | 87024-06-04 08:10 G | | 33506077.70 | 33506077.84 | 33506078.01 | 0.0286 | 0.0224 | |
| Saturn | 87025-06-17 12:58 G | | 33506455.84 | 33506456.04 | 33506456.26 | 0.0282 | 0.0156 | |
| Jupiter | 87028-01-02 11:17 G | | 33507384.87 | 33507384.97 | 33507385.10 | 0.0499 | 0.0432 | |
| Uranus | 87035-11-25 05:32 G | | 33510268.68 | 33510268.73 | 33510268.82 | 0.0140 | 0.0135 | |
| Uranus | 87036-11-29 00:15 G | | 33510638.29 | 33510638.51 | 33510638.74 | 0.0140 | 0.0055 | |
| Uranus | 87037-12-03 19:41 G | | 33511008.06 | 33511008.32 | 33511008.59 | 0.0139 | 0.0004 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 87038-12-08 10:34 G | 33511377.74 | 33511377.94 | 33511378.16 | 0.0139 | 0.0070 |
| Jupiter | 87040-01-06 17:32 G | 33511771.99 | 33511772.23 | 33511772.47 | 0.0500 | 0.0042 |
| Saturn | 87040-12-13 05:17 G | 33512113.49 | 33512113.72 | 33512113.95 | 0.0278 | 0.0079 |
| Saturn | 87054-06-12 04:20 G | 33517042.44 | 33517042.68 | 33517042.92 | 0.0283 | 0.0013 |
| Neptune | 87055-12-31 08:10 G | 33517609.79 | 33517609.84 | 33517609.94 | 0.0089 | 0.0085 |
| Neptune | 87057-01-01 23:17 G | 33517977.30 | 33517977.47 | 33517977.68 | 0.0089 | 0.0062 |
| Jupiter | 87057-07-01 07:41 G | 33518157.61 | 33518157.82 | 33518158.04 | 0.0528 | 0.0231 |
| Neptune | 87058-01-04 10:34 G | 33518344.74 | 33518344.94 | 33518345.17 | 0.0089 | 0.0046 |
| Neptune | 87059-01-06 20:39 G | 33518712.11 | 33518712.36 | 33518712.63 | 0.0089 | 0.0023 |
| Neptune | 87060-01-09 12:58 G | 33519079.79 | 33519080.04 | 33519080.29 | 0.0089 | 0.0006 |
| Neptune | 87061-01-10 18:58 G | 33519447.05 | 33519447.29 | 33519447.56 | 0.0089 | 0.0019 |
| Neptune | 87062-01-13 13:56 G | 33519814.86 | 33519815.08 | 33519815.33 | 0.0089 | 0.0036 |
| Neptune | 87063-01-15 18:44 G | 33520182.12 | 33520182.28 | 33520182.49 | 0.0089 | 0.0061 |
| Neptune | 87064-01-18 13:12 G | 33520549.94 | 33520550.05 | 33520550.22 | 0.0089 | 0.0076 |
| Jupiter | 87069-07-06 04:34 G | 33522545.51 | 33522545.69 | 33522545.89 | 0.0526 | 0.0297 |
| Saturn | 87069-12-07 13:56 G | 33522699.97 | 33522700.08 | 33522700.20 | 0.0276 | 0.0243 |
| Saturn | 87070-12-20 11:03 G | 33523077.74 | 33523077.96 | 33523078.18 | 0.0280 | 0.0125 |
| Uranus | 87080-05-26 04:34 G | 33526522.50 | 33526522.69 | 33526522.90 | 0.0138 | 0.0080 |
| Uranus | 87081-05-30 14:39 G | 33526891.85 | 33526892.11 | 33526892.37 | 0.0139 | 0.0007 |
| Uranus | 87082-06-04 08:24 G | 33527261.63 | 33527261.85 | 33527262.09 | 0.0139 | 0.0046 |
| Saturn | 87083-06-06 02:24 G | 33527628.43 | 33527628.60 | 33527628.79 | 0.0286 | 0.0195 |
| Uranus | 87083-06-08 21:08 G | 33527631.27 | 33527631.38 | 33527631.50 | 0.0140 | 0.0125 |
| Saturn | 87084-06-18 11:17 G | 33528006.79 | 33528006.97 | 33528007.15 | 0.0282 | 0.0184 |
| Saturn | 87099-12-15 11:03 G | 33533664.71 | 33533664.96 | 33533665.20 | 0.0278 | 0.0043 |
| Jupiter | 87111-01-02 14:53 G | 33537700.06 | 33537700.12 | 33537700.19 | 0.0498 | 0.0477 |
| Saturn | 87113-06-14 06:58 G | 33538593.54 | 33538593.79 | 33538594.04 | 0.0283 | 0.0018 |
| Uranus | 87119-11-26 17:17 G | 33540950.07 | 33540950.22 | 33540950.38 | 0.0140 | 0.0114 |
| Uranus | 87120-11-30 12:44 G | 33541319.81 | 33541320.03 | 33541320.25 | 0.0139 | 0.0061 |
| Uranus | 87121-12-05 06:58 G | 33541689.52 | 33541689.79 | 33541690.05 | 0.0139 | 0.0015 |
| Uranus | 87122-12-09 23:03 G | 33542059.26 | 33542059.46 | 33542059.66 | 0.0139 | 0.0078 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 87123-01-07 02:39 G | 33542087.38 | 33542087.61 | 33542087.83 | 0.0499 | 0.0006 |
| Uranus | 87123-12-14 17:03 G | 33542429.19 | 33542429.21 | 33542429.27 | 0.0138 | 0.0137 |
| Saturn | 87128-12-09 16:05 G | 33544251.01 | 33544251.17 | 33544251.34 | 0.0276 | 0.0205 |
| Saturn | 87129-12-22 18:29 G | 33544629.08 | 33544629.27 | 33544629.46 | 0.0280 | 0.0164 |
| Jupiter | 87135-01-11 15:51 G | 33546475.07 | 33546475.16 | 33546475.26 | 0.0501 | 0.0458 |
| Neptune | 87137-06-29 11:03 G | 33547374.87 | 33547374.96 | 33547375.08 | 0.0088 | 0.0079 |
| Neptune | 87138-07-01 22:20 G | 33547742.22 | 33547742.43 | 33547742.65 | 0.0088 | 0.0052 |
| Neptune | 87139-07-04 12:00 G | 33548109.80 | 33548110.00 | 33548110.24 | 0.0088 | 0.0041 |
| Jupiter | 87140-07-01 07:41 G | 33548472.64 | 33548472.82 | 33548473.02 | 0.0527 | 0.0295 |
| Neptune | 87140-07-05 18:44 G | 33548477.03 | 33548477.28 | 33548477.55 | 0.0088 | 0.0014 |
| Neptune | 87141-07-08 12:29 G | 33548844.76 | 33548845.02 | 33548845.27 | 0.0088 | 0.0002 |
| Saturn | 87142-06-08 05:46 G | 33549179.55 | 33549179.74 | 33549179.94 | 0.0286 | 0.0164 |
| Neptune | 87142-07-10 16:34 G | 33549211.95 | 33549212.19 | 33549212.44 | 0.0088 | 0.0026 |
| Saturn | 87143-06-21 17:46 G | 33549558.09 | 33549558.24 | 33549558.40 | 0.0281 | 0.0213 |
| Neptune | 87143-07-13 10:20 G | 33549579.72 | 33549579.93 | 33549580.19 | 0.0088 | 0.0039 |
| Neptune | 87144-07-14 16:05 G | 33549947.00 | 33549947.17 | 33549947.34 | 0.0088 | 0.0064 |
| Neptune | 87145-07-17 06:58 G | 33550314.69 | 33550314.79 | 33550314.94 | 0.0088 | 0.0077 |
| Jupiter | 87152-07-06 14:53 G | 33552860.91 | 33552861.12 | 33552861.33 | 0.0526 | 0.0213 |
| Saturn | 87158-12-17 15:08 G | 33555215.88 | 33555216.13 | 33555216.39 | 0.0278 | 0.0002 |
| Uranus | 87163-05-23 21:08 G | 33556834.32 | 33556834.38 | 33556834.46 | 0.0138 | 0.0132 |
| Uranus | 87164-05-27 16:05 G | 33557203.96 | 33557204.17 | 33557204.39 | 0.0138 | 0.0070 |
| Mars | 87165-04-14 22:05 G | 33557526.24 | 33557526.42 | 33557526.61 | 0.1804 | 0.0382 |
| Uranus | 87165-06-01 00:44 G | 33557573.28 | 33557573.53 | 33557573.80 | 0.0139 | 0.0013 |
| Uranus | 87166-06-05 19:56 G | 33557943.11 | 33557943.33 | 33557943.55 | 0.0139 | 0.0066 |
| Uranus | 87167-06-10 06:29 G | 33558312.65 | 33558312.77 | 33558312.93 | 0.0140 | 0.0117 |
| Saturn | 87172-06-15 07:27 G | 33560144.56 | 33560144.81 | 33560145.06 | 0.0283 | 0.0049 |
| Saturn | 87187-12-12 04:05 G | 33565802.48 | 33565802.67 | 33565802.86 | 0.0276 | 0.0165 |
| Saturn | 87188-12-24 08:10 G | 33566180.69 | 33566180.84 | 33566181.01 | 0.0280 | 0.0209 |
| Saturn | 87201-06-09 17:32 G | 33570731.03 | 33570731.23 | 33570731.45 | 0.0285 | 0.0128 |
| Saturn | 87202-06-23 03:36 G | 33571109.55 | 33571109.65 | 33571109.78 | 0.0281 | 0.0247 |

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| Uranus | 87203-11-27 05:46 G | 33571631.61 | 33571631.74 | 33571631.86 | 0.0140 | 0.0122 |
| Uranus | 87204-12-01 02:24 G | 33572001.37 | 33572001.60 | 33572001.84 | 0.0139 | 0.0042 |
| Uranus | 87205-12-05 19:27 G | 33572371.05 | 33572371.31 | 33572371.58 | 0.0139 | 0.0015 |
| Jupiter | 87206-01-06 08:24 G | 33572402.61 | 33572402.85 | 33572403.09 | 0.0500 | 0.0068 |
| Uranus | 87206-12-10 12:15 G | 33572740.83 | 33572741.01 | 33572741.22 | 0.0139 | 0.0085 |
| Saturn | 87217-12-18 21:22 G | 33576767.14 | 33576767.39 | 33576767.64 | 0.0278 | 0.0044 |
| Jupiter | 87218-01-10 15:08 G | 33576789.99 | 33576790.13 | 33576790.27 | 0.0501 | 0.0391 |
| Pluto | 87220-03-21 09:22 G | 33577590.68 | 33577590.89 | 33577591.14 | 0.0062 | 0.0027 |
| Neptune | 87221-01-02 07:41 G | 33577877.66 | 33577877.82 | 33577878.00 | 0.0089 | 0.0066 |
| Pluto | 87221-03-23 01:27 G | 33577957.49 | 33577957.56 | 33577957.67 | 0.0063 | 0.0059 |
| Neptune | 87222-01-04 17:03 G | 33578245.01 | 33578245.21 | 33578245.43 | 0.0089 | 0.0054 |
| Neptune | 87223-01-07 10:34 G | 33578612.70 | 33578612.94 | 33578613.18 | 0.0089 | 0.0025 |
| Jupiter | 87223-07-01 12:58 G | 33578787.88 | 33578788.04 | 33578788.19 | 0.0528 | 0.0390 |
| Neptune | 87224-01-09 16:05 G | 33578979.92 | 33578980.17 | 33578980.44 | 0.0089 | 0.0014 |
| Neptune | 87225-01-11 11:17 G | 33579347.72 | 33579347.97 | 33579348.22 | 0.0089 | 0.0016 |
| Neptune | 87226-01-13 16:20 G | 33579714.95 | 33579715.18 | 33579715.44 | 0.0089 | 0.0027 |
| Neptune | 87227-01-16 09:51 G | 33580082.73 | 33580082.91 | 33580083.14 | 0.0089 | 0.0056 |
| Neptune | 87228-01-18 17:17 G | 33580450.09 | 33580450.22 | 33580450.41 | 0.0089 | 0.0068 |
| Saturn | 87231-06-17 14:10 G | 33581695.86 | 33581696.09 | 33581696.32 | 0.0283 | 0.0087 |
| Jupiter | 87235-07-06 06:15 G | 33583175.53 | 33583175.76 | 33583176.00 | 0.0527 | 0.0109 |
| Saturn | 87246-12-13 20:53 G | 33587354.16 | 33587354.37 | 33587354.59 | 0.0277 | 0.0118 |
| Uranus | 87247-05-24 04:34 G | 33587515.66 | 33587515.69 | 33587515.78 | 0.0138 | 0.0134 |
| Saturn | 87247-12-26 22:20 G | 33587732.33 | 33587732.43 | 33587732.54 | 0.0281 | 0.0255 |
| Uranus | 87248-05-28 00:00 G | 33587885.30 | 33587885.50 | 33587885.72 | 0.0138 | 0.0070 |
| Uranus | 87249-06-01 07:56 G | 33588254.57 | 33588254.83 | 33588255.09 | 0.0139 | 0.0001 |
| Uranus | 87250-06-06 03:36 G | 33588624.43 | 33588624.65 | 33588624.88 | 0.0139 | 0.0056 |
| Uranus | 87251-06-10 13:27 G | 33588994.02 | 33588994.06 | 33588994.14 | 0.0140 | 0.0136 |
| Saturn | 87260-06-11 06:58 G | 33592282.56 | 33592282.79 | 33592283.02 | 0.0285 | 0.0084 |
| Mars | 87269-10-16 05:03 G | 33595696.52 | 33595696.71 | 33595696.89 | 0.1729 | 0.0747 |
| Saturn | 87275-12-08 13:41 G | 33597941.07 | 33597941.07 | 33597941.07 | 0.0274 | 0.0274 |

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| Saturn | 87276-12-20 11:17 G | 33598318.74 | 33598318.97 | 33598319.20 | 0.0279 | 0.0089 |
| Uranus | 87287-11-27 16:34 G | 33602313.02 | 33602313.19 | 33602313.38 | 0.0140 | 0.0102 |
| Uranus | 87288-12-01 14:10 G | 33602682.87 | 33602683.09 | 33602683.34 | 0.0140 | 0.0049 |
| Jupiter | 87289-01-05 07:41 G | 33602717.60 | 33602717.82 | 33602718.03 | 0.0499 | 0.0141 |
| Saturn | 87289-06-05 16:34 G | 33602869.07 | 33602869.19 | 33602869.32 | 0.0287 | 0.0245 |
| Uranus | 87289-12-06 06:15 G | 33603052.51 | 33603052.76 | 33603053.02 | 0.0139 | 0.0030 |
| Saturn | 87290-06-19 05:32 G | 33603247.53 | 33603247.73 | 33603247.95 | 0.0282 | 0.0131 |
| Uranus | 87290-12-11 00:29 G | 33603422.35 | 33603422.52 | 33603422.72 | 0.0139 | 0.0091 |
| Jupiter | 87301-01-10 22:34 G | 33607105.26 | 33607105.44 | 33607105.63 | 0.0500 | 0.0306 |
| Neptune | 87301-06-29 19:41 G | 33607275.23 | 33607275.32 | 33607275.46 | 0.0088 | 0.0080 |
| Neptune | 87302-07-02 10:34 G | 33607642.78 | 33607642.94 | 33607643.12 | 0.0088 | 0.0064 |
| Neptune | 87303-07-04 16:20 G | 33608009.95 | 33608010.18 | 33608010.41 | 0.0088 | 0.0041 |
| Neptune | 87304-07-06 10:05 G | 33608377.68 | 33608377.92 | 33608378.17 | 0.0088 | 0.0025 |
| Neptune | 87305-07-08 14:24 G | 33608744.84 | 33608745.10 | 33608745.36 | 0.0088 | 0.0001 |
| Saturn | 87305-12-16 12:58 G | 33608905.80 | 33608906.04 | 33608906.28 | 0.0277 | 0.0072 |
| Jupiter | 87306-07-01 04:34 G | 33609102.61 | 33609102.69 | 33609102.79 | 0.0528 | 0.0489 |
| Neptune | 87306-07-11 08:10 G | 33609112.58 | 33609112.84 | 33609113.11 | 0.0088 | 0.0014 |
| Neptune | 87307-07-13 14:24 G | 33609479.88 | 33609480.10 | 33609480.33 | 0.0088 | 0.0038 |
| Neptune | 87308-07-15 05:03 G | 33609847.51 | 33609847.71 | 33609847.94 | 0.0088 | 0.0052 |
| Neptune | 87309-07-17 15:22 G | 33610215.03 | 33610215.14 | 33610215.27 | 0.0088 | 0.0077 |
| Pluto | 87311-09-23 04:05 G | 33611012.62 | 33611012.67 | 33611012.75 | 0.0081 | 0.0078 |
| Jupiter | 87318-07-06 12:44 G | 33613490.80 | 33613491.03 | 33613491.25 | 0.0527 | 0.0024 |
| Saturn | 87319-06-14 19:27 G | 33613834.06 | 33613834.31 | 33613834.57 | 0.0284 | 0.0036 |
| Jupiter | 87330-07-11 10:20 G | 33617878.88 | 33617878.93 | 33617879.00 | 0.0525 | 0.0509 |
| Uranus | 87331-05-25 13:56 G | 33618196.98 | 33618197.08 | 33618197.20 | 0.0138 | 0.0123 |
| Uranus | 87332-05-29 09:36 G | 33618566.69 | 33618566.90 | 33618567.14 | 0.0138 | 0.0064 |
| Uranus | 87333-06-02 16:48 G | 33618935.94 | 33618936.20 | 33618936.46 | 0.0139 | 0.0003 |
| Uranus | 87334-06-07 13:12 G | 33619305.84 | 33619306.05 | 33619306.26 | 0.0139 | 0.0073 |
| Saturn | 87334-12-11 03:51 G | 33619492.53 | 33619492.66 | 33619492.80 | 0.0275 | 0.0227 |
| Uranus | 87335-06-11 21:51 G | 33619675.31 | 33619675.41 | 33619675.54 | 0.0140 | 0.0125 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 87335-12-24 06:44 G | 33619870.58 | 33619870.78 | 33619870.99 | 0.0279 | 0.0139 |
| Saturn | 87348-06-08 11:17 G | 33624420.80 | 33624420.97 | 33624421.15 | 0.0286 | 0.0194 |
| Saturn | 87349-06-22 00:29 G | 33624799.34 | 33624799.52 | 33624799.71 | 0.0282 | 0.0178 |
| Saturn | 87364-12-18 01:56 G | 33630457.32 | 33630457.58 | 33630457.83 | 0.0278 | 0.0020 |
| Uranus | 87371-11-29 01:41 G | 33632994.43 | 33632994.57 | 33632994.75 | 0.0140 | 0.0112 |
| Jupiter | 87372-01-06 13:12 G | 33633032.85 | 33633033.05 | 33633033.27 | 0.0498 | 0.0225 |
| Uranus | 87372-12-03 01:27 G | 33633364.32 | 33633364.56 | 33633364.80 | 0.0140 | 0.0030 |
| Uranus | 87373-12-07 16:05 G | 33633733.92 | 33633734.17 | 33633734.44 | 0.0139 | 0.0026 |
| Uranus | 87374-12-12 11:46 G | 33634103.82 | 33634103.99 | 33634104.17 | 0.0139 | 0.0098 |
| Saturn | 87378-06-16 08:10 G | 33635385.59 | 33635385.84 | 33635386.09 | 0.0284 | 0.0014 |
| Jupiter | 87384-01-10 14:10 G | 33637419.88 | 33637420.09 | 33637420.31 | 0.0500 | 0.0209 |
| Neptune | 87385-01-02 11:32 G | 33637777.86 | 33637777.98 | 33637778.14 | 0.0089 | 0.0075 |
| Neptune | 87386-01-05 05:46 G | 33638145.56 | 33638145.74 | 33638145.95 | 0.0089 | 0.0056 |
| Neptune | 87387-01-07 11:03 G | 33638512.74 | 33638512.96 | 33638513.22 | 0.0089 | 0.0036 |
| Neptune | 87388-01-10 06:15 G | 33638880.52 | 33638880.76 | 33638881.03 | 0.0089 | 0.0015 |
| Neptune | 87389-01-11 12:15 G | 33639247.76 | 33639248.01 | 33639248.26 | 0.0089 | 0.0004 |
| Neptune | 87390-01-14 05:03 G | 33639615.47 | 33639615.71 | 33639615.98 | 0.0089 | 0.0025 |
| Neptune | 87391-01-16 14:10 G | 33639982.89 | 33639983.09 | 33639983.32 | 0.0089 | 0.0044 |
| Neptune | 87392-01-19 03:08 G | 33640350.46 | 33640350.63 | 33640350.82 | 0.0089 | 0.0066 |
| Neptune | 87393-01-20 16:48 G | 33640718.14 | 33640718.20 | 33640718.30 | 0.0089 | 0.0085 |
| Saturn | 87393-12-12 22:20 G | 33641044.26 | 33641044.43 | 33641044.62 | 0.0276 | 0.0178 |
| Saturn | 87394-12-26 01:27 G | 33641422.40 | 33641422.56 | 33641422.75 | 0.0280 | 0.0190 |
| Jupiter | 87401-07-06 02:39 G | 33643805.37 | 33643805.61 | 33643805.84 | 0.0527 | 0.0103 |
| Saturn | 87407-06-12 08:39 G | 33645972.65 | 33645972.86 | 33645973.07 | 0.0286 | 0.0140 |
| Saturn | 87408-06-24 17:03 G | 33646351.08 | 33646351.21 | 33646351.36 | 0.0281 | 0.0229 |
| Jupiter | 87413-07-11 00:58 G | 33648193.39 | 33648193.54 | 33648193.70 | 0.0526 | 0.0383 |
| Uranus | 87415-05-26 22:48 G | 33648878.38 | 33648878.45 | 33648878.57 | 0.0138 | 0.0127 |
| Uranus | 87416-05-30 18:44 G | 33649248.06 | 33649248.28 | 33649248.51 | 0.0138 | 0.0059 |
| Uranus | 87417-06-04 00:58 G | 33649617.29 | 33649617.54 | 33649617.80 | 0.0139 | 0.0008 |
| Uranus | 87418-06-08 21:51 G | 33649987.19 | 33649987.41 | 33649987.63 | 0.0139 | 0.0065 |

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| Saturn | 87423-12-21 13:56 G | 33652008.83 | 33652009.08 | 33652009.33 | 0.0278 | 0.0032 |
| Saturn | 87437-06-19 00:29 G | 33656937.29 | 33656937.52 | 33656937.76 | 0.0283 | 0.0067 |
| Mars | 87449-04-16 19:56 G | 33661257.14 | 33661257.33 | 33661257.52 | 0.1814 | 0.0668 |
| Saturn | 87452-12-15 14:53 G | 33662595.90 | 33662596.12 | 33662596.34 | 0.0276 | 0.0128 |
| Saturn | 87453-12-28 14:39 G | 33662973.98 | 33662974.11 | 33662974.25 | 0.0280 | 0.0239 |
| Jupiter | 87455-01-06 06:44 G | 33663347.60 | 33663347.78 | 33663347.96 | 0.0498 | 0.0311 |
| Uranus | 87455-11-30 10:48 G | 33663675.76 | 33663675.95 | 33663676.15 | 0.0140 | 0.0093 |
| Uranus | 87456-12-04 11:03 G | 33664045.72 | 33664045.96 | 33664046.20 | 0.0140 | 0.0039 |
| Uranus | 87457-12-09 00:29 G | 33664415.28 | 33664415.52 | 33664415.78 | 0.0139 | 0.0042 |
| Uranus | 87458-12-13 21:22 G | 33664785.23 | 33664785.39 | 33664785.57 | 0.0139 | 0.0100 |
| Neptune | 87465-06-30 08:39 G | 33667175.79 | 33667175.86 | 33667175.98 | 0.0088 | 0.0082 |
| Saturn | 87466-06-14 01:12 G | 33667524.32 | 33667524.55 | 33667524.79 | 0.0285 | 0.0089 |
| Neptune | 87466-07-02 13:56 G | 33667542.94 | 33667543.08 | 33667543.25 | 0.0088 | 0.0071 |
| Jupiter | 87467-01-11 01:27 G | 33667735.34 | 33667735.56 | 33667735.78 | 0.0499 | 0.0134 |
| Saturn | 87467-06-27 04:48 G | 33667902.65 | 33667902.70 | 33667902.76 | 0.0281 | 0.0273 |
| Neptune | 87467-07-05 07:56 G | 33667910.62 | 33667910.83 | 33667911.07 | 0.0088 | 0.0043 |
| Pluto | 87468-03-25 05:03 G | 33668174.49 | 33668174.71 | 33668174.97 | 0.0062 | 0.0025 |
| Neptune | 87468-07-06 12:15 G | 33668277.79 | 33668278.01 | 33668278.26 | 0.0088 | 0.0033 |
| Pluto | 87469-03-26 09:22 G | 33668540.79 | 33668540.89 | 33668541.03 | 0.0063 | 0.0055 |
| Neptune | 87469-07-09 05:32 G | 33668645.47 | 33668645.73 | 33668646.00 | 0.0088 | 0.0005 |
| Neptune | 87470-07-11 12:15 G | 33669012.76 | 33669013.01 | 33669013.26 | 0.0088 | 0.0006 |
| Neptune | 87471-07-14 00:58 G | 33669380.31 | 33669380.54 | 33669380.81 | 0.0088 | 0.0034 |
| Neptune | 87472-07-15 12:15 G | 33669747.82 | 33669748.01 | 33669748.25 | 0.0088 | 0.0046 |
| Neptune | 87473-07-17 20:53 G | 33670115.25 | 33670115.37 | 33670115.55 | 0.0088 | 0.0073 |
| Neptune | 87474-07-20 13:27 G | 33670483.01 | 33670483.06 | 33670483.15 | 0.0088 | 0.0084 |
| Mars | 87474-10-16 15:51 G | 33670571.10 | 33670571.16 | 33670571.22 | 0.1716 | 0.1615 |
| Saturn | 87482-12-23 04:34 G | 33673560.46 | 33673560.69 | 33673560.92 | 0.0279 | 0.0081 |
| Jupiter | 87484-07-05 00:00 G | 33674120.30 | 33674120.50 | 33674120.71 | 0.0528 | 0.0217 |
| Saturn | 87495-06-08 05:46 G | 33678110.66 | 33678110.74 | 33678110.85 | 0.0287 | 0.0263 |
| Saturn | 87496-06-20 19:41 G | 33678489.10 | 33678489.32 | 33678489.54 | 0.0282 | 0.0113 |

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| Jupiter | 87496-07-10 06:58 G | 33678508.60 | 33678508.79 | 33678508.99 | 0.0527 | 0.0296 |
| Uranus | 87499-05-27 10:48 G | 33679559.82 | 33679559.95 | 33679560.11 | 0.0138 | 0.0112 |
| Uranus | 87500-06-01 06:44 G | 33679929.55 | 33679929.78 | 33679930.02 | 0.0138 | 0.0054 |
| Uranus | 87501-06-05 12:58 G | 33680298.79 | 33680299.04 | 33680299.29 | 0.0139 | 0.0008 |
| Uranus | 87502-06-10 09:51 G | 33680668.72 | 33680668.91 | 33680669.12 | 0.0139 | 0.0083 |
| Uranus | 87503-06-14 17:32 G | 33681038.19 | 33681038.23 | 33681038.31 | 0.0139 | 0.0136 |
| Saturn | 87511-12-18 22:20 G | 33684147.18 | 33684147.43 | 33684147.67 | 0.0277 | 0.0084 |
| Saturn | 87525-06-16 11:03 G | 33689075.71 | 33689075.96 | 33689076.21 | 0.0285 | 0.0044 |
| Jupiter | 87538-01-06 18:29 G | 33693663.13 | 33693663.27 | 33693663.43 | 0.0498 | 0.0370 |
| Uranus | 87539-12-01 20:39 G | 33694357.20 | 33694357.36 | 33694357.55 | 0.0140 | 0.0102 |
| Uranus | 87540-12-05 22:05 G | 33694727.17 | 33694727.42 | 33694727.67 | 0.0140 | 0.0019 |
| Saturn | 87540-12-12 14:24 G | 33694734.00 | 33694734.10 | 33694734.23 | 0.0275 | 0.0240 |
| Uranus | 87541-12-10 10:48 G | 33695096.70 | 33695096.95 | 33695097.21 | 0.0139 | 0.0035 |
| Saturn | 87541-12-25 17:46 G | 33695112.03 | 33695112.24 | 33695112.46 | 0.0279 | 0.0126 |
| Uranus | 87542-12-15 08:10 G | 33695466.72 | 33695466.84 | 33695467.01 | 0.0139 | 0.0111 |
| Neptune | 87549-01-04 00:44 G | 33697678.48 | 33697678.53 | 33697678.60 | 0.0089 | 0.0087 |
| Neptune | 87550-01-06 06:00 G | 33698045.57 | 33698045.75 | 33698045.97 | 0.0089 | 0.0058 |
| Jupiter | 87550-01-10 22:48 G | 33698050.21 | 33698050.45 | 33698050.69 | 0.0499 | 0.0054 |
| Neptune | 87551-01-09 00:58 G | 33698413.34 | 33698413.54 | 33698413.79 | 0.0089 | 0.0048 |
| Neptune | 87552-01-11 08:10 G | 33698780.60 | 33698780.84 | 33698781.09 | 0.0089 | 0.0018 |
| Neptune | 87553-01-13 00:29 G | 33699148.26 | 33699148.52 | 33699148.79 | 0.0089 | 0.0007 |
| Mars | 87553-10-19 21:22 G | 33699428.26 | 33699428.39 | 33699428.53 | 0.1721 | 0.1159 |
| Neptune | 87554-01-15 10:20 G | 33699515.70 | 33699515.93 | 33699516.18 | 0.0089 | 0.0024 |
| Saturn | 87554-06-10 22:48 G | 33699662.30 | 33699662.45 | 33699662.60 | 0.0286 | 0.0216 |
| Neptune | 87555-01-17 21:22 G | 33699883.16 | 33699883.39 | 33699883.65 | 0.0089 | 0.0034 |
| Saturn | 87555-06-24 10:34 G | 33700040.75 | 33700040.94 | 33700041.16 | 0.0282 | 0.0156 |
| Neptune | 87556-01-20 12:00 G | 33700250.85 | 33700251.00 | 33700251.20 | 0.0089 | 0.0064 |
| Neptune | 87557-01-21 18:58 G | 33700618.17 | 33700618.29 | 33700618.47 | 0.0089 | 0.0074 |
| Jupiter | 87562-01-15 11:03 G | 33702437.87 | 33702437.96 | 33702438.06 | 0.0500 | 0.0448 |
| Jupiter | 87567-07-06 07:12 G | 33704435.61 | 33704435.80 | 33704436.00 | 0.0528 | 0.0303 |

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| Saturn | 87570-12-19 23:32 G | 33705698.24 | 33705698.48 | 33705698.74 | 0.0277 | 0.0043 |
| Jupiter | 87579-07-10 20:53 G | 33708823.16 | 33708823.37 | 33708823.59 | 0.0527 | 0.0183 |
| Uranus | 87583-05-28 22:48 G | 33710241.32 | 33710241.45 | 33710241.58 | 0.0138 | 0.0116 |
| Uranus | 87584-06-01 17:46 G | 33710611.01 | 33710611.24 | 33710611.49 | 0.0138 | 0.0047 |
| Saturn | 87584-06-17 18:15 G | 33710627.02 | 33710627.26 | 33710627.51 | 0.0284 | 0.0006 |
| Uranus | 87585-06-06 00:00 G | 33710980.26 | 33710980.50 | 33710980.75 | 0.0139 | 0.0019 |
| Uranus | 87586-06-10 20:53 G | 33711350.17 | 33711350.37 | 33711350.59 | 0.0139 | 0.0077 |
| Saturn | 87599-12-14 21:51 G | 33716285.26 | 33716285.41 | 33716285.59 | 0.0275 | 0.0204 |
| Saturn | 87600-12-26 22:20 G | 33716663.23 | 33716663.43 | 33716663.64 | 0.0280 | 0.0161 |
| Saturn | 87613-06-12 10:20 G | 33721213.74 | 33721213.93 | 33721214.13 | 0.0286 | 0.0172 |
| Saturn | 87614-06-25 16:48 G | 33721592.03 | 33721592.20 | 33721592.40 | 0.0281 | 0.0193 |
| Jupiter | 87621-01-05 17:46 G | 33723978.13 | 33723978.24 | 33723978.35 | 0.0498 | 0.0437 |
| Uranus | 87623-12-02 09:08 G | 33725038.69 | 33725038.88 | 33725039.11 | 0.0140 | 0.0082 |
| Uranus | 87624-12-06 10:48 G | 33725408.71 | 33725408.95 | 33725409.20 | 0.0140 | 0.0027 |
| Uranus | 87625-12-10 22:20 G | 33725778.21 | 33725778.43 | 33725778.68 | 0.0139 | 0.0056 |
| Uranus | 87626-12-15 20:53 G | 33726148.25 | 33726148.37 | 33726148.54 | 0.0139 | 0.0112 |
| Saturn | 87629-12-21 00:29 G | 33727249.28 | 33727249.52 | 33727249.76 | 0.0277 | 0.0010 |
| Neptune | 87630-07-03 04:48 G | 33727443.58 | 33727443.70 | 33727443.88 | 0.0088 | 0.0072 |
| Neptune | 87631-07-05 09:36 G | 33727810.71 | 33727810.90 | 33727811.11 | 0.0088 | 0.0055 |
| Neptune | 87632-07-07 01:41 G | 33728178.34 | 33728178.57 | 33728178.83 | 0.0088 | 0.0033 |
| Jupiter | 87633-01-10 09:22 G | 33728365.66 | 33728365.89 | 33728366.11 | 0.0499 | 0.0010 |
| Neptune | 87633-07-09 09:36 G | 33728545.65 | 33728545.90 | 33728546.15 | 0.0088 | 0.0016 |
| Neptune | 87634-07-11 21:51 G | 33728913.15 | 33728913.41 | 33728913.68 | 0.0088 | 0.0006 |
| Neptune | 87635-07-14 10:20 G | 33729280.70 | 33729280.93 | 33729281.18 | 0.0088 | 0.0023 |
| Neptune | 87636-07-15 17:46 G | 33729648.02 | 33729648.24 | 33729648.47 | 0.0088 | 0.0044 |
| Neptune | 87637-07-18 10:05 G | 33730015.76 | 33730015.92 | 33730016.12 | 0.0088 | 0.0061 |
| Neptune | 87638-07-20 14:24 G | 33730383.04 | 33730383.10 | 33730383.21 | 0.0088 | 0.0083 |
| Saturn | 87643-06-20 02:24 G | 33732178.37 | 33732178.60 | 33732178.84 | 0.0284 | 0.0034 |
| Jupiter | 87645-01-14 21:36 G | 33732753.26 | 33732753.40 | 33732753.55 | 0.0500 | 0.0398 |
| Jupiter | 87650-07-04 23:03 G | 33734750.33 | 33734750.46 | 33734750.61 | 0.0528 | 0.0413 |

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| Saturn | 87658-12-15 23:17 G | 33737836.27 | 33737836.47 | 33737836.66 | 0.0275 | 0.0170 |
| Saturn | 87659-12-28 18:15 G | 33738214.08 | 33738214.26 | 33738214.45 | 0.0280 | 0.0193 |
| Jupiter | 87662-07-10 07:41 G | 33739138.59 | 33739138.82 | 33739139.05 | 0.0527 | 0.0104 |
| Uranus | 87667-05-29 10:48 G | 33740922.79 | 33740922.95 | 33740923.13 | 0.0138 | 0.0100 |
| Uranus | 87668-06-02 06:15 G | 33741292.52 | 33741292.76 | 33741293.01 | 0.0138 | 0.0044 |
| Uranus | 87669-06-06 12:44 G | 33741661.79 | 33741662.03 | 33741662.29 | 0.0139 | 0.0022 |
| Uranus | 87670-06-11 10:05 G | 33742031.74 | 33742031.92 | 33742032.11 | 0.0139 | 0.0095 |
| Saturn | 87672-06-13 12:58 G | 33742764.82 | 33742765.04 | 33742765.26 | 0.0286 | 0.0137 |
| Saturn | 87673-06-26 16:48 G | 33743143.06 | 33743143.20 | 33743143.36 | 0.0281 | 0.0223 |
| Saturn | 87688-12-22 01:56 G | 33748800.34 | 33748800.58 | 33748800.82 | 0.0277 | 0.0021 |
| Saturn | 87702-06-22 08:24 G | 33753729.63 | 33753729.85 | 33753730.09 | 0.0284 | 0.0065 |
| Jupiter | 87704-01-07 09:36 G | 33754293.84 | 33754293.90 | 33754293.97 | 0.0498 | 0.0474 |
| Uranus | 87707-12-03 23:03 G | 33755720.27 | 33755720.46 | 33755720.67 | 0.0140 | 0.0087 |
| Uranus | 87708-12-08 01:12 G | 33756090.29 | 33756090.55 | 33756090.80 | 0.0140 | 0.0005 |
| Uranus | 87709-12-12 12:15 G | 33756459.78 | 33756460.01 | 33756460.27 | 0.0139 | 0.0050 |
| Uranus | 87710-12-17 11:32 G | 33756829.89 | 33756829.98 | 33756830.10 | 0.0139 | 0.0126 |
| Neptune | 87714-01-06 18:00 G | 33757946.10 | 33757946.25 | 33757946.44 | 0.0089 | 0.0068 |
| Neptune | 87715-01-09 01:41 G | 33758313.37 | 33758313.57 | 33758313.78 | 0.0089 | 0.0050 |
| Neptune | 87716-01-11 16:34 G | 33758680.95 | 33758681.19 | 33758681.46 | 0.0089 | 0.0027 |
| Jupiter | 87716-01-11 20:24 G | 33758681.11 | 33758681.35 | 33758681.60 | 0.0499 | 0.0056 * |
| Pluto | 87716-03-28 16:05 G | 33758757.92 | 33758758.17 | 33758758.42 | 0.0063 | 0.0011 |
| Neptune | 87717-01-13 04:34 G | 33759048.45 | 33759048.69 | 33759048.94 | 0.0089 | 0.0010 |
| Pluto | 87717-03-30 04:48 G | 33759124.68 | 33759124.70 | 33759124.77 | 0.0063 | 0.0062 |
| Saturn | 87717-12-17 14:39 G | 33759386.90 | 33759387.11 | 33759387.34 | 0.0275 | 0.0139 |
| Neptune | 87718-01-15 15:08 G | 33759415.87 | 33759416.13 | 33759416.40 | 0.0089 | 0.0013 |
| Saturn | 87718-12-30 11:46 G | 33759764.85 | 33759764.99 | 33759765.15 | 0.0280 | 0.0222 |
| Neptune | 87719-01-18 07:27 G | 33759783.58 | 33759783.81 | 33759784.05 | 0.0089 | 0.0030 |
| Neptune | 87720-01-20 13:27 G | 33760150.88 | 33760151.06 | 33760151.30 | 0.0089 | 0.0053 |
| Neptune | 87721-01-22 08:24 G | 33760518.72 | 33760518.85 | 33760519.03 | 0.0089 | 0.0071 |
| Jupiter | 87728-01-16 04:05 G | 33763068.51 | 33763068.67 | 33763068.83 | 0.0499 | 0.0346 |

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| Saturn | 87731-06-16 09:22 G | 33764315.66 | 33764315.89 | 33764316.12 | 0.0286 | 0.0110 |
| Saturn | 87732-06-28 17:46 G | 33764694.15 | 33764694.24 | 33764694.35 | 0.0281 | 0.0254 |
| Mars | 87733-04-18 22:20 G | 33764988.27 | 33764988.43 | 33764988.58 | 0.1823 | 0.0908 |
| Jupiter | 87733-07-05 14:24 G | 33765066.01 | 33765066.10 | 33765066.21 | 0.0529 | 0.0473 |
| Jupiter | 87745-07-10 10:48 G | 33769453.71 | 33769453.95 | 33769454.19 | 0.0528 | 0.0056 |
| Saturn | 87747-12-25 00:00 G | 33770351.26 | 33770351.50 | 33770351.75 | 0.0277 | 0.0050 |
| Uranus | 87751-05-30 21:51 G | 33771604.27 | 33771604.41 | 33771604.58 | 0.0138 | 0.0106 |
| Uranus | 87752-06-03 16:34 G | 33771973.94 | 33771974.19 | 33771974.44 | 0.0138 | 0.0034 |
| Uranus | 87753-06-07 23:17 G | 33772343.24 | 33772343.47 | 33772343.72 | 0.0139 | 0.0030 |
| Uranus | 87754-06-12 19:56 G | 33772713.15 | 33772713.33 | 33772713.54 | 0.0139 | 0.0090 |
| Mars | 87758-10-18 23:46 G | 33774302.34 | 33774302.49 | 33774302.64 | 0.1708 | 0.1183 |
| Saturn | 87761-06-23 07:41 G | 33775280.58 | 33775280.82 | 33775281.05 | 0.0284 | 0.0090 |
| Saturn | 87776-12-18 06:44 G | 33780937.56 | 33780937.78 | 33780938.01 | 0.0275 | 0.0111 |
| Saturn | 87777-12-31 08:53 G | 33781315.76 | 33781315.87 | 33781315.99 | 0.0280 | 0.0245 |
| Saturn | 87790-06-17 07:41 G | 33785866.60 | 33785866.82 | 33785867.05 | 0.0286 | 0.0087 |
| Saturn | 87791-06-30 20:10 G | 33786245.31 | 33786245.34 | 33786245.37 | 0.0281 | 0.0278 |
| Uranus | 87791-12-04 13:12 G | 33786401.84 | 33786402.05 | 33786402.29 | 0.0140 | 0.0067 |
| Uranus | 87792-12-08 15:22 G | 33786771.89 | 33786772.14 | 33786772.40 | 0.0140 | 0.0012 |
| Uranus | 87793-12-13 01:56 G | 33787141.37 | 33787141.58 | 33787141.82 | 0.0139 | 0.0072 |
| Neptune | 87794-07-03 06:44 G | 33787343.67 | 33787343.78 | 33787343.94 | 0.0088 | 0.0074 |
| Uranus | 87794-12-18 01:41 G | 33787511.49 | 33787511.57 | 33787511.69 | 0.0139 | 0.0127 |
| Neptune | 87795-07-05 22:48 G | 33787711.27 | 33787711.45 | 33787711.64 | 0.0088 | 0.0064 |
| Neptune | 87796-07-07 07:27 G | 33788078.59 | 33788078.81 | 33788079.05 | 0.0088 | 0.0035 |
| Neptune | 87797-07-09 18:00 G | 33788446.01 | 33788446.25 | 33788446.52 | 0.0088 | 0.0025 |
| Neptune | 87798-07-12 07:27 G | 33788813.57 | 33788813.81 | 33788814.07 | 0.0088 | 0.0004 |
| Jupiter | 87799-01-11 03:36 G | 33788996.43 | 33788996.65 | 33788996.87 | 0.0498 | 0.0112 |
| Neptune | 87799-07-14 13:41 G | 33789180.82 | 33789181.07 | 33789181.34 | 0.0088 | 0.0013 |
| Neptune | 87800-07-17 06:44 G | 33789548.57 | 33789548.78 | 33789549.02 | 0.0088 | 0.0042 |
| Neptune | 87801-07-19 11:17 G | 33789915.77 | 33789915.97 | 33789916.18 | 0.0088 | 0.0051 |
| Neptune | 87802-07-22 05:03 G | 33790283.62 | 33790283.71 | 33790283.84 | 0.0088 | 0.0080 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 87805-12-13 22:20 G | 33791524.42 | 33791524.43 | 33791524.45 | 0.0273 | 0.0272 |
| Pluto | 87806-09-28 03:22 G | 33791812.59 | 33791812.64 | 33791812.76 | 0.0081 | 0.0078 |
| Saturn | 87806-12-26 14:24 G | 33791901.85 | 33791902.10 | 33791902.34 | 0.0277 | 0.0073 |
| Jupiter | 87811-01-16 22:34 G | 33793384.26 | 33793384.44 | 33793384.63 | 0.0500 | 0.0305 |
| Saturn | 87819-06-12 13:27 G | 33796452.98 | 33796453.06 | 33796453.16 | 0.0289 | 0.0269 |
| Saturn | 87820-06-24 23:32 G | 33796831.25 | 33796831.48 | 33796831.72 | 0.0284 | 0.0109 |
| Jupiter | 87828-07-10 21:22 G | 33799769.17 | 33799769.39 | 33799769.62 | 0.0527 | 0.0010 |
| Uranus | 87835-06-01 08:53 G | 33802285.69 | 33802285.87 | 33802286.06 | 0.0138 | 0.0089 |
| Saturn | 87835-12-21 05:17 G | 33802488.49 | 33802488.72 | 33802488.95 | 0.0275 | 0.0088 |
| Uranus | 87836-06-05 02:39 G | 33802655.37 | 33802655.61 | 33802655.87 | 0.0138 | 0.0034 |
| Saturn | 87837-01-02 07:27 G | 33802866.75 | 33802866.81 | 33802866.89 | 0.0280 | 0.0267 |
| Uranus | 87837-06-09 10:20 G | 33803024.70 | 33803024.93 | 33803025.18 | 0.0139 | 0.0034 |
| Mars | 87837-10-22 20:10 G | 33803160.29 | 33803160.34 | 33803160.40 | 0.1714 | 0.1640 |
| Uranus | 87838-06-14 06:44 G | 33803394.62 | 33803394.78 | 33803394.95 | 0.0139 | 0.0106 |
| Saturn | 87849-06-19 09:08 G | 33807417.65 | 33807417.88 | 33807418.11 | 0.0286 | 0.0067 |
| Saturn | 87864-12-14 13:12 G | 33813074.95 | 33813075.05 | 33813075.16 | 0.0273 | 0.0248 |
| Saturn | 87865-12-27 04:48 G | 33813452.46 | 33813452.70 | 33813452.93 | 0.0277 | 0.0095 |
| Uranus | 87874-12-01 12:58 G | 33816713.97 | 33816714.04 | 33816714.14 | 0.0141 | 0.0133 |
| Uranus | 87875-12-06 01:56 G | 33817083.36 | 33817083.58 | 33817083.80 | 0.0140 | 0.0072 |
| Uranus | 87876-12-10 04:20 G | 33817453.42 | 33817453.68 | 33817453.93 | 0.0140 | 0.0011 |
| Uranus | 87877-12-14 15:08 G | 33817822.91 | 33817823.13 | 33817823.37 | 0.0139 | 0.0064 |
| Neptune | 87878-01-06 19:27 G | 33817846.21 | 33817846.31 | 33817846.43 | 0.0089 | 0.0080 |
| Saturn | 87878-06-13 03:36 G | 33818003.54 | 33818003.65 | 33818003.78 | 0.0289 | 0.0253 |
| Neptune | 87879-01-09 09:08 G | 33818213.68 | 33818213.88 | 33818214.12 | 0.0089 | 0.0052 |
| Saturn | 87879-06-26 17:17 G | 33818382.00 | 33818382.22 | 33818382.43 | 0.0284 | 0.0127 |
| Neptune | 87880-01-11 22:20 G | 33818581.23 | 33818581.43 | 33818581.67 | 0.0089 | 0.0040 |
| Neptune | 87881-01-13 07:27 G | 33818948.56 | 33818948.81 | 33818949.08 | 0.0089 | 0.0012 |
| Jupiter | 87882-01-11 23:46 G | 33819312.27 | 33819312.49 | 33819312.72 | 0.0499 | 0.0150 |
| Neptune | 87882-01-16 00:44 G | 33819316.28 | 33819316.53 | 33819316.79 | 0.0089 | 0.0002 |
| Neptune | 87883-01-18 06:29 G | 33819683.53 | 33819683.77 | 33819684.02 | 0.0089 | 0.0029 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 87884-01-21 01:56 G | 33820051.35 | 33820051.58 | 33820051.81 | 0.0089 | 0.0040 |
| Neptune | 87885-01-22 06:44 G | 33820418.64 | 33820418.78 | 33820418.96 | 0.0089 | 0.0070 |
| Neptune | 87886-01-25 00:15 G | 33820786.42 | 33820786.51 | 33820786.66 | 0.0089 | 0.0080 |
| Jupiter | 87894-01-16 03:51 G | 33823699.46 | 33823699.66 | 33823699.86 | 0.0500 | 0.0270 |
| Saturn | 87894-12-22 03:36 G | 33824039.42 | 33824039.65 | 33824039.89 | 0.0275 | 0.0065 |
| Saturn | 87908-06-21 06:29 G | 33828968.53 | 33828968.77 | 33828969.02 | 0.0286 | 0.0047 |
| Jupiter | 87911-07-12 03:36 G | 33830084.41 | 33830084.65 | 33830084.89 | 0.0528 | 0.0054 |
| Uranus | 87919-06-02 19:27 G | 33832967.15 | 33832967.31 | 33832967.49 | 0.0138 | 0.0097 |
| Uranus | 87920-06-06 12:00 G | 33833336.75 | 33833337.00 | 33833337.27 | 0.0138 | 0.0024 |
| Uranus | 87921-06-10 20:24 G | 33833706.12 | 33833706.35 | 33833706.59 | 0.0139 | 0.0039 |
| Uranus | 87922-06-15 15:22 G | 33834075.98 | 33834076.14 | 33834076.33 | 0.0139 | 0.0102 |
| Saturn | 87923-12-17 06:58 G | 33834625.66 | 33834625.79 | 33834625.95 | 0.0273 | 0.0223 |
| Saturn | 87924-12-29 04:05 G | 33835003.46 | 33835003.67 | 33835003.89 | 0.0277 | 0.0116 |
| Saturn | 87937-06-15 00:15 G | 33839554.37 | 33839554.51 | 33839554.65 | 0.0289 | 0.0231 |
| Saturn | 87938-06-28 18:00 G | 33839933.05 | 33839933.25 | 33839933.45 | 0.0284 | 0.0150 |
| Saturn | 87953-12-23 23:03 G | 33845590.21 | 33845590.46 | 33845590.72 | 0.0275 | 0.0041 |
| Neptune | 87958-07-04 17:32 G | 33847244.16 | 33847244.23 | 33847244.32 | 0.0088 | 0.0084 |
| Uranus | 87958-12-02 23:17 G | 33847395.40 | 33847395.47 | 33847395.57 | 0.0141 | 0.0133 |
| Neptune | 87959-07-07 03:22 G | 33847611.48 | 33847611.64 | 33847611.81 | 0.0088 | 0.0066 |
| Uranus | 87959-12-07 12:58 G | 33847764.81 | 33847765.04 | 33847765.27 | 0.0140 | 0.0056 |
| Neptune | 87960-07-08 12:58 G | 33847978.82 | 33847979.04 | 33847979.28 | 0.0088 | 0.0045 |
| Uranus | 87960-12-11 15:08 G | 33848134.88 | 33848135.13 | 33848135.39 | 0.0140 | 0.0002 |
| Neptune | 87961-07-11 04:05 G | 33848346.44 | 33848346.67 | 33848346.91 | 0.0088 | 0.0027 |
| Uranus | 87961-12-16 01:56 G | 33848504.39 | 33848504.58 | 33848504.80 | 0.0139 | 0.0085 |
| Neptune | 87962-07-13 09:36 G | 33848713.65 | 33848713.90 | 33848714.17 | 0.0088 | 0.0008 |
| Neptune | 87963-07-16 03:36 G | 33849081.39 | 33849081.65 | 33849081.90 | 0.0088 | 0.0011 |
| Pluto | 87964-04-01 15:22 G | 33849341.88 | 33849342.14 | 33849342.40 | 0.0063 | 0.0002 |
| Neptune | 87964-07-17 07:27 G | 33849448.58 | 33849448.81 | 33849449.06 | 0.0088 | 0.0031 |
| Jupiter | 87965-01-12 03:22 G | 33849627.42 | 33849627.64 | 33849627.86 | 0.0498 | 0.0194 |
| Neptune | 87965-07-20 00:44 G | 33849816.34 | 33849816.53 | 33849816.77 | 0.0088 | 0.0051 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 87966-07-22 06:44 G | 33850183.64 | 33850183.78 | 33850183.95 | 0.0088 | 0.0069 |
| Saturn | 87967-06-22 23:32 G | 33850519.23 | 33850519.48 | 33850519.74 | 0.0286 | 0.0023 |
| Jupiter | 87977-01-16 20:53 G | 33854015.16 | 33854015.37 | 33854015.57 | 0.0499 | 0.0227 |
| Saturn | 87982-12-18 08:53 G | 33856176.72 | 33856176.87 | 33856177.04 | 0.0273 | 0.0197 |
| Saturn | 87983-12-31 07:56 G | 33856554.62 | 33856554.83 | 33856555.04 | 0.0277 | 0.0140 |
| Jupiter | 87994-07-11 11:17 G | 33860399.75 | 33860399.97 | 33860400.19 | 0.0527 | 0.0100 |
| Saturn | 87996-06-16 02:24 G | 33861105.44 | 33861105.60 | 33861105.76 | 0.0289 | 0.0206 |
| Saturn | 87997-06-29 19:12 G | 33861484.12 | 33861484.30 | 33861484.50 | 0.0284 | 0.0174 |

89TH MILLENNIUM CE

This is a list of transits of Moon in the 89th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Uranus | 88003-06-03 07:56 G | | 33863648.64 | 33863648.83 | 33863649.04 | 0.0138 | 0.0078 | |
| Uranus | 88004-06-06 23:46 G | | 33864018.24 | 33864018.49 | 33864018.75 | 0.0138 | 0.0024 | |
| Uranus | 88005-06-11 09:08 G | | 33864387.66 | 33864387.88 | 33864388.12 | 0.0138 | 0.0047 | |
| Uranus | 88006-06-16 03:22 G | | 33864757.52 | 33864757.64 | 33864757.80 | 0.0139 | 0.0116 | |
| Jupiter | 88006-07-16 16:05 G | | 33864788.07 | 33864788.17 | 33864788.28 | 0.0526 | 0.0471 | |
| Saturn | 88012-12-24 20:10 G | | 33867141.09 | 33867141.34 | 33867141.60 | 0.0275 | 0.0014 | |
| Mars | 88017-04-21 12:58 G | | 33868719.88 | 33868720.04 | 33868720.21 | 0.1832 | 0.0802 | |
| Saturn | 88026-06-23 21:36 G | | 33872070.16 | 33872070.40 | 33872070.65 | 0.0286 | 0.0005 | |
| Saturn | 88041-12-19 17:03 G | | 33877728.02 | 33877728.21 | 33877728.41 | 0.0273 | 0.0163 | |
| Neptune | 88042-01-07 00:15 G | | 33877746.46 | 33877746.51 | 33877746.61 | 0.0089 | 0.0085 | |
| Mars | 88042-10-21 06:29 G | | 33878033.61 | 33878033.77 | 33878033.93 | 0.1700 | 0.0856 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 88042-12-03 08:39 G | 33878076.76 | 33878076.86 | 33878077.00 | 0.0141 | 0.0125 |
| Saturn | 88043-01-01 11:32 G | 33878105.79 | 33878105.98 | 33878106.19 | 0.0277 | 0.0171 |
| Neptune | 88043-01-09 14:53 G | 33878113.95 | 33878114.12 | 33878114.32 | 0.0089 | 0.0060 |
| Uranus | 88043-12-07 22:48 G | 33878446.23 | 33878446.45 | 33878446.69 | 0.0140 | 0.0061 |
| Neptune | 88044-01-11 22:48 G | 33878481.24 | 33878481.45 | 33878481.69 | 0.0089 | 0.0046 |
| Uranus | 88044-12-12 00:58 G | 33878816.29 | 33878816.54 | 33878816.81 | 0.0140 | 0.0022 |
| Neptune | 88045-01-13 17:17 G | 33878848.98 | 33878849.22 | 33878849.47 | 0.0089 | 0.0020 |
| Uranus | 88045-12-16 12:44 G | 33879185.83 | 33879186.03 | 33879186.25 | 0.0140 | 0.0076 |
| Neptune | 88046-01-15 22:48 G | 33879216.20 | 33879216.45 | 33879216.71 | 0.0089 | 0.0006 |
| Neptune | 88047-01-18 18:15 G | 33879584.01 | 33879584.26 | 33879584.52 | 0.0089 | 0.0020 |
| Jupiter | 88048-01-12 18:44 G | 33879943.09 | 33879943.28 | 33879943.48 | 0.0498 | 0.0248 |
| Neptune | 88048-01-21 00:29 G | 33879951.29 | 33879951.52 | 33879951.75 | 0.0089 | 0.0035 |
| Neptune | 88049-01-22 17:03 G | 33880319.03 | 33880319.21 | 33880319.43 | 0.0089 | 0.0059 |
| Neptune | 88050-01-25 02:39 G | 33880686.49 | 33880686.61 | 33880686.76 | 0.0089 | 0.0075 |
| Pluto | 88054-10-01 05:46 G | 33882396.51 | 33882396.74 | 33882396.98 | 0.0081 | 0.0032 |
| Saturn | 88055-06-18 05:46 G | 33882656.56 | 33882656.74 | 33882656.94 | 0.0289 | 0.0177 |
| Saturn | 88056-06-30 17:17 G | 33883035.06 | 33883035.22 | 33883035.41 | 0.0284 | 0.0205 |
| Jupiter | 88060-01-16 23:17 G | 33884330.24 | 33884330.47 | 33884330.70 | 0.0500 | 0.0176 |
| Saturn | 88071-12-27 01:27 G | 33888692.32 | 33888692.56 | 33888692.80 | 0.0275 | 0.0020 |
| Jupiter | 88077-07-10 17:17 G | 33890715.00 | 33890715.22 | 33890715.45 | 0.0528 | 0.0180 |
| Saturn | 88085-06-25 03:36 G | 33893621.41 | 33893621.65 | 33893621.88 | 0.0286 | 0.0040 |
| Uranus | 88086-05-30 12:00 G | 33893960.96 | 33893961.00 | 33893961.08 | 0.0137 | 0.0133 |
| Uranus | 88087-06-03 21:51 G | 33894330.23 | 33894330.41 | 33894330.62 | 0.0138 | 0.0085 |
| Uranus | 88088-06-07 12:44 G | 33894699.78 | 33894700.03 | 33894700.30 | 0.0138 | 0.0009 |
| Uranus | 88089-06-11 22:48 G | 33895069.23 | 33895069.45 | 33895069.68 | 0.0138 | 0.0052 |
| Jupiter | 88089-07-15 11:32 G | 33895102.82 | 33895102.98 | 33895103.13 | 0.0527 | 0.0387 |
| Uranus | 88090-06-16 15:36 G | 33895439.03 | 33895439.15 | 33895439.31 | 0.0139 | 0.0117 |
| Saturn | 88100-12-22 00:58 G | 33899279.32 | 33899279.54 | 33899279.77 | 0.0273 | 0.0127 |
| Saturn | 88102-01-03 15:22 G | 33899656.98 | 33899657.14 | 33899657.32 | 0.0278 | 0.0205 |
| Saturn | 88114-06-20 09:22 G | 33904207.68 | 33904207.89 | 33904208.12 | 0.0288 | 0.0140 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 88115-07-03 18:58 G | 33904586.17 | 33904586.29 | 33904586.43 | 0.0284 | 0.0240 |
| Mars | 88121-10-24 21:22 G | 33906891.32 | 33906891.39 | 33906891.47 | 0.1706 | 0.1587 |
| Neptune | 88123-07-07 07:56 G | 33907511.69 | 33907511.83 | 33907512.03 | 0.0088 | 0.0068 |
| Neptune | 88124-07-08 23:46 G | 33907879.32 | 33907879.49 | 33907879.70 | 0.0088 | 0.0058 |
| Neptune | 88125-07-11 04:48 G | 33908246.47 | 33908246.70 | 33908246.96 | 0.0088 | 0.0029 |
| Neptune | 88126-07-13 22:48 G | 33908614.21 | 33908614.45 | 33908614.71 | 0.0088 | 0.0019 |
| Uranus | 88126-12-04 20:10 G | 33908758.23 | 33908758.34 | 33908758.49 | 0.0141 | 0.0121 |
| Neptune | 88127-07-16 03:22 G | 33908981.39 | 33908981.64 | 33908981.89 | 0.0088 | 0.0010 |
| Uranus | 88127-12-09 11:17 G | 33909127.74 | 33909127.97 | 33909128.22 | 0.0140 | 0.0046 |
| Neptune | 88128-07-17 19:56 G | 33909349.08 | 33909349.33 | 33909349.60 | 0.0088 | 0.0020 |
| Uranus | 88128-12-13 13:12 G | 33909497.79 | 33909498.05 | 33909498.31 | 0.0140 | 0.0013 |
| Neptune | 88129-07-20 02:39 G | 33909716.41 | 33909716.61 | 33909716.83 | 0.0088 | 0.0048 |
| Saturn | 88129-12-16 18:44 G | 33909866.27 | 33909866.28 | 33909866.31 | 0.0271 | 0.0270 |
| Uranus | 88129-12-18 01:12 G | 33909867.37 | 33909867.55 | 33909867.73 | 0.0140 | 0.0098 |
| Neptune | 88130-07-22 15:36 G | 33910083.97 | 33910084.15 | 33910084.37 | 0.0088 | 0.0058 |
| Saturn | 88130-12-29 14:39 G | 33910243.88 | 33910244.11 | 33910244.35 | 0.0276 | 0.0058 |
| Jupiter | 88131-01-12 17:17 G | 33910258.04 | 33910258.22 | 33910258.41 | 0.0498 | 0.0316 |
| Neptune | 88131-07-25 03:22 G | 33910451.61 | 33910451.64 | 33910451.71 | 0.0088 | 0.0086 |
| Jupiter | 88143-01-17 06:44 G | 33914645.57 | 33914645.78 | 33914646.00 | 0.0499 | 0.0122 |
| Saturn | 88144-06-27 14:53 G | 33915172.90 | 33915173.12 | 33915173.36 | 0.0286 | 0.0077 |
| Saturn | 88159-12-24 07:41 G | 33920830.59 | 33920830.82 | 33920831.07 | 0.0274 | 0.0089 |
| Jupiter | 88160-07-10 13:27 G | 33921029.87 | 33921030.06 | 33921030.26 | 0.0528 | 0.0265 |
| Saturn | 88161-01-05 00:58 G | 33921208.44 | 33921208.54 | 33921208.66 | 0.0278 | 0.0247 |
| Uranus | 88171-06-05 12:29 G | 33925011.82 | 33925012.02 | 33925012.25 | 0.0138 | 0.0064 |
| Uranus | 88172-06-09 02:39 G | 33925381.35 | 33925381.61 | 33925381.87 | 0.0138 | 0.0010 |
| Jupiter | 88172-07-15 22:34 G | 33925418.26 | 33925418.44 | 33925418.62 | 0.0527 | 0.0319 |
| Uranus | 88173-06-13 13:56 G | 33925750.86 | 33925751.08 | 33925751.30 | 0.0138 | 0.0063 |
| Saturn | 88173-06-21 15:08 G | 33925758.91 | 33925759.13 | 33925759.37 | 0.0288 | 0.0101 |
| Uranus | 88174-06-18 06:15 G | 33926120.67 | 33926120.76 | 33926120.85 | 0.0139 | 0.0130 |
| Saturn | 88174-07-05 04:20 G | 33926137.64 | 33926137.68 | 33926137.72 | 0.0283 | 0.0278 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 88188-12-18 10:20 G | 33931417.82 | 33931417.93 | 33931418.07 | 0.0272 | 0.0232 |
| Saturn | 88189-12-31 05:46 G | 33931795.51 | 33931795.74 | 33931795.97 | 0.0276 | 0.0099 |
| Saturn | 88202-06-17 11:17 G | 33936345.88 | 33936345.97 | 33936346.07 | 0.0290 | 0.0266 |
| Saturn | 88203-07-01 03:22 G | 33936724.41 | 33936724.64 | 33936724.87 | 0.0285 | 0.0120 |
| Neptune | 88206-01-08 07:41 G | 33937646.79 | 33937646.82 | 33937646.90 | 0.0089 | 0.0087 |
| Neptune | 88207-01-10 14:10 G | 33938013.97 | 33938014.09 | 33938014.28 | 0.0089 | 0.0074 |
| Neptune | 88208-01-13 09:51 G | 33938381.69 | 33938381.91 | 33938382.12 | 0.0089 | 0.0047 |
| Neptune | 88209-01-14 14:39 G | 33938748.89 | 33938749.11 | 33938749.36 | 0.0089 | 0.0034 |
| Neptune | 88210-01-17 09:51 G | 33939116.65 | 33939116.91 | 33939117.17 | 0.0089 | 0.0007 |
| Uranus | 88210-12-06 09:51 G | 33939439.77 | 33939439.91 | 33939440.08 | 0.0141 | 0.0112 |
| Neptune | 88211-01-19 16:20 G | 33939483.93 | 33939484.18 | 33939484.44 | 0.0089 | 0.0006 |
| Pluto | 88211-04-05 04:05 G | 33939559.54 | 33939559.67 | 33939559.82 | 0.0062 | 0.0052 |
| Uranus | 88211-12-11 01:27 G | 33939809.34 | 33939809.56 | 33939809.81 | 0.0140 | 0.0047 |
| Neptune | 88212-01-22 07:41 G | 33939851.58 | 33939851.82 | 33939852.08 | 0.0089 | 0.0032 |
| Pluto | 88212-04-05 09:22 G | 33939925.67 | 33939925.89 | 33939926.13 | 0.0063 | 0.0022 |
| Uranus | 88212-12-15 02:39 G | 33940179.36 | 33940179.61 | 33940179.87 | 0.0140 | 0.0036 |
| Neptune | 88213-01-23 18:44 G | 33940219.07 | 33940219.28 | 33940219.50 | 0.0089 | 0.0046 |
| Uranus | 88213-12-19 15:36 G | 33940548.96 | 33940549.15 | 33940549.34 | 0.0140 | 0.0091 |
| Jupiter | 88214-01-12 22:20 G | 33940573.30 | 33940573.43 | 33940573.56 | 0.0498 | 0.0398 |
| Neptune | 88214-01-26 05:32 G | 33940586.60 | 33940586.73 | 33940586.90 | 0.0089 | 0.0073 |
| Neptune | 88215-01-28 21:36 G | 33940954.35 | 33940954.40 | 33940954.49 | 0.0089 | 0.0086 |
| Saturn | 88218-12-26 19:56 G | 33942382.09 | 33942382.33 | 33942382.57 | 0.0274 | 0.0047 |
| Jupiter | 88226-01-17 10:05 G | 33944960.68 | 33944960.92 | 33944961.16 | 0.0499 | 0.0043 |
| Saturn | 88232-06-24 06:00 G | 33947310.52 | 33947310.75 | 33947310.99 | 0.0287 | 0.0053 |
| Jupiter | 88243-07-11 21:22 G | 33951345.22 | 33951345.39 | 33951345.57 | 0.0528 | 0.0341 |
| Saturn | 88247-12-22 02:39 G | 33952969.44 | 33952969.61 | 33952969.79 | 0.0272 | 0.0187 |
| Saturn | 88249-01-02 18:00 G | 33953347.03 | 33953347.25 | 33953347.47 | 0.0277 | 0.0141 |
| Uranus | 88254-06-02 15:08 G | 33955324.03 | 33955324.13 | 33955324.28 | 0.0137 | 0.0120 |
| Uranus | 88255-06-07 03:22 G | 33955693.44 | 33955693.64 | 33955693.86 | 0.0138 | 0.0070 |
| Jupiter | 88255-07-16 10:05 G | 33955732.70 | 33955732.92 | 33955733.14 | 0.0527 | 0.0197 |

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| Uranus | 88256-06-10 16:05 G | 33956062.91 | 33956063.17 | 33956063.44 | 0.0138 | 0.0008 |
| Uranus | 88257-06-15 03:36 G | 33956432.46 | 33956432.65 | 33956432.88 | 0.0138 | 0.0068 |
| Uranus | 88258-06-19 18:44 G | 33956802.23 | 33956802.28 | 33956802.36 | 0.0139 | 0.0134 |
| Saturn | 88261-06-19 02:10 G | 33957897.43 | 33957897.59 | 33957897.76 | 0.0289 | 0.0214 |
| Saturn | 88262-07-02 13:27 G | 33958275.86 | 33958276.06 | 33958276.27 | 0.0285 | 0.0168 |
| Saturn | 88277-12-28 13:56 G | 33963933.84 | 33963934.08 | 33963934.32 | 0.0275 | 0.0002 |
| Neptune | 88287-07-07 18:29 G | 33967412.17 | 33967412.27 | 33967412.42 | 0.0088 | 0.0077 |
| Neptune | 88288-07-08 22:48 G | 33967779.29 | 33967779.45 | 33967779.66 | 0.0088 | 0.0061 |
| Neptune | 88289-07-11 17:17 G | 33968146.99 | 33968147.22 | 33968147.46 | 0.0088 | 0.0038 |
| Neptune | 88290-07-13 22:05 G | 33968514.19 | 33968514.42 | 33968514.67 | 0.0088 | 0.0022 |
| Saturn | 88291-06-27 03:22 G | 33968862.41 | 33968862.64 | 33968862.88 | 0.0286 | 0.0006 |
| Neptune | 88291-07-16 14:53 G | 33968881.85 | 33968882.12 | 33968882.38 | 0.0088 | 0.0001 |
| Neptune | 88292-07-17 22:48 G | 33969249.21 | 33969249.45 | 33969249.70 | 0.0088 | 0.0016 |
| Neptune | 88293-07-20 10:20 G | 33969616.70 | 33969616.93 | 33969617.19 | 0.0088 | 0.0038 |
| Neptune | 88294-07-22 22:48 G | 33969984.27 | 33969984.45 | 33969984.66 | 0.0088 | 0.0055 |
| Uranus | 88294-12-07 00:44 G | 33970121.36 | 33970121.53 | 33970121.71 | 0.0141 | 0.0104 |
| Neptune | 88295-07-25 05:32 G | 33970351.63 | 33970351.73 | 33970351.88 | 0.0088 | 0.0077 |
| Uranus | 88295-12-11 17:03 G | 33970490.98 | 33970491.21 | 33970491.46 | 0.0140 | 0.0031 |
| Uranus | 88296-12-15 17:46 G | 33970860.99 | 33970861.24 | 33970861.50 | 0.0140 | 0.0030 |
| Jupiter | 88297-01-11 21:36 G | 33970888.38 | 33970888.40 | 33970888.43 | 0.0498 | 0.0495 |
| Uranus | 88297-12-20 06:44 G | 33971230.65 | 33971230.78 | 33971230.93 | 0.0140 | 0.0115 |
| Mars | 88301-04-24 03:22 G | 33972450.49 | 33972450.64 | 33972450.80 | 0.1842 | 0.1238 |
| Pluto | 88302-10-06 05:46 G | 33972980.49 | 33972980.74 | 33972981.02 | 0.0081 | 0.0020 |
| Saturn | 88306-12-24 14:53 G | 33974520.91 | 33974521.12 | 33974521.34 | 0.0273 | 0.0142 |
| Saturn | 88308-01-06 04:48 G | 33974898.53 | 33974898.70 | 33974898.90 | 0.0277 | 0.0185 |
| Jupiter | 88309-01-17 04:20 G | 33975275.45 | 33975275.68 | 33975275.91 | 0.0499 | 0.0050 |
| Saturn | 88320-06-21 16:34 G | 33979448.98 | 33979449.19 | 33979449.40 | 0.0289 | 0.0159 |
| Jupiter | 88321-01-21 22:34 G | 33979663.33 | 33979663.44 | 33979663.56 | 0.0500 | 0.0435 |
| Saturn | 88321-07-05 04:05 G | 33979827.51 | 33979827.67 | 33979827.82 | 0.0284 | 0.0219 |
| Jupiter | 88326-07-11 05:32 G | 33981659.63 | 33981659.73 | 33981659.84 | 0.0528 | 0.0474 |

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| Mars | 88326-10-25 09:36 G | 33981765.72 | 33981765.90 | 33981766.08 | 0.1694 | 0.0092 |
| Saturn | 88336-12-31 08:53 G | 33985485.63 | 33985485.87 | 33985486.11 | 0.0276 | 0.0045 |
| Uranus | 88338-06-04 03:51 G | 33986005.58 | 33986005.66 | 33986005.78 | 0.0137 | 0.0127 |
| Jupiter | 88338-07-16 11:46 G | 33986047.77 | 33986047.99 | 33986048.22 | 0.0528 | 0.0091 |
| Uranus | 88339-06-08 16:48 G | 33986374.98 | 33986375.20 | 33986375.44 | 0.0138 | 0.0049 |
| Uranus | 88340-06-12 04:20 G | 33986744.42 | 33986744.68 | 33986744.94 | 0.0138 | 0.0004 |
| Uranus | 88341-06-16 17:32 G | 33987114.03 | 33987114.23 | 33987114.43 | 0.0138 | 0.0079 |
| Saturn | 88350-06-29 23:17 G | 33990414.23 | 33990414.47 | 33990414.71 | 0.0286 | 0.0053 |
| Saturn | 88365-12-25 23:46 G | 33996072.25 | 33996072.49 | 33996072.73 | 0.0274 | 0.0099 |
| Saturn | 88367-01-07 19:12 G | 33996450.17 | 33996450.30 | 33996450.44 | 0.0278 | 0.0231 |
| Neptune | 88371-01-11 01:27 G | 33997914.46 | 33997914.56 | 33997914.67 | 0.0089 | 0.0080 |
| Neptune | 88372-01-13 06:29 G | 33998281.59 | 33998281.77 | 33998281.99 | 0.0089 | 0.0053 |
| Neptune | 88373-01-15 00:58 G | 33998649.31 | 33998649.54 | 33998649.78 | 0.0089 | 0.0041 |
| Neptune | 88374-01-17 09:08 G | 33999016.63 | 33999016.88 | 33999017.13 | 0.0089 | 0.0014 |
| Neptune | 88375-01-19 23:46 G | 33999384.22 | 33999384.49 | 33999384.75 | 0.0089 | 0.0002 |
| Neptune | 88376-01-22 11:46 G | 33999751.77 | 33999751.99 | 33999752.24 | 0.0089 | 0.0026 |
| Neptune | 88377-01-23 21:08 G | 34000119.16 | 34000119.38 | 34000119.64 | 0.0089 | 0.0038 |
| Neptune | 88378-01-26 13:41 G | 34000486.92 | 34000487.07 | 34000487.26 | 0.0089 | 0.0065 |
| Uranus | 88378-12-08 15:22 G | 34000802.95 | 34000803.14 | 34000803.33 | 0.0141 | 0.0096 |
| Neptune | 88379-01-28 19:12 G | 34000854.20 | 34000854.30 | 34000854.46 | 0.0089 | 0.0078 |
| Saturn | 88379-06-24 08:24 G | 34001000.63 | 34001000.85 | 34001001.08 | 0.0288 | 0.0107 |
| Uranus | 88379-12-13 08:24 G | 34001172.61 | 34001172.85 | 34001173.10 | 0.0140 | 0.0029 |
| Saturn | 88380-07-06 23:17 G | 34001379.41 | 34001379.47 | 34001379.54 | 0.0283 | 0.0270 |
| Uranus | 88380-12-17 07:56 G | 34001542.60 | 34001542.83 | 34001543.09 | 0.0140 | 0.0053 |
| Uranus | 88381-12-21 22:05 G | 34001912.28 | 34001912.42 | 34001912.58 | 0.0140 | 0.0109 |
| Jupiter | 88392-01-17 13:12 G | 34005590.82 | 34005591.05 | 34005591.28 | 0.0498 | 0.0123 |
| Saturn | 88394-12-21 04:48 G | 34006659.59 | 34006659.70 | 34006659.83 | 0.0272 | 0.0236 |
| Saturn | 88396-01-02 22:20 G | 34007037.20 | 34007037.43 | 34007037.68 | 0.0276 | 0.0091 |
| Jupiter | 88404-01-21 15:22 G | 34009977.98 | 34009978.14 | 34009978.31 | 0.0499 | 0.0346 |
| Saturn | 88408-06-18 01:12 G | 34011587.49 | 34011587.55 | 34011587.62 | 0.0289 | 0.0279 |

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| Saturn | 88409-07-01 14:53 G | 34011965.88 | 34011966.12 | 34011966.35 | 0.0285 | 0.0105 |
| Jupiter | 88421-07-15 09:36 G | 34016362.65 | 34016362.90 | 34016363.14 | 0.0528 | 0.0009 |
| Uranus | 88422-06-04 16:05 G | 34016687.02 | 34016687.17 | 34016687.34 | 0.0137 | 0.0106 |
| Uranus | 88423-06-09 05:46 G | 34017056.53 | 34017056.74 | 34017056.97 | 0.0138 | 0.0057 |
| Uranus | 88424-06-12 15:51 G | 34017425.91 | 34017426.16 | 34017426.43 | 0.0138 | 0.0022 |
| Saturn | 88424-12-27 09:36 G | 34017623.66 | 34017623.90 | 34017624.14 | 0.0274 | 0.0058 |
| Uranus | 88425-06-17 05:46 G | 34017795.54 | 34017795.74 | 34017795.94 | 0.0138 | 0.0080 |
| Saturn | 88426-01-09 10:34 G | 34018001.90 | 34018001.94 | 34018001.99 | 0.0278 | 0.0273 |
| Jupiter | 88433-07-20 05:32 G | 34020750.63 | 34020750.73 | 34020750.83 | 0.0527 | 0.0470 |
| Saturn | 88438-06-26 02:39 G | 34022552.38 | 34022552.61 | 34022552.84 | 0.0288 | 0.0055 |
| Neptune | 88451-07-07 18:00 G | 34027312.25 | 34027312.25 | 34027312.30 | 0.0088 | 0.0088 |
| Neptune | 88452-07-09 11:46 G | 34027679.83 | 34027679.99 | 34027680.20 | 0.0088 | 0.0061 |
| Neptune | 88453-07-11 17:03 G | 34028047.02 | 34028047.21 | 34028047.43 | 0.0088 | 0.0051 |
| Saturn | 88453-12-22 14:53 G | 34028210.95 | 34028211.12 | 34028211.30 | 0.0272 | 0.0197 |
| Neptune | 88454-07-14 08:10 G | 34028414.59 | 34028414.84 | 34028415.10 | 0.0088 | 0.0024 |
| Saturn | 88455-01-04 04:34 G | 34028588.46 | 34028588.69 | 34028588.92 | 0.0277 | 0.0127 |
| Neptune | 88455-07-16 17:17 G | 34028781.98 | 34028782.22 | 34028782.47 | 0.0088 | 0.0012 |
| Neptune | 88456-07-18 03:36 G | 34029149.39 | 34029149.65 | 34029149.92 | 0.0088 | 0.0015 |
| Neptune | 88457-07-20 18:15 G | 34029517.02 | 34029517.26 | 34029517.50 | 0.0088 | 0.0026 |
| Neptune | 88458-07-23 00:29 G | 34029884.31 | 34029884.52 | 34029884.73 | 0.0088 | 0.0054 |
| Pluto | 88459-04-07 22:05 G | 34030143.21 | 34030143.42 | 34030143.68 | 0.0063 | 0.0022 |
| Neptune | 88459-07-25 17:46 G | 34030252.08 | 34030252.24 | 34030252.43 | 0.0088 | 0.0064 |
| Pluto | 88460-04-08 10:20 G | 34030509.81 | 34030509.93 | 34030510.11 | 0.0063 | 0.0052 |
| Uranus | 88462-12-09 03:08 G | 34031484.43 | 34031484.63 | 34031484.84 | 0.0141 | 0.0088 |
| Uranus | 88463-12-13 21:36 G | 34031854.16 | 34031854.40 | 34031854.66 | 0.0141 | 0.0016 |
| Uranus | 88464-12-17 20:24 G | 34032224.12 | 34032224.35 | 34032224.61 | 0.0140 | 0.0048 |
| Uranus | 88465-12-22 11:03 G | 34032593.90 | 34032593.96 | 34032594.06 | 0.0140 | 0.0132 |
| Saturn | 88467-06-20 14:10 G | 34033138.94 | 34033139.09 | 34033139.25 | 0.0289 | 0.0228 |
| Saturn | 88468-07-03 01:12 G | 34033517.35 | 34033517.55 | 34033517.78 | 0.0284 | 0.0153 |
| Jupiter | 88475-01-16 06:44 G | 34035905.57 | 34035905.78 | 34035906.00 | 0.0498 | 0.0208 |

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| Saturn | 88483-12-29 20:24 G | 34039175.12 | 34039175.35 | 34039175.59 | 0.0275 | 0.0025 |
| Jupiter | 88487-01-21 01:27 G | 34040293.37 | 34040293.56 | 34040293.75 | 0.0499 | 0.0277 |
| Saturn | 88497-06-27 19:41 G | 34044104.08 | 34044104.32 | 34044104.56 | 0.0287 | 0.0010 |
| Jupiter | 88504-07-15 05:32 G | 34046677.51 | 34046677.73 | 34046677.95 | 0.0528 | 0.0122 |
| Uranus | 88506-06-06 03:51 G | 34047368.53 | 34047368.66 | 34047368.81 | 0.0137 | 0.0113 |
| Uranus | 88507-06-10 18:29 G | 34047738.04 | 34047738.27 | 34047738.51 | 0.0137 | 0.0036 |
| Uranus | 88508-06-14 03:08 G | 34048107.37 | 34048107.63 | 34048107.89 | 0.0138 | 0.0016 |
| Uranus | 88509-06-18 17:46 G | 34048477.08 | 34048477.24 | 34048477.44 | 0.0138 | 0.0093 |
| Saturn | 88512-12-24 15:36 G | 34049761.96 | 34049762.15 | 34049762.37 | 0.0273 | 0.0167 |
| Saturn | 88514-01-06 07:12 G | 34050139.60 | 34050139.80 | 34050140.00 | 0.0277 | 0.0159 |
| Jupiter | 88516-07-20 07:56 G | 34051065.66 | 34051065.83 | 34051066.01 | 0.0527 | 0.0365 |
| Saturn | 88526-06-22 21:08 G | 34054690.20 | 34054690.38 | 34054690.58 | 0.0289 | 0.0185 |
| Saturn | 88527-07-06 11:46 G | 34055068.82 | 34055068.99 | 34055069.16 | 0.0284 | 0.0195 |
| Neptune | 88535-01-10 23:03 G | 34057814.38 | 34057814.46 | 34057814.56 | 0.0089 | 0.0082 |
| Neptune | 88536-01-13 16:20 G | 34058182.02 | 34058182.18 | 34058182.37 | 0.0089 | 0.0066 |
| Neptune | 88537-01-15 01:41 G | 34058549.36 | 34058549.57 | 34058549.80 | 0.0089 | 0.0043 |
| Neptune | 88538-01-17 14:24 G | 34058916.85 | 34058917.10 | 34058917.36 | 0.0089 | 0.0026 |
| Neptune | 88539-01-20 04:05 G | 34059284.42 | 34059284.67 | 34059284.92 | 0.0089 | 0.0003 |
| Neptune | 88540-01-22 12:15 G | 34059651.75 | 34059652.01 | 34059652.27 | 0.0089 | 0.0013 |
| Neptune | 88541-01-24 06:15 G | 34060019.54 | 34060019.76 | 34060020.00 | 0.0089 | 0.0036 |
| Neptune | 88542-01-26 11:17 G | 34060386.78 | 34060386.97 | 34060387.20 | 0.0089 | 0.0051 |
| Saturn | 88543-01-01 02:39 G | 34060726.36 | 34060726.61 | 34060726.86 | 0.0275 | 0.0005 |
| Neptune | 88543-01-29 06:58 G | 34060754.66 | 34060754.79 | 34060754.93 | 0.0089 | 0.0076 |
| Uranus | 88546-12-10 12:44 G | 34062165.83 | 34062166.03 | 34062166.25 | 0.0141 | 0.0086 |
| Uranus | 88547-12-15 08:53 G | 34062535.62 | 34062535.87 | 34062536.12 | 0.0141 | 0.0014 |
| Uranus | 88548-12-19 06:29 G | 34062905.54 | 34062905.77 | 34062906.01 | 0.0140 | 0.0065 |
| Uranus | 88549-12-23 22:34 G | 34063275.34 | 34063275.44 | 34063275.57 | 0.0140 | 0.0123 |
| Saturn | 88556-06-30 04:20 G | 34065655.43 | 34065655.68 | 34065655.93 | 0.0287 | 0.0030 |
| Jupiter | 88558-01-16 23:17 G | 34066221.28 | 34066221.47 | 34066221.67 | 0.0498 | 0.0243 |
| Jupiter | 88570-01-21 05:17 G | 34070608.51 | 34070608.72 | 34070608.93 | 0.0499 | 0.0228 |

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| Saturn | 88571-12-26 14:10 G | 34071312.89 | 34071313.09 | 34071313.31 | 0.0273 | 0.0141 |
| Saturn | 88573-01-07 11:17 G | 34071690.79 | 34071690.97 | 34071691.15 | 0.0277 | 0.0185 |
| Mars | 88585-04-25 00:00 G | 34076181.42 | 34076181.50 | 34076181.58 | 0.1852 | 0.1633 |
| Saturn | 88585-06-24 04:34 G | 34076241.48 | 34076241.69 | 34076241.90 | 0.0289 | 0.0145 |
| Saturn | 88586-07-07 21:51 G | 34076620.29 | 34076620.41 | 34076620.55 | 0.0284 | 0.0236 |
| Jupiter | 88587-07-15 12:15 G | 34076992.79 | 34076993.01 | 34076993.24 | 0.0529 | 0.0197 |
| Uranus | 88590-06-06 17:32 G | 34078050.05 | 34078050.23 | 34078050.42 | 0.0137 | 0.0093 |
| Uranus | 88591-06-11 08:39 G | 34078419.64 | 34078419.86 | 34078420.10 | 0.0137 | 0.0043 |
| Uranus | 88592-06-14 16:20 G | 34078788.93 | 34078789.18 | 34078789.44 | 0.0138 | 0.0036 |
| Uranus | 88593-06-19 07:41 G | 34079158.65 | 34079158.82 | 34079159.02 | 0.0138 | 0.0093 |
| Jupiter | 88599-07-20 09:51 G | 34081380.72 | 34081380.91 | 34081381.10 | 0.0528 | 0.0296 |
| Saturn | 88602-01-02 22:48 G | 34082277.19 | 34082277.45 | 34082277.70 | 0.0275 | 0.0028 |
| Mars | 88610-10-28 01:12 G | 34085497.35 | 34085497.55 | 34085497.75 | 0.1687 | 0.0440 |
| Saturn | 88615-07-03 03:36 G | 34087206.41 | 34087206.65 | 34087206.90 | 0.0287 | 0.0068 |
| Neptune | 88616-07-10 11:32 G | 34087579.85 | 34087579.98 | 34087580.16 | 0.0088 | 0.0070 |
| Neptune | 88617-07-13 01:41 G | 34087947.39 | 34087947.57 | 34087947.80 | 0.0088 | 0.0056 |
| Neptune | 88618-07-15 12:58 G | 34088314.81 | 34088315.04 | 34088315.27 | 0.0088 | 0.0031 |
| Neptune | 88619-07-17 22:05 G | 34088682.16 | 34088682.42 | 34088682.68 | 0.0088 | 0.0018 |
| Neptune | 88620-07-19 13:12 G | 34089049.80 | 34089050.05 | 34089050.30 | 0.0088 | 0.0008 |
| Neptune | 88621-07-21 18:00 G | 34089417.01 | 34089417.25 | 34089417.52 | 0.0088 | 0.0020 |
| Neptune | 88622-07-24 11:46 G | 34089784.79 | 34089784.99 | 34089785.24 | 0.0088 | 0.0046 |
| Neptune | 88623-07-26 16:20 G | 34090152.00 | 34090152.18 | 34090152.38 | 0.0088 | 0.0058 |
| Neptune | 88624-07-28 09:22 G | 34090519.83 | 34090519.89 | 34090520.00 | 0.0088 | 0.0083 |
| Uranus | 88630-12-11 21:22 G | 34092847.18 | 34092847.39 | 34092847.63 | 0.0141 | 0.0077 |
| Saturn | 88630-12-28 14:53 G | 34092863.91 | 34092864.12 | 34092864.34 | 0.0273 | 0.0118 |
| Uranus | 88631-12-16 19:12 G | 34093217.06 | 34093217.30 | 34093217.55 | 0.0141 | 0.0006 |
| Saturn | 88632-01-10 13:12 G | 34093241.90 | 34093242.05 | 34093242.23 | 0.0277 | 0.0206 |
| Uranus | 88632-12-20 15:36 G | 34093586.92 | 34093587.15 | 34093587.40 | 0.0140 | 0.0059 |
| Jupiter | 88641-01-17 03:51 G | 34096536.47 | 34096536.66 | 34096536.86 | 0.0498 | 0.0283 |
| Saturn | 88644-06-26 10:34 G | 34097792.73 | 34097792.94 | 34097793.16 | 0.0289 | 0.0110 |

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| Saturn | 88645-07-10 02:53 G | 34098171.55 | 34098171.62 | 34098171.70 | 0.0284 | 0.0269 |
| Jupiter | 88653-01-21 16:20 G | 34100923.97 | 34100924.18 | 34100924.39 | 0.0498 | 0.0177 |
| Saturn | 88659-12-23 04:34 G | 34103450.65 | 34103450.69 | 34103450.77 | 0.0271 | 0.0263 |
| Saturn | 88661-01-03 14:53 G | 34103827.87 | 34103828.12 | 34103828.37 | 0.0275 | 0.0046 |
| Jupiter | 88670-07-15 12:58 G | 34107307.84 | 34107308.04 | 34107308.23 | 0.0528 | 0.0270 |
| Uranus | 88674-06-08 07:27 G | 34108731.64 | 34108731.81 | 34108731.99 | 0.0137 | 0.0098 |
| Saturn | 88674-07-04 00:44 G | 34108757.31 | 34108757.53 | 34108757.76 | 0.0287 | 0.0100 |
| Uranus | 88675-06-12 23:32 G | 34109101.24 | 34109101.48 | 34109101.72 | 0.0137 | 0.0021 |
| Uranus | 88676-06-16 06:00 G | 34109470.50 | 34109470.75 | 34109471.01 | 0.0138 | 0.0031 |
| Uranus | 88677-06-20 22:48 G | 34109840.31 | 34109840.45 | 34109840.60 | 0.0138 | 0.0109 |
| Jupiter | 88682-07-20 20:39 G | 34111696.15 | 34111696.36 | 34111696.58 | 0.0527 | 0.0215 |
| Saturn | 88689-12-29 13:55 G | 34114414.86 | 34114415.08 | 34114415.31 | 0.0273 | 0.0099 |
| Saturn | 88691-01-11 06:58 G | 34114792.66 | 34114792.79 | 34114792.95 | 0.0277 | 0.0225 |
| Neptune | 88699-01-11 07:41 G | 34117714.75 | 34117714.82 | 34117714.89 | 0.0089 | 0.0085 |
| Neptune | 88700-01-13 18:15 G | 34118082.14 | 34118082.26 | 34118082.40 | 0.0089 | 0.0075 |
| Neptune | 88701-01-16 06:00 G | 34118449.53 | 34118449.75 | 34118449.99 | 0.0089 | 0.0046 |
| Neptune | 88702-01-18 21:36 G | 34118817.18 | 34118817.40 | 34118817.64 | 0.0089 | 0.0036 |
| Neptune | 88703-01-21 05:03 G | 34119184.45 | 34119184.71 | 34119184.97 | 0.0089 | 0.0007 |
| Saturn | 88703-06-29 11:03 G | 34119343.72 | 34119343.96 | 34119344.19 | 0.0289 | 0.0081 |
| Neptune | 88704-01-23 23:31 G | 34119552.23 | 34119552.48 | 34119552.74 | 0.0089 | 0.0004 |
| Neptune | 88705-01-25 04:19 G | 34119919.46 | 34119919.68 | 34119919.94 | 0.0089 | 0.0033 |
| Neptune | 88706-01-27 23:31 G | 34120287.25 | 34120287.48 | 34120287.71 | 0.0089 | 0.0043 |
| Pluto | 88706-04-11 15:07 G | 34120361.13 | 34120361.13 | 34120361.17 | 0.0062 | 0.0062 |
| Neptune | 88707-01-30 05:17 G | 34120654.59 | 34120654.72 | 34120654.89 | 0.0089 | 0.0071 |
| Pluto | 88707-04-13 06:15 G | 34120727.51 | 34120727.76 | 34120728.02 | 0.0063 | 0.0016 |
| Neptune | 88708-02-01 21:22 G | 34121022.30 | 34121022.39 | 34121022.51 | 0.0089 | 0.0082 |
| Uranus | 88713-12-08 14:39 G | 34123159.08 | 34123159.11 | 34123159.15 | 0.0141 | 0.0140 |
| Uranus | 88714-12-13 09:07 G | 34123528.67 | 34123528.88 | 34123529.11 | 0.0141 | 0.0076 |
| Uranus | 88715-12-18 07:55 G | 34123898.58 | 34123898.83 | 34123899.07 | 0.0141 | 0.0002 |
| Uranus | 88716-12-22 02:39 G | 34124268.41 | 34124268.61 | 34124268.85 | 0.0140 | 0.0077 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 88717-12-26 21:22 G | 34124638.35 | 34124638.39 | 34124638.47 | 0.0140 | 0.0136 |
| Saturn | 88718-12-24 18:58 G | 34125001.20 | 34125001.29 | 34125001.40 | 0.0271 | 0.0246 |
| Saturn | 88720-01-06 10:19 G | 34125378.70 | 34125378.93 | 34125379.17 | 0.0275 | 0.0067 |
| Jupiter | 88724-01-18 18:00 G | 34126852.08 | 34126852.25 | 34126852.42 | 0.0498 | 0.0316 |
| Saturn | 88732-06-22 01:27 G | 34129929.48 | 34129929.56 | 34129929.66 | 0.0291 | 0.0269 |
| Saturn | 88733-07-06 00:15 G | 34130308.31 | 34130308.51 | 34130308.73 | 0.0287 | 0.0128 |
| Jupiter | 88736-01-23 06:43 G | 34131239.55 | 34131239.78 | 34131240.02 | 0.0499 | 0.0147 |
| Saturn | 88748-12-31 07:41 G | 34135965.58 | 34135965.82 | 34135966.06 | 0.0273 | 0.0081 |
| Saturn | 88750-01-12 20:24 G | 34136343.23 | 34136343.35 | 34136343.48 | 0.0277 | 0.0240 |
| Jupiter | 88753-07-16 03:07 G | 34137623.45 | 34137623.63 | 34137623.82 | 0.0528 | 0.0330 |
| Uranus | 88758-06-09 22:05 G | 34139413.23 | 34139413.42 | 34139413.64 | 0.0137 | 0.0079 |
| Uranus | 88759-06-14 15:07 G | 34139782.89 | 34139783.13 | 34139783.37 | 0.0137 | 0.0028 |
| Uranus | 88760-06-17 20:53 G | 34140152.15 | 34140152.37 | 34140152.62 | 0.0138 | 0.0053 |
| Uranus | 88761-06-22 14:10 G | 34140521.95 | 34140522.09 | 34140522.26 | 0.0138 | 0.0108 |
| Saturn | 88762-06-30 03:07 G | 34140894.39 | 34140894.63 | 34140894.88 | 0.0289 | 0.0054 |
| Jupiter | 88765-07-20 22:05 G | 34142011.19 | 34142011.42 | 34142011.64 | 0.0528 | 0.0160 |
| Saturn | 88777-12-25 14:10 G | 34146551.98 | 34146552.09 | 34146552.22 | 0.0271 | 0.0232 |
| Saturn | 88779-01-07 08:10 G | 34146929.62 | 34146929.84 | 34146930.08 | 0.0275 | 0.0083 |
| Neptune | 88780-07-10 19:55 G | 34147480.24 | 34147480.33 | 34147480.46 | 0.0088 | 0.0081 |
| Neptune | 88781-07-13 07:27 G | 34147847.64 | 34147847.81 | 34147848.02 | 0.0088 | 0.0057 |
| Neptune | 88782-07-15 15:07 G | 34148214.91 | 34148215.13 | 34148215.38 | 0.0088 | 0.0043 |
| Neptune | 88783-07-18 07:27 G | 34148582.57 | 34148582.81 | 34148583.06 | 0.0088 | 0.0018 |
| Neptune | 88784-07-19 12:15 G | 34148949.75 | 34148950.01 | 34148950.27 | 0.0088 | 0.0006 |
| Neptune | 88785-07-22 06:15 G | 34149317.51 | 34149317.76 | 34149318.02 | 0.0088 | 0.0020 |
| Neptune | 88786-07-24 10:34 G | 34149684.72 | 34149684.94 | 34149685.19 | 0.0088 | 0.0033 |
| Neptune | 88787-07-27 03:07 G | 34150052.45 | 34150052.63 | 34150052.85 | 0.0088 | 0.0059 |
| Neptune | 88788-07-28 10:48 G | 34150419.83 | 34150419.95 | 34150420.12 | 0.0088 | 0.0071 |
| Saturn | 88791-06-24 00:00 G | 34151480.38 | 34151480.50 | 34151480.63 | 0.0291 | 0.0244 |
| Saturn | 88792-07-06 22:48 G | 34151859.25 | 34151859.45 | 34151859.66 | 0.0287 | 0.0153 |
| Pluto | 88797-10-12 00:00 G | 34153782.25 | 34153782.50 | 34153782.76 | 0.0081 | 0.0006 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 88798-12-13 21:22 G | 34154210.16 | 34154210.39 | 34154210.64 | 0.0141 | 0.0063 |
| Uranus | 88799-12-18 21:22 G | 34154580.14 | 34154580.39 | 34154580.64 | 0.0141 | 0.0007 |
| Uranus | 88800-12-22 15:36 G | 34154949.92 | 34154950.15 | 34154950.37 | 0.0140 | 0.0074 |
| Jupiter | 88807-01-18 07:41 G | 34157167.65 | 34157167.82 | 34157168.00 | 0.0498 | 0.0339 |
| Saturn | 88808-01-01 20:39 G | 34157516.12 | 34157516.36 | 34157516.61 | 0.0272 | 0.0068 |
| Saturn | 88809-01-13 13:27 G | 34157893.99 | 34157894.06 | 34157894.15 | 0.0277 | 0.0260 |
| Jupiter | 88819-01-22 15:22 G | 34161554.92 | 34161555.14 | 34161555.37 | 0.0498 | 0.0110 |
| Saturn | 88821-06-30 18:43 G | 34162445.03 | 34162445.28 | 34162445.52 | 0.0289 | 0.0028 |
| Jupiter | 88836-07-15 07:27 G | 34167938.64 | 34167938.81 | 34167938.97 | 0.0529 | 0.0373 |
| Saturn | 88836-12-26 14:39 G | 34168102.97 | 34168103.11 | 34168103.26 | 0.0271 | 0.0216 |
| Saturn | 88838-01-08 04:19 G | 34168480.45 | 34168480.68 | 34168480.92 | 0.0275 | 0.0101 |
| Uranus | 88842-06-10 12:00 G | 34170094.80 | 34170095.00 | 34170095.20 | 0.0137 | 0.0083 |
| Uranus | 88843-06-15 05:03 G | 34170464.47 | 34170464.71 | 34170464.96 | 0.0137 | 0.0006 |
| Uranus | 88844-06-18 10:19 G | 34170833.70 | 34170833.93 | 34170834.18 | 0.0138 | 0.0046 |
| Uranus | 88845-06-23 04:34 G | 34171203.60 | 34171203.69 | 34171203.80 | 0.0138 | 0.0126 |
| Jupiter | 88848-07-20 14:39 G | 34172326.89 | 34172327.11 | 34172327.33 | 0.0527 | 0.0116 |
| Saturn | 88850-06-24 21:36 G | 34173031.25 | 34173031.40 | 34173031.57 | 0.0292 | 0.0218 |
| Saturn | 88851-07-08 16:05 G | 34173409.97 | 34173410.17 | 34173410.37 | 0.0287 | 0.0176 |
| Neptune | 88864-01-13 21:51 G | 34177982.30 | 34177982.41 | 34177982.56 | 0.0089 | 0.0077 |
| Neptune | 88865-01-15 14:24 G | 34178349.92 | 34178350.10 | 34178350.30 | 0.0089 | 0.0058 |
| Neptune | 88866-01-17 20:39 G | 34178717.14 | 34178717.36 | 34178717.61 | 0.0089 | 0.0039 |
| Saturn | 88867-01-02 15:36 G | 34179066.91 | 34179067.15 | 34179067.39 | 0.0272 | 0.0051 |
| Neptune | 88867-01-20 15:51 G | 34179084.93 | 34179085.16 | 34179085.43 | 0.0089 | 0.0020 |
| Neptune | 88868-01-22 21:36 G | 34179452.14 | 34179452.40 | 34179452.65 | 0.0089 | 0.0002 |
| Neptune | 88869-01-24 15:51 G | 34179819.91 | 34179820.16 | 34179820.43 | 0.0089 | 0.0020 |
| Mars | 88869-04-27 11:03 G | 34179912.87 | 34179912.96 | 34179913.05 | 0.1861 | 0.1639 |
| Neptune | 88870-01-26 23:17 G | 34180187.25 | 34180187.47 | 34180187.70 | 0.0089 | 0.0041 |
| Neptune | 88871-01-29 14:10 G | 34180554.91 | 34180555.09 | 34180555.31 | 0.0089 | 0.0059 |
| Neptune | 88872-02-01 01:41 G | 34180922.49 | 34180922.57 | 34180922.71 | 0.0089 | 0.0081 |
| Saturn | 88880-07-01 16:34 G | 34183995.95 | 34183996.19 | 34183996.43 | 0.0289 | 0.0001 |

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| Uranus | 88881-12-09 18:43 G | 34184522.19 | 34184522.28 | 34184522.42 | 0.0141 | 0.0125 |
| Uranus | 88882-12-14 11:46 G | 34184891.76 | 34184891.99 | 34184892.23 | 0.0141 | 0.0062 |
| Uranus | 88883-12-19 12:15 G | 34185261.76 | 34185262.01 | 34185262.26 | 0.0141 | 0.0015 |
| Uranus | 88884-12-23 05:03 G | 34185631.52 | 34185631.71 | 34185631.93 | 0.0140 | 0.0091 |
| Jupiter | 88890-01-17 14:24 G | 34187482.96 | 34187483.10 | 34187483.25 | 0.0497 | 0.0378 |
| Mars | 88894-10-29 09:36 G | 34189228.73 | 34189228.90 | 34189229.07 | 0.1679 | 0.0814 |
| Saturn | 88895-12-28 12:00 G | 34189653.84 | 34189654.00 | 34189654.19 | 0.0271 | 0.0196 |
| Saturn | 88897-01-08 21:07 G | 34190031.16 | 34190031.38 | 34190031.61 | 0.0275 | 0.0121 |
| Jupiter | 88902-01-23 09:07 G | 34191870.65 | 34191870.88 | 34191871.11 | 0.0498 | 0.0064 |
| Saturn | 88909-06-26 15:07 G | 34194581.94 | 34194582.13 | 34194582.33 | 0.0291 | 0.0186 |
| Saturn | 88910-07-10 07:55 G | 34194960.67 | 34194960.83 | 34194961.01 | 0.0287 | 0.0206 |
| Jupiter | 88914-01-27 11:46 G | 34196257.91 | 34196257.99 | 34196258.09 | 0.0500 | 0.0459 |
| Jupiter | 88919-07-16 22:19 G | 34198254.31 | 34198254.43 | 34198254.56 | 0.0528 | 0.0431 |
| Saturn | 88926-01-04 19:27 G | 34200618.07 | 34200618.31 | 34200618.55 | 0.0272 | 0.0027 |
| Uranus | 88926-06-12 01:12 G | 34200776.32 | 34200776.55 | 34200776.77 | 0.0137 | 0.0066 |
| Uranus | 88927-06-16 18:43 G | 34201146.03 | 34201146.28 | 34201146.53 | 0.0137 | 0.0013 |
| Uranus | 88928-06-19 23:31 G | 34201515.27 | 34201515.48 | 34201515.72 | 0.0138 | 0.0068 |
| Uranus | 88929-06-24 18:15 G | 34201885.17 | 34201885.26 | 34201885.39 | 0.0138 | 0.0123 |
| Jupiter | 88931-07-21 17:17 G | 34202641.97 | 34202642.22 | 34202642.46 | 0.0527 | 0.0045 |
| Saturn | 88939-07-04 19:27 G | 34205547.07 | 34205547.31 | 34205547.54 | 0.0289 | 0.0033 |
| Neptune | 88944-07-11 03:07 G | 34207380.63 | 34207380.63 | 34207380.66 | 0.0088 | 0.0088 |
| Neptune | 88945-07-13 09:51 G | 34207747.75 | 34207747.91 | 34207748.13 | 0.0088 | 0.0062 |
| Neptune | 88946-07-16 02:53 G | 34208115.44 | 34208115.62 | 34208115.85 | 0.0088 | 0.0052 |
| Neptune | 88947-07-18 07:27 G | 34208482.57 | 34208482.81 | 34208483.07 | 0.0088 | 0.0024 |
| Mars | 88948-05-01 02:53 G | 34208770.55 | 34208770.62 | 34208770.69 | 0.1855 | 0.1695 |
| Neptune | 88948-07-20 01:27 G | 34208850.31 | 34208850.56 | 34208850.83 | 0.0088 | 0.0013 |
| Neptune | 88949-07-22 06:15 G | 34209217.53 | 34209217.76 | 34209218.02 | 0.0088 | 0.0015 |
| Neptune | 88950-07-24 21:36 G | 34209585.16 | 34209585.40 | 34209585.67 | 0.0088 | 0.0027 |
| Neptune | 88951-07-27 05:46 G | 34209952.56 | 34209952.74 | 34209952.96 | 0.0088 | 0.0053 |
| Neptune | 88952-07-28 16:34 G | 34210320.04 | 34210320.19 | 34210320.41 | 0.0088 | 0.0064 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 88954-04-15 03:22 G | 34210945.39 | 34210945.64 | 34210945.90 | 0.0063 | 0.0012 |
| Saturn | 88954-12-30 08:24 G | 34211204.66 | 34211204.85 | 34211205.06 | 0.0271 | 0.0171 |
| Pluto | 88955-04-16 09:07 G | 34211311.82 | 34211311.88 | 34211311.95 | 0.0063 | 0.0060 |
| Saturn | 88956-01-11 19:41 G | 34211582.12 | 34211582.32 | 34211582.53 | 0.0275 | 0.0148 |
| Uranus | 88965-12-11 07:12 G | 34215203.74 | 34215203.80 | 34215203.91 | 0.0142 | 0.0133 |
| Uranus | 88966-12-16 00:00 G | 34215573.25 | 34215573.50 | 34215573.75 | 0.0141 | 0.0047 |
| Uranus | 88967-12-21 01:41 G | 34215943.32 | 34215943.57 | 34215943.82 | 0.0141 | 0.0021 |
| Saturn | 88968-06-27 10:34 G | 34216132.74 | 34216132.94 | 34216133.16 | 0.0291 | 0.0151 |
| Uranus | 88968-12-24 17:31 G | 34216313.04 | 34216313.23 | 34216313.44 | 0.0140 | 0.0090 |
| Saturn | 88969-07-11 07:12 G | 34216511.68 | 34216511.80 | 34216511.94 | 0.0287 | 0.0238 |
| Jupiter | 88973-01-18 04:34 G | 34217798.57 | 34217798.69 | 34217798.82 | 0.0498 | 0.0420 |
| Saturn | 88985-01-06 00:00 G | 34222169.25 | 34222169.50 | 34222169.75 | 0.0273 | 0.0001 |
| Jupiter | 88985-01-22 09:07 G | 34222185.64 | 34222185.88 | 34222186.12 | 0.0499 | 0.0008 |
| Jupiter | 88997-01-27 03:36 G | 34226573.53 | 34226573.65 | 34226573.79 | 0.0499 | 0.0411 |
| Saturn | 88998-07-05 20:53 G | 34227098.14 | 34227098.37 | 34227098.62 | 0.0289 | 0.0069 |

90TH MILLENNIUM CE

This is a list of transits of Moon in the 90th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Jupiter | 89002-07-16 20:39 G | 34228569.33 | 34228569.36 | 34228569.41 | 0.0529 | 0.0520 | | |
| Uranus | 89009-06-09 09:36 G | 34231088.83 | 34231088.90 | 34231089.00 | 0.0137 | 0.0128 | | |
| Uranus | 89010-06-13 12:29 G | 34231457.82 | 34231458.02 | 34231458.25 | 0.0137 | 0.0071 | | |
| Uranus | 89011-06-18 06:29 G | 34231827.52 | 34231827.77 | 34231828.02 | 0.0137 | 0.0007 | | |

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| Uranus | 89012-06-21 10:48 G | 34232196.73 | 34232196.95 | 34232197.19 | 0.0138 | 0.0059 |
| Saturn | 89014-01-01 12:15 G | 34232755.80 | 34232756.01 | 34232756.22 | 0.0271 | 0.0140 |
| Jupiter | 89014-07-21 23:03 G | 34232957.23 | 34232957.46 | 34232957.68 | 0.0528 | 0.0025 |
| Saturn | 89015-01-14 05:03 G | 34233133.55 | 34233133.71 | 34233133.90 | 0.0275 | 0.0184 |
| Saturn | 89027-06-30 16:34 G | 34237683.98 | 34237684.19 | 34237684.41 | 0.0291 | 0.0115 |
| Neptune | 89028-01-15 08:10 G | 34237882.75 | 34237882.84 | 34237882.98 | 0.0089 | 0.0079 |
| Saturn | 89028-07-13 15:36 G | 34238063.09 | 34238063.15 | 34238063.23 | 0.0286 | 0.0273 |
| Neptune | 89029-01-16 13:55 G | 34238249.94 | 34238250.08 | 34238250.26 | 0.0089 | 0.0069 |
| Neptune | 89030-01-19 09:22 G | 34238617.67 | 34238617.89 | 34238618.14 | 0.0089 | 0.0040 |
| Neptune | 89031-01-21 15:07 G | 34238984.91 | 34238985.13 | 34238985.39 | 0.0089 | 0.0030 |
| Neptune | 89032-01-24 09:36 G | 34239352.63 | 34239352.90 | 34239353.16 | 0.0089 | 0.0001 |
| Neptune | 89033-01-25 18:00 G | 34239720.00 | 34239720.25 | 34239720.50 | 0.0089 | 0.0009 |
| Neptune | 89034-01-28 06:58 G | 34240087.57 | 34240087.79 | 34240088.05 | 0.0089 | 0.0038 |
| Neptune | 89035-01-30 20:10 G | 34240455.14 | 34240455.34 | 34240455.56 | 0.0089 | 0.0049 |
| Neptune | 89036-02-02 04:34 G | 34240822.58 | 34240822.69 | 34240822.84 | 0.0089 | 0.0077 |
| Neptune | 89037-02-03 21:51 G | 34241190.39 | 34241190.41 | 34241190.48 | 0.0089 | 0.0088 |
| Saturn | 89044-01-09 03:36 G | 34243720.40 | 34243720.65 | 34243720.91 | 0.0273 | 0.0038 |
| Pluto | 89044-10-14 11:17 G | 34243999.83 | 34243999.97 | 34244000.15 | 0.0081 | 0.0064 |
| Uranus | 89049-12-12 19:12 G | 34245885.15 | 34245885.30 | 34245885.45 | 0.0142 | 0.0112 |
| Uranus | 89050-12-17 10:34 G | 34246254.70 | 34246254.94 | 34246255.19 | 0.0141 | 0.0051 |
| Uranus | 89051-12-22 12:58 G | 34246624.80 | 34246625.04 | 34246625.29 | 0.0141 | 0.0029 |
| Uranus | 89052-12-26 04:19 G | 34246994.51 | 34246994.68 | 34246994.86 | 0.0140 | 0.0103 |
| Jupiter | 89056-01-19 04:19 G | 34248113.62 | 34248113.68 | 34248113.76 | 0.0498 | 0.0475 |
| Saturn | 89056-06-24 03:07 G | 34248270.61 | 34248270.63 | 34248270.67 | 0.0293 | 0.0290 |
| Saturn | 89057-07-07 22:34 G | 34248649.21 | 34248649.44 | 34248649.67 | 0.0289 | 0.0108 |
| Jupiter | 89068-01-23 21:22 G | 34252501.16 | 34252501.39 | 34252501.62 | 0.0498 | 0.0057 |
| Saturn | 89073-01-03 00:00 G | 34254307.29 | 34254307.50 | 34254307.73 | 0.0271 | 0.0102 |
| Saturn | 89074-01-15 18:29 G | 34254685.14 | 34254685.27 | 34254685.42 | 0.0276 | 0.0223 |
| Jupiter | 89080-01-28 03:22 G | 34256888.47 | 34256888.64 | 34256888.82 | 0.0499 | 0.0338 |
| Saturn | 89086-07-02 05:46 G | 34259235.52 | 34259235.74 | 34259235.97 | 0.0291 | 0.0072 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 89093-06-09 21:36 G | 34261770.32 | 34261770.40 | 34261770.51 | 0.0137 | 0.0127 |
| Uranus | 89094-06-14 00:43 G | 34262139.31 | 34262139.53 | 34262139.77 | 0.0137 | 0.0055 |
| Uranus | 89095-06-18 18:43 G | 34262509.03 | 34262509.28 | 34262509.54 | 0.0137 | 0.0002 |
| Uranus | 89096-06-21 23:03 G | 34262878.27 | 34262878.46 | 34262878.68 | 0.0138 | 0.0081 |
| Uranus | 89097-06-26 18:29 G | 34263248.23 | 34263248.27 | 34263248.34 | 0.0138 | 0.0134 |
| Jupiter | 89097-07-21 06:43 G | 34263272.55 | 34263272.78 | 34263273.02 | 0.0527 | 0.0100 |
| Mars | 89099-10-30 11:03 G | 34264103.82 | 34264103.96 | 34264104.10 | 0.1669 | 0.1143 |
| Saturn | 89101-12-30 04:19 G | 34264894.57 | 34264894.68 | 34264894.82 | 0.0269 | 0.0235 |
| Saturn | 89103-01-11 11:17 G | 34265271.74 | 34265271.97 | 34265272.22 | 0.0273 | 0.0077 |
| Neptune | 89109-07-14 21:51 G | 34267648.29 | 34267648.41 | 34267648.57 | 0.0088 | 0.0074 |
| Jupiter | 89109-07-26 20:24 G | 34267660.22 | 34267660.35 | 34267660.48 | 0.0527 | 0.0435 |
| Neptune | 89110-07-17 02:10 G | 34268015.40 | 34268015.59 | 34268015.81 | 0.0088 | 0.0052 |
| Neptune | 89111-07-19 19:41 G | 34268383.10 | 34268383.32 | 34268383.58 | 0.0088 | 0.0036 |
| Neptune | 89112-07-21 01:41 G | 34268750.32 | 34268750.57 | 34268750.82 | 0.0088 | 0.0013 |
| Neptune | 89113-07-23 16:19 G | 34269117.92 | 34269118.18 | 34269118.45 | 0.0088 | 0.0003 |
| Neptune | 89114-07-26 02:10 G | 34269485.36 | 34269485.59 | 34269485.84 | 0.0088 | 0.0025 |
| Saturn | 89115-06-27 11:17 G | 34269821.83 | 34269821.97 | 34269822.11 | 0.0293 | 0.0242 |
| Neptune | 89115-07-28 11:46 G | 34269852.78 | 34269852.99 | 34269853.25 | 0.0088 | 0.0041 |
| Saturn | 89116-07-10 08:10 G | 34270200.64 | 34270200.84 | 34270201.05 | 0.0288 | 0.0151 |
| Neptune | 89116-07-30 02:24 G | 34270220.45 | 34270220.60 | 34270220.80 | 0.0088 | 0.0063 |
| Neptune | 89117-08-01 07:41 G | 34270587.73 | 34270587.82 | 34270587.97 | 0.0088 | 0.0079 |
| Saturn | 89132-01-06 17:03 G | 34275858.98 | 34275859.21 | 34275859.45 | 0.0272 | 0.0062 |
| Saturn | 89133-01-18 07:27 G | 34276236.76 | 34276236.81 | 34276236.89 | 0.0276 | 0.0265 |
| Uranus | 89133-12-14 01:55 G | 34276566.48 | 34276566.58 | 34276566.72 | 0.0142 | 0.0125 |
| Uranus | 89134-12-18 17:31 G | 34276935.98 | 34276936.23 | 34276936.48 | 0.0141 | 0.0037 |
| Uranus | 89135-12-23 21:07 G | 34277306.14 | 34277306.38 | 34277306.63 | 0.0141 | 0.0029 |
| Uranus | 89136-12-27 12:00 G | 34277675.82 | 34277676.00 | 34277676.18 | 0.0140 | 0.0102 |
| Saturn | 89145-07-04 20:39 G | 34280787.12 | 34280787.36 | 34280787.61 | 0.0290 | 0.0026 |
| Jupiter | 89151-01-23 15:36 G | 34282815.93 | 34282816.15 | 34282816.39 | 0.0498 | 0.0147 |
| Saturn | 89160-12-31 12:43 G | 34286445.87 | 34286446.03 | 34286446.21 | 0.0270 | 0.0197 |

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| Saturn | 89162-01-13 01:41 G | 34286823.35 | 34286823.57 | 34286823.79 | 0.0274 | 0.0120 |
| Jupiter | 89163-01-28 05:17 G | 34287203.53 | 34287203.72 | 34287203.92 | 0.0499 | 0.0253 |
| Saturn | 89174-06-29 01:12 G | 34291373.38 | 34291373.55 | 34291373.74 | 0.0292 | 0.0193 |
| Saturn | 89175-07-13 01:27 G | 34291752.40 | 34291752.56 | 34291752.74 | 0.0288 | 0.0197 |
| Uranus | 89177-06-11 10:48 G | 34292451.83 | 34292451.95 | 34292452.09 | 0.0136 | 0.0117 |
| Uranus | 89178-06-15 13:41 G | 34292820.86 | 34292821.07 | 34292821.31 | 0.0137 | 0.0058 |
| Mars | 89178-11-02 14:53 G | 34292961.05 | 34292961.12 | 34292961.18 | 0.1674 | 0.1560 |
| Uranus | 89179-06-20 07:41 G | 34293190.57 | 34293190.82 | 34293191.07 | 0.0137 | 0.0020 |
| Uranus | 89180-06-23 12:00 G | 34293559.79 | 34293560.00 | 34293560.22 | 0.0137 | 0.0072 |
| Jupiter | 89180-07-20 18:43 G | 34293587.07 | 34293587.28 | 34293587.48 | 0.0528 | 0.0225 |
| Saturn | 89191-01-08 08:24 G | 34297410.60 | 34297410.85 | 34297411.10 | 0.0272 | 0.0018 |
| Neptune | 89192-01-15 08:24 G | 34297782.82 | 34297782.85 | 34297782.93 | 0.0089 | 0.0087 |
| Jupiter | 89192-07-26 01:27 G | 34297975.39 | 34297975.56 | 34297975.74 | 0.0527 | 0.0342 |
| Neptune | 89193-01-17 04:05 G | 34298150.52 | 34298150.67 | 34298150.84 | 0.0089 | 0.0070 |
| Neptune | 89194-01-19 09:51 G | 34298517.72 | 34298517.91 | 34298518.14 | 0.0089 | 0.0049 |
| Neptune | 89195-01-22 02:53 G | 34298885.38 | 34298885.62 | 34298885.88 | 0.0089 | 0.0032 |
| Neptune | 89196-01-24 12:15 G | 34299252.77 | 34299253.01 | 34299253.27 | 0.0089 | 0.0011 |
| Neptune | 89197-01-26 00:43 G | 34299620.27 | 34299620.53 | 34299620.81 | 0.0089 | 0.0007 |
| Neptune | 89198-01-28 15:51 G | 34299987.92 | 34299988.16 | 34299988.39 | 0.0089 | 0.0029 |
| Neptune | 89199-01-30 23:31 G | 34300355.26 | 34300355.48 | 34300355.71 | 0.0089 | 0.0046 |
| Neptune | 89200-02-02 17:31 G | 34300723.08 | 34300723.23 | 34300723.41 | 0.0089 | 0.0067 |
| Neptune | 89201-02-03 22:34 G | 34301090.39 | 34301090.44 | 34301090.54 | 0.0089 | 0.0085 |
| Pluto | 89201-04-18 04:34 G | 34301163.50 | 34301163.69 | 34301163.92 | 0.0063 | 0.0036 |
| Pluto | 89202-04-19 08:10 G | 34301529.71 | 34301529.84 | 34301530.04 | 0.0063 | 0.0048 |
| Saturn | 89204-07-06 11:31 G | 34302338.73 | 34302338.98 | 34302339.23 | 0.0289 | 0.0026 |
| Uranus | 89217-12-14 11:31 G | 34307247.82 | 34307247.98 | 34307248.16 | 0.0142 | 0.0105 |
| Uranus | 89218-12-19 02:10 G | 34307617.36 | 34307617.59 | 34307617.85 | 0.0141 | 0.0045 |
| Uranus | 89219-12-24 06:15 G | 34307987.52 | 34307987.76 | 34307988.01 | 0.0141 | 0.0039 |
| Saturn | 89220-01-03 03:22 G | 34307997.44 | 34307997.64 | 34307997.84 | 0.0270 | 0.0155 |
| Uranus | 89220-12-27 20:24 G | 34308357.19 | 34308357.35 | 34308357.51 | 0.0140 | 0.0110 |

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| Saturn | 89221-01-14 20:39 G | 34308375.18 | 34308375.36 | 34308375.56 | 0.0274 | 0.0167 |
| Mars | 89232-05-03 08:10 G | 34312501.70 | 34312501.84 | 34312501.97 | 0.1864 | 0.1359 |
| Saturn | 89233-06-30 22:48 G | 34312925.25 | 34312925.45 | 34312925.66 | 0.0292 | 0.0137 |
| Jupiter | 89234-01-22 21:07 G | 34313131.18 | 34313131.38 | 34313131.58 | 0.0498 | 0.0229 |
| Saturn | 89234-07-14 21:51 G | 34313304.30 | 34313304.41 | 34313304.54 | 0.0287 | 0.0247 |
| Jupiter | 89246-01-27 08:39 G | 34317518.63 | 34317518.86 | 34317519.09 | 0.0498 | 0.0167 |
| Saturn | 89250-01-09 19:12 G | 34318962.05 | 34318962.30 | 34318962.56 | 0.0273 | 0.0027 |
| Uranus | 89261-06-11 23:31 G | 34323133.36 | 34323133.48 | 34323133.64 | 0.0136 | 0.0114 |
| Uranus | 89262-06-16 03:36 G | 34323502.42 | 34323502.65 | 34323502.89 | 0.0137 | 0.0042 |
| Uranus | 89263-06-20 21:22 G | 34323872.13 | 34323872.39 | 34323872.64 | 0.0137 | 0.0013 |
| Saturn | 89263-07-09 01:55 G | 34323890.35 | 34323890.58 | 34323890.83 | 0.0289 | 0.0082 |
| Jupiter | 89263-07-21 01:12 G | 34323902.36 | 34323902.55 | 34323902.74 | 0.0528 | 0.0315 |
| Uranus | 89264-06-24 01:41 G | 34324241.40 | 34324241.57 | 34324241.76 | 0.0137 | 0.0095 |
| Neptune | 89273-07-13 22:19 G | 34327548.35 | 34327548.43 | 34327548.54 | 0.0088 | 0.0082 |
| Neptune | 89274-07-16 15:36 G | 34327915.96 | 34327916.15 | 34327916.37 | 0.0088 | 0.0054 |
| Neptune | 89275-07-18 22:19 G | 34328283.23 | 34328283.43 | 34328283.66 | 0.0088 | 0.0045 |
| Jupiter | 89275-07-25 18:43 G | 34328290.07 | 34328290.28 | 34328290.49 | 0.0527 | 0.0251 |
| Neptune | 89276-07-20 12:15 G | 34328650.75 | 34328651.01 | 34328651.28 | 0.0088 | 0.0016 |
| Neptune | 89277-07-22 23:03 G | 34329018.21 | 34329018.46 | 34329018.71 | 0.0088 | 0.0006 |
| Neptune | 89278-07-25 07:27 G | 34329385.55 | 34329385.81 | 34329386.07 | 0.0088 | 0.0022 |
| Saturn | 89279-01-04 20:53 G | 34329549.15 | 34329549.37 | 34329549.59 | 0.0271 | 0.0111 |
| Neptune | 89279-07-27 22:48 G | 34329753.23 | 34329753.45 | 34329753.70 | 0.0088 | 0.0032 |
| Saturn | 89280-01-17 13:55 G | 34329926.93 | 34329927.08 | 34329927.25 | 0.0275 | 0.0210 |
| Neptune | 89280-07-29 03:22 G | 34330120.48 | 34330120.64 | 34330120.86 | 0.0088 | 0.0061 |
| Neptune | 89281-07-31 21:36 G | 34330488.27 | 34330488.40 | 34330488.58 | 0.0088 | 0.0070 |
| Saturn | 89292-07-02 22:19 G | 34334477.20 | 34334477.43 | 34334477.66 | 0.0291 | 0.0080 |
| Pluto | 89292-10-18 12:00 G | 34334584.89 | 34334585.00 | 34334585.14 | 0.0081 | 0.0072 |
| Uranus | 89301-12-15 20:39 G | 34337929.22 | 34337929.36 | 34337929.51 | 0.0142 | 0.0116 |
| Uranus | 89302-12-20 11:46 G | 34338298.73 | 34338298.99 | 34338299.24 | 0.0141 | 0.0027 |
| Uranus | 89303-12-25 16:19 G | 34338668.93 | 34338669.18 | 34338669.43 | 0.0141 | 0.0037 |

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| Uranus | 89304-12-29 05:31 G | 34339038.60 | 34339038.73 | 34339038.90 | 0.0140 | 0.0114 |
| Saturn | 89307-12-31 21:51 G | 34340136.31 | 34340136.41 | 34340136.55 | 0.0270 | 0.0239 |
| Saturn | 89309-01-12 06:29 G | 34340513.54 | 34340513.77 | 34340514.01 | 0.0274 | 0.0071 |
| Jupiter | 89317-01-22 22:34 G | 34343446.26 | 34343446.44 | 34343446.63 | 0.0497 | 0.0322 |
| Saturn | 89321-06-27 22:19 G | 34345063.32 | 34345063.43 | 34345063.56 | 0.0292 | 0.0253 |
| Saturn | 89322-07-11 21:07 G | 34345442.17 | 34345442.38 | 34345442.59 | 0.0288 | 0.0135 |
| Jupiter | 89329-01-27 01:55 G | 34347833.35 | 34347833.58 | 34347833.81 | 0.0498 | 0.0068 |
| Saturn | 89338-01-07 10:48 G | 34351100.71 | 34351100.95 | 34351101.19 | 0.0272 | 0.0070 |
| Saturn | 89339-01-19 23:46 G | 34351478.40 | 34351478.49 | 34351478.59 | 0.0276 | 0.0255 |
| Uranus | 89345-06-13 12:58 G | 34353814.89 | 34353815.04 | 34353815.22 | 0.0137 | 0.0105 |
| Uranus | 89346-06-17 17:17 G | 34354183.99 | 34354184.22 | 34354184.46 | 0.0137 | 0.0043 |
| Jupiter | 89346-07-20 11:46 G | 34354216.87 | 34354216.99 | 34354217.12 | 0.0528 | 0.0438 |
| Uranus | 89347-06-22 10:19 G | 34354553.69 | 34354553.93 | 34354554.18 | 0.0137 | 0.0034 |
| Uranus | 89348-06-25 15:22 G | 34354922.95 | 34354923.14 | 34354923.33 | 0.0138 | 0.0087 |
| Saturn | 89351-07-06 14:53 G | 34356028.88 | 34356029.12 | 34356029.37 | 0.0290 | 0.0028 |
| Neptune | 89357-01-17 05:03 G | 34358050.58 | 34358050.71 | 34358050.88 | 0.0089 | 0.0071 |
| Neptune | 89358-01-19 21:22 G | 34358418.20 | 34358418.39 | 34358418.60 | 0.0089 | 0.0060 |
| Jupiter | 89358-07-25 16:34 G | 34358604.98 | 34358605.19 | 34358605.41 | 0.0528 | 0.0129 |
| Neptune | 89359-01-22 08:24 G | 34358785.63 | 34358785.85 | 34358786.09 | 0.0089 | 0.0033 |
| Neptune | 89360-01-24 19:12 G | 34359153.06 | 34359153.30 | 34359153.58 | 0.0089 | 0.0022 |
| Neptune | 89361-01-26 11:03 G | 34359520.71 | 34359520.96 | 34359521.21 | 0.0089 | 0.0007 |
| Neptune | 89362-01-28 17:46 G | 34359887.98 | 34359888.24 | 34359888.50 | 0.0089 | 0.0017 |
| Neptune | 89363-01-31 12:00 G | 34360255.80 | 34360256.00 | 34360256.24 | 0.0089 | 0.0046 |
| Neptune | 89364-02-02 17:31 G | 34360623.04 | 34360623.23 | 34360623.44 | 0.0089 | 0.0055 |
| Neptune | 89365-02-04 12:00 G | 34360990.95 | 34360991.00 | 34360991.12 | 0.0089 | 0.0085 |
| Saturn | 89367-01-02 04:48 G | 34361687.55 | 34361687.70 | 34361687.88 | 0.0270 | 0.0203 |
| Saturn | 89368-01-14 19:55 G | 34362065.12 | 34362065.33 | 34362065.55 | 0.0274 | 0.0113 |
| Saturn | 89380-06-29 17:17 G | 34366615.06 | 34366615.22 | 34366615.39 | 0.0292 | 0.0204 |
| Saturn | 89381-07-13 18:00 G | 34366994.08 | 34366994.25 | 34366994.44 | 0.0287 | 0.0184 |
| Mars | 89383-11-01 22:34 G | 34367835.26 | 34367835.44 | 34367835.63 | 0.1663 | 0.0669 |

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| Uranus | 89385-12-16 09:22 G | 34368610.71 | 34368610.89 | 34368611.09 | 0.0141 | 0.0094 |
| Uranus | 89386-12-21 00:15 G | 34368980.27 | 34368980.51 | 34368980.77 | 0.0141 | 0.0034 |
| Uranus | 89387-12-26 04:19 G | 34369350.45 | 34369350.68 | 34369350.93 | 0.0141 | 0.0052 |
| Uranus | 89388-12-29 17:17 G | 34369720.11 | 34369720.22 | 34369720.37 | 0.0140 | 0.0122 |
| Saturn | 89397-01-08 16:48 G | 34372651.94 | 34372652.20 | 34372652.45 | 0.0272 | 0.0032 |
| Jupiter | 89400-01-22 19:41 G | 34373761.19 | 34373761.32 | 34373761.45 | 0.0497 | 0.0410 |
| Saturn | 89410-07-09 01:55 G | 34377580.33 | 34377580.58 | 34377580.83 | 0.0290 | 0.0020 |
| Jupiter | 89412-01-28 14:53 G | 34378148.88 | 34378149.12 | 34378149.35 | 0.0498 | 0.0007 |
| Jupiter | 89424-02-01 17:46 G | 34382536.16 | 34382536.24 | 34382536.33 | 0.0499 | 0.0462 |
| Saturn | 89426-01-04 13:27 G | 34383238.87 | 34383239.06 | 34383239.25 | 0.0270 | 0.0170 |
| Saturn | 89427-01-17 06:43 G | 34383616.59 | 34383616.78 | 34383616.99 | 0.0274 | 0.0150 |
| Uranus | 89429-06-15 00:43 G | 34384496.37 | 34384496.53 | 34384496.72 | 0.0137 | 0.0100 |
| Uranus | 89430-06-19 05:31 G | 34384865.50 | 34384865.73 | 34384865.98 | 0.0137 | 0.0030 |
| Uranus | 89431-06-23 22:19 G | 34385235.18 | 34385235.43 | 34385235.69 | 0.0137 | 0.0028 |
| Uranus | 89432-06-27 03:51 G | 34385604.51 | 34385604.66 | 34385604.81 | 0.0138 | 0.0109 |
| Neptune | 89437-07-15 11:17 G | 34387448.91 | 34387448.97 | 34387449.10 | 0.0089 | 0.0083 |
| Neptune | 89438-07-17 18:43 G | 34387816.13 | 34387816.28 | 34387816.47 | 0.0088 | 0.0065 |
| Saturn | 89439-07-03 10:19 G | 34388166.74 | 34388166.93 | 34388167.14 | 0.0292 | 0.0157 |
| Neptune | 89439-07-20 06:58 G | 34388183.58 | 34388183.79 | 34388184.04 | 0.0088 | 0.0046 |
| Saturn | 89440-07-16 08:53 G | 34388545.74 | 34388545.87 | 34388546.03 | 0.0287 | 0.0229 |
| Neptune | 89440-07-21 19:41 G | 34388551.09 | 34388551.32 | 34388551.56 | 0.0088 | 0.0027 |
| Neptune | 89441-07-24 03:36 G | 34388918.39 | 34388918.65 | 34388918.92 | 0.0088 | 0.0007 |
| Jupiter | 89441-07-25 14:10 G | 34388919.85 | 34388920.09 | 34388920.33 | 0.0528 | 0.0042 |
| Neptune | 89442-07-26 20:24 G | 34389286.10 | 34389286.35 | 34389286.60 | 0.0088 | 0.0012 |
| Neptune | 89443-07-29 00:29 G | 34389653.30 | 34389653.52 | 34389653.78 | 0.0088 | 0.0032 |
| Neptune | 89444-07-30 18:43 G | 34390021.08 | 34390021.28 | 34390021.52 | 0.0088 | 0.0049 |
| Neptune | 89445-08-01 23:17 G | 34390388.33 | 34390388.47 | 34390388.65 | 0.0088 | 0.0069 |
| Neptune | 89446-08-04 15:22 G | 34390756.10 | 34390756.14 | 34390756.24 | 0.0088 | 0.0086 |
| Pluto | 89448-04-21 08:10 G | 34391381.68 | 34391381.84 | 34391382.06 | 0.0063 | 0.0042 |
| Pluto | 89449-04-22 12:00 G | 34391747.80 | 34391748.00 | 34391748.21 | 0.0063 | 0.0036 |

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| Saturn | 89456-01-11 16:19 G | 34394202.93 | 34394203.18 | 34394203.44 | 0.0272 | 0.0005 |
| Saturn | 89469-07-10 10:34 G | 34399131.70 | 34399131.94 | 34399132.18 | 0.0290 | 0.0063 |
| Uranus | 89469-12-17 20:39 G | 34399292.19 | 34399292.36 | 34399292.55 | 0.0141 | 0.0103 |
| Uranus | 89470-12-22 12:00 G | 34399661.75 | 34399662.00 | 34399662.25 | 0.0141 | 0.0013 |
| Uranus | 89471-12-27 16:19 G | 34400031.94 | 34400032.18 | 34400032.42 | 0.0141 | 0.0050 |
| Uranus | 89472-12-31 05:03 G | 34400401.63 | 34400401.71 | 34400401.84 | 0.0140 | 0.0129 |
| Jupiter | 89483-01-23 10:19 G | 34404076.84 | 34404076.93 | 34404077.01 | 0.0497 | 0.0463 |
| Saturn | 89485-01-05 19:55 G | 34404790.14 | 34404790.33 | 34404790.55 | 0.0270 | 0.0142 |
| Saturn | 89486-01-18 09:36 G | 34405167.71 | 34405167.90 | 34405168.09 | 0.0275 | 0.0179 |
| Jupiter | 89495-01-27 13:12 G | 34408463.82 | 34408464.05 | 34408464.29 | 0.0498 | 0.0057 |
| Saturn | 89498-07-04 22:05 G | 34409718.20 | 34409718.42 | 34409718.65 | 0.0291 | 0.0113 |
| Saturn | 89499-07-18 15:22 G | 34410097.06 | 34410097.14 | 34410097.25 | 0.0287 | 0.0266 |
| Jupiter | 89507-02-02 05:46 G | 34412851.61 | 34412851.74 | 34412851.87 | 0.0499 | 0.0405 |
| Uranus | 89513-06-16 11:31 G | 34415177.82 | 34415177.98 | 34415178.19 | 0.0137 | 0.0095 |
| Uranus | 89514-06-20 17:31 G | 34415546.99 | 34415547.23 | 34415547.47 | 0.0137 | 0.0030 |
| Saturn | 89515-01-13 16:48 G | 34415753.96 | 34415754.20 | 34415754.44 | 0.0272 | 0.0028 |
| Uranus | 89515-06-25 08:53 G | 34415916.64 | 34415916.87 | 34415917.12 | 0.0137 | 0.0046 |
| Mars | 89516-05-05 12:43 G | 34416231.83 | 34416232.03 | 34416232.22 | 0.1874 | 0.0258 |
| Uranus | 89516-06-28 14:39 G | 34416285.96 | 34416286.11 | 34416286.30 | 0.0138 | 0.0101 |
| Neptune | 89521-01-18 16:19 G | 34417951.08 | 34417951.18 | 34417951.34 | 0.0089 | 0.0078 |
| Neptune | 89522-01-21 04:19 G | 34418318.53 | 34418318.68 | 34418318.88 | 0.0089 | 0.0064 |
| Neptune | 89523-01-23 14:10 G | 34418685.87 | 34418686.09 | 34418686.35 | 0.0089 | 0.0039 |
| Neptune | 89524-01-26 07:12 G | 34419053.57 | 34419053.80 | 34419054.05 | 0.0089 | 0.0025 |
| Jupiter | 89524-07-25 18:00 G | 34419235.02 | 34419235.25 | 34419235.47 | 0.0528 | 0.0041 |
| Neptune | 89525-01-27 13:41 G | 34419420.81 | 34419421.07 | 34419421.33 | 0.0089 | 0.0001 |
| Neptune | 89526-01-30 08:53 G | 34419788.62 | 34419788.87 | 34419789.13 | 0.0089 | 0.0013 |
| Neptune | 89527-02-01 13:41 G | 34420155.86 | 34420156.07 | 34420156.32 | 0.0089 | 0.0037 |
| Saturn | 89527-06-29 15:07 G | 34420304.12 | 34420304.13 | 34420304.17 | 0.0294 | 0.0292 |
| Neptune | 89528-02-04 08:10 G | 34420523.65 | 34420523.84 | 34420524.07 | 0.0089 | 0.0053 |
| Saturn | 89528-07-12 18:43 G | 34420683.06 | 34420683.28 | 34420683.50 | 0.0289 | 0.0099 |

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| Neptune | 89529-02-05 15:51 G | 34420891.05 | 34420891.16 | 34420891.31 | 0.0089 | 0.0076 |
| Jupiter | 89536-07-30 19:12 G | 34423623.23 | 34423623.30 | 34423623.39 | 0.0527 | 0.0495 |
| Pluto | 89539-10-23 16:34 G | 34424803.01 | 34424803.19 | 34424803.43 | 0.0081 | 0.0052 |
| Saturn | 89544-01-08 18:58 G | 34426341.06 | 34426341.29 | 34426341.52 | 0.0270 | 0.0116 |
| Saturn | 89545-01-20 03:36 G | 34426718.50 | 34426718.65 | 34426718.83 | 0.0275 | 0.0208 |
| Uranus | 89553-12-19 08:10 G | 34429973.65 | 34429973.84 | 34429974.07 | 0.0141 | 0.0082 |
| Uranus | 89554-12-24 00:15 G | 34430343.26 | 34430343.51 | 34430343.76 | 0.0141 | 0.0021 |
| Uranus | 89555-12-29 03:36 G | 34430713.44 | 34430713.65 | 34430713.89 | 0.0141 | 0.0066 |
| Uranus | 89557-01-01 16:48 G | 34431083.14 | 34431083.20 | 34431083.29 | 0.0140 | 0.0134 |
| Saturn | 89557-07-06 23:03 G | 34431269.22 | 34431269.46 | 34431269.71 | 0.0291 | 0.0077 |
| Saturn | 89573-01-02 04:48 G | 34436927.65 | 34436927.70 | 34436927.78 | 0.0269 | 0.0259 |
| Saturn | 89574-01-14 18:43 G | 34437305.05 | 34437305.28 | 34437305.52 | 0.0272 | 0.0054 |
| Jupiter | 89578-01-28 05:31 G | 34438779.50 | 34438779.73 | 34438779.95 | 0.0498 | 0.0101 |
| Saturn | 89586-06-30 20:39 G | 34441855.27 | 34441855.36 | 34441855.48 | 0.0294 | 0.0261 |
| Saturn | 89587-07-15 00:43 G | 34442234.32 | 34442234.53 | 34442234.74 | 0.0289 | 0.0132 |
| Jupiter | 89590-02-01 12:58 G | 34443166.89 | 34443167.04 | 34443167.21 | 0.0499 | 0.0377 |
| Uranus | 89597-06-16 21:07 G | 34445859.18 | 34445859.38 | 34445859.58 | 0.0137 | 0.0088 |
| Uranus | 89598-06-21 03:36 G | 34446228.41 | 34446228.65 | 34446228.89 | 0.0137 | 0.0020 |
| Uranus | 89599-06-25 18:00 G | 34446598.01 | 34446598.25 | 34446598.50 | 0.0137 | 0.0040 |
| Uranus | 89600-06-29 00:29 G | 34446967.42 | 34446967.52 | 34446967.66 | 0.0138 | 0.0120 |
| Neptune | 89601-07-15 17:31 G | 34447349.17 | 34447349.23 | 34447349.32 | 0.0089 | 0.0084 |
| Neptune | 89602-07-18 04:34 G | 34447716.57 | 34447716.69 | 34447716.86 | 0.0089 | 0.0074 |
| Saturn | 89603-01-09 10:19 G | 34447891.69 | 34447891.93 | 34447892.17 | 0.0270 | 0.0091 |
| Neptune | 89603-07-20 18:15 G | 34448084.05 | 34448084.26 | 34448084.47 | 0.0088 | 0.0046 |
| Saturn | 89604-01-21 21:36 G | 34448269.29 | 34448269.40 | 34448269.54 | 0.0275 | 0.0234 |
| Neptune | 89604-07-22 00:00 G | 34448451.28 | 34448451.50 | 34448451.76 | 0.0088 | 0.0037 |
| Neptune | 89605-07-24 17:17 G | 34448818.97 | 34448819.22 | 34448819.48 | 0.0088 | 0.0008 |
| Neptune | 89606-07-26 21:36 G | 34449186.15 | 34449186.40 | 34449186.66 | 0.0088 | 0.0002 |
| Jupiter | 89607-07-26 00:15 G | 34449550.27 | 34449550.51 | 34449550.74 | 0.0528 | 0.0104 |
| Neptune | 89607-07-29 15:36 G | 34449553.91 | 34449554.15 | 34449554.40 | 0.0088 | 0.0030 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 89608-07-30 20:24 G | 34449921.14 | 34449921.35 | 34449921.59 | 0.0088 | 0.0039 |
| Neptune | 89609-08-02 11:46 G | 34450288.84 | 34450288.99 | 34450289.19 | 0.0088 | 0.0068 |
| Neptune | 89610-08-04 21:07 G | 34450656.28 | 34450656.38 | 34450656.52 | 0.0088 | 0.0077 |
| Saturn | 89616-07-07 18:58 G | 34452820.05 | 34452820.29 | 34452820.53 | 0.0291 | 0.0045 |
| Jupiter | 89619-07-30 21:36 G | 34453938.27 | 34453938.40 | 34453938.53 | 0.0528 | 0.0431 |
| Saturn | 89632-01-04 04:48 G | 34458478.60 | 34458478.70 | 34458478.82 | 0.0268 | 0.0235 |
| Saturn | 89633-01-15 15:51 G | 34458855.92 | 34458856.16 | 34458856.40 | 0.0272 | 0.0079 |
| Uranus | 89637-12-19 14:53 G | 34460654.94 | 34460655.12 | 34460655.34 | 0.0141 | 0.0093 |
| Uranus | 89638-12-24 07:55 G | 34461024.58 | 34461024.83 | 34461025.08 | 0.0141 | 0.0002 |
| Uranus | 89639-12-29 11:03 G | 34461394.73 | 34461394.96 | 34461395.20 | 0.0141 | 0.0060 |
| Saturn | 89645-07-01 21:22 G | 34463406.25 | 34463406.39 | 34463406.55 | 0.0294 | 0.0232 |
| Saturn | 89646-07-15 21:51 G | 34463785.20 | 34463785.41 | 34463785.62 | 0.0290 | 0.0156 |
| Jupiter | 89661-01-27 13:27 G | 34469094.82 | 34469095.06 | 34469095.29 | 0.0498 | 0.0128 |
| Saturn | 89662-01-10 03:51 G | 34469442.42 | 34469442.66 | 34469442.89 | 0.0270 | 0.0068 |
| Saturn | 89663-01-22 19:55 G | 34469820.26 | 34469820.33 | 34469820.41 | 0.0274 | 0.0259 |
| Mars | 89667-11-04 17:03 G | 34471567.03 | 34471567.21 | 34471567.39 | 0.1657 | 0.0073 |
| Jupiter | 89673-02-01 02:39 G | 34473482.46 | 34473482.61 | 34473482.77 | 0.0499 | 0.0352 |
| Saturn | 89675-07-09 17:46 G | 34474371.01 | 34474371.24 | 34474371.48 | 0.0292 | 0.0022 |
| Uranus | 89681-06-17 07:12 G | 34476540.60 | 34476540.80 | 34476541.00 | 0.0137 | 0.0086 |
| Uranus | 89682-06-21 14:39 G | 34476909.87 | 34476910.11 | 34476910.35 | 0.0137 | 0.0019 |
| Uranus | 89683-06-26 03:36 G | 34477279.42 | 34477279.65 | 34477279.90 | 0.0137 | 0.0055 |
| Uranus | 89684-06-29 11:17 G | 34477648.84 | 34477648.97 | 34477649.13 | 0.0138 | 0.0111 |
| Neptune | 89685-01-18 01:12 G | 34477851.53 | 34477851.55 | 34477851.58 | 0.0089 | 0.0088 |
| Neptune | 89686-01-20 09:51 G | 34478218.75 | 34478218.91 | 34478219.13 | 0.0089 | 0.0063 |
| Neptune | 89687-01-23 03:36 G | 34478586.46 | 34478586.65 | 34478586.88 | 0.0089 | 0.0051 |
| Neptune | 89688-01-25 09:51 G | 34478953.66 | 34478953.91 | 34478954.16 | 0.0089 | 0.0024 |
| Neptune | 89689-01-27 05:03 G | 34479321.46 | 34479321.71 | 34479321.97 | 0.0089 | 0.0013 |
| Neptune | 89690-01-29 10:19 G | 34479688.69 | 34479688.93 | 34479689.19 | 0.0089 | 0.0015 |
| Jupiter | 89690-07-25 07:41 G | 34479865.60 | 34479865.82 | 34479866.04 | 0.0529 | 0.0140 |
| Saturn | 89691-01-05 00:58 G | 34480029.40 | 34480029.54 | 34480029.70 | 0.0268 | 0.0214 |

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| Neptune | 89691-02-01 04:05 G | 34480056.42 | 34480056.67 | 34480056.93 | 0.0089 | 0.0026 |
| Saturn | 89692-01-17 05:31 G | 34480406.50 | 34480406.73 | 34480406.97 | 0.0272 | 0.0105 |
| Neptune | 89692-02-03 12:29 G | 34480423.83 | 34480424.02 | 34480424.22 | 0.0089 | 0.0053 |
| Neptune | 89693-02-05 01:55 G | 34480791.41 | 34480791.58 | 34480791.77 | 0.0089 | 0.0064 |
| Pluto | 89695-04-24 15:51 G | 34481599.98 | 34481600.16 | 34481600.39 | 0.0063 | 0.0037 |
| Pluto | 89696-04-24 19:55 G | 34481966.15 | 34481966.33 | 34481966.57 | 0.0063 | 0.0037 |
| Jupiter | 89702-07-31 14:39 G | 34484253.96 | 34484254.11 | 34484254.28 | 0.0527 | 0.0381 |
| Saturn | 89704-07-03 14:10 G | 34484956.91 | 34484957.09 | 34484957.26 | 0.0294 | 0.0211 |
| Saturn | 89705-07-17 12:00 G | 34485335.81 | 34485336.00 | 34485336.21 | 0.0290 | 0.0175 |
| Saturn | 89721-01-12 02:24 G | 34490993.37 | 34490993.60 | 34490993.84 | 0.0270 | 0.0044 |
| Uranus | 89721-12-20 21:22 G | 34491336.18 | 34491336.39 | 34491336.62 | 0.0142 | 0.0076 |
| Uranus | 89722-12-25 15:22 G | 34491705.90 | 34491706.14 | 34491706.39 | 0.0141 | 0.0015 |
| Uranus | 89723-12-30 17:31 G | 34492076.02 | 34492076.23 | 34492076.46 | 0.0141 | 0.0074 |
| Uranus | 89725-01-03 07:55 G | 34492445.82 | 34492445.83 | 34492445.86 | 0.0141 | 0.0140 |
| Saturn | 89734-07-11 17:03 G | 34495921.97 | 34495922.21 | 34495922.45 | 0.0292 | 0.0004 |
| Jupiter | 89744-01-29 02:24 G | 34499410.39 | 34499410.60 | 34499410.81 | 0.0498 | 0.0161 |
| Saturn | 89750-01-06 16:19 G | 34501580.02 | 34501580.18 | 34501580.38 | 0.0268 | 0.0191 |
| Saturn | 89751-01-18 21:36 G | 34501957.19 | 34501957.40 | 34501957.62 | 0.0272 | 0.0130 |
| Jupiter | 89756-02-02 17:03 G | 34503798.03 | 34503798.21 | 34503798.40 | 0.0499 | 0.0320 |
| Saturn | 89763-07-05 03:51 G | 34506507.48 | 34506507.66 | 34506507.85 | 0.0294 | 0.0192 |
| Saturn | 89764-07-18 06:00 G | 34506886.58 | 34506886.75 | 34506886.94 | 0.0290 | 0.0192 |
| Uranus | 89765-06-18 16:48 G | 34507222.00 | 34507222.20 | 34507222.43 | 0.0137 | 0.0077 |
| Uranus | 89766-06-23 01:41 G | 34507591.33 | 34507591.57 | 34507591.81 | 0.0137 | 0.0011 |
| Neptune | 89766-07-18 16:34 G | 34507617.07 | 34507617.19 | 34507617.33 | 0.0089 | 0.0075 |
| Uranus | 89767-06-27 13:27 G | 34507960.83 | 34507961.06 | 34507961.31 | 0.0137 | 0.0051 |
| Neptune | 89767-07-20 22:05 G | 34507984.23 | 34507984.42 | 34507984.64 | 0.0089 | 0.0054 |
| Uranus | 89768-06-30 22:19 G | 34508330.37 | 34508330.43 | 34508330.53 | 0.0137 | 0.0130 |
| Neptune | 89768-07-22 15:36 G | 34508351.94 | 34508352.15 | 34508352.40 | 0.0088 | 0.0039 |
| Neptune | 89769-07-24 19:55 G | 34508719.09 | 34508719.33 | 34508719.59 | 0.0088 | 0.0018 |
| Neptune | 89770-07-27 13:55 G | 34509086.82 | 34509087.08 | 34509087.34 | 0.0088 | 0.0000 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 89771-07-29 19:41 G | 34509454.08 | 34509454.32 | 34509454.56 | 0.0088 | 0.0021 |
| Neptune | 89772-07-31 10:05 G | 34509821.69 | 34509821.92 | 34509822.17 | 0.0088 | 0.0038 |
| Jupiter | 89773-07-26 00:00 G | 34510181.28 | 34510181.50 | 34510181.72 | 0.0528 | 0.0178 |
| Neptune | 89773-08-02 19:41 G | 34510189.16 | 34510189.32 | 34510189.53 | 0.0088 | 0.0059 |
| Neptune | 89774-08-05 05:31 G | 34510556.59 | 34510556.73 | 34510556.87 | 0.0088 | 0.0075 |
| Saturn | 89780-01-14 00:43 G | 34512544.29 | 34512544.53 | 34512544.78 | 0.0270 | 0.0021 |
| Jupiter | 89785-07-30 14:39 G | 34514568.93 | 34514569.11 | 34514569.30 | 0.0527 | 0.0320 |
| Pluto | 89786-10-26 02:53 G | 34515021.48 | 34515021.62 | 34515021.81 | 0.0081 | 0.0063 |
| Saturn | 89793-07-12 12:15 G | 34517472.76 | 34517473.01 | 34517473.26 | 0.0292 | 0.0018 |
| Mars | 89800-05-07 14:53 G | 34519962.94 | 34519963.12 | 34519963.29 | 0.1883 | 0.0154 |
| Uranus | 89805-12-22 02:39 G | 34522017.41 | 34522017.61 | 34522017.84 | 0.0142 | 0.0086 |
| Uranus | 89806-12-26 22:05 G | 34522387.17 | 34522387.42 | 34522387.67 | 0.0141 | 0.0004 |
| Uranus | 89807-12-31 23:03 G | 34522757.23 | 34522757.46 | 34522757.70 | 0.0141 | 0.0065 |
| Saturn | 89809-01-08 10:19 G | 34523130.75 | 34523130.93 | 34523131.13 | 0.0268 | 0.0166 |
| Saturn | 89810-01-20 21:22 G | 34523508.20 | 34523508.39 | 34523508.59 | 0.0272 | 0.0154 |
| Saturn | 89822-07-06 23:46 G | 34528058.30 | 34528058.49 | 34528058.68 | 0.0294 | 0.0172 |
| Saturn | 89823-07-21 05:46 G | 34528437.58 | 34528437.74 | 34528437.90 | 0.0290 | 0.0208 |
| Jupiter | 89827-01-29 14:53 G | 34529725.90 | 34529726.12 | 34529726.34 | 0.0498 | 0.0197 |
| Saturn | 89839-01-15 20:10 G | 34534095.09 | 34534095.34 | 34534095.60 | 0.0270 | 0.0007 |
| Jupiter | 89839-02-02 22:34 G | 34534113.26 | 34534113.44 | 34534113.63 | 0.0499 | 0.0284 |
| Uranus | 89848-06-15 18:29 G | 34537534.26 | 34537534.27 | 34537534.31 | 0.0136 | 0.0136 |
| Uranus | 89849-06-20 03:51 G | 34537903.45 | 34537903.66 | 34537903.88 | 0.0137 | 0.0077 |
| Neptune | 89850-01-21 23:46 G | 34538119.35 | 34538119.49 | 34538119.68 | 0.0089 | 0.0068 |
| Uranus | 89850-06-24 13:55 G | 34538272.84 | 34538273.08 | 34538273.33 | 0.0137 | 0.0007 |
| Neptune | 89851-01-24 05:46 G | 34538486.55 | 34538486.74 | 34538486.95 | 0.0089 | 0.0056 |
| Uranus | 89851-06-29 00:29 G | 34538642.30 | 34538642.52 | 34538642.77 | 0.0137 | 0.0065 |
| Neptune | 89852-01-27 01:27 G | 34538854.32 | 34538854.56 | 34538854.81 | 0.0089 | 0.0029 |
| Uranus | 89852-07-02 11:03 G | 34539011.86 | 34539011.96 | 34539012.07 | 0.0137 | 0.0123 |
| Saturn | 89852-07-14 04:05 G | 34539023.42 | 34539023.67 | 34539023.92 | 0.0292 | 0.0036 |
| Neptune | 89853-01-28 07:12 G | 34539221.57 | 34539221.80 | 34539222.06 | 0.0089 | 0.0017 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 89854-01-31 00:43 G | 34539589.27 | 34539589.53 | 34539589.80 | 0.0089 | 0.0009 |
| Neptune | 89855-02-02 10:19 G | 34539956.70 | 34539956.93 | 34539957.18 | 0.0089 | 0.0022 |
| Neptune | 89856-02-04 22:34 G | 34540324.24 | 34540324.44 | 34540324.69 | 0.0089 | 0.0047 |
| Jupiter | 89856-07-25 22:19 G | 34540496.23 | 34540496.43 | 34540496.64 | 0.0528 | 0.0245 |
| Neptune | 89857-02-06 12:58 G | 34540691.86 | 34540692.04 | 34540692.23 | 0.0089 | 0.0060 |
| Neptune | 89858-02-08 20:24 G | 34541059.29 | 34541059.35 | 34541059.44 | 0.0089 | 0.0086 |
| Saturn | 89868-01-10 12:29 G | 34544681.82 | 34544682.02 | 34544682.23 | 0.0268 | 0.0137 |
| Jupiter | 89868-07-31 06:58 G | 34544884.60 | 34544884.79 | 34544884.99 | 0.0528 | 0.0268 |
| Saturn | 89869-01-22 00:43 G | 34545059.36 | 34545059.53 | 34545059.71 | 0.0272 | 0.0181 |
| Mars | 89872-11-04 19:55 G | 34546442.17 | 34546442.33 | 34546442.50 | 0.1648 | 0.0953 |
| Saturn | 89881-07-08 02:10 G | 34549609.39 | 34549609.59 | 34549609.80 | 0.0294 | 0.0148 |
| Saturn | 89882-07-22 05:46 G | 34549988.60 | 34549988.74 | 34549988.89 | 0.0289 | 0.0230 |
| Uranus | 89889-12-22 11:46 G | 34552698.77 | 34552698.99 | 34552699.23 | 0.0142 | 0.0070 |
| Uranus | 89890-12-27 08:24 G | 34553068.61 | 34553068.85 | 34553069.10 | 0.0141 | 0.0007 |
| Uranus | 89892-01-01 07:41 G | 34553438.63 | 34553438.82 | 34553439.06 | 0.0141 | 0.0083 |
| Saturn | 89898-01-16 16:48 G | 34555645.95 | 34555646.20 | 34555646.45 | 0.0270 | 0.0037 |
| Jupiter | 89910-01-29 20:10 G | 34560041.14 | 34560041.34 | 34560041.54 | 0.0498 | 0.0238 |
| Saturn | 89911-07-17 02:10 G | 34560574.35 | 34560574.59 | 34560574.83 | 0.0292 | 0.0063 |
| Jupiter | 89922-02-03 13:55 G | 34564428.88 | 34564429.08 | 34564429.29 | 0.0498 | 0.0241 |
| Saturn | 89927-01-12 20:10 G | 34566233.12 | 34566233.34 | 34566233.57 | 0.0268 | 0.0103 |
| Saturn | 89928-01-25 03:51 G | 34566610.51 | 34566610.66 | 34566610.83 | 0.0272 | 0.0211 |
| Neptune | 89930-07-19 20:53 G | 34567517.26 | 34567517.37 | 34567517.54 | 0.0089 | 0.0075 |
| Neptune | 89931-07-22 14:53 G | 34567884.96 | 34567885.12 | 34567885.31 | 0.0089 | 0.0065 |
| Neptune | 89932-07-23 18:58 G | 34568252.08 | 34568252.29 | 34568252.54 | 0.0089 | 0.0038 |
| Uranus | 89933-06-21 13:55 G | 34568584.85 | 34568585.08 | 34568585.31 | 0.0137 | 0.0065 |
| Neptune | 89933-07-26 12:00 G | 34568619.77 | 34568620.00 | 34568620.27 | 0.0088 | 0.0028 |
| Uranus | 89934-06-26 01:12 G | 34568954.30 | 34568954.55 | 34568954.79 | 0.0137 | 0.0003 |
| Neptune | 89934-07-28 18:29 G | 34568987.02 | 34568987.27 | 34568987.52 | 0.0088 | 0.0001 |
| Uranus | 89935-06-30 10:48 G | 34569323.73 | 34569323.95 | 34569324.19 | 0.0137 | 0.0064 |
| Neptune | 89935-07-31 07:27 G | 34569354.55 | 34569354.81 | 34569355.08 | 0.0088 | 0.0011 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 89936-08-01 18:29 G | 34569722.05 | 34569722.27 | 34569722.50 | 0.0088 | 0.0038 |
| Neptune | 89937-08-04 03:07 G | 34570089.42 | 34570089.63 | 34570089.87 | 0.0088 | 0.0048 |
| Neptune | 89938-08-06 18:43 G | 34570457.18 | 34570457.28 | 34570457.44 | 0.0088 | 0.0076 |
| Jupiter | 89939-07-27 14:10 G | 34570811.91 | 34570812.09 | 34570812.28 | 0.0528 | 0.0293 |
| Neptune | 89939-08-09 00:15 G | 34570824.45 | 34570824.51 | 34570824.59 | 0.0088 | 0.0085 |
| Saturn | 89940-07-10 05:31 G | 34571160.51 | 34571160.73 | 34571160.96 | 0.0294 | 0.0118 |
| Saturn | 89941-07-24 04:05 G | 34571539.56 | 34571539.67 | 34571539.79 | 0.0289 | 0.0255 |
| Pluto | 89942-04-29 01:27 G | 34571818.37 | 34571818.56 | 34571818.80 | 0.0063 | 0.0032 |
| Pluto | 89943-04-30 07:55 G | 34572184.73 | 34572184.83 | 34572185.01 | 0.0063 | 0.0053 |
| Jupiter | 89951-08-01 10:34 G | 34575199.72 | 34575199.94 | 34575200.17 | 0.0527 | 0.0199 |
| Mars | 89951-11-09 02:10 G | 34575299.42 | 34575299.59 | 34575299.75 | 0.1652 | 0.0763 |
| Saturn | 89956-01-07 15:51 G | 34576820.04 | 34576820.16 | 34576820.27 | 0.0267 | 0.0236 |
| Saturn | 89957-01-18 21:51 G | 34577197.18 | 34577197.41 | 34577197.64 | 0.0270 | 0.0071 |
| Saturn | 89969-07-04 01:55 G | 34581746.54 | 34581746.58 | 34581746.62 | 0.0296 | 0.0291 |
| Saturn | 89970-07-18 09:36 G | 34582125.69 | 34582125.90 | 34582126.13 | 0.0292 | 0.0095 |
| Uranus | 89973-12-23 21:22 G | 34583380.17 | 34583380.39 | 34583380.62 | 0.0141 | 0.0074 |
| Uranus | 89974-12-28 18:58 G | 34583750.04 | 34583750.29 | 34583750.54 | 0.0141 | 0.0014 |
| Uranus | 89976-01-02 17:03 G | 34584120.00 | 34584120.21 | 34584120.45 | 0.0141 | 0.0075 |
| Saturn | 89986-01-14 02:24 G | 34587784.35 | 34587784.60 | 34587784.84 | 0.0269 | 0.0066 |
| Saturn | 89987-01-26 06:58 G | 34588161.69 | 34588161.79 | 34588161.89 | 0.0273 | 0.0248 |
| Jupiter | 89993-01-29 08:24 G | 34590356.66 | 34590356.85 | 34590357.04 | 0.0498 | 0.0288 |
| Saturn | 89999-07-12 08:39 G | 34592711.63 | 34592711.86 | 34592712.11 | 0.0293 | 0.0085 |
| Saturn | 90000-07-25 06:29 G | 34593090.75 | 34593090.77 | 34593090.81 | 0.0289 | 0.0286 |

91ST MILLENNIUM CE

This is a list of transits of Moon in the 91st millennium CE.

| | FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------|-------|---|-------------|-------------|-------------|--------|--------|---|
| | TRANSIT | | | | | | | | |
| | TIME | | | | | | | | |
| Jupiter | 90005-02-02 | 09:07 | G | 34594743.66 | 34594743.88 | 34594744.10 | 0.0499 | 0.0167 | |
| Neptune | 90014-01-22 | 01:55 | G | 34598019.50 | 34598019.58 | 34598019.73 | 0.0089 | 0.0079 | |
| Saturn | 90015-01-09 | 00:29 | G | 34598371.36 | 34598371.52 | 34598371.68 | 0.0267 | 0.0201 | |
| Neptune | 90015-01-24 | 21:36 | G | 34598387.21 | 34598387.40 | 34598387.63 | 0.0089 | 0.0054 | |
| Saturn | 90016-01-21 | 11:03 | G | 34598748.75 | 34598748.96 | 34598749.19 | 0.0271 | 0.0111 | |
| Neptune | 90016-01-27 | 04:48 | G | 34598754.48 | 34598754.70 | 34598754.93 | 0.0089 | 0.0040 | |
| Uranus | 90016-06-17 | 16:34 | G | 34598897.12 | 34598897.19 | 34598897.30 | 0.0136 | 0.0126 | |
| Neptune | 90017-01-28 | 20:53 | G | 34599122.12 | 34599122.37 | 34599122.65 | 0.0089 | 0.0016 | |
| Uranus | 90017-06-21 | 23:31 | G | 34599266.27 | 34599266.48 | 34599266.72 | 0.0137 | 0.0069 | |
| Neptune | 90018-01-31 | 07:41 | G | 34599489.57 | 34599489.82 | 34599490.08 | 0.0089 | 0.0003 | |
| Uranus | 90018-06-26 | 12:29 | G | 34599635.78 | 34599636.02 | 34599636.26 | 0.0137 | 0.0005 | |
| Neptune | 90019-02-02 | 18:43 | G | 34599857.04 | 34599857.28 | 34599857.56 | 0.0089 | 0.0023 | |
| Uranus | 90019-06-30 | 20:39 | G | 34600005.16 | 34600005.36 | 34600005.60 | 0.0137 | 0.0074 | |
| Neptune | 90020-02-05 | 10:34 | G | 34600224.72 | 34600224.94 | 34600225.17 | 0.0089 | 0.0036 | |
| Uranus | 90020-07-04 | 09:51 | G | 34600374.89 | 34600374.91 | 34600374.96 | 0.0138 | 0.0136 | |
| Neptune | 90021-02-06 | 17:17 | G | 34600592.05 | 34600592.22 | 34600592.43 | 0.0089 | 0.0062 | |
| Neptune | 90022-02-09 | 12:29 | G | 34600959.89 | 34600960.02 | 34600960.17 | 0.0089 | 0.0075 | |
| Jupiter | 90022-07-26 | 08:53 | G | 34601126.72 | 34601126.87 | 34601127.04 | 0.0528 | 0.0392 | |
| Saturn | 90028-07-05 | 15:51 | G | 34603298.04 | 34603298.16 | 34603298.28 | 0.0296 | 0.0254 | |
| Saturn | 90029-07-19 | 22:34 | G | 34603677.22 | 34603677.44 | 34603677.65 | 0.0291 | 0.0130 | |
| Jupiter | 90034-07-31 | 08:39 | G | 34605514.64 | 34605514.86 | 34605515.08 | 0.0527 | 0.0088 | |
| Saturn | 90045-01-15 | 08:10 | G | 34609335.58 | 34609335.84 | 34609336.09 | 0.0269 | 0.0025 | |
| Uranus | 90056-12-19 | 12:15 | G | 34613692.00 | 34613692.01 | 34613692.05 | 0.0142 | 0.0141 | |
| Uranus | 90057-12-24 | 08:39 | G | 34614061.63 | 34614061.86 | 34614062.11 | 0.0141 | 0.0059 | |
| Saturn | 90058-07-13 | 17:46 | G | 34614263.01 | 34614263.24 | 34614263.49 | 0.0293 | 0.0046 | |
| Uranus | 90058-12-29 | 07:41 | G | 34614431.57 | 34614431.82 | 34614432.07 | 0.0141 | 0.0006 | |

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| Uranus | 90060-01-03 04:05 G | 34614801.50 | 34614801.67 | 34614801.89 | 0.0141 | 0.0096 |
| Saturn | 90074-01-10 14:53 G | 34619922.93 | 34619923.12 | 34619923.31 | 0.0268 | 0.0162 |
| Saturn | 90075-01-23 00:43 G | 34620300.32 | 34620300.53 | 34620300.73 | 0.0271 | 0.0152 |
| Jupiter | 90076-01-29 00:58 G | 34620671.39 | 34620671.54 | 34620671.70 | 0.0498 | 0.0371 |
| Mars | 90084-05-08 11:03 G | 34623693.77 | 34623693.96 | 34623694.16 | 0.1892 | 0.0697 |
| Saturn | 90087-07-08 09:07 G | 34624849.72 | 34624849.88 | 34624850.07 | 0.0295 | 0.0207 |
| Jupiter | 90088-02-02 19:55 G | 34625059.10 | 34625059.33 | 34625059.55 | 0.0498 | 0.0102 |
| Saturn | 90088-07-21 11:03 G | 34625228.77 | 34625228.96 | 34625229.17 | 0.0291 | 0.0172 |
| Neptune | 90094-07-19 14:10 G | 34627418.00 | 34627418.09 | 34627418.21 | 0.0089 | 0.0081 |
| Neptune | 90095-07-21 18:29 G | 34627785.12 | 34627785.27 | 34627785.45 | 0.0089 | 0.0067 |
| Neptune | 90096-07-23 11:03 G | 34628152.75 | 34628152.96 | 34628153.21 | 0.0089 | 0.0044 |
| Neptune | 90097-07-25 18:43 G | 34628520.05 | 34628520.28 | 34628520.52 | 0.0088 | 0.0029 |
| Neptune | 90098-07-28 07:27 G | 34628887.54 | 34628887.81 | 34628888.08 | 0.0088 | 0.0007 |
| Neptune | 90099-07-30 19:12 G | 34629255.06 | 34629255.30 | 34629255.55 | 0.0088 | 0.0008 |
| Uranus | 90100-06-19 02:24 G | 34629578.58 | 34629578.60 | 34629578.65 | 0.0136 | 0.0135 |
| Neptune | 90100-08-02 02:39 G | 34629622.37 | 34629622.61 | 34629622.86 | 0.0088 | 0.0031 |
| Uranus | 90101-06-23 07:55 G | 34629947.60 | 34629947.83 | 34629948.07 | 0.0137 | 0.0055 |
| Neptune | 90101-08-04 18:15 G | 34629990.07 | 34629990.26 | 34629990.50 | 0.0088 | 0.0047 |
| Uranus | 90102-06-27 21:36 G | 34630317.16 | 34630317.40 | 34630317.65 | 0.0137 | 0.0006 |
| Neptune | 90102-08-06 22:48 G | 34630357.30 | 34630357.45 | 34630357.63 | 0.0088 | 0.0069 |
| Uranus | 90103-07-02 04:48 G | 34630686.50 | 34630686.70 | 34630686.93 | 0.0137 | 0.0076 |
| Neptune | 90103-08-09 16:34 G | 34630725.13 | 34630725.19 | 34630725.30 | 0.0088 | 0.0084 |
| Saturn | 90104-01-18 20:10 G | 34630887.09 | 34630887.34 | 34630887.58 | 0.0270 | 0.0017 |
| Jupiter | 90105-07-26 08:53 G | 34631441.80 | 34631441.87 | 34631441.94 | 0.0529 | 0.0498 |
| Saturn | 90117-07-16 12:58 G | 34635814.80 | 34635815.04 | 34635815.27 | 0.0292 | 0.0004 |
| Jupiter | 90117-07-31 13:27 G | 34635829.82 | 34635830.06 | 34635830.30 | 0.0528 | 0.0010 |
| Jupiter | 90129-08-05 07:27 G | 34640217.74 | 34640217.81 | 34640217.89 | 0.0527 | 0.0496 |
| Saturn | 90133-01-13 05:46 G | 34641474.53 | 34641474.74 | 34641474.97 | 0.0268 | 0.0122 |
| Saturn | 90134-01-25 10:48 G | 34641851.79 | 34641851.95 | 34641852.15 | 0.0272 | 0.0193 |
| Uranus | 90140-12-20 22:05 G | 34644373.37 | 34644373.42 | 34644373.50 | 0.0142 | 0.0137 |

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| Uranus | 90141-12-25 17:03 G | 34644742.98 | 34644743.21 | 34644743.46 | 0.0141 | 0.0062 |
| Uranus | 90142-12-30 17:17 G | 34645112.98 | 34645113.22 | 34645113.47 | 0.0141 | 0.0025 |
| Uranus | 90144-01-04 12:43 G | 34645482.84 | 34645483.03 | 34645483.26 | 0.0141 | 0.0087 |
| Saturn | 90146-07-11 01:55 G | 34646401.37 | 34646401.58 | 34646401.80 | 0.0295 | 0.0153 |
| Saturn | 90147-07-25 00:00 G | 34646780.34 | 34646780.50 | 34646780.67 | 0.0290 | 0.0216 |
| Mars | 90156-11-07 06:43 G | 34650173.59 | 34650173.78 | 34650173.96 | 0.1642 | 0.0565 |
| Jupiter | 90159-01-29 09:51 G | 34650986.81 | 34650986.91 | 34650987.02 | 0.0497 | 0.0440 |
| Saturn | 90162-01-08 04:19 G | 34652061.61 | 34652061.68 | 34652061.78 | 0.0267 | 0.0249 |
| Saturn | 90163-01-20 12:43 G | 34652438.80 | 34652439.03 | 34652439.27 | 0.0270 | 0.0058 |
| Jupiter | 90171-02-02 15:07 G | 34655373.89 | 34655374.13 | 34655374.38 | 0.0498 | 0.0013 |
| Saturn | 90176-07-18 12:29 G | 34657366.79 | 34657367.02 | 34657367.26 | 0.0291 | 0.0056 |
| Neptune | 90178-01-22 18:29 G | 34657920.19 | 34657920.27 | 34657920.35 | 0.0089 | 0.0084 |
| Neptune | 90179-01-25 01:12 G | 34658287.39 | 34658287.55 | 34658287.77 | 0.0089 | 0.0058 |
| Neptune | 90180-01-27 16:34 G | 34658654.98 | 34658655.19 | 34658655.43 | 0.0089 | 0.0047 |
| Neptune | 90181-01-29 04:48 G | 34659022.47 | 34659022.70 | 34659022.96 | 0.0089 | 0.0020 |
| Neptune | 90182-01-31 15:51 G | 34659389.89 | 34659390.16 | 34659390.43 | 0.0089 | 0.0008 |
| Neptune | 90183-02-03 08:10 G | 34659757.61 | 34659757.84 | 34659758.10 | 0.0089 | 0.0020 |
| Jupiter | 90183-02-07 00:58 G | 34659761.41 | 34659761.54 | 34659761.67 | 0.0499 | 0.0409 |
| Neptune | 90184-02-05 14:53 G | 34660124.87 | 34660125.12 | 34660125.37 | 0.0089 | 0.0030 |
| Uranus | 90184-06-19 11:31 G | 34660259.87 | 34660259.98 | 34660260.12 | 0.0136 | 0.0118 |
| Neptune | 90185-02-07 09:51 G | 34660492.73 | 34660492.91 | 34660493.12 | 0.0089 | 0.0057 |
| Uranus | 90185-06-23 15:51 G | 34660628.95 | 34660629.16 | 34660629.41 | 0.0137 | 0.0063 |
| Neptune | 90186-02-09 15:07 G | 34660859.98 | 34660860.13 | 34660860.31 | 0.0089 | 0.0069 |
| Uranus | 90186-06-28 07:12 G | 34660998.56 | 34660998.80 | 34660999.05 | 0.0137 | 0.0015 |
| Uranus | 90187-07-02 13:12 G | 34661367.86 | 34661368.05 | 34661368.27 | 0.0137 | 0.0081 |
| Pluto | 90189-05-01 15:07 G | 34662036.88 | 34662037.13 | 34662037.38 | 0.0063 | 0.0006 |
| Saturn | 90192-01-15 17:17 G | 34663025.98 | 34663026.22 | 34663026.47 | 0.0269 | 0.0078 |
| Saturn | 90193-01-26 22:19 G | 34663403.31 | 34663403.43 | 34663403.55 | 0.0272 | 0.0237 |
| Jupiter | 90200-07-31 01:41 G | 34666144.35 | 34666144.57 | 34666144.79 | 0.0528 | 0.0125 |
| Saturn | 90205-07-13 18:43 G | 34667953.05 | 34667953.28 | 34667953.52 | 0.0294 | 0.0100 |

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| Saturn | 90206-07-27 18:15 G | 34668332.17 | 34668332.26 | 34668332.35 | 0.0289 | 0.0267 |
| Jupiter | 90212-08-05 06:15 G | 34670532.60 | 34670532.76 | 34670532.94 | 0.0527 | 0.0368 |
| Saturn | 90221-01-10 19:55 G | 34673613.19 | 34673613.33 | 34673613.49 | 0.0267 | 0.0206 |
| Saturn | 90222-01-23 06:43 G | 34673990.56 | 34673990.78 | 34673991.01 | 0.0271 | 0.0102 |
| Uranus | 90224-12-22 06:00 G | 34675054.67 | 34675054.75 | 34675054.85 | 0.0142 | 0.0132 |
| Uranus | 90225-12-27 00:00 G | 34675424.26 | 34675424.50 | 34675424.75 | 0.0141 | 0.0053 |
| Uranus | 90227-01-01 01:41 G | 34675794.33 | 34675794.57 | 34675794.83 | 0.0141 | 0.0016 |
| Uranus | 90228-01-05 20:10 G | 34676164.17 | 34676164.34 | 34676164.53 | 0.0141 | 0.0105 |
| Saturn | 90234-07-08 04:19 G | 34678539.60 | 34678539.68 | 34678539.79 | 0.0295 | 0.0269 |
| Saturn | 90235-07-22 09:51 G | 34678918.69 | 34678918.91 | 34678919.14 | 0.0291 | 0.0111 |
| Mars | 90235-11-11 20:39 G | 34679031.25 | 34679031.36 | 34679031.48 | 0.1646 | 0.1358 |
| Saturn | 90251-01-18 01:12 G | 34684577.30 | 34684577.55 | 34684577.80 | 0.0269 | 0.0033 |
| Jupiter | 90254-02-02 16:05 G | 34685688.95 | 34685689.17 | 34685689.40 | 0.0498 | 0.0083 |
| Neptune | 90259-07-23 10:34 G | 34687685.78 | 34687685.94 | 34687686.13 | 0.0089 | 0.0065 |
| Neptune | 90260-07-24 18:15 G | 34688053.09 | 34688053.26 | 34688053.48 | 0.0089 | 0.0055 |
| Neptune | 90261-07-27 05:46 G | 34688420.50 | 34688420.74 | 34688421.01 | 0.0088 | 0.0029 |
| Neptune | 90262-07-29 18:29 G | 34688788.04 | 34688788.27 | 34688788.53 | 0.0088 | 0.0018 |
| Neptune | 90263-08-01 01:41 G | 34689155.31 | 34689155.57 | 34689155.83 | 0.0088 | 0.0010 |
| Saturn | 90264-07-15 13:12 G | 34689504.81 | 34689505.05 | 34689505.29 | 0.0293 | 0.0047 |
| Neptune | 90264-08-02 18:43 G | 34689523.03 | 34689523.28 | 34689523.53 | 0.0088 | 0.0021 |
| Neptune | 90265-08-04 22:19 G | 34689890.23 | 34689890.43 | 34689890.67 | 0.0088 | 0.0048 |
| Jupiter | 90266-02-07 06:00 G | 34690076.57 | 34690076.75 | 34690076.94 | 0.0499 | 0.0325 |
| Neptune | 90266-08-07 16:19 G | 34690258.01 | 34690258.18 | 34690258.40 | 0.0088 | 0.0058 |
| Neptune | 90267-08-09 21:51 G | 34690625.34 | 34690625.41 | 34690625.49 | 0.0088 | 0.0084 |
| Uranus | 90268-06-20 20:53 G | 34690941.31 | 34690941.37 | 34690941.47 | 0.0136 | 0.0128 |
| Uranus | 90269-06-25 00:29 G | 34691310.29 | 34691310.52 | 34691310.78 | 0.0137 | 0.0047 |
| Uranus | 90270-06-29 16:34 G | 34691679.94 | 34691680.19 | 34691680.43 | 0.0137 | 0.0013 |
| Uranus | 90271-07-03 21:36 G | 34692049.21 | 34692049.40 | 34692049.61 | 0.0137 | 0.0086 |
| Pluto | 90279-11-01 03:22 G | 34695091.40 | 34695091.64 | 34695091.90 | 0.0081 | 0.0032 |
| Saturn | 90280-01-13 11:17 G | 34695164.79 | 34695164.97 | 34695165.17 | 0.0268 | 0.0165 |

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| Saturn | 90281-01-24 19:12 G | 34695542.09 | 34695542.30 | 34695542.52 | 0.0271 | 0.0143 |
| Jupiter | 90283-07-31 03:51 G | 34696459.45 | 34696459.66 | 34696459.87 | 0.0528 | 0.0237 |
| Saturn | 90293-07-10 01:55 G | 34700091.42 | 34700091.58 | 34700091.76 | 0.0295 | 0.0216 |
| Saturn | 90294-07-24 02:24 G | 34700470.40 | 34700470.60 | 34700470.82 | 0.0290 | 0.0161 |
| Jupiter | 90295-08-04 22:05 G | 34700847.22 | 34700847.42 | 34700847.62 | 0.0528 | 0.0271 |
| Uranus | 90308-12-23 12:00 G | 34705735.93 | 34705736.00 | 34705736.09 | 0.0142 | 0.0134 |
| Uranus | 90309-12-28 04:48 G | 34706105.47 | 34706105.70 | 34706105.95 | 0.0141 | 0.0055 |
| Saturn | 90310-01-20 11:03 G | 34706128.72 | 34706128.96 | 34706129.20 | 0.0270 | 0.0007 |
| Uranus | 90311-01-02 07:55 G | 34706475.59 | 34706475.83 | 34706476.08 | 0.0141 | 0.0030 |
| Uranus | 90312-01-07 00:58 G | 34706845.35 | 34706845.54 | 34706845.75 | 0.0141 | 0.0093 |
| Saturn | 90323-07-19 09:22 G | 34711056.65 | 34711056.89 | 34711057.12 | 0.0293 | 0.0002 |
| Jupiter | 90337-02-02 21:51 G | 34716004.18 | 34716004.41 | 34716004.64 | 0.0498 | 0.0149 |
| Saturn | 90339-01-15 19:41 G | 34716716.10 | 34716716.32 | 34716716.54 | 0.0268 | 0.0128 |
| Saturn | 90340-01-27 23:03 G | 34717093.27 | 34717093.46 | 34717093.65 | 0.0272 | 0.0181 |
| Neptune | 90342-01-23 23:46 G | 34717820.43 | 34717820.49 | 34717820.59 | 0.0089 | 0.0084 |
| Neptune | 90343-01-26 14:24 G | 34718187.93 | 34718188.10 | 34718188.28 | 0.0089 | 0.0067 |
| Neptune | 90344-01-29 03:07 G | 34718555.43 | 34718555.63 | 34718555.86 | 0.0089 | 0.0046 |
| Neptune | 90345-01-30 12:15 G | 34718922.77 | 34718923.01 | 34718923.27 | 0.0089 | 0.0029 |
| Neptune | 90346-02-02 05:46 G | 34719290.49 | 34719290.74 | 34719291.00 | 0.0089 | 0.0007 |
| Neptune | 90347-02-04 11:46 G | 34719657.73 | 34719657.99 | 34719658.25 | 0.0089 | 0.0009 |
| Neptune | 90348-02-07 06:58 G | 34720025.56 | 34720025.79 | 34720026.05 | 0.0089 | 0.0032 |
| Jupiter | 90349-02-07 03:51 G | 34720391.46 | 34720391.66 | 34720391.86 | 0.0498 | 0.0244 |
| Neptune | 90349-02-08 12:43 G | 34720392.82 | 34720393.03 | 34720393.26 | 0.0089 | 0.0046 |
| Neptune | 90350-02-11 06:43 G | 34720760.64 | 34720760.78 | 34720760.96 | 0.0089 | 0.0070 |
| Neptune | 90351-02-13 15:36 G | 34721128.08 | 34721128.15 | 34721128.23 | 0.0089 | 0.0085 |
| Uranus | 90352-06-22 06:58 G | 34721622.66 | 34721622.79 | 34721622.96 | 0.0136 | 0.0109 |
| Saturn | 90352-07-12 13:55 G | 34721642.88 | 34721643.08 | 34721643.29 | 0.0294 | 0.0172 |
| Uranus | 90353-06-26 10:19 G | 34721991.71 | 34721991.93 | 34721992.17 | 0.0137 | 0.0055 |
| Saturn | 90353-07-26 13:27 G | 34722021.89 | 34722022.06 | 34722022.24 | 0.0290 | 0.0202 |
| Uranus | 90354-07-01 03:07 G | 34722361.39 | 34722361.63 | 34722361.88 | 0.0137 | 0.0025 |

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| Uranus | 90355-07-05 07:27 G | 34722730.63 | 34722730.81 | 34722731.02 | 0.0137 | 0.0089 |
| Jupiter | 90366-07-30 23:17 G | 34726774.29 | 34726774.47 | 34726774.66 | 0.0529 | 0.0324 |
| Saturn | 90368-01-10 11:31 G | 34727302.96 | 34727302.98 | 34727303.01 | 0.0266 | 0.0264 |
| Saturn | 90369-01-21 21:07 G | 34727680.15 | 34727680.38 | 34727680.62 | 0.0270 | 0.0042 |
| Jupiter | 90378-08-05 02:39 G | 34731162.40 | 34731162.61 | 34731162.82 | 0.0527 | 0.0176 |
| Saturn | 90382-07-21 02:39 G | 34732608.37 | 34732608.61 | 34732608.85 | 0.0293 | 0.0040 |
| Uranus | 90392-12-23 19:55 G | 34736417.22 | 34736417.33 | 34736417.45 | 0.0142 | 0.0125 |
| Uranus | 90393-12-28 12:00 G | 34736786.76 | 34736787.00 | 34736787.26 | 0.0141 | 0.0049 |
| Uranus | 90395-01-02 16:05 G | 34737156.93 | 34737157.17 | 34737157.42 | 0.0141 | 0.0023 |
| Uranus | 90396-01-07 07:55 G | 34737526.68 | 34737526.83 | 34737527.00 | 0.0141 | 0.0111 |
| Saturn | 90398-01-16 19:41 G | 34738267.09 | 34738267.32 | 34738267.57 | 0.0268 | 0.0096 |
| Saturn | 90399-01-29 01:12 G | 34738644.41 | 34738644.55 | 34738644.71 | 0.0272 | 0.0214 |
| Saturn | 90411-07-14 21:36 G | 34743194.19 | 34743194.40 | 34743194.62 | 0.0294 | 0.0135 |
| Saturn | 90412-07-28 00:29 G | 34743573.39 | 34743573.52 | 34743573.66 | 0.0290 | 0.0239 |
| Jupiter | 90420-02-02 21:22 G | 34746319.18 | 34746319.39 | 34746319.59 | 0.0497 | 0.0223 |
| Neptune | 90423-07-23 18:29 G | 34747586.14 | 34747586.27 | 34747586.43 | 0.0089 | 0.0071 |
| Neptune | 90424-07-25 05:31 G | 34747953.54 | 34747953.73 | 34747953.93 | 0.0089 | 0.0058 |
| Neptune | 90425-07-27 19:26 G | 34748321.09 | 34748321.31 | 34748321.55 | 0.0089 | 0.0033 |
| Neptune | 90426-07-30 01:41 G | 34748688.32 | 34748688.57 | 34748688.83 | 0.0088 | 0.0020 |
| Saturn | 90427-01-11 17:17 G | 34748854.12 | 34748854.22 | 34748854.34 | 0.0266 | 0.0234 |
| Neptune | 90427-08-01 19:12 G | 34749056.04 | 34749056.30 | 34749056.55 | 0.0088 | 0.0004 |
| Saturn | 90428-01-24 01:26 G | 34749231.32 | 34749231.56 | 34749231.80 | 0.0270 | 0.0071 |
| Neptune | 90428-08-02 23:02 G | 34749423.21 | 34749423.46 | 34749423.71 | 0.0088 | 0.0017 |
| Neptune | 90429-08-05 16:34 G | 34749790.97 | 34749791.19 | 34749791.43 | 0.0088 | 0.0041 |
| Neptune | 90430-08-07 21:22 G | 34750158.22 | 34750158.39 | 34750158.61 | 0.0088 | 0.0055 |
| Neptune | 90431-08-10 11:46 G | 34750525.90 | 34750525.99 | 34750526.15 | 0.0088 | 0.0079 |
| Jupiter | 90432-02-07 16:19 G | 34750706.96 | 34750707.18 | 34750707.40 | 0.0498 | 0.0176 |
| Pluto | 90435-05-05 02:38 G | 34751889.54 | 34751889.61 | 34751889.70 | 0.0063 | 0.0059 |
| Pluto | 90436-05-05 06:14 G | 34752255.53 | 34752255.76 | 34752256.01 | 0.0063 | 0.0018 |
| Uranus | 90436-06-22 17:46 G | 34752304.13 | 34752304.24 | 34752304.37 | 0.0136 | 0.0120 |

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| Uranus | 90437-06-26 20:24 G | 34752673.12 | 34752673.35 | 34752673.61 | 0.0137 | 0.0037 |
| Uranus | 90438-07-01 13:26 G | 34753042.82 | 34753043.06 | 34753043.31 | 0.0137 | 0.0022 |
| Uranus | 90439-07-05 17:17 G | 34753412.06 | 34753412.22 | 34753412.41 | 0.0137 | 0.0098 |
| Mars | 90440-11-10 11:46 G | 34753905.81 | 34753905.99 | 34753906.17 | 0.1637 | 0.0198 |
| Saturn | 90441-07-22 08:53 G | 34754159.63 | 34754159.87 | 34754160.11 | 0.0292 | 0.0073 |
| Jupiter | 90449-07-30 06:00 G | 34757089.62 | 34757089.75 | 34757089.89 | 0.0528 | 0.0421 |
| Saturn | 90457-01-17 17:17 G | 34759817.98 | 34759818.22 | 34759818.46 | 0.0268 | 0.0068 |
| Saturn | 90458-01-30 04:48 G | 34760195.59 | 34760195.70 | 34760195.82 | 0.0272 | 0.0238 |
| Jupiter | 90461-08-04 00:00 G | 34761477.26 | 34761477.50 | 34761477.74 | 0.0528 | 0.0091 |
| Saturn | 90470-07-16 05:31 G | 34764745.51 | 34764745.73 | 34764745.95 | 0.0294 | 0.0100 |
| Saturn | 90471-07-30 11:02 G | 34765124.88 | 34765124.96 | 34765125.05 | 0.0289 | 0.0270 |
| Uranus | 90476-12-24 05:17 G | 34767098.63 | 34767098.72 | 34767098.84 | 0.0142 | 0.0128 |
| Uranus | 90477-12-28 20:53 G | 34767468.13 | 34767468.37 | 34767468.62 | 0.0141 | 0.0045 |
| Uranus | 90479-01-03 01:26 G | 34767838.32 | 34767838.56 | 34767838.81 | 0.0141 | 0.0037 |
| Uranus | 90480-01-07 16:19 G | 34768208.01 | 34768208.18 | 34768208.37 | 0.0141 | 0.0102 |
| Saturn | 90486-01-12 19:12 G | 34770405.15 | 34770405.30 | 34770405.46 | 0.0266 | 0.0207 |
| Saturn | 90487-01-24 20:38 G | 34770782.12 | 34770782.36 | 34770782.60 | 0.0270 | 0.0094 |
| Saturn | 90499-07-10 04:05 G | 34775331.60 | 34775331.67 | 34775331.77 | 0.0297 | 0.0280 |
| Saturn | 90500-07-24 07:12 G | 34775710.56 | 34775710.80 | 34775711.04 | 0.0292 | 0.0099 |
| Jupiter | 90503-02-03 14:10 G | 34776634.90 | 34776635.09 | 34776635.30 | 0.0498 | 0.0264 |
| Neptune | 90506-01-24 10:34 G | 34777720.86 | 34777720.94 | 34777721.02 | 0.0089 | 0.0084 |
| Neptune | 90507-01-27 00:14 G | 34778088.40 | 34778088.51 | 34778088.67 | 0.0089 | 0.0075 |
| Neptune | 90508-01-29 09:07 G | 34778455.66 | 34778455.88 | 34778456.11 | 0.0089 | 0.0046 |
| Neptune | 90509-01-31 03:22 G | 34778823.42 | 34778823.64 | 34778823.88 | 0.0089 | 0.0037 |
| Neptune | 90510-02-02 09:07 G | 34779190.62 | 34779190.88 | 34779191.14 | 0.0089 | 0.0009 |
| Neptune | 90511-02-05 04:34 G | 34779558.43 | 34779558.69 | 34779558.96 | 0.0089 | 0.0002 |
| Neptune | 90512-02-07 10:48 G | 34779925.71 | 34779925.95 | 34779926.19 | 0.0089 | 0.0029 |
| Neptune | 90513-02-09 03:50 G | 34780293.44 | 34780293.66 | 34780293.92 | 0.0089 | 0.0040 |
| Neptune | 90514-02-11 12:43 G | 34780660.89 | 34780661.03 | 34780661.22 | 0.0089 | 0.0068 |
| Jupiter | 90515-02-07 18:58 G | 34781022.07 | 34781022.29 | 34781022.52 | 0.0498 | 0.0136 |

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| Neptune | 90515-02-14 02:10 G | 34781028.46 | 34781028.59 | 34781028.72 | 0.0089 | 0.0078 |
| Saturn | 90516-01-20 17:02 G | 34781368.97 | 34781369.21 | 34781369.44 | 0.0268 | 0.0045 |
| Saturn | 90517-02-01 05:31 G | 34781746.65 | 34781746.73 | 34781746.80 | 0.0272 | 0.0258 |
| Uranus | 90520-06-24 03:22 G | 34782985.49 | 34782985.64 | 34782985.83 | 0.0136 | 0.0101 |
| Uranus | 90521-06-28 06:14 G | 34783354.53 | 34783354.76 | 34783355.01 | 0.0137 | 0.0046 |
| Uranus | 90522-07-02 23:46 G | 34783724.25 | 34783724.49 | 34783724.74 | 0.0137 | 0.0036 |
| Uranus | 90523-07-07 03:22 G | 34784093.48 | 34784093.64 | 34784093.83 | 0.0137 | 0.0099 |
| Pluto | 90526-11-05 07:55 G | 34785310.58 | 34785310.83 | 34785311.09 | 0.0081 | 0.0027 |
| Saturn | 90529-07-18 10:05 G | 34786296.69 | 34786296.92 | 34786297.15 | 0.0294 | 0.0075 |
| Jupiter | 90532-07-30 06:43 G | 34787404.71 | 34787404.78 | 34787404.87 | 0.0529 | 0.0493 |
| Jupiter | 90544-08-04 11:46 G | 34791792.76 | 34791792.99 | 34791793.21 | 0.0528 | 0.0047 |
| Saturn | 90545-01-14 12:00 G | 34791955.81 | 34791956.00 | 34791956.19 | 0.0266 | 0.0181 |
| Saturn | 90546-01-26 12:14 G | 34792332.78 | 34792333.01 | 34792333.24 | 0.0270 | 0.0115 |
| Saturn | 90558-07-11 22:05 G | 34796882.31 | 34796882.42 | 34796882.54 | 0.0297 | 0.0261 |
| Saturn | 90559-07-26 04:48 G | 34797261.49 | 34797261.70 | 34797261.92 | 0.0292 | 0.0123 |
| Uranus | 90560-12-25 16:34 G | 34797780.06 | 34797780.19 | 34797780.36 | 0.0142 | 0.0114 |
| Uranus | 90561-12-30 08:24 G | 34798149.60 | 34798149.85 | 34798150.10 | 0.0141 | 0.0039 |
| Uranus | 90563-01-04 13:12 G | 34798519.81 | 34798520.05 | 34798520.30 | 0.0141 | 0.0035 |
| Uranus | 90564-01-09 03:36 G | 34798889.53 | 34798889.65 | 34798889.78 | 0.0141 | 0.0122 |
| Saturn | 90575-01-21 15:50 G | 34802919.92 | 34802920.16 | 34802920.41 | 0.0268 | 0.0022 |
| Jupiter | 90586-02-02 18:29 G | 34806950.09 | 34806950.27 | 34806950.46 | 0.0498 | 0.0301 |
| Neptune | 90587-07-24 05:02 G | 34807486.61 | 34807486.71 | 34807486.84 | 0.0089 | 0.0080 |
| Saturn | 90588-07-19 08:24 G | 34807847.61 | 34807847.85 | 34807848.09 | 0.0294 | 0.0053 |
| Neptune | 90588-07-25 19:26 G | 34807854.13 | 34807854.31 | 34807854.51 | 0.0089 | 0.0056 |
| Neptune | 90589-07-28 00:43 G | 34808221.31 | 34808221.53 | 34808221.77 | 0.0089 | 0.0043 |
| Neptune | 90590-07-30 18:29 G | 34808589.03 | 34808589.27 | 34808589.53 | 0.0088 | 0.0019 |
| Neptune | 90591-08-01 22:48 G | 34808956.20 | 34808956.45 | 34808956.70 | 0.0088 | 0.0007 |
| Neptune | 90592-08-03 16:05 G | 34809323.92 | 34809324.17 | 34809324.43 | 0.0088 | 0.0019 |
| Neptune | 90593-08-05 22:19 G | 34809691.20 | 34809691.43 | 34809691.67 | 0.0088 | 0.0031 |
| Neptune | 90594-08-08 12:00 G | 34810058.82 | 34810059.00 | 34810059.23 | 0.0088 | 0.0057 |

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| Neptune | 90595-08-10 22:48 G | 34810426.31 | 34810426.45 | 34810426.62 | 0.0088 | 0.0069 |
| Jupiter | 90598-02-07 12:58 G | 34811337.82 | 34811338.04 | 34811338.27 | 0.0498 | 0.0093 |
| Saturn | 90604-01-17 01:55 G | 34813506.39 | 34813506.58 | 34813506.79 | 0.0266 | 0.0158 |
| Uranus | 90604-06-25 12:43 G | 34813666.91 | 34813667.03 | 34813667.20 | 0.0137 | 0.0112 |
| Saturn | 90605-01-28 07:41 G | 34813883.62 | 34813883.82 | 34813884.03 | 0.0270 | 0.0133 |
| Uranus | 90605-06-29 15:50 G | 34814035.92 | 34814036.16 | 34814036.41 | 0.0137 | 0.0027 |
| Uranus | 90606-07-04 08:53 G | 34814405.63 | 34814405.87 | 34814406.12 | 0.0137 | 0.0031 |
| Uranus | 90607-07-08 12:29 G | 34814774.87 | 34814775.02 | 34814775.18 | 0.0137 | 0.0109 |
| Saturn | 90617-07-13 16:48 G | 34818433.08 | 34818433.20 | 34818433.34 | 0.0297 | 0.0245 |
| Saturn | 90618-07-28 03:36 G | 34818812.45 | 34818812.65 | 34818812.86 | 0.0292 | 0.0143 |
| Jupiter | 90627-08-05 21:50 G | 34822108.17 | 34822108.41 | 34822108.65 | 0.0527 | 0.0003 |
| Saturn | 90634-01-23 08:10 G | 34824470.59 | 34824470.84 | 34824471.10 | 0.0268 | 0.0004 |
| Uranus | 90644-12-27 04:34 G | 34828461.56 | 34828461.69 | 34828461.85 | 0.0142 | 0.0117 |
| Mars | 90645-11-11 09:36 G | 34828780.78 | 34828780.90 | 34828781.01 | 0.1629 | 0.1359 |
| Uranus | 90645-12-31 19:41 G | 34828831.08 | 34828831.32 | 34828831.58 | 0.0141 | 0.0032 |
| Uranus | 90647-01-06 00:43 G | 34829201.29 | 34829201.53 | 34829201.76 | 0.0141 | 0.0049 |
| Saturn | 90647-07-21 22:48 G | 34829398.20 | 34829398.45 | 34829398.70 | 0.0295 | 0.0037 |
| Uranus | 90648-01-10 13:55 G | 34829570.96 | 34829571.08 | 34829571.25 | 0.0141 | 0.0116 |
| Saturn | 90663-01-17 22:19 G | 34835057.23 | 34835057.43 | 34835057.64 | 0.0266 | 0.0140 |
| Saturn | 90664-01-30 06:14 G | 34835434.56 | 34835434.76 | 34835434.97 | 0.0270 | 0.0149 |
| Jupiter | 90669-02-03 13:55 G | 34837265.92 | 34837266.08 | 34837266.25 | 0.0497 | 0.0341 |
| Neptune | 90671-01-27 06:00 G | 34837988.64 | 34837988.75 | 34837988.93 | 0.0089 | 0.0075 |
| Neptune | 90672-01-30 01:26 G | 34838356.37 | 34838356.56 | 34838356.77 | 0.0089 | 0.0056 |
| Neptune | 90673-01-31 06:43 G | 34838723.56 | 34838723.78 | 34838724.03 | 0.0089 | 0.0037 |
| Neptune | 90674-02-03 01:55 G | 34839091.34 | 34839091.58 | 34839091.85 | 0.0089 | 0.0019 |
| Neptune | 90675-02-05 08:24 G | 34839458.60 | 34839458.85 | 34839459.11 | 0.0089 | 0.0003 |
| Neptune | 90676-02-08 00:43 G | 34839826.28 | 34839826.53 | 34839826.81 | 0.0089 | 0.0020 |
| Saturn | 90676-07-14 15:36 G | 34839984.01 | 34839984.15 | 34839984.31 | 0.0297 | 0.0229 |
| Neptune | 90677-02-09 11:02 G | 34840193.75 | 34840193.96 | 34840194.20 | 0.0089 | 0.0041 |
| Saturn | 90677-07-29 01:12 G | 34840363.34 | 34840363.55 | 34840363.75 | 0.0292 | 0.0159 |

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| Neptune | 90678-02-11 23:02 G | 34840561.28 | 34840561.46 | 34840561.69 | 0.0089 | 0.0057 |
| Neptune | 90679-02-14 14:10 G | 34840928.99 | 34840929.09 | 34840929.23 | 0.0089 | 0.0078 |
| Jupiter | 90681-02-07 20:24 G | 34841653.11 | 34841653.35 | 34841653.59 | 0.0499 | 0.0052 |
| Pluto | 90682-05-08 22:19 G | 34842108.21 | 34842108.43 | 34842108.67 | 0.0063 | 0.0023 |
| Pluto | 90683-05-10 01:41 G | 34842474.43 | 34842474.57 | 34842474.75 | 0.0063 | 0.0049 |
| Uranus | 90688-06-25 20:24 G | 34844348.18 | 34844348.35 | 34844348.56 | 0.0137 | 0.0094 |
| Uranus | 90689-06-29 23:31 G | 34844717.25 | 34844717.48 | 34844717.73 | 0.0137 | 0.0039 |
| Uranus | 90690-07-04 16:34 G | 34845086.96 | 34845087.19 | 34845087.44 | 0.0137 | 0.0046 |
| Uranus | 90691-07-08 20:24 G | 34845456.20 | 34845456.35 | 34845456.52 | 0.0137 | 0.0106 |
| Saturn | 90693-01-23 21:50 G | 34846021.16 | 34846021.41 | 34846021.66 | 0.0268 | 0.0013 |
| Saturn | 90706-07-23 14:10 G | 34850948.85 | 34850949.09 | 34850949.34 | 0.0295 | 0.0020 |
| Jupiter | 90710-08-06 01:55 G | 34852423.35 | 34852423.58 | 34852423.80 | 0.0528 | 0.0049 |
| Saturn | 90722-01-19 22:19 G | 34856608.22 | 34856608.43 | 34856608.65 | 0.0266 | 0.0121 |
| Saturn | 90723-02-01 01:41 G | 34856985.37 | 34856985.57 | 34856985.77 | 0.0270 | 0.0164 |
| Mars | 90724-11-14 20:24 G | 34857638.20 | 34857638.35 | 34857638.50 | 0.1633 | 0.1019 |
| Uranus | 90728-12-28 13:26 G | 34859142.90 | 34859143.06 | 34859143.26 | 0.0142 | 0.0102 |
| Uranus | 90730-01-02 05:17 G | 34859512.48 | 34859512.72 | 34859512.98 | 0.0141 | 0.0029 |
| Uranus | 90731-01-07 10:05 G | 34859882.69 | 34859882.92 | 34859883.18 | 0.0141 | 0.0048 |
| Mars | 90731-05-17 04:48 G | 34860012.55 | 34860012.70 | 34860012.86 | 0.1904 | 0.1039 |
| Uranus | 90732-01-12 00:00 G | 34860252.43 | 34860252.50 | 34860252.59 | 0.0141 | 0.0134 |
| Saturn | 90735-07-17 11:02 G | 34861534.79 | 34861534.96 | 34861535.13 | 0.0297 | 0.0209 |
| Saturn | 90736-07-30 16:19 G | 34861913.99 | 34861914.18 | 34861914.39 | 0.0292 | 0.0178 |
| Saturn | 90751-01-14 18:00 G | 34867195.17 | 34867195.25 | 34867195.35 | 0.0264 | 0.0247 |
| Neptune | 90751-07-25 19:55 G | 34867387.29 | 34867387.33 | 34867387.42 | 0.0089 | 0.0086 |
| Saturn | 90752-01-26 18:43 G | 34867572.04 | 34867572.28 | 34867572.52 | 0.0267 | 0.0031 |
| Jupiter | 90752-02-04 19:41 G | 34867581.18 | 34867581.32 | 34867581.48 | 0.0498 | 0.0390 |
| Neptune | 90752-07-27 01:26 G | 34867754.37 | 34867754.56 | 34867754.75 | 0.0089 | 0.0059 |
| Neptune | 90753-07-29 19:12 G | 34868122.09 | 34868122.30 | 34868122.51 | 0.0089 | 0.0049 |
| Neptune | 90754-07-31 23:02 G | 34868489.22 | 34868489.46 | 34868489.71 | 0.0089 | 0.0023 |
| Neptune | 90755-08-03 16:05 G | 34868856.91 | 34868857.17 | 34868857.43 | 0.0088 | 0.0011 |

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| Neptune | 90756-08-04 22:34 G | 34869224.20 | 34869224.44 | 34869224.69 | 0.0088 | 0.0015 |
| Neptune | 90757-08-07 11:17 G | 34869591.73 | 34869591.97 | 34869592.24 | 0.0088 | 0.0027 |
| Neptune | 90758-08-09 22:34 G | 34869959.25 | 34869959.44 | 34869959.65 | 0.0088 | 0.0052 |
| Neptune | 90759-08-12 06:29 G | 34870326.60 | 34870326.77 | 34870326.97 | 0.0088 | 0.0063 |
| Jupiter | 90764-02-09 09:36 G | 34871968.67 | 34871968.90 | 34871969.13 | 0.0498 | 0.0014 |
| Saturn | 90765-07-24 13:41 G | 34872499.84 | 34872500.07 | 34872500.31 | 0.0295 | 0.0005 |
| Uranus | 90772-06-27 04:48 G | 34875029.55 | 34875029.70 | 34875029.87 | 0.0136 | 0.0104 |
| Pluto | 90772-11-07 01:41 G | 34875162.46 | 34875162.57 | 34875162.73 | 0.0082 | 0.0069 |
| Uranus | 90773-07-01 08:24 G | 34875398.61 | 34875398.85 | 34875399.10 | 0.0137 | 0.0020 |
| Uranus | 90774-07-06 00:29 G | 34875768.28 | 34875768.52 | 34875768.77 | 0.0137 | 0.0036 |
| Uranus | 90775-07-10 03:50 G | 34876137.56 | 34876137.66 | 34876137.81 | 0.0137 | 0.0118 |
| Jupiter | 90776-02-14 00:43 G | 34876356.45 | 34876356.53 | 34876356.61 | 0.0499 | 0.0467 |
| Saturn | 90781-01-20 20:38 G | 34878159.12 | 34878159.36 | 34878159.60 | 0.0266 | 0.0098 |
| Saturn | 90782-02-01 18:29 G | 34878536.09 | 34878536.27 | 34878536.47 | 0.0270 | 0.0180 |
| Jupiter | 90793-08-05 20:24 G | 34882739.12 | 34882739.35 | 34882739.58 | 0.0528 | 0.0069 |
| Saturn | 90794-07-18 03:07 G | 34883085.44 | 34883085.63 | 34883085.83 | 0.0297 | 0.0182 |
| Saturn | 90795-08-01 08:38 G | 34883464.69 | 34883464.86 | 34883465.04 | 0.0292 | 0.0203 |
| Jupiter | 90805-08-10 13:12 G | 34887126.97 | 34887127.05 | 34887127.15 | 0.0527 | 0.0484 |
| Saturn | 90810-01-15 16:48 G | 34888746.08 | 34888746.20 | 34888746.34 | 0.0264 | 0.0223 |
| Saturn | 90811-01-27 22:19 G | 34889123.20 | 34889123.43 | 34889123.67 | 0.0268 | 0.0052 |
| Uranus | 90812-12-28 20:10 G | 34889824.20 | 34889824.34 | 34889824.53 | 0.0142 | 0.0111 |
| Uranus | 90814-01-02 12:29 G | 34890193.77 | 34890194.02 | 34890194.27 | 0.0141 | 0.0022 |
| Uranus | 90815-01-07 17:02 G | 34890563.98 | 34890564.21 | 34890564.45 | 0.0141 | 0.0056 |
| Uranus | 90816-01-12 06:29 G | 34890933.68 | 34890933.77 | 34890933.90 | 0.0141 | 0.0126 |
| Saturn | 90824-07-25 15:22 G | 34894050.90 | 34894051.14 | 34894051.38 | 0.0295 | 0.0032 |
| Neptune | 90835-01-27 22:19 G | 34897889.29 | 34897889.43 | 34897889.57 | 0.0089 | 0.0074 |
| Jupiter | 90835-02-04 06:29 G | 34897896.67 | 34897896.77 | 34897896.87 | 0.0498 | 0.0444 |
| Neptune | 90836-01-30 03:36 G | 34898256.49 | 34898256.65 | 34898256.84 | 0.0089 | 0.0065 |
| Neptune | 90837-01-31 22:48 G | 34898624.22 | 34898624.45 | 34898624.70 | 0.0089 | 0.0036 |
| Neptune | 90838-02-03 06:14 G | 34898991.53 | 34898991.76 | 34898992.01 | 0.0089 | 0.0027 |

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| Neptune | 90839-02-05 22:34 G | 34899359.17 | 34899359.44 | 34899359.71 | 0.0089 | 0.0002 |
| Saturn | 90840-01-22 18:00 G | 34899710.00 | 34899710.25 | 34899710.50 | 0.0266 | 0.0074 |
| Neptune | 90840-02-08 09:50 G | 34899726.66 | 34899726.91 | 34899727.16 | 0.0089 | 0.0011 |
| Saturn | 90841-02-02 19:12 G | 34900087.14 | 34900087.30 | 34900087.46 | 0.0270 | 0.0202 |
| Neptune | 90841-02-09 20:10 G | 34900094.11 | 34900094.34 | 34900094.59 | 0.0089 | 0.0039 |
| Neptune | 90842-02-12 12:00 G | 34900461.80 | 34900462.00 | 34900462.22 | 0.0089 | 0.0049 |
| Neptune | 90843-02-14 18:58 G | 34900829.17 | 34900829.29 | 34900829.43 | 0.0089 | 0.0077 |
| Neptune | 90844-02-17 13:41 G | 34901197.04 | 34901197.07 | 34901197.15 | 0.0089 | 0.0087 |
| Jupiter | 90847-02-08 21:50 G | 34902284.17 | 34902284.41 | 34902284.65 | 0.0498 | 0.0036 |
| Saturn | 90853-07-19 00:58 G | 34904636.34 | 34904636.54 | 34904636.76 | 0.0296 | 0.0153 |
| Saturn | 90854-08-02 10:34 G | 34905015.80 | 34905015.94 | 34905016.08 | 0.0292 | 0.0234 |
| Uranus | 90856-06-27 12:00 G | 34905710.82 | 34905711.00 | 34905711.21 | 0.0136 | 0.0088 |
| Uranus | 90857-07-01 16:34 G | 34906079.95 | 34906080.19 | 34906080.43 | 0.0137 | 0.0032 |
| Uranus | 90858-07-06 07:55 G | 34906449.60 | 34906449.83 | 34906450.07 | 0.0137 | 0.0052 |
| Jupiter | 90859-02-13 00:58 G | 34906671.42 | 34906671.54 | 34906671.68 | 0.0499 | 0.0411 |
| Uranus | 90859-07-10 12:29 G | 34906818.90 | 34906819.02 | 34906819.18 | 0.0137 | 0.0112 |
| Saturn | 90869-01-16 23:46 G | 34910297.34 | 34910297.49 | 34910297.66 | 0.0264 | 0.0196 |
| Saturn | 90870-01-29 03:07 G | 34910674.40 | 34910674.63 | 34910674.87 | 0.0268 | 0.0079 |
| Jupiter | 90876-08-04 17:02 G | 34913053.98 | 34913054.21 | 34913054.44 | 0.0527 | 0.0145 |
| Saturn | 90883-07-27 15:50 G | 34915601.91 | 34915602.16 | 34915602.40 | 0.0294 | 0.0066 |
| Jupiter | 90888-08-09 22:05 G | 34917442.28 | 34917442.42 | 34917442.57 | 0.0527 | 0.0403 |
| Uranus | 90896-12-29 01:26 G | 34920505.38 | 34920505.56 | 34920505.76 | 0.0142 | 0.0096 |
| Uranus | 90898-01-02 18:43 G | 34920875.03 | 34920875.28 | 34920875.53 | 0.0141 | 0.0026 |
| Uranus | 90899-01-07 22:34 G | 34921245.21 | 34921245.44 | 34921245.69 | 0.0141 | 0.0056 |
| Saturn | 90899-01-23 21:07 G | 34921261.14 | 34921261.38 | 34921261.63 | 0.0266 | 0.0044 |
| Uranus | 90900-01-12 12:43 G | 34921615.01 | 34921615.03 | 34921615.09 | 0.0141 | 0.0139 |
| Saturn | 90900-02-05 04:48 G | 34921638.59 | 34921638.70 | 34921638.82 | 0.0270 | 0.0232 |
| Saturn | 90912-07-21 08:53 G | 34926187.66 | 34926187.87 | 34926188.09 | 0.0296 | 0.0115 |
| Saturn | 90913-08-04 19:12 G | 34926567.22 | 34926567.30 | 34926567.40 | 0.0292 | 0.0271 |
| Neptune | 90915-07-26 01:41 G | 34927287.50 | 34927287.57 | 34927287.66 | 0.0089 | 0.0084 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 90916-07-27 19:12 G | 34927655.16 | 34927655.30 | 34927655.47 | 0.0089 | 0.0070 |
| Neptune | 90917-07-29 23:31 G | 34928022.28 | 34928022.48 | 34928022.71 | 0.0089 | 0.0047 |
| Neptune | 90918-08-01 15:36 G | 34928389.92 | 34928390.15 | 34928390.41 | 0.0089 | 0.0033 |
| Neptune | 90919-08-03 22:48 G | 34928757.21 | 34928757.45 | 34928757.71 | 0.0089 | 0.0010 |
| Neptune | 90920-08-05 11:02 G | 34929124.70 | 34929124.96 | 34929125.23 | 0.0088 | 0.0005 |
| Neptune | 90921-08-07 23:17 G | 34929492.25 | 34929492.47 | 34929492.72 | 0.0088 | 0.0028 |
| Neptune | 90922-08-10 06:29 G | 34929859.56 | 34929859.77 | 34929860.02 | 0.0088 | 0.0041 |
| Neptune | 90923-08-12 23:17 G | 34930227.31 | 34930227.47 | 34930227.65 | 0.0088 | 0.0065 |
| Neptune | 90924-08-14 03:22 G | 34930594.54 | 34930594.64 | 34930594.78 | 0.0088 | 0.0079 |
| Saturn | 90928-01-20 09:07 G | 34931848.69 | 34931848.88 | 34931849.08 | 0.0265 | 0.0163 |
| Pluto | 90928-05-11 07:26 G | 34931960.77 | 34931960.81 | 34931960.93 | 0.0063 | 0.0060 |
| Saturn | 90929-01-31 06:58 G | 34932225.57 | 34932225.79 | 34932226.04 | 0.0268 | 0.0110 |
| Pluto | 90929-05-12 18:29 G | 34932327.04 | 34932327.27 | 34932327.53 | 0.0063 | 0.0011 |
| Mars | 90929-11-14 03:50 G | 34932512.49 | 34932512.66 | 34932512.83 | 0.1625 | 0.0713 |
| Jupiter | 90930-02-08 19:12 G | 34932599.08 | 34932599.30 | 34932599.53 | 0.0498 | 0.0110 |
| Uranus | 90940-06-28 21:50 G | 34936392.23 | 34936392.41 | 34936392.59 | 0.0136 | 0.0096 |
| Uranus | 90941-07-03 03:07 G | 34936761.39 | 34936761.63 | 34936761.87 | 0.0137 | 0.0013 |
| Saturn | 90941-07-15 12:00 G | 34936773.93 | 34936774.00 | 34936774.07 | 0.0298 | 0.0287 |
| Jupiter | 90942-02-13 15:07 G | 34936986.98 | 34936987.13 | 34936987.30 | 0.0499 | 0.0364 |
| Uranus | 90942-07-07 17:17 G | 34937130.98 | 34937131.22 | 34937131.47 | 0.0137 | 0.0043 |
| Saturn | 90942-07-29 18:58 G | 34937153.06 | 34937153.29 | 34937153.52 | 0.0294 | 0.0107 |
| Uranus | 90943-07-11 22:19 G | 34937500.36 | 34937500.43 | 34937500.55 | 0.0137 | 0.0127 |
| Saturn | 90958-01-26 08:38 G | 34942812.62 | 34942812.86 | 34942813.10 | 0.0267 | 0.0012 |
| Saturn | 90959-02-07 17:31 G | 34943190.19 | 34943190.23 | 34943190.28 | 0.0271 | 0.0266 |
| Jupiter | 90959-08-06 01:41 G | 34943369.37 | 34943369.57 | 34943369.78 | 0.0528 | 0.0224 |
| Saturn | 90971-07-23 23:46 G | 34947739.26 | 34947739.49 | 34947739.72 | 0.0296 | 0.0072 |
| Jupiter | 90971-08-10 23:17 G | 34947757.28 | 34947757.47 | 34947757.66 | 0.0527 | 0.0329 |
| Uranus | 90980-12-30 09:07 G | 34951186.71 | 34951186.88 | 34951187.06 | 0.0142 | 0.0106 |
| Uranus | 90982-01-04 03:07 G | 34951556.38 | 34951556.63 | 34951556.88 | 0.0141 | 0.0015 |
| Uranus | 90983-01-09 06:00 G | 34951926.52 | 34951926.75 | 34951926.99 | 0.0141 | 0.0061 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 90984-01-13 20:53 G | 34952296.30 | 34952296.37 | 34952296.46 | 0.0141 | 0.0133 |
| Saturn | 90987-01-21 15:50 G | 34953399.93 | 34953400.16 | 34953400.38 | 0.0265 | 0.0130 |
| Saturn | 90988-02-02 13:41 G | 34953776.87 | 34953777.07 | 34953777.29 | 0.0269 | 0.0144 |
| Neptune | 90999-01-28 00:43 G | 34957789.46 | 34957789.53 | 34957789.65 | 0.0089 | 0.0082 |
| Neptune | 91000-01-30 19:12 G | 34958157.15 | 34958157.30 | 34958157.51 | 0.0089 | 0.0065 |
| Saturn | 91000-07-17 21:07 G | 34958325.25 | 34958325.38 | 34958325.53 | 0.0298 | 0.0242 |

92ND MILLENNIUM CE

This is a list of transits of Moon in the 92nd millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|-------------|-------------|-------------|--------|--------|-------|---|
| Neptune | 91001-02-02 03:22 G | 34958524.44 | 34958524.64 | 34958524.88 | 0.0089 | 0.0045 | | |
| Saturn | 91001-08-01 06:43 G | 34958704.58 | 34958704.78 | 34958704.99 | 0.0294 | 0.0148 | | |
| Neptune | 91002-02-04 18:00 G | 34958892.01 | 34958892.25 | 34958892.52 | 0.0089 | 0.0028 | | |
| Neptune | 91003-02-07 06:58 G | 34959259.54 | 34959259.79 | 34959260.04 | 0.0089 | 0.0008 | | |
| Neptune | 91004-02-09 16:48 G | 34959626.94 | 34959627.20 | 34959627.47 | 0.0089 | 0.0011 | | |
| Neptune | 91005-02-11 10:05 G | 34959994.69 | 34959994.92 | 34959995.16 | 0.0089 | 0.0031 | | |
| Neptune | 91006-02-13 16:34 G | 34960361.97 | 34960362.19 | 34960362.41 | 0.0089 | 0.0049 | | |
| Neptune | 91007-02-16 11:31 G | 34960729.83 | 34960729.98 | 34960730.16 | 0.0089 | 0.0068 | | |
| Neptune | 91008-02-18 16:34 G | 34961097.17 | 34961097.19 | 34961097.28 | 0.0089 | 0.0088 | | |
| Mars | 91008-11-17 11:17 G | 34961369.88 | 34961369.97 | 34961370.07 | 0.1628 | 0.1421 | | |
| Jupiter | 91013-02-09 06:14 G | 34962914.54 | 34962914.76 | 34962914.98 | 0.0498 | 0.0173 | | |
| Mars | 91015-05-19 07:26 G | 34963743.63 | 34963743.81 | 34963744.00 | 0.1911 | 0.0384 | | |
| Saturn | 91016-01-17 20:38 G | 34963987.28 | 34963987.36 | 34963987.45 | 0.0264 | 0.0247 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 91017-01-29 00:43 G | 34964364.29 | 34964364.53 | 34964364.78 | 0.0267 | 0.0025 |
| Pluto | 91019-11-12 12:43 G | 34965381.78 | 34965382.03 | 34965382.28 | 0.0081 | 0.0030 |
| Uranus | 91024-06-30 05:46 G | 34967073.54 | 34967073.74 | 34967073.95 | 0.0136 | 0.0081 |
| Jupiter | 91025-02-13 09:50 G | 34967301.71 | 34967301.91 | 34967302.10 | 0.0499 | 0.0289 |
| Uranus | 91025-07-04 12:14 G | 34967442.78 | 34967443.01 | 34967443.26 | 0.0137 | 0.0024 |
| Uranus | 91026-07-09 01:41 G | 34967812.35 | 34967812.57 | 34967812.81 | 0.0137 | 0.0061 |
| Uranus | 91027-07-13 08:53 G | 34968181.76 | 34968181.87 | 34968181.99 | 0.0137 | 0.0120 |
| Saturn | 91030-07-26 15:36 G | 34969290.91 | 34969291.15 | 34969291.40 | 0.0295 | 0.0025 |
| Jupiter | 91042-08-05 23:31 G | 34973684.29 | 34973684.48 | 34973684.68 | 0.0528 | 0.0306 |
| Saturn | 91046-01-23 22:48 G | 34974951.23 | 34974951.45 | 34974951.70 | 0.0266 | 0.0096 |
| Saturn | 91047-02-05 03:07 G | 34975328.46 | 34975328.63 | 34975328.81 | 0.0269 | 0.0181 |
| Jupiter | 91054-08-10 20:24 G | 34978072.15 | 34978072.35 | 34978072.56 | 0.0527 | 0.0216 |
| Saturn | 91059-07-20 15:50 G | 34979876.99 | 34979877.16 | 34979877.35 | 0.0297 | 0.0190 |
| Saturn | 91060-08-03 03:07 G | 34980256.47 | 34980256.63 | 34980256.81 | 0.0293 | 0.0198 |
| Uranus | 91064-12-31 18:00 G | 34981868.05 | 34981868.25 | 34981868.47 | 0.0142 | 0.0087 |
| Uranus | 91066-01-05 13:26 G | 34982237.81 | 34982238.06 | 34982238.30 | 0.0141 | 0.0019 |
| Uranus | 91067-01-10 15:36 G | 34982607.92 | 34982608.15 | 34982608.38 | 0.0141 | 0.0065 |
| Saturn | 91075-01-19 12:58 G | 34985538.90 | 34985539.04 | 34985539.19 | 0.0265 | 0.0209 |
| Saturn | 91076-01-31 13:41 G | 34985915.82 | 34985916.07 | 34985916.32 | 0.0268 | 0.0062 |
| Neptune | 91079-07-26 18:58 G | 34987188.23 | 34987188.29 | 34987188.38 | 0.0089 | 0.0085 |
| Neptune | 91080-07-27 23:31 G | 34987555.37 | 34987555.48 | 34987555.63 | 0.0089 | 0.0076 |
| Neptune | 91081-07-30 15:22 G | 34987922.94 | 34987923.14 | 34987923.38 | 0.0089 | 0.0049 |
| Neptune | 91082-08-01 23:46 G | 34988290.28 | 34988290.49 | 34988290.72 | 0.0089 | 0.0039 |
| Neptune | 91083-08-04 10:48 G | 34988657.69 | 34988657.95 | 34988658.22 | 0.0089 | 0.0012 |
| Neptune | 91084-08-05 23:46 G | 34989025.24 | 34989025.49 | 34989025.74 | 0.0089 | 0.0002 |
| Neptune | 91085-08-08 05:31 G | 34989392.50 | 34989392.73 | 34989393.00 | 0.0088 | 0.0026 |
| Neptune | 91086-08-10 22:19 G | 34989760.22 | 34989760.43 | 34989760.68 | 0.0088 | 0.0036 |
| Neptune | 91087-08-13 02:24 G | 34990127.44 | 34990127.60 | 34990127.80 | 0.0088 | 0.0062 |
| Neptune | 91088-08-14 20:24 G | 34990495.21 | 34990495.35 | 34990495.51 | 0.0088 | 0.0072 |
| Saturn | 91089-07-28 07:12 G | 34990842.55 | 34990842.80 | 34990843.05 | 0.0294 | 0.0030 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 91096-02-08 19:41 G | 34993229.13 | 34993229.32 | 34993229.52 | 0.0498 | 0.0273 |
| Saturn | 91105-01-26 12:29 G | 34996502.79 | 34996503.02 | 34996503.26 | 0.0266 | 0.0058 |
| Saturn | 91106-02-07 21:36 G | 34996880.27 | 34996880.40 | 34996880.54 | 0.0270 | 0.0219 |
| Jupiter | 91108-02-14 13:26 G | 34997616.85 | 34997617.06 | 34997617.27 | 0.0498 | 0.0201 |
| Uranus | 91108-07-01 15:36 G | 34997754.96 | 34997755.15 | 34997755.36 | 0.0137 | 0.0087 |
| Uranus | 91109-07-05 23:31 G | 34998124.24 | 34998124.48 | 34998124.72 | 0.0137 | 0.0005 |
| Uranus | 91110-07-10 11:31 G | 34998493.75 | 34998493.98 | 34998494.23 | 0.0137 | 0.0052 |
| Uranus | 91111-07-14 19:41 G | 34998863.30 | 34998863.32 | 34998863.34 | 0.0137 | 0.0137 |
| Saturn | 91118-07-23 16:34 G | 35001428.99 | 35001429.19 | 35001429.40 | 0.0297 | 0.0134 |
| Saturn | 91119-08-07 01:41 G | 35001808.45 | 35001808.57 | 35001808.70 | 0.0292 | 0.0248 |
| Jupiter | 91125-08-05 18:14 G | 35003999.14 | 35003999.26 | 35003999.40 | 0.0528 | 0.0432 |
| Saturn | 91134-01-22 01:55 G | 35007090.39 | 35007090.58 | 35007090.78 | 0.0265 | 0.0170 |
| Mars | 91134-11-15 16:19 G | 35007388.10 | 35007388.18 | 35007388.27 | 0.1618 | 0.1448 |
| Saturn | 91135-02-02 22:48 G | 35007467.21 | 35007467.45 | 35007467.69 | 0.0268 | 0.0098 |
| Jupiter | 91137-08-10 17:31 G | 35008387.00 | 35008387.23 | 35008387.47 | 0.0528 | 0.0099 |
| Saturn | 91148-07-31 01:41 G | 35012394.33 | 35012394.57 | 35012394.80 | 0.0294 | 0.0085 |
| Uranus | 91149-01-02 06:00 G | 35012549.56 | 35012549.75 | 35012549.95 | 0.0142 | 0.0095 |
| Uranus | 91150-01-07 02:10 G | 35012919.34 | 35012919.59 | 35012919.84 | 0.0141 | 0.0003 |
| Uranus | 91151-01-12 02:38 G | 35013289.40 | 35013289.61 | 35013289.85 | 0.0141 | 0.0071 |
| Saturn | 91164-01-29 04:34 G | 35018054.45 | 35018054.69 | 35018054.93 | 0.0267 | 0.0021 |
| Neptune | 91164-02-01 00:14 G | 35018057.36 | 35018057.51 | 35018057.70 | 0.0089 | 0.0065 |
| Neptune | 91165-02-02 13:55 G | 35018424.89 | 35018425.08 | 35018425.31 | 0.0089 | 0.0055 |
| Saturn | 91165-02-09 12:14 G | 35018431.94 | 35018432.01 | 35018432.10 | 0.0271 | 0.0256 |
| Neptune | 91166-02-05 04:34 G | 35018792.46 | 35018792.69 | 35018792.93 | 0.0089 | 0.0027 |
| Neptune | 91167-02-07 13:12 G | 35019159.80 | 35019160.05 | 35019160.33 | 0.0089 | 0.0017 |
| Neptune | 91168-02-10 07:12 G | 35019527.56 | 35019527.80 | 35019528.06 | 0.0089 | 0.0012 |
| Neptune | 91169-02-11 13:12 G | 35019894.80 | 35019895.05 | 35019895.31 | 0.0089 | 0.0021 |
| Neptune | 91170-02-14 08:24 G | 35020262.66 | 35020262.85 | 35020263.09 | 0.0089 | 0.0050 |
| Neptune | 91171-02-16 14:10 G | 35020629.92 | 35020630.09 | 35020630.30 | 0.0089 | 0.0059 |
| Neptune | 91172-02-19 07:26 G | 35020997.79 | 35020997.81 | 35020997.90 | 0.0089 | 0.0087 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 91175-05-16 12:14 G | 35022179.76 | 35022180.01 | 35022180.26 | 0.0063 | 0.0016 |
| Saturn | 91177-07-25 16:19 G | 35022980.95 | 35022981.18 | 35022981.42 | 0.0296 | 0.0079 |
| Jupiter | 91179-02-09 04:48 G | 35023544.54 | 35023544.70 | 35023544.87 | 0.0498 | 0.0343 |
| Jupiter | 91191-02-13 11:31 G | 35027931.75 | 35027931.98 | 35027932.22 | 0.0498 | 0.0126 |
| Uranus | 91192-07-01 22:34 G | 35028436.24 | 35028436.44 | 35028436.67 | 0.0137 | 0.0075 |
| Saturn | 91193-01-23 09:50 G | 35028641.69 | 35028641.91 | 35028642.13 | 0.0265 | 0.0135 |
| Uranus | 91193-07-06 08:10 G | 35028805.60 | 35028805.84 | 35028806.08 | 0.0137 | 0.0014 |
| Saturn | 91194-02-04 09:07 G | 35029018.68 | 35029018.88 | 35029019.11 | 0.0269 | 0.0136 |
| Uranus | 91194-07-10 18:58 G | 35029175.08 | 35029175.29 | 35029175.52 | 0.0137 | 0.0070 |
| Uranus | 91195-07-15 04:48 G | 35029544.63 | 35029544.70 | 35029544.79 | 0.0137 | 0.0129 |
| Saturn | 91206-07-19 13:12 G | 35033566.92 | 35033567.05 | 35033567.18 | 0.0297 | 0.0252 |
| Saturn | 91207-08-03 00:00 G | 35033946.30 | 35033946.50 | 35033946.72 | 0.0293 | 0.0138 |
| Jupiter | 91208-08-04 16:34 G | 35034314.17 | 35034314.19 | 35034314.23 | 0.0529 | 0.0525 |
| Mars | 91213-11-17 16:05 G | 35036244.99 | 35036245.17 | 35036245.35 | 0.1621 | 0.0221 |
| Jupiter | 91220-08-09 13:12 G | 35038701.82 | 35038702.05 | 35038702.28 | 0.0528 | 0.0006 |
| Saturn | 91222-01-18 13:55 G | 35039229.01 | 35039229.08 | 35039229.14 | 0.0264 | 0.0254 |
| Saturn | 91223-01-30 17:17 G | 35039605.97 | 35039606.22 | 35039606.46 | 0.0267 | 0.0016 |
| Jupiter | 91232-08-14 15:50 G | 35043090.05 | 35043090.16 | 35043090.26 | 0.0527 | 0.0467 |
| Uranus | 91233-01-02 16:48 G | 35043230.97 | 35043231.20 | 35043231.43 | 0.0142 | 0.0074 |
| Uranus | 91234-01-07 14:10 G | 35043600.85 | 35043601.09 | 35043601.34 | 0.0141 | 0.0007 |
| Uranus | 91235-01-12 14:10 G | 35043970.88 | 35043971.09 | 35043971.32 | 0.0141 | 0.0080 |
| Saturn | 91236-07-27 10:05 G | 35044532.67 | 35044532.92 | 35044533.17 | 0.0296 | 0.0029 |
| Neptune | 91244-07-28 14:38 G | 35047456.00 | 35047456.11 | 35047456.28 | 0.0089 | 0.0075 |
| Neptune | 91245-07-30 23:46 G | 35047823.32 | 35047823.49 | 35047823.69 | 0.0089 | 0.0059 |
| Neptune | 91246-08-02 09:36 G | 35048190.68 | 35048190.90 | 35048191.16 | 0.0089 | 0.0039 |
| Neptune | 91247-08-05 00:00 G | 35048558.27 | 35048558.50 | 35048558.75 | 0.0089 | 0.0022 |
| Neptune | 91248-08-06 06:00 G | 35048925.49 | 35048925.75 | 35048926.01 | 0.0089 | 0.0001 |
| Neptune | 91249-08-08 23:17 G | 35049293.22 | 35049293.47 | 35049293.72 | 0.0088 | 0.0016 |
| Neptune | 91250-08-11 02:53 G | 35049660.40 | 35049660.62 | 35049660.86 | 0.0088 | 0.0037 |
| Neptune | 91251-08-13 20:10 G | 35050028.15 | 35050028.34 | 35050028.58 | 0.0088 | 0.0052 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 91252-01-25 15:07 G | 35050192.90 | 35050193.13 | 35050193.36 | 0.0266 | 0.0103 |
| Neptune | 91252-08-15 01:55 G | 35050395.45 | 35050395.58 | 35050395.73 | 0.0088 | 0.0073 |
| Saturn | 91253-02-05 21:07 G | 35050570.20 | 35050570.38 | 35050570.57 | 0.0269 | 0.0170 |
| Neptune | 91253-08-17 15:50 G | 35050763.15 | 35050763.16 | 35050763.22 | 0.0088 | 0.0088 |
| Jupiter | 91262-02-08 02:10 G | 35053859.47 | 35053859.59 | 35053859.73 | 0.0497 | 0.0419 |
| Saturn | 91265-07-21 10:05 G | 35055118.75 | 35055118.92 | 35055119.10 | 0.0297 | 0.0202 |
| Pluto | 91265-11-14 00:00 G | 35055234.29 | 35055234.50 | 35055234.75 | 0.0081 | 0.0035 |
| Saturn | 91266-08-04 22:05 G | 35055498.25 | 35055498.42 | 35055498.61 | 0.0293 | 0.0188 |
| Jupiter | 91274-02-12 13:41 G | 35058246.85 | 35058247.07 | 35058247.30 | 0.0498 | 0.0043 |
| Uranus | 91276-07-02 07:41 G | 35059117.61 | 35059117.82 | 35059118.04 | 0.0136 | 0.0078 |
| Uranus | 91277-07-06 18:14 G | 35059487.02 | 35059487.26 | 35059487.50 | 0.0137 | 0.0002 |
| Uranus | 91278-07-11 03:36 G | 35059856.43 | 35059856.65 | 35059856.89 | 0.0137 | 0.0060 |
| Saturn | 91281-01-20 00:14 G | 35060780.39 | 35060780.51 | 35060780.65 | 0.0264 | 0.0223 |
| Saturn | 91282-01-31 22:34 G | 35061157.19 | 35061157.44 | 35061157.70 | 0.0268 | 0.0046 |
| Jupiter | 91286-02-17 02:38 G | 35062634.57 | 35062634.61 | 35062634.66 | 0.0499 | 0.0488 |
| Saturn | 91295-07-29 22:19 G | 35066084.18 | 35066084.43 | 35066084.68 | 0.0295 | 0.0018 |
| Mars | 91299-05-19 04:48 G | 35067473.54 | 35067473.70 | 35067473.87 | 0.1920 | 0.1177 |
| Jupiter | 91303-08-10 15:50 G | 35069016.93 | 35069017.16 | 35069017.39 | 0.0528 | 0.0101 |
| Saturn | 91311-01-27 23:02 G | 35071744.24 | 35071744.46 | 35071744.70 | 0.0266 | 0.0077 |
| Saturn | 91312-02-09 06:58 G | 35072121.63 | 35072121.79 | 35072121.96 | 0.0269 | 0.0198 |
| Jupiter | 91315-08-15 05:46 G | 35073404.58 | 35073404.74 | 35073404.91 | 0.0527 | 0.0365 |
| Uranus | 91317-01-04 02:24 G | 35073912.39 | 35073912.60 | 35073912.81 | 0.0142 | 0.0084 |
| Uranus | 91318-01-09 01:12 G | 35074282.31 | 35074282.55 | 35074282.80 | 0.0141 | 0.0011 |
| Uranus | 91319-01-13 23:31 G | 35074652.28 | 35074652.48 | 35074652.72 | 0.0141 | 0.0082 |
| Saturn | 91324-07-24 03:50 G | 35076670.47 | 35076670.66 | 35076670.87 | 0.0297 | 0.0158 |
| Saturn | 91325-08-07 12:58 G | 35077049.90 | 35077050.04 | 35077050.20 | 0.0292 | 0.0228 |
| Neptune | 91328-02-01 09:36 G | 35077957.75 | 35077957.90 | 35077958.07 | 0.0089 | 0.0071 |
| Neptune | 91329-02-03 00:14 G | 35078325.34 | 35078325.51 | 35078325.72 | 0.0089 | 0.0057 |
| Neptune | 91330-02-05 08:24 G | 35078692.61 | 35078692.85 | 35078693.10 | 0.0089 | 0.0033 |
| Neptune | 91331-02-08 03:07 G | 35079060.38 | 35079060.63 | 35079060.88 | 0.0089 | 0.0019 |

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| Neptune | 91332-02-10 08:53 G | 35079427.61 | 35079427.87 | 35079428.13 | 0.0089 | 0.0004 |
| Neptune | 91333-02-12 04:19 G | 35079795.43 | 35079795.68 | 35079795.95 | 0.0089 | 0.0019 |
| Neptune | 91334-02-14 10:48 G | 35080162.74 | 35080162.95 | 35080163.19 | 0.0089 | 0.0041 |
| Neptune | 91335-02-17 03:50 G | 35080530.48 | 35080530.66 | 35080530.89 | 0.0089 | 0.0058 |
| Neptune | 91336-02-19 13:55 G | 35080897.99 | 35080898.08 | 35080898.21 | 0.0089 | 0.0079 |
| Saturn | 91340-01-23 01:26 G | 35082331.40 | 35082331.56 | 35082331.74 | 0.0264 | 0.0198 |
| Saturn | 91341-02-02 21:36 G | 35082708.16 | 35082708.40 | 35082708.65 | 0.0268 | 0.0068 |
| Jupiter | 91345-02-08 08:38 G | 35084174.81 | 35084174.86 | 35084174.90 | 0.0497 | 0.0486 |
| Saturn | 91354-08-01 07:55 G | 35087635.60 | 35087635.83 | 35087636.07 | 0.0295 | 0.0058 |
| Jupiter | 91357-02-12 21:36 G | 35088562.16 | 35088562.40 | 35088562.65 | 0.0498 | 0.0011 |
| Uranus | 91360-07-03 14:24 G | 35089798.89 | 35089799.10 | 35089799.33 | 0.0136 | 0.0069 |
| Uranus | 91361-07-08 02:24 G | 35090168.36 | 35090168.60 | 35090168.85 | 0.0137 | 0.0007 |
| Uranus | 91362-07-12 10:48 G | 35090537.73 | 35090537.95 | 35090538.16 | 0.0137 | 0.0077 |
| Uranus | 91363-07-16 22:34 G | 35090907.43 | 35090907.44 | 35090907.49 | 0.0137 | 0.0136 |
| Jupiter | 91369-02-17 05:46 G | 35092949.63 | 35092949.74 | 35092949.85 | 0.0499 | 0.0435 |
| Saturn | 91370-01-29 06:00 G | 35093295.51 | 35093295.75 | 35093295.99 | 0.0266 | 0.0055 |
| Saturn | 91371-02-10 09:22 G | 35093672.74 | 35093672.89 | 35093673.03 | 0.0270 | 0.0220 |
| Saturn | 91383-07-26 13:55 G | 35098221.86 | 35098222.08 | 35098222.31 | 0.0297 | 0.0118 |
| Saturn | 91384-08-08 18:43 G | 35098601.19 | 35098601.28 | 35098601.39 | 0.0292 | 0.0266 |
| Jupiter | 91386-08-09 10:34 G | 35099331.73 | 35099331.94 | 35099332.16 | 0.0528 | 0.0185 |
| Jupiter | 91398-08-14 19:12 G | 35103720.11 | 35103720.30 | 35103720.48 | 0.0528 | 0.0297 |
| Saturn | 91399-01-23 21:50 G | 35103882.22 | 35103882.41 | 35103882.60 | 0.0264 | 0.0178 |
| Saturn | 91400-02-04 22:34 G | 35104259.22 | 35104259.44 | 35104259.67 | 0.0268 | 0.0088 |
| Uranus | 91401-01-05 08:24 G | 35104593.63 | 35104593.85 | 35104594.10 | 0.0142 | 0.0067 |
| Uranus | 91402-01-10 09:22 G | 35104963.64 | 35104963.89 | 35104964.14 | 0.0141 | 0.0002 |
| Uranus | 91403-01-15 06:58 G | 35105333.60 | 35105333.79 | 35105334.00 | 0.0141 | 0.0091 |
| Neptune | 91408-07-29 23:46 G | 35107356.37 | 35107356.49 | 35107356.62 | 0.0089 | 0.0076 |
| Neptune | 91409-08-01 08:38 G | 35107723.71 | 35107723.86 | 35107724.06 | 0.0089 | 0.0067 |
| Neptune | 91410-08-03 23:46 G | 35108091.28 | 35108091.49 | 35108091.73 | 0.0089 | 0.0039 |
| Neptune | 91411-08-06 04:48 G | 35108458.47 | 35108458.70 | 35108458.96 | 0.0089 | 0.0030 |

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| Neptune | 91412-08-07 22:48 G | 35108826.19 | 35108826.45 | 35108826.70 | 0.0089 | 0.0002 |
| Saturn | 91413-08-03 16:48 G | 35109186.98 | 35109187.20 | 35109187.43 | 0.0295 | 0.0095 |
| Neptune | 91413-08-10 02:24 G | 35109193.36 | 35109193.60 | 35109193.86 | 0.0088 | 0.0008 |
| Neptune | 91414-08-12 19:26 G | 35109561.08 | 35109561.31 | 35109561.56 | 0.0088 | 0.0035 |
| Neptune | 91415-08-15 01:12 G | 35109928.35 | 35109928.55 | 35109928.78 | 0.0088 | 0.0045 |
| Neptune | 91416-08-16 14:24 G | 35110295.97 | 35110296.10 | 35110296.28 | 0.0088 | 0.0072 |
| Neptune | 91417-08-19 01:12 G | 35110663.48 | 35110663.55 | 35110663.67 | 0.0088 | 0.0082 |
| Mars | 91418-11-18 10:34 G | 35111119.77 | 35111119.94 | 35111120.11 | 0.1614 | 0.0866 |
| Pluto | 91421-05-18 23:31 G | 35112032.29 | 35112032.48 | 35112032.70 | 0.0063 | 0.0038 |
| Pluto | 91422-05-20 16:34 G | 35112399.00 | 35112399.19 | 35112399.38 | 0.0063 | 0.0042 |
| Saturn | 91429-01-31 04:05 G | 35114846.42 | 35114846.67 | 35114846.93 | 0.0266 | 0.0036 |
| Saturn | 91430-02-12 02:38 G | 35115223.50 | 35115223.61 | 35115223.74 | 0.0269 | 0.0236 |
| Jupiter | 91440-02-14 02:38 G | 35118877.38 | 35118877.61 | 35118877.84 | 0.0498 | 0.0046 |
| Saturn | 91442-07-28 12:14 G | 35119772.77 | 35119773.01 | 35119773.25 | 0.0297 | 0.0081 |
| Uranus | 91444-07-05 00:43 G | 35120480.31 | 35120480.53 | 35120480.76 | 0.0136 | 0.0069 |
| Uranus | 91445-07-09 13:41 G | 35120849.83 | 35120850.07 | 35120850.31 | 0.0137 | 0.0009 |
| Uranus | 91446-07-13 20:10 G | 35121219.13 | 35121219.34 | 35121219.58 | 0.0137 | 0.0069 |
| Jupiter | 91452-02-18 20:53 G | 35123265.23 | 35123265.37 | 35123265.53 | 0.0498 | 0.0382 |
| Saturn | 91458-01-25 19:41 G | 35125433.13 | 35125433.32 | 35125433.51 | 0.0264 | 0.0159 |
| Saturn | 91459-02-07 00:29 G | 35125810.30 | 35125810.52 | 35125810.75 | 0.0268 | 0.0105 |
| Jupiter | 91469-08-10 01:26 G | 35129647.36 | 35129647.56 | 35129647.76 | 0.0528 | 0.0245 |
| Saturn | 91471-07-22 06:43 G | 35130358.68 | 35130358.78 | 35130358.89 | 0.0299 | 0.0267 |
| Saturn | 91472-08-04 21:07 G | 35130738.17 | 35130738.38 | 35130738.60 | 0.0295 | 0.0126 |
| Jupiter | 91481-08-14 20:38 G | 35134035.14 | 35134035.36 | 35134035.58 | 0.0527 | 0.0225 |
| Uranus | 91485-01-05 15:50 G | 35135274.95 | 35135275.16 | 35135275.39 | 0.0142 | 0.0078 |
| Uranus | 91486-01-10 18:00 G | 35135645.01 | 35135645.25 | 35135645.50 | 0.0141 | 0.0018 |
| Uranus | 91487-01-15 13:55 G | 35136014.88 | 35136015.08 | 35136015.29 | 0.0141 | 0.0087 |
| Saturn | 91488-02-01 19:41 G | 35136397.07 | 35136397.32 | 35136397.58 | 0.0266 | 0.0022 |
| Saturn | 91489-02-12 21:22 G | 35136774.32 | 35136774.39 | 35136774.48 | 0.0269 | 0.0252 |
| Neptune | 91492-02-01 21:07 G | 35137858.28 | 35137858.38 | 35137858.48 | 0.0089 | 0.0081 |

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| Neptune | 91493-02-03 04:19 G | 35138225.48 | 35138225.68 | 35138225.89 | 0.0089 | 0.0055 |
| Neptune | 91494-02-05 23:17 G | 35138593.26 | 35138593.47 | 35138593.71 | 0.0089 | 0.0045 |
| Neptune | 91495-02-08 05:02 G | 35138960.45 | 35138960.71 | 35138960.96 | 0.0089 | 0.0018 |
| Neptune | 91496-02-11 00:14 G | 35139328.25 | 35139328.51 | 35139328.77 | 0.0089 | 0.0008 |
| Neptune | 91497-02-12 07:12 G | 35139695.56 | 35139695.80 | 35139696.05 | 0.0089 | 0.0020 |
| Mars | 91497-11-20 21:50 G | 35139977.26 | 35139977.41 | 35139977.56 | 0.1617 | 0.1071 |
| Neptune | 91498-02-14 22:48 G | 35140063.21 | 35140063.45 | 35140063.72 | 0.0089 | 0.0031 |
| Neptune | 91499-02-17 09:50 G | 35140430.73 | 35140430.91 | 35140431.11 | 0.0089 | 0.0058 |
| Neptune | 91500-02-19 21:07 G | 35140798.23 | 35140798.38 | 35140798.57 | 0.0089 | 0.0068 |
| Saturn | 91501-07-30 07:55 G | 35141323.59 | 35141323.83 | 35141324.07 | 0.0297 | 0.0051 |
| Pluto | 91511-11-18 16:05 G | 35145087.13 | 35145087.17 | 35145087.23 | 0.0082 | 0.0080 |
| Saturn | 91517-01-27 19:26 G | 35146984.11 | 35146984.31 | 35146984.51 | 0.0264 | 0.0144 |
| Saturn | 91518-02-08 20:38 G | 35147361.14 | 35147361.36 | 35147361.59 | 0.0268 | 0.0120 |
| Jupiter | 91523-02-14 20:53 G | 35149193.13 | 35149193.37 | 35149193.60 | 0.0498 | 0.0076 |
| Uranus | 91527-07-03 05:46 G | 35150792.68 | 35150792.74 | 35150792.81 | 0.0136 | 0.0130 |
| Uranus | 91528-07-06 09:22 G | 35151161.68 | 35151161.89 | 35151162.14 | 0.0136 | 0.0062 |
| Uranus | 91529-07-10 23:46 G | 35151531.25 | 35151531.49 | 35151531.74 | 0.0137 | 0.0004 |
| Uranus | 91530-07-15 05:17 G | 35151900.53 | 35151900.72 | 35151900.93 | 0.0137 | 0.0087 |
| Saturn | 91530-07-24 03:22 G | 35151909.51 | 35151909.64 | 35151909.79 | 0.0299 | 0.0241 |
| Saturn | 91531-08-07 14:10 G | 35152288.88 | 35152289.09 | 35152289.31 | 0.0295 | 0.0152 |
| Jupiter | 91535-02-19 00:00 G | 35153580.34 | 35153580.50 | 35153580.68 | 0.0499 | 0.0344 |
| Saturn | 91546-01-22 18:00 G | 35157571.23 | 35157571.25 | 35157571.29 | 0.0262 | 0.0261 |
| Saturn | 91547-02-03 12:58 G | 35157947.79 | 35157948.04 | 35157948.28 | 0.0265 | 0.0007 |
| Jupiter | 91552-08-10 04:05 G | 35159962.48 | 35159962.67 | 35159962.87 | 0.0528 | 0.0311 |
| Saturn | 91560-07-31 06:43 G | 35162874.55 | 35162874.78 | 35162875.02 | 0.0297 | 0.0026 |
| Jupiter | 91564-08-15 06:14 G | 35164350.55 | 35164350.76 | 35164350.98 | 0.0527 | 0.0167 |
| Uranus | 91569-01-07 00:43 G | 35165956.30 | 35165956.53 | 35165956.78 | 0.0142 | 0.0059 |
| Uranus | 91570-01-12 04:05 G | 35166326.43 | 35166326.67 | 35166326.92 | 0.0141 | 0.0010 |
| Uranus | 91571-01-16 22:48 G | 35166696.29 | 35166696.45 | 35166696.65 | 0.0141 | 0.0102 |
| Neptune | 91572-07-30 06:43 G | 35167256.73 | 35167256.78 | 35167256.90 | 0.0089 | 0.0084 |

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| Neptune | 91573-08-01 22:19 G | 35167624.29 | 35167624.43 | 35167624.62 | 0.0089 | 0.0067 |
| Neptune | 91574-08-04 03:07 G | 35167991.43 | 35167991.63 | 35167991.87 | 0.0089 | 0.0048 |
| Neptune | 91575-08-06 21:22 G | 35168359.16 | 35168359.39 | 35168359.64 | 0.0089 | 0.0030 |
| Saturn | 91576-01-29 16:05 G | 35168534.96 | 35168535.17 | 35168535.39 | 0.0264 | 0.0128 |
| Neptune | 91576-08-08 01:26 G | 35168726.32 | 35168726.56 | 35168726.82 | 0.0089 | 0.0012 |
| Saturn | 91577-02-09 10:34 G | 35168911.73 | 35168911.94 | 35168912.17 | 0.0268 | 0.0136 |
| Neptune | 91577-08-10 18:14 G | 35169094.00 | 35169094.26 | 35169094.53 | 0.0088 | 0.0008 |
| Neptune | 91578-08-13 01:26 G | 35169461.33 | 35169461.56 | 35169461.80 | 0.0088 | 0.0026 |
| Neptune | 91579-08-15 13:41 G | 35169828.85 | 35169829.07 | 35169829.31 | 0.0088 | 0.0045 |
| Neptune | 91580-08-17 00:58 G | 35170196.38 | 35170196.54 | 35170196.73 | 0.0088 | 0.0063 |
| Neptune | 91581-08-19 07:55 G | 35170563.75 | 35170563.83 | 35170563.97 | 0.0088 | 0.0080 |
| Saturn | 91589-07-24 16:48 G | 35173460.03 | 35173460.20 | 35173460.37 | 0.0299 | 0.0217 |
| Saturn | 91590-08-08 03:22 G | 35173839.45 | 35173839.64 | 35173839.84 | 0.0295 | 0.0177 |
| Saturn | 91605-01-23 10:19 G | 35179121.86 | 35179121.93 | 35179122.01 | 0.0262 | 0.0248 |
| Saturn | 91606-02-04 10:48 G | 35179498.71 | 35179498.95 | 35179499.19 | 0.0265 | 0.0010 |
| Jupiter | 91606-02-14 00:14 G | 35179508.28 | 35179508.51 | 35179508.74 | 0.0498 | 0.0112 |
| Uranus | 91611-07-03 17:31 G | 35181474.19 | 35181474.23 | 35181474.33 | 0.0136 | 0.0131 |
| Uranus | 91612-07-06 21:22 G | 35181843.17 | 35181843.39 | 35181843.63 | 0.0136 | 0.0058 |
| Uranus | 91613-07-11 12:14 G | 35182212.77 | 35182213.01 | 35182213.26 | 0.0137 | 0.0019 |
| Uranus | 91614-07-15 16:34 G | 35182582.00 | 35182582.19 | 35182582.42 | 0.0137 | 0.0081 |
| Jupiter | 91618-02-18 20:38 G | 35183896.19 | 35183896.36 | 35183896.54 | 0.0499 | 0.0311 |
| Saturn | 91619-08-02 03:22 G | 35184425.40 | 35184425.64 | 35184425.88 | 0.0297 | 0.0005 |
| Saturn | 91635-01-30 06:29 G | 35190085.55 | 35190085.77 | 35190086.01 | 0.0264 | 0.0116 |
| Jupiter | 91635-08-10 18:00 G | 35190278.09 | 35190278.25 | 35190278.41 | 0.0528 | 0.0361 |
| Saturn | 91636-02-11 02:24 G | 35190462.40 | 35190462.60 | 35190462.80 | 0.0267 | 0.0152 |
| Jupiter | 91647-08-15 21:07 G | 35194666.15 | 35194666.38 | 35194666.62 | 0.0527 | 0.0135 |
| Saturn | 91648-07-25 06:58 G | 35195010.61 | 35195010.79 | 35195010.98 | 0.0299 | 0.0193 |
| Saturn | 91649-08-08 22:05 G | 35195390.25 | 35195390.42 | 35195390.60 | 0.0295 | 0.0198 |
| Uranus | 91652-01-03 19:26 G | 35196268.27 | 35196268.31 | 35196268.39 | 0.0142 | 0.0138 |
| Uranus | 91653-01-07 13:12 G | 35196637.82 | 35196638.05 | 35196638.29 | 0.0142 | 0.0066 |

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| Uranus | 91654-01-12 17:02 G | 35197007.98 | 35197008.21 | 35197008.47 | 0.0141 | 0.0032 |
| Uranus | 91655-01-17 10:34 G | 35197377.77 | 35197377.94 | 35197378.15 | 0.0141 | 0.0099 |
| Neptune | 91656-02-01 22:05 G | 35197758.39 | 35197758.42 | 35197758.50 | 0.0089 | 0.0087 |
| Neptune | 91657-02-03 17:31 G | 35198126.07 | 35198126.23 | 35198126.45 | 0.0089 | 0.0062 |
| Neptune | 91658-02-05 23:31 G | 35198493.27 | 35198493.48 | 35198493.70 | 0.0089 | 0.0049 |
| Neptune | 91659-02-08 18:00 G | 35198861.00 | 35198861.25 | 35198861.51 | 0.0089 | 0.0024 |
| Neptune | 91660-02-11 01:55 G | 35199228.34 | 35199228.58 | 35199228.84 | 0.0089 | 0.0011 |
| Neptune | 91661-02-12 17:02 G | 35199595.95 | 35199596.21 | 35199596.48 | 0.0089 | 0.0014 |
| Neptune | 91662-02-15 05:31 G | 35199963.50 | 35199963.73 | 35199963.98 | 0.0089 | 0.0027 |
| Neptune | 91663-02-17 15:22 G | 35200330.95 | 35200331.14 | 35200331.39 | 0.0089 | 0.0051 |
| Saturn | 91664-01-25 09:22 G | 35200672.80 | 35200672.89 | 35200673.01 | 0.0262 | 0.0236 |
| Neptune | 91664-02-20 08:53 G | 35200698.70 | 35200698.87 | 35200699.05 | 0.0089 | 0.0064 |
| Saturn | 91665-02-05 09:22 G | 35201049.64 | 35201049.89 | 35201050.13 | 0.0265 | 0.0025 |
| Neptune | 91665-02-21 15:22 G | 35201066.12 | 35201066.14 | 35201066.17 | 0.0089 | 0.0088 |
| Pluto | 91667-05-21 22:34 G | 35201885.32 | 35201885.44 | 35201885.62 | 0.0063 | 0.0050 |
| Pluto | 91668-05-22 08:38 G | 35202251.64 | 35202251.86 | 35202252.12 | 0.0063 | 0.0027 |
| Saturn | 91678-08-02 19:12 G | 35205976.05 | 35205976.30 | 35205976.55 | 0.0297 | 0.0019 |
| Jupiter | 91689-02-13 19:26 G | 35209824.09 | 35209824.31 | 35209824.53 | 0.0498 | 0.0144 |
| Saturn | 91694-01-30 23:31 G | 35211636.25 | 35211636.48 | 35211636.71 | 0.0264 | 0.0101 |
| Saturn | 91695-02-12 01:26 G | 35212013.38 | 35212013.56 | 35212013.74 | 0.0267 | 0.0173 |
| Uranus | 91695-07-04 04:19 G | 35212155.58 | 35212155.68 | 35212155.82 | 0.0136 | 0.0119 |
| Uranus | 91696-07-07 06:58 G | 35212524.56 | 35212524.79 | 35212525.03 | 0.0136 | 0.0052 |
| Uranus | 91697-07-11 22:34 G | 35212894.20 | 35212894.44 | 35212894.69 | 0.0137 | 0.0017 |
| Uranus | 91698-07-16 02:24 G | 35213263.43 | 35213263.60 | 35213263.79 | 0.0137 | 0.0098 |
| Jupiter | 91701-02-19 04:19 G | 35214211.48 | 35214211.68 | 35214211.89 | 0.0499 | 0.0263 |
| Mars | 91702-11-21 11:31 G | 35214851.80 | 35214851.98 | 35214852.17 | 0.1610 | 0.0161 |
| Saturn | 91707-07-28 03:50 G | 35216561.47 | 35216561.66 | 35216561.86 | 0.0299 | 0.0170 |
| Saturn | 91708-08-10 20:38 G | 35216941.21 | 35216941.36 | 35216941.52 | 0.0295 | 0.0219 |
| Jupiter | 91718-08-11 08:10 G | 35220593.68 | 35220593.84 | 35220593.99 | 0.0528 | 0.0397 |
| Saturn | 91723-01-27 10:05 G | 35222223.78 | 35222223.92 | 35222224.05 | 0.0262 | 0.0218 |

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| Saturn | 91724-02-08 03:36 G | 35222600.40 | 35222600.65 | 35222600.90 | 0.0265 | 0.0044 |
| Jupiter | 91730-08-16 00:43 G | 35224981.31 | 35224981.53 | 35224981.75 | 0.0527 | 0.0076 |
| Uranus | 91736-01-05 09:50 G | 35226949.87 | 35226949.91 | 35226949.98 | 0.0142 | 0.0138 |
| Uranus | 91737-01-09 02:53 G | 35227319.38 | 35227319.62 | 35227319.88 | 0.0142 | 0.0044 |
| Neptune | 91737-08-02 01:55 G | 35227524.44 | 35227524.58 | 35227524.77 | 0.0089 | 0.0067 |
| Saturn | 91737-08-04 10:48 G | 35227526.71 | 35227526.95 | 35227527.20 | 0.0297 | 0.0047 |
| Uranus | 91738-01-14 07:26 G | 35227689.56 | 35227689.81 | 35227690.06 | 0.0141 | 0.0025 |
| Neptune | 91738-08-04 19:55 G | 35227892.15 | 35227892.33 | 35227892.54 | 0.0089 | 0.0058 |
| Uranus | 91739-01-19 00:00 G | 35228059.38 | 35228059.50 | 35228059.66 | 0.0141 | 0.0119 |
| Neptune | 91739-08-07 00:29 G | 35228259.29 | 35228259.52 | 35228259.76 | 0.0089 | 0.0030 |
| Neptune | 91740-08-08 16:05 G | 35228626.93 | 35228627.17 | 35228627.44 | 0.0089 | 0.0021 |
| Neptune | 91741-08-11 00:00 G | 35228994.26 | 35228994.50 | 35228994.75 | 0.0089 | 0.0007 |
| Neptune | 91742-08-13 11:02 G | 35229361.71 | 35229361.96 | 35229362.23 | 0.0088 | 0.0017 |
| Neptune | 91743-08-16 00:00 G | 35229729.29 | 35229729.50 | 35229729.72 | 0.0088 | 0.0044 |
| Neptune | 91744-08-17 06:43 G | 35230096.58 | 35230096.78 | 35230097.00 | 0.0088 | 0.0053 |
| Neptune | 91745-08-19 23:17 G | 35230464.39 | 35230464.47 | 35230464.60 | 0.0088 | 0.0081 |
| Saturn | 91753-02-02 01:41 G | 35233187.34 | 35233187.57 | 35233187.80 | 0.0264 | 0.0079 |
| Saturn | 91754-02-14 04:34 G | 35233564.53 | 35233564.69 | 35233564.86 | 0.0268 | 0.0195 |
| Pluto | 91758-11-22 17:17 G | 35235307.15 | 35235307.22 | 35235307.35 | 0.0081 | 0.0074 |
| Saturn | 91766-07-29 06:14 G | 35238112.56 | 35238112.76 | 35238112.98 | 0.0299 | 0.0139 |
| Saturn | 91767-08-12 19:12 G | 35238492.17 | 35238492.30 | 35238492.45 | 0.0295 | 0.0244 |
| Jupiter | 91772-02-14 21:22 G | 35240139.17 | 35240139.39 | 35240139.62 | 0.0498 | 0.0205 |
| Uranus | 91779-07-05 16:05 G | 35242837.07 | 35242837.17 | 35242837.30 | 0.0136 | 0.0121 |
| Uranus | 91780-07-08 18:14 G | 35243206.03 | 35243206.26 | 35243206.51 | 0.0136 | 0.0046 |
| Uranus | 91781-07-13 10:19 G | 35243575.70 | 35243575.93 | 35243576.18 | 0.0137 | 0.0029 |
| Saturn | 91782-01-28 07:26 G | 35243774.65 | 35243774.81 | 35243774.99 | 0.0263 | 0.0194 |
| Uranus | 91782-07-17 13:12 G | 35243944.89 | 35243945.05 | 35243945.26 | 0.0137 | 0.0093 |
| Saturn | 91783-02-08 23:31 G | 35244151.24 | 35244151.48 | 35244151.73 | 0.0266 | 0.0069 |
| Jupiter | 91784-02-19 11:02 G | 35244526.76 | 35244526.96 | 35244527.17 | 0.0499 | 0.0199 |
| Saturn | 91796-08-05 10:34 G | 35249077.72 | 35249077.94 | 35249078.18 | 0.0297 | 0.0076 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 91801-08-11 07:41 G | 35250908.74 | 35250908.82 | 35250908.92 | 0.0528 | 0.0481 |
| Saturn | 91812-02-05 08:10 G | 35254738.60 | 35254738.84 | 35254739.08 | 0.0264 | 0.0053 |
| Saturn | 91813-02-16 06:14 G | 35255115.63 | 35255115.76 | 35255115.90 | 0.0268 | 0.0223 |
| Jupiter | 91813-08-16 13:41 G | 35255296.84 | 35255297.07 | 35255297.30 | 0.0527 | 0.0017 |
| Uranus | 91820-01-07 00:00 G | 35257631.38 | 35257631.50 | 35257631.63 | 0.0142 | 0.0122 |
| Neptune | 91820-02-03 11:46 G | 35257658.95 | 35257658.99 | 35257659.08 | 0.0089 | 0.0086 |
| Uranus | 91821-01-10 16:19 G | 35258000.95 | 35258001.18 | 35258001.44 | 0.0142 | 0.0050 |
| Neptune | 91821-02-04 17:31 G | 35258026.12 | 35258026.23 | 35258026.41 | 0.0089 | 0.0073 |
| Uranus | 91822-01-15 21:36 G | 35258371.17 | 35258371.40 | 35258371.64 | 0.0141 | 0.0048 |
| Neptune | 91822-02-07 12:00 G | 35258393.79 | 35258394.00 | 35258394.24 | 0.0089 | 0.0048 |
| Uranus | 91823-01-20 13:26 G | 35258740.93 | 35258741.06 | 35258741.23 | 0.0141 | 0.0116 |
| Neptune | 91823-02-09 21:22 G | 35258761.17 | 35258761.39 | 35258761.63 | 0.0089 | 0.0035 |
| Neptune | 91824-02-12 10:48 G | 35259128.69 | 35259128.95 | 35259129.23 | 0.0089 | 0.0011 |
| Neptune | 91825-02-14 00:29 G | 35259496.27 | 35259496.52 | 35259496.77 | 0.0089 | 0.0002 |
| Saturn | 91825-07-31 08:10 G | 35259663.61 | 35259663.84 | 35259664.07 | 0.0299 | 0.0104 |
| Neptune | 91826-02-16 08:53 G | 35259863.63 | 35259863.87 | 35259864.14 | 0.0089 | 0.0027 |
| Saturn | 91826-08-14 17:46 G | 35260043.15 | 35260043.24 | 35260043.33 | 0.0295 | 0.0273 |
| Neptune | 91827-02-19 03:07 G | 35260231.41 | 35260231.63 | 35260231.86 | 0.0089 | 0.0039 |
| Neptune | 91828-02-21 08:53 G | 35260598.71 | 35260598.87 | 35260599.06 | 0.0089 | 0.0065 |
| Neptune | 91829-02-23 03:50 G | 35260966.56 | 35260966.66 | 35260966.82 | 0.0089 | 0.0077 |
| Saturn | 91841-01-30 07:12 G | 35265325.61 | 35265325.80 | 35265326.00 | 0.0263 | 0.0168 |
| Saturn | 91842-02-11 05:02 G | 35265702.49 | 35265702.71 | 35265702.94 | 0.0266 | 0.0100 |
| Saturn | 91854-07-25 01:55 G | 35270249.50 | 35270249.58 | 35270249.67 | 0.0301 | 0.0278 |
| Jupiter | 91855-02-15 06:14 G | 35270454.57 | 35270454.76 | 35270454.96 | 0.0498 | 0.0261 |
| Saturn | 91855-08-08 20:38 G | 35270629.14 | 35270629.36 | 35270629.58 | 0.0297 | 0.0111 |
| Uranus | 91863-07-07 01:41 G | 35273518.44 | 35273518.57 | 35273518.74 | 0.0136 | 0.0108 |
| Uranus | 91864-07-10 03:22 G | 35273887.41 | 35273887.64 | 35273887.89 | 0.0136 | 0.0044 |
| Uranus | 91865-07-14 19:41 G | 35274257.07 | 35274257.32 | 35274257.56 | 0.0137 | 0.0028 |
| Uranus | 91866-07-18 21:50 G | 35274626.28 | 35274626.41 | 35274626.59 | 0.0137 | 0.0108 |
| Jupiter | 91867-02-19 22:05 G | 35274842.19 | 35274842.42 | 35274842.65 | 0.0498 | 0.0137 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 91871-02-06 13:41 G | 35276289.82 | 35276290.07 | 35276290.33 | 0.0265 | 0.0022 |
| Saturn | 91872-02-18 08:24 G | 35276666.80 | 35276666.85 | 35276666.93 | 0.0268 | 0.0259 |
| Saturn | 91884-08-01 12:14 G | 35281214.77 | 35281215.01 | 35281215.26 | 0.0298 | 0.0066 |
| Jupiter | 91896-08-15 13:12 G | 35285611.82 | 35285612.05 | 35285612.29 | 0.0527 | 0.0048 |
| Saturn | 91900-02-01 14:38 G | 35286876.90 | 35286877.11 | 35286877.32 | 0.0263 | 0.0137 |
| Saturn | 91901-02-13 17:17 G | 35287254.02 | 35287254.22 | 35287254.44 | 0.0266 | 0.0136 |
| Neptune | 91901-08-03 17:31 G | 35287425.11 | 35287425.23 | 35287425.39 | 0.0089 | 0.0075 |
| Neptune | 91902-08-05 22:19 G | 35287792.26 | 35287792.43 | 35287792.63 | 0.0089 | 0.0059 |
| Neptune | 91903-08-08 13:12 G | 35288159.82 | 35288160.05 | 35288160.30 | 0.0089 | 0.0038 |
| Uranus | 91904-01-08 10:34 G | 35288312.84 | 35288312.94 | 35288313.08 | 0.0142 | 0.0124 |
| Neptune | 91904-08-09 22:05 G | 35288527.19 | 35288527.42 | 35288527.67 | 0.0089 | 0.0023 |
| Uranus | 91905-01-12 03:07 G | 35288682.38 | 35288682.63 | 35288682.89 | 0.0142 | 0.0030 |
| Neptune | 91905-08-12 08:38 G | 35288894.60 | 35288894.86 | 35288895.13 | 0.0089 | 0.0002 |
| Uranus | 91906-01-17 08:38 G | 35289052.63 | 35289052.86 | 35289053.12 | 0.0142 | 0.0040 |
| Neptune | 91906-08-14 22:34 G | 35289262.19 | 35289262.44 | 35289262.69 | 0.0089 | 0.0014 |
| Uranus | 91907-01-22 00:14 G | 35289422.46 | 35289422.51 | 35289422.61 | 0.0141 | 0.0135 |
| Neptune | 91907-08-17 03:50 G | 35289629.44 | 35289629.66 | 35289629.91 | 0.0088 | 0.0036 |
| Mars | 91907-11-22 23:31 G | 35289727.35 | 35289727.48 | 35289727.62 | 0.1605 | 0.1196 |
| Neptune | 91908-08-18 21:22 G | 35289997.19 | 35289997.39 | 35289997.60 | 0.0088 | 0.0052 |
| Jupiter | 91908-08-21 14:38 G | 35290000.05 | 35290000.11 | 35290000.18 | 0.0527 | 0.0500 |
| Neptune | 91909-08-21 00:43 G | 35290364.42 | 35290364.53 | 35290364.71 | 0.0088 | 0.0073 |
| Neptune | 91910-08-23 18:29 G | 35290732.27 | 35290732.27 | 35290732.30 | 0.0088 | 0.0088 |
| Pluto | 91913-05-26 00:58 G | 35291738.49 | 35291738.54 | 35291738.66 | 0.0063 | 0.0060 |
| Saturn | 91913-07-27 17:17 G | 35291801.08 | 35291801.22 | 35291801.37 | 0.0300 | 0.0236 |
| Pluto | 91914-05-27 05:17 G | 35292104.48 | 35292104.72 | 35292104.97 | 0.0063 | 0.0014 |
| Saturn | 91914-08-11 09:22 G | 35292180.69 | 35292180.89 | 35292181.11 | 0.0297 | 0.0151 |
| Saturn | 91929-01-28 04:48 G | 35297464.62 | 35297464.70 | 35297464.79 | 0.0262 | 0.0245 |
| Saturn | 91930-02-08 19:26 G | 35297841.06 | 35297841.31 | 35297841.57 | 0.0265 | 0.0015 |
| Jupiter | 91938-02-15 12:43 G | 35300769.86 | 35300770.03 | 35300770.22 | 0.0498 | 0.0330 |
| Saturn | 91943-08-05 02:10 G | 35302766.35 | 35302766.59 | 35302766.83 | 0.0298 | 0.0021 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Mars | 91946-05-27 09:22 G | 35303792.74 | 35303792.89 | 35303793.03 | 0.1930 | 0.1075 |
| Uranus | 91947-07-08 13:12 G | 35304199.91 | 35304200.05 | 35304200.20 | 0.0136 | 0.0111 |
| Uranus | 91948-07-11 14:38 G | 35304568.87 | 35304569.11 | 35304569.36 | 0.0136 | 0.0034 |
| Uranus | 91949-07-16 06:43 G | 35304938.55 | 35304938.78 | 35304939.03 | 0.0137 | 0.0037 |
| Jupiter | 91950-02-19 14:38 G | 35305156.88 | 35305157.11 | 35305157.34 | 0.0498 | 0.0047 |
| Uranus | 91950-07-20 09:07 G | 35305307.73 | 35305307.88 | 35305308.05 | 0.0137 | 0.0103 |
| Saturn | 91959-02-04 04:48 G | 35308428.48 | 35308428.70 | 35308428.93 | 0.0264 | 0.0103 |
| Saturn | 91960-02-16 06:14 G | 35308805.57 | 35308805.76 | 35308805.95 | 0.0267 | 0.0171 |
| Jupiter | 91962-02-24 09:50 G | 35309544.83 | 35309544.91 | 35309545.00 | 0.0499 | 0.0461 |
| Saturn | 91972-07-29 11:02 G | 35313352.78 | 35313352.96 | 35313353.16 | 0.0300 | 0.0186 |
| Saturn | 91973-08-12 22:34 G | 35313732.26 | 35313732.44 | 35313732.64 | 0.0296 | 0.0194 |
| Jupiter | 91979-08-16 14:53 G | 35315926.90 | 35315927.12 | 35315927.33 | 0.0527 | 0.0161 |
| Neptune | 91985-02-05 03:50 G | 35317926.56 | 35317926.66 | 35317926.80 | 0.0089 | 0.0079 |
| Neptune | 91986-02-07 14:10 G | 35318293.91 | 35318294.09 | 35318294.31 | 0.0089 | 0.0053 |
| Mars | 91986-11-25 02:24 G | 35318584.43 | 35318584.60 | 35318584.77 | 0.1607 | 0.0686 |
| Neptune | 91987-02-10 02:53 G | 35318661.39 | 35318661.62 | 35318661.86 | 0.0089 | 0.0042 |
| Uranus | 91988-01-08 19:41 G | 35318994.17 | 35318994.32 | 35318994.48 | 0.0142 | 0.0114 |
| Saturn | 91988-01-30 12:00 G | 35319015.87 | 35319016.00 | 35319016.17 | 0.0263 | 0.0213 |
| Neptune | 91988-02-12 18:14 G | 35319029.02 | 35319029.26 | 35319029.52 | 0.0089 | 0.0016 |
| Uranus | 91989-01-12 12:00 G | 35319363.76 | 35319364.00 | 35319364.25 | 0.0142 | 0.0038 |
| Saturn | 91989-02-10 06:00 G | 35319392.51 | 35319392.75 | 35319392.99 | 0.0266 | 0.0051 |
| Neptune | 91989-02-14 02:24 G | 35319396.34 | 35319396.60 | 35319396.87 | 0.0089 | 0.0004 |
| Uranus | 91990-01-17 18:00 G | 35319734.03 | 35319734.25 | 35319734.50 | 0.0142 | 0.0060 |
| Neptune | 91990-02-16 21:07 G | 35319764.14 | 35319764.38 | 35319764.64 | 0.0089 | 0.0023 |
| Uranus | 91991-01-22 09:07 G | 35320103.79 | 35320103.88 | 35320104.02 | 0.0141 | 0.0126 |
| Neptune | 91991-02-19 02:24 G | 35320131.38 | 35320131.60 | 35320131.86 | 0.0089 | 0.0034 |
| Jupiter | 91991-08-21 07:26 G | 35320314.65 | 35320314.81 | 35320314.97 | 0.0527 | 0.0389 |
| Neptune | 91992-02-21 22:05 G | 35320499.23 | 35320499.42 | 35320499.62 | 0.0089 | 0.0059 |
| Neptune | 91993-02-23 03:50 G | 35320866.54 | 35320866.66 | 35320866.84 | 0.0089 | 0.0071 |

93RD MILLENNIUM CE

This is a list of transits of Moon in the 93rd millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 92002-08-06 23:46 G | | 35324318.26 | 35324318.49 | 35324318.73 | 0.0297 | 0.0028 | |
| Pluto | 92004-11-25 10:34 G | | 35325159.76 | 35325159.94 | 35325160.15 | 0.0081 | 0.0056 | |
| Saturn | 92018-02-05 19:55 G | | 35329980.10 | 35329980.33 | 35329980.58 | 0.0264 | 0.0067 | |
| Saturn | 92019-02-17 16:34 G | | 35330357.04 | 35330357.19 | 35330357.35 | 0.0267 | 0.0211 | |
| Jupiter | 92021-02-14 04:19 G | | 35331084.57 | 35331084.68 | 35331084.80 | 0.0498 | 0.0427 | |
| Uranus | 92031-07-09 00:14 G | | 35334881.34 | 35334881.51 | 35334881.70 | 0.0136 | 0.0096 | |
| Saturn | 92031-08-01 04:48 G | | 35334904.48 | 35334904.70 | 35334904.93 | 0.0299 | 0.0134 | |
| Uranus | 92032-07-12 01:41 G | | 35335250.34 | 35335250.57 | 35335250.82 | 0.0136 | 0.0034 | |
| Saturn | 92032-08-14 14:38 G | | 35335283.97 | 35335284.11 | 35335284.25 | 0.0295 | 0.0242 | |
| Jupiter | 92033-02-19 00:43 G | | 35335472.29 | 35335472.53 | 35335472.76 | 0.0498 | 0.0029 | |
| Uranus | 92033-07-16 17:17 G | | 35335619.99 | 35335620.22 | 35335620.47 | 0.0136 | 0.0040 | |
| Uranus | 92034-07-20 19:12 G | | 35335989.20 | 35335989.30 | 35335989.45 | 0.0137 | 0.0118 | |
| Jupiter | 92045-02-23 04:48 G | | 35339859.55 | 35339859.70 | 35339859.85 | 0.0499 | 0.0387 | |
| Saturn | 92047-01-31 21:50 G | | 35340567.24 | 35340567.41 | 35340567.60 | 0.0263 | 0.0179 | |
| Saturn | 92048-02-12 22:05 G | | 35340944.20 | 35340944.42 | 35340944.65 | 0.0266 | 0.0090 | |
| Saturn | 92061-08-09 01:12 G | | 35345870.32 | 35345870.55 | 35345870.78 | 0.0297 | 0.0083 | |
| Jupiter | 92062-08-15 07:41 G | | 35346241.61 | 35346241.82 | 35346242.03 | 0.0528 | 0.0262 | |
| Neptune | 92065-08-02 20:38 G | | 35347325.31 | 35347325.36 | 35347325.45 | 0.0089 | 0.0085 | |
| Neptune | 92066-08-05 11:17 G | | 35347692.77 | 35347692.97 | 35347693.17 | 0.0089 | 0.0058 | |
| Neptune | 92067-08-07 20:38 G | | 35348060.17 | 35348060.36 | 35348060.58 | 0.0089 | 0.0049 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 92068-08-09 05:17 G | 35348427.48 | 35348427.72 | 35348427.99 | 0.0089 | 0.0023 |
| Neptune | 92069-08-11 19:55 G | 35348795.09 | 35348795.33 | 35348795.59 | 0.0089 | 0.0013 |
| Neptune | 92070-08-14 00:58 G | 35349162.29 | 35349162.54 | 35349162.80 | 0.0089 | 0.0015 |
| Neptune | 92071-08-16 18:29 G | 35349530.04 | 35349530.27 | 35349530.53 | 0.0089 | 0.0025 |
| Uranus | 92072-01-09 04:05 G | 35349675.54 | 35349675.67 | 35349675.85 | 0.0142 | 0.0115 |
| Neptune | 92072-08-17 22:19 G | 35349897.24 | 35349897.43 | 35349897.65 | 0.0088 | 0.0052 |
| Uranus | 92073-01-12 21:07 G | 35350045.13 | 35350045.38 | 35350045.64 | 0.0142 | 0.0022 |
| Neptune | 92073-08-20 15:22 G | 35350264.97 | 35350265.14 | 35350265.35 | 0.0088 | 0.0061 |
| Uranus | 92074-01-18 03:07 G | 35350415.40 | 35350415.63 | 35350415.88 | 0.0142 | 0.0049 |
| Jupiter | 92074-08-20 10:05 G | 35350629.74 | 35350629.92 | 35350630.10 | 0.0527 | 0.0304 |
| Neptune | 92074-08-22 21:36 G | 35350632.39 | 35350632.40 | 35350632.45 | 0.0088 | 0.0088 |
| Saturn | 92077-02-07 06:00 G | 35351531.49 | 35351531.75 | 35351532.01 | 0.0265 | 0.0029 |
| Saturn | 92078-02-19 02:10 G | 35351908.52 | 35351908.59 | 35351908.69 | 0.0268 | 0.0250 |
| Saturn | 92090-08-02 23:17 G | 35356456.24 | 35356456.47 | 35356456.71 | 0.0299 | 0.0080 |
| Saturn | 92091-08-17 11:17 G | 35356835.96 | 35356835.97 | 35356836.00 | 0.0295 | 0.0294 |
| Saturn | 92106-02-03 12:29 G | 35362118.82 | 35362119.02 | 35362119.22 | 0.0263 | 0.0142 |
| Saturn | 92107-02-15 15:22 G | 35362495.93 | 35362496.14 | 35362496.35 | 0.0267 | 0.0128 |
| Uranus | 92115-07-10 12:43 G | 35365562.87 | 35365563.03 | 35365563.21 | 0.0136 | 0.0100 |
| Jupiter | 92116-02-19 17:17 G | 35365786.99 | 35365787.22 | 35365787.45 | 0.0498 | 0.0116 |
| Uranus | 92116-07-13 14:53 G | 35365931.87 | 35365932.12 | 35365932.36 | 0.0136 | 0.0021 |
| Uranus | 92117-07-18 06:29 G | 35366301.54 | 35366301.77 | 35366302.01 | 0.0136 | 0.0048 |
| Uranus | 92118-07-22 08:53 G | 35366670.76 | 35366670.87 | 35366671.02 | 0.0137 | 0.0117 |
| Saturn | 92119-07-29 08:53 G | 35367042.74 | 35367042.87 | 35367043.00 | 0.0300 | 0.0247 |
| Saturn | 92120-08-11 23:17 G | 35367422.26 | 35367422.47 | 35367422.70 | 0.0296 | 0.0135 |
| Jupiter | 92128-02-24 07:55 G | 35370174.66 | 35370174.83 | 35370175.02 | 0.0498 | 0.0297 |
| Saturn | 92135-01-29 21:50 G | 35372706.35 | 35372706.41 | 35372706.50 | 0.0263 | 0.0251 |
| Saturn | 92136-02-10 12:43 G | 35373082.78 | 35373083.03 | 35373083.29 | 0.0265 | 0.0008 |
| Jupiter | 92145-08-15 06:29 G | 35376556.61 | 35376556.77 | 35376556.93 | 0.0528 | 0.0370 |
| Neptune | 92149-02-05 07:26 G | 35377826.73 | 35377826.81 | 35377826.94 | 0.0089 | 0.0081 |
| Saturn | 92149-08-05 21:50 G | 35378008.17 | 35378008.41 | 35378008.64 | 0.0298 | 0.0028 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 92150-02-07 18:29 G | 35378194.11 | 35378194.27 | 35378194.48 | 0.0089 | 0.0064 |
| Neptune | 92151-02-10 11:02 G | 35378561.76 | 35378561.96 | 35378562.20 | 0.0089 | 0.0043 |
| Neptune | 92152-02-12 18:00 G | 35378929.00 | 35378929.25 | 35378929.51 | 0.0089 | 0.0026 |
| Neptune | 92153-02-14 13:26 G | 35379296.81 | 35379297.06 | 35379297.32 | 0.0089 | 0.0004 |
| Neptune | 92154-02-16 18:58 G | 35379664.04 | 35379664.29 | 35379664.55 | 0.0089 | 0.0011 |
| Neptune | 92155-02-19 14:10 G | 35380031.84 | 35380032.09 | 35380032.33 | 0.0089 | 0.0033 |
| Uranus | 92156-01-10 15:22 G | 35380356.98 | 35380357.14 | 35380357.33 | 0.0142 | 0.0105 |
| Neptune | 92156-02-21 21:07 G | 35380399.17 | 35380399.38 | 35380399.60 | 0.0089 | 0.0047 |
| Uranus | 92157-01-14 08:53 G | 35380726.62 | 35380726.87 | 35380727.12 | 0.0142 | 0.0027 |
| Neptune | 92157-02-23 12:29 G | 35380766.89 | 35380767.02 | 35380767.21 | 0.0089 | 0.0071 |
| Jupiter | 92157-08-20 04:19 G | 35380944.46 | 35380944.68 | 35380944.91 | 0.0527 | 0.0186 |
| Uranus | 92158-01-19 14:53 G | 35381096.91 | 35381097.12 | 35381097.36 | 0.0142 | 0.0071 |
| Neptune | 92158-02-26 00:14 G | 35381134.46 | 35381134.51 | 35381134.61 | 0.0089 | 0.0085 |
| Uranus | 92159-01-24 06:00 G | 35381466.71 | 35381466.75 | 35381466.83 | 0.0141 | 0.0138 |
| Pluto | 92159-05-28 21:36 G | 35381591.37 | 35381591.40 | 35381591.49 | 0.0063 | 0.0061 |
| Pluto | 92160-05-29 11:31 G | 35381957.74 | 35381957.98 | 35381958.24 | 0.0063 | 0.0010 |
| Saturn | 92165-02-05 02:24 G | 35383670.38 | 35383670.60 | 35383670.82 | 0.0264 | 0.0109 |
| Saturn | 92166-02-17 01:26 G | 35384047.37 | 35384047.56 | 35384047.77 | 0.0267 | 0.0164 |
| Saturn | 92178-07-31 04:05 G | 35388594.48 | 35388594.67 | 35388594.86 | 0.0300 | 0.0197 |
| Saturn | 92179-08-14 15:07 G | 35388973.94 | 35388974.13 | 35388974.33 | 0.0296 | 0.0182 |
| Mars | 92191-11-24 17:31 G | 35393459.05 | 35393459.23 | 35393459.42 | 0.1602 | 0.0527 |
| Saturn | 92194-01-31 01:55 G | 35394257.46 | 35394257.58 | 35394257.73 | 0.0263 | 0.0223 |
| Saturn | 92195-02-11 22:05 G | 35394634.19 | 35394634.42 | 35394634.67 | 0.0265 | 0.0041 |
| Jupiter | 92199-02-18 23:46 G | 35396102.28 | 35396102.49 | 35396102.70 | 0.0498 | 0.0206 |
| Uranus | 92199-07-11 01:12 G | 35396244.36 | 35396244.55 | 35396244.76 | 0.0136 | 0.0083 |
| Uranus | 92200-07-15 03:36 G | 35396613.41 | 35396613.65 | 35396613.90 | 0.0136 | 0.0022 |
| Uranus | 92201-07-19 18:43 G | 35396983.05 | 35396983.28 | 35396983.51 | 0.0136 | 0.0054 |
| Uranus | 92202-07-23 21:22 G | 35397352.34 | 35397352.39 | 35397352.48 | 0.0137 | 0.0131 |
| Saturn | 92208-08-08 19:55 G | 35399560.10 | 35399560.33 | 35399560.57 | 0.0298 | 0.0017 |
| Jupiter | 92211-02-24 07:55 G | 35400489.61 | 35400489.83 | 35400490.04 | 0.0499 | 0.0228 |

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| Saturn | 92224-02-08 09:50 G | 35405221.67 | 35405221.91 | 35405222.15 | 0.0264 | 0.0080 |
| Saturn | 92225-02-19 03:50 G | 35405598.50 | 35405598.66 | 35405598.84 | 0.0267 | 0.0198 |
| Jupiter | 92228-08-15 02:38 G | 35406871.50 | 35406871.61 | 35406871.72 | 0.0528 | 0.0469 |
| Mars | 92230-05-28 15:36 G | 35407522.95 | 35407523.15 | 35407523.35 | 0.1936 | 0.0604 |
| Neptune | 92230-08-06 17:17 G | 35407593.07 | 35407593.22 | 35407593.40 | 0.0089 | 0.0066 |
| Neptune | 92231-08-09 01:26 G | 35407960.36 | 35407960.56 | 35407960.78 | 0.0089 | 0.0053 |
| Neptune | 92232-08-10 17:17 G | 35408327.99 | 35408328.22 | 35408328.47 | 0.0089 | 0.0029 |
| Neptune | 92233-08-12 21:50 G | 35408695.16 | 35408695.41 | 35408695.67 | 0.0089 | 0.0016 |
| Neptune | 92234-08-15 15:36 G | 35409062.90 | 35409063.15 | 35409063.41 | 0.0089 | 0.0008 |
| Neptune | 92235-08-17 19:26 G | 35409430.08 | 35409430.31 | 35409430.57 | 0.0089 | 0.0021 |
| Neptune | 92236-08-19 12:00 G | 35409797.77 | 35409798.00 | 35409798.23 | 0.0088 | 0.0043 |
| Saturn | 92237-08-02 16:19 G | 35410145.97 | 35410146.18 | 35410146.40 | 0.0299 | 0.0154 |
| Neptune | 92237-08-21 18:14 G | 35410165.09 | 35410165.26 | 35410165.47 | 0.0088 | 0.0058 |
| Saturn | 92238-08-17 04:05 G | 35410525.53 | 35410525.67 | 35410525.84 | 0.0295 | 0.0226 |
| Neptune | 92238-08-24 06:43 G | 35410532.67 | 35410532.78 | 35410532.90 | 0.0088 | 0.0080 |
| Uranus | 92240-01-12 05:17 G | 35411038.54 | 35411038.72 | 35411038.91 | 0.0142 | 0.0099 |
| Jupiter | 92240-08-19 23:02 G | 35411259.24 | 35411259.46 | 35411259.68 | 0.0528 | 0.0094 |
| Uranus | 92241-01-15 22:48 G | 35411408.20 | 35411408.45 | 35411408.71 | 0.0142 | 0.0009 |
| Uranus | 92242-01-21 04:19 G | 35411778.46 | 35411778.68 | 35411778.93 | 0.0142 | 0.0064 |
| Pluto | 92250-11-29 07:12 G | 35415012.62 | 35415012.80 | 35415013.02 | 0.0081 | 0.0050 |
| Saturn | 92253-02-02 05:46 G | 35415808.59 | 35415808.74 | 35415808.91 | 0.0263 | 0.0198 |
| Saturn | 92254-02-14 07:12 G | 35416185.57 | 35416185.80 | 35416186.04 | 0.0266 | 0.0071 |
| Saturn | 92267-08-11 11:31 G | 35421111.75 | 35421111.98 | 35421112.22 | 0.0298 | 0.0058 |
| Mars | 92270-11-28 03:22 G | 35422316.53 | 35422316.64 | 35422316.74 | 0.1604 | 0.1358 |
| Jupiter | 92282-02-19 01:12 G | 35426417.35 | 35426417.55 | 35426417.76 | 0.0498 | 0.0267 |
| Saturn | 92283-02-09 09:22 G | 35426772.64 | 35426772.89 | 35426773.15 | 0.0264 | 0.0054 |
| Uranus | 92283-07-12 14:10 G | 35426925.90 | 35426926.09 | 35426926.29 | 0.0136 | 0.0087 |
| Saturn | 92284-02-21 05:46 G | 35427149.62 | 35427149.74 | 35427149.88 | 0.0267 | 0.0227 |
| Uranus | 92284-07-15 17:17 G | 35427294.97 | 35427295.22 | 35427295.47 | 0.0136 | 0.0007 |
| Uranus | 92285-07-20 07:55 G | 35427664.61 | 35427664.83 | 35427665.07 | 0.0136 | 0.0062 |

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| Uranus | 92286-07-24 11:31 G | 35428033.94 | 35428033.98 | 35428034.06 | 0.0137 | 0.0133 |
| Jupiter | 92294-02-23 15:07 G | 35430804.92 | 35430805.13 | 35430805.34 | 0.0498 | 0.0172 |
| Saturn | 92296-08-04 01:55 G | 35431697.36 | 35431697.58 | 35431697.81 | 0.0299 | 0.0116 |
| Saturn | 92297-08-18 17:17 G | 35432077.12 | 35432077.22 | 35432077.34 | 0.0295 | 0.0260 |
| Saturn | 92312-02-05 11:17 G | 35437359.80 | 35437359.97 | 35437360.16 | 0.0263 | 0.0175 |
| Neptune | 92313-02-06 09:22 G | 35437726.81 | 35437726.89 | 35437727.00 | 0.0089 | 0.0082 |
| Saturn | 92313-02-16 11:02 G | 35437736.73 | 35437736.96 | 35437737.19 | 0.0266 | 0.0094 |
| Neptune | 92314-02-09 03:07 G | 35438094.50 | 35438094.63 | 35438094.79 | 0.0089 | 0.0073 |
| Neptune | 92315-02-11 09:22 G | 35438461.67 | 35438461.89 | 35438462.13 | 0.0089 | 0.0045 |
| Neptune | 92316-02-14 05:17 G | 35438829.49 | 35438829.72 | 35438829.96 | 0.0089 | 0.0036 |
| Neptune | 92317-02-15 11:17 G | 35439196.72 | 35439196.97 | 35439197.23 | 0.0089 | 0.0008 |
| Neptune | 92318-02-18 06:00 G | 35439564.48 | 35439564.75 | 35439565.02 | 0.0089 | 0.0002 |
| Neptune | 92319-02-20 14:10 G | 35439931.87 | 35439932.09 | 35439932.34 | 0.0089 | 0.0030 |
| Neptune | 92320-02-23 04:34 G | 35440299.47 | 35440299.69 | 35440299.95 | 0.0089 | 0.0040 |
| Neptune | 92321-02-24 17:31 G | 35440667.08 | 35440667.23 | 35440667.40 | 0.0089 | 0.0067 |
| Neptune | 92322-02-27 03:07 G | 35441034.50 | 35441034.63 | 35441034.77 | 0.0089 | 0.0076 |
| Jupiter | 92323-08-21 08:53 G | 35441574.64 | 35441574.87 | 35441575.11 | 0.0527 | 0.0030 |
| Uranus | 92324-01-13 19:41 G | 35441720.14 | 35441720.32 | 35441720.55 | 0.0142 | 0.0089 |
| Uranus | 92325-01-17 14:38 G | 35442089.86 | 35442090.11 | 35442090.36 | 0.0142 | 0.0008 |
| Saturn | 92325-07-30 01:41 G | 35442283.53 | 35442283.57 | 35442283.63 | 0.0301 | 0.0294 |
| Uranus | 92326-01-22 20:10 G | 35442460.14 | 35442460.34 | 35442460.55 | 0.0142 | 0.0088 |
| Saturn | 92326-08-13 16:48 G | 35442662.96 | 35442663.20 | 35442663.44 | 0.0298 | 0.0089 |
| Saturn | 92342-02-11 06:14 G | 35448323.51 | 35448323.76 | 35448324.01 | 0.0264 | 0.0032 |
| Saturn | 92343-02-23 08:24 G | 35448700.79 | 35448700.85 | 35448700.95 | 0.0267 | 0.0252 |
| Saturn | 92355-08-07 10:34 G | 35453248.72 | 35453248.94 | 35453249.16 | 0.0299 | 0.0085 |
| Saturn | 92356-08-21 03:07 G | 35453628.59 | 35453628.63 | 35453628.69 | 0.0295 | 0.0287 |
| Jupiter | 92365-02-19 10:19 G | 35456732.76 | 35456732.93 | 35456733.10 | 0.0498 | 0.0321 |
| Uranus | 92367-07-14 02:24 G | 35457607.39 | 35457607.60 | 35457607.83 | 0.0136 | 0.0069 |
| Uranus | 92368-07-17 06:14 G | 35457976.52 | 35457976.76 | 35457977.01 | 0.0136 | 0.0008 |
| Uranus | 92369-07-21 19:41 G | 35458346.11 | 35458346.32 | 35458346.56 | 0.0136 | 0.0069 |

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| Saturn | 92371-02-06 13:26 G | 35458910.86 | 35458911.06 | 35458911.26 | 0.0263 | 0.0154 |
| Saturn | 92372-02-18 06:14 G | 35459287.54 | 35459287.76 | 35459288.00 | 0.0266 | 0.0118 |
| Jupiter | 92377-02-24 00:43 G | 35461120.30 | 35461120.53 | 35461120.77 | 0.0498 | 0.0127 |
| Saturn | 92384-07-31 00:14 G | 35463834.40 | 35463834.51 | 35463834.63 | 0.0301 | 0.0267 |
| Saturn | 92385-08-14 15:07 G | 35464213.90 | 35464214.13 | 35464214.36 | 0.0298 | 0.0114 |
| Neptune | 92394-08-06 20:53 G | 35467493.27 | 35467493.37 | 35467493.53 | 0.0089 | 0.0077 |
| Neptune | 92395-08-09 13:41 G | 35467860.88 | 35467861.07 | 35467861.28 | 0.0089 | 0.0052 |
| Neptune | 92396-08-10 17:31 G | 35468228.02 | 35468228.23 | 35468228.47 | 0.0089 | 0.0041 |
| Mars | 92396-11-25 06:43 G | 35468334.68 | 35468334.78 | 35468334.87 | 0.1597 | 0.1334 |
| Neptune | 92397-08-13 11:17 G | 35468595.73 | 35468595.97 | 35468596.24 | 0.0089 | 0.0016 |
| Neptune | 92398-08-15 15:50 G | 35468962.92 | 35468963.16 | 35468963.42 | 0.0089 | 0.0005 |
| Neptune | 92399-08-18 07:26 G | 35469330.55 | 35469330.81 | 35469331.07 | 0.0089 | 0.0021 |
| Neptune | 92400-08-19 15:07 G | 35469697.92 | 35469698.13 | 35469698.38 | 0.0089 | 0.0033 |
| Saturn | 92401-02-12 06:29 G | 35469874.53 | 35469874.77 | 35469875.01 | 0.0264 | 0.0010 |
| Neptune | 92401-08-22 02:24 G | 35470065.41 | 35470065.60 | 35470065.81 | 0.0089 | 0.0058 |
| Neptune | 92402-08-24 15:36 G | 35470433.00 | 35470433.15 | 35470433.31 | 0.0088 | 0.0069 |
| Pluto | 92406-06-02 11:02 G | 35471810.70 | 35471810.96 | 35471811.23 | 0.0063 | 0.0005 |
| Jupiter | 92406-08-20 06:29 G | 35471889.54 | 35471889.77 | 35471890.00 | 0.0527 | 0.0045 |
| Uranus | 92408-01-14 09:36 G | 35472401.69 | 35472401.90 | 35472402.12 | 0.0143 | 0.0081 |
| Uranus | 92409-01-18 04:48 G | 35472771.46 | 35472771.70 | 35472771.96 | 0.0142 | 0.0009 |
| Uranus | 92410-01-23 09:50 G | 35473141.70 | 35473141.91 | 35473142.13 | 0.0142 | 0.0082 |
| Saturn | 92414-08-08 14:10 G | 35474799.86 | 35474800.09 | 35474800.33 | 0.0299 | 0.0059 |
| Jupiter | 92418-08-25 13:12 G | 35476277.95 | 35476278.05 | 35476278.16 | 0.0527 | 0.0460 |
| Saturn | 92430-02-07 06:14 G | 35480461.54 | 35480461.76 | 35480461.98 | 0.0262 | 0.0132 |
| Saturn | 92431-02-18 21:36 G | 35480838.20 | 35480838.40 | 35480838.62 | 0.0266 | 0.0141 |
| Saturn | 92443-08-01 18:14 G | 35485385.14 | 35485385.26 | 35485385.41 | 0.0301 | 0.0247 |
| Saturn | 92444-08-15 13:41 G | 35485764.86 | 35485765.07 | 35485765.28 | 0.0298 | 0.0136 |
| Jupiter | 92448-02-19 20:53 G | 35487048.20 | 35487048.37 | 35487048.54 | 0.0498 | 0.0363 |
| Uranus | 92450-07-10 03:07 G | 35487919.58 | 35487919.63 | 35487919.68 | 0.0135 | 0.0132 |
| Uranus | 92451-07-14 14:10 G | 35488288.88 | 35488289.09 | 35488289.32 | 0.0136 | 0.0075 |

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| Uranus | 92452-07-17 18:58 G | 35488658.05 | 35488658.29 | 35488658.53 | 0.0136 | 0.0007 |
| Uranus | 92453-07-22 07:41 G | 35489027.62 | 35489027.82 | 35489028.05 | 0.0136 | 0.0074 |
| Saturn | 92459-02-02 07:55 G | 35491048.78 | 35491048.83 | 35491048.91 | 0.0261 | 0.0251 |
| Saturn | 92460-02-14 06:00 G | 35491425.51 | 35491425.75 | 35491426.00 | 0.0263 | 0.0013 |
| Jupiter | 92460-02-24 06:29 G | 35491435.54 | 35491435.77 | 35491435.99 | 0.0499 | 0.0097 |
| Saturn | 92473-08-09 09:22 G | 35496350.64 | 35496350.89 | 35496351.14 | 0.0300 | 0.0041 |
| Mars | 92475-11-28 02:10 G | 35497191.42 | 35497191.59 | 35497191.76 | 0.1599 | 0.0373 |
| Neptune | 92478-02-08 00:58 G | 35497994.42 | 35497994.54 | 35497994.69 | 0.0089 | 0.0075 |
| Neptune | 92479-02-10 20:24 G | 35498362.17 | 35498362.35 | 35498362.57 | 0.0089 | 0.0057 |
| Neptune | 92480-02-13 03:07 G | 35498729.40 | 35498729.63 | 35498729.86 | 0.0089 | 0.0038 |
| Neptune | 92481-02-14 20:10 G | 35499097.09 | 35499097.34 | 35499097.61 | 0.0089 | 0.0019 |
| Neptune | 92482-02-17 05:46 G | 35499464.49 | 35499464.74 | 35499464.99 | 0.0089 | 0.0001 |
| Neptune | 92483-02-19 18:29 G | 35499832.02 | 35499832.27 | 35499832.54 | 0.0089 | 0.0019 |
| Neptune | 92484-02-22 09:07 G | 35500199.67 | 35500199.88 | 35500200.12 | 0.0089 | 0.0038 |
| Neptune | 92485-02-23 18:00 G | 35500567.05 | 35500567.25 | 35500567.47 | 0.0089 | 0.0055 |
| Neptune | 92486-02-26 12:14 G | 35500934.89 | 35500935.01 | 35500935.16 | 0.0089 | 0.0075 |
| Saturn | 92489-02-07 21:22 G | 35502012.16 | 35502012.39 | 35502012.62 | 0.0262 | 0.0111 |
| Jupiter | 92489-08-20 00:29 G | 35502205.30 | 35502205.52 | 35502205.75 | 0.0528 | 0.0085 |
| Saturn | 92490-02-19 18:14 G | 35502389.08 | 35502389.26 | 35502389.46 | 0.0265 | 0.0164 |
| Uranus | 92492-01-14 19:55 G | 35503083.12 | 35503083.33 | 35503083.57 | 0.0143 | 0.0076 |
| Uranus | 92493-01-18 16:48 G | 35503452.96 | 35503453.20 | 35503453.45 | 0.0142 | 0.0008 |
| Uranus | 92494-01-23 21:22 G | 35503823.21 | 35503823.39 | 35503823.57 | 0.0142 | 0.0103 |
| Pluto | 92496-12-01 12:58 G | 35504865.84 | 35504866.04 | 35504866.26 | 0.0081 | 0.0045 |
| Jupiter | 92501-08-25 20:24 G | 35506593.21 | 35506593.35 | 35506593.50 | 0.0527 | 0.0411 |
| Saturn | 92502-08-03 15:22 G | 35506936.00 | 35506936.14 | 35506936.29 | 0.0301 | 0.0234 |
| Saturn | 92503-08-18 12:14 G | 35507315.82 | 35507316.01 | 35507316.23 | 0.0298 | 0.0151 |
| Saturn | 92518-02-04 06:43 G | 35512599.69 | 35512599.78 | 35512599.91 | 0.0261 | 0.0233 |
| Saturn | 92519-02-15 22:19 G | 35512976.18 | 35512976.43 | 35512976.69 | 0.0263 | 0.0036 |
| Jupiter | 92531-02-20 05:46 G | 35517363.61 | 35517363.74 | 35517363.88 | 0.0498 | 0.0394 |
| Saturn | 92532-08-10 22:05 G | 35517901.17 | 35517901.42 | 35517901.67 | 0.0300 | 0.0029 |

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| Uranus | 92535-07-16 02:53 G | 35518970.39 | 35518970.62 | 35518970.87 | 0.0136 | 0.0055 |
| Uranus | 92536-07-19 08:24 G | 35519339.61 | 35519339.85 | 35519340.10 | 0.0136 | 0.0005 |
| Uranus | 92537-07-23 19:55 G | 35519709.13 | 35519709.33 | 35519709.54 | 0.0136 | 0.0083 |
| Jupiter | 92543-02-25 02:10 G | 35521751.36 | 35521751.59 | 35521751.82 | 0.0498 | 0.0080 |
| Saturn | 92548-02-10 17:46 G | 35523563.02 | 35523563.24 | 35523563.48 | 0.0262 | 0.0091 |
| Saturn | 92549-02-21 17:46 G | 35523940.08 | 35523940.24 | 35523940.42 | 0.0265 | 0.0186 |
| Neptune | 92558-08-07 08:24 G | 35527393.79 | 35527393.85 | 35527393.95 | 0.0089 | 0.0084 |
| Neptune | 92559-08-09 12:29 G | 35527760.84 | 35527761.02 | 35527761.23 | 0.0089 | 0.0058 |
| Neptune | 92560-08-11 06:00 G | 35528128.56 | 35528128.75 | 35528128.99 | 0.0089 | 0.0048 |
| Saturn | 92561-08-04 12:58 G | 35528486.88 | 35528487.04 | 35528487.21 | 0.0301 | 0.0220 |
| Neptune | 92561-08-13 11:46 G | 35528495.76 | 35528495.99 | 35528496.24 | 0.0089 | 0.0022 |
| Neptune | 92562-08-16 02:53 G | 35528863.36 | 35528863.62 | 35528863.88 | 0.0089 | 0.0010 |
| Saturn | 92562-08-19 07:26 G | 35528866.61 | 35528866.81 | 35528867.02 | 0.0298 | 0.0164 |
| Neptune | 92563-08-18 11:46 G | 35529230.76 | 35529230.99 | 35529231.24 | 0.0089 | 0.0016 |
| Neptune | 92564-08-19 21:22 G | 35529598.15 | 35529598.39 | 35529598.65 | 0.0089 | 0.0027 |
| Neptune | 92565-08-22 11:02 G | 35529965.77 | 35529965.96 | 35529966.18 | 0.0089 | 0.0052 |
| Neptune | 92566-08-24 16:19 G | 35530333.02 | 35530333.18 | 35530333.39 | 0.0089 | 0.0063 |
| Neptune | 92567-08-27 09:50 G | 35530700.90 | 35530700.91 | 35530700.96 | 0.0088 | 0.0088 |
| Jupiter | 92572-08-20 08:53 G | 35532520.64 | 35532520.87 | 35532521.10 | 0.0527 | 0.0116 |
| Uranus | 92576-01-16 03:50 G | 35533764.44 | 35533764.66 | 35533764.91 | 0.0143 | 0.0070 |
| Uranus | 92577-01-20 02:10 G | 35534134.35 | 35534134.59 | 35534134.84 | 0.0142 | 0.0018 |
| Saturn | 92577-02-05 01:55 G | 35534150.44 | 35534150.58 | 35534150.73 | 0.0261 | 0.0212 |
| Uranus | 92578-01-25 05:31 G | 35534504.54 | 35534504.73 | 35534504.93 | 0.0142 | 0.0094 |
| Saturn | 92578-02-16 12:58 G | 35534526.79 | 35534527.04 | 35534527.29 | 0.0263 | 0.0060 |
| Jupiter | 92584-08-25 07:12 G | 35536908.64 | 35536908.80 | 35536908.97 | 0.0527 | 0.0353 |
| Saturn | 92591-08-12 15:22 G | 35539451.90 | 35539452.14 | 35539452.38 | 0.0300 | 0.0016 |
| Saturn | 92607-02-12 18:00 G | 35545114.03 | 35545114.25 | 35545114.49 | 0.0262 | 0.0069 |
| Saturn | 92608-02-24 13:12 G | 35545490.89 | 35545491.05 | 35545491.21 | 0.0265 | 0.0207 |
| Jupiter | 92614-02-21 00:58 G | 35547679.42 | 35547679.54 | 35547679.67 | 0.0498 | 0.0422 |
| Uranus | 92618-07-13 06:43 G | 35549282.67 | 35549282.78 | 35549282.90 | 0.0135 | 0.0119 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 92619-07-17 15:36 G | 35549651.94 | 35549652.15 | 35549652.40 | 0.0135 | 0.0062 |
| Uranus | 92620-07-20 22:19 G | 35550021.19 | 35550021.43 | 35550021.67 | 0.0136 | 0.0022 |
| Saturn | 92620-08-06 04:34 G | 35550037.51 | 35550037.69 | 35550037.88 | 0.0301 | 0.0204 |
| Uranus | 92621-07-25 08:53 G | 35550390.68 | 35550390.87 | 35550391.08 | 0.0136 | 0.0087 |
| Saturn | 92621-08-20 20:10 G | 35550417.14 | 35550417.34 | 35550417.55 | 0.0298 | 0.0175 |
| Jupiter | 92626-02-25 03:07 G | 35552066.39 | 35552066.63 | 35552066.86 | 0.0499 | 0.0033 |
| Saturn | 92636-02-07 17:46 G | 35555701.07 | 35555701.24 | 35555701.42 | 0.0261 | 0.0188 |
| Saturn | 92637-02-18 09:50 G | 35556077.69 | 35556077.91 | 35556078.15 | 0.0263 | 0.0081 |
| Jupiter | 92638-03-01 23:31 G | 35556454.47 | 35556454.48 | 35556454.49 | 0.0499 | 0.0499 |
| Neptune | 92642-02-09 11:46 G | 35557894.88 | 35557894.99 | 35557895.15 | 0.0088 | 0.0076 |
| Neptune | 92643-02-11 18:29 G | 35558262.13 | 35558262.27 | 35558262.47 | 0.0088 | 0.0067 |
| Neptune | 92644-02-14 11:02 G | 35558629.74 | 35558629.96 | 35558630.22 | 0.0089 | 0.0039 |
| Neptune | 92645-02-15 22:48 G | 35558997.21 | 35558997.45 | 35558997.69 | 0.0089 | 0.0029 |
| Neptune | 92646-02-18 10:19 G | 35559364.66 | 35559364.93 | 35559365.20 | 0.0089 | 0.0002 |
| Neptune | 92647-02-21 01:55 G | 35559732.33 | 35559732.58 | 35559732.83 | 0.0089 | 0.0008 |
| Neptune | 92648-02-23 08:38 G | 35560099.64 | 35560099.86 | 35560100.12 | 0.0089 | 0.0036 |
| Neptune | 92649-02-25 03:50 G | 35560467.45 | 35560467.66 | 35560467.89 | 0.0089 | 0.0045 |
| Neptune | 92650-02-27 09:22 G | 35560834.76 | 35560834.89 | 35560835.04 | 0.0089 | 0.0073 |
| Saturn | 92650-08-14 15:22 G | 35561002.90 | 35561003.14 | 35561003.37 | 0.0300 | 0.0003 |
| Neptune | 92651-03-02 04:34 G | 35561202.61 | 35561202.69 | 35561202.80 | 0.0089 | 0.0082 |
| Pluto | 92651-06-05 05:02 G | 35561297.65 | 35561297.71 | 35561297.81 | 0.0063 | 0.0059 |
| Pluto | 92652-06-05 09:50 G | 35561663.66 | 35561663.91 | 35561664.17 | 0.0063 | 0.0010 |
| Jupiter | 92655-08-21 17:46 G | 35562836.03 | 35562836.24 | 35562836.45 | 0.0527 | 0.0179 |
| Uranus | 92660-01-17 13:26 G | 35564445.84 | 35564446.06 | 35564446.30 | 0.0143 | 0.0068 |
| Uranus | 92661-01-21 13:12 G | 35564815.80 | 35564816.05 | 35564816.30 | 0.0142 | 0.0019 |
| Uranus | 92662-01-26 15:07 G | 35565185.99 | 35565186.13 | 35565186.31 | 0.0142 | 0.0113 |
| Saturn | 92666-02-13 17:17 G | 35566664.97 | 35566665.22 | 35566665.47 | 0.0262 | 0.0044 |
| Saturn | 92667-02-25 06:29 G | 35567041.66 | 35567041.77 | 35567041.91 | 0.0265 | 0.0231 |
| Jupiter | 92667-08-26 19:26 G | 35567224.12 | 35567224.31 | 35567224.51 | 0.0527 | 0.0298 |
| Saturn | 92679-08-07 19:55 G | 35571588.15 | 35571588.33 | 35571588.53 | 0.0301 | 0.0186 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 92680-08-21 13:41 G | 35571967.89 | 35571968.07 | 35571968.26 | 0.0298 | 0.0192 |
| Mars | 92680-11-28 10:48 G | 35572066.76 | 35572066.95 | 35572067.14 | 0.1595 | 0.0544 |
| Saturn | 92695-02-08 15:22 G | 35577251.96 | 35577252.14 | 35577252.34 | 0.0261 | 0.0163 |
| Saturn | 92696-02-20 13:12 G | 35577628.84 | 35577629.05 | 35577629.27 | 0.0263 | 0.0107 |
| Jupiter | 92697-02-20 00:00 G | 35577994.44 | 35577994.50 | 35577994.56 | 0.0498 | 0.0481 |
| Uranus | 92702-07-14 21:36 G | 35579964.33 | 35579964.40 | 35579964.51 | 0.0135 | 0.0125 |
| Uranus | 92703-07-19 06:00 G | 35580333.51 | 35580333.75 | 35580334.01 | 0.0136 | 0.0040 |
| Uranus | 92704-07-22 13:26 G | 35580702.82 | 35580703.06 | 35580703.30 | 0.0136 | 0.0020 |
| Uranus | 92705-07-26 22:34 G | 35581072.28 | 35581072.44 | 35581072.63 | 0.0136 | 0.0100 |
| Jupiter | 92709-02-25 21:07 G | 35582382.15 | 35582382.38 | 35582382.61 | 0.0499 | 0.0002 |
| Saturn | 92709-08-16 14:10 G | 35582553.85 | 35582554.09 | 35582554.34 | 0.0300 | 0.0023 |
| Jupiter | 92721-03-02 06:14 G | 35586769.66 | 35586769.76 | 35586769.87 | 0.0499 | 0.0451 |
| Neptune | 92722-08-08 07:12 G | 35587293.76 | 35587293.80 | 35587293.91 | 0.0089 | 0.0085 |
| Neptune | 92723-08-11 00:58 G | 35587661.39 | 35587661.54 | 35587661.70 | 0.0089 | 0.0070 |
| Neptune | 92724-08-12 06:29 G | 35588028.58 | 35588028.77 | 35588029.00 | 0.0089 | 0.0048 |
| Saturn | 92725-02-15 13:41 G | 35588215.82 | 35588216.07 | 35588216.33 | 0.0262 | 0.0014 |
| Neptune | 92725-08-14 19:55 G | 35588396.10 | 35588396.33 | 35588396.59 | 0.0089 | 0.0033 |
| Saturn | 92726-02-27 06:14 G | 35588592.71 | 35588592.76 | 35588592.83 | 0.0265 | 0.0257 |
| Neptune | 92726-08-17 06:43 G | 35588763.54 | 35588763.78 | 35588764.03 | 0.0089 | 0.0010 |
| Neptune | 92727-08-19 15:36 G | 35589130.89 | 35589131.15 | 35589131.41 | 0.0089 | 0.0003 |
| Neptune | 92728-08-21 06:58 G | 35589498.55 | 35589498.79 | 35589499.03 | 0.0089 | 0.0026 |
| Neptune | 92729-08-23 11:31 G | 35589865.77 | 35589865.98 | 35589866.23 | 0.0089 | 0.0040 |
| Neptune | 92730-08-26 05:31 G | 35590233.56 | 35590233.73 | 35590233.91 | 0.0089 | 0.0063 |
| Neptune | 92731-08-28 08:53 G | 35590600.77 | 35590600.87 | 35590601.03 | 0.0089 | 0.0077 |
| Saturn | 92738-08-09 21:07 G | 35593139.19 | 35593139.38 | 35593139.59 | 0.0301 | 0.0157 |
| Jupiter | 92738-08-22 06:00 G | 35593151.54 | 35593151.75 | 35593151.97 | 0.0527 | 0.0223 |
| Saturn | 92739-08-24 17:46 G | 35593519.10 | 35593519.24 | 35593519.41 | 0.0297 | 0.0221 |
| Pluto | 92742-12-06 19:41 G | 35594719.13 | 35594719.32 | 35594719.53 | 0.0081 | 0.0053 |
| Uranus | 92744-01-19 00:43 G | 35595127.29 | 35595127.53 | 35595127.78 | 0.0143 | 0.0057 |
| Uranus | 92745-01-23 01:12 G | 35595497.31 | 35595497.55 | 35595497.80 | 0.0142 | 0.0029 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 92746-01-28 01:55 G | 35595867.43 | 35595867.58 | 35595867.77 | 0.0142 | 0.0108 |
| Jupiter | 92750-08-27 01:26 G | 35597539.37 | 35597539.56 | 35597539.77 | 0.0527 | 0.0251 |
| Saturn | 92754-02-10 21:50 G | 35598803.21 | 35598803.41 | 35598803.62 | 0.0261 | 0.0132 |
| Saturn | 92755-02-22 17:46 G | 35599180.04 | 35599180.24 | 35599180.46 | 0.0264 | 0.0136 |
| Mars | 92759-12-02 16:34 G | 35600924.09 | 35600924.19 | 35600924.30 | 0.1597 | 0.1332 |
| Saturn | 92768-08-17 13:26 G | 35604104.81 | 35604105.06 | 35604105.31 | 0.0300 | 0.0053 |
| Saturn | 92783-02-06 02:53 G | 35609390.54 | 35609390.62 | 35609390.71 | 0.0260 | 0.0245 |
| Saturn | 92784-02-17 15:22 G | 35609766.89 | 35609767.14 | 35609767.39 | 0.0263 | 0.0018 |
| Uranus | 92786-07-15 12:29 G | 35610645.88 | 35610646.02 | 35610646.19 | 0.0135 | 0.0104 |
| Uranus | 92787-07-19 19:26 G | 35611015.08 | 35611015.31 | 35611015.57 | 0.0136 | 0.0046 |
| Uranus | 92788-07-23 03:50 G | 35611384.43 | 35611384.66 | 35611384.90 | 0.0136 | 0.0039 |
| Uranus | 92789-07-27 12:14 G | 35611753.86 | 35611754.01 | 35611754.20 | 0.0136 | 0.0103 |
| Jupiter | 92792-02-26 00:00 G | 35612697.25 | 35612697.50 | 35612697.74 | 0.0498 | 0.0054 |
| Saturn | 92797-08-11 06:58 G | 35614690.59 | 35614690.79 | 35614691.01 | 0.0300 | 0.0123 |
| Saturn | 92798-08-26 02:38 G | 35615070.49 | 35615070.61 | 35615070.74 | 0.0297 | 0.0251 |
| Jupiter | 92804-03-01 08:24 G | 35617084.71 | 35617084.85 | 35617085.00 | 0.0499 | 0.0372 |
| Neptune | 92806-02-09 11:31 G | 35617794.92 | 35617794.98 | 35617795.08 | 0.0088 | 0.0084 |
| Neptune | 92807-02-12 02:38 G | 35618162.45 | 35618162.61 | 35618162.79 | 0.0088 | 0.0069 |
| Neptune | 92808-02-14 14:38 G | 35618529.92 | 35618530.11 | 35618530.34 | 0.0088 | 0.0048 |
| Neptune | 92809-02-16 00:29 G | 35618897.28 | 35618897.52 | 35618897.78 | 0.0089 | 0.0033 |
| Neptune | 92810-02-18 17:31 G | 35619264.99 | 35619265.23 | 35619265.49 | 0.0089 | 0.0011 |
| Neptune | 92811-02-21 00:14 G | 35619632.25 | 35619632.51 | 35619632.77 | 0.0089 | 0.0005 |
| Neptune | 92812-02-23 19:26 G | 35620000.07 | 35620000.31 | 35620000.57 | 0.0089 | 0.0027 |
| Saturn | 92813-02-12 05:31 G | 35620354.51 | 35620354.73 | 35620354.97 | 0.0262 | 0.0099 |
| Neptune | 92813-02-25 00:58 G | 35620367.33 | 35620367.54 | 35620367.78 | 0.0089 | 0.0043 |
| Saturn | 92814-02-23 20:10 G | 35620731.16 | 35620731.34 | 35620731.55 | 0.0264 | 0.0168 |
| Neptune | 92814-02-27 19:41 G | 35620735.15 | 35620735.32 | 35620735.53 | 0.0089 | 0.0063 |
| Neptune | 92815-03-02 03:36 G | 35621102.56 | 35621102.65 | 35621102.78 | 0.0089 | 0.0080 |
| Jupiter | 92821-08-21 04:19 G | 35623466.50 | 35623466.68 | 35623466.87 | 0.0527 | 0.0307 |
| Saturn | 92826-08-05 00:58 G | 35625276.49 | 35625276.54 | 35625276.61 | 0.0302 | 0.0292 |

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| Uranus | 92827-01-14 16:05 G | 35625439.10 | 35625439.17 | 35625439.30 | 0.0143 | 0.0131 |
| Saturn | 92827-08-19 18:58 G | 35625656.07 | 35625656.29 | 35625656.53 | 0.0299 | 0.0090 |
| Uranus | 92828-01-19 15:07 G | 35625808.90 | 35625809.13 | 35625809.39 | 0.0143 | 0.0054 |
| Uranus | 92829-01-23 16:48 G | 35626178.97 | 35626179.20 | 35626179.45 | 0.0142 | 0.0036 |
| Uranus | 92830-01-28 16:48 G | 35626549.10 | 35626549.20 | 35626549.32 | 0.0142 | 0.0128 |
| Jupiter | 92833-08-26 07:41 G | 35627854.60 | 35627854.82 | 35627855.04 | 0.0527 | 0.0150 |
| Saturn | 92842-02-07 06:43 G | 35630941.65 | 35630941.78 | 35630941.93 | 0.0261 | 0.0214 |
| Saturn | 92843-02-19 02:10 G | 35631318.36 | 35631318.59 | 35631318.83 | 0.0263 | 0.0053 |
| Saturn | 92856-08-12 22:34 G | 35636242.21 | 35636242.44 | 35636242.67 | 0.0300 | 0.0082 |
| Saturn | 92857-08-27 13:12 G | 35636622.02 | 35636622.05 | 35636622.11 | 0.0296 | 0.0291 |
| Uranus | 92870-07-16 03:36 G | 35641327.53 | 35641327.65 | 35641327.81 | 0.0135 | 0.0110 |
| Uranus | 92871-07-20 10:05 G | 35641696.66 | 35641696.92 | 35641697.18 | 0.0136 | 0.0024 |
| Saturn | 92872-02-14 11:17 G | 35641905.73 | 35641905.97 | 35641906.23 | 0.0262 | 0.0065 |
| Uranus | 92872-07-23 18:58 G | 35642066.07 | 35642066.29 | 35642066.54 | 0.0136 | 0.0036 |
| Saturn | 92873-02-25 01:26 G | 35642282.41 | 35642282.56 | 35642282.73 | 0.0265 | 0.0204 |
| Uranus | 92873-07-28 02:24 G | 35642435.48 | 35642435.60 | 35642435.74 | 0.0136 | 0.0118 |
| Jupiter | 92875-02-25 00:00 G | 35643012.28 | 35643012.50 | 35643012.72 | 0.0498 | 0.0137 |
| Mars | 92877-06-02 21:50 G | 35643841.27 | 35643841.41 | 35643841.56 | 0.1944 | 0.1194 |
| Saturn | 92885-08-06 13:41 G | 35646827.95 | 35646828.07 | 35646828.21 | 0.0302 | 0.0250 |
| Neptune | 92886-08-07 18:29 G | 35647194.24 | 35647194.27 | 35647194.35 | 0.0089 | 0.0087 |
| Saturn | 92886-08-21 10:19 G | 35647207.73 | 35647207.93 | 35647208.15 | 0.0299 | 0.0133 |
| Jupiter | 92887-03-01 16:48 G | 35647400.02 | 35647400.20 | 35647400.40 | 0.0499 | 0.0304 |
| Neptune | 92887-08-10 01:26 G | 35647561.47 | 35647561.56 | 35647561.70 | 0.0089 | 0.0078 |
| Neptune | 92888-08-11 14:10 G | 35647928.89 | 35647929.09 | 35647929.32 | 0.0089 | 0.0051 |
| Neptune | 92889-08-14 02:10 G | 35648296.39 | 35648296.59 | 35648296.82 | 0.0089 | 0.0042 |
| Neptune | 92890-08-16 09:50 G | 35648663.65 | 35648663.91 | 35648664.17 | 0.0089 | 0.0015 |
| Neptune | 92891-08-19 01:55 G | 35649031.33 | 35649031.58 | 35649031.83 | 0.0089 | 0.0005 |
| Neptune | 92892-08-20 06:00 G | 35649398.52 | 35649398.75 | 35649399.01 | 0.0089 | 0.0023 |
| Neptune | 92893-08-23 00:14 G | 35649766.27 | 35649766.51 | 35649766.75 | 0.0089 | 0.0032 |
| Neptune | 92894-08-25 04:19 G | 35650133.50 | 35650133.68 | 35650133.88 | 0.0089 | 0.0059 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 92895-08-27 20:24 G | 35650501.19 | 35650501.35 | 35650501.52 | 0.0089 | 0.0068 |
| Pluto | 92897-06-07 08:53 G | 35651150.78 | 35651150.87 | 35651151.03 | 0.0063 | 0.0055 |
| Pluto | 92898-06-08 16:48 G | 35651516.97 | 35651517.20 | 35651517.45 | 0.0063 | 0.0015 |
| Saturn | 92901-02-09 18:14 G | 35652493.09 | 35652493.26 | 35652493.43 | 0.0261 | 0.0181 |
| Saturn | 92902-02-21 16:19 G | 35652869.95 | 35652870.18 | 35652870.41 | 0.0264 | 0.0089 |
| Jupiter | 92904-08-21 08:10 G | 35653781.70 | 35653781.84 | 35653781.99 | 0.0528 | 0.0410 |
| Uranus | 92911-01-16 07:26 G | 35656120.75 | 35656120.81 | 35656120.90 | 0.0143 | 0.0136 |
| Uranus | 92912-01-21 05:17 G | 35656490.48 | 35656490.72 | 35656490.99 | 0.0143 | 0.0038 |
| Uranus | 92913-01-25 07:55 G | 35656860.59 | 35656860.83 | 35656861.06 | 0.0142 | 0.0047 |
| Uranus | 92914-01-30 06:14 G | 35657230.66 | 35657230.76 | 35657230.90 | 0.0142 | 0.0128 |
| Saturn | 92915-08-16 14:24 G | 35657793.85 | 35657794.10 | 35657794.35 | 0.0300 | 0.0035 |
| Jupiter | 92916-08-26 01:26 G | 35658169.33 | 35658169.56 | 35658169.79 | 0.0527 | 0.0057 |
| Saturn | 92931-02-16 18:00 G | 35663457.00 | 35663457.25 | 35663457.51 | 0.0263 | 0.0029 |
| Saturn | 92932-02-28 14:24 G | 35663834.01 | 35663834.10 | 35663834.21 | 0.0265 | 0.0239 |
| Saturn | 92944-08-09 13:26 G | 35668379.88 | 35668380.06 | 35668380.23 | 0.0301 | 0.0200 |
| Saturn | 92945-08-24 10:05 G | 35668759.74 | 35668759.92 | 35668760.11 | 0.0298 | 0.0179 |
| Uranus | 92954-07-17 17:31 G | 35672009.06 | 35672009.23 | 35672009.42 | 0.0135 | 0.0089 |
| Uranus | 92955-07-21 22:19 G | 35672378.18 | 35672378.43 | 35672378.69 | 0.0136 | 0.0031 |
| Uranus | 92956-07-25 08:38 G | 35672747.64 | 35672747.86 | 35672748.08 | 0.0136 | 0.0055 |
| Uranus | 92957-07-29 14:53 G | 35673117.00 | 35673117.12 | 35673117.26 | 0.0136 | 0.0117 |
| Jupiter | 92958-02-25 05:31 G | 35673327.51 | 35673327.73 | 35673327.96 | 0.0498 | 0.0199 |
| Saturn | 92960-02-12 09:36 G | 35674044.71 | 35674044.90 | 35674045.11 | 0.0261 | 0.0146 |
| Saturn | 92961-02-23 03:50 G | 35674421.44 | 35674421.66 | 35674421.89 | 0.0264 | 0.0123 |
| Mars | 92964-12-01 07:26 G | 35675798.62 | 35675798.81 | 35675799.01 | 0.1592 | 0.0038 |
| Jupiter | 92970-03-01 11:17 G | 35677714.76 | 35677714.97 | 35677715.17 | 0.0498 | 0.0222 |
| Neptune | 92971-02-12 07:55 G | 35678062.69 | 35678062.83 | 35678062.99 | 0.0088 | 0.0070 |
| Neptune | 92972-02-14 16:34 G | 35678430.01 | 35678430.19 | 35678430.40 | 0.0088 | 0.0059 |
| Neptune | 92973-02-16 10:48 G | 35678797.72 | 35678797.95 | 35678798.20 | 0.0088 | 0.0033 |
| Neptune | 92974-02-18 16:48 G | 35679164.94 | 35679165.20 | 35679165.45 | 0.0089 | 0.0022 |
| Saturn | 92974-08-18 07:26 G | 35679345.57 | 35679345.81 | 35679346.06 | 0.0299 | 0.0016 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 92975-02-21 12:14 G | 35679532.75 | 35679533.01 | 35679533.27 | 0.0089 | 0.0005 |
| Neptune | 92976-02-23 18:00 G | 35679900.00 | 35679900.25 | 35679900.51 | 0.0089 | 0.0015 |
| Neptune | 92977-02-25 11:17 G | 35680267.75 | 35680267.97 | 35680268.22 | 0.0089 | 0.0042 |
| Neptune | 92978-02-27 19:55 G | 35680635.15 | 35680635.33 | 35680635.55 | 0.0089 | 0.0052 |
| Neptune | 92979-03-02 09:50 G | 35681002.79 | 35681002.91 | 35681003.04 | 0.0089 | 0.0078 |
| Neptune | 92980-03-03 23:17 G | 35681370.47 | 35681370.47 | 35681370.49 | 0.0089 | 0.0089 |
| Jupiter | 92987-08-21 01:41 G | 35684096.51 | 35684096.57 | 35684096.63 | 0.0528 | 0.0507 |
| Pluto | 92988-12-08 18:29 G | 35684572.14 | 35684572.27 | 35684572.48 | 0.0081 | 0.0064 |
| Saturn | 92989-02-06 13:55 G | 35684632.05 | 35684632.08 | 35684632.13 | 0.0261 | 0.0257 |
| Saturn | 92990-02-18 05:46 G | 35685008.50 | 35685008.74 | 35685008.98 | 0.0263 | 0.0006 |
| Uranus | 92995-01-16 21:22 G | 35686802.26 | 35686802.39 | 35686802.56 | 0.0143 | 0.0114 |
| Uranus | 92996-01-21 18:43 G | 35687172.02 | 35687172.28 | 35687172.53 | 0.0143 | 0.0037 |
| Uranus | 92997-01-25 22:05 G | 35687542.20 | 35687542.42 | 35687542.66 | 0.0142 | 0.0055 |
| Jupiter | 92999-08-26 03:36 G | 35688484.43 | 35688484.65 | 35688484.88 | 0.0527 | 0.0057 |

94TH MILLENNIUM CE

This is a list of transits of Moon in the 94th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Saturn | 93003-08-13 15:22 G | 35689931.95 | 35689932.14 | 35689932.36 | 0.0301 | 0.0148 | | |
| Saturn | 93004-08-27 09:22 G | 35690311.75 | 35690311.89 | 35690312.06 | 0.0297 | 0.0228 | | |
| Jupiter | 93011-08-31 19:26 G | 35692872.19 | 35692872.31 | 35692872.44 | 0.0527 | 0.0443 | | |
| Saturn | 93019-02-14 22:48 G | 35695596.23 | 35695596.45 | 35695596.69 | 0.0262 | 0.0110 | | |
| Saturn | 93020-02-26 12:29 G | 35695972.82 | 35695973.02 | 35695973.23 | 0.0264 | 0.0159 | | |

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| Saturn | 93033-08-21 06:29 G | 35700897.54 | 35700897.77 | 35700898.01 | 0.0299 | 0.0068 |
| Uranus | 93038-07-19 07:41 G | 35702690.66 | 35702690.82 | 35702691.00 | 0.0135 | 0.0095 |
| Uranus | 93039-07-23 11:31 G | 35703059.73 | 35703059.98 | 35703060.24 | 0.0135 | 0.0010 |
| Uranus | 93040-07-26 22:19 G | 35703429.22 | 35703429.43 | 35703429.67 | 0.0136 | 0.0050 |
| Jupiter | 93041-02-24 20:53 G | 35703642.19 | 35703642.37 | 35703642.56 | 0.0498 | 0.0294 |
| Uranus | 93041-07-31 03:07 G | 35703798.60 | 35703798.63 | 35703798.71 | 0.0136 | 0.0133 |
| Saturn | 93048-02-10 00:14 G | 35706183.39 | 35706183.51 | 35706183.65 | 0.0261 | 0.0221 |
| Saturn | 93049-02-20 21:22 G | 35706560.15 | 35706560.39 | 35706560.63 | 0.0263 | 0.0043 |
| Neptune | 93051-08-11 08:10 G | 35707461.74 | 35707461.84 | 35707461.98 | 0.0089 | 0.0079 |
| Neptune | 93052-08-12 21:22 G | 35707829.21 | 35707829.39 | 35707829.56 | 0.0089 | 0.0062 |
| Jupiter | 93053-03-01 16:05 G | 35708029.94 | 35708030.17 | 35708030.40 | 0.0498 | 0.0129 |
| Neptune | 93053-08-15 03:07 G | 35708196.42 | 35708196.63 | 35708196.88 | 0.0089 | 0.0044 |
| Neptune | 93054-08-17 20:10 G | 35708564.11 | 35708564.34 | 35708564.60 | 0.0089 | 0.0026 |
| Neptune | 93055-08-20 00:29 G | 35708931.27 | 35708931.52 | 35708931.78 | 0.0089 | 0.0006 |
| Neptune | 93056-08-21 18:14 G | 35709299.00 | 35709299.26 | 35709299.52 | 0.0089 | 0.0011 |
| Neptune | 93057-08-23 23:17 G | 35709666.24 | 35709666.47 | 35709666.71 | 0.0089 | 0.0031 |
| Neptune | 93058-08-26 14:24 G | 35710033.89 | 35710034.10 | 35710034.34 | 0.0089 | 0.0047 |
| Neptune | 93059-08-28 23:02 G | 35710401.32 | 35710401.46 | 35710401.64 | 0.0089 | 0.0068 |
| Neptune | 93060-08-30 09:22 G | 35710768.83 | 35710768.89 | 35710769.01 | 0.0089 | 0.0084 |
| Saturn | 93062-08-15 15:22 G | 35711483.91 | 35711484.14 | 35711484.38 | 0.0301 | 0.0094 |
| Saturn | 93063-08-30 04:48 G | 35711863.63 | 35711863.70 | 35711863.80 | 0.0297 | 0.0277 |
| Saturn | 93078-02-16 05:46 G | 35717147.50 | 35717147.74 | 35717147.99 | 0.0262 | 0.0072 |
| Uranus | 93079-01-18 07:12 G | 35717483.69 | 35717483.80 | 35717483.94 | 0.0143 | 0.0124 |
| Saturn | 93079-02-27 21:50 G | 35717524.24 | 35717524.41 | 35717524.58 | 0.0265 | 0.0194 |
| Uranus | 93080-01-23 03:07 G | 35717853.38 | 35717853.63 | 35717853.90 | 0.0143 | 0.0024 |
| Uranus | 93081-01-27 07:55 G | 35718223.60 | 35718223.83 | 35718224.06 | 0.0143 | 0.0059 |
| Uranus | 93082-02-01 04:19 G | 35718593.68 | 35718593.68 | 35718593.71 | 0.0142 | 0.0142 |
| Jupiter | 93082-08-25 16:19 G | 35718798.96 | 35718799.18 | 35718799.41 | 0.0527 | 0.0174 |
| Saturn | 93091-08-09 09:22 G | 35722069.78 | 35722069.89 | 35722070.01 | 0.0302 | 0.0260 |
| Saturn | 93092-08-23 07:26 G | 35722449.60 | 35722449.81 | 35722450.03 | 0.0298 | 0.0120 |

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| Jupiter | 93094-08-30 18:43 G | 35723187.11 | 35723187.28 | 35723187.45 | 0.0527 | 0.0343 |
| Saturn | 93107-02-12 13:55 G | 35727734.92 | 35727735.08 | 35727735.25 | 0.0261 | 0.0188 |
| Saturn | 93108-02-24 10:19 G | 35728111.70 | 35728111.93 | 35728112.17 | 0.0264 | 0.0078 |
| Saturn | 93121-08-18 09:07 G | 35733035.64 | 35733035.88 | 35733036.13 | 0.0300 | 0.0045 |
| Uranus | 93122-07-20 20:53 G | 35733372.17 | 35733372.37 | 35733372.58 | 0.0135 | 0.0075 |
| Uranus | 93123-07-24 23:31 G | 35733741.23 | 35733741.48 | 35733741.74 | 0.0135 | 0.0017 |
| Jupiter | 93124-02-26 06:00 G | 35733957.59 | 35733957.75 | 35733957.92 | 0.0498 | 0.0362 |
| Uranus | 93124-07-28 11:31 G | 35734110.78 | 35734110.98 | 35734111.19 | 0.0136 | 0.0069 |
| Uranus | 93125-08-01 15:22 G | 35734480.08 | 35734480.14 | 35734480.23 | 0.0136 | 0.0130 |
| Neptune | 93135-02-13 08:10 G | 35737962.73 | 35737962.84 | 35737963.01 | 0.0088 | 0.0075 |
| Neptune | 93136-02-16 03:07 G | 35738330.48 | 35738330.63 | 35738330.83 | 0.0088 | 0.0064 |
| Jupiter | 93136-03-01 11:17 G | 35738344.73 | 35738344.97 | 35738345.20 | 0.0498 | 0.0057 |
| Neptune | 93137-02-17 08:53 G | 35738697.65 | 35738697.87 | 35738698.12 | 0.0088 | 0.0038 |
| Saturn | 93137-02-18 11:17 G | 35738698.72 | 35738698.97 | 35738699.22 | 0.0262 | 0.0038 |
| Neptune | 93138-02-20 04:19 G | 35739065.44 | 35739065.68 | 35739065.95 | 0.0088 | 0.0027 |
| Saturn | 93138-03-02 09:07 G | 35739075.77 | 35739075.88 | 35739076.01 | 0.0265 | 0.0226 |
| Neptune | 93139-02-22 11:02 G | 35739432.71 | 35739432.96 | 35739433.22 | 0.0088 | 0.0003 |
| Neptune | 93140-02-25 03:36 G | 35739800.39 | 35739800.65 | 35739800.93 | 0.0089 | 0.0011 |
| Neptune | 93141-02-26 13:55 G | 35740167.86 | 35740168.08 | 35740168.33 | 0.0089 | 0.0035 |
| Neptune | 93142-03-01 02:38 G | 35740535.39 | 35740535.61 | 35740535.84 | 0.0089 | 0.0048 |
| Neptune | 93143-03-03 17:02 G | 35740903.09 | 35740903.21 | 35740903.38 | 0.0089 | 0.0072 |
| Pluto | 93143-06-12 11:17 G | 35741003.79 | 35741003.97 | 35741004.17 | 0.0063 | 0.0042 |
| Neptune | 93144-03-05 00:14 G | 35741270.47 | 35741270.51 | 35741270.63 | 0.0089 | 0.0085 |
| Pluto | 93144-06-13 04:05 G | 35741370.46 | 35741370.67 | 35741370.91 | 0.0063 | 0.0030 |
| Jupiter | 93148-03-06 05:31 G | 35742732.63 | 35742732.73 | 35742732.84 | 0.0499 | 0.0443 |
| Saturn | 93150-08-12 08:24 G | 35743621.70 | 35743621.85 | 35743622.02 | 0.0301 | 0.0214 |
| Saturn | 93151-08-27 05:46 G | 35744001.55 | 35744001.74 | 35744001.94 | 0.0298 | 0.0165 |
| Mars | 93161-06-05 13:55 G | 35747571.88 | 35747572.08 | 35747572.28 | 0.1948 | 0.0301 |
| Uranus | 93163-01-19 16:05 G | 35748165.02 | 35748165.17 | 35748165.36 | 0.0143 | 0.0105 |
| Uranus | 93164-01-24 11:17 G | 35748534.72 | 35748534.97 | 35748535.23 | 0.0143 | 0.0030 |

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| Uranus | 93165-01-28 17:02 G | 35748905.00 | 35748905.21 | 35748905.44 | 0.0143 | 0.0065 |
| Jupiter | 93165-08-25 20:53 G | 35749114.18 | 35749114.37 | 35749114.57 | 0.0528 | 0.0261 |
| Saturn | 93166-02-14 00:29 G | 35749286.32 | 35749286.52 | 35749286.72 | 0.0261 | 0.0157 |
| Saturn | 93167-02-25 15:07 G | 35749662.90 | 35749663.13 | 35749663.37 | 0.0264 | 0.0108 |
| Mars | 93169-12-03 01:26 G | 35750674.39 | 35750674.56 | 35750674.73 | 0.1589 | 0.0648 |
| Jupiter | 93177-08-30 18:14 G | 35753502.05 | 35753502.26 | 35753502.47 | 0.0527 | 0.0256 |
| Saturn | 93180-08-19 21:50 G | 35754587.16 | 35754587.41 | 35754587.65 | 0.0300 | 0.0007 |
| Saturn | 93196-02-20 19:12 G | 35760250.06 | 35760250.30 | 35760250.54 | 0.0262 | 0.0011 |
| Saturn | 93197-03-03 19:12 G | 35760627.24 | 35760627.30 | 35760627.37 | 0.0265 | 0.0253 |
| Uranus | 93206-07-21 11:31 G | 35764053.78 | 35764053.98 | 35764054.18 | 0.0135 | 0.0080 |
| Jupiter | 93207-02-25 03:07 G | 35764272.51 | 35764272.63 | 35764272.75 | 0.0498 | 0.0428 |
| Uranus | 93207-07-25 13:26 G | 35764422.81 | 35764423.06 | 35764423.32 | 0.0135 | 0.0006 |
| Uranus | 93208-07-29 02:10 G | 35764792.38 | 35764792.59 | 35764792.81 | 0.0136 | 0.0063 |
| Saturn | 93209-08-14 01:26 G | 35765173.37 | 35765173.56 | 35765173.76 | 0.0301 | 0.0175 |
| Saturn | 93210-08-28 19:26 G | 35765553.13 | 35765553.31 | 35765553.49 | 0.0298 | 0.0203 |
| Neptune | 93215-08-11 17:02 G | 35767362.13 | 35767362.21 | 35767362.33 | 0.0089 | 0.0081 |
| Neptune | 93216-08-12 22:34 G | 35767729.31 | 35767729.44 | 35767729.62 | 0.0089 | 0.0072 |
| Neptune | 93217-08-15 16:05 G | 35768096.97 | 35768097.17 | 35768097.41 | 0.0089 | 0.0044 |
| Neptune | 93218-08-17 19:55 G | 35768464.12 | 35768464.33 | 35768464.58 | 0.0089 | 0.0036 |
| Jupiter | 93219-03-01 21:22 G | 35768660.16 | 35768660.39 | 35768660.62 | 0.0498 | 0.0018 |
| Neptune | 93219-08-20 13:41 G | 35768831.81 | 35768832.07 | 35768832.33 | 0.0089 | 0.0008 |
| Neptune | 93220-08-21 19:12 G | 35769199.05 | 35769199.30 | 35769199.55 | 0.0089 | 0.0001 |
| Neptune | 93221-08-24 08:53 G | 35769566.62 | 35769566.87 | 35769567.12 | 0.0089 | 0.0028 |
| Neptune | 93222-08-26 18:29 G | 35769934.05 | 35769934.27 | 35769934.50 | 0.0089 | 0.0038 |
| Neptune | 93223-08-29 03:50 G | 35770301.49 | 35770301.66 | 35770301.85 | 0.0089 | 0.0065 |
| Neptune | 93224-08-30 18:14 G | 35770669.16 | 35770669.26 | 35770669.43 | 0.0089 | 0.0075 |
| Saturn | 93225-02-15 02:38 G | 35770837.39 | 35770837.61 | 35770837.83 | 0.0261 | 0.0131 |
| Saturn | 93226-02-26 14:10 G | 35771213.88 | 35771214.09 | 35771214.31 | 0.0264 | 0.0134 |
| Jupiter | 93231-03-06 05:46 G | 35773047.58 | 35773047.74 | 35773047.91 | 0.0498 | 0.0369 |
| Pluto | 93233-12-11 04:48 G | 35774058.56 | 35774058.70 | 35774058.86 | 0.0082 | 0.0067 |

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| Saturn | 93239-08-22 09:50 G | 35776138.68 | 35776138.91 | 35776139.15 | 0.0300 | 0.0032 |
| Uranus | 93247-01-20 00:29 G | 35778846.40 | 35778846.52 | 35778846.69 | 0.0143 | 0.0117 |
| Uranus | 93248-01-24 19:26 G | 35779216.05 | 35779216.31 | 35779216.57 | 0.0143 | 0.0014 |
| Jupiter | 93248-08-24 22:34 G | 35779429.25 | 35779429.44 | 35779429.62 | 0.0527 | 0.0338 |
| Mars | 93248-12-04 21:22 G | 35779531.25 | 35779531.39 | 35779531.54 | 0.1590 | 0.0935 |
| Uranus | 93249-01-29 01:55 G | 35779586.36 | 35779586.58 | 35779586.81 | 0.0143 | 0.0066 |
| Saturn | 93254-02-10 05:02 G | 35781424.65 | 35781424.71 | 35781424.79 | 0.0260 | 0.0248 |
| Saturn | 93255-02-22 01:12 G | 35781801.31 | 35781801.55 | 35781801.80 | 0.0262 | 0.0015 |
| Jupiter | 93260-08-29 15:50 G | 35783816.95 | 35783817.16 | 35783817.37 | 0.0527 | 0.0177 |
| Saturn | 93268-08-15 06:58 G | 35786724.57 | 35786724.79 | 35786725.01 | 0.0301 | 0.0141 |
| Saturn | 93269-08-29 22:05 G | 35787104.28 | 35787104.42 | 35787104.59 | 0.0298 | 0.0235 |
| Saturn | 93284-02-16 22:34 G | 35792388.20 | 35792388.44 | 35792388.67 | 0.0261 | 0.0104 |
| Saturn | 93285-02-27 15:07 G | 35792764.94 | 35792765.13 | 35792765.33 | 0.0264 | 0.0155 |
| Jupiter | 93290-02-24 17:02 G | 35794588.15 | 35794588.21 | 35794588.27 | 0.0498 | 0.0478 |
| Uranus | 93290-07-22 00:43 G | 35794735.32 | 35794735.53 | 35794735.76 | 0.0135 | 0.0062 |
| Uranus | 93291-07-26 02:24 G | 35795104.34 | 35795104.60 | 35795104.85 | 0.0135 | 0.0003 |
| Uranus | 93292-07-29 15:36 G | 35795473.97 | 35795474.15 | 35795474.35 | 0.0136 | 0.0085 |
| Saturn | 93298-08-23 18:29 G | 35797690.04 | 35797690.27 | 35797690.51 | 0.0300 | 0.0062 |
| Neptune | 93299-02-12 20:24 G | 35797863.32 | 35797863.35 | 35797863.43 | 0.0088 | 0.0086 |
| Neptune | 93300-02-15 01:55 G | 35798230.42 | 35798230.58 | 35798230.78 | 0.0088 | 0.0063 |
| Neptune | 93301-02-17 21:07 G | 35798598.18 | 35798598.38 | 35798598.61 | 0.0088 | 0.0051 |
| Neptune | 93302-02-20 04:48 G | 35798965.47 | 35798965.70 | 35798965.96 | 0.0088 | 0.0027 |
| Jupiter | 93302-03-02 00:00 G | 35798975.26 | 35798975.50 | 35798975.74 | 0.0499 | 0.0079 |
| Neptune | 93303-02-22 20:24 G | 35799333.10 | 35799333.35 | 35799333.63 | 0.0088 | 0.0015 |
| Neptune | 93304-02-25 07:55 G | 35799700.59 | 35799700.83 | 35799701.09 | 0.0088 | 0.0012 |
| Neptune | 93305-02-26 18:43 G | 35800068.03 | 35800068.28 | 35800068.54 | 0.0089 | 0.0024 |
| Neptune | 93306-03-01 10:34 G | 35800435.75 | 35800435.94 | 35800436.17 | 0.0089 | 0.0049 |
| Neptune | 93307-03-03 17:17 G | 35800803.05 | 35800803.22 | 35800803.44 | 0.0089 | 0.0060 |
| Neptune | 93308-03-05 12:43 G | 35801170.97 | 35801171.03 | 35801171.11 | 0.0089 | 0.0085 |
| Saturn | 93313-02-12 08:24 G | 35802975.74 | 35802975.85 | 35802975.99 | 0.0260 | 0.0223 |

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| Saturn | 93314-02-24 00:00 G | 35803352.25 | 35803352.50 | 35803352.75 | 0.0262 | 0.0035 |
| Jupiter | 93314-03-06 14:53 G | 35803362.95 | 35803363.12 | 35803363.30 | 0.0499 | 0.0323 |
| Saturn | 93327-08-18 04:19 G | 35808275.45 | 35808275.68 | 35808275.91 | 0.0302 | 0.0113 |
| Saturn | 93328-08-31 22:19 G | 35808655.32 | 35808655.43 | 35808655.55 | 0.0298 | 0.0262 |
| Uranus | 93331-01-21 12:58 G | 35809527.86 | 35809528.04 | 35809528.25 | 0.0143 | 0.0094 |
| Jupiter | 93331-08-26 00:14 G | 35809744.38 | 35809744.51 | 35809744.65 | 0.0528 | 0.0415 |
| Uranus | 93332-01-26 06:58 G | 35809897.54 | 35809897.79 | 35809898.05 | 0.0143 | 0.0020 |
| Uranus | 93333-01-30 14:10 G | 35810267.89 | 35810268.09 | 35810268.31 | 0.0143 | 0.0078 |
| Saturn | 93343-02-18 18:43 G | 35813939.06 | 35813939.28 | 35813939.52 | 0.0261 | 0.0083 |
| Jupiter | 93343-08-31 06:29 G | 35814132.55 | 35814132.77 | 35814133.00 | 0.0528 | 0.0133 |
| Saturn | 93344-03-01 16:19 G | 35814316.00 | 35814316.18 | 35814316.36 | 0.0264 | 0.0172 |
| Saturn | 93356-08-10 19:55 G | 35818861.30 | 35818861.33 | 35818861.38 | 0.0303 | 0.0298 |
| Saturn | 93357-08-25 18:29 G | 35819241.03 | 35819241.27 | 35819241.50 | 0.0300 | 0.0086 |
| Saturn | 93372-02-14 06:00 G | 35824526.60 | 35824526.75 | 35824526.92 | 0.0260 | 0.0198 |
| Saturn | 93373-02-24 15:22 G | 35824902.89 | 35824903.14 | 35824903.40 | 0.0262 | 0.0055 |
| Uranus | 93373-07-19 01:12 G | 35825047.49 | 35825047.55 | 35825047.64 | 0.0135 | 0.0129 |
| Uranus | 93374-07-23 14:53 G | 35825416.92 | 35825417.12 | 35825417.35 | 0.0135 | 0.0066 |
| Uranus | 93375-07-27 16:19 G | 35825785.93 | 35825786.18 | 35825786.44 | 0.0136 | 0.0020 |
| Uranus | 93376-07-31 06:29 G | 35826155.57 | 35826155.77 | 35826155.98 | 0.0136 | 0.0078 |
| Neptune | 93379-08-11 18:00 G | 35827262.25 | 35827262.25 | 35827262.25 | 0.0089 | 0.0089 |
| Neptune | 93380-08-13 11:02 G | 35827629.85 | 35827629.96 | 35827630.13 | 0.0089 | 0.0074 |
| Neptune | 93381-08-15 15:07 G | 35827996.96 | 35827997.13 | 35827997.36 | 0.0089 | 0.0054 |
| Neptune | 93382-08-18 07:55 G | 35828364.62 | 35828364.83 | 35828365.09 | 0.0089 | 0.0038 |
| Neptune | 93383-08-20 14:53 G | 35828731.88 | 35828732.12 | 35828732.37 | 0.0089 | 0.0018 |
| Neptune | 93384-08-22 04:05 G | 35829099.41 | 35829099.67 | 35829099.94 | 0.0089 | 0.0001 |
| Jupiter | 93385-03-01 12:58 G | 35829290.82 | 35829291.04 | 35829291.26 | 0.0499 | 0.0120 |
| Neptune | 93385-08-24 15:07 G | 35829466.90 | 35829467.13 | 35829467.38 | 0.0089 | 0.0020 |
| Saturn | 93386-08-19 01:12 G | 35829826.33 | 35829826.55 | 35829826.78 | 0.0302 | 0.0090 |
| Neptune | 93386-08-26 23:17 G | 35829834.24 | 35829834.47 | 35829834.72 | 0.0089 | 0.0036 |
| Neptune | 93387-08-29 14:24 G | 35830201.93 | 35830202.10 | 35830202.32 | 0.0089 | 0.0056 |

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| Saturn | 93387-09-02 23:02 G | 35830206.41 | 35830206.46 | 35830206.52 | 0.0298 | 0.0288 |
| Neptune | 93388-08-30 18:58 G | 35830569.16 | 35830569.29 | 35830569.46 | 0.0089 | 0.0072 |
| Pluto | 93389-06-14 19:12 G | 35830857.11 | 35830857.30 | 35830857.53 | 0.0063 | 0.0033 |
| Pluto | 93390-06-16 05:46 G | 35831223.56 | 35831223.74 | 35831223.96 | 0.0063 | 0.0041 |
| Jupiter | 93397-03-06 04:34 G | 35833678.50 | 35833678.69 | 35833678.90 | 0.0499 | 0.0286 |
| Saturn | 93402-02-20 18:14 G | 35835490.03 | 35835490.26 | 35835490.50 | 0.0261 | 0.0063 |
| Saturn | 93403-03-04 12:14 G | 35835866.84 | 35835867.01 | 35835867.19 | 0.0264 | 0.0188 |
| Jupiter | 93414-08-26 18:14 G | 35840060.14 | 35840060.26 | 35840060.39 | 0.0527 | 0.0448 |
| Uranus | 93415-01-23 01:55 G | 35840209.41 | 35840209.58 | 35840209.77 | 0.0143 | 0.0102 |
| Saturn | 93415-08-13 13:41 G | 35840411.97 | 35840412.07 | 35840412.17 | 0.0303 | 0.0275 |
| Uranus | 93416-01-27 19:55 G | 35840579.07 | 35840579.33 | 35840579.59 | 0.0143 | 0.0002 |
| Saturn | 93416-08-27 08:53 G | 35840791.64 | 35840791.87 | 35840792.11 | 0.0300 | 0.0111 |
| Uranus | 93417-02-01 03:07 G | 35840949.44 | 35840949.63 | 35840949.86 | 0.0142 | 0.0080 |
| Jupiter | 93426-08-31 11:02 G | 35844447.73 | 35844447.96 | 35844448.19 | 0.0527 | 0.0096 |
| Saturn | 93431-02-15 19:26 G | 35846077.13 | 35846077.31 | 35846077.51 | 0.0259 | 0.0177 |
| Saturn | 93432-02-27 07:12 G | 35846453.57 | 35846453.80 | 35846454.04 | 0.0262 | 0.0072 |
| Saturn | 93445-08-20 23:17 G | 35851377.24 | 35851377.47 | 35851377.70 | 0.0302 | 0.0067 |
| Mars | 93453-12-06 02:10 G | 35854406.39 | 35854406.59 | 35854406.80 | 0.1587 | 0.0163 |
| Uranus | 93457-07-20 14:10 G | 35855729.03 | 35855729.09 | 35855729.19 | 0.0135 | 0.0128 |
| Uranus | 93458-07-25 04:19 G | 35856098.45 | 35856098.68 | 35856098.92 | 0.0135 | 0.0048 |
| Uranus | 93459-07-29 05:02 G | 35856467.46 | 35856467.71 | 35856467.96 | 0.0136 | 0.0013 |
| Uranus | 93460-08-01 19:41 G | 35856837.16 | 35856837.32 | 35856837.49 | 0.0136 | 0.0100 |
| Saturn | 93461-02-21 15:07 G | 35857040.88 | 35857041.13 | 35857041.38 | 0.0261 | 0.0043 |
| Saturn | 93462-03-05 02:10 G | 35857417.44 | 35857417.59 | 35857417.77 | 0.0263 | 0.0200 |
| Neptune | 93464-02-16 14:24 G | 35858130.95 | 35858131.10 | 35858131.30 | 0.0088 | 0.0067 |
| Neptune | 93465-02-17 22:34 G | 35858498.27 | 35858498.44 | 35858498.66 | 0.0088 | 0.0058 |
| Neptune | 93466-02-20 12:58 G | 35858865.80 | 35858866.04 | 35858866.31 | 0.0088 | 0.0030 |
| Neptune | 93467-02-23 02:10 G | 35859233.36 | 35859233.59 | 35859233.85 | 0.0088 | 0.0020 |
| Neptune | 93468-02-25 12:14 G | 35859600.75 | 35859601.01 | 35859601.28 | 0.0088 | 0.0007 |
| Jupiter | 93468-03-02 03:50 G | 35859606.43 | 35859606.66 | 35859606.89 | 0.0498 | 0.0155 |

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| Neptune | 93469-02-27 05:46 G | 35859968.50 | 35859968.74 | 35859969.00 | 0.0089 | 0.0017 |
| Neptune | 93470-03-01 11:46 G | 35860335.78 | 35860335.99 | 35860336.24 | 0.0089 | 0.0044 |
| Neptune | 93471-03-04 07:12 G | 35860703.61 | 35860703.80 | 35860704.02 | 0.0089 | 0.0055 |
| Neptune | 93472-03-05 12:43 G | 35861070.95 | 35861071.03 | 35861071.16 | 0.0089 | 0.0081 |
| Saturn | 93474-08-14 01:12 G | 35861962.42 | 35861962.55 | 35861962.68 | 0.0303 | 0.0254 |
| Saturn | 93475-08-28 23:02 G | 35862342.25 | 35862342.46 | 35862342.68 | 0.0300 | 0.0132 |
| Pluto | 93479-12-15 09:22 G | 35863911.67 | 35863911.89 | 35863912.15 | 0.0081 | 0.0039 |
| Jupiter | 93480-03-06 08:53 G | 35863993.68 | 35863993.87 | 35863994.08 | 0.0499 | 0.0243 |
| Saturn | 93490-02-16 11:31 G | 35867627.79 | 35867627.98 | 35867628.18 | 0.0259 | 0.0157 |
| Saturn | 93491-02-28 05:02 G | 35868004.49 | 35868004.71 | 35868004.94 | 0.0262 | 0.0087 |
| Jupiter | 93497-08-25 21:22 G | 35870375.32 | 35870375.39 | 35870375.46 | 0.0527 | 0.0498 |
| Uranus | 93499-01-23 16:19 G | 35870890.97 | 35870891.18 | 35870891.41 | 0.0143 | 0.0078 |
| Uranus | 93500-01-28 10:19 G | 35871260.67 | 35871260.93 | 35871261.18 | 0.0143 | 0.0005 |
| Uranus | 93501-02-02 17:46 G | 35871631.06 | 35871631.24 | 35871631.44 | 0.0142 | 0.0095 |
| Saturn | 93504-08-22 17:02 G | 35872927.97 | 35872928.21 | 35872928.46 | 0.0302 | 0.0048 |
| Jupiter | 93509-09-01 03:07 G | 35874763.40 | 35874763.63 | 35874763.85 | 0.0527 | 0.0050 |
| Saturn | 93520-02-24 05:17 G | 35878591.47 | 35878591.72 | 35878591.98 | 0.0261 | 0.0027 |
| Saturn | 93521-03-06 17:02 G | 35878968.08 | 35878968.21 | 35878968.37 | 0.0263 | 0.0214 |
| Saturn | 93533-08-15 17:02 G | 35883513.07 | 35883513.21 | 35883513.37 | 0.0303 | 0.0233 |
| Saturn | 93534-08-30 18:43 G | 35883893.09 | 35883893.28 | 35883893.49 | 0.0300 | 0.0155 |
| Uranus | 93541-07-22 02:24 G | 35886410.49 | 35886410.60 | 35886410.74 | 0.0135 | 0.0117 |
| Uranus | 93542-07-26 16:48 G | 35886779.98 | 35886780.20 | 35886780.44 | 0.0135 | 0.0052 |
| Uranus | 93543-07-30 17:31 G | 35887148.99 | 35887149.23 | 35887149.48 | 0.0135 | 0.0033 |
| Uranus | 93544-08-03 08:38 G | 35887518.68 | 35887518.86 | 35887519.04 | 0.0136 | 0.0092 |
| Neptune | 93544-08-14 12:14 G | 35887529.89 | 35887530.01 | 35887530.16 | 0.0089 | 0.0074 |
| Neptune | 93545-08-17 04:34 G | 35887897.53 | 35887897.69 | 35887897.89 | 0.0089 | 0.0065 |
| Neptune | 93546-08-19 12:14 G | 35888264.80 | 35888265.01 | 35888265.25 | 0.0089 | 0.0038 |
| Neptune | 93547-08-21 23:46 G | 35888632.26 | 35888632.49 | 35888632.76 | 0.0089 | 0.0028 |
| Neptune | 93548-08-23 12:14 G | 35888999.76 | 35889000.01 | 35889000.26 | 0.0089 | 0.0001 |
| Saturn | 93549-02-18 10:34 G | 35889178.74 | 35889178.94 | 35889179.14 | 0.0259 | 0.0140 |

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| Neptune | 93549-08-25 18:58 G | 35889367.03 | 35889367.29 | 35889367.55 | 0.0089 | 0.0009 |
| Saturn | 93550-03-02 03:50 G | 35889555.43 | 35889555.66 | 35889555.89 | 0.0262 | 0.0102 |
| Neptune | 93550-08-28 11:02 G | 35889734.75 | 35889734.96 | 35889735.21 | 0.0089 | 0.0036 |
| Jupiter | 93551-03-03 07:26 G | 35889921.60 | 35889921.81 | 35889922.02 | 0.0499 | 0.0208 |
| Neptune | 93551-08-30 15:07 G | 35890101.93 | 35890102.13 | 35890102.38 | 0.0089 | 0.0045 |
| Neptune | 93552-09-01 08:53 G | 35890469.74 | 35890469.87 | 35890470.04 | 0.0089 | 0.0072 |
| Neptune | 93553-09-03 13:41 G | 35890836.98 | 35890837.07 | 35890837.18 | 0.0089 | 0.0081 |
| Jupiter | 93563-03-08 05:31 G | 35894309.52 | 35894309.73 | 35894309.94 | 0.0499 | 0.0219 |
| Saturn | 93563-08-24 06:29 G | 35894478.52 | 35894478.77 | 35894479.02 | 0.0302 | 0.0022 |
| Saturn | 93578-02-13 14:38 G | 35899766.05 | 35899766.11 | 35899766.18 | 0.0259 | 0.0250 |
| Saturn | 93579-02-24 22:19 G | 35900142.18 | 35900142.43 | 35900142.68 | 0.0261 | 0.0011 |
| Saturn | 93580-03-07 16:19 G | 35900519.07 | 35900519.18 | 35900519.31 | 0.0263 | 0.0228 |
| Uranus | 93583-01-25 02:24 G | 35901572.41 | 35901572.60 | 35901572.82 | 0.0143 | 0.0088 |
| Uranus | 93584-01-29 21:07 G | 35901942.13 | 35901942.38 | 35901942.63 | 0.0143 | 0.0016 |
| Uranus | 93585-02-03 04:48 G | 35902312.52 | 35902312.70 | 35902312.91 | 0.0142 | 0.0093 |
| Saturn | 93592-08-16 16:05 G | 35905064.00 | 35905064.17 | 35905064.34 | 0.0303 | 0.0205 |
| Jupiter | 93592-08-31 11:17 G | 35905078.73 | 35905078.97 | 35905079.21 | 0.0527 | 0.0025 |
| Saturn | 93593-08-31 16:48 G | 35905444.01 | 35905444.20 | 35905444.39 | 0.0300 | 0.0178 |
| Saturn | 93608-02-20 10:48 G | 35910729.74 | 35910729.95 | 35910730.18 | 0.0260 | 0.0118 |
| Saturn | 93609-03-02 21:50 G | 35911106.18 | 35911106.41 | 35911106.64 | 0.0262 | 0.0117 |
| Saturn | 93622-08-24 23:17 G | 35916029.23 | 35916029.47 | 35916029.72 | 0.0302 | 0.0008 |
| Uranus | 93625-07-22 14:38 G | 35917091.98 | 35917092.11 | 35917092.24 | 0.0135 | 0.0115 |
| Uranus | 93626-07-27 04:34 G | 35917461.46 | 35917461.69 | 35917461.94 | 0.0135 | 0.0037 |
| Uranus | 93627-07-31 05:02 G | 35917830.47 | 35917830.71 | 35917830.96 | 0.0135 | 0.0026 |
| Neptune | 93628-02-16 17:46 G | 35918031.14 | 35918031.24 | 35918031.38 | 0.0088 | 0.0077 |
| Uranus | 93628-08-03 19:55 G | 35918200.20 | 35918200.33 | 35918200.47 | 0.0136 | 0.0113 |
| Neptune | 93629-02-18 07:12 G | 35918398.60 | 35918398.80 | 35918399.02 | 0.0088 | 0.0056 |
| Neptune | 93630-02-20 21:22 G | 35918766.18 | 35918766.39 | 35918766.63 | 0.0088 | 0.0041 |
| Neptune | 93631-02-23 05:46 G | 35919133.48 | 35919133.74 | 35919134.00 | 0.0088 | 0.0020 |
| Neptune | 93632-02-26 00:00 G | 35919501.25 | 35919501.50 | 35919501.76 | 0.0088 | 0.0005 |

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| Neptune | 93633-02-27 05:31 G | 35919868.49 | 35919868.73 | 35919869.00 | 0.0088 | 0.0018 |
| Neptune | 93634-03-02 01:12 G | 35920236.31 | 35920236.55 | 35920236.80 | 0.0089 | 0.0032 |
| Jupiter | 93634-03-03 02:24 G | 35920237.40 | 35920237.60 | 35920237.80 | 0.0498 | 0.0249 |
| Neptune | 93635-03-04 06:58 G | 35920603.61 | 35920603.79 | 35920604.00 | 0.0089 | 0.0056 |
| Pluto | 93635-06-19 08:38 G | 35920710.62 | 35920710.86 | 35920711.11 | 0.0063 | 0.0017 |
| Neptune | 93636-03-06 00:43 G | 35920971.38 | 35920971.53 | 35920971.72 | 0.0089 | 0.0069 |
| Pluto | 93636-06-19 11:46 G | 35921076.94 | 35921076.99 | 35921077.11 | 0.0063 | 0.0060 |
| Saturn | 93637-02-14 09:22 G | 35921316.78 | 35921316.89 | 35921317.02 | 0.0259 | 0.0225 |
| Saturn | 93638-02-26 00:00 G | 35921693.26 | 35921693.50 | 35921693.74 | 0.0261 | 0.0010 |
| Saturn | 93639-03-09 20:10 G | 35922070.25 | 35922070.34 | 35922070.43 | 0.0263 | 0.0244 |
| Jupiter | 93646-03-07 08:38 G | 35924624.64 | 35924624.86 | 35924625.09 | 0.0499 | 0.0177 |
| Saturn | 93651-08-18 17:02 G | 35926615.02 | 35926615.21 | 35926615.42 | 0.0303 | 0.0172 |
| Saturn | 93652-09-01 13:55 G | 35926994.90 | 35926995.08 | 35926995.26 | 0.0300 | 0.0207 |
| Mars | 93658-12-06 07:12 G | 35929281.64 | 35929281.80 | 35929281.95 | 0.1585 | 0.0799 |
| Uranus | 93667-01-25 10:48 G | 35932253.73 | 35932253.95 | 35932254.19 | 0.0143 | 0.0069 |
| Saturn | 93667-02-21 09:22 G | 35932280.66 | 35932280.89 | 35932281.14 | 0.0260 | 0.0095 |
| Uranus | 93668-01-30 05:46 G | 35932623.49 | 35932623.74 | 35932624.00 | 0.0143 | 0.0005 |
| Saturn | 93668-03-03 18:00 G | 35932657.05 | 35932657.25 | 35932657.48 | 0.0262 | 0.0136 |
| Uranus | 93669-02-03 12:58 G | 35932993.89 | 35932994.04 | 35932994.23 | 0.0142 | 0.0107 |
| Jupiter | 93675-08-31 20:10 G | 35935394.12 | 35935394.34 | 35935394.57 | 0.0527 | 0.0029 |
| Saturn | 93681-08-26 02:38 G | 35937580.38 | 35937580.61 | 35937580.84 | 0.0302 | 0.0040 |
| Jupiter | 93687-09-05 19:55 G | 35939782.24 | 35939782.33 | 35939782.43 | 0.0526 | 0.0477 |
| Saturn | 93696-02-16 12:29 G | 35942867.88 | 35942868.02 | 35942868.18 | 0.0259 | 0.0200 |
| Saturn | 93697-02-27 06:14 G | 35943244.52 | 35943244.76 | 35943245.00 | 0.0261 | 0.0034 |
| Neptune | 93708-08-15 00:43 G | 35947430.43 | 35947430.53 | 35947430.64 | 0.0089 | 0.0081 |
| Uranus | 93709-07-24 02:24 G | 35947773.46 | 35947773.60 | 35947773.76 | 0.0135 | 0.0107 |
| Neptune | 93709-08-17 08:53 G | 35947797.73 | 35947797.87 | 35947798.05 | 0.0089 | 0.0068 |
| Uranus | 93710-07-28 16:34 G | 35948142.95 | 35948143.19 | 35948143.43 | 0.0135 | 0.0039 |
| Neptune | 93710-08-19 19:41 G | 35948165.11 | 35948165.32 | 35948165.57 | 0.0089 | 0.0045 |
| Saturn | 93710-08-20 17:02 G | 35948165.99 | 35948166.21 | 35948166.44 | 0.0302 | 0.0134 |

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| Uranus | 93711-08-01 17:17 G | 35948511.98 | 35948512.22 | 35948512.45 | 0.0135 | 0.0045 |
| Neptune | 93711-08-22 09:36 G | 35948532.68 | 35948532.90 | 35948533.15 | 0.0089 | 0.0032 |
| Saturn | 93711-09-04 12:14 G | 35948545.88 | 35948546.01 | 35948546.16 | 0.0299 | 0.0244 |
| Uranus | 93712-08-05 07:26 G | 35948881.68 | 35948881.81 | 35948882.00 | 0.0136 | 0.0105 |
| Neptune | 93712-08-23 16:19 G | 35948899.92 | 35948900.18 | 35948900.44 | 0.0089 | 0.0009 |
| Neptune | 93713-08-26 09:22 G | 35949267.64 | 35949267.89 | 35949268.15 | 0.0089 | 0.0005 |
| Neptune | 93714-08-28 13:26 G | 35949634.82 | 35949635.06 | 35949635.30 | 0.0089 | 0.0028 |
| Neptune | 93715-08-31 06:43 G | 35950002.56 | 35950002.78 | 35950003.02 | 0.0089 | 0.0043 |
| Neptune | 93716-09-01 11:31 G | 35950369.83 | 35950369.98 | 35950370.17 | 0.0089 | 0.0065 |
| Jupiter | 93717-03-02 21:50 G | 35950552.23 | 35950552.41 | 35950552.59 | 0.0498 | 0.0327 |
| Neptune | 93717-09-04 02:10 G | 35950737.49 | 35950737.59 | 35950737.73 | 0.0089 | 0.0079 |
| Pluto | 93725-12-19 00:58 G | 35953765.29 | 35953765.54 | 35953765.80 | 0.0081 | 0.0005 |
| Saturn | 93726-02-23 08:24 G | 35953831.61 | 35953831.85 | 35953832.10 | 0.0260 | 0.0069 |
| Saturn | 93727-03-06 23:17 G | 35954208.29 | 35954208.47 | 35954208.67 | 0.0262 | 0.0163 |
| Jupiter | 93729-03-07 17:17 G | 35954940.00 | 35954940.22 | 35954940.44 | 0.0499 | 0.0109 |
| Mars | 93737-12-09 02:53 G | 35958138.47 | 35958138.62 | 35958138.77 | 0.1586 | 0.0946 |
| Saturn | 93740-08-28 13:41 G | 35959131.84 | 35959132.07 | 35959132.30 | 0.0301 | 0.0080 |
| Uranus | 93751-01-26 16:34 G | 35962934.98 | 35962935.19 | 35962935.41 | 0.0143 | 0.0081 |
| Uranus | 93752-01-31 12:29 G | 35963304.77 | 35963305.02 | 35963305.27 | 0.0143 | 0.0023 |
| Uranus | 93753-02-04 19:41 G | 35963675.14 | 35963675.32 | 35963675.51 | 0.0142 | 0.0099 |
| Saturn | 93755-02-18 22:34 G | 35964419.27 | 35964419.44 | 35964419.63 | 0.0259 | 0.0172 |
| Saturn | 93756-03-01 12:29 G | 35964795.78 | 35964796.02 | 35964796.27 | 0.0261 | 0.0062 |
| Jupiter | 93758-09-01 00:43 G | 35965709.29 | 35965709.53 | 35965709.76 | 0.0527 | 0.0102 |
| Saturn | 93769-08-21 23:46 G | 35969717.26 | 35969717.49 | 35969717.72 | 0.0302 | 0.0091 |
| Jupiter | 93770-09-05 20:10 G | 35970097.20 | 35970097.34 | 35970097.48 | 0.0527 | 0.0411 |
| Saturn | 93770-09-05 21:36 G | 35970097.33 | 35970097.40 | 35970097.47 | 0.0299 | 0.0284 * |
| Saturn | 93785-02-24 14:53 G | 35975382.88 | 35975383.12 | 35975383.36 | 0.0260 | 0.0041 |
| Saturn | 93786-03-08 10:48 G | 35975759.80 | 35975759.95 | 35975760.12 | 0.0263 | 0.0192 |
| Neptune | 93792-02-17 00:58 G | 35977931.49 | 35977931.54 | 35977931.64 | 0.0088 | 0.0085 |
| Neptune | 93793-02-18 16:48 G | 35978299.02 | 35978299.20 | 35978299.40 | 0.0088 | 0.0058 |

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| Uranus | 93793-07-24 14:38 G | 35978454.96 | 35978455.11 | 35978455.27 | 0.0135 | 0.0103 |
| Neptune | 93794-02-21 00:14 G | 35978666.29 | 35978666.51 | 35978666.74 | 0.0088 | 0.0049 |
| Uranus | 93794-07-29 04:19 G | 35978824.44 | 35978824.68 | 35978824.93 | 0.0135 | 0.0025 |
| Neptune | 93795-02-23 19:12 G | 35979034.06 | 35979034.30 | 35979034.56 | 0.0088 | 0.0021 |
| Uranus | 93795-08-02 05:02 G | 35979193.48 | 35979193.71 | 35979193.95 | 0.0135 | 0.0038 |
| Neptune | 93796-02-26 00:58 G | 35979401.28 | 35979401.54 | 35979401.80 | 0.0088 | 0.0012 |
| Uranus | 93796-08-05 18:58 G | 35979563.22 | 35979563.29 | 35979563.40 | 0.0136 | 0.0126 |
| Neptune | 93797-02-27 20:10 G | 35979769.08 | 35979769.34 | 35979769.60 | 0.0088 | 0.0016 |
| Neptune | 93798-03-02 02:38 G | 35980136.38 | 35980136.61 | 35980136.87 | 0.0089 | 0.0026 |
| Saturn | 93798-08-16 02:24 G | 35980303.49 | 35980303.60 | 35980303.72 | 0.0304 | 0.0262 |
| Neptune | 93799-03-04 19:41 G | 35980504.12 | 35980504.32 | 35980504.55 | 0.0089 | 0.0052 |
| Saturn | 93799-08-31 00:58 G | 35980683.32 | 35980683.54 | 35980683.77 | 0.0301 | 0.0121 |
| Jupiter | 93800-03-03 09:36 G | 35980867.76 | 35980867.90 | 35980868.05 | 0.0498 | 0.0389 |
| Neptune | 93800-03-07 06:14 G | 35980871.58 | 35980871.76 | 35980871.94 | 0.0089 | 0.0062 |
| Neptune | 93801-03-09 17:46 G | 35981239.24 | 35981239.24 | 35981239.28 | 0.0089 | 0.0089 |
| Mars | 93808-06-11 06:43 G | 35983889.61 | 35983889.78 | 35983889.96 | 0.1954 | 0.0861 |
| Jupiter | 93812-03-07 18:58 G | 35985255.05 | 35985255.29 | 35985255.54 | 0.0499 | 0.0051 |
| Saturn | 93814-02-21 07:41 G | 35985970.62 | 35985970.82 | 35985971.04 | 0.0260 | 0.0142 |
| Saturn | 93815-03-04 17:02 G | 35986346.98 | 35986347.21 | 35986347.46 | 0.0262 | 0.0090 |
| Saturn | 93828-08-24 17:45 G | 35991269.01 | 35991269.24 | 35991269.47 | 0.0302 | 0.0048 |
| Uranus | 93835-01-28 00:29 G | 35993616.30 | 35993616.52 | 35993616.78 | 0.0143 | 0.0064 |
| Uranus | 93836-02-01 21:21 G | 35993986.14 | 35993986.39 | 35993986.64 | 0.0143 | 0.0012 |
| Uranus | 93837-02-06 02:53 G | 35994356.49 | 35994356.62 | 35994356.80 | 0.0142 | 0.0115 |
| Jupiter | 93841-09-01 00:00 G | 35996024.29 | 35996024.50 | 35996024.71 | 0.0528 | 0.0177 |
| Saturn | 93843-02-16 11:02 G | 35996557.90 | 35996557.96 | 35996558.06 | 0.0259 | 0.0246 |
| Saturn | 93844-02-28 04:48 G | 35996934.46 | 35996934.70 | 35996934.94 | 0.0261 | 0.0013 |
| Saturn | 93845-03-10 23:17 G | 35997311.35 | 35997311.47 | 35997311.61 | 0.0263 | 0.0223 |
| Jupiter | 93853-09-06 01:41 G | 36000412.39 | 36000412.57 | 36000412.76 | 0.0527 | 0.0313 |
| Saturn | 93857-08-18 19:41 G | 36001855.15 | 36001855.32 | 36001855.49 | 0.0303 | 0.0216 |
| Saturn | 93858-09-02 14:38 G | 36002234.91 | 36002235.11 | 36002235.33 | 0.0301 | 0.0167 |

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| Saturn | 93873-02-22 14:09 G | 36007521.87 | 36007522.09 | 36007522.33 | 0.0260 | 0.0113 |
| Neptune | 93873-08-17 17:17 G | 36007698.07 | 36007698.22 | 36007698.42 | 0.0089 | 0.0067 |
| Saturn | 93874-03-06 01:41 G | 36007898.36 | 36007898.57 | 36007898.80 | 0.0262 | 0.0120 |
| Neptune | 93874-08-20 07:55 G | 36008065.64 | 36008065.83 | 36008066.03 | 0.0089 | 0.0056 |
| Neptune | 93875-08-22 12:57 G | 36008432.81 | 36008433.04 | 36008433.29 | 0.0089 | 0.0031 |
| Neptune | 93876-08-24 06:43 G | 36008800.53 | 36008800.78 | 36008801.03 | 0.0089 | 0.0020 |
| Uranus | 93877-07-26 01:55 G | 36009136.43 | 36009136.58 | 36009136.77 | 0.0135 | 0.0098 |
| Neptune | 93877-08-26 10:48 G | 36009167.70 | 36009167.95 | 36009168.20 | 0.0089 | 0.0007 |
| Uranus | 93878-07-30 15:21 G | 36009505.89 | 36009506.14 | 36009506.39 | 0.0135 | 0.0027 |
| Neptune | 93878-08-29 03:50 G | 36009535.41 | 36009535.66 | 36009535.92 | 0.0089 | 0.0017 |
| Uranus | 93879-08-03 16:48 G | 36009874.98 | 36009875.20 | 36009875.43 | 0.0136 | 0.0057 |
| Neptune | 93879-08-31 09:21 G | 36009902.69 | 36009902.89 | 36009903.12 | 0.0089 | 0.0044 |
| Uranus | 93880-08-07 06:57 G | 36010244.67 | 36010244.79 | 36010244.92 | 0.0136 | 0.0117 |
| Neptune | 93880-09-01 23:45 G | 36010270.28 | 36010270.49 | 36010270.70 | 0.0089 | 0.0053 |
| Pluto | 93881-06-22 12:29 G | 36010563.76 | 36010564.02 | 36010564.28 | 0.0063 | 0.0008 |
| Neptune | 93881-09-04 10:05 G | 36010637.81 | 36010637.92 | 36010638.03 | 0.0089 | 0.0079 |
| Jupiter | 93883-03-03 06:57 G | 36011182.70 | 36011182.79 | 36011182.88 | 0.0498 | 0.0463 |
| Saturn | 93887-08-27 17:31 G | 36012821.00 | 36012821.23 | 36012821.47 | 0.0301 | 0.0005 |
| Jupiter | 93895-03-07 17:02 G | 36015569.99 | 36015570.21 | 36015570.44 | 0.0498 | 0.0042 |
| Saturn | 93902-02-19 00:43 G | 36018109.41 | 36018109.53 | 36018109.68 | 0.0260 | 0.0216 |
| Saturn | 93903-03-02 18:43 G | 36018486.03 | 36018486.28 | 36018486.53 | 0.0261 | 0.0018 |
| Saturn | 93904-03-13 08:09 G | 36018862.78 | 36018862.84 | 36018862.92 | 0.0264 | 0.0253 |
| Jupiter | 93907-03-13 07:41 G | 36019957.71 | 36019957.82 | 36019957.95 | 0.0499 | 0.0428 |
| Saturn | 93916-08-21 14:24 G | 36023406.89 | 36023407.10 | 36023407.31 | 0.0303 | 0.0162 |
| Saturn | 93917-09-05 10:33 G | 36023786.78 | 36023786.94 | 36023787.12 | 0.0300 | 0.0216 |
| Uranus | 93919-01-29 09:50 G | 36024297.69 | 36024297.91 | 36024298.16 | 0.0143 | 0.0071 |
| Uranus | 93920-02-03 07:41 G | 36024667.58 | 36024667.82 | 36024668.07 | 0.0143 | 0.0033 |
| Uranus | 93921-02-07 12:57 G | 36025037.87 | 36025038.04 | 36025038.21 | 0.0142 | 0.0108 |
| Jupiter | 93924-09-01 00:29 G | 36026339.32 | 36026339.52 | 36026339.72 | 0.0527 | 0.0289 |
| Saturn | 93932-02-25 22:48 G | 36029073.22 | 36029073.45 | 36029073.70 | 0.0260 | 0.0083 |

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| Saturn | 93933-03-08 17:02 G | 36029450.01 | 36029450.21 | 36029450.41 | 0.0263 | 0.0151 |
| Jupiter | 93936-09-05 12:43 G | 36030726.81 | 36030727.03 | 36030727.24 | 0.0527 | 0.0192 |
| Mars | 93942-12-10 21:21 G | 36033014.20 | 36033014.39 | 36033014.59 | 0.1584 | 0.0087 |
| Saturn | 93946-08-30 19:12 G | 36034373.07 | 36034373.30 | 36034373.54 | 0.0301 | 0.0053 |
| Neptune | 93956-02-18 13:12 G | 36037832.00 | 36037832.05 | 36037832.11 | 0.0088 | 0.0086 |
| Neptune | 93957-02-19 18:57 G | 36038199.15 | 36038199.29 | 36038199.50 | 0.0088 | 0.0068 |
| Neptune | 93958-02-22 14:53 G | 36038566.92 | 36038567.12 | 36038567.35 | 0.0088 | 0.0048 |
| Neptune | 93959-02-24 20:24 G | 36038934.12 | 36038934.35 | 36038934.60 | 0.0088 | 0.0030 |
| Neptune | 93960-02-27 15:21 G | 36039301.88 | 36039302.14 | 36039302.41 | 0.0088 | 0.0011 |
| Saturn | 93961-02-20 15:36 G | 36039660.98 | 36039661.15 | 36039661.33 | 0.0260 | 0.0182 |
| Neptune | 93961-02-28 22:48 G | 36039669.19 | 36039669.45 | 36039669.70 | 0.0088 | 0.0006 |
| Uranus | 93961-07-27 13:55 G | 36039817.91 | 36039818.08 | 36039818.27 | 0.0135 | 0.0091 |
| Neptune | 93962-03-03 13:55 G | 36040036.83 | 36040037.08 | 36040037.35 | 0.0088 | 0.0025 |
| Saturn | 93962-03-04 03:50 G | 36040037.41 | 36040037.66 | 36040037.92 | 0.0262 | 0.0049 |
| Uranus | 93962-08-01 02:38 G | 36040187.36 | 36040187.61 | 36040187.87 | 0.0135 | 0.0014 |
| Neptune | 93963-03-06 01:41 G | 36040404.36 | 36040404.57 | 36040404.80 | 0.0089 | 0.0042 |
| Uranus | 93963-08-05 04:33 G | 36040556.47 | 36040556.69 | 36040556.93 | 0.0136 | 0.0052 |
| Neptune | 93964-03-07 12:29 G | 36040771.85 | 36040772.02 | 36040772.23 | 0.0089 | 0.0063 |
| Neptune | 93965-03-10 04:48 G | 36041139.62 | 36041139.70 | 36041139.84 | 0.0089 | 0.0080 |
| Pluto | 93971-12-23 16:33 G | 36043618.96 | 36043619.19 | 36043619.44 | 0.0081 | 0.0031 |
| Saturn | 93975-08-24 12:14 G | 36044958.79 | 36044959.01 | 36044959.23 | 0.0302 | 0.0110 |
| Saturn | 93976-09-07 10:48 G | 36045338.85 | 36045338.95 | 36045339.07 | 0.0299 | 0.0265 |
| Jupiter | 93978-03-07 20:24 G | 36045885.11 | 36045885.35 | 36045885.59 | 0.0498 | 0.0107 |
| Jupiter | 93990-03-12 03:21 G | 36050272.49 | 36050272.64 | 36050272.81 | 0.0499 | 0.0357 |
| Saturn | 93991-02-27 11:17 G | 36050624.74 | 36050624.97 | 36050625.22 | 0.0261 | 0.0052 |
| Saturn | 93992-03-10 08:09 G | 36051001.68 | 36051001.84 | 36051002.03 | 0.0263 | 0.0180 |

95TH MILLENNIUM CE

This is a list of transits of Moon in the 95th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Uranus | 94003-01-29 22:19 | G | 36054979.20 | 36054979.43 | 36054979.69 | 0.0143 | 0.0052 | |
| Uranus | 94004-02-03 20:38 | G | 36055349.13 | 36055349.36 | 36055349.62 | 0.0143 | 0.0026 | |
| Saturn | 94004-08-17 19:12 | G | 36055545.21 | 36055545.30 | 36055545.42 | 0.0303 | 0.0274 | |
| Uranus | 94005-02-08 00:00 | G | 36055719.41 | 36055719.50 | 36055719.64 | 0.0142 | 0.0129 | |
| Saturn | 94005-09-01 16:33 | G | 36055924.96 | 36055925.19 | 36055925.43 | 0.0301 | 0.0105 | |
| Jupiter | 94007-08-31 12:43 | G | 36056653.89 | 36056654.03 | 36056654.18 | 0.0528 | 0.0403 | |
| Jupiter | 94019-09-05 18:14 | G | 36061042.04 | 36061042.26 | 36061042.48 | 0.0528 | 0.0092 | |
| Saturn | 94020-02-23 01:41 | G | 36061212.36 | 36061212.57 | 36061212.77 | 0.0260 | 0.0152 | |
| Saturn | 94021-03-05 10:19 | G | 36061588.69 | 36061588.93 | 36061589.17 | 0.0262 | 0.0077 | |
| Saturn | 94034-08-26 14:24 | G | 36066510.87 | 36066511.10 | 36066511.33 | 0.0302 | 0.0060 | |
| Neptune | 94037-08-18 06:29 | G | 36067598.65 | 36067598.77 | 36067598.93 | 0.0089 | 0.0072 | |
| Neptune | 94038-08-20 11:17 | G | 36067965.80 | 36067965.97 | 36067966.18 | 0.0089 | 0.0061 | |
| Neptune | 94039-08-23 05:17 | G | 36068333.50 | 36068333.72 | 36068333.97 | 0.0089 | 0.0035 | |
| Neptune | 94040-08-24 09:21 | G | 36068700.66 | 36068700.89 | 36068701.15 | 0.0089 | 0.0024 | |
| Neptune | 94041-08-27 02:38 | G | 36069068.35 | 36069068.61 | 36069068.87 | 0.0089 | 0.0001 | |
| Neptune | 94042-08-29 09:07 | G | 36069435.64 | 36069435.88 | 36069436.13 | 0.0089 | 0.0013 | |
| Neptune | 94043-08-31 22:05 | G | 36069803.19 | 36069803.42 | 36069803.67 | 0.0089 | 0.0037 | |
| Neptune | 94044-09-02 08:53 | G | 36070170.68 | 36070170.87 | 36070171.09 | 0.0089 | 0.0050 | |
| Uranus | 94045-07-28 00:57 | G | 36070499.37 | 36070499.54 | 36070499.74 | 0.0135 | 0.0088 | |
| Neptune | 94045-09-04 16:48 | G | 36070538.07 | 36070538.20 | 36070538.36 | 0.0089 | 0.0074 | |
| Uranus | 94046-08-01 12:29 | G | 36070868.77 | 36070869.02 | 36070869.28 | 0.0135 | 0.0014 | |
| Neptune | 94046-09-07 07:55 | G | 36070905.81 | 36070905.83 | 36070905.91 | 0.0089 | 0.0087 | |

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| Uranus | 94047-08-05 15:21 G | 36071237.94 | 36071238.14 | 36071238.36 | 0.0136 | 0.0068 |
| Uranus | 94048-08-09 03:50 G | 36071607.61 | 36071607.66 | 36071607.76 | 0.0136 | 0.0130 |
| Saturn | 94049-02-17 06:57 G | 36071799.76 | 36071799.79 | 36071799.84 | 0.0259 | 0.0255 |
| Saturn | 94050-03-01 01:12 G | 36072176.30 | 36072176.55 | 36072176.79 | 0.0261 | 0.0023 |
| Saturn | 94051-03-12 17:45 G | 36072553.10 | 36072553.24 | 36072553.40 | 0.0263 | 0.0209 |
| Jupiter | 94061-03-06 16:19 G | 36076199.96 | 36076200.18 | 36076200.39 | 0.0498 | 0.0182 |
| Saturn | 94063-08-20 13:12 G | 36077096.89 | 36077097.05 | 36077097.22 | 0.0303 | 0.0225 |
| Saturn | 94064-09-03 08:53 G | 36077476.67 | 36077476.87 | 36077477.10 | 0.0300 | 0.0156 |
| Jupiter | 94073-03-11 10:19 G | 36080587.74 | 36080587.93 | 36080588.13 | 0.0498 | 0.0278 |
| Saturn | 94079-02-24 04:33 G | 36082763.48 | 36082763.69 | 36082763.93 | 0.0260 | 0.0126 |
| Saturn | 94080-03-06 18:00 G | 36083140.02 | 36083140.25 | 36083140.47 | 0.0262 | 0.0105 |
| Uranus | 94086-01-25 07:41 G | 36085290.79 | 36085290.82 | 36085290.89 | 0.0143 | 0.0140 |
| Uranus | 94087-01-30 09:07 G | 36085660.64 | 36085660.88 | 36085661.14 | 0.0143 | 0.0056 |
| Uranus | 94088-02-04 08:53 G | 36086030.63 | 36086030.87 | 36086031.10 | 0.0143 | 0.0047 |
| Uranus | 94089-02-08 11:31 G | 36086400.86 | 36086400.98 | 36086401.13 | 0.0142 | 0.0122 |
| Jupiter | 94090-08-30 18:14 G | 36086969.18 | 36086969.26 | 36086969.35 | 0.0528 | 0.0489 |
| Mars | 94092-06-11 20:53 G | 36087620.19 | 36087620.37 | 36087620.55 | 0.1956 | 0.0649 |
| Saturn | 94093-08-28 13:12 G | 36088062.81 | 36088063.05 | 36088063.29 | 0.0302 | 0.0013 |
| Jupiter | 94102-09-05 10:33 G | 36091356.70 | 36091356.94 | 36091357.18 | 0.0527 | 0.0009 |
| Saturn | 94108-02-20 18:29 G | 36093351.17 | 36093351.27 | 36093351.39 | 0.0259 | 0.0230 |
| Saturn | 94109-03-03 09:21 G | 36093727.64 | 36093727.89 | 36093728.14 | 0.0261 | 0.0004 |
| Saturn | 94110-03-14 20:24 G | 36094104.24 | 36094104.35 | 36094104.48 | 0.0263 | 0.0232 |
| Jupiter | 94114-09-10 09:07 G | 36095744.76 | 36095744.88 | 36095744.99 | 0.0527 | 0.0443 |
| Neptune | 94120-02-18 14:09 G | 36097732.06 | 36097732.09 | 36097732.19 | 0.0088 | 0.0086 |
| Neptune | 94121-02-20 10:05 G | 36098099.82 | 36098099.92 | 36098100.08 | 0.0088 | 0.0076 |
| Neptune | 94122-02-22 16:05 G | 36098466.97 | 36098467.17 | 36098467.40 | 0.0088 | 0.0049 |
| Saturn | 94122-08-23 03:07 G | 36098648.44 | 36098648.63 | 36098648.83 | 0.0303 | 0.0181 |
| Neptune | 94123-02-25 10:19 G | 36098834.71 | 36098834.93 | 36098835.19 | 0.0088 | 0.0040 |
| Saturn | 94123-09-07 01:41 G | 36099028.40 | 36099028.57 | 36099028.76 | 0.0300 | 0.0199 |
| Neptune | 94124-02-27 18:57 G | 36099202.05 | 36099202.29 | 36099202.55 | 0.0088 | 0.0013 |

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| Neptune | 94125-03-01 09:50 G | 36099569.64 | 36099569.91 | 36099570.18 | 0.0088 | 0.0003 |
| Neptune | 94126-03-03 22:48 G | 36099937.21 | 36099937.45 | 36099937.70 | 0.0089 | 0.0025 |
| Neptune | 94127-03-06 07:55 G | 36100304.60 | 36100304.83 | 36100305.10 | 0.0089 | 0.0035 |
| Pluto | 94127-06-26 17:17 G | 36100416.98 | 36100417.22 | 36100417.49 | 0.0063 | 0.0008 |
| Neptune | 94128-03-08 01:12 G | 36100672.38 | 36100672.55 | 36100672.74 | 0.0089 | 0.0062 |
| Neptune | 94129-03-10 06:57 G | 36101039.66 | 36101039.79 | 36101039.98 | 0.0089 | 0.0071 |
| Uranus | 94129-07-29 11:31 G | 36101180.80 | 36101180.98 | 36101181.19 | 0.0135 | 0.0081 |
| Uranus | 94130-08-02 22:19 G | 36101550.17 | 36101550.43 | 36101550.69 | 0.0135 | 0.0006 |
| Uranus | 94131-08-07 02:24 G | 36101919.38 | 36101919.60 | 36101919.81 | 0.0136 | 0.0063 |
| Saturn | 94138-02-26 08:53 G | 36104314.64 | 36104314.87 | 36104315.10 | 0.0260 | 0.0103 |
| Saturn | 94139-03-10 03:07 G | 36104691.42 | 36104691.63 | 36104691.84 | 0.0262 | 0.0128 |
| Jupiter | 94144-03-07 02:24 G | 36106515.39 | 36106515.60 | 36106515.81 | 0.0498 | 0.0244 |
| Mars | 94147-12-10 15:21 G | 36107888.98 | 36107889.14 | 36107889.29 | 0.1582 | 0.0884 |
| Saturn | 94152-08-31 02:38 G | 36109614.37 | 36109614.61 | 36109614.86 | 0.0302 | 0.0026 |
| Jupiter | 94156-03-11 05:45 G | 36110902.53 | 36110902.74 | 36110902.96 | 0.0499 | 0.0209 |
| Saturn | 94167-02-22 00:00 G | 36114902.37 | 36114902.50 | 36114902.67 | 0.0259 | 0.0206 |
| Saturn | 94168-03-04 08:38 G | 36115278.60 | 36115278.86 | 36115279.11 | 0.0261 | 0.0021 |
| Saturn | 94169-03-15 21:21 G | 36115655.34 | 36115655.39 | 36115655.47 | 0.0263 | 0.0254 |
| Uranus | 94170-01-26 18:00 G | 36115972.21 | 36115972.25 | 36115972.35 | 0.0143 | 0.0137 |
| Uranus | 94171-01-31 18:14 G | 36116342.00 | 36116342.26 | 36116342.52 | 0.0143 | 0.0041 |
| Uranus | 94172-02-05 18:43 G | 36116712.05 | 36116712.28 | 36116712.53 | 0.0143 | 0.0038 |
| Uranus | 94173-02-09 19:55 G | 36117082.31 | 36117082.33 | 36117082.39 | 0.0142 | 0.0141 |
| Saturn | 94181-08-24 14:24 G | 36120199.89 | 36120200.10 | 36120200.30 | 0.0303 | 0.0146 |
| Saturn | 94182-09-08 15:50 G | 36120580.03 | 36120580.16 | 36120580.32 | 0.0300 | 0.0234 |
| Jupiter | 94185-09-04 14:09 G | 36121671.87 | 36121672.09 | 36121672.31 | 0.0527 | 0.0100 |
| Saturn | 94197-02-27 15:07 G | 36125865.90 | 36125866.13 | 36125866.35 | 0.0260 | 0.0084 |
| Jupiter | 94197-09-09 13:12 G | 36126059.89 | 36126060.05 | 36126060.22 | 0.0527 | 0.0370 |
| Saturn | 94198-03-11 08:09 G | 36126242.64 | 36126242.84 | 36126243.05 | 0.0262 | 0.0145 |
| Neptune | 94201-08-19 10:33 G | 36127498.87 | 36127498.94 | 36127499.06 | 0.0089 | 0.0083 |
| Neptune | 94202-08-22 04:33 G | 36127866.51 | 36127866.69 | 36127866.90 | 0.0089 | 0.0058 |

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| Neptune | 94203-08-24 08:53 G | 36128233.67 | 36128233.87 | 36128234.09 | 0.0089 | 0.0046 |
| Neptune | 94204-08-26 00:57 G | 36128601.29 | 36128601.54 | 36128601.80 | 0.0089 | 0.0022 |
| Neptune | 94205-08-28 08:09 G | 36128968.59 | 36128968.84 | 36128969.08 | 0.0089 | 0.0010 |
| Neptune | 94206-08-30 19:41 G | 36129336.07 | 36129336.32 | 36129336.59 | 0.0089 | 0.0014 |
| Neptune | 94207-09-02 08:09 G | 36129703.61 | 36129703.84 | 36129704.08 | 0.0089 | 0.0027 |
| Neptune | 94208-09-03 15:36 G | 36130070.94 | 36130071.15 | 36130071.37 | 0.0089 | 0.0051 |
| Neptune | 94209-09-06 07:55 G | 36130438.67 | 36130438.83 | 36130439.02 | 0.0089 | 0.0063 |
| Neptune | 94210-09-08 12:29 G | 36130805.98 | 36130806.02 | 36130806.07 | 0.0089 | 0.0087 |
| Saturn | 94211-09-03 06:29 G | 36131165.53 | 36131165.77 | 36131166.02 | 0.0302 | 0.0060 |
| Uranus | 94213-07-30 21:36 G | 36131862.22 | 36131862.40 | 36131862.61 | 0.0135 | 0.0080 |
| Uranus | 94214-08-04 06:43 G | 36132231.52 | 36132231.78 | 36132232.04 | 0.0135 | 0.0004 |
| Uranus | 94215-08-08 11:31 G | 36132600.80 | 36132600.98 | 36132601.20 | 0.0136 | 0.0076 |
| Pluto | 94217-12-27 04:19 G | 36133472.58 | 36133472.68 | 36133472.85 | 0.0081 | 0.0070 |
| Saturn | 94226-02-23 22:05 G | 36136453.24 | 36136453.42 | 36136453.60 | 0.0259 | 0.0186 |
| Mars | 94226-12-13 19:12 G | 36136746.12 | 36136746.30 | 36136746.49 | 0.1583 | 0.0693 |
| Saturn | 94227-03-07 06:00 G | 36136829.51 | 36136829.75 | 36136830.00 | 0.0260 | 0.0037 |
| Jupiter | 94227-03-08 00:00 G | 36136830.32 | 36136830.50 | 36136830.69 | 0.0499 | 0.0304 |
| Jupiter | 94239-03-12 21:21 G | 36141218.18 | 36141218.39 | 36141218.61 | 0.0499 | 0.0163 |
| Saturn | 94240-08-26 23:31 G | 36141751.26 | 36141751.48 | 36141751.70 | 0.0303 | 0.0113 |
| Saturn | 94241-09-11 00:14 G | 36142131.40 | 36142131.51 | 36142131.62 | 0.0300 | 0.0264 |
| Uranus | 94254-01-28 00:43 G | 36146653.47 | 36146653.53 | 36146653.63 | 0.0143 | 0.0135 |
| Uranus | 94255-02-01 23:02 G | 36147023.22 | 36147023.46 | 36147023.72 | 0.0143 | 0.0047 |
| Uranus | 94256-02-07 01:41 G | 36147393.35 | 36147393.57 | 36147393.80 | 0.0143 | 0.0054 |
| Saturn | 94256-03-01 17:17 G | 36147416.98 | 36147417.22 | 36147417.46 | 0.0260 | 0.0067 |
| Uranus | 94257-02-11 01:41 G | 36147763.47 | 36147763.57 | 36147763.69 | 0.0142 | 0.0129 |
| Saturn | 94257-03-13 03:21 G | 36147793.45 | 36147793.64 | 36147793.86 | 0.0262 | 0.0161 |
| Jupiter | 94268-09-04 21:50 G | 36151987.18 | 36151987.41 | 36151987.64 | 0.0527 | 0.0154 |
| Saturn | 94269-08-20 04:05 G | 36152336.61 | 36152336.67 | 36152336.75 | 0.0304 | 0.0290 |
| Saturn | 94270-09-04 05:17 G | 36152716.49 | 36152716.72 | 36152716.95 | 0.0302 | 0.0089 |
| Jupiter | 94280-09-09 18:29 G | 36156375.10 | 36156375.27 | 36156375.46 | 0.0526 | 0.0320 |

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| Neptune | 94285-02-20 12:29 G | 36157999.92 | 36158000.02 | 36158000.16 | 0.0088 | 0.0078 |
| Saturn | 94285-02-24 16:19 G | 36158004.00 | 36158004.18 | 36158004.38 | 0.0258 | 0.0169 |
| Neptune | 94286-02-23 06:14 G | 36158367.58 | 36158367.76 | 36158367.99 | 0.0088 | 0.0057 |
| Saturn | 94286-03-08 06:57 G | 36158380.56 | 36158380.79 | 36158381.03 | 0.0260 | 0.0053 |
| Neptune | 94287-02-25 16:05 G | 36158734.96 | 36158735.17 | 36158735.40 | 0.0088 | 0.0041 |
| Neptune | 94288-02-28 05:02 G | 36159102.46 | 36159102.71 | 36159102.99 | 0.0088 | 0.0020 |
| Neptune | 94289-03-01 19:26 G | 36159470.06 | 36159470.31 | 36159470.56 | 0.0088 | 0.0003 |
| Neptune | 94290-03-04 03:50 G | 36159837.41 | 36159837.66 | 36159837.93 | 0.0088 | 0.0018 |
| Neptune | 94291-03-06 22:19 G | 36160205.19 | 36160205.43 | 36160205.67 | 0.0089 | 0.0034 |
| Neptune | 94292-03-08 03:50 G | 36160572.46 | 36160572.66 | 36160572.88 | 0.0089 | 0.0053 |
| Neptune | 94293-03-10 23:17 G | 36160940.34 | 36160940.47 | 36160940.65 | 0.0089 | 0.0071 |
| Uranus | 94297-07-31 07:55 G | 36162543.64 | 36162543.83 | 36162544.05 | 0.0135 | 0.0071 |
| Uranus | 94298-08-04 16:05 G | 36162912.91 | 36162913.17 | 36162913.43 | 0.0135 | 0.0001 |
| Uranus | 94299-08-08 22:33 G | 36163282.24 | 36163282.44 | 36163282.65 | 0.0136 | 0.0073 |
| Saturn | 94299-08-29 00:29 G | 36163302.28 | 36163302.52 | 36163302.75 | 0.0304 | 0.0085 |
| Saturn | 94300-09-12 21:36 G | 36163682.34 | 36163682.40 | 36163682.48 | 0.0300 | 0.0286 |
| Jupiter | 94310-03-08 18:14 G | 36167146.09 | 36167146.26 | 36167146.43 | 0.0498 | 0.0328 |
| Saturn | 94315-03-04 11:45 G | 36168967.73 | 36168967.99 | 36168968.24 | 0.0260 | 0.0051 |
| Saturn | 94316-03-14 19:41 G | 36169344.14 | 36169344.32 | 36169344.51 | 0.0262 | 0.0173 |
| Jupiter | 94322-03-13 04:05 G | 36171533.43 | 36171533.67 | 36171533.91 | 0.0499 | 0.0122 |
| Saturn | 94328-08-22 00:57 G | 36173887.43 | 36173887.54 | 36173887.66 | 0.0304 | 0.0266 |
| Saturn | 94329-09-06 05:17 G | 36174267.51 | 36174267.72 | 36174267.94 | 0.0302 | 0.0112 |
| Uranus | 94338-01-29 07:26 G | 36177334.73 | 36177334.81 | 36177334.93 | 0.0143 | 0.0131 |
| Uranus | 94339-02-03 04:05 G | 36177704.43 | 36177704.67 | 36177704.94 | 0.0143 | 0.0040 |
| Uranus | 94340-02-08 07:55 G | 36178074.61 | 36178074.83 | 36178075.08 | 0.0143 | 0.0043 |
| Saturn | 94344-02-27 13:55 G | 36179554.90 | 36179555.08 | 36179555.28 | 0.0258 | 0.0153 |
| Saturn | 94345-03-10 06:29 G | 36179931.54 | 36179931.77 | 36179932.01 | 0.0260 | 0.0067 |
| Jupiter | 94351-09-06 04:33 G | 36182302.49 | 36182302.69 | 36182302.89 | 0.0527 | 0.0216 |
| Mars | 94352-12-11 10:48 G | 36182764.93 | 36182764.95 | 36182764.98 | 0.1581 | 0.1568 |
| Saturn | 94358-08-30 14:24 G | 36184852.86 | 36184853.10 | 36184853.35 | 0.0304 | 0.0064 |

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| Jupiter | 94363-09-11 08:38 G | 36186690.66 | 36186690.86 | 36186691.06 | 0.0527 | 0.0262 |
| Neptune | 94365-08-20 04:05 G | 36187399.66 | 36187399.67 | 36187399.72 | 0.0089 | 0.0088 |
| Neptune | 94366-08-22 08:38 G | 36187766.70 | 36187766.86 | 36187767.06 | 0.0089 | 0.0063 |
| Neptune | 94367-08-25 00:14 G | 36188134.32 | 36188134.51 | 36188134.74 | 0.0089 | 0.0052 |
| Neptune | 94368-08-26 08:53 G | 36188501.64 | 36188501.87 | 36188502.11 | 0.0089 | 0.0026 |
| Neptune | 94369-08-28 19:55 G | 36188869.07 | 36188869.33 | 36188869.59 | 0.0089 | 0.0015 |
| Neptune | 94370-08-31 08:53 G | 36189236.63 | 36189236.87 | 36189237.12 | 0.0089 | 0.0011 |
| Neptune | 94371-09-02 14:53 G | 36189603.87 | 36189604.12 | 36189604.38 | 0.0089 | 0.0021 |
| Pluto | 94372-06-28 16:33 G | 36189904.09 | 36189904.19 | 36189904.36 | 0.0063 | 0.0054 |
| Neptune | 94372-09-04 07:26 G | 36189971.61 | 36189971.81 | 36189972.03 | 0.0089 | 0.0047 |
| Saturn | 94373-02-21 21:50 G | 36190142.38 | 36190142.41 | 36190142.46 | 0.0258 | 0.0254 |
| Pluto | 94373-06-30 04:33 G | 36190270.46 | 36190270.69 | 36190270.94 | 0.0063 | 0.0017 |
| Neptune | 94373-09-06 11:31 G | 36190338.79 | 36190338.98 | 36190339.18 | 0.0089 | 0.0057 |
| Saturn | 94374-03-05 02:38 G | 36190518.36 | 36190518.61 | 36190518.86 | 0.0259 | 0.0039 |
| Neptune | 94374-09-09 05:17 G | 36190706.64 | 36190706.72 | 36190706.81 | 0.0089 | 0.0083 |
| Saturn | 94375-03-16 16:48 G | 36190895.03 | 36190895.20 | 36190895.36 | 0.0262 | 0.0190 |
| Uranus | 94381-08-01 18:14 G | 36193225.07 | 36193225.26 | 36193225.47 | 0.0135 | 0.0074 |
| Uranus | 94382-08-06 00:43 G | 36193594.27 | 36193594.53 | 36193594.79 | 0.0135 | 0.0007 |
| Uranus | 94383-08-10 08:38 G | 36193963.68 | 36193963.86 | 36193964.06 | 0.0136 | 0.0083 |
| Saturn | 94387-08-23 22:33 G | 36195438.31 | 36195438.44 | 36195438.58 | 0.0304 | 0.0248 |
| Saturn | 94388-09-07 02:38 G | 36195818.39 | 36195818.61 | 36195818.83 | 0.0302 | 0.0131 |
| Jupiter | 94393-03-07 21:50 G | 36197461.25 | 36197461.41 | 36197461.58 | 0.0499 | 0.0370 |
| Saturn | 94403-02-28 13:12 G | 36201105.86 | 36201106.05 | 36201106.27 | 0.0258 | 0.0141 |
| Saturn | 94404-03-11 00:00 G | 36201482.26 | 36201482.50 | 36201482.75 | 0.0260 | 0.0082 |
| Jupiter | 94405-03-12 13:26 G | 36201848.84 | 36201849.06 | 36201849.29 | 0.0499 | 0.0077 |
| Jupiter | 94417-03-17 07:55 G | 36206236.77 | 36206236.83 | 36206236.91 | 0.0499 | 0.0475 |
| Saturn | 94417-08-31 04:05 G | 36206403.43 | 36206403.67 | 36206403.91 | 0.0304 | 0.0046 |
| Uranus | 94422-01-29 15:21 G | 36208016.05 | 36208016.14 | 36208016.23 | 0.0143 | 0.0132 |
| Uranus | 94423-02-03 10:48 G | 36208385.70 | 36208385.95 | 36208386.20 | 0.0143 | 0.0040 |
| Uranus | 94424-02-08 15:50 G | 36208755.94 | 36208756.16 | 36208756.40 | 0.0143 | 0.0058 |

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| Uranus | 94425-02-12 12:57 G | 36209125.96 | 36209126.04 | 36209126.14 | 0.0142 | 0.0134 |
| Mars | 94431-12-14 07:26 G | 36211621.64 | 36211621.81 | 36211621.99 | 0.1582 | 0.0123 |
| Saturn | 94432-02-23 11:17 G | 36211692.90 | 36211692.97 | 36211693.07 | 0.0258 | 0.0243 |
| Saturn | 94433-03-05 21:50 G | 36212069.17 | 36212069.41 | 36212069.65 | 0.0259 | 0.0024 |
| Saturn | 94434-03-17 15:36 G | 36212446.00 | 36212446.15 | 36212446.30 | 0.0262 | 0.0207 |
| Jupiter | 94434-09-05 21:07 G | 36212618.18 | 36212618.38 | 36212618.58 | 0.0527 | 0.0269 |
| Saturn | 94446-08-24 15:50 G | 36216989.01 | 36216989.16 | 36216989.33 | 0.0304 | 0.0230 |
| Jupiter | 94446-09-10 15:07 G | 36217005.92 | 36217006.13 | 36217006.34 | 0.0527 | 0.0231 |
| Saturn | 94447-09-08 16:05 G | 36217368.96 | 36217369.17 | 36217369.40 | 0.0302 | 0.0145 |
| Neptune | 94449-02-21 01:12 G | 36217900.44 | 36217900.55 | 36217900.71 | 0.0088 | 0.0076 |
| Neptune | 94450-02-23 12:00 G | 36218267.86 | 36218268.00 | 36218268.19 | 0.0088 | 0.0067 |
| Neptune | 94451-02-26 00:14 G | 36218635.28 | 36218635.51 | 36218635.77 | 0.0088 | 0.0039 |
| Neptune | 94452-02-28 16:19 G | 36219002.95 | 36219003.18 | 36219003.43 | 0.0088 | 0.0029 |
| Neptune | 94453-03-02 00:14 G | 36219370.25 | 36219370.51 | 36219370.78 | 0.0088 | 0.0003 |
| Neptune | 94454-03-04 19:12 G | 36219738.04 | 36219738.30 | 36219738.56 | 0.0088 | 0.0007 |
| Neptune | 94455-03-07 00:29 G | 36220105.29 | 36220105.52 | 36220105.77 | 0.0088 | 0.0035 |
| Neptune | 94456-03-08 19:55 G | 36220473.12 | 36220473.33 | 36220473.57 | 0.0089 | 0.0044 |
| Neptune | 94457-03-11 02:24 G | 36220840.47 | 36220840.60 | 36220840.76 | 0.0089 | 0.0072 |
| Neptune | 94458-03-13 18:43 G | 36221208.20 | 36221208.28 | 36221208.42 | 0.0089 | 0.0081 |
| Saturn | 94462-03-01 08:24 G | 36222656.63 | 36222656.85 | 36222657.07 | 0.0258 | 0.0127 |
| Pluto | 94462-12-28 08:38 G | 36222958.80 | 36222958.86 | 36222958.95 | 0.0081 | 0.0078 |
| Saturn | 94463-03-12 14:09 G | 36223032.85 | 36223033.09 | 36223033.33 | 0.0260 | 0.0097 |
| Uranus | 94465-08-02 04:33 G | 36223906.49 | 36223906.69 | 36223906.92 | 0.0135 | 0.0062 |
| Uranus | 94466-08-06 10:19 G | 36224275.67 | 36224275.93 | 36224276.19 | 0.0135 | 0.0008 |
| Uranus | 94467-08-10 19:55 G | 36224645.14 | 36224645.33 | 36224645.52 | 0.0136 | 0.0084 |
| Jupiter | 94476-03-07 12:29 G | 36227776.88 | 36227777.02 | 36227777.16 | 0.0499 | 0.0390 |
| Saturn | 94476-08-31 23:17 G | 36227954.24 | 36227954.47 | 36227954.71 | 0.0304 | 0.0034 |
| Jupiter | 94488-03-12 06:29 G | 36232164.53 | 36232164.77 | 36232165.01 | 0.0499 | 0.0050 |
| Saturn | 94491-02-24 06:57 G | 36233243.69 | 36233243.79 | 36233243.90 | 0.0258 | 0.0230 |
| Saturn | 94492-03-06 21:36 G | 36233620.16 | 36233620.40 | 36233620.65 | 0.0259 | 0.0011 |

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| Saturn | 94493-03-18 10:48 G | 36233996.82 | 36233996.95 | 36233997.08 | 0.0262 | 0.0224 |
| Jupiter | 94500-03-17 14:53 G | 36236552.02 | 36236552.12 | 36236552.24 | 0.0499 | 0.0440 |
| Saturn | 94505-08-26 05:02 G | 36238539.54 | 36238539.71 | 36238539.89 | 0.0304 | 0.0214 |
| Uranus | 94506-01-31 01:55 G | 36238697.46 | 36238697.58 | 36238697.73 | 0.0143 | 0.0121 |
| Saturn | 94506-09-10 04:33 G | 36238919.49 | 36238919.69 | 36238919.91 | 0.0302 | 0.0158 |
| Uranus | 94507-02-04 20:38 G | 36239067.11 | 36239067.36 | 36239067.62 | 0.0143 | 0.0033 |
| Uranus | 94508-02-10 02:53 G | 36239437.39 | 36239437.62 | 36239437.85 | 0.0142 | 0.0052 |
| Mars | 94510-12-17 01:26 G | 36240478.51 | 36240478.56 | 36240478.62 | 0.1582 | 0.1502 |
| Jupiter | 94517-09-06 05:17 G | 36242933.54 | 36242933.72 | 36242933.92 | 0.0527 | 0.0300 |
| Saturn | 94521-03-02 22:48 G | 36244207.23 | 36244207.45 | 36244207.69 | 0.0258 | 0.0114 |
| Saturn | 94522-03-14 09:07 G | 36244583.67 | 36244583.88 | 36244584.10 | 0.0260 | 0.0115 |
| Neptune | 94529-08-20 09:36 G | 36247299.86 | 36247299.90 | 36247299.95 | 0.0089 | 0.0088 |
| Jupiter | 94529-09-11 08:53 G | 36247321.66 | 36247321.87 | 36247322.08 | 0.0526 | 0.0191 |
| Neptune | 94530-08-23 00:00 G | 36247667.37 | 36247667.50 | 36247667.67 | 0.0089 | 0.0072 |
| Neptune | 94531-08-25 09:36 G | 36248034.70 | 36248034.90 | 36248035.10 | 0.0089 | 0.0050 |
| Neptune | 94532-08-26 18:29 G | 36248402.05 | 36248402.27 | 36248402.53 | 0.0089 | 0.0035 |
| Neptune | 94533-08-29 08:53 G | 36248769.64 | 36248769.87 | 36248770.13 | 0.0089 | 0.0014 |
| Neptune | 94534-08-31 14:53 G | 36249136.86 | 36249137.12 | 36249137.38 | 0.0089 | 0.0001 |
| Neptune | 94535-09-03 07:55 G | 36249504.59 | 36249504.83 | 36249505.09 | 0.0089 | 0.0023 |
| Saturn | 94535-09-03 21:21 G | 36249505.15 | 36249505.39 | 36249505.63 | 0.0304 | 0.0016 |
| Neptune | 94536-09-04 11:31 G | 36249871.77 | 36249871.98 | 36249872.23 | 0.0089 | 0.0037 |
| Neptune | 94537-09-07 04:48 G | 36250239.53 | 36250239.70 | 36250239.92 | 0.0089 | 0.0060 |
| Neptune | 94538-09-09 10:33 G | 36250606.83 | 36250606.94 | 36250607.10 | 0.0089 | 0.0074 |
| Uranus | 94548-07-30 03:50 G | 36254218.61 | 36254218.66 | 36254218.76 | 0.0135 | 0.0130 |
| Uranus | 94549-08-03 14:53 G | 36254587.91 | 36254588.12 | 36254588.34 | 0.0135 | 0.0066 |
| Saturn | 94550-02-26 08:09 G | 36254794.72 | 36254794.84 | 36254794.99 | 0.0258 | 0.0215 |
| Uranus | 94550-08-07 18:57 G | 36254957.04 | 36254957.29 | 36254957.55 | 0.0136 | 0.0018 |
| Saturn | 94551-03-09 19:55 G | 36255171.08 | 36255171.33 | 36255171.59 | 0.0259 | 0.0009 |
| Uranus | 94551-08-12 05:45 G | 36255326.58 | 36255326.74 | 36255326.93 | 0.0136 | 0.0092 |
| Saturn | 94552-03-20 03:36 G | 36255547.57 | 36255547.65 | 36255547.74 | 0.0262 | 0.0246 |

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| Jupiter | 94559-03-09 03:07 G | 36258092.50 | 36258092.63 | 36258092.76 | 0.0498 | 0.0418 |
| Saturn | 94564-08-26 22:19 G | 36260090.25 | 36260090.43 | 36260090.62 | 0.0304 | 0.0194 |
| Saturn | 94565-09-11 01:26 G | 36260470.38 | 36260470.56 | 36260470.76 | 0.0302 | 0.0177 |
| Jupiter | 94571-03-13 06:43 G | 36262479.55 | 36262479.78 | 36262480.01 | 0.0499 | 0.0013 |
| Saturn | 94580-03-03 19:55 G | 36265758.10 | 36265758.33 | 36265758.56 | 0.0259 | 0.0097 |
| Saturn | 94581-03-15 11:31 G | 36266134.79 | 36266134.98 | 36266135.20 | 0.0260 | 0.0137 |
| Jupiter | 94583-03-18 03:50 G | 36266867.51 | 36266867.66 | 36266867.81 | 0.0499 | 0.0374 |
| Uranus | 94590-01-31 13:41 G | 36269378.96 | 36269379.07 | 36269379.22 | 0.0143 | 0.0122 |
| Uranus | 94591-02-05 07:55 G | 36269748.59 | 36269748.83 | 36269749.10 | 0.0143 | 0.0027 |
| Uranus | 94592-02-10 14:53 G | 36270118.91 | 36270119.12 | 36270119.36 | 0.0142 | 0.0069 |
| Saturn | 94594-09-04 17:45 G | 36271055.99 | 36271056.24 | 36271056.49 | 0.0304 | 0.0008 |
| Jupiter | 94600-09-06 18:29 G | 36273249.12 | 36273249.27 | 36273249.44 | 0.0527 | 0.0367 |
| Saturn | 94609-02-28 09:07 G | 36276345.73 | 36276345.88 | 36276346.06 | 0.0258 | 0.0195 |
| Saturn | 94610-03-11 15:07 G | 36276721.87 | 36276722.13 | 36276722.38 | 0.0260 | 0.0029 |
| Jupiter | 94612-09-11 10:05 G | 36277636.69 | 36277636.92 | 36277637.16 | 0.0527 | 0.0130 |
| Neptune | 94613-02-22 10:19 G | 36277800.85 | 36277800.93 | 36277801.04 | 0.0088 | 0.0082 |
| Neptune | 94614-02-24 20:38 G | 36278168.21 | 36278168.36 | 36278168.55 | 0.0088 | 0.0069 |
| Neptune | 94615-02-27 13:26 G | 36278535.85 | 36278536.06 | 36278536.28 | 0.0088 | 0.0046 |
| Neptune | 94616-02-29 20:09 G | 36278903.10 | 36278903.34 | 36278903.59 | 0.0088 | 0.0033 |
| Neptune | 94617-03-03 15:36 G | 36279270.90 | 36279271.15 | 36279271.41 | 0.0088 | 0.0010 |
| Neptune | 94618-03-05 21:21 G | 36279638.13 | 36279638.39 | 36279638.65 | 0.0088 | 0.0005 |
| Pluto | 94618-07-02 21:50 G | 36279757.22 | 36279757.41 | 36279757.62 | 0.0063 | 0.0038 |
| Neptune | 94619-03-08 16:19 G | 36280005.93 | 36280006.18 | 36280006.44 | 0.0088 | 0.0028 |
| Pluto | 94619-07-04 14:38 G | 36280123.89 | 36280124.11 | 36280124.34 | 0.0063 | 0.0031 |
| Neptune | 94620-03-09 23:31 G | 36280373.28 | 36280373.48 | 36280373.72 | 0.0088 | 0.0044 |
| Neptune | 94621-03-12 15:50 G | 36280740.99 | 36280741.16 | 36280741.36 | 0.0089 | 0.0064 |
| Neptune | 94622-03-15 03:07 G | 36281108.55 | 36281108.63 | 36281108.77 | 0.0089 | 0.0080 |
| Saturn | 94623-08-30 02:24 G | 36281641.41 | 36281641.60 | 36281641.80 | 0.0304 | 0.0168 |
| Saturn | 94624-09-13 06:57 G | 36282021.62 | 36282021.79 | 36282021.97 | 0.0301 | 0.0200 |
| Uranus | 94633-08-05 00:57 G | 36285269.32 | 36285269.54 | 36285269.78 | 0.0135 | 0.0052 |

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| Uranus | 94634-08-09 04:19 G | 36285638.42 | 36285638.68 | 36285638.94 | 0.0136 | 0.0015 |
| Uranus | 94635-08-13 16:05 G | 36286008.02 | 36286008.17 | 36286008.37 | 0.0136 | 0.0096 |
| Mars | 94636-12-14 11:02 G | 36286496.79 | 36286496.96 | 36286497.13 | 0.1581 | 0.0855 |
| Saturn | 94639-03-07 00:57 G | 36287309.32 | 36287309.54 | 36287309.78 | 0.0259 | 0.0074 |
| Saturn | 94640-03-17 15:50 G | 36287685.97 | 36287686.16 | 36287686.37 | 0.0261 | 0.0161 |
| Jupiter | 94642-03-09 00:57 G | 36288407.51 | 36288407.54 | 36288407.59 | 0.0498 | 0.0491 |
| Saturn | 94653-09-06 17:02 G | 36292606.96 | 36292607.21 | 36292607.46 | 0.0303 | 0.0033 |
| Jupiter | 94654-03-13 23:02 G | 36292795.22 | 36292795.46 | 36292795.69 | 0.0499 | 0.0065 |
| Jupiter | 94666-03-18 05:45 G | 36297182.57 | 36297182.74 | 36297182.93 | 0.0499 | 0.0322 |
| Saturn | 94668-03-01 08:24 G | 36297896.67 | 36297896.85 | 36297897.06 | 0.0258 | 0.0172 |
| Saturn | 94669-03-12 15:50 G | 36298272.92 | 36298273.16 | 36298273.41 | 0.0260 | 0.0055 |
| Uranus | 94674-02-02 01:26 G | 36300060.40 | 36300060.56 | 36300060.74 | 0.0143 | 0.0107 |
| Uranus | 94675-02-06 19:41 G | 36300430.06 | 36300430.32 | 36300430.57 | 0.0143 | 0.0021 |
| Uranus | 94676-02-12 02:53 G | 36300800.41 | 36300800.62 | 36300800.85 | 0.0142 | 0.0067 |
| Saturn | 94682-08-31 13:41 G | 36303192.86 | 36303193.07 | 36303193.29 | 0.0304 | 0.0135 |
| Jupiter | 94683-09-06 18:57 G | 36303564.16 | 36303564.29 | 36303564.43 | 0.0527 | 0.0430 |
| Saturn | 94683-09-15 14:53 G | 36303572.98 | 36303573.12 | 36303573.29 | 0.0301 | 0.0233 |
| Neptune | 94693-08-20 22:48 G | 36307200.44 | 36307200.45 | 36307200.52 | 0.0089 | 0.0088 |
| Neptune | 94694-08-23 09:36 G | 36307567.81 | 36307567.90 | 36307568.04 | 0.0089 | 0.0079 |
| Neptune | 94695-08-25 19:12 G | 36307935.09 | 36307935.30 | 36307935.51 | 0.0089 | 0.0051 |
| Jupiter | 94695-09-11 21:07 G | 36307952.16 | 36307952.38 | 36307952.60 | 0.0527 | 0.0086 |
| Neptune | 94696-08-27 10:05 G | 36308302.72 | 36308302.92 | 36308303.15 | 0.0089 | 0.0043 |
| Neptune | 94697-08-29 15:21 G | 36308669.89 | 36308670.14 | 36308670.39 | 0.0089 | 0.0015 |
| Saturn | 94698-03-08 08:09 G | 36308860.59 | 36308860.84 | 36308861.08 | 0.0259 | 0.0048 |
| Neptune | 94698-09-01 08:53 G | 36309037.62 | 36309037.87 | 36309038.12 | 0.0089 | 0.0006 |
| Saturn | 94699-03-19 17:02 G | 36309237.05 | 36309237.21 | 36309237.39 | 0.0261 | 0.0191 |
| Neptune | 94699-09-03 12:29 G | 36309404.79 | 36309405.02 | 36309405.28 | 0.0089 | 0.0022 |
| Neptune | 94700-09-06 05:02 G | 36309772.48 | 36309772.71 | 36309772.97 | 0.0089 | 0.0031 |
| Neptune | 94701-09-08 11:02 G | 36310139.79 | 36310139.96 | 36310140.17 | 0.0089 | 0.0058 |
| Neptune | 94702-09-10 23:45 G | 36310507.34 | 36310507.49 | 36310507.69 | 0.0089 | 0.0067 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 94709-01-01 21:21 G | 36312812.17 | 36312812.39 | 36312812.65 | 0.0081 | 0.0038 |
| Saturn | 94711-08-26 00:00 G | 36313778.48 | 36313778.50 | 36313778.52 | 0.0305 | 0.0303 |
| Saturn | 94712-09-09 02:38 G | 36314158.38 | 36314158.61 | 36314158.84 | 0.0303 | 0.0069 |
| Mars | 94715-12-18 18:29 G | 36315354.12 | 36315354.27 | 36315354.42 | 0.1581 | 0.1044 |
| Uranus | 94716-08-01 21:36 G | 36315581.30 | 36315581.40 | 36315581.52 | 0.0135 | 0.0121 |
| Uranus | 94717-08-06 10:33 G | 36315950.72 | 36315950.94 | 36315951.16 | 0.0135 | 0.0060 |
| Uranus | 94718-08-10 12:29 G | 36316319.78 | 36316320.02 | 36316320.28 | 0.0135 | 0.0027 |
| Uranus | 94719-08-15 01:41 G | 36316689.41 | 36316689.57 | 36316689.74 | 0.0136 | 0.0098 |
| Saturn | 94727-03-04 11:02 G | 36319447.77 | 36319447.96 | 36319448.18 | 0.0259 | 0.0148 |
| Saturn | 94728-03-15 01:41 G | 36319824.35 | 36319824.57 | 36319824.80 | 0.0260 | 0.0086 |
| Jupiter | 94737-03-13 20:09 G | 36323110.11 | 36323110.34 | 36323110.57 | 0.0498 | 0.0136 |
| Mars | 94739-06-19 14:24 G | 36323937.89 | 36323938.10 | 36323938.31 | 0.1958 | 0.0117 |
| Saturn | 94741-09-03 03:36 G | 36324744.42 | 36324744.65 | 36324744.89 | 0.0303 | 0.0096 |
| Saturn | 94742-09-18 00:57 G | 36325124.44 | 36325124.54 | 36325124.67 | 0.0301 | 0.0269 |
| Jupiter | 94749-03-18 11:17 G | 36327497.77 | 36327497.97 | 36327498.17 | 0.0499 | 0.0237 |
| Saturn | 94756-02-28 04:33 G | 36330035.62 | 36330035.69 | 36330035.78 | 0.0259 | 0.0244 |
| Saturn | 94757-03-10 13:55 G | 36330411.82 | 36330412.08 | 36330412.34 | 0.0260 | 0.0019 |
| Uranus | 94758-02-03 09:50 G | 36330741.77 | 36330741.91 | 36330742.08 | 0.0143 | 0.0113 |
| Saturn | 94758-03-21 21:36 G | 36330788.29 | 36330788.40 | 36330788.54 | 0.0262 | 0.0225 |
| Uranus | 94759-02-08 04:05 G | 36331111.41 | 36331111.67 | 36331111.93 | 0.0143 | 0.0014 |
| Uranus | 94760-02-13 12:00 G | 36331481.79 | 36331482.00 | 36331482.22 | 0.0142 | 0.0079 |
| Jupiter | 94766-09-06 23:17 G | 36333879.43 | 36333879.47 | 36333879.51 | 0.0527 | 0.0518 |
| Saturn | 94770-08-27 18:00 G | 36335330.14 | 36335330.25 | 36335330.37 | 0.0304 | 0.0263 |
| Saturn | 94771-09-11 22:19 G | 36335710.21 | 36335710.43 | 36335710.65 | 0.0302 | 0.0109 |
| Neptune | 94778-02-25 10:05 G | 36338068.78 | 36338068.92 | 36338069.11 | 0.0088 | 0.0068 |
| Jupiter | 94778-09-11 20:09 G | 36338267.10 | 36338267.34 | 36338267.58 | 0.0527 | 0.0013 |
| Neptune | 94779-02-27 16:19 G | 36338436.00 | 36338436.18 | 36338436.41 | 0.0088 | 0.0056 |
| Neptune | 94780-03-01 12:14 G | 36338803.78 | 36338804.01 | 36338804.27 | 0.0088 | 0.0030 |
| Neptune | 94781-03-03 18:14 G | 36339171.02 | 36339171.26 | 36339171.52 | 0.0088 | 0.0019 |
| Neptune | 94782-03-06 12:43 G | 36339538.77 | 36339539.03 | 36339539.30 | 0.0088 | 0.0008 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 94783-03-08 21:36 G | 36339906.15 | 36339906.40 | 36339906.65 | 0.0088 | 0.0018 |
| Neptune | 94784-03-10 11:31 G | 36340273.76 | 36340273.98 | 36340274.23 | 0.0088 | 0.0044 |
| Neptune | 94785-03-13 00:14 G | 36340641.33 | 36340641.51 | 36340641.73 | 0.0088 | 0.0055 |
| Saturn | 94786-03-05 21:36 G | 36340999.19 | 36340999.40 | 36340999.62 | 0.0259 | 0.0120 |
| Neptune | 94786-03-15 09:50 G | 36341008.83 | 36341008.91 | 36341009.05 | 0.0089 | 0.0081 |
| Saturn | 94787-03-17 15:07 G | 36341375.91 | 36341376.13 | 36341376.35 | 0.0261 | 0.0116 |
| Jupiter | 94790-09-16 10:48 G | 36342654.92 | 36342654.95 | 36342654.98 | 0.0527 | 0.0520 |
| Uranus | 94800-08-02 05:45 G | 36346262.72 | 36346262.74 | 36346262.80 | 0.0135 | 0.0133 |
| Saturn | 94800-09-04 18:29 G | 36346296.03 | 36346296.27 | 36346296.52 | 0.0303 | 0.0054 |
| Uranus | 94801-08-06 19:55 G | 36346632.10 | 36346632.33 | 36346632.57 | 0.0135 | 0.0043 |
| Uranus | 94802-08-10 21:07 G | 36347001.13 | 36347001.38 | 36347001.64 | 0.0135 | 0.0021 |
| Uranus | 94803-08-15 10:48 G | 36347370.81 | 36347370.95 | 36347371.13 | 0.0136 | 0.0105 |
| Saturn | 94815-03-01 13:26 G | 36351586.93 | 36351587.06 | 36351587.21 | 0.0259 | 0.0216 |
| Saturn | 94816-03-11 20:09 G | 36351963.08 | 36351963.34 | 36351963.59 | 0.0260 | 0.0010 |
| Saturn | 94817-03-23 10:19 G | 36352339.89 | 36352339.93 | 36352339.98 | 0.0262 | 0.0256 |
| Jupiter | 94820-03-13 00:14 G | 36353425.31 | 36353425.51 | 36353425.71 | 0.0498 | 0.0228 |
| Saturn | 94829-08-29 20:09 G | 36356882.18 | 36356882.34 | 36356882.51 | 0.0304 | 0.0216 |
| Saturn | 94830-09-13 23:02 G | 36357262.26 | 36357262.46 | 36357262.67 | 0.0302 | 0.0154 |
| Jupiter | 94832-03-17 09:21 G | 36357812.66 | 36357812.89 | 36357813.12 | 0.0499 | 0.0163 |
| Mars | 94841-12-14 22:19 G | 36361372.40 | 36361372.43 | 36361372.45 | 0.1581 | 0.1559 |
| Uranus | 94842-02-03 16:05 G | 36361423.00 | 36361423.17 | 36361423.37 | 0.0143 | 0.0100 |
| Uranus | 94843-02-08 10:48 G | 36361792.70 | 36361792.95 | 36361793.21 | 0.0143 | 0.0016 |
| Uranus | 94844-02-13 18:29 G | 36362163.07 | 36362163.27 | 36362163.50 | 0.0142 | 0.0075 |
| Saturn | 94845-03-07 13:12 G | 36362550.83 | 36362551.05 | 36362551.29 | 0.0259 | 0.0091 |
| Saturn | 94846-03-19 02:24 G | 36362927.41 | 36362927.60 | 36362927.82 | 0.0261 | 0.0147 |
| Neptune | 94858-08-23 18:00 G | 36367468.16 | 36367468.25 | 36367468.40 | 0.0089 | 0.0080 |
| Neptune | 94859-08-26 10:33 G | 36367835.76 | 36367835.94 | 36367836.12 | 0.0089 | 0.0061 |
| Saturn | 94859-09-07 15:07 G | 36367847.89 | 36367848.13 | 36367848.37 | 0.0303 | 0.0007 |
| Neptune | 94860-08-27 14:38 G | 36368202.91 | 36368203.11 | 36368203.35 | 0.0089 | 0.0043 |
| Neptune | 94861-08-30 08:38 G | 36368570.63 | 36368570.86 | 36368571.12 | 0.0089 | 0.0025 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 94861-09-10 12:43 G | 36368581.81 | 36368582.03 | 36368582.25 | 0.0527 | 0.0116 |
| Neptune | 94862-09-01 13:12 G | 36368937.81 | 36368938.05 | 36368938.31 | 0.0089 | 0.0005 |
| Neptune | 94863-09-04 05:31 G | 36369305.47 | 36369305.73 | 36369305.99 | 0.0089 | 0.0012 |
| Pluto | 94864-07-05 09:07 G | 36369610.68 | 36369610.88 | 36369611.12 | 0.0063 | 0.0029 |
| Neptune | 94864-09-05 12:43 G | 36369672.81 | 36369673.03 | 36369673.27 | 0.0089 | 0.0032 |
| Pluto | 94865-07-06 15:50 G | 36369976.97 | 36369977.16 | 36369977.37 | 0.0063 | 0.0041 |
| Neptune | 94865-09-08 00:57 G | 36370040.33 | 36370040.54 | 36370040.77 | 0.0089 | 0.0048 |
| Neptune | 94866-09-10 12:43 G | 36370407.89 | 36370408.03 | 36370408.20 | 0.0089 | 0.0068 |
| Neptune | 94867-09-12 19:12 G | 36370775.25 | 36370775.30 | 36370775.41 | 0.0089 | 0.0085 |
| Jupiter | 94873-09-15 17:31 G | 36372970.10 | 36372970.23 | 36372970.37 | 0.0527 | 0.0433 |
| Saturn | 94874-03-02 20:09 G | 36373138.17 | 36373138.34 | 36373138.52 | 0.0259 | 0.0188 |
| Saturn | 94875-03-14 07:12 G | 36373514.56 | 36373514.80 | 36373515.04 | 0.0260 | 0.0041 |
| Uranus | 94884-08-02 15:07 G | 36376944.02 | 36376944.13 | 36376944.28 | 0.0135 | 0.0115 |
| Uranus | 94885-08-07 05:17 G | 36377313.50 | 36377313.72 | 36377313.96 | 0.0135 | 0.0053 |
| Uranus | 94886-08-11 06:00 G | 36377682.51 | 36377682.75 | 36377683.00 | 0.0135 | 0.0036 |
| Uranus | 94887-08-15 19:55 G | 36378052.19 | 36378052.33 | 36378052.51 | 0.0136 | 0.0105 |
| Saturn | 94888-08-31 21:50 G | 36378434.20 | 36378434.41 | 36378434.61 | 0.0304 | 0.0164 |
| Saturn | 94889-09-15 20:53 G | 36378814.19 | 36378814.37 | 36378814.56 | 0.0302 | 0.0202 |
| Jupiter | 94903-03-13 20:53 G | 36383740.17 | 36383740.37 | 36383740.56 | 0.0498 | 0.0302 |
| Saturn | 94904-03-10 01:55 G | 36384102.33 | 36384102.58 | 36384102.83 | 0.0259 | 0.0061 |
| Saturn | 94905-03-21 10:19 G | 36384478.75 | 36384478.93 | 36384479.12 | 0.0261 | 0.0180 |
| Jupiter | 94915-03-18 11:17 G | 36388127.75 | 36388127.97 | 36388128.20 | 0.0498 | 0.0086 |
| Saturn | 94918-09-10 18:00 G | 36389400.02 | 36389400.25 | 36389400.49 | 0.0302 | 0.0048 |
| Mars | 94920-12-17 15:50 G | 36390228.98 | 36390229.16 | 36390229.34 | 0.1581 | 0.0108 |
| Uranus | 94926-02-04 22:19 G | 36392104.27 | 36392104.43 | 36392104.60 | 0.0143 | 0.0110 |
| Uranus | 94927-02-09 17:02 G | 36392473.96 | 36392474.21 | 36392474.47 | 0.0143 | 0.0009 |
| Uranus | 94928-02-15 00:29 G | 36392844.32 | 36392844.52 | 36392844.75 | 0.0142 | 0.0082 |
| Saturn | 94933-03-05 06:14 G | 36394689.58 | 36394689.76 | 36394689.96 | 0.0259 | 0.0160 |
| Saturn | 94934-03-16 23:02 G | 36395066.23 | 36395066.46 | 36395066.69 | 0.0261 | 0.0074 |
| Neptune | 94942-02-25 13:41 G | 36397968.94 | 36397969.07 | 36397969.25 | 0.0088 | 0.0070 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 94943-02-28 09:21 G | 36398336.72 | 36398336.89 | 36398337.11 | 0.0088 | 0.0059 |
| Neptune | 94944-03-01 15:50 G | 36398703.93 | 36398704.16 | 36398704.40 | 0.0088 | 0.0034 |
| Jupiter | 94944-09-10 15:21 G | 36398896.93 | 36398897.14 | 36398897.36 | 0.0527 | 0.0213 |
| Neptune | 94945-03-04 08:53 G | 36399071.62 | 36399071.87 | 36399072.14 | 0.0088 | 0.0023 |
| Neptune | 94946-03-06 18:29 G | 36399439.02 | 36399439.27 | 36399439.53 | 0.0088 | 0.0002 |
| Neptune | 94947-03-09 07:55 G | 36399806.56 | 36399806.83 | 36399807.09 | 0.0088 | 0.0014 |
| Saturn | 94947-09-04 19:26 G | 36399986.08 | 36399986.31 | 36399986.55 | 0.0304 | 0.0114 |
| Neptune | 94948-03-10 22:05 G | 36400174.21 | 36400174.42 | 36400174.66 | 0.0088 | 0.0039 |
| Saturn | 94948-09-18 16:19 G | 36400366.05 | 36400366.18 | 36400366.33 | 0.0301 | 0.0247 |
| Neptune | 94949-03-13 06:29 G | 36400541.58 | 36400541.77 | 36400542.02 | 0.0088 | 0.0052 |
| Neptune | 94950-03-16 01:12 G | 36400909.44 | 36400909.55 | 36400909.70 | 0.0089 | 0.0076 |
| Neptune | 94951-03-18 06:57 G | 36401276.78 | 36401276.79 | 36401276.84 | 0.0089 | 0.0088 |
| Pluto | 94955-01-05 01:55 G | 36402665.32 | 36402665.58 | 36402665.85 | 0.0081 | 0.0013 |
| Jupiter | 94956-09-15 05:02 G | 36403284.53 | 36403284.71 | 36403284.90 | 0.0527 | 0.0319 |
| Saturn | 94962-03-01 01:26 G | 36405277.51 | 36405277.56 | 36405277.62 | 0.0258 | 0.0252 |
| Saturn | 94963-03-12 08:38 G | 36405653.60 | 36405653.86 | 36405654.12 | 0.0260 | 0.0030 |
| Saturn | 94964-03-22 18:43 G | 36406030.14 | 36406030.28 | 36406030.43 | 0.0262 | 0.0212 |
| Uranus | 94968-08-03 23:45 G | 36407625.42 | 36407625.49 | 36407625.60 | 0.0135 | 0.0126 |
| Uranus | 94969-08-08 14:24 G | 36407994.87 | 36407995.10 | 36407995.35 | 0.0135 | 0.0036 |
| Uranus | 94970-08-12 14:53 G | 36408363.88 | 36408364.12 | 36408364.37 | 0.0135 | 0.0028 |
| Uranus | 94971-08-17 05:17 G | 36408733.61 | 36408733.72 | 36408733.88 | 0.0136 | 0.0115 |
| Saturn | 94976-08-28 15:21 G | 36410572.05 | 36410572.14 | 36410572.25 | 0.0304 | 0.0274 |
| Saturn | 94977-09-12 20:09 G | 36410952.12 | 36410952.34 | 36410952.57 | 0.0302 | 0.0095 |
| Jupiter | 94986-03-12 22:33 G | 36414055.30 | 36414055.44 | 36414055.59 | 0.0498 | 0.0386 |
| Saturn | 94992-03-06 18:57 G | 36416241.09 | 36416241.29 | 36416241.50 | 0.0259 | 0.0130 |
| Saturn | 94993-03-18 11:02 G | 36416617.74 | 36416617.96 | 36416618.19 | 0.0261 | 0.0104 |
| Jupiter | 94998-03-17 11:45 G | 36418442.75 | 36418442.99 | 36418443.24 | 0.0498 | 0.0008 |

96TH MILLENNIUM CE

This is a list of transits of Moon in the 96th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 95006-09-07 13:12 | G | 36421537.82 | 36421538.05 | 36421538.30 | 0.0303 | 0.0070 | |
| Saturn | 95007-09-22 12:00 | G | 36421917.97 | 36421918.00 | 36421918.07 | 0.0301 | 0.0294 | |
| Uranus | 95010-02-06 06:00 | G | 36422785.56 | 36422785.75 | 36422785.96 | 0.0143 | 0.0093 | |
| Jupiter | 95010-03-22 18:57 | G | 36422830.20 | 36422830.29 | 36422830.39 | 0.0499 | 0.0448 | |
| Uranus | 95011-02-11 02:09 | G | 36423155.33 | 36423155.59 | 36423155.84 | 0.0143 | 0.0012 | |
| Uranus | 95012-02-16 08:24 | G | 36423525.66 | 36423525.85 | 36423526.08 | 0.0142 | 0.0084 | |
| Saturn | 95021-03-03 07:26 | G | 36426828.70 | 36426828.81 | 36426828.94 | 0.0258 | 0.0227 | |
| Saturn | 95022-03-14 14:09 | G | 36427204.84 | 36427205.09 | 36427205.34 | 0.0260 | 0.0003 | |
| Neptune | 95022-08-25 11:17 | G | 36427368.86 | 36427368.97 | 36427369.10 | 0.0089 | 0.0079 | |
| Saturn | 95023-03-26 06:29 | G | 36427581.69 | 36427581.77 | 36427581.86 | 0.0262 | 0.0243 | |
| Mars | 95023-06-20 20:53 | G | 36427668.25 | 36427668.37 | 36427668.49 | 0.1958 | 0.1452 | |
| Neptune | 95023-08-27 15:36 | G | 36427735.99 | 36427736.15 | 36427736.31 | 0.0089 | 0.0070 | |
| Neptune | 95024-08-29 09:07 | G | 36428103.66 | 36428103.88 | 36428104.11 | 0.0089 | 0.0042 | |
| Neptune | 95025-08-31 13:41 | G | 36428470.86 | 36428471.07 | 36428471.32 | 0.0089 | 0.0033 | |
| Neptune | 95026-09-03 05:31 | G | 36428838.47 | 36428838.73 | 36428838.99 | 0.0089 | 0.0005 | |
| Neptune | 95027-09-05 13:41 | G | 36429205.83 | 36429206.07 | 36429206.32 | 0.0089 | 0.0004 | |
| Jupiter | 95027-09-11 04:19 | G | 36429211.51 | 36429211.68 | 36429211.86 | 0.0527 | 0.0324 | |
| Neptune | 95028-09-07 00:14 | G | 36429573.27 | 36429573.51 | 36429573.77 | 0.0089 | 0.0031 | |
| Neptune | 95029-09-09 12:57 | G | 36429940.84 | 36429941.04 | 36429941.28 | 0.0089 | 0.0041 | |
| Neptune | 95030-09-11 19:26 | G | 36430308.16 | 36430308.31 | 36430308.49 | 0.0089 | 0.0068 | |
| Neptune | 95031-09-14 12:14 | G | 36430675.91 | 36430676.01 | 36430676.16 | 0.0089 | 0.0077 | |
| Saturn | 95035-09-01 14:24 | G | 36432123.96 | 36432124.10 | 36432124.26 | 0.0304 | 0.0233 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 95036-09-15 16:48 G | 36432503.99 | 36432504.20 | 36432504.42 | 0.0302 | 0.0139 |
| Jupiter | 95039-09-16 08:53 G | 36433599.67 | 36433599.87 | 36433600.08 | 0.0527 | 0.0220 |
| Saturn | 95051-03-10 05:31 G | 36437792.52 | 36437792.73 | 36437792.96 | 0.0259 | 0.0107 |
| Saturn | 95052-03-20 15:07 G | 36438168.92 | 36438169.13 | 36438169.36 | 0.0261 | 0.0132 |
| Uranus | 95052-08-05 09:36 G | 36438306.78 | 36438306.90 | 36438307.07 | 0.0135 | 0.0109 |
| Uranus | 95053-08-10 00:00 G | 36438676.27 | 36438676.50 | 36438676.74 | 0.0135 | 0.0046 |
| Uranus | 95054-08-14 00:14 G | 36439045.29 | 36439045.51 | 36439045.76 | 0.0136 | 0.0046 |
| Uranus | 95055-08-18 14:53 G | 36439414.99 | 36439415.12 | 36439415.27 | 0.0136 | 0.0112 |
| Saturn | 95065-09-09 04:19 G | 36443089.45 | 36443089.68 | 36443089.92 | 0.0303 | 0.0031 |
| Jupiter | 95069-03-13 00:14 G | 36444370.42 | 36444370.51 | 36444370.60 | 0.0498 | 0.0462 |
| Saturn | 95080-03-04 08:38 G | 36448379.71 | 36448379.86 | 36448380.01 | 0.0258 | 0.0207 |
| Saturn | 95081-03-15 21:07 G | 36448756.14 | 36448756.38 | 36448756.62 | 0.0259 | 0.0023 |
| Jupiter | 95081-03-17 10:05 G | 36448757.70 | 36448757.92 | 36448758.15 | 0.0499 | 0.0067 |
| Jupiter | 95093-03-22 06:43 G | 36453145.64 | 36453145.78 | 36453145.93 | 0.0499 | 0.0392 |
| Uranus | 95094-02-06 16:33 G | 36453467.01 | 36453467.19 | 36453467.39 | 0.0143 | 0.0101 |
| Saturn | 95094-09-03 03:50 G | 36453675.48 | 36453675.66 | 36453675.85 | 0.0304 | 0.0197 |
| Uranus | 95095-02-11 12:57 G | 36453836.79 | 36453837.04 | 36453837.30 | 0.0143 | 0.0004 |
| Saturn | 95095-09-18 03:07 G | 36454055.44 | 36454055.63 | 36454055.85 | 0.0302 | 0.0172 |
| Uranus | 95096-02-16 18:29 G | 36454207.08 | 36454207.27 | 36454207.49 | 0.0142 | 0.0090 |
| Neptune | 95106-02-27 05:31 G | 36457869.65 | 36457869.73 | 36457869.87 | 0.0088 | 0.0080 |
| Neptune | 95107-03-01 12:43 G | 36458236.86 | 36458237.03 | 36458237.24 | 0.0088 | 0.0058 |
| Neptune | 95108-03-03 05:17 G | 36458604.51 | 36458604.72 | 36458604.97 | 0.0088 | 0.0045 |
| Neptune | 95109-03-05 16:33 G | 36458971.96 | 36458972.19 | 36458972.45 | 0.0088 | 0.0022 |
| Neptune | 95110-03-08 04:33 G | 36459339.42 | 36459339.69 | 36459339.96 | 0.0088 | 0.0008 |
| Saturn | 95110-03-12 08:24 G | 36459343.61 | 36459343.85 | 36459344.10 | 0.0259 | 0.0083 |
| Pluto | 95110-07-10 18:43 G | 36459464.04 | 36459464.28 | 36459464.54 | 0.0063 | 0.0017 |
| Jupiter | 95110-09-11 13:26 G | 36459526.92 | 36459527.06 | 36459527.22 | 0.0528 | 0.0393 |
| Neptune | 95111-03-10 19:55 G | 36459707.08 | 36459707.33 | 36459707.58 | 0.0088 | 0.0016 |
| Saturn | 95111-03-23 14:09 G | 36459719.91 | 36459720.09 | 36459720.31 | 0.0261 | 0.0158 |
| Pluto | 95111-07-12 00:43 G | 36459830.41 | 36459830.53 | 36459830.66 | 0.0063 | 0.0054 |

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| Neptune | 95112-03-12 02:53 G | 36460074.39 | 36460074.62 | 36460074.89 | 0.0088 | 0.0030 |
| Neptune | 95113-03-14 21:50 G | 36460442.23 | 36460442.41 | 36460442.63 | 0.0088 | 0.0054 |
| Neptune | 95114-03-17 03:36 G | 36460809.49 | 36460809.65 | 36460809.84 | 0.0088 | 0.0065 |
| Jupiter | 95122-09-16 06:29 G | 36463914.54 | 36463914.77 | 36463915.00 | 0.0527 | 0.0149 |
| Saturn | 95124-09-11 18:43 G | 36464641.05 | 36464641.28 | 36464641.51 | 0.0303 | 0.0001 |
| Mars | 95125-12-19 10:48 G | 36465104.78 | 36465104.95 | 36465105.13 | 0.1581 | 0.0641 |
| Uranus | 95136-08-06 18:43 G | 36468988.16 | 36468988.28 | 36468988.40 | 0.0135 | 0.0118 |
| Uranus | 95137-08-11 08:38 G | 36469357.61 | 36469357.86 | 36469358.11 | 0.0135 | 0.0027 |
| Uranus | 95138-08-15 09:07 G | 36469726.65 | 36469726.88 | 36469727.13 | 0.0136 | 0.0037 |
| Saturn | 95139-03-07 11:45 G | 36469930.83 | 36469930.99 | 36469931.17 | 0.0258 | 0.0187 |
| Uranus | 95139-08-19 23:31 G | 36470096.41 | 36470096.48 | 36470096.60 | 0.0136 | 0.0125 |
| Saturn | 95140-03-18 03:07 G | 36470307.39 | 36470307.63 | 36470307.87 | 0.0259 | 0.0045 |
| Saturn | 95153-09-05 05:31 G | 36475226.54 | 36475226.73 | 36475226.95 | 0.0304 | 0.0171 |
| Saturn | 95154-09-20 05:45 G | 36475606.57 | 36475606.74 | 36475606.94 | 0.0302 | 0.0197 |
| Jupiter | 95164-03-18 00:29 G | 36479073.29 | 36479073.52 | 36479073.75 | 0.0498 | 0.0115 |
| Saturn | 95169-03-13 03:36 G | 36480894.40 | 36480894.65 | 36480894.90 | 0.0259 | 0.0063 |
| Saturn | 95170-03-24 14:24 G | 36481270.94 | 36481271.10 | 36481271.29 | 0.0261 | 0.0179 |
| Jupiter | 95176-03-22 06:00 G | 36483460.58 | 36483460.75 | 36483460.93 | 0.0499 | 0.0338 |
| Uranus | 95178-02-08 04:19 G | 36484148.47 | 36484148.68 | 36484148.91 | 0.0143 | 0.0079 |
| Uranus | 95179-02-13 02:09 G | 36484518.34 | 36484518.59 | 36484518.84 | 0.0143 | 0.0002 |
| Uranus | 95180-02-18 06:29 G | 36484888.60 | 36484888.77 | 36484888.98 | 0.0142 | 0.0099 |
| Saturn | 95183-09-14 01:41 G | 36486192.33 | 36486192.57 | 36486192.81 | 0.0303 | 0.0025 |
| Neptune | 95186-08-25 15:50 G | 36487269.11 | 36487269.16 | 36487269.25 | 0.0089 | 0.0085 |
| Neptune | 95187-08-28 09:21 G | 36487636.75 | 36487636.89 | 36487637.07 | 0.0089 | 0.0069 |
| Neptune | 95188-08-29 14:24 G | 36488003.91 | 36488004.10 | 36488004.32 | 0.0089 | 0.0050 |
| Neptune | 95189-09-01 05:02 G | 36488371.47 | 36488371.71 | 36488371.96 | 0.0089 | 0.0033 |
| Neptune | 95190-09-03 14:09 G | 36488738.86 | 36488739.09 | 36488739.35 | 0.0089 | 0.0014 |
| Neptune | 95191-09-06 00:29 G | 36489106.26 | 36489106.52 | 36489106.78 | 0.0089 | 0.0003 |
| Neptune | 95192-09-07 14:38 G | 36489473.88 | 36489474.11 | 36489474.36 | 0.0089 | 0.0024 |
| Neptune | 95193-09-09 20:09 G | 36489841.12 | 36489841.34 | 36489841.58 | 0.0089 | 0.0040 |

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| Jupiter | 95193-09-10 16:05 G | 36489842.04 | 36489842.17 | 36489842.31 | 0.0527 | 0.0434 |
| Neptune | 95194-09-12 13:41 G | 36490208.89 | 36490209.07 | 36490209.26 | 0.0089 | 0.0059 |
| Neptune | 95195-09-14 17:31 G | 36490576.11 | 36490576.23 | 36490576.36 | 0.0089 | 0.0076 |
| Saturn | 95198-03-08 15:50 G | 36491481.98 | 36491482.16 | 36491482.34 | 0.0258 | 0.0167 |
| Saturn | 95199-03-20 02:24 G | 36491858.36 | 36491858.60 | 36491858.85 | 0.0259 | 0.0066 |
| Pluto | 95201-01-08 18:14 G | 36492519.03 | 36492519.26 | 36492519.52 | 0.0081 | 0.0024 |
| Mars | 95204-12-21 10:33 G | 36493961.79 | 36493961.94 | 36493962.10 | 0.1581 | 0.0822 |
| Jupiter | 95205-09-15 15:50 G | 36494229.94 | 36494230.16 | 36494230.38 | 0.0527 | 0.0087 |
| Saturn | 95212-09-06 05:17 G | 36496777.52 | 36496777.72 | 36496777.93 | 0.0305 | 0.0148 |
| Saturn | 95213-09-21 09:07 G | 36497157.73 | 36497157.88 | 36497158.05 | 0.0302 | 0.0221 |
| Uranus | 95220-08-07 04:33 G | 36499669.55 | 36499669.69 | 36499669.87 | 0.0135 | 0.0102 |
| Uranus | 95221-08-11 17:45 G | 36500039.00 | 36500039.24 | 36500039.49 | 0.0135 | 0.0038 |
| Uranus | 95222-08-15 18:57 G | 36500408.07 | 36500408.29 | 36500408.52 | 0.0136 | 0.0054 |
| Uranus | 95223-08-20 08:24 G | 36500777.75 | 36500777.85 | 36500777.99 | 0.0136 | 0.0119 |
| Saturn | 95228-03-14 00:29 G | 36502445.28 | 36502445.52 | 36502445.77 | 0.0259 | 0.0043 |
| Saturn | 95229-03-25 16:05 G | 36502822.03 | 36502822.17 | 36502822.33 | 0.0261 | 0.0201 |
| Saturn | 95242-09-14 20:53 G | 36507743.13 | 36507743.37 | 36507743.62 | 0.0303 | 0.0047 |
| Jupiter | 95247-03-17 22:33 G | 36509388.22 | 36509388.44 | 36509388.66 | 0.0499 | 0.0174 |
| Saturn | 95257-03-09 12:57 G | 36513032.83 | 36513033.04 | 36513033.25 | 0.0258 | 0.0148 |
| Saturn | 95258-03-20 17:17 G | 36513408.99 | 36513409.22 | 36513409.47 | 0.0259 | 0.0090 |
| Jupiter | 95259-03-22 20:53 G | 36513776.19 | 36513776.37 | 36513776.56 | 0.0499 | 0.0297 |
| Uranus | 95262-02-08 14:38 G | 36514829.91 | 36514830.11 | 36514830.33 | 0.0143 | 0.0088 |
| Uranus | 95263-02-13 13:26 G | 36515199.81 | 36515200.06 | 36515200.30 | 0.0143 | 0.0018 |
| Uranus | 95264-02-18 16:48 G | 36515570.03 | 36515570.20 | 36515570.39 | 0.0142 | 0.0103 |
| Neptune | 95270-02-26 10:05 G | 36517769.91 | 36517769.92 | 36517769.99 | 0.0088 | 0.0088 |
| Neptune | 95271-03-01 01:12 G | 36518137.38 | 36518137.55 | 36518137.77 | 0.0088 | 0.0061 |
| Saturn | 95271-09-08 04:33 G | 36518328.48 | 36518328.69 | 36518328.90 | 0.0305 | 0.0127 |
| Neptune | 95272-03-02 13:26 G | 36518504.87 | 36518505.06 | 36518505.28 | 0.0088 | 0.0051 |
| Saturn | 95272-09-22 10:05 G | 36518708.78 | 36518708.92 | 36518709.07 | 0.0302 | 0.0240 |
| Neptune | 95273-03-04 23:45 G | 36518872.25 | 36518872.49 | 36518872.77 | 0.0088 | 0.0024 |

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| Neptune | 95274-03-07 16:48 G | 36519239.96 | 36519240.20 | 36519240.46 | 0.0088 | 0.0014 |
| Neptune | 95275-03-09 23:45 G | 36519607.23 | 36519607.49 | 36519607.75 | 0.0088 | 0.0014 |
| Neptune | 95276-03-11 18:57 G | 36519975.05 | 36519975.29 | 36519975.56 | 0.0088 | 0.0024 |
| Jupiter | 95276-09-10 03:07 G | 36520157.56 | 36520157.63 | 36520157.72 | 0.0527 | 0.0488 |
| Neptune | 95277-03-14 00:29 G | 36520342.32 | 36520342.52 | 36520342.75 | 0.0088 | 0.0050 |
| Neptune | 95278-03-16 19:26 G | 36520710.14 | 36520710.31 | 36520710.53 | 0.0088 | 0.0061 |
| Neptune | 95279-03-19 02:53 G | 36521077.59 | 36521077.62 | 36521077.70 | 0.0089 | 0.0087 |
| Saturn | 95286-03-04 11:17 G | 36523619.92 | 36523619.97 | 36523620.03 | 0.0257 | 0.0251 |
| Saturn | 95287-03-16 00:43 G | 36523996.29 | 36523996.53 | 36523996.78 | 0.0259 | 0.0021 |
| Saturn | 95288-03-26 13:12 G | 36524372.92 | 36524373.05 | 36524373.19 | 0.0260 | 0.0219 |
| Jupiter | 95288-09-15 00:29 G | 36524545.28 | 36524545.52 | 36524545.75 | 0.0527 | 0.0037 |
| Saturn | 95300-09-01 09:21 G | 36528913.88 | 36528913.89 | 36528913.91 | 0.0305 | 0.0304 |
| Jupiter | 95300-09-20 22:33 G | 36528933.39 | 36528933.44 | 36528933.51 | 0.0526 | 0.0508 |
| Saturn | 95301-09-16 11:17 G | 36529293.73 | 36529293.97 | 36529294.21 | 0.0303 | 0.0064 |
| Uranus | 95304-08-08 12:43 G | 36530350.91 | 36530351.03 | 36530351.19 | 0.0135 | 0.0110 |
| Uranus | 95305-08-13 00:57 G | 36530720.29 | 36530720.54 | 36530720.80 | 0.0135 | 0.0021 |
| Uranus | 95306-08-17 03:21 G | 36531089.41 | 36531089.64 | 36531089.87 | 0.0136 | 0.0043 |
| Uranus | 95307-08-21 16:05 G | 36531459.14 | 36531459.17 | 36531459.24 | 0.0136 | 0.0133 |
| Saturn | 95316-03-11 03:21 G | 36534583.43 | 36534583.64 | 36534583.88 | 0.0258 | 0.0128 |
| Saturn | 95317-03-22 10:48 G | 36534959.73 | 36534959.95 | 36534960.17 | 0.0259 | 0.0111 |
| Jupiter | 95330-03-18 19:26 G | 36539704.10 | 36539704.31 | 36539704.53 | 0.0499 | 0.0196 |
| Saturn | 95330-09-10 00:57 G | 36539879.32 | 36539879.54 | 36539879.76 | 0.0305 | 0.0111 |
| Saturn | 95331-09-25 03:21 G | 36540259.52 | 36540259.64 | 36540259.78 | 0.0303 | 0.0257 |
| Jupiter | 95342-03-23 05:45 G | 36544091.54 | 36544091.74 | 36544091.95 | 0.0499 | 0.0276 |
| Saturn | 95345-03-06 09:50 G | 36545170.82 | 36545170.91 | 36545171.02 | 0.0257 | 0.0234 |
| Uranus | 95346-02-09 21:50 G | 36545511.20 | 36545511.41 | 36545511.66 | 0.0143 | 0.0070 |
| Saturn | 95346-03-17 21:21 G | 36545547.14 | 36545547.39 | 36545547.64 | 0.0258 | 0.0002 |
| Uranus | 95347-02-14 22:48 G | 36545881.20 | 36545881.45 | 36545881.70 | 0.0143 | 0.0010 |
| Saturn | 95347-03-29 02:53 G | 36545923.54 | 36545923.62 | 36545923.72 | 0.0260 | 0.0241 |
| Uranus | 95348-02-20 00:57 G | 36546251.39 | 36546251.54 | 36546251.72 | 0.0142 | 0.0111 |

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| Neptune | 95351-08-28 15:07 G | 36547537.00 | 36547537.13 | 36547537.31 | 0.0089 | 0.0070 |
| Neptune | 95352-08-30 05:02 G | 36547904.53 | 36547904.71 | 36547904.92 | 0.0089 | 0.0059 |
| Neptune | 95353-09-01 15:50 G | 36548271.93 | 36548272.16 | 36548272.39 | 0.0089 | 0.0033 |
| Neptune | 95354-09-04 00:00 G | 36548639.25 | 36548639.50 | 36548639.76 | 0.0089 | 0.0022 |
| Neptune | 95355-09-06 14:53 G | 36549006.87 | 36549007.12 | 36549007.37 | 0.0089 | 0.0005 |
| Pluto | 95356-07-12 18:14 G | 36549317.01 | 36549317.26 | 36549317.53 | 0.0063 | 0.0011 |
| Neptune | 95356-09-07 19:26 G | 36549374.07 | 36549374.31 | 36549374.58 | 0.0089 | 0.0014 |
| Pluto | 95357-07-14 10:33 G | 36549683.91 | 36549683.94 | 36549684.02 | 0.0064 | 0.0062 |
| Neptune | 95357-09-10 12:57 G | 36549741.83 | 36549742.04 | 36549742.28 | 0.0089 | 0.0041 |
| Neptune | 95358-09-12 17:02 G | 36550109.01 | 36550109.21 | 36550109.43 | 0.0089 | 0.0050 |
| Saturn | 95359-09-02 22:19 G | 36550464.37 | 36550464.43 | 36550464.51 | 0.0305 | 0.0290 |
| Jupiter | 95359-09-11 15:36 G | 36550473.10 | 36550473.15 | 36550473.21 | 0.0527 | 0.0511 |
| Neptune | 95359-09-15 10:05 G | 36550476.80 | 36550476.92 | 36550477.05 | 0.0089 | 0.0077 |
| Neptune | 95360-09-16 16:19 G | 36550844.15 | 36550844.18 | 36550844.25 | 0.0089 | 0.0087 |
| Saturn | 95360-09-17 04:33 G | 36550844.46 | 36550844.69 | 36550844.92 | 0.0303 | 0.0083 |
| Jupiter | 95371-09-16 14:09 G | 36554860.87 | 36554861.09 | 36554861.32 | 0.0527 | 0.0013 |
| Saturn | 95375-03-12 20:09 G | 36556134.12 | 36556134.34 | 36556134.56 | 0.0258 | 0.0109 |
| Saturn | 95376-03-23 09:36 G | 36556510.70 | 36556510.90 | 36556511.11 | 0.0259 | 0.0133 |
| Jupiter | 95383-09-21 16:33 G | 36559249.07 | 36559249.19 | 36559249.30 | 0.0526 | 0.0454 |
| Mars | 95386-06-25 16:48 G | 36560257.09 | 36560257.20 | 36560257.31 | 0.1959 | 0.1583 |
| Uranus | 95388-08-08 23:02 G | 36561032.31 | 36561032.46 | 36561032.65 | 0.0135 | 0.0097 |
| Uranus | 95389-08-13 10:05 G | 36561401.67 | 36561401.92 | 36561402.17 | 0.0135 | 0.0031 |
| Saturn | 95389-09-10 14:53 G | 36561429.88 | 36561430.12 | 36561430.36 | 0.0305 | 0.0092 |
| Uranus | 95390-08-17 13:12 G | 36561770.83 | 36561771.05 | 36561771.27 | 0.0135 | 0.0061 |
| Saturn | 95390-09-25 14:53 G | 36561810.03 | 36561810.12 | 36561810.23 | 0.0303 | 0.0276 |
| Uranus | 95391-08-22 00:29 G | 36562140.44 | 36562140.52 | 36562140.64 | 0.0136 | 0.0125 |
| Saturn | 95404-03-08 07:55 G | 36566721.71 | 36566721.83 | 36566721.98 | 0.0257 | 0.0216 |
| Saturn | 95405-03-19 12:29 G | 36567097.76 | 36567098.02 | 36567098.28 | 0.0258 | 0.0022 |
| Mars | 95409-12-22 08:09 G | 36568836.64 | 36568836.84 | 36568837.04 | 0.1581 | 0.0130 |
| Jupiter | 95413-03-19 03:21 G | 36570019.43 | 36570019.64 | 36570019.87 | 0.0499 | 0.0220 |

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| Saturn | 95418-09-04 18:57 G | 36572015.19 | 36572015.29 | 36572015.40 | 0.0305 | 0.0270 |
| Saturn | 95419-09-20 01:55 G | 36572395.36 | 36572395.58 | 36572395.80 | 0.0303 | 0.0102 |
| Jupiter | 95425-03-23 14:38 G | 36574406.92 | 36574407.11 | 36574407.32 | 0.0499 | 0.0233 |
| Uranus | 95430-02-11 03:07 G | 36576192.43 | 36576192.63 | 36576192.87 | 0.0143 | 0.0083 |
| Uranus | 95431-02-16 05:31 G | 36576562.48 | 36576562.73 | 36576562.97 | 0.0143 | 0.0025 |
| Uranus | 95432-02-21 05:45 G | 36576932.58 | 36576932.74 | 36576932.94 | 0.0142 | 0.0107 |
| Neptune | 95434-02-27 20:09 G | 36577670.31 | 36577670.34 | 36577670.43 | 0.0088 | 0.0086 |
| Saturn | 95434-03-14 18:43 G | 36577685.06 | 36577685.28 | 36577685.51 | 0.0258 | 0.0087 |
| Neptune | 95435-03-02 10:19 G | 36578037.80 | 36578037.93 | 36578038.11 | 0.0088 | 0.0070 |
| Saturn | 95435-03-26 07:55 G | 36578061.63 | 36578061.83 | 36578062.03 | 0.0259 | 0.0155 |
| Neptune | 95436-03-03 19:41 G | 36578405.12 | 36578405.32 | 36578405.57 | 0.0088 | 0.0050 |
| Neptune | 95437-03-06 14:24 G | 36578772.86 | 36578773.10 | 36578773.34 | 0.0088 | 0.0033 |
| Neptune | 95438-03-08 20:24 G | 36579140.09 | 36579140.35 | 36579140.61 | 0.0088 | 0.0013 |
| Neptune | 95439-03-11 16:05 G | 36579507.91 | 36579508.17 | 36579508.43 | 0.0088 | 0.0003 |
| Neptune | 95440-03-12 21:50 G | 36579875.17 | 36579875.41 | 36579875.66 | 0.0088 | 0.0025 |
| Neptune | 95441-03-15 15:50 G | 36580242.93 | 36580243.16 | 36580243.41 | 0.0088 | 0.0040 |
| Neptune | 95442-03-18 00:00 G | 36580610.34 | 36580610.50 | 36580610.70 | 0.0088 | 0.0063 |
| Neptune | 95443-03-20 13:55 G | 36580977.97 | 36580978.08 | 36580978.25 | 0.0089 | 0.0077 |
| Pluto | 95447-01-13 06:00 G | 36582372.53 | 36582372.75 | 36582372.98 | 0.0081 | 0.0041 |
| Saturn | 95448-09-12 02:53 G | 36582980.38 | 36582980.62 | 36582980.86 | 0.0305 | 0.0073 |
| Saturn | 95449-09-27 06:14 G | 36583360.71 | 36583360.76 | 36583360.81 | 0.0303 | 0.0295 |
| Jupiter | 95454-09-17 04:19 G | 36585176.45 | 36585176.68 | 36585176.91 | 0.0527 | 0.0048 |
| Saturn | 95463-03-10 01:12 G | 36588272.40 | 36588272.55 | 36588272.73 | 0.0257 | 0.0194 |
| Saturn | 95464-03-20 05:45 G | 36588648.50 | 36588648.74 | 36588648.99 | 0.0258 | 0.0045 |
| Jupiter | 95466-09-21 18:29 G | 36589564.12 | 36589564.27 | 36589564.42 | 0.0527 | 0.0398 |
| Uranus | 95472-08-10 08:09 G | 36591713.68 | 36591713.84 | 36591714.00 | 0.0135 | 0.0102 |
| Uranus | 95473-08-14 17:31 G | 36592082.97 | 36592083.23 | 36592083.49 | 0.0135 | 0.0014 |
| Uranus | 95474-08-18 22:05 G | 36592452.21 | 36592452.42 | 36592452.66 | 0.0135 | 0.0051 |
| Saturn | 95477-09-05 17:02 G | 36593566.09 | 36593566.21 | 36593566.37 | 0.0305 | 0.0247 |
| Saturn | 95478-09-20 21:07 G | 36593946.16 | 36593946.38 | 36593946.61 | 0.0303 | 0.0124 |

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| Saturn | 95493-03-15 19:55 G | 36599236.09 | 36599236.33 | 36599236.57 | 0.0258 | 0.0065 |
| Saturn | 95494-03-27 02:09 G | 36599612.41 | 36599612.59 | 36599612.79 | 0.0259 | 0.0176 |
| Jupiter | 95496-03-18 11:31 G | 36600334.79 | 36600334.98 | 36600335.17 | 0.0499 | 0.0271 |
| Saturn | 95507-09-15 00:57 G | 36604531.31 | 36604531.54 | 36604531.77 | 0.0305 | 0.0046 |
| Jupiter | 95508-03-24 05:17 G | 36604722.50 | 36604722.72 | 36604722.94 | 0.0499 | 0.0206 |
| Uranus | 95514-02-12 09:07 G | 36606873.65 | 36606873.88 | 36606874.12 | 0.0143 | 0.0066 |
| Uranus | 95515-02-17 13:26 G | 36607243.81 | 36607244.06 | 36607244.31 | 0.0143 | 0.0013 |
| Neptune | 95515-08-30 04:33 G | 36607437.55 | 36607437.69 | 36607437.84 | 0.0089 | 0.0075 |
| Uranus | 95516-02-22 12:29 G | 36607613.88 | 36607614.02 | 36607614.18 | 0.0142 | 0.0118 |
| Neptune | 95516-08-31 16:05 G | 36607805.00 | 36607805.17 | 36607805.36 | 0.0089 | 0.0061 |
| Neptune | 95517-09-02 23:17 G | 36608172.25 | 36608172.47 | 36608172.72 | 0.0089 | 0.0038 |
| Neptune | 95518-09-05 15:36 G | 36608539.92 | 36608540.15 | 36608540.40 | 0.0089 | 0.0025 |
| Neptune | 95519-09-07 20:09 G | 36608907.08 | 36608907.34 | 36608907.60 | 0.0089 | 0.0002 |
| Neptune | 95520-09-09 13:26 G | 36609274.82 | 36609275.06 | 36609275.33 | 0.0089 | 0.0012 |
| Neptune | 95521-09-11 18:00 G | 36609642.03 | 36609642.25 | 36609642.49 | 0.0089 | 0.0034 |
| Saturn | 95522-03-11 19:26 G | 36609823.12 | 36609823.31 | 36609823.50 | 0.0258 | 0.0169 |
| Neptune | 95522-09-14 09:50 G | 36610009.70 | 36610009.91 | 36610010.14 | 0.0089 | 0.0049 |
| Saturn | 95523-03-23 06:43 G | 36610199.55 | 36610199.78 | 36610200.02 | 0.0259 | 0.0069 |
| Neptune | 95523-09-16 17:02 G | 36610377.08 | 36610377.21 | 36610377.38 | 0.0089 | 0.0071 |
| Neptune | 95524-09-18 03:50 G | 36610744.62 | 36610744.66 | 36610744.77 | 0.0089 | 0.0085 |
| Saturn | 95536-09-07 13:12 G | 36615116.88 | 36615117.05 | 36615117.24 | 0.0305 | 0.0215 |
| Jupiter | 95537-09-17 07:40 G | 36615491.59 | 36615491.82 | 36615492.04 | 0.0527 | 0.0100 |
| Saturn | 95537-09-22 14:52 G | 36615496.91 | 36615497.12 | 36615497.33 | 0.0303 | 0.0154 |
| Jupiter | 95549-09-22 14:52 G | 36619879.96 | 36619880.12 | 36619880.29 | 0.0527 | 0.0362 |
| Saturn | 95552-03-17 18:00 G | 36620786.99 | 36620787.25 | 36620787.50 | 0.0258 | 0.0037 |
| Saturn | 95553-03-28 22:33 G | 36621163.29 | 36621163.44 | 36621163.61 | 0.0259 | 0.0201 |
| Uranus | 95556-08-11 19:26 G | 36622395.13 | 36622395.31 | 36622395.48 | 0.0135 | 0.0091 |
| Uranus | 95557-08-16 03:07 G | 36622764.37 | 36622764.63 | 36622764.89 | 0.0135 | 0.0022 |
| Uranus | 95558-08-20 09:21 G | 36623133.68 | 36623133.89 | 36623134.10 | 0.0135 | 0.0069 |
| Uranus | 95559-08-24 17:45 G | 36623503.21 | 36623503.24 | 36623503.31 | 0.0136 | 0.0133 |

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| Saturn | 95566-09-16 06:57 G | 36626082.55 | 36626082.79 | 36626083.02 | 0.0305 | 0.0012 |
| Jupiter | 95579-03-19 23:45 G | 36630650.30 | 36630650.49 | 36630650.69 | 0.0499 | 0.0303 |
| Saturn | 95581-03-12 22:33 G | 36631374.25 | 36631374.44 | 36631374.65 | 0.0258 | 0.0142 |
| Saturn | 95582-03-24 12:28 G | 36631750.80 | 36631751.02 | 36631751.26 | 0.0259 | 0.0096 |
| Jupiter | 95591-03-24 08:38 G | 36635037.65 | 36635037.86 | 36635038.08 | 0.0499 | 0.0157 |
| Saturn | 95595-09-09 14:09 G | 36636667.90 | 36636668.09 | 36636668.30 | 0.0304 | 0.0178 |
| Saturn | 95596-09-23 17:31 G | 36637048.05 | 36637048.23 | 36637048.42 | 0.0303 | 0.0191 |
| Uranus | 95598-02-12 17:31 G | 36637555.01 | 36637555.23 | 36637555.46 | 0.0143 | 0.0075 |
| Neptune | 95598-02-28 07:12 G | 36637570.77 | 36637570.80 | 36637570.87 | 0.0088 | 0.0087 |
| Uranus | 95599-02-17 22:48 G | 36637925.21 | 36637925.45 | 36637925.70 | 0.0143 | 0.0033 |
| Neptune | 95599-03-02 14:24 G | 36637938.00 | 36637938.10 | 36637938.25 | 0.0088 | 0.0078 |
| Uranus | 95600-02-22 19:40 G | 36638295.18 | 36638295.32 | 36638295.51 | 0.0142 | 0.0113 |
| Neptune | 95600-03-04 09:36 G | 36638305.70 | 36638305.90 | 36638306.13 | 0.0088 | 0.0050 |
| Neptune | 95601-03-06 15:21 G | 36638672.92 | 36638673.14 | 36638673.38 | 0.0088 | 0.0042 |
| Neptune | 95602-03-09 10:48 G | 36639040.70 | 36639040.95 | 36639041.22 | 0.0088 | 0.0014 |
| Pluto | 95602-07-17 00:43 G | 36639170.29 | 36639170.53 | 36639170.79 | 0.0063 | 0.0007 |
| Neptune | 95603-03-11 17:45 G | 36639407.99 | 36639408.24 | 36639408.50 | 0.0088 | 0.0004 |
| Neptune | 95604-03-13 10:48 G | 36639775.70 | 36639775.95 | 36639776.22 | 0.0088 | 0.0024 |
| Neptune | 95605-03-15 21:07 G | 36640143.17 | 36640143.38 | 36640143.63 | 0.0088 | 0.0034 |
| Neptune | 95606-03-18 09:50 G | 36640510.72 | 36640510.91 | 36640511.12 | 0.0088 | 0.0060 |
| Neptune | 95607-03-21 00:28 G | 36640878.39 | 36640878.52 | 36640878.70 | 0.0088 | 0.0070 |
| Saturn | 95610-03-08 11:16 G | 36641961.91 | 36641961.97 | 36641962.06 | 0.0258 | 0.0246 |
| Saturn | 95611-03-19 15:50 G | 36642337.90 | 36642338.16 | 36642338.41 | 0.0258 | 0.0009 |
| Saturn | 95612-03-30 02:52 G | 36642714.51 | 36642714.62 | 36642714.75 | 0.0260 | 0.0226 |
| Mars | 95614-12-23 00:28 G | 36643712.36 | 36643712.52 | 36643712.68 | 0.1582 | 0.0739 |
| Jupiter | 95620-09-16 20:38 G | 36645807.15 | 36645807.36 | 36645807.58 | 0.0527 | 0.0165 |
| Saturn | 95625-09-17 14:52 G | 36647633.87 | 36647634.12 | 36647634.36 | 0.0304 | 0.0026 |
| Jupiter | 95632-09-21 10:48 G | 36650194.75 | 36650194.95 | 36650195.15 | 0.0526 | 0.0279 |
| Saturn | 95640-03-14 07:12 G | 36652925.59 | 36652925.80 | 36652926.03 | 0.0258 | 0.0114 |
| Uranus | 95640-08-12 04:33 G | 36653076.51 | 36653076.69 | 36653076.87 | 0.0135 | 0.0092 |

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| Saturn | 95641-03-25 17:02 G | 36653302.00 | 36653302.21 | 36653302.45 | 0.0259 | 0.0124 |
| Uranus | 95641-08-16 10:48 G | 36653445.70 | 36653445.95 | 36653446.21 | 0.0135 | 0.0008 |
| Uranus | 95642-08-20 19:12 G | 36653815.08 | 36653815.30 | 36653815.52 | 0.0136 | 0.0060 |
| Saturn | 95654-09-11 01:55 G | 36658219.38 | 36658219.58 | 36658219.79 | 0.0304 | 0.0140 |
| Saturn | 95655-09-26 07:40 G | 36658599.67 | 36658599.82 | 36658599.97 | 0.0303 | 0.0231 |
| Jupiter | 95662-03-18 20:09 G | 36660965.20 | 36660965.34 | 36660965.49 | 0.0498 | 0.0384 |
| Saturn | 95669-03-09 12:28 G | 36663512.89 | 36663513.02 | 36663513.16 | 0.0258 | 0.0217 |
| Saturn | 95670-03-20 22:04 G | 36663889.18 | 36663889.42 | 36663889.66 | 0.0259 | 0.0021 |
| Mars | 95670-06-25 23:16 G | 36663986.26 | 36663986.47 | 36663986.68 | 0.1958 | 0.0612 |
| Saturn | 95671-04-01 13:55 G | 36664266.03 | 36664266.08 | 36664266.13 | 0.0260 | 0.0254 |
| Jupiter | 95674-03-23 15:21 G | 36665352.90 | 36665353.14 | 36665353.38 | 0.0498 | 0.0079 |
| Neptune | 95679-08-29 16:04 G | 36667338.13 | 36667338.17 | 36667338.27 | 0.0089 | 0.0086 |
| Neptune | 95680-08-30 22:33 G | 36667705.27 | 36667705.44 | 36667705.65 | 0.0089 | 0.0061 |
| Neptune | 95681-09-02 15:36 G | 36668072.96 | 36668073.15 | 36668073.38 | 0.0089 | 0.0050 |
| Uranus | 95682-02-13 05:16 G | 36668236.48 | 36668236.72 | 36668236.96 | 0.0143 | 0.0055 |
| Neptune | 95682-09-04 19:40 G | 36668440.09 | 36668440.32 | 36668440.58 | 0.0089 | 0.0024 |
| Uranus | 95683-02-18 12:00 G | 36668606.75 | 36668607.00 | 36668607.25 | 0.0143 | 0.0025 |
| Neptune | 95683-09-07 13:12 G | 36668807.80 | 36668808.05 | 36668808.31 | 0.0089 | 0.0013 |
| Uranus | 95684-02-23 08:09 G | 36668976.76 | 36668976.84 | 36668976.95 | 0.0142 | 0.0132 |
| Neptune | 95684-09-08 18:14 G | 36669175.02 | 36669175.26 | 36669175.51 | 0.0089 | 0.0013 |
| Saturn | 95684-09-19 00:57 G | 36669185.30 | 36669185.54 | 36669185.79 | 0.0304 | 0.0068 |
| Neptune | 95685-09-11 08:52 G | 36669542.62 | 36669542.87 | 36669543.12 | 0.0089 | 0.0024 |
| Jupiter | 95686-03-27 22:04 G | 36669740.40 | 36669740.42 | 36669740.46 | 0.0499 | 0.0494 |
| Neptune | 95686-09-13 17:16 G | 36669910.04 | 36669910.22 | 36669910.44 | 0.0089 | 0.0050 |
| Neptune | 95687-09-16 03:36 G | 36670277.47 | 36670277.65 | 36670277.85 | 0.0089 | 0.0060 |
| Neptune | 95688-09-17 17:16 G | 36670645.18 | 36670645.22 | 36670645.31 | 0.0089 | 0.0086 |
| Pluto | 95693-01-15 09:21 G | 36672225.74 | 36672225.89 | 36672226.09 | 0.0081 | 0.0062 |
| Mars | 95693-12-24 18:43 G | 36672569.15 | 36672569.28 | 36672569.42 | 0.1582 | 0.1058 |
| Saturn | 95699-03-16 14:52 G | 36674476.88 | 36674477.12 | 36674477.36 | 0.0258 | 0.0085 |
| Saturn | 95700-03-27 19:55 G | 36674853.13 | 36674853.33 | 36674853.55 | 0.0259 | 0.0153 |

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| Jupiter | 95703-09-17 12:00 G | 36676121.80 | 36676122.00 | 36676122.21 | 0.0527 | 0.0261 |
| Saturn | 95713-09-13 23:02 G | 36679771.24 | 36679771.46 | 36679771.68 | 0.0304 | 0.0095 |
| Saturn | 95714-09-29 03:36 G | 36680151.56 | 36680151.65 | 36680151.76 | 0.0302 | 0.0275 |
| Jupiter | 95715-09-22 15:07 G | 36680509.93 | 36680510.13 | 36680510.34 | 0.0527 | 0.0193 |
| Uranus | 95724-08-13 15:50 G | 36683757.99 | 36683758.16 | 36683758.37 | 0.0135 | 0.0085 |
| Uranus | 95725-08-17 21:07 G | 36684127.13 | 36684127.38 | 36684127.64 | 0.0135 | 0.0011 |
| Uranus | 95726-08-22 06:43 G | 36684496.58 | 36684496.78 | 36684496.98 | 0.0136 | 0.0078 |
| Saturn | 95728-03-11 19:40 G | 36685064.16 | 36685064.32 | 36685064.49 | 0.0258 | 0.0191 |
| Saturn | 95729-03-23 11:02 G | 36685440.73 | 36685440.96 | 36685441.20 | 0.0259 | 0.0051 |
| Saturn | 95742-09-07 16:19 G | 36690357.05 | 36690357.18 | 36690357.31 | 0.0305 | 0.0258 |
| Saturn | 95743-09-22 17:31 G | 36690737.01 | 36690737.23 | 36690737.46 | 0.0303 | 0.0113 |
| Jupiter | 95745-03-19 04:33 G | 36691280.59 | 36691280.69 | 36691280.80 | 0.0498 | 0.0446 |
| Jupiter | 95757-03-23 10:48 G | 36695667.72 | 36695667.95 | 36695668.19 | 0.0499 | 0.0012 |
| Saturn | 95758-03-18 20:09 G | 36696028.09 | 36696028.34 | 36696028.60 | 0.0259 | 0.0055 |
| Saturn | 95759-03-30 04:33 G | 36696404.53 | 36696404.69 | 36696404.88 | 0.0260 | 0.0183 |
| Neptune | 95763-03-03 05:31 G | 36697838.64 | 36697838.73 | 36697838.87 | 0.0088 | 0.0079 |
| Neptune | 95764-03-04 11:16 G | 36698205.79 | 36698205.97 | 36698206.18 | 0.0088 | 0.0059 |
| Neptune | 95765-03-07 06:14 G | 36698573.54 | 36698573.76 | 36698574.01 | 0.0088 | 0.0042 |
| Uranus | 95766-02-14 17:31 G | 36698918.01 | 36698918.23 | 36698918.48 | 0.0143 | 0.0060 |
| Neptune | 95766-03-09 14:09 G | 36698940.85 | 36698941.09 | 36698941.34 | 0.0088 | 0.0022 |
| Uranus | 95767-02-20 00:57 G | 36699288.31 | 36699288.54 | 36699288.79 | 0.0143 | 0.0049 |
| Neptune | 95767-03-12 05:45 G | 36699308.47 | 36699308.74 | 36699309.01 | 0.0088 | 0.0005 |
| Uranus | 95768-02-24 20:09 G | 36699658.23 | 36699658.34 | 36699658.47 | 0.0142 | 0.0127 |
| Neptune | 95768-03-13 17:16 G | 36699675.98 | 36699676.22 | 36699676.48 | 0.0088 | 0.0015 |
| Neptune | 95769-03-16 03:50 G | 36700043.42 | 36700043.66 | 36700043.92 | 0.0088 | 0.0031 |
| Jupiter | 95769-03-28 06:14 G | 36700055.64 | 36700055.76 | 36700055.89 | 0.0499 | 0.0416 |
| Neptune | 95770-03-18 20:52 G | 36700411.16 | 36700411.37 | 36700411.58 | 0.0088 | 0.0051 |
| Neptune | 95771-03-21 03:07 G | 36700778.50 | 36700778.63 | 36700778.83 | 0.0088 | 0.0070 |
| Neptune | 95772-03-22 23:02 G | 36701146.45 | 36701146.46 | 36701146.51 | 0.0088 | 0.0088 |
| Saturn | 95772-09-15 23:16 G | 36701323.23 | 36701323.47 | 36701323.71 | 0.0304 | 0.0049 |

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| Jupiter | 95786-09-16 17:02 G | 36706437.05 | 36706437.21 | 36706437.38 | 0.0528 | 0.0354 |
| Saturn | 95787-03-14 09:21 G | 36706615.71 | 36706615.89 | 36706616.09 | 0.0259 | 0.0160 |
| Saturn | 95788-03-24 23:31 G | 36706992.24 | 36706992.48 | 36706992.72 | 0.0259 | 0.0080 |
| Jupiter | 95798-09-21 11:31 G | 36710824.75 | 36710824.98 | 36710825.22 | 0.0527 | 0.0094 |
| Saturn | 95801-09-10 13:55 G | 36711908.92 | 36711909.08 | 36711909.27 | 0.0304 | 0.0211 |
| Saturn | 95802-09-25 18:14 G | 36712289.07 | 36712289.26 | 36712289.47 | 0.0303 | 0.0159 |
| Uranus | 95808-08-15 01:40 G | 36714439.39 | 36714439.57 | 36714439.78 | 0.0135 | 0.0081 |
| Uranus | 95809-08-19 05:31 G | 36714808.48 | 36714808.73 | 36714808.99 | 0.0135 | 0.0002 |
| Uranus | 95810-08-23 16:33 G | 36715177.99 | 36715178.19 | 36715178.40 | 0.0135 | 0.0071 |
| Saturn | 95817-03-21 04:33 G | 36717579.44 | 36717579.69 | 36717579.94 | 0.0259 | 0.0024 |
| Saturn | 95818-04-01 19:26 G | 36717956.18 | 36717956.31 | 36717956.46 | 0.0260 | 0.0211 |
| Mars | 95819-12-23 22:04 G | 36718587.36 | 36718587.42 | 36718587.48 | 0.1584 | 0.1492 |
| Saturn | 95831-09-19 22:04 G | 36722875.17 | 36722875.42 | 36722875.67 | 0.0304 | 0.0002 |
| Jupiter | 95840-03-23 15:50 G | 36725982.93 | 36725983.16 | 36725983.39 | 0.0498 | 0.0070 |
| Neptune | 95844-09-01 14:24 G | 36727605.95 | 36727606.10 | 36727606.29 | 0.0089 | 0.0065 |
| Neptune | 95845-09-03 18:28 G | 36727973.09 | 36727973.27 | 36727973.49 | 0.0089 | 0.0054 |
| Saturn | 95846-03-17 00:00 G | 36728167.29 | 36728167.50 | 36728167.72 | 0.0259 | 0.0128 |
| Neptune | 95846-09-06 11:45 G | 36728340.76 | 36728340.99 | 36728341.25 | 0.0089 | 0.0028 |
| Saturn | 95847-03-28 07:55 G | 36728543.60 | 36728543.83 | 36728544.07 | 0.0260 | 0.0109 |
| Neptune | 95847-09-08 17:45 G | 36728708.01 | 36728708.24 | 36728708.50 | 0.0089 | 0.0017 |
| Pluto | 95848-07-20 08:38 G | 36729023.62 | 36729023.86 | 36729024.12 | 0.0063 | 0.0009 |
| Neptune | 95848-09-10 08:09 G | 36729075.57 | 36729075.84 | 36729076.10 | 0.0089 | 0.0009 |
| Neptune | 95849-09-12 18:00 G | 36729443.02 | 36729443.25 | 36729443.50 | 0.0089 | 0.0020 |
| Uranus | 95850-02-16 05:16 G | 36729599.48 | 36729599.72 | 36729599.98 | 0.0143 | 0.0042 |
| Neptune | 95850-09-15 02:24 G | 36729810.39 | 36729810.60 | 36729810.85 | 0.0089 | 0.0045 |
| Uranus | 95851-02-21 13:40 G | 36729969.84 | 36729970.07 | 36729970.32 | 0.0143 | 0.0041 |
| Neptune | 95851-09-17 16:48 G | 36730178.03 | 36730178.20 | 36730178.41 | 0.0089 | 0.0057 |
| Jupiter | 95852-03-27 22:19 G | 36730370.25 | 36730370.43 | 36730370.62 | 0.0498 | 0.0324 |
| Neptune | 95852-09-18 21:21 G | 36730545.32 | 36730545.39 | 36730545.52 | 0.0089 | 0.0082 |
| Saturn | 95860-09-12 17:31 G | 36733461.04 | 36733461.23 | 36733461.44 | 0.0304 | 0.0160 |

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| Saturn | 95861-09-27 23:02 G | 36733841.29 | 36733841.46 | 36733841.63 | 0.0303 | 0.0208 |
| Jupiter | 95869-09-16 10:19 G | 36736751.82 | 36736751.93 | 36736752.05 | 0.0527 | 0.0460 |
| Saturn | 95875-03-12 05:02 G | 36738754.60 | 36738754.71 | 36738754.83 | 0.0258 | 0.0229 |
| Saturn | 95876-03-22 17:31 G | 36739130.99 | 36739131.23 | 36739131.48 | 0.0259 | 0.0008 |
| Saturn | 95877-04-03 09:36 G | 36739507.82 | 36739507.90 | 36739508.01 | 0.0260 | 0.0240 |
| Jupiter | 95881-09-21 03:36 G | 36741139.43 | 36741139.65 | 36741139.87 | 0.0527 | 0.0025 |
| Saturn | 95890-09-21 18:14 G | 36744427.02 | 36744427.26 | 36744427.51 | 0.0304 | 0.0053 |
| Uranus | 95892-08-15 13:40 G | 36745120.87 | 36745121.07 | 36745121.27 | 0.0135 | 0.0076 |
| Uranus | 95893-08-19 16:04 G | 36745489.91 | 36745490.17 | 36745490.43 | 0.0135 | 0.0001 |
| Jupiter | 95893-09-26 05:45 G | 36745527.65 | 36745527.74 | 36745527.83 | 0.0527 | 0.0486 |
| Uranus | 95894-08-24 03:21 G | 36745859.47 | 36745859.64 | 36745859.84 | 0.0135 | 0.0087 |
| Mars | 95898-12-26 06:57 G | 36747444.59 | 36747444.79 | 36747445.00 | 0.1583 | 0.0058 |
| Saturn | 95905-03-19 08:38 G | 36749718.63 | 36749718.86 | 36749719.10 | 0.0259 | 0.0096 |
| Saturn | 95906-03-30 14:24 G | 36750094.89 | 36750095.10 | 36750095.32 | 0.0260 | 0.0139 |
| Saturn | 95919-09-16 20:52 G | 36755013.16 | 36755013.37 | 36755013.60 | 0.0304 | 0.0110 |
| Saturn | 95920-10-01 00:28 G | 36755393.40 | 36755393.52 | 36755393.66 | 0.0303 | 0.0255 |
| Jupiter | 95923-03-24 09:07 G | 36756297.65 | 36756297.88 | 36756298.11 | 0.0498 | 0.0149 |
| Neptune | 95927-03-04 06:14 G | 36757738.66 | 36757738.76 | 36757738.90 | 0.0088 | 0.0078 |
| Neptune | 95928-03-05 23:45 G | 36758106.35 | 36758106.49 | 36758106.69 | 0.0088 | 0.0069 |
| Neptune | 95929-03-08 08:52 G | 36758473.65 | 36758473.87 | 36758474.10 | 0.0088 | 0.0042 |
| Neptune | 95930-03-10 22:33 G | 36758841.21 | 36758841.44 | 36758841.71 | 0.0088 | 0.0032 |
| Neptune | 95931-03-13 12:43 G | 36759208.78 | 36759209.03 | 36759209.28 | 0.0088 | 0.0005 |
| Neptune | 95932-03-14 22:19 G | 36759576.16 | 36759576.43 | 36759576.70 | 0.0088 | 0.0004 |
| Uranus | 95933-02-12 19:55 G | 36759911.28 | 36759911.33 | 36759911.41 | 0.0143 | 0.0139 |
| Neptune | 95933-03-17 15:36 G | 36759943.93 | 36759944.15 | 36759944.41 | 0.0088 | 0.0033 |
| Uranus | 95934-02-17 14:52 G | 36760280.88 | 36760281.12 | 36760281.36 | 0.0143 | 0.0047 |
| Saturn | 95934-03-14 16:33 G | 36760306.05 | 36760306.19 | 36760306.35 | 0.0258 | 0.0200 |
| Neptune | 95934-03-19 21:50 G | 36760311.20 | 36760311.41 | 36760311.66 | 0.0088 | 0.0042 |
| Uranus | 95935-02-22 23:16 G | 36760651.24 | 36760651.47 | 36760651.70 | 0.0143 | 0.0060 |
| Neptune | 95935-03-22 17:31 G | 36760679.09 | 36760679.23 | 36760679.42 | 0.0088 | 0.0070 |

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| Saturn | 95935-03-26 07:55 G | 36760682.59 | 36760682.83 | 36760683.07 | 0.0259 | 0.0037 |
| Jupiter | 95935-03-29 02:38 G | 36760685.41 | 36760685.61 | 36760685.81 | 0.0499 | 0.0250 |
| Uranus | 95936-02-27 16:48 G | 36761021.16 | 36761021.20 | 36761021.28 | 0.0143 | 0.0139 |
| Neptune | 95936-03-23 23:31 G | 36761046.38 | 36761046.48 | 36761046.62 | 0.0088 | 0.0078 |
| Pluto | 95939-01-20 10:19 G | 36762078.77 | 36762078.93 | 36762079.12 | 0.0081 | 0.0059 |
| Saturn | 95948-09-09 10:48 G | 36765598.85 | 36765598.95 | 36765599.08 | 0.0305 | 0.0269 |
| Saturn | 95949-09-24 14:24 G | 36765978.88 | 36765979.10 | 36765979.33 | 0.0304 | 0.0100 |
| Saturn | 95964-03-20 12:57 G | 36771269.79 | 36771270.04 | 36771270.29 | 0.0259 | 0.0065 |
| Jupiter | 95964-09-21 06:28 G | 36771454.54 | 36771454.77 | 36771455.00 | 0.0528 | 0.0120 |
| Saturn | 95965-03-31 23:02 G | 36771646.28 | 36771646.46 | 36771646.65 | 0.0260 | 0.0167 |
| Uranus | 95976-08-16 23:45 G | 36775802.28 | 36775802.49 | 36775802.70 | 0.0135 | 0.0070 |
| Jupiter | 95976-09-25 21:36 G | 36775842.26 | 36775842.40 | 36775842.56 | 0.0527 | 0.0396 |
| Uranus | 95977-08-21 00:57 G | 36776171.29 | 36776171.54 | 36776171.80 | 0.0135 | 0.0009 |
| Uranus | 95978-08-25 13:12 G | 36776540.88 | 36776541.05 | 36776541.27 | 0.0135 | 0.0082 |
| Saturn | 95978-09-18 16:19 G | 36776564.94 | 36776565.18 | 36776565.42 | 0.0304 | 0.0067 |
| Saturn | 95979-10-03 16:33 G | 36776945.17 | 36776945.19 | 36776945.24 | 0.0302 | 0.0299 |
| Saturn | 95993-03-16 04:19 G | 36781857.51 | 36781857.68 | 36781857.86 | 0.0258 | 0.0172 |
| Saturn | 95994-03-27 15:21 G | 36782233.89 | 36782234.14 | 36782234.39 | 0.0259 | 0.0065 |

97TH MILLENNIUM CE

This is a list of transits of Moon in the 97th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|---------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Jupiter | 96006-03-23 16:33 G | 36786612.99 | 36786613.19 | 36786613.40 | 0.0498 | 0.0215 | | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 96007-09-12 03:50 G | 36787150.52 | 36787150.66 | 36787150.82 | 0.0305 | 0.0231 |
| Neptune | 96008-09-01 17:16 G | 36787506.11 | 36787506.22 | 36787506.37 | 0.0089 | 0.0076 |
| Saturn | 96008-09-26 10:19 G | 36787530.73 | 36787530.93 | 36787531.15 | 0.0304 | 0.0141 |
| Neptune | 96009-09-04 10:19 G | 36787873.74 | 36787873.93 | 36787874.16 | 0.0089 | 0.0052 |
| Neptune | 96010-09-06 17:02 G | 36788241.00 | 36788241.21 | 36788241.44 | 0.0089 | 0.0039 |
| Neptune | 96011-09-09 05:45 G | 36788608.49 | 36788608.74 | 36788609.01 | 0.0089 | 0.0016 |
| Neptune | 96012-09-10 17:02 G | 36788975.96 | 36788976.21 | 36788976.46 | 0.0089 | 0.0003 |
| Neptune | 96013-09-13 00:43 G | 36789343.29 | 36789343.53 | 36789343.80 | 0.0089 | 0.0021 |
| Neptune | 96014-09-15 16:48 G | 36789710.97 | 36789711.20 | 36789711.43 | 0.0089 | 0.0034 |
| Neptune | 96015-09-17 21:07 G | 36790078.20 | 36790078.38 | 36790078.58 | 0.0089 | 0.0058 |
| Neptune | 96016-09-19 14:52 G | 36790445.98 | 36790446.12 | 36790446.29 | 0.0089 | 0.0070 |
| Uranus | 96017-02-13 03:36 G | 36790592.57 | 36790592.65 | 36790592.73 | 0.0143 | 0.0136 |
| Uranus | 96018-02-17 22:19 G | 36790962.19 | 36790962.43 | 36790962.69 | 0.0143 | 0.0036 |
| Jupiter | 96018-03-28 04:48 G | 36791000.48 | 36791000.70 | 36791000.93 | 0.0498 | 0.0180 |
| Uranus | 96019-02-23 07:12 G | 36791332.57 | 36791332.80 | 36791333.05 | 0.0143 | 0.0049 |
| Saturn | 96023-03-22 18:28 G | 36792821.03 | 36792821.27 | 36792821.52 | 0.0258 | 0.0040 |
| Saturn | 96024-04-02 09:07 G | 36793197.73 | 36793197.88 | 36793198.05 | 0.0260 | 0.0191 |
| Saturn | 96037-09-20 01:40 G | 36798116.32 | 36798116.57 | 36798116.82 | 0.0304 | 0.0029 |
| Jupiter | 96047-09-21 03:50 G | 36801769.45 | 36801769.66 | 36801769.87 | 0.0527 | 0.0193 |
| Saturn | 96052-03-17 10:19 G | 36803408.74 | 36803408.93 | 36803409.15 | 0.0258 | 0.0148 |
| Saturn | 96053-03-28 14:52 G | 36803784.88 | 36803785.12 | 36803785.36 | 0.0259 | 0.0088 |
| Jupiter | 96059-09-26 06:28 G | 36806157.59 | 36806157.77 | 36806157.95 | 0.0527 | 0.0321 |
| Uranus | 96060-08-17 11:45 G | 36806483.79 | 36806483.99 | 36806484.22 | 0.0135 | 0.0067 |
| Uranus | 96061-08-21 12:43 G | 36806852.78 | 36806853.03 | 36806853.29 | 0.0135 | 0.0011 |
| Uranus | 96062-08-26 01:12 G | 36807222.39 | 36807222.55 | 36807222.74 | 0.0135 | 0.0097 |
| Saturn | 96066-09-13 17:02 G | 36808702.04 | 36808702.21 | 36808702.39 | 0.0305 | 0.0195 |
| Saturn | 96067-09-28 23:31 G | 36809082.29 | 36809082.48 | 36809082.68 | 0.0304 | 0.0176 |
| Saturn | 96081-03-12 11:31 G | 36813995.93 | 36813995.98 | 36813996.03 | 0.0258 | 0.0251 |
| Saturn | 96082-03-24 00:43 G | 36814372.29 | 36814372.53 | 36814372.77 | 0.0258 | 0.0017 |
| Saturn | 96083-04-04 13:12 G | 36814748.91 | 36814749.05 | 36814749.20 | 0.0260 | 0.0211 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 96089-03-22 21:50 G | 36816928.21 | 36816928.41 | 36816928.62 | 0.0498 | 0.0269 |
| Neptune | 96091-03-03 18:14 G | 36817639.20 | 36817639.26 | 36817639.35 | 0.0088 | 0.0084 |
| Neptune | 96092-03-05 04:19 G | 36818006.54 | 36818006.68 | 36818006.83 | 0.0088 | 0.0072 |
| Neptune | 96093-03-07 17:02 G | 36818374.00 | 36818374.21 | 36818374.45 | 0.0088 | 0.0049 |
| Neptune | 96094-03-10 07:26 G | 36818741.59 | 36818741.81 | 36818742.05 | 0.0088 | 0.0035 |
| Pluto | 96094-07-23 08:09 G | 36818876.59 | 36818876.84 | 36818877.12 | 0.0063 | 0.0011 |
| Neptune | 96095-03-12 15:36 G | 36819108.89 | 36819109.15 | 36819109.42 | 0.0088 | 0.0012 |
| Neptune | 96096-03-14 09:50 G | 36819476.66 | 36819476.91 | 36819477.17 | 0.0088 | 0.0003 |
| Saturn | 96096-09-21 05:45 G | 36819667.50 | 36819667.74 | 36819667.98 | 0.0304 | 0.0006 |
| Neptune | 96097-03-16 15:21 G | 36819843.90 | 36819844.14 | 36819844.40 | 0.0088 | 0.0025 |
| Neptune | 96098-03-19 11:02 G | 36820211.74 | 36820211.96 | 36820212.21 | 0.0088 | 0.0039 |
| Neptune | 96099-03-21 17:02 G | 36820579.04 | 36820579.21 | 36820579.41 | 0.0088 | 0.0060 |
| Neptune | 96100-03-24 11:02 G | 36820946.84 | 36820946.96 | 36820947.11 | 0.0088 | 0.0076 |
| Uranus | 96101-02-14 12:14 G | 36821273.92 | 36821274.01 | 36821274.11 | 0.0143 | 0.0133 |
| Jupiter | 96101-03-28 05:45 G | 36821315.52 | 36821315.74 | 36821315.96 | 0.0499 | 0.0105 |
| Uranus | 96102-02-19 07:26 G | 36821643.57 | 36821643.81 | 36821644.06 | 0.0143 | 0.0039 |
| Uranus | 96103-02-24 15:50 G | 36822013.94 | 36822014.16 | 36822014.40 | 0.0143 | 0.0068 |
| Mars | 96103-12-27 06:57 G | 36822319.62 | 36822319.79 | 36822319.95 | 0.1585 | 0.0665 |
| Saturn | 96111-03-20 08:38 G | 36824959.63 | 36824959.86 | 36824960.09 | 0.0257 | 0.0122 |
| Saturn | 96112-03-30 13:26 G | 36825335.84 | 36825336.06 | 36825336.29 | 0.0258 | 0.0110 |
| Saturn | 96125-09-15 23:02 G | 36830253.26 | 36830253.46 | 36830253.67 | 0.0305 | 0.0164 |
| Saturn | 96126-10-01 02:24 G | 36830633.42 | 36830633.60 | 36830633.79 | 0.0304 | 0.0203 |
| Jupiter | 96130-09-21 14:38 G | 36832084.91 | 36832085.11 | 36832085.31 | 0.0527 | 0.0264 |
| Saturn | 96140-03-14 14:38 G | 36835547.00 | 36835547.11 | 36835547.23 | 0.0257 | 0.0227 |
| Saturn | 96141-03-26 03:07 G | 36835923.38 | 36835923.63 | 36835923.87 | 0.0258 | 0.0007 |
| Saturn | 96142-04-06 08:09 G | 36836299.73 | 36836299.84 | 36836299.98 | 0.0259 | 0.0226 |
| Jupiter | 96142-09-26 05:16 G | 36836472.53 | 36836472.72 | 36836472.93 | 0.0527 | 0.0264 |
| Uranus | 96144-08-18 22:33 G | 36837165.22 | 36837165.44 | 36837165.67 | 0.0135 | 0.0058 |
| Uranus | 96145-08-22 22:48 G | 36837534.20 | 36837534.45 | 36837534.70 | 0.0135 | 0.0019 |
| Uranus | 96146-08-27 12:00 G | 36837903.84 | 36837904.00 | 36837904.19 | 0.0135 | 0.0093 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 96155-09-24 07:26 G | 36841218.58 | 36841218.81 | 36841219.04 | 0.0304 | 0.0034 |
| Saturn | 96170-03-21 02:38 G | 36846510.38 | 36846510.61 | 36846510.85 | 0.0257 | 0.0098 |
| Saturn | 96171-04-01 14:09 G | 36846886.88 | 36846887.09 | 36846887.30 | 0.0258 | 0.0126 |
| Jupiter | 96172-03-23 01:12 G | 36847243.38 | 36847243.55 | 36847243.72 | 0.0499 | 0.0332 |
| Neptune | 96172-09-02 07:40 G | 36847406.73 | 36847406.82 | 36847406.92 | 0.0089 | 0.0083 |
| Neptune | 96173-09-04 14:24 G | 36847773.93 | 36847774.10 | 36847774.31 | 0.0089 | 0.0057 |
| Neptune | 96174-09-07 02:52 G | 36848141.40 | 36848141.62 | 36848141.85 | 0.0089 | 0.0047 |
| Neptune | 96175-09-09 15:07 G | 36848508.90 | 36848509.13 | 36848509.38 | 0.0089 | 0.0020 |
| Neptune | 96176-09-10 22:48 G | 36848876.19 | 36848876.45 | 36848876.71 | 0.0089 | 0.0009 |
| Neptune | 96177-09-13 14:38 G | 36849243.87 | 36849244.11 | 36849244.37 | 0.0089 | 0.0018 |
| Neptune | 96178-09-15 18:57 G | 36849611.05 | 36849611.29 | 36849611.54 | 0.0089 | 0.0027 |
| Neptune | 96179-09-18 12:28 G | 36849978.84 | 36849979.02 | 36849979.24 | 0.0089 | 0.0054 |
| Neptune | 96180-09-19 16:48 G | 36850346.05 | 36850346.20 | 36850346.39 | 0.0089 | 0.0064 |
| Mars | 96182-12-29 05:31 G | 36851176.55 | 36851176.73 | 36851176.90 | 0.1584 | 0.0671 |
| Jupiter | 96184-03-27 22:33 G | 36851631.21 | 36851631.44 | 36851631.68 | 0.0499 | 0.0059 |
| Saturn | 96184-09-16 18:00 G | 36851804.03 | 36851804.25 | 36851804.47 | 0.0305 | 0.0134 |
| Pluto | 96185-01-22 19:12 G | 36851932.17 | 36851932.30 | 36851932.50 | 0.0081 | 0.0062 |
| Uranus | 96185-02-14 22:48 G | 36851955.34 | 36851955.45 | 36851955.60 | 0.0143 | 0.0124 |
| Saturn | 96185-10-01 20:09 G | 36852184.18 | 36852184.34 | 36852184.50 | 0.0304 | 0.0231 |
| Uranus | 96186-02-19 18:43 G | 36852325.03 | 36852325.28 | 36852325.53 | 0.0143 | 0.0025 |
| Uranus | 96187-02-25 02:38 G | 36852695.39 | 36852695.61 | 36852695.86 | 0.0143 | 0.0061 |
| Jupiter | 96196-04-01 06:00 G | 36856018.68 | 36856018.75 | 36856018.84 | 0.0499 | 0.0468 |
| Saturn | 96199-03-16 15:36 G | 36857098.01 | 36857098.15 | 36857098.31 | 0.0257 | 0.0202 |
| Saturn | 96200-03-27 21:07 G | 36857474.13 | 36857474.38 | 36857474.64 | 0.0258 | 0.0025 |
| Saturn | 96201-04-08 01:12 G | 36857850.46 | 36857850.55 | 36857850.65 | 0.0259 | 0.0239 |
| Saturn | 96213-09-11 00:14 G | 36862389.50 | 36862389.51 | 36862389.52 | 0.0305 | 0.0304 |
| Jupiter | 96213-09-21 18:57 G | 36862400.10 | 36862400.29 | 36862400.49 | 0.0527 | 0.0303 |
| Saturn | 96214-09-26 07:26 G | 36862769.58 | 36862769.81 | 36862770.05 | 0.0304 | 0.0062 |
| Jupiter | 96225-09-26 23:31 G | 36866788.29 | 36866788.48 | 36866788.68 | 0.0527 | 0.0249 |
| Uranus | 96227-08-16 21:36 G | 36867477.32 | 36867477.40 | 36867477.50 | 0.0135 | 0.0125 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 96228-08-20 11:02 G | 36867846.75 | 36867846.96 | 36867847.20 | 0.0135 | 0.0056 |
| Saturn | 96229-03-23 00:43 G | 36868061.30 | 36868061.53 | 36868061.76 | 0.0257 | 0.0078 |
| Uranus | 96229-08-24 11:16 G | 36868215.72 | 36868215.97 | 36868216.22 | 0.0135 | 0.0024 |
| Saturn | 96230-04-03 13:12 G | 36868437.86 | 36868438.05 | 36868438.27 | 0.0258 | 0.0144 |
| Uranus | 96230-08-29 00:43 G | 36868585.39 | 36868585.53 | 36868585.69 | 0.0135 | 0.0108 |
| Saturn | 96243-09-19 06:43 G | 36873354.56 | 36873354.78 | 36873355.01 | 0.0305 | 0.0109 |
| Saturn | 96244-10-03 11:45 G | 36873734.88 | 36873734.99 | 36873735.13 | 0.0304 | 0.0255 |
| Jupiter | 96255-03-24 20:38 G | 36877559.20 | 36877559.36 | 36877559.53 | 0.0498 | 0.0359 |
| Neptune | 96256-03-06 09:07 G | 36877906.74 | 36877906.88 | 36877907.06 | 0.0088 | 0.0072 |
| Neptune | 96257-03-09 00:57 G | 36878274.37 | 36878274.54 | 36878274.74 | 0.0088 | 0.0060 |
| Neptune | 96258-03-11 08:38 G | 36878641.63 | 36878641.86 | 36878642.12 | 0.0088 | 0.0034 |
| Saturn | 96258-03-18 08:09 G | 36878648.67 | 36878648.84 | 36878649.03 | 0.0257 | 0.0181 |
| Neptune | 96259-03-14 03:50 G | 36879009.42 | 36879009.66 | 36879009.92 | 0.0088 | 0.0023 |
| Saturn | 96259-03-29 11:02 G | 36879024.71 | 36879024.96 | 36879025.21 | 0.0258 | 0.0043 |
| Neptune | 96260-03-15 09:21 G | 36879376.64 | 36879376.89 | 36879377.16 | 0.0088 | 0.0003 |
| Saturn | 96260-04-08 21:21 G | 36879401.35 | 36879401.39 | 36879401.45 | 0.0259 | 0.0254 |
| Neptune | 96261-03-18 05:02 G | 36879744.45 | 36879744.71 | 36879744.97 | 0.0088 | 0.0012 |
| Neptune | 96262-03-20 11:16 G | 36880111.76 | 36880111.97 | 36880112.22 | 0.0088 | 0.0040 |
| Neptune | 96263-03-23 04:04 G | 36880479.47 | 36880479.67 | 36880479.91 | 0.0088 | 0.0049 |
| Neptune | 96264-03-24 14:09 G | 36880846.99 | 36880847.09 | 36880847.24 | 0.0088 | 0.0077 |
| Neptune | 96265-03-27 02:38 G | 36881214.56 | 36881214.61 | 36881214.68 | 0.0088 | 0.0086 |
| Jupiter | 96267-03-29 03:36 G | 36881946.41 | 36881946.65 | 36881946.89 | 0.0499 | 0.0022 |
| Uranus | 96269-02-16 12:57 G | 36882636.91 | 36882637.04 | 36882637.21 | 0.0143 | 0.0118 |
| Uranus | 96270-02-21 09:21 G | 36883006.64 | 36883006.89 | 36883007.14 | 0.0143 | 0.0022 |
| Uranus | 96271-02-26 16:48 G | 36883377.00 | 36883377.20 | 36883377.42 | 0.0143 | 0.0084 |
| Saturn | 96272-09-11 19:26 G | 36883940.22 | 36883940.31 | 36883940.41 | 0.0305 | 0.0280 |
| Saturn | 96273-09-27 00:00 G | 36884320.26 | 36884320.50 | 36884320.74 | 0.0304 | 0.0083 |
| Jupiter | 96279-04-02 21:07 G | 36886334.26 | 36886334.38 | 36886334.50 | 0.0499 | 0.0421 |
| Saturn | 96288-03-23 23:45 G | 36889612.25 | 36889612.49 | 36889612.73 | 0.0257 | 0.0058 |
| Saturn | 96289-04-04 06:28 G | 36889988.58 | 36889988.77 | 36889988.98 | 0.0258 | 0.0157 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 96296-09-21 12:14 G | 36892715.84 | 36892716.01 | 36892716.18 | 0.0527 | 0.0332 |
| Saturn | 96302-09-21 00:43 G | 36894905.31 | 36894905.53 | 36894905.75 | 0.0306 | 0.0090 |
| Saturn | 96303-10-06 08:24 G | 36895285.76 | 36895285.85 | 36895285.95 | 0.0304 | 0.0274 |
| Jupiter | 96308-09-27 08:24 G | 36897103.64 | 36897103.85 | 36897104.08 | 0.0527 | 0.0202 |
| Mars | 96308-12-27 21:21 G | 36897195.34 | 36897195.39 | 36897195.44 | 0.1588 | 0.1528 |
| Uranus | 96311-08-18 09:21 G | 36898158.84 | 36898158.89 | 36898158.96 | 0.0135 | 0.0130 |
| Uranus | 96312-08-21 23:02 G | 36898528.22 | 36898528.46 | 36898528.69 | 0.0135 | 0.0044 |
| Uranus | 96313-08-25 22:19 G | 36898897.19 | 36898897.43 | 36898897.68 | 0.0135 | 0.0031 |
| Uranus | 96314-08-30 12:14 G | 36899266.87 | 36899267.01 | 36899267.17 | 0.0135 | 0.0107 |
| Saturn | 96317-03-19 21:50 G | 36900199.22 | 36900199.41 | 36900199.61 | 0.0257 | 0.0161 |
| Mars | 96317-07-03 15:36 G | 36900304.97 | 36900305.15 | 36900305.33 | 0.1955 | 0.0563 |
| Saturn | 96318-03-31 06:28 G | 36900575.54 | 36900575.77 | 36900576.01 | 0.0258 | 0.0058 |
| Saturn | 96331-09-14 07:40 G | 36905490.70 | 36905490.82 | 36905490.96 | 0.0305 | 0.0262 |
| Saturn | 96332-09-28 10:04 G | 36905870.69 | 36905870.92 | 36905871.16 | 0.0304 | 0.0102 |
| Neptune | 96336-09-03 13:12 G | 36907306.98 | 36907307.05 | 36907307.15 | 0.0089 | 0.0084 |
| Neptune | 96337-09-05 23:45 G | 36907674.34 | 36907674.49 | 36907674.69 | 0.0089 | 0.0068 |
| Jupiter | 96338-03-24 20:09 G | 36907874.22 | 36907874.34 | 36907874.48 | 0.0498 | 0.0415 |
| Neptune | 96338-09-08 12:43 G | 36908041.84 | 36908042.03 | 36908042.26 | 0.0089 | 0.0047 |
| Neptune | 96339-09-10 18:57 G | 36908409.06 | 36908409.29 | 36908409.55 | 0.0089 | 0.0030 |
| Pluto | 96340-07-27 06:00 G | 36908729.51 | 36908729.75 | 36908730.00 | 0.0063 | 0.0015 |
| Neptune | 96340-09-12 12:00 G | 36908776.75 | 36908777.00 | 36908777.25 | 0.0089 | 0.0009 |
| Neptune | 96341-09-14 16:04 G | 36909143.92 | 36909144.17 | 36909144.43 | 0.0089 | 0.0006 |
| Neptune | 96342-09-17 09:50 G | 36909511.66 | 36909511.91 | 36909512.15 | 0.0089 | 0.0027 |
| Neptune | 96343-09-19 14:38 G | 36909878.90 | 36909879.11 | 36909879.34 | 0.0089 | 0.0042 |
| Neptune | 96344-09-21 05:31 G | 36910246.58 | 36910246.73 | 36910246.94 | 0.0089 | 0.0065 |
| Neptune | 96345-09-23 14:24 G | 36910614.02 | 36910614.10 | 36910614.23 | 0.0089 | 0.0080 |
| Saturn | 96347-03-26 16:48 G | 36911162.95 | 36911163.20 | 36911163.46 | 0.0257 | 0.0042 |
| Saturn | 96348-04-05 19:26 G | 36911539.13 | 36911539.31 | 36911539.51 | 0.0258 | 0.0169 |
| Jupiter | 96350-03-29 18:57 G | 36912262.06 | 36912262.29 | 36912262.52 | 0.0499 | 0.0029 |
| Uranus | 96353-02-18 02:38 G | 36913318.45 | 36913318.61 | 36913318.80 | 0.0143 | 0.0106 |

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| Uranus | 96354-02-22 23:31 G | 36913688.23 | 36913688.48 | 36913688.74 | 0.0143 | 0.0009 |
| Uranus | 96355-02-28 06:28 G | 36914058.57 | 36914058.77 | 36914059.00 | 0.0143 | 0.0080 |
| Saturn | 96361-09-21 20:52 G | 36916456.14 | 36916456.37 | 36916456.60 | 0.0305 | 0.0072 |
| Jupiter | 96362-04-03 05:16 G | 36916649.58 | 36916649.72 | 36916649.87 | 0.0499 | 0.0397 |
| Saturn | 96362-10-07 02:38 G | 36916836.56 | 36916836.61 | 36916836.69 | 0.0304 | 0.0291 |
| Saturn | 96376-03-20 17:02 G | 36921750.02 | 36921750.21 | 36921750.42 | 0.0257 | 0.0144 |
| Saturn | 96377-04-01 06:14 G | 36922126.53 | 36922126.76 | 36922126.99 | 0.0258 | 0.0072 |
| Jupiter | 96379-09-22 20:52 G | 36923031.21 | 36923031.37 | 36923031.54 | 0.0527 | 0.0377 |
| Mars | 96387-12-31 00:00 G | 36926052.32 | 36926052.50 | 36926052.68 | 0.1587 | 0.0320 |
| Saturn | 96390-09-14 21:07 G | 36927041.25 | 36927041.38 | 36927041.54 | 0.0305 | 0.0242 |
| Jupiter | 96391-09-27 19:12 G | 36927419.09 | 36927419.30 | 36927419.51 | 0.0527 | 0.0172 |
| Saturn | 96391-09-30 02:52 G | 36927421.41 | 36927421.62 | 36927421.84 | 0.0304 | 0.0120 |
| Uranus | 96395-08-18 22:04 G | 36928840.29 | 36928840.42 | 36928840.56 | 0.0135 | 0.0112 |
| Uranus | 96396-08-22 11:16 G | 36929209.74 | 36929209.97 | 36929210.22 | 0.0135 | 0.0044 |
| Uranus | 96397-08-26 11:02 G | 36929578.73 | 36929578.96 | 36929579.21 | 0.0135 | 0.0038 |
| Uranus | 96398-08-31 00:43 G | 36929948.44 | 36929948.53 | 36929948.66 | 0.0135 | 0.0121 |
| Saturn | 96405-03-16 05:16 G | 36932337.66 | 36932337.72 | 36932337.80 | 0.0257 | 0.0246 |
| Saturn | 96406-03-27 07:40 G | 36932713.57 | 36932713.82 | 36932714.08 | 0.0257 | 0.0027 |
| Saturn | 96407-04-07 15:07 G | 36933089.97 | 36933090.13 | 36933090.31 | 0.0258 | 0.0182 |
| Neptune | 96420-03-06 18:57 G | 36937807.17 | 36937807.29 | 36937807.42 | 0.0088 | 0.0076 |
| Saturn | 96420-09-22 14:52 G | 36938006.87 | 36938007.12 | 36938007.36 | 0.0305 | 0.0052 |
| Neptune | 96421-03-09 01:26 G | 36938174.40 | 36938174.56 | 36938174.75 | 0.0088 | 0.0066 |
| Jupiter | 96421-03-24 17:02 G | 36938190.11 | 36938190.21 | 36938190.31 | 0.0499 | 0.0447 |
| Neptune | 96422-03-11 20:24 G | 36938542.15 | 36938542.35 | 36938542.61 | 0.0088 | 0.0042 |
| Neptune | 96423-03-14 02:24 G | 36938909.36 | 36938909.60 | 36938909.85 | 0.0088 | 0.0029 |
| Neptune | 96424-03-15 21:21 G | 36939277.13 | 36939277.39 | 36939277.66 | 0.0088 | 0.0005 |
| Neptune | 96425-03-18 04:33 G | 36939644.44 | 36939644.69 | 36939644.94 | 0.0088 | 0.0009 |
| Neptune | 96426-03-20 19:55 G | 36940012.08 | 36940012.33 | 36940012.59 | 0.0088 | 0.0033 |
| Neptune | 96427-03-23 07:40 G | 36940379.61 | 36940379.82 | 36940380.04 | 0.0088 | 0.0046 |
| Neptune | 96428-03-24 18:28 G | 36940747.12 | 36940747.27 | 36940747.46 | 0.0088 | 0.0069 |

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| Neptune | 96429-03-27 11:02 G | 36941114.88 | 36941114.96 | 36941115.07 | 0.0088 | 0.0082 |
| Pluto | 96431-01-26 18:28 G | 36941785.07 | 36941785.27 | 36941785.50 | 0.0081 | 0.0048 |
| Jupiter | 96433-03-29 02:38 G | 36942577.37 | 36942577.61 | 36942577.86 | 0.0499 | 0.0059 |
| Saturn | 96435-03-22 17:31 G | 36943301.03 | 36943301.23 | 36943301.45 | 0.0257 | 0.0126 |
| Saturn | 96436-04-02 02:52 G | 36943677.39 | 36943677.62 | 36943677.87 | 0.0258 | 0.0087 |
| Uranus | 96437-02-18 15:21 G | 36943999.97 | 36944000.14 | 36944000.34 | 0.0143 | 0.0103 |
| Uranus | 96438-02-23 13:12 G | 36944369.80 | 36944370.05 | 36944370.31 | 0.0143 | 0.0005 |
| Uranus | 96439-02-28 19:55 G | 36944740.15 | 36944740.33 | 36944740.53 | 0.0143 | 0.0100 |
| Jupiter | 96445-04-02 19:12 G | 36946965.16 | 36946965.30 | 36946965.45 | 0.0499 | 0.0375 |
| Saturn | 96449-09-15 18:57 G | 36948592.13 | 36948592.29 | 36948592.45 | 0.0305 | 0.0221 |
| Saturn | 96450-10-01 03:07 G | 36948972.43 | 36948972.63 | 36948972.84 | 0.0304 | 0.0139 |
| Jupiter | 96462-09-22 08:52 G | 36953346.73 | 36953346.87 | 36953347.02 | 0.0528 | 0.0405 |
| Saturn | 96464-03-16 22:33 G | 36953888.32 | 36953888.44 | 36953888.57 | 0.0258 | 0.0223 |
| Saturn | 96465-03-28 04:48 G | 36954264.46 | 36954264.70 | 36954264.95 | 0.0258 | 0.0008 |
| Saturn | 96466-04-08 18:14 G | 36954641.11 | 36954641.26 | 36954641.41 | 0.0258 | 0.0197 |
| Jupiter | 96474-09-27 11:02 G | 36957734.73 | 36957734.96 | 36957735.18 | 0.0527 | 0.0135 |
| Uranus | 96479-08-19 10:33 G | 36959521.83 | 36959521.94 | 36959522.06 | 0.0135 | 0.0118 |
| Saturn | 96479-09-24 09:36 G | 36959557.65 | 36959557.90 | 36959558.15 | 0.0305 | 0.0030 |
| Uranus | 96480-08-22 23:31 G | 36959891.23 | 36959891.48 | 36959891.72 | 0.0135 | 0.0031 |
| Uranus | 96481-08-26 22:48 G | 36960260.22 | 36960260.45 | 36960260.69 | 0.0135 | 0.0043 |
| Uranus | 96482-08-31 12:00 G | 36960629.91 | 36960630.00 | 36960630.14 | 0.0135 | 0.0120 |
| Saturn | 96494-03-23 18:43 G | 36964852.06 | 36964852.28 | 36964852.52 | 0.0257 | 0.0104 |
| Saturn | 96495-04-03 22:04 G | 36965228.19 | 36965228.42 | 36965228.66 | 0.0258 | 0.0102 |
| Neptune | 96500-09-03 18:43 G | 36967207.23 | 36967207.28 | 36967207.39 | 0.0089 | 0.0086 |
| Neptune | 96501-09-06 09:07 G | 36967574.78 | 36967574.88 | 36967575.03 | 0.0089 | 0.0077 |
| Neptune | 96502-09-08 15:21 G | 36967941.94 | 36967942.14 | 36967942.37 | 0.0089 | 0.0049 |
| Neptune | 96503-09-11 08:38 G | 36968309.65 | 36968309.86 | 36968310.10 | 0.0089 | 0.0040 |
| Jupiter | 96504-03-24 21:07 G | 36968505.34 | 36968505.38 | 36968505.41 | 0.0498 | 0.0492 |
| Neptune | 96504-09-12 12:43 G | 36968676.79 | 36968677.03 | 36968677.29 | 0.0089 | 0.0012 |
| Neptune | 96505-09-15 06:14 G | 36969044.51 | 36969044.76 | 36969045.02 | 0.0089 | 0.0003 |

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| Neptune | 96506-09-17 11:31 G | 36969411.76 | 36969411.98 | 36969412.23 | 0.0089 | 0.0025 |
| Neptune | 96507-09-20 01:55 G | 36969779.34 | 36969779.58 | 36969779.82 | 0.0089 | 0.0034 |
| Saturn | 96508-09-18 01:12 G | 36970143.38 | 36970143.55 | 36970143.74 | 0.0305 | 0.0194 |
| Neptune | 96508-09-21 10:48 G | 36970146.79 | 36970146.95 | 36970147.15 | 0.0089 | 0.0062 |
| Neptune | 96509-09-23 20:38 G | 36970514.20 | 36970514.36 | 36970514.52 | 0.0089 | 0.0070 |
| Saturn | 96509-10-03 07:40 G | 36970523.62 | 36970523.82 | 36970524.02 | 0.0304 | 0.0167 |
| Jupiter | 96516-03-29 09:21 G | 36972892.67 | 36972892.89 | 36972893.11 | 0.0498 | 0.0125 |
| Uranus | 96521-02-19 23:31 G | 36974681.29 | 36974681.48 | 36974681.70 | 0.0144 | 0.0093 |
| Uranus | 96522-02-24 22:48 G | 36975051.20 | 36975051.45 | 36975051.70 | 0.0143 | 0.0003 |
| Uranus | 96523-03-02 04:33 G | 36975421.50 | 36975421.69 | 36975421.90 | 0.0143 | 0.0093 |
| Saturn | 96523-03-19 20:09 G | 36975439.20 | 36975439.34 | 36975439.50 | 0.0258 | 0.0201 |
| Saturn | 96524-03-30 09:21 G | 36975815.65 | 36975815.89 | 36975816.13 | 0.0258 | 0.0012 |
| Saturn | 96525-04-10 20:52 G | 36976192.25 | 36976192.37 | 36976192.52 | 0.0259 | 0.0215 |
| Jupiter | 96528-04-03 00:57 G | 36977280.35 | 36977280.54 | 36977280.73 | 0.0499 | 0.0313 |
| Saturn | 96538-09-26 12:14 G | 36981108.77 | 36981109.01 | 36981109.25 | 0.0305 | 0.0001 |
| Jupiter | 96545-09-22 18:00 G | 36983662.15 | 36983662.25 | 36983662.37 | 0.0527 | 0.0463 |
| Saturn | 96553-03-25 17:45 G | 36986403.00 | 36986403.24 | 36986403.49 | 0.0258 | 0.0082 |
| Saturn | 96554-04-05 22:48 G | 36986779.25 | 36986779.45 | 36986779.68 | 0.0258 | 0.0125 |
| Jupiter | 96557-09-27 06:43 G | 36988049.55 | 36988049.78 | 36988050.01 | 0.0527 | 0.0058 |
| Uranus | 96563-08-20 23:31 G | 36990203.32 | 36990203.48 | 36990203.65 | 0.0135 | 0.0099 |
| Uranus | 96564-08-24 12:00 G | 36990572.76 | 36990573.00 | 36990573.26 | 0.0135 | 0.0032 |
| Uranus | 96565-08-28 12:00 G | 36990941.78 | 36990942.00 | 36990942.24 | 0.0135 | 0.0052 |
| Uranus | 96566-09-02 01:26 G | 36991311.52 | 36991311.56 | 36991311.62 | 0.0135 | 0.0132 |
| Saturn | 96567-09-20 11:02 G | 36991694.75 | 36991694.96 | 36991695.17 | 0.0305 | 0.0160 |
| Saturn | 96568-10-04 13:26 G | 36992074.88 | 36992075.06 | 36992075.26 | 0.0304 | 0.0197 |
| Saturn | 96582-03-21 03:50 G | 36996990.49 | 36996990.66 | 36996990.83 | 0.0258 | 0.0178 |
| Saturn | 96583-04-01 16:48 G | 36997366.96 | 36997367.20 | 36997367.45 | 0.0258 | 0.0035 |
| Neptune | 96584-03-06 17:31 G | 36997707.23 | 36997707.23 | 36997707.25 | 0.0088 | 0.0088 |
| Saturn | 96584-04-11 22:19 G | 36997743.34 | 36997743.43 | 36997743.54 | 0.0259 | 0.0237 |
| Neptune | 96585-03-09 12:57 G | 36998074.88 | 36998075.04 | 36998075.23 | 0.0088 | 0.0065 |

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| Neptune | 96586-03-11 18:28 G | 36998442.08 | 36998442.27 | 36998442.50 | 0.0088 | 0.0053 |
| Pluto | 96586-07-30 11:16 G | 36998582.76 | 36998582.97 | 36998583.22 | 0.0063 | 0.0023 |
| Neptune | 96587-03-14 13:12 G | 36998809.80 | 36998810.05 | 36998810.31 | 0.0088 | 0.0028 |
| Pluto | 96587-07-31 17:31 G | 36998949.15 | 36998949.23 | 36998949.34 | 0.0064 | 0.0059 |
| Neptune | 96588-03-15 21:50 G | 36999177.18 | 36999177.41 | 36999177.67 | 0.0088 | 0.0016 |
| Neptune | 96589-03-18 12:28 G | 36999544.76 | 36999545.02 | 36999545.30 | 0.0088 | 0.0009 |
| Neptune | 96590-03-21 01:26 G | 36999912.32 | 36999912.56 | 36999912.81 | 0.0088 | 0.0021 |
| Neptune | 96591-03-23 10:19 G | 37000279.72 | 37000279.93 | 37000280.19 | 0.0088 | 0.0046 |
| Neptune | 96592-03-25 04:04 G | 37000647.48 | 37000647.67 | 37000647.87 | 0.0088 | 0.0057 |
| Mars | 96592-12-29 19:26 G | 37000927.15 | 37000927.31 | 37000927.47 | 0.1590 | 0.0873 |
| Neptune | 96593-03-27 09:21 G | 37001014.83 | 37001014.89 | 37001015.02 | 0.0088 | 0.0083 |
| Saturn | 96597-09-28 03:07 G | 37002660.40 | 37002660.63 | 37002660.87 | 0.0305 | 0.0035 |
| Jupiter | 96599-03-29 17:02 G | 37003207.98 | 37003208.21 | 37003208.44 | 0.0498 | 0.0181 |
| Mars | 96601-07-04 11:45 G | 37004034.82 | 37004034.99 | 37004035.16 | 0.1951 | 0.1235 |
| Uranus | 96605-02-21 08:24 G | 37005362.66 | 37005362.85 | 37005363.06 | 0.0144 | 0.0096 |
| Uranus | 96606-02-26 08:52 G | 37005732.63 | 37005732.87 | 37005733.12 | 0.0143 | 0.0007 |
| Uranus | 96607-03-03 13:40 G | 37006102.92 | 37006103.07 | 37006103.26 | 0.0143 | 0.0109 |
| Jupiter | 96611-04-04 02:09 G | 37007595.40 | 37007595.59 | 37007595.79 | 0.0499 | 0.0262 |
| Saturn | 96612-03-27 19:40 G | 37007954.08 | 37007954.32 | 37007954.57 | 0.0258 | 0.0059 |
| Saturn | 96613-04-08 07:55 G | 37008330.64 | 37008330.83 | 37008331.03 | 0.0259 | 0.0149 |
| Saturn | 96626-09-22 21:21 G | 37013246.16 | 37013246.39 | 37013246.61 | 0.0305 | 0.0125 |
| Saturn | 96627-10-07 23:02 G | 37013626.31 | 37013626.46 | 37013626.62 | 0.0304 | 0.0233 |
| Jupiter | 96640-09-27 17:45 G | 37018365.01 | 37018365.24 | 37018365.46 | 0.0528 | 0.0011 |
| Saturn | 96641-03-23 14:24 G | 37018541.92 | 37018542.10 | 37018542.31 | 0.0258 | 0.0154 |
| Saturn | 96642-04-03 22:19 G | 37018918.18 | 37018918.43 | 37018918.68 | 0.0259 | 0.0058 |
| Uranus | 96647-08-22 12:57 G | 37020884.90 | 37020885.04 | 37020885.20 | 0.0135 | 0.0105 |
| Uranus | 96648-08-26 00:57 G | 37021254.29 | 37021254.54 | 37021254.80 | 0.0135 | 0.0017 |
| Uranus | 96649-08-30 01:26 G | 37021623.33 | 37021623.56 | 37021623.78 | 0.0135 | 0.0056 |
| Uranus | 96650-09-03 13:55 G | 37021993.08 | 37021993.08 | 37021993.10 | 0.0135 | 0.0135 |
| Jupiter | 96652-10-02 08:09 G | 37022752.72 | 37022752.84 | 37022752.97 | 0.0527 | 0.0451 |

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| Saturn | 96655-09-16 18:14 G | 37023832.20 | 37023832.26 | 37023832.36 | 0.0304 | 0.0286 |
| Saturn | 96656-10-01 00:14 G | 37024212.29 | 37024212.51 | 37024212.75 | 0.0304 | 0.0074 |
| Neptune | 96665-09-06 10:48 G | 37027474.85 | 37027474.95 | 37027475.09 | 0.0089 | 0.0079 |
| Neptune | 96666-09-09 04:19 G | 37027842.51 | 37027842.68 | 37027842.89 | 0.0089 | 0.0060 |
| Neptune | 96667-09-11 08:38 G | 37028209.65 | 37028209.86 | 37028210.09 | 0.0089 | 0.0042 |
| Neptune | 96668-09-13 01:12 G | 37028577.31 | 37028577.55 | 37028577.82 | 0.0089 | 0.0023 |
| Neptune | 96669-09-15 07:40 G | 37028944.58 | 37028944.82 | 37028945.07 | 0.0089 | 0.0004 |
| Saturn | 96670-03-18 18:57 G | 37029129.22 | 37029129.29 | 37029129.35 | 0.0258 | 0.0249 |
| Neptune | 96670-09-17 20:52 G | 37029312.11 | 37029312.37 | 37029312.63 | 0.0089 | 0.0014 |
| Saturn | 96671-03-30 06:43 G | 37029505.54 | 37029505.78 | 37029506.02 | 0.0258 | 0.0036 |
| Neptune | 96671-09-20 07:40 G | 37029679.60 | 37029679.82 | 37029680.06 | 0.0089 | 0.0033 |
| Mars | 96672-01-03 02:38 G | 37029784.47 | 37029784.61 | 37029784.75 | 0.1588 | 0.1133 |
| Saturn | 96672-04-09 20:52 G | 37029882.20 | 37029882.37 | 37029882.56 | 0.0259 | 0.0173 |
| Neptune | 96672-09-21 16:04 G | 37030046.96 | 37030047.17 | 37030047.40 | 0.0089 | 0.0050 |
| Neptune | 96673-09-24 07:12 G | 37030414.67 | 37030414.80 | 37030414.98 | 0.0089 | 0.0070 |
| Neptune | 96674-09-26 12:00 G | 37030781.96 | 37030782.00 | 37030782.06 | 0.0089 | 0.0087 |
| Pluto | 96677-01-29 14:09 G | 37031637.88 | 37031638.09 | 37031638.34 | 0.0081 | 0.0039 |
| Jupiter | 96682-03-29 14:52 G | 37033522.92 | 37033523.12 | 37033523.32 | 0.0498 | 0.0255 |
| Saturn | 96685-09-24 14:38 G | 37034797.88 | 37034798.11 | 37034798.35 | 0.0304 | 0.0084 |
| Saturn | 96686-10-09 18:43 G | 37035178.20 | 37035178.28 | 37035178.39 | 0.0303 | 0.0275 |
| Uranus | 96689-02-21 16:04 G | 37036043.97 | 37036044.17 | 37036044.41 | 0.0144 | 0.0083 |
| Uranus | 96690-02-26 18:14 G | 37036414.02 | 37036414.26 | 37036414.51 | 0.0143 | 0.0011 |
| Uranus | 96691-03-03 21:50 G | 37036784.24 | 37036784.41 | 37036784.60 | 0.0143 | 0.0105 |
| Jupiter | 96694-04-03 07:55 G | 37037910.61 | 37037910.83 | 37037911.05 | 0.0498 | 0.0183 |
| Saturn | 96700-03-25 22:33 G | 37040093.23 | 37040093.44 | 37040093.68 | 0.0258 | 0.0128 |
| Saturn | 96701-04-06 03:07 G | 37040469.40 | 37040469.63 | 37040469.88 | 0.0259 | 0.0081 |
| Saturn | 96714-09-19 18:57 G | 37045384.15 | 37045384.29 | 37045384.44 | 0.0304 | 0.0239 |
| Saturn | 96715-10-04 21:36 G | 37045764.18 | 37045764.40 | 37045764.64 | 0.0304 | 0.0117 |
| Jupiter | 96723-09-28 08:24 G | 37048679.62 | 37048679.85 | 37048680.08 | 0.0527 | 0.0109 |
| Saturn | 96729-03-21 05:31 G | 37050680.61 | 37050680.73 | 37050680.85 | 0.0258 | 0.0222 |

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| Saturn | 96730-04-01 21:21 G | 37051057.15 | 37051057.39 | 37051057.63 | 0.0258 | 0.0011 |
| Saturn | 96731-04-13 07:40 G | 37051433.66 | 37051433.82 | 37051433.99 | 0.0259 | 0.0197 |
| Uranus | 96731-08-24 02:09 G | 37051566.42 | 37051566.59 | 37051566.80 | 0.0135 | 0.0085 |
| Uranus | 96732-08-27 13:55 G | 37051935.83 | 37051936.08 | 37051936.34 | 0.0135 | 0.0018 |
| Uranus | 96733-08-31 15:07 G | 37052304.93 | 37052305.13 | 37052305.35 | 0.0135 | 0.0068 |
| Jupiter | 96735-10-03 06:43 G | 37053067.61 | 37053067.78 | 37053067.95 | 0.0527 | 0.0342 |
| Saturn | 96744-09-27 15:50 G | 37056349.92 | 37056350.16 | 37056350.39 | 0.0304 | 0.0037 |
| Neptune | 96749-03-10 12:00 G | 37057974.85 | 37057975.00 | 37057975.16 | 0.0088 | 0.0069 |
| Neptune | 96750-03-13 04:48 G | 37058342.51 | 37058342.70 | 37058342.91 | 0.0088 | 0.0059 |
| Neptune | 96751-03-15 14:24 G | 37058709.88 | 37058710.10 | 37058710.34 | 0.0088 | 0.0033 |
| Neptune | 96752-03-17 02:52 G | 37059077.37 | 37059077.62 | 37059077.89 | 0.0088 | 0.0023 |
| Neptune | 96753-03-19 17:31 G | 37059444.98 | 37059445.23 | 37059445.49 | 0.0088 | 0.0003 |
| Neptune | 96754-03-22 01:55 G | 37059812.32 | 37059812.58 | 37059812.85 | 0.0088 | 0.0013 |
| Neptune | 96755-03-24 20:24 G | 37060180.14 | 37060180.35 | 37060180.59 | 0.0088 | 0.0041 |
| Neptune | 96756-03-26 01:55 G | 37060547.39 | 37060547.58 | 37060547.81 | 0.0088 | 0.0051 |
| Neptune | 96757-03-28 21:50 G | 37060915.29 | 37060915.41 | 37060915.55 | 0.0088 | 0.0077 |
| Neptune | 96758-03-31 03:50 G | 37061282.64 | 37061282.66 | 37061282.71 | 0.0088 | 0.0088 |
| Saturn | 96759-03-28 05:16 G | 37061644.50 | 37061644.72 | 37061644.97 | 0.0259 | 0.0102 |
| Saturn | 96760-04-07 14:24 G | 37062020.88 | 37062021.10 | 37062021.33 | 0.0259 | 0.0106 |
| Jupiter | 96765-03-29 19:26 G | 37063838.14 | 37063838.31 | 37063838.49 | 0.0498 | 0.0335 |
| Uranus | 96773-02-23 05:16 G | 37066725.53 | 37066725.72 | 37066725.96 | 0.0144 | 0.0085 |
| Saturn | 96773-09-21 18:14 G | 37066936.08 | 37066936.26 | 37066936.47 | 0.0304 | 0.0191 |
| Uranus | 96774-02-28 08:52 G | 37067095.63 | 37067095.87 | 37067096.12 | 0.0143 | 0.0021 |
| Saturn | 96774-10-06 18:57 G | 37067316.08 | 37067316.29 | 37067316.50 | 0.0304 | 0.0162 |
| Uranus | 96775-03-05 11:16 G | 37067465.85 | 37067465.97 | 37067466.13 | 0.0143 | 0.0122 |
| Jupiter | 96777-04-02 23:45 G | 37068225.26 | 37068225.49 | 37068225.72 | 0.0498 | 0.0104 |
| Saturn | 96788-03-22 20:24 G | 37072232.20 | 37072232.35 | 37072232.52 | 0.0258 | 0.0195 |
| Saturn | 96789-04-03 08:52 G | 37072608.62 | 37072608.87 | 37072609.13 | 0.0258 | 0.0018 |
| Saturn | 96790-04-14 14:09 G | 37072984.96 | 37072985.09 | 37072985.23 | 0.0259 | 0.0221 |
| Mars | 96797-12-31 13:12 G | 37075802.96 | 37075803.05 | 37075803.14 | 0.1593 | 0.1355 |

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| Saturn | 96803-09-30 19:55 G | 37077902.10 | 37077902.33 | 37077902.57 | 0.0304 | 0.0011 |
| Jupiter | 96806-09-27 07:26 G | 37078994.61 | 37078994.81 | 37078995.01 | 0.0528 | 0.0222 |
| Uranus | 96815-08-24 17:02 G | 37082248.03 | 37082248.21 | 37082248.39 | 0.0135 | 0.0090 |
| Uranus | 96816-08-28 03:50 G | 37082617.40 | 37082617.66 | 37082617.92 | 0.0135 | 0.0001 |
| Uranus | 96817-09-01 05:16 G | 37082986.53 | 37082986.72 | 37082986.94 | 0.0135 | 0.0072 |
| Saturn | 96818-03-29 14:52 G | 37083195.88 | 37083196.12 | 37083196.35 | 0.0259 | 0.0073 |
| Jupiter | 96818-10-02 02:38 G | 37083382.39 | 37083382.61 | 37083382.82 | 0.0528 | 0.0236 |
| Saturn | 96819-04-10 05:31 G | 37083572.52 | 37083572.73 | 37083572.94 | 0.0259 | 0.0131 |
| Neptune | 96829-09-06 22:48 G | 37087375.35 | 37087375.45 | 37087375.57 | 0.0089 | 0.0080 |
| Neptune | 96830-09-09 03:36 G | 37087742.50 | 37087742.65 | 37087742.81 | 0.0089 | 0.0071 |
| Neptune | 96831-09-11 19:55 G | 37088110.11 | 37088110.33 | 37088110.57 | 0.0089 | 0.0043 |
| Pluto | 96832-08-02 12:00 G | 37088435.80 | 37088436.00 | 37088436.24 | 0.0063 | 0.0035 |
| Neptune | 96832-09-13 03:36 G | 37088477.44 | 37088477.65 | 37088477.89 | 0.0089 | 0.0034 |
| Saturn | 96832-09-23 14:24 G | 37088487.89 | 37088488.10 | 37088488.33 | 0.0304 | 0.0145 |
| Pluto | 96833-08-03 18:43 G | 37088802.13 | 37088802.28 | 37088802.47 | 0.0064 | 0.0046 |
| Neptune | 96833-09-15 15:50 G | 37088844.90 | 37088845.16 | 37088845.43 | 0.0089 | 0.0006 |
| Saturn | 96833-10-08 16:33 G | 37088868.02 | 37088868.19 | 37088868.37 | 0.0304 | 0.0210 |
| Neptune | 96834-09-18 03:50 G | 37089212.42 | 37089212.66 | 37089212.91 | 0.0089 | 0.0004 |
| Neptune | 96835-09-20 10:33 G | 37089579.71 | 37089579.94 | 37089580.19 | 0.0089 | 0.0031 |
| Neptune | 96836-09-22 02:52 G | 37089947.41 | 37089947.62 | 37089947.85 | 0.0089 | 0.0041 |
| Neptune | 96837-09-24 06:57 G | 37090314.64 | 37090314.79 | 37090314.97 | 0.0089 | 0.0069 |
| Neptune | 96838-09-27 00:28 G | 37090682.42 | 37090682.52 | 37090682.67 | 0.0089 | 0.0077 |
| Saturn | 96847-03-25 09:50 G | 37093783.72 | 37093783.91 | 37093784.10 | 0.0258 | 0.0165 |
| Jupiter | 96848-03-28 11:16 G | 37094152.84 | 37094152.97 | 37094153.10 | 0.0498 | 0.0415 |
| Saturn | 96848-04-04 15:36 G | 37094159.90 | 37094160.15 | 37094160.41 | 0.0258 | 0.0042 |
| Saturn | 96849-04-15 22:04 G | 37094536.36 | 37094536.42 | 37094536.51 | 0.0259 | 0.0246 |
| Uranus | 96857-02-23 18:43 G | 37097407.05 | 37097407.28 | 37097407.52 | 0.0144 | 0.0065 |
| Uranus | 96858-02-28 23:02 G | 37097777.22 | 37097777.46 | 37097777.71 | 0.0143 | 0.0027 |
| Uranus | 96859-03-06 00:28 G | 37098147.40 | 37098147.52 | 37098147.66 | 0.0143 | 0.0124 |
| Jupiter | 96860-04-02 07:40 G | 37098540.59 | 37098540.82 | 37098541.06 | 0.0498 | 0.0042 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 96861-09-17 16:33 G | 37099074.14 | 37099074.19 | 37099074.24 | 0.0304 | 0.0296 |
| Saturn | 96862-10-02 21:07 G | 37099454.15 | 37099454.38 | 37099454.62 | 0.0304 | 0.0060 |
| Jupiter | 96872-04-06 14:52 G | 37102928.06 | 37102928.12 | 37102928.19 | 0.0498 | 0.0479 |
| Mars | 96877-01-02 07:55 G | 37104659.65 | 37104659.83 | 37104660.00 | 0.1591 | 0.0048 |
| Saturn | 96877-03-31 03:07 G | 37104747.40 | 37104747.63 | 37104747.87 | 0.0258 | 0.0049 |
| Saturn | 96878-04-11 17:02 G | 37105124.02 | 37105124.21 | 37105124.41 | 0.0259 | 0.0156 |
| Jupiter | 96889-09-26 03:07 G | 37109309.44 | 37109309.63 | 37109309.82 | 0.0528 | 0.0313 |
| Saturn | 96891-09-26 09:50 G | 37110039.69 | 37110039.91 | 37110040.14 | 0.0304 | 0.0100 |
| Saturn | 96892-10-10 15:21 G | 37110420.02 | 37110420.14 | 37110420.27 | 0.0303 | 0.0255 |
| Uranus | 96899-08-25 06:57 G | 37112929.59 | 37112929.79 | 37112930.01 | 0.0135 | 0.0069 |
| Uranus | 96900-08-29 17:16 G | 37113298.96 | 37113299.22 | 37113299.48 | 0.0135 | 0.0002 |
| Uranus | 96901-09-02 19:55 G | 37113668.15 | 37113668.33 | 37113668.53 | 0.0135 | 0.0085 |
| Jupiter | 96901-10-01 23:45 G | 37113697.28 | 37113697.49 | 37113697.71 | 0.0527 | 0.0141 |
| Saturn | 96906-03-27 15:36 G | 37115334.93 | 37115335.15 | 37115335.36 | 0.0258 | 0.0140 |
| Saturn | 96907-04-07 20:38 G | 37115711.13 | 37115711.36 | 37115711.61 | 0.0258 | 0.0067 |
| Neptune | 96913-03-10 19:40 G | 37117875.24 | 37117875.32 | 37117875.47 | 0.0088 | 0.0080 |
| Neptune | 96914-03-13 07:40 G | 37118242.65 | 37118242.82 | 37118243.01 | 0.0088 | 0.0060 |
| Neptune | 96915-03-15 18:57 G | 37118610.06 | 37118610.29 | 37118610.53 | 0.0088 | 0.0044 |
| Neptune | 96916-03-17 11:02 G | 37118977.72 | 37118977.96 | 37118978.21 | 0.0088 | 0.0024 |
| Neptune | 96917-03-19 17:45 G | 37119344.98 | 37119345.24 | 37119345.51 | 0.0088 | 0.0008 |
| Neptune | 96918-03-22 12:57 G | 37119712.79 | 37119713.04 | 37119713.30 | 0.0088 | 0.0014 |
| Neptune | 96919-03-24 18:14 G | 37120080.03 | 37120080.26 | 37120080.52 | 0.0088 | 0.0029 |
| Neptune | 96920-03-26 13:12 G | 37120447.86 | 37120448.05 | 37120448.29 | 0.0088 | 0.0052 |
| Saturn | 96920-09-20 11:31 G | 37120625.86 | 37120625.98 | 37120626.12 | 0.0305 | 0.0256 |
| Neptune | 96921-03-28 20:24 G | 37120815.18 | 37120815.35 | 37120815.52 | 0.0088 | 0.0065 |
| Saturn | 96921-10-05 13:55 G | 37121005.84 | 37121006.08 | 37121006.32 | 0.0304 | 0.0099 |
| Neptune | 96922-03-31 11:45 G | 37121182.98 | 37121182.99 | 37121183.07 | 0.0088 | 0.0088 |
| Pluto | 96923-02-02 13:12 G | 37121490.81 | 37121491.05 | 37121491.31 | 0.0081 | 0.0010 |
| Jupiter | 96931-03-29 21:07 G | 37124468.32 | 37124468.38 | 37124468.46 | 0.0498 | 0.0474 |
| Saturn | 96935-03-23 00:14 G | 37125922.42 | 37125922.51 | 37125922.61 | 0.0258 | 0.0236 |

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| Saturn | 96936-04-02 14:24 G | 37126298.86 | 37126299.10 | 37126299.35 | 0.0258 | 0.0025 |
| Saturn | 96937-04-13 21:21 G | 37126675.21 | 37126675.39 | 37126675.58 | 0.0259 | 0.0179 |
| Uranus | 96941-02-25 10:04 G | 37128088.70 | 37128088.92 | 37128089.17 | 0.0144 | 0.0067 |
| Uranus | 96942-03-02 15:36 G | 37128458.92 | 37128459.15 | 37128459.40 | 0.0143 | 0.0042 |
| Uranus | 96943-03-07 16:04 G | 37128829.14 | 37128829.17 | 37128829.25 | 0.0143 | 0.0141 |
| Jupiter | 96943-04-03 04:33 G | 37128855.45 | 37128855.69 | 37128855.93 | 0.0498 | 0.0024 |
| Saturn | 96950-09-29 04:48 G | 37131591.47 | 37131591.70 | 37131591.93 | 0.0305 | 0.0064 |
| Saturn | 96951-10-14 11:31 G | 37131971.92 | 37131971.98 | 37131972.05 | 0.0303 | 0.0292 |
| Jupiter | 96955-04-07 18:14 G | 37133243.13 | 37133243.26 | 37133243.39 | 0.0499 | 0.0407 |
| Saturn | 96965-03-28 17:02 G | 37136886.00 | 37136886.21 | 37136886.45 | 0.0258 | 0.0120 |
| Saturn | 96966-04-09 03:50 G | 37137262.44 | 37137262.66 | 37137262.90 | 0.0258 | 0.0088 |
| Jupiter | 96972-09-26 02:52 G | 37139624.48 | 37139624.62 | 37139624.77 | 0.0527 | 0.0402 |
| Saturn | 96979-09-22 20:09 G | 37142177.18 | 37142177.34 | 37142177.52 | 0.0305 | 0.0224 |
| Saturn | 96980-10-06 22:33 G | 37142557.22 | 37142557.44 | 37142557.66 | 0.0305 | 0.0131 |
| Uranus | 96983-08-26 22:04 G | 37143611.23 | 37143611.42 | 37143611.63 | 0.0134 | 0.0075 |
| Uranus | 96984-08-30 06:57 G | 37143980.54 | 37143980.79 | 37143981.05 | 0.0135 | 0.0016 |
| Jupiter | 96984-10-01 03:50 G | 37144012.43 | 37144012.66 | 37144012.90 | 0.0527 | 0.0045 |
| Uranus | 96985-09-03 10:19 G | 37144349.76 | 37144349.93 | 37144350.13 | 0.0135 | 0.0087 |
| Neptune | 96993-09-06 22:19 G | 37147275.41 | 37147275.43 | 37147275.47 | 0.0089 | 0.0089 |
| Saturn | 96994-03-24 09:07 G | 37147473.75 | 37147473.88 | 37147474.02 | 0.0258 | 0.0212 |
| Neptune | 96994-09-09 13:26 G | 37147642.92 | 37147643.06 | 37147643.21 | 0.0089 | 0.0074 |
| Saturn | 96995-04-04 17:16 G | 37147849.96 | 37147850.22 | 37147850.47 | 0.0258 | 0.0007 |
| Neptune | 96995-09-11 22:04 G | 37148010.23 | 37148010.42 | 37148010.63 | 0.0089 | 0.0053 |
| Saturn | 96996-04-14 20:52 G | 37148226.21 | 37148226.37 | 37148226.54 | 0.0259 | 0.0196 |
| Neptune | 96996-09-13 08:38 G | 37148377.63 | 37148377.86 | 37148378.11 | 0.0089 | 0.0038 |
| Jupiter | 96996-10-05 17:31 G | 37148400.17 | 37148400.23 | 37148400.31 | 0.0527 | 0.0503 |
| Neptune | 96997-09-15 22:33 G | 37148745.20 | 37148745.44 | 37148745.69 | 0.0089 | 0.0016 |
| Neptune | 96998-09-18 05:02 G | 37149112.45 | 37149112.71 | 37149112.97 | 0.0089 | 0.0001 |
| Neptune | 96999-09-20 22:04 G | 37149480.18 | 37149480.42 | 37149480.67 | 0.0089 | 0.0022 |
| Neptune | 97000-09-23 02:09 G | 37149847.36 | 37149847.59 | 37149847.82 | 0.0089 | 0.0038 |

98TH MILLENNIUM CE

This is a list of transits of Moon in the 98th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Neptune | 97001-09-25 19:26 | G | 37150215.13 | 37150215.31 | 37150215.52 | 0.0089 | 0.0058 | |
| Neptune | 97002-09-28 00:28 | G | 37150582.41 | 37150582.52 | 37150582.68 | 0.0089 | 0.0074 | |
| Saturn | 97009-10-01 18:28 | G | 37153143.03 | 37153143.27 | 37153143.51 | 0.0305 | 0.0034 | |
| Saturn | 97024-03-30 21:36 | G | 37158437.18 | 37158437.40 | 37158437.63 | 0.0257 | 0.0099 | |
| Uranus | 97025-02-26 20:38 | G | 37158770.12 | 37158770.36 | 37158770.62 | 0.0144 | 0.0048 | |
| Saturn | 97025-04-11 11:02 | G | 37158813.74 | 37158813.96 | 37158814.19 | 0.0258 | 0.0104 | |
| Uranus | 97026-03-04 03:07 | G | 37159140.41 | 37159140.63 | 37159140.88 | 0.0143 | 0.0044 | |
| Jupiter | 97026-04-03 10:33 | G | 37159170.72 | 37159170.94 | 37159171.17 | 0.0498 | 0.0087 | |
| Uranus | 97027-03-09 02:24 | G | 37159510.59 | 37159510.60 | 37159510.66 | 0.0143 | 0.0143 | |
| Jupiter | 97038-04-08 00:57 | G | 37163558.37 | 37163558.54 | 37163558.72 | 0.0499 | 0.0352 | |
| Saturn | 97038-09-24 22:48 | G | 37163728.28 | 37163728.45 | 37163728.64 | 0.0305 | 0.0200 | |
| Saturn | 97039-10-10 04:48 | G | 37164108.50 | 37164108.70 | 37164108.90 | 0.0305 | 0.0157 | |
| Saturn | 97053-03-26 10:48 | G | 37169024.78 | 37169024.95 | 37169025.12 | 0.0258 | 0.0190 | |
| Saturn | 97054-04-06 13:26 | G | 37169400.80 | 37169401.06 | 37169401.31 | 0.0258 | 0.0009 | |
| Saturn | 97055-04-17 21:36 | G | 37169777.27 | 37169777.40 | 37169777.54 | 0.0259 | 0.0214 | |
| Jupiter | 97055-09-27 10:19 | G | 37169939.83 | 37169939.93 | 37169940.04 | 0.0528 | 0.0471 | |
| Uranus | 97067-08-28 12:00 | G | 37174292.79 | 37174293.00 | 37174293.23 | 0.0134 | 0.0054 | |
| Jupiter | 97067-10-02 03:50 | G | 37174327.43 | 37174327.66 | 37174327.88 | 0.0527 | 0.0016 | |
| Uranus | 97068-08-31 19:40 | G | 37174662.07 | 37174662.32 | 37174662.59 | 0.0135 | 0.0013 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 97068-10-02 20:52 G | 37174694.12 | 37174694.37 | 37174694.62 | 0.0305 | 0.0009 |
| Uranus | 97069-09-05 00:00 G | 37175031.37 | 37175031.50 | 37175031.68 | 0.0135 | 0.0102 |
| Neptune | 97078-03-13 10:04 G | 37178142.76 | 37178142.92 | 37178143.14 | 0.0088 | 0.0063 |
| Pluto | 97078-08-06 02:09 G | 37178288.47 | 37178288.59 | 37178288.74 | 0.0063 | 0.0054 |
| Neptune | 97079-03-16 03:21 G | 37178510.46 | 37178510.64 | 37178510.86 | 0.0088 | 0.0054 |
| Pluto | 97079-08-07 19:26 G | 37178655.08 | 37178655.31 | 37178655.56 | 0.0063 | 0.0025 |
| Jupiter | 97079-10-07 11:16 G | 37178715.87 | 37178715.97 | 37178716.09 | 0.0527 | 0.0461 |
| Neptune | 97080-03-17 09:21 G | 37178877.65 | 37178877.89 | 37178878.16 | 0.0088 | 0.0026 |
| Neptune | 97081-03-20 05:02 G | 37179245.46 | 37179245.71 | 37179245.97 | 0.0088 | 0.0017 |
| Mars | 97082-01-03 17:02 G | 37179535.02 | 37179535.21 | 37179535.40 | 0.1595 | 0.0532 |
| Neptune | 97082-03-22 10:33 G | 37179612.69 | 37179612.94 | 37179613.20 | 0.0088 | 0.0011 |
| Neptune | 97083-03-25 05:02 G | 37179980.45 | 37179980.71 | 37179980.97 | 0.0088 | 0.0019 |
| Saturn | 97083-04-02 02:24 G | 37179988.37 | 37179988.60 | 37179988.82 | 0.0257 | 0.0082 |
| Neptune | 97084-03-26 12:57 G | 37180347.84 | 37180348.04 | 37180348.27 | 0.0088 | 0.0047 |
| Saturn | 97084-04-12 10:48 G | 37180364.73 | 37180364.95 | 37180365.18 | 0.0258 | 0.0119 |
| Neptune | 97085-03-29 04:04 G | 37180715.48 | 37180715.67 | 37180715.89 | 0.0088 | 0.0056 |
| Neptune | 97086-03-31 16:33 G | 37181083.14 | 37181083.19 | 37181083.29 | 0.0088 | 0.0084 |
| Saturn | 97097-09-26 01:40 G | 37185279.38 | 37185279.57 | 37185279.76 | 0.0305 | 0.0176 |
| Saturn | 97098-10-11 10:04 G | 37185659.73 | 37185659.92 | 37185660.11 | 0.0305 | 0.0178 |
| Uranus | 97108-02-24 09:36 G | 37189081.89 | 37189081.90 | 37189081.97 | 0.0144 | 0.0142 |
| Uranus | 97109-02-28 07:12 G | 37189451.56 | 37189451.80 | 37189452.04 | 0.0144 | 0.0056 |
| Jupiter | 97109-04-03 20:38 G | 37189486.13 | 37189486.36 | 37189486.60 | 0.0498 | 0.0120 |
| Uranus | 97110-03-05 15:07 G | 37189821.90 | 37189822.13 | 37189822.37 | 0.0144 | 0.0055 |
| Saturn | 97112-03-28 05:02 G | 37190575.52 | 37190575.71 | 37190575.90 | 0.0257 | 0.0173 |
| Saturn | 97113-04-08 11:45 G | 37190951.75 | 37190951.99 | 37190952.23 | 0.0258 | 0.0026 |
| Saturn | 97114-04-20 00:14 G | 37191328.42 | 37191328.51 | 37191328.63 | 0.0259 | 0.0231 |
| Jupiter | 97121-04-08 08:38 G | 37193873.69 | 37193873.86 | 37193874.04 | 0.0498 | 0.0310 |
| Saturn | 97127-10-05 13:40 G | 37196244.82 | 37196245.07 | 37196245.32 | 0.0305 | 0.0008 |
| Jupiter | 97138-09-27 17:31 G | 37200255.17 | 37200255.23 | 37200255.30 | 0.0527 | 0.0504 |
| Saturn | 97142-04-04 01:12 G | 37201539.30 | 37201539.55 | 37201539.79 | 0.0257 | 0.0064 |

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| Saturn | 97143-04-15 02:52 G | 37201915.41 | 37201915.62 | 37201915.85 | 0.0258 | 0.0134 |
| Uranus | 97150-08-25 21:21 G | 37204605.30 | 37204605.39 | 37204605.50 | 0.0134 | 0.0123 |
| Jupiter | 97150-10-02 22:04 G | 37204643.19 | 37204643.42 | 37204643.65 | 0.0527 | 0.0061 |
| Uranus | 97151-08-30 03:21 G | 37204974.43 | 37204974.64 | 37204974.86 | 0.0134 | 0.0059 |
| Uranus | 97152-09-02 09:21 G | 37205343.65 | 37205343.89 | 37205344.16 | 0.0134 | 0.0033 |
| Uranus | 97153-09-06 14:38 G | 37205712.98 | 37205713.11 | 37205713.29 | 0.0135 | 0.0102 |
| Saturn | 97156-09-28 00:57 G | 37206830.35 | 37206830.54 | 37206830.75 | 0.0306 | 0.0160 |
| Saturn | 97157-10-13 07:26 G | 37207210.63 | 37207210.81 | 37207211.01 | 0.0305 | 0.0194 |
| Neptune | 97158-09-10 16:48 G | 37207543.10 | 37207543.20 | 37207543.36 | 0.0089 | 0.0077 |
| Neptune | 97159-09-13 02:24 G | 37207910.43 | 37207910.60 | 37207910.79 | 0.0089 | 0.0065 |
| Neptune | 97160-09-14 17:31 G | 37208278.02 | 37208278.23 | 37208278.47 | 0.0089 | 0.0039 |
| Mars | 97161-01-06 23:02 G | 37208392.30 | 37208392.46 | 37208392.62 | 0.1593 | 0.0899 |
| Neptune | 97161-09-16 22:33 G | 37208645.21 | 37208645.44 | 37208645.70 | 0.0089 | 0.0028 |
| Neptune | 97162-09-19 16:48 G | 37209012.95 | 37209013.20 | 37209013.45 | 0.0089 | 0.0000 |
| Jupiter | 97162-10-07 12:14 G | 37209030.86 | 37209031.01 | 37209031.16 | 0.0527 | 0.0404 |
| Neptune | 97163-09-21 20:52 G | 37209380.13 | 37209380.37 | 37209380.63 | 0.0089 | 0.0010 |
| Neptune | 97164-09-23 13:40 G | 37209747.84 | 37209748.07 | 37209748.32 | 0.0089 | 0.0037 |
| Neptune | 97165-09-25 19:26 G | 37210115.13 | 37210115.31 | 37210115.55 | 0.0089 | 0.0048 |
| Neptune | 97166-09-28 08:38 G | 37210482.74 | 37210482.86 | 37210483.03 | 0.0089 | 0.0074 |
| Neptune | 97167-09-30 19:55 G | 37210850.27 | 37210850.33 | 37210850.43 | 0.0089 | 0.0084 |
| Pluto | 97169-02-05 09:21 G | 37211343.65 | 37211343.89 | 37211344.15 | 0.0081 | 0.0026 |
| Saturn | 97171-03-29 23:16 G | 37212126.29 | 37212126.47 | 37212126.68 | 0.0257 | 0.0157 |
| Saturn | 97172-04-09 12:14 G | 37212502.77 | 37212503.01 | 37212503.24 | 0.0257 | 0.0041 |
| Saturn | 97173-04-20 21:36 G | 37212879.34 | 37212879.40 | 37212879.49 | 0.0258 | 0.0246 |
| Saturn | 97186-10-06 07:26 G | 37217795.58 | 37217795.81 | 37217796.05 | 0.0305 | 0.0026 |
| Jupiter | 97192-04-03 00:57 G | 37219801.33 | 37219801.54 | 37219801.76 | 0.0498 | 0.0173 |
| Uranus | 97193-02-28 13:40 G | 37220132.83 | 37220133.07 | 37220133.33 | 0.0144 | 0.0039 |
| Uranus | 97194-03-05 22:19 G | 37220503.21 | 37220503.43 | 37220503.68 | 0.0144 | 0.0051 |
| Saturn | 97200-03-24 12:57 G | 37222713.99 | 37222714.04 | 37222714.11 | 0.0258 | 0.0250 |
| Saturn | 97201-04-04 16:48 G | 37223089.94 | 37223090.20 | 37223090.45 | 0.0257 | 0.0051 |

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| Saturn | 97202-04-15 21:21 G | 37223466.20 | 37223466.39 | 37223466.59 | 0.0258 | 0.0150 |
| Jupiter | 97204-04-07 21:21 G | 37224189.18 | 37224189.39 | 37224189.60 | 0.0499 | 0.0253 |
| Saturn | 97215-09-29 17:16 G | 37228381.01 | 37228381.22 | 37228381.44 | 0.0306 | 0.0145 |
| Saturn | 97216-10-13 20:24 G | 37228761.17 | 37228761.35 | 37228761.54 | 0.0305 | 0.0207 |
| Saturn | 97230-03-30 22:48 G | 37233677.26 | 37233677.45 | 37233677.66 | 0.0257 | 0.0146 |
| Saturn | 97231-04-11 09:21 G | 37234053.65 | 37234053.89 | 37234054.14 | 0.0257 | 0.0055 |
| Jupiter | 97233-10-02 00:14 G | 37234958.28 | 37234958.51 | 37234958.74 | 0.0527 | 0.0116 |
| Uranus | 97234-08-26 09:36 G | 37235286.85 | 37235286.90 | 37235286.99 | 0.0134 | 0.0129 |
| Uranus | 97235-08-30 17:02 G | 37235655.98 | 37235656.21 | 37235656.44 | 0.0134 | 0.0038 |
| Uranus | 97236-09-02 22:04 G | 37236025.17 | 37236025.42 | 37236025.68 | 0.0135 | 0.0028 |
| Uranus | 97237-09-07 04:33 G | 37236394.60 | 37236394.69 | 37236394.83 | 0.0135 | 0.0119 |
| Neptune | 97242-03-13 21:21 G | 37238043.25 | 37238043.39 | 37238043.55 | 0.0088 | 0.0071 |
| Neptune | 97243-03-16 02:38 G | 37238410.42 | 37238410.61 | 37238410.83 | 0.0088 | 0.0055 |
| Neptune | 97244-03-17 22:19 G | 37238778.19 | 37238778.43 | 37238778.67 | 0.0088 | 0.0035 |
| Neptune | 97245-03-20 04:04 G | 37239145.43 | 37239145.67 | 37239145.93 | 0.0088 | 0.0019 |
| Saturn | 97245-10-07 03:21 G | 37239346.41 | 37239346.64 | 37239346.88 | 0.0305 | 0.0040 |
| Jupiter | 97245-10-07 05:02 G | 37239346.56 | 37239346.71 | 37239346.87 | 0.0527 | 0.0380 * |
| Neptune | 97246-03-22 21:35 G | 37239513.13 | 37239513.40 | 37239513.67 | 0.0088 | 0.0000 |
| Neptune | 97247-03-25 06:28 G | 37239880.53 | 37239880.77 | 37239881.03 | 0.0088 | 0.0018 |
| Neptune | 97248-03-26 18:57 G | 37240248.05 | 37240248.29 | 37240248.55 | 0.0088 | 0.0037 |
| Mars | 97248-07-09 18:43 G | 37240353.10 | 37240353.28 | 37240353.47 | 0.1945 | 0.0145 |
| Neptune | 97249-03-29 09:35 G | 37240615.70 | 37240615.90 | 37240616.09 | 0.0088 | 0.0056 |
| Neptune | 97250-03-31 17:31 G | 37240983.10 | 37240983.23 | 37240983.39 | 0.0088 | 0.0074 |
| Saturn | 97259-03-26 03:35 G | 37244264.56 | 37244264.65 | 37244264.75 | 0.0258 | 0.0238 |
| Saturn | 97260-04-05 08:38 G | 37244640.61 | 37244640.86 | 37244641.10 | 0.0257 | 0.0040 |
| Saturn | 97261-04-16 20:09 G | 37245017.16 | 37245017.34 | 37245017.52 | 0.0258 | 0.0168 |
| Saturn | 97274-09-30 04:19 G | 37249931.47 | 37249931.68 | 37249931.91 | 0.0306 | 0.0135 |
| Jupiter | 97275-04-03 19:55 G | 37250117.11 | 37250117.33 | 37250117.55 | 0.0498 | 0.0188 |
| Saturn | 97275-10-15 09:07 G | 37250311.72 | 37250311.88 | 37250312.06 | 0.0305 | 0.0221 |
| Uranus | 97276-02-25 04:48 G | 37250444.62 | 37250444.70 | 37250444.81 | 0.0144 | 0.0133 |

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| Uranus | 97277-03-01 00:28 G | 37250814.29 | 37250814.52 | 37250814.78 | 0.0144 | 0.0048 |
| Uranus | 97278-03-06 09:50 G | 37251184.70 | 37251184.91 | 37251185.15 | 0.0144 | 0.0067 |
| Jupiter | 97287-04-08 04:19 G | 37254504.48 | 37254504.68 | 37254504.90 | 0.0499 | 0.0227 |
| Saturn | 97289-03-31 21:07 G | 37255228.17 | 37255228.38 | 37255228.59 | 0.0257 | 0.0134 |
| Saturn | 97290-04-12 00:43 G | 37255604.29 | 37255604.53 | 37255604.79 | 0.0257 | 0.0069 |
| Saturn | 97303-09-24 17:02 G | 37260517.18 | 37260517.21 | 37260517.24 | 0.0305 | 0.0301 |
| Saturn | 97304-10-08 22:33 G | 37260897.20 | 37260897.44 | 37260897.68 | 0.0305 | 0.0053 |
| Jupiter | 97316-10-02 21:07 G | 37265274.17 | 37265274.38 | 37265274.60 | 0.0528 | 0.0145 |
| Saturn | 97318-03-27 19:26 G | 37265815.21 | 37265815.31 | 37265815.44 | 0.0258 | 0.0228 |
| Uranus | 97318-08-27 23:02 G | 37265968.33 | 37265968.46 | 37265968.63 | 0.0134 | 0.0109 |
| Saturn | 97319-04-08 07:11 G | 37266191.56 | 37266191.80 | 37266192.04 | 0.0257 | 0.0027 |
| Uranus | 97319-09-01 07:55 G | 37266337.60 | 37266337.83 | 37266338.06 | 0.0135 | 0.0044 |
| Saturn | 97320-04-18 18:28 G | 37266568.10 | 37266568.27 | 37266568.45 | 0.0258 | 0.0183 |
| Uranus | 97320-09-04 11:16 G | 37266706.74 | 37266706.97 | 37266707.22 | 0.0135 | 0.0049 |
| Uranus | 97321-09-08 19:11 G | 37267076.20 | 37267076.30 | 37267076.44 | 0.0135 | 0.0117 |
| Neptune | 97322-09-10 19:26 G | 37267443.22 | 37267443.31 | 37267443.43 | 0.0089 | 0.0082 |
| Neptune | 97323-09-13 11:45 G | 37267810.85 | 37267810.99 | 37267811.16 | 0.0089 | 0.0071 |
| Neptune | 97324-09-14 16:33 G | 37268177.97 | 37268178.19 | 37268178.41 | 0.0089 | 0.0045 |
| Pluto | 97325-08-10 07:55 G | 37268507.57 | 37268507.83 | 37268508.10 | 0.0063 | 0.0003 |
| Neptune | 97325-09-17 10:19 G | 37268545.70 | 37268545.93 | 37268546.17 | 0.0089 | 0.0034 |
| Neptune | 97326-09-19 15:07 G | 37268912.88 | 37268913.13 | 37268913.38 | 0.0089 | 0.0009 |
| Neptune | 97327-09-22 07:26 G | 37269280.55 | 37269280.81 | 37269281.07 | 0.0089 | 0.0004 |
| Neptune | 97328-09-23 15:07 G | 37269647.91 | 37269648.13 | 37269648.38 | 0.0089 | 0.0030 |
| Jupiter | 97328-10-07 18:00 G | 37269662.07 | 37269662.25 | 37269662.43 | 0.0527 | 0.0348 |
| Neptune | 97329-09-26 03:07 G | 37270015.40 | 37270015.63 | 37270015.87 | 0.0089 | 0.0042 |
| Neptune | 97330-09-28 15:35 G | 37270383.00 | 37270383.15 | 37270383.32 | 0.0089 | 0.0066 |
| Neptune | 97331-09-30 21:35 G | 37270750.31 | 37270750.40 | 37270750.56 | 0.0089 | 0.0079 |
| Saturn | 97333-10-01 20:24 G | 37271482.14 | 37271482.35 | 37271482.57 | 0.0305 | 0.0120 |
| Saturn | 97334-10-17 04:33 G | 37271862.55 | 37271862.69 | 37271862.84 | 0.0305 | 0.0238 |
| Saturn | 97348-04-02 12:57 G | 37276778.81 | 37276779.04 | 37276779.27 | 0.0257 | 0.0122 |

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| Saturn | 97349-04-13 16:48 G | 37277154.97 | 37277155.20 | 37277155.44 | 0.0257 | 0.0084 |
| Jupiter | 97358-04-04 01:11 G | 37280432.34 | 37280432.55 | 37280432.76 | 0.0498 | 0.0217 |
| Uranus | 97360-02-26 17:16 G | 37281126.17 | 37281126.22 | 37281126.28 | 0.0144 | 0.0140 |
| Uranus | 97361-03-02 12:28 G | 37281495.77 | 37281496.02 | 37281496.28 | 0.0144 | 0.0025 |
| Uranus | 97362-03-07 21:21 G | 37281866.17 | 37281866.39 | 37281866.63 | 0.0144 | 0.0063 |
| Saturn | 97362-09-25 11:16 G | 37282067.89 | 37282067.97 | 37282068.07 | 0.0305 | 0.0282 |
| Saturn | 97363-10-10 13:55 G | 37282447.84 | 37282448.08 | 37282448.32 | 0.0305 | 0.0072 |
| Mars | 97366-01-06 15:50 G | 37283266.98 | 37283267.16 | 37283267.35 | 0.1598 | 0.0222 |
| Jupiter | 97370-04-08 18:28 G | 37284820.06 | 37284820.27 | 37284820.49 | 0.0498 | 0.0172 |
| Saturn | 97377-03-28 18:43 G | 37287366.16 | 37287366.28 | 37287366.42 | 0.0258 | 0.0214 |
| Saturn | 97378-04-09 07:40 G | 37287742.58 | 37287742.82 | 37287743.07 | 0.0258 | 0.0013 |
| Saturn | 97379-04-20 12:28 G | 37288118.87 | 37288119.02 | 37288119.19 | 0.0258 | 0.0202 |
| Saturn | 97392-10-02 22:19 G | 37293033.21 | 37293033.43 | 37293033.66 | 0.0305 | 0.0098 |
| Saturn | 97393-10-18 05:45 G | 37293413.61 | 37293413.74 | 37293413.87 | 0.0305 | 0.0257 |
| Jupiter | 97399-10-03 04:19 G | 37295589.46 | 37295589.68 | 37295589.91 | 0.0527 | 0.0202 |
| Uranus | 97402-08-29 11:45 G | 37296649.86 | 37296649.99 | 37296650.13 | 0.0135 | 0.0113 |
| Uranus | 97403-09-02 21:07 G | 37297019.15 | 37297019.38 | 37297019.63 | 0.0135 | 0.0023 |
| Uranus | 97404-09-05 23:45 G | 37297388.26 | 37297388.49 | 37297388.75 | 0.0135 | 0.0043 |
| Neptune | 97406-03-14 20:09 G | 37297943.26 | 37297943.34 | 37297943.44 | 0.0088 | 0.0082 |
| Neptune | 97407-03-17 14:38 G | 37298310.92 | 37298311.11 | 37298311.33 | 0.0088 | 0.0056 |
| Saturn | 97407-04-05 06:28 G | 37298329.54 | 37298329.77 | 37298330.00 | 0.0258 | 0.0109 |
| Neptune | 97408-03-18 21:35 G | 37298678.20 | 37298678.40 | 37298678.64 | 0.0088 | 0.0047 |
| Saturn | 97408-04-15 17:16 G | 37298706.00 | 37298706.22 | 37298706.44 | 0.0258 | 0.0104 |
| Neptune | 97409-03-21 13:11 G | 37299045.80 | 37299046.05 | 37299046.33 | 0.0088 | 0.0020 |
| Neptune | 97410-03-24 00:43 G | 37299413.28 | 37299413.53 | 37299413.79 | 0.0088 | 0.0010 |
| Neptune | 97411-03-26 11:31 G | 37299780.73 | 37299780.98 | 37299781.26 | 0.0088 | 0.0018 |
| Jupiter | 97411-10-08 21:50 G | 37299977.23 | 37299977.41 | 37299977.61 | 0.0527 | 0.0290 |
| Neptune | 97412-03-28 03:50 G | 37300148.43 | 37300148.66 | 37300148.92 | 0.0088 | 0.0027 |
| Neptune | 97413-03-30 10:19 G | 37300515.74 | 37300515.93 | 37300516.16 | 0.0088 | 0.0054 |
| Neptune | 97414-04-02 05:16 G | 37300883.57 | 37300883.72 | 37300883.93 | 0.0088 | 0.0064 |

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| Saturn | 97421-09-27 05:45 G | 37303618.61 | 37303618.74 | 37303618.87 | 0.0304 | 0.0257 |
| Saturn | 97422-10-12 09:07 G | 37303998.66 | 37303998.88 | 37303999.12 | 0.0305 | 0.0096 |
| Saturn | 97436-03-30 20:52 G | 37308917.23 | 37308917.37 | 37308917.54 | 0.0258 | 0.0200 |
| Saturn | 97437-04-11 04:04 G | 37309293.41 | 37309293.67 | 37309293.93 | 0.0258 | 0.0006 |
| Saturn | 97438-04-22 07:11 G | 37309669.69 | 37309669.80 | 37309669.94 | 0.0258 | 0.0224 |
| Jupiter | 97441-04-04 13:40 G | 37310747.88 | 37310748.07 | 37310748.27 | 0.0498 | 0.0272 |
| Uranus | 97444-02-28 07:40 G | 37311807.69 | 37311807.82 | 37311808.00 | 0.0144 | 0.0117 |
| Mars | 97445-01-09 20:38 G | 37312124.32 | 37312124.36 | 37312124.39 | 0.1596 | 0.1564 |
| Uranus | 97445-03-04 03:35 G | 37312177.40 | 37312177.65 | 37312177.90 | 0.0144 | 0.0031 |
| Uranus | 97446-03-09 12:43 G | 37312547.84 | 37312548.03 | 37312548.26 | 0.0144 | 0.0085 |
| Saturn | 97451-10-06 02:52 G | 37314584.38 | 37314584.62 | 37314584.86 | 0.0305 | 0.0070 |
| Saturn | 97452-10-20 06:14 G | 37314964.69 | 37314964.76 | 37314964.86 | 0.0304 | 0.0284 |
| Jupiter | 97453-04-08 21:50 G | 37315135.18 | 37315135.41 | 37315135.65 | 0.0498 | 0.0129 |
| Saturn | 97466-04-06 08:38 G | 37319880.64 | 37319880.86 | 37319881.09 | 0.0258 | 0.0089 |
| Saturn | 97467-04-17 22:04 G | 37320257.22 | 37320257.42 | 37320257.65 | 0.0258 | 0.0126 |
| Saturn | 97480-09-28 10:33 G | 37325169.80 | 37325169.94 | 37325170.11 | 0.0304 | 0.0228 |
| Saturn | 97481-10-13 17:16 G | 37325550.02 | 37325550.22 | 37325550.44 | 0.0304 | 0.0129 |
| Jupiter | 97482-10-03 08:09 G | 37325904.66 | 37325904.84 | 37325905.04 | 0.0528 | 0.0271 |
| Uranus | 97486-08-30 00:57 G | 37327331.38 | 37327331.54 | 37327331.74 | 0.0134 | 0.0096 |
| Uranus | 97487-09-03 11:45 G | 37327700.76 | 37327700.99 | 37327701.24 | 0.0135 | 0.0029 |
| Neptune | 97487-09-13 11:31 G | 37327710.85 | 37327710.98 | 37327711.15 | 0.0089 | 0.0072 |
| Uranus | 97488-09-06 12:57 G | 37328069.83 | 37328070.04 | 37328070.28 | 0.0135 | 0.0065 |
| Neptune | 97488-09-15 05:16 G | 37328078.54 | 37328078.72 | 37328078.93 | 0.0089 | 0.0058 |
| Uranus | 97489-09-10 23:45 G | 37328439.45 | 37328439.49 | 37328439.55 | 0.0135 | 0.0131 |
| Neptune | 97489-09-17 11:02 G | 37328445.74 | 37328445.96 | 37328446.19 | 0.0089 | 0.0035 |
| Neptune | 97490-09-20 01:26 G | 37328813.32 | 37328813.56 | 37328813.83 | 0.0089 | 0.0021 |
| Neptune | 97491-09-22 10:48 G | 37329180.71 | 37329180.95 | 37329181.20 | 0.0089 | 0.0003 |
| Neptune | 97492-09-23 20:24 G | 37329548.10 | 37329548.35 | 37329548.61 | 0.0089 | 0.0018 |
| Neptune | 97493-09-26 10:33 G | 37329915.74 | 37329915.94 | 37329916.18 | 0.0089 | 0.0041 |
| Neptune | 97494-09-28 16:19 G | 37330283.00 | 37330283.18 | 37330283.41 | 0.0089 | 0.0054 |

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| Jupiter | 97494-10-08 11:45 G | 37330292.78 | 37330292.99 | 37330293.20 | 0.0528 | 0.0245 |
| Saturn | 97495-04-01 21:50 G | 37330468.24 | 37330468.41 | 37330468.60 | 0.0258 | 0.0179 |
| Neptune | 97495-10-01 10:19 G | 37330650.82 | 37330650.93 | 37330651.06 | 0.0089 | 0.0078 |
| Saturn | 97496-04-12 01:40 G | 37330844.32 | 37330844.57 | 37330844.82 | 0.0258 | 0.0028 |
| Saturn | 97497-04-23 11:31 G | 37331220.92 | 37331220.98 | 37331221.04 | 0.0259 | 0.0250 |
| Saturn | 97510-10-08 07:55 G | 37336135.58 | 37336135.83 | 37336136.08 | 0.0305 | 0.0034 |
| Jupiter | 97524-04-04 14:09 G | 37341062.91 | 37341063.09 | 37341063.28 | 0.0498 | 0.0322 |
| Saturn | 97525-04-08 16:04 G | 37341431.94 | 37341432.17 | 37341432.41 | 0.0258 | 0.0068 |
| Saturn | 97526-04-20 00:57 G | 37341808.34 | 37341808.54 | 37341808.75 | 0.0258 | 0.0150 |
| Uranus | 97528-02-29 20:38 G | 37342489.24 | 37342489.36 | 37342489.51 | 0.0144 | 0.0122 |
| Uranus | 97529-03-05 16:48 G | 37342858.95 | 37342859.20 | 37342859.45 | 0.0144 | 0.0007 |
| Uranus | 97530-03-11 01:40 G | 37343229.36 | 37343229.57 | 37343229.79 | 0.0144 | 0.0079 |
| Mars | 97532-07-12 03:50 G | 37344083.50 | 37344083.66 | 37344083.82 | 0.1940 | 0.1243 |
| Jupiter | 97536-04-09 08:09 G | 37345450.62 | 37345450.84 | 37345451.07 | 0.0498 | 0.0070 |
| Saturn | 97539-10-02 01:55 G | 37346721.40 | 37346721.58 | 37346721.76 | 0.0304 | 0.0191 |
| Saturn | 97540-10-16 08:52 G | 37347101.67 | 37347101.87 | 37347102.07 | 0.0304 | 0.0165 |
| Jupiter | 97548-04-13 18:00 G | 37349838.14 | 37349838.25 | 37349838.38 | 0.0498 | 0.0433 |
| Saturn | 97554-04-03 22:19 G | 37352019.23 | 37352019.43 | 37352019.63 | 0.0259 | 0.0161 |
| Saturn | 97555-04-15 07:26 G | 37352395.58 | 37352395.81 | 37352396.06 | 0.0258 | 0.0053 |
| Jupiter | 97565-10-03 14:52 G | 37356219.95 | 37356220.12 | 37356220.31 | 0.0528 | 0.0339 |
| Saturn | 97569-10-09 19:55 G | 37357687.08 | 37357687.33 | 37357687.57 | 0.0305 | 0.0005 |
| Neptune | 97570-03-15 07:11 G | 37357843.78 | 37357843.80 | 37357843.85 | 0.0088 | 0.0087 |
| Uranus | 97570-08-31 13:26 G | 37358012.89 | 37358013.06 | 37358013.24 | 0.0134 | 0.0098 |
| Mars | 97571-01-08 10:04 G | 37358142.76 | 37358142.92 | 37358143.09 | 0.1602 | 0.0769 |
| Neptune | 97571-03-17 16:19 G | 37358211.01 | 37358211.18 | 37358211.36 | 0.0088 | 0.0063 |
| Pluto | 97571-08-13 20:52 G | 37358360.20 | 37358360.37 | 37358360.59 | 0.0063 | 0.0041 |
| Uranus | 97571-09-05 00:57 G | 37358382.29 | 37358382.54 | 37358382.78 | 0.0135 | 0.0008 |
| Neptune | 97572-03-19 06:14 G | 37358578.55 | 37358578.76 | 37358578.99 | 0.0088 | 0.0050 |
| Pluto | 97572-08-14 10:19 G | 37358726.75 | 37358726.93 | 37358727.16 | 0.0064 | 0.0040 |
| Uranus | 97572-09-08 01:26 G | 37358751.33 | 37358751.56 | 37358751.79 | 0.0135 | 0.0057 |

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| Neptune | 97573-03-21 19:40 G | 37358946.08 | 37358946.32 | 37358946.56 | 0.0088 | 0.0026 |
| Neptune | 97574-03-24 04:19 G | 37359313.42 | 37359313.68 | 37359313.95 | 0.0088 | 0.0014 |
| Neptune | 97575-03-26 21:35 G | 37359681.16 | 37359681.40 | 37359681.67 | 0.0088 | 0.0010 |
| Neptune | 97576-03-28 03:21 G | 37360048.40 | 37360048.64 | 37360048.91 | 0.0088 | 0.0023 |
| Neptune | 97577-03-30 22:48 G | 37360416.24 | 37360416.45 | 37360416.69 | 0.0088 | 0.0046 |
| Jupiter | 97577-10-08 05:45 G | 37360607.52 | 37360607.74 | 37360607.95 | 0.0527 | 0.0164 |
| Neptune | 97578-04-02 04:33 G | 37360783.50 | 37360783.69 | 37360783.87 | 0.0088 | 0.0061 |
| Neptune | 97579-04-04 22:33 G | 37361151.36 | 37361151.44 | 37361151.54 | 0.0088 | 0.0083 |
| Saturn | 97583-03-30 11:31 G | 37362606.95 | 37362606.98 | 37362607.04 | 0.0259 | 0.0254 |
| Saturn | 97584-04-09 23:45 G | 37362983.24 | 37362983.49 | 37362983.74 | 0.0258 | 0.0044 |
| Saturn | 97585-04-21 03:21 G | 37363359.47 | 37363359.64 | 37363359.84 | 0.0258 | 0.0179 |
| Saturn | 97598-10-03 22:48 G | 37368273.25 | 37368273.45 | 37368273.66 | 0.0304 | 0.0151 |
| Saturn | 97599-10-19 02:24 G | 37368653.42 | 37368653.60 | 37368653.79 | 0.0304 | 0.0204 |
| Jupiter | 97607-04-04 19:55 G | 37371378.19 | 37371378.33 | 37371378.46 | 0.0497 | 0.0395 |
| Uranus | 97612-03-01 07:26 G | 37373170.64 | 37373170.81 | 37373171.00 | 0.0144 | 0.0104 |
| Uranus | 97613-03-06 04:04 G | 37373540.42 | 37373540.67 | 37373540.93 | 0.0144 | 0.0017 |
| Saturn | 97613-04-05 04:48 G | 37373570.50 | 37373570.70 | 37373570.91 | 0.0259 | 0.0139 |
| Uranus | 97614-03-11 13:11 G | 37373910.86 | 37373911.05 | 37373911.24 | 0.0144 | 0.0099 |
| Saturn | 97614-04-16 19:40 G | 37373947.09 | 37373947.32 | 37373947.55 | 0.0259 | 0.0079 |
| Jupiter | 97619-04-09 07:11 G | 37375765.55 | 37375765.80 | 37375766.05 | 0.0497 | 0.0015 |
| Saturn | 97628-10-11 16:33 G | 37379238.96 | 37379239.19 | 37379239.43 | 0.0304 | 0.0046 |
| Jupiter | 97631-04-13 16:48 G | 37380153.05 | 37380153.20 | 37380153.36 | 0.0498 | 0.0363 |
| Saturn | 97642-03-31 22:33 G | 37384158.34 | 37384158.44 | 37384158.57 | 0.0259 | 0.0230 |
| Saturn | 97643-04-12 05:16 G | 37384534.46 | 37384534.72 | 37384534.98 | 0.0258 | 0.0019 |
| Saturn | 97644-04-22 12:14 G | 37384910.87 | 37384911.01 | 37384911.16 | 0.0259 | 0.0206 |
| Jupiter | 97648-10-02 05:02 G | 37386534.59 | 37386534.71 | 37386534.83 | 0.0528 | 0.0445 |
| Mars | 97650-01-10 07:55 G | 37386999.72 | 37386999.83 | 37386999.95 | 0.1600 | 0.1215 |
| Neptune | 97651-09-13 23:31 G | 37387611.37 | 37387611.48 | 37387611.65 | 0.0089 | 0.0076 |
| Neptune | 97652-09-15 06:28 G | 37387978.61 | 37387978.77 | 37387978.94 | 0.0089 | 0.0066 |
| Neptune | 97653-09-17 19:55 G | 37388346.09 | 37388346.33 | 37388346.57 | 0.0089 | 0.0038 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 97654-09-01 02:24 G | 37388694.41 | 37388694.60 | 37388694.81 | 0.0134 | 0.0083 |
| Neptune | 97654-09-20 06:57 G | 37388713.57 | 37388713.79 | 37388714.04 | 0.0089 | 0.0029 |
| Uranus | 97655-09-05 14:38 G | 37389063.87 | 37389064.11 | 37389064.36 | 0.0134 | 0.0015 |
| Neptune | 97655-09-22 15:50 G | 37389080.90 | 37389081.16 | 37389081.42 | 0.0089 | 0.0001 |
| Uranus | 97656-09-08 14:09 G | 37389432.90 | 37389433.09 | 37389433.31 | 0.0135 | 0.0079 |
| Neptune | 97656-09-24 07:26 G | 37389448.56 | 37389448.81 | 37389449.06 | 0.0089 | 0.0009 |
| Neptune | 97657-09-26 11:45 G | 37389815.77 | 37389815.99 | 37389816.24 | 0.0089 | 0.0037 |
| Saturn | 97657-10-05 20:24 G | 37389825.13 | 37389825.35 | 37389825.59 | 0.0304 | 0.0107 |
| Neptune | 97658-09-29 05:31 G | 37390183.53 | 37390183.73 | 37390183.97 | 0.0089 | 0.0047 |
| Saturn | 97658-10-20 21:21 G | 37390205.26 | 37390205.39 | 37390205.55 | 0.0304 | 0.0249 |
| Neptune | 97659-10-01 09:35 G | 37390550.79 | 37390550.90 | 37390551.06 | 0.0089 | 0.0074 |
| Neptune | 97660-10-03 02:24 G | 37390918.53 | 37390918.60 | 37390918.71 | 0.0089 | 0.0083 |
| Jupiter | 97660-10-07 08:52 G | 37390922.64 | 37390922.87 | 37390923.09 | 0.0528 | 0.0069 |
| Pluto | 97662-02-12 05:31 G | 37391415.46 | 37391415.73 | 37391416.00 | 0.0081 | 0.0016 |
| Saturn | 97672-04-06 19:26 G | 37395122.09 | 37395122.31 | 37395122.53 | 0.0259 | 0.0113 |
| Saturn | 97673-04-18 08:24 G | 37395498.63 | 37395498.85 | 37395499.08 | 0.0259 | 0.0105 |
| Saturn | 97686-09-29 15:07 G | 37400411.02 | 37400411.13 | 37400411.26 | 0.0304 | 0.0260 |
| Saturn | 97687-10-14 20:38 G | 37400791.14 | 37400791.36 | 37400791.59 | 0.0304 | 0.0094 |
| Jupiter | 97690-04-03 17:02 G | 37401693.14 | 37401693.21 | 37401693.30 | 0.0498 | 0.0471 |
| Uranus | 97696-03-01 14:52 G | 37403851.96 | 37403852.12 | 37403852.30 | 0.0144 | 0.0111 |
| Uranus | 97697-03-06 12:57 G | 37404221.79 | 37404222.04 | 37404222.29 | 0.0144 | 0.0002 |
| Uranus | 97698-03-11 20:38 G | 37404592.16 | 37404592.36 | 37404592.57 | 0.0143 | 0.0088 |
| Saturn | 97701-04-03 06:14 G | 37405709.60 | 37405709.76 | 37405709.92 | 0.0259 | 0.0203 |
| Jupiter | 97702-04-09 04:33 G | 37406080.47 | 37406080.69 | 37406080.92 | 0.0498 | 0.0095 |
| Saturn | 97702-04-14 13:11 G | 37406085.80 | 37406086.05 | 37406086.30 | 0.0258 | 0.0008 |
| Saturn | 97703-04-26 02:24 G | 37406462.51 | 37406462.60 | 37406462.71 | 0.0259 | 0.0235 |
| Jupiter | 97714-04-13 22:48 G | 37410468.26 | 37410468.45 | 37410468.65 | 0.0498 | 0.0287 |
| Saturn | 97716-10-08 16:19 G | 37411376.94 | 37411377.18 | 37411377.42 | 0.0304 | 0.0058 |
| Saturn | 97717-10-23 18:28 G | 37411757.22 | 37411757.27 | 37411757.34 | 0.0304 | 0.0293 |
| Saturn | 97731-04-10 10:04 G | 37416673.69 | 37416673.92 | 37416674.16 | 0.0259 | 0.0086 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 97732-04-20 17:02 G | 37417050.00 | 37417050.21 | 37417050.44 | 0.0259 | 0.0134 |
| Neptune | 97734-03-15 11:02 G | 37417743.94 | 37417743.96 | 37417744.00 | 0.0088 | 0.0087 |
| Neptune | 97735-03-17 22:04 G | 37418111.31 | 37418111.42 | 37418111.60 | 0.0088 | 0.0074 |
| Neptune | 97736-03-19 13:40 G | 37418478.87 | 37418479.07 | 37418479.29 | 0.0088 | 0.0050 |
| Neptune | 97737-03-21 21:07 G | 37418846.16 | 37418846.38 | 37418846.64 | 0.0088 | 0.0038 |
| Neptune | 97738-03-24 16:19 G | 37419213.93 | 37419214.18 | 37419214.44 | 0.0088 | 0.0014 |
| Uranus | 97738-09-02 14:24 G | 37419375.91 | 37419376.10 | 37419376.31 | 0.0134 | 0.0083 |
| Neptune | 97739-03-26 21:50 G | 37419581.15 | 37419581.41 | 37419581.68 | 0.0088 | 0.0002 |
| Uranus | 97739-09-07 03:07 G | 37419745.38 | 37419745.63 | 37419745.88 | 0.0134 | 0.0005 |
| Neptune | 97740-03-28 17:16 G | 37419948.97 | 37419949.22 | 37419949.48 | 0.0088 | 0.0024 |
| Uranus | 97740-09-10 02:09 G | 37420114.39 | 37420114.59 | 37420114.82 | 0.0135 | 0.0071 |
| Neptune | 97741-03-30 23:16 G | 37420316.26 | 37420316.47 | 37420316.72 | 0.0088 | 0.0036 |
| Neptune | 97742-04-02 16:19 G | 37420684.00 | 37420684.18 | 37420684.39 | 0.0088 | 0.0061 |
| Neptune | 97743-04-05 01:55 G | 37421051.46 | 37421051.58 | 37421051.75 | 0.0088 | 0.0073 |
| Jupiter | 97743-10-07 22:19 G | 37421237.20 | 37421237.43 | 37421237.66 | 0.0528 | 0.0030 |
| Saturn | 97745-10-02 19:40 G | 37421963.16 | 37421963.32 | 37421963.49 | 0.0304 | 0.0211 |
| Saturn | 97746-10-18 00:14 G | 37422343.31 | 37422343.51 | 37422343.73 | 0.0304 | 0.0140 |
| Jupiter | 97755-10-13 01:26 G | 37425625.49 | 37425625.56 | 37425625.64 | 0.0527 | 0.0494 |
| Saturn | 97760-04-04 14:24 G | 37427260.92 | 37427261.10 | 37427261.29 | 0.0258 | 0.0177 |
| Saturn | 97761-04-16 03:21 G | 37427637.40 | 37427637.64 | 37427637.88 | 0.0258 | 0.0038 |
| Saturn | 97775-10-11 14:52 G | 37432928.88 | 37432929.12 | 37432929.36 | 0.0304 | 0.0011 |
| Mars | 97776-01-08 00:28 G | 37433017.47 | 37433017.52 | 37433017.57 | 0.1608 | 0.1549 |
| Uranus | 97780-03-02 21:35 G | 37434533.23 | 37434533.40 | 37434533.61 | 0.0144 | 0.0100 |
| Uranus | 97781-03-07 21:07 G | 37434903.13 | 37434903.38 | 37434903.63 | 0.0144 | 0.0009 |
| Uranus | 97782-03-13 03:50 G | 37435273.50 | 37435273.66 | 37435273.85 | 0.0143 | 0.0107 |
| Jupiter | 97785-04-08 09:50 G | 37436395.68 | 37436395.91 | 37436396.14 | 0.0497 | 0.0167 |
| Saturn | 97790-04-11 18:43 G | 37438225.03 | 37438225.28 | 37438225.53 | 0.0259 | 0.0057 |
| Saturn | 97791-04-22 23:02 G | 37438601.28 | 37438601.46 | 37438601.67 | 0.0259 | 0.0165 |
| Jupiter | 97797-04-12 15:35 G | 37440782.94 | 37440783.15 | 37440783.36 | 0.0498 | 0.0210 |
| Saturn | 97804-10-05 18:43 G | 37443515.08 | 37443515.28 | 37443515.49 | 0.0304 | 0.0166 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 97805-10-20 20:52 G | 37443895.18 | 37443895.37 | 37443895.57 | 0.0304 | 0.0186 |
| Neptune | 97815-09-15 04:04 G | 37447511.61 | 37447511.67 | 37447511.74 | 0.0089 | 0.0086 |
| Neptune | 97816-09-16 15:35 G | 37447878.99 | 37447879.15 | 37447879.34 | 0.0089 | 0.0067 |
| Neptune | 97817-09-19 04:19 G | 37448246.48 | 37448246.68 | 37448246.89 | 0.0089 | 0.0049 |
| Pluto | 97818-08-17 19:26 G | 37448579.06 | 37448579.31 | 37448579.56 | 0.0063 | 0.0000 |
| Neptune | 97818-09-21 10:48 G | 37448613.72 | 37448613.95 | 37448614.21 | 0.0089 | 0.0031 |
| Saturn | 97819-04-08 02:09 G | 37448812.39 | 37448812.59 | 37448812.79 | 0.0258 | 0.0150 |
| Neptune | 97819-09-24 03:35 G | 37448981.41 | 37448981.65 | 37448981.90 | 0.0089 | 0.0012 |
| Saturn | 97820-04-18 17:31 G | 37449188.99 | 37449189.23 | 37449189.46 | 0.0258 | 0.0067 |
| Neptune | 97820-09-25 07:55 G | 37449348.58 | 37449348.83 | 37449349.08 | 0.0089 | 0.0008 |
| Neptune | 97821-09-28 01:40 G | 37449716.33 | 37449716.57 | 37449716.82 | 0.0089 | 0.0026 |
| Uranus | 97822-09-04 02:24 G | 37450057.40 | 37450057.60 | 37450057.83 | 0.0134 | 0.0072 |
| Neptune | 97822-09-30 05:45 G | 37450083.55 | 37450083.74 | 37450083.98 | 0.0089 | 0.0047 |
| Uranus | 97823-09-08 16:04 G | 37450426.92 | 37450427.17 | 37450427.42 | 0.0135 | 0.0002 |
| Neptune | 97823-10-02 21:35 G | 37450451.23 | 37450451.40 | 37450451.60 | 0.0089 | 0.0062 |
| Uranus | 97824-09-11 14:52 G | 37450795.95 | 37450796.12 | 37450796.32 | 0.0135 | 0.0093 |
| Neptune | 97824-10-04 06:14 G | 37450818.69 | 37450818.76 | 37450818.87 | 0.0089 | 0.0083 |
| Jupiter | 97826-10-08 01:26 G | 37451552.34 | 37451552.56 | 37451552.78 | 0.0528 | 0.0128 |
| Saturn | 97834-10-14 14:09 G | 37454480.86 | 37454481.09 | 37454481.32 | 0.0305 | 0.0034 |
| Jupiter | 97838-10-12 17:16 G | 37455940.06 | 37455940.22 | 37455940.38 | 0.0528 | 0.0381 |
| Saturn | 97848-04-02 18:14 G | 37459400.18 | 37459400.26 | 37459400.37 | 0.0259 | 0.0239 |
| Saturn | 97849-04-13 23:16 G | 37459776.22 | 37459776.47 | 37459776.73 | 0.0258 | 0.0030 |
| Saturn | 97850-04-25 08:38 G | 37460152.71 | 37460152.86 | 37460153.03 | 0.0259 | 0.0194 |
| Mars | 97855-01-11 06:28 G | 37461874.56 | 37461874.77 | 37461874.97 | 0.1605 | 0.0131 |
| Saturn | 97863-10-08 10:19 G | 37465066.70 | 37465066.93 | 37465067.16 | 0.0304 | 0.0123 |
| Uranus | 97864-03-04 06:43 G | 37465214.60 | 37465214.78 | 37465214.98 | 0.0144 | 0.0101 |
| Saturn | 97864-10-22 11:31 G | 37465446.83 | 37465446.98 | 37465447.15 | 0.0304 | 0.0231 |
| Uranus | 97865-03-09 07:26 G | 37465584.56 | 37465584.81 | 37465585.06 | 0.0144 | 0.0009 |
| Uranus | 97866-03-14 12:28 G | 37465954.85 | 37465955.02 | 37465955.24 | 0.0143 | 0.0097 |
| Jupiter | 97868-04-08 01:55 G | 37466710.38 | 37466710.58 | 37466710.78 | 0.0498 | 0.0249 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 97878-04-09 14:09 G | 37470363.88 | 37470364.09 | 37470364.31 | 0.0258 | 0.0125 |
| Saturn | 97879-04-21 00:28 G | 37470740.28 | 37470740.52 | 37470740.76 | 0.0258 | 0.0093 |
| Jupiter | 97880-04-12 22:48 G | 37471098.22 | 37471098.45 | 37471098.68 | 0.0498 | 0.0136 |
| Saturn | 97892-10-01 02:38 G | 37475652.53 | 37475652.61 | 37475652.71 | 0.0304 | 0.0279 |
| Saturn | 97893-10-16 09:07 G | 37476032.65 | 37476032.88 | 37476033.11 | 0.0305 | 0.0074 |
| Neptune | 97899-03-18 09:07 G | 37478011.79 | 37478011.88 | 37478011.98 | 0.0088 | 0.0081 |
| Neptune | 97900-03-20 15:07 G | 37478378.95 | 37478379.13 | 37478379.36 | 0.0088 | 0.0055 |
| Neptune | 97901-03-23 10:19 G | 37478746.73 | 37478746.93 | 37478747.17 | 0.0088 | 0.0045 |
| Neptune | 97902-03-25 15:50 G | 37479113.92 | 37479114.16 | 37479114.43 | 0.0088 | 0.0018 |
| Neptune | 97903-03-28 11:02 G | 37479481.70 | 37479481.96 | 37479482.23 | 0.0088 | 0.0007 |
| Neptune | 97904-03-29 18:00 G | 37479849.01 | 37479849.25 | 37479849.51 | 0.0088 | 0.0019 |
| Neptune | 97905-04-01 09:21 G | 37480216.65 | 37480216.89 | 37480217.16 | 0.0088 | 0.0030 |
| Neptune | 97906-04-03 20:52 G | 37480584.19 | 37480584.37 | 37480584.58 | 0.0088 | 0.0055 |
| Uranus | 97906-09-05 14:24 G | 37480738.89 | 37480739.10 | 37480739.32 | 0.0135 | 0.0070 |
| Saturn | 97907-04-05 20:09 G | 37480951.22 | 37480951.34 | 37480951.49 | 0.0258 | 0.0217 |
| Neptune | 97907-04-06 08:09 G | 37480951.67 | 37480951.84 | 37480952.02 | 0.0088 | 0.0066 |
| Uranus | 97907-09-10 03:35 G | 37481108.40 | 37481108.65 | 37481108.90 | 0.0135 | 0.0018 |
| Pluto | 97908-02-16 04:04 G | 37481267.61 | 37481267.67 | 37481267.79 | 0.0081 | 0.0076 |
| Saturn | 97908-04-16 04:48 G | 37481327.45 | 37481327.70 | 37481327.95 | 0.0258 | 0.0006 |
| Uranus | 97908-09-13 02:38 G | 37481477.43 | 37481477.61 | 37481477.82 | 0.0135 | 0.0086 |
| Saturn | 97909-04-27 18:28 G | 37481704.16 | 37481704.27 | 37481704.41 | 0.0258 | 0.0221 |
| Jupiter | 97909-10-07 19:26 G | 37481867.10 | 37481867.31 | 37481867.53 | 0.0528 | 0.0220 |
| Jupiter | 97921-10-12 20:09 G | 37486255.16 | 37486255.34 | 37486255.52 | 0.0528 | 0.0306 |
| Saturn | 97922-10-10 18:28 G | 37486618.04 | 37486618.27 | 37486618.51 | 0.0304 | 0.0087 |
| Saturn | 97923-10-25 23:16 G | 37486998.36 | 37486998.47 | 37486998.58 | 0.0304 | 0.0266 |
| Saturn | 97937-04-11 20:38 G | 37491915.14 | 37491915.36 | 37491915.60 | 0.0258 | 0.0103 |
| Saturn | 97938-04-23 00:14 G | 37492291.29 | 37492291.51 | 37492291.75 | 0.0258 | 0.0119 |
| Uranus | 97948-03-05 18:28 G | 37495896.07 | 37495896.27 | 37495896.49 | 0.0144 | 0.0089 |
| Uranus | 97949-03-10 20:09 G | 37496266.09 | 37496266.34 | 37496266.59 | 0.0143 | 0.0005 |
| Uranus | 97950-03-16 00:14 G | 37496636.38 | 37496636.51 | 37496636.67 | 0.0143 | 0.0119 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 97951-04-09 15:07 G | 37497025.95 | 37497026.13 | 37497026.32 | 0.0498 | 0.0308 |
| Saturn | 97951-10-04 14:24 G | 37497203.97 | 37497204.10 | 37497204.25 | 0.0305 | 0.0247 |
| Saturn | 97952-10-18 18:28 G | 37497584.04 | 37497584.27 | 37497584.50 | 0.0305 | 0.0105 |
| Jupiter | 97963-04-13 23:16 G | 37501413.23 | 37501413.47 | 37501413.70 | 0.0498 | 0.0088 |
| Saturn | 97966-04-06 21:35 G | 37502502.25 | 37502502.40 | 37502502.57 | 0.0258 | 0.0197 |
| Saturn | 97967-04-18 11:16 G | 37502878.73 | 37502878.97 | 37502879.21 | 0.0258 | 0.0018 |
| Saturn | 97968-04-28 22:04 G | 37503255.34 | 37503255.42 | 37503255.51 | 0.0258 | 0.0242 |
| Neptune | 97980-09-17 00:43 G | 37507779.40 | 37507779.53 | 37507779.71 | 0.0089 | 0.0070 |
| Neptune | 97981-09-19 07:26 G | 37508146.63 | 37508146.81 | 37508147.02 | 0.0089 | 0.0060 |
| Saturn | 97981-10-12 00:57 G | 37508169.31 | 37508169.54 | 37508169.77 | 0.0304 | 0.0055 |
| Neptune | 97982-09-22 00:43 G | 37508514.31 | 37508514.53 | 37508514.79 | 0.0089 | 0.0032 |
| Saturn | 97982-10-27 08:38 G | 37508549.82 | 37508549.86 | 37508549.91 | 0.0304 | 0.0298 |
| Neptune | 97983-09-24 05:16 G | 37508881.48 | 37508881.72 | 37508881.97 | 0.0089 | 0.0022 |
| Neptune | 97984-09-25 23:16 G | 37509249.21 | 37509249.47 | 37509249.72 | 0.0089 | 0.0007 |
| Neptune | 97985-09-28 04:19 G | 37509616.45 | 37509616.68 | 37509616.93 | 0.0089 | 0.0016 |
| Neptune | 97986-09-30 18:57 G | 37509984.07 | 37509984.29 | 37509984.53 | 0.0089 | 0.0043 |
| Neptune | 97987-10-03 03:50 G | 37510351.48 | 37510351.66 | 37510351.87 | 0.0089 | 0.0053 |
| Neptune | 97988-10-04 13:26 G | 37510718.97 | 37510719.06 | 37510719.19 | 0.0089 | 0.0081 |
| Uranus | 97990-09-06 02:09 G | 37511420.38 | 37511420.59 | 37511420.83 | 0.0135 | 0.0060 |
| Uranus | 97991-09-10 15:50 G | 37511789.91 | 37511790.16 | 37511790.41 | 0.0135 | 0.0014 |
| Uranus | 97992-09-13 15:21 G | 37512159.00 | 37512159.14 | 37512159.30 | 0.0135 | 0.0106 |
| Jupiter | 97992-10-07 06:43 G | 37512182.59 | 37512182.78 | 37512182.98 | 0.0528 | 0.0258 |
| Saturn | 97996-04-12 17:45 G | 37513466.01 | 37513466.24 | 37513466.50 | 0.0258 | 0.0081 |
| Saturn | 97997-04-23 22:48 G | 37513842.26 | 37513842.45 | 37513842.67 | 0.0258 | 0.0141 |

99TH MILLENNIUM CE

This is a list of transits of Moon in the 99th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 98004-10-12 06:00 | G | 37516570.54 | 37516570.75 | 37516570.96 | 0.0527 | 0.0245 | |
| Saturn | 98010-10-05 14:38 | G | 37518754.94 | 37518755.11 | 37518755.29 | 0.0305 | 0.0215 | |
| Saturn | 98011-10-20 16:33 | G | 37519134.97 | 37519135.19 | 37519135.42 | 0.0305 | 0.0136 | |
| Saturn | 98025-04-08 00:57 | G | 37524053.38 | 37524053.54 | 37524053.73 | 0.0258 | 0.0177 | |
| Saturn | 98026-04-19 13:40 | G | 37524429.82 | 37524430.07 | 37524430.31 | 0.0258 | 0.0038 | |
| Uranus | 98032-03-06 07:55 | G | 37526577.61 | 37526577.83 | 37526578.04 | 0.0143 | 0.0084 | |
| Uranus | 98033-03-11 10:19 | G | 37526947.69 | 37526947.93 | 37526948.18 | 0.0143 | 0.0025 | |
| Uranus | 98034-03-16 13:40 | G | 37527317.92 | 37527318.07 | 37527318.24 | 0.0143 | 0.0112 | |
| Jupiter | 98034-04-08 17:45 | G | 37527341.07 | 37527341.24 | 37527341.41 | 0.0498 | 0.0357 | |
| Saturn | 98040-10-13 05:16 | G | 37529720.49 | 37529720.72 | 37529720.95 | 0.0305 | 0.0025 | |
| Jupiter | 98046-04-13 08:09 | G | 37531728.62 | 37531728.84 | 37531729.07 | 0.0498 | 0.0030 | |
| Saturn | 98055-04-14 12:57 | G | 37535016.80 | 37535017.04 | 37535017.29 | 0.0257 | 0.0059 | |
| Saturn | 98056-04-25 00:00 | G | 37535393.31 | 37535393.50 | 37535393.69 | 0.0257 | 0.0163 | |
| Jupiter | 98058-04-17 20:38 | G | 37536116.31 | 37536116.36 | 37536116.44 | 0.0498 | 0.0480 | |
| Mars | 98060-01-11 14:38 | G | 37536749.95 | 37536750.11 | 37536750.28 | 0.1611 | 0.0614 | |
| Neptune | 98063-03-18 10:04 | G | 37537911.84 | 37537911.92 | 37537912.04 | 0.0088 | 0.0081 | |
| Neptune | 98064-03-20 05:02 | G | 37538279.57 | 37538279.71 | 37538279.91 | 0.0088 | 0.0066 | |
| Pluto | 98064-08-19 09:07 | G | 37538431.76 | 37538431.88 | 37538432.05 | 0.0063 | 0.0051 | |
| Neptune | 98065-03-22 10:33 | G | 37538646.74 | 37538646.94 | 37538647.19 | 0.0088 | 0.0044 | |
| Pluto | 98065-08-20 14:24 | G | 37538797.86 | 37538798.10 | 37538798.36 | 0.0064 | 0.0019 | |
| Neptune | 98066-03-25 05:02 | G | 37539014.47 | 37539014.71 | 37539014.98 | 0.0088 | 0.0029 | |
| Neptune | 98067-03-27 13:26 | G | 37539381.81 | 37539382.06 | 37539382.31 | 0.0088 | 0.0007 | |
| Neptune | 98068-03-29 04:19 | G | 37539749.41 | 37539749.68 | 37539749.95 | 0.0088 | 0.0007 | |
| Neptune | 98069-03-31 16:48 | G | 37540116.97 | 37540117.20 | 37540117.45 | 0.0088 | 0.0030 | |
| Saturn | 98069-10-06 06:43 | G | 37540305.59 | 37540305.78 | 37540305.98 | 0.0305 | 0.0186 | |

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| Neptune | 98070-04-03 02:38 G | 37540484.38 | 37540484.61 | 37540484.85 | 0.0088 | 0.0044 |
| Saturn | 98070-10-21 11:16 G | 37540685.77 | 37540685.97 | 37540686.17 | 0.0305 | 0.0163 |
| Neptune | 98071-04-05 19:26 G | 37540852.16 | 37540852.31 | 37540852.48 | 0.0088 | 0.0068 |
| Neptune | 98072-04-07 01:26 G | 37541219.48 | 37541219.56 | 37541219.68 | 0.0088 | 0.0081 |
| Uranus | 98074-09-06 14:24 G | 37542101.88 | 37542102.10 | 37542102.32 | 0.0135 | 0.0057 |
| Uranus | 98075-09-11 03:07 G | 37542471.39 | 37542471.63 | 37542471.89 | 0.0135 | 0.0030 |
| Jupiter | 98075-10-07 16:19 G | 37542497.99 | 37542498.18 | 37542498.37 | 0.0528 | 0.0301 |
| Uranus | 98076-09-14 02:52 G | 37542840.47 | 37542840.62 | 37542840.80 | 0.0135 | 0.0099 |
| Saturn | 98084-04-09 01:26 G | 37545604.37 | 37545604.56 | 37545604.76 | 0.0258 | 0.0158 |
| Saturn | 98085-04-20 06:57 G | 37545980.55 | 37545980.79 | 37545981.05 | 0.0257 | 0.0062 |
| Jupiter | 98087-10-12 06:43 G | 37546885.57 | 37546885.78 | 37546886.00 | 0.0528 | 0.0186 |
| Saturn | 98099-10-15 01:55 G | 37551271.34 | 37551271.58 | 37551271.83 | 0.0305 | 0.0004 |
| Saturn | 98113-04-05 00:14 G | 37556191.47 | 37556191.51 | 37556191.57 | 0.0258 | 0.0253 |
| Saturn | 98114-04-16 12:00 G | 37556567.77 | 37556568.00 | 37556568.24 | 0.0257 | 0.0039 |
| Saturn | 98115-04-27 23:45 G | 37556944.32 | 37556944.49 | 37556944.67 | 0.0257 | 0.0184 |
| Uranus | 98116-03-07 18:57 G | 37557259.08 | 37557259.29 | 37557259.53 | 0.0143 | 0.0075 |
| Uranus | 98117-03-12 22:48 G | 37557629.21 | 37557629.45 | 37557629.70 | 0.0143 | 0.0021 |
| Jupiter | 98117-04-09 04:33 G | 37557656.58 | 37557656.69 | 37557656.82 | 0.0498 | 0.0420 |
| Uranus | 98118-03-18 00:43 G | 37557999.47 | 37557999.53 | 37557999.64 | 0.0143 | 0.0135 |
| Saturn | 98128-10-08 00:28 G | 37561856.33 | 37561856.52 | 37561856.73 | 0.0305 | 0.0163 |
| Jupiter | 98129-04-13 18:57 G | 37562044.04 | 37562044.29 | 37562044.53 | 0.0498 | 0.0004 |
| Saturn | 98129-10-23 08:09 G | 37562236.66 | 37562236.84 | 37562237.02 | 0.0305 | 0.0189 |
| Mars | 98139-01-14 10:33 G | 37565606.77 | 37565606.94 | 37565607.11 | 0.1608 | 0.0631 |
| Jupiter | 98141-04-18 09:50 G | 37566431.82 | 37566431.91 | 37566431.99 | 0.0498 | 0.0463 |
| Saturn | 98143-04-11 18:43 G | 37567155.07 | 37567155.28 | 37567155.50 | 0.0258 | 0.0139 |
| Saturn | 98144-04-21 21:50 G | 37567531.17 | 37567531.41 | 37567531.65 | 0.0257 | 0.0084 |
| Neptune | 98144-09-17 04:33 G | 37567679.58 | 37567679.69 | 37567679.83 | 0.0089 | 0.0078 |
| Neptune | 98145-09-19 21:50 G | 37568047.26 | 37568047.41 | 37568047.62 | 0.0089 | 0.0062 |
| Neptune | 98146-09-22 02:24 G | 37568414.39 | 37568414.60 | 37568414.84 | 0.0089 | 0.0040 |
| Neptune | 98147-09-24 19:55 G | 37568782.09 | 37568782.33 | 37568782.59 | 0.0089 | 0.0024 |

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| Neptune | 98148-09-26 01:55 G | 37569149.34 | 37569149.58 | 37569149.83 | 0.0089 | 0.0004 |
| Neptune | 98149-09-28 15:35 G | 37569516.90 | 37569517.15 | 37569517.42 | 0.0089 | 0.0015 |
| Neptune | 98150-10-01 01:55 G | 37569884.37 | 37569884.58 | 37569884.82 | 0.0089 | 0.0035 |
| Neptune | 98151-10-03 11:02 G | 37570251.77 | 37570251.96 | 37570252.19 | 0.0089 | 0.0052 |
| Neptune | 98152-10-05 01:55 G | 37570619.46 | 37570619.58 | 37570619.75 | 0.0089 | 0.0072 |
| Neptune | 98153-10-07 07:11 G | 37570986.78 | 37570986.80 | 37570986.84 | 0.0089 | 0.0089 |
| Pluto | 98155-02-19 07:11 G | 37571486.55 | 37571486.80 | 37571487.07 | 0.0081 | 0.0013 |
| Uranus | 98157-09-04 01:26 G | 37572414.50 | 37572414.56 | 37572414.64 | 0.0134 | 0.0129 |
| Uranus | 98158-09-08 01:40 G | 37572783.35 | 37572783.57 | 37572783.81 | 0.0135 | 0.0050 |
| Jupiter | 98158-10-07 22:04 G | 37572813.25 | 37572813.42 | 37572813.60 | 0.0528 | 0.0337 |
| Saturn | 98158-10-16 14:09 G | 37572821.84 | 37572822.09 | 37572822.34 | 0.0305 | 0.0027 |
| Uranus | 98159-09-12 14:24 G | 37573152.86 | 37573153.10 | 37573153.36 | 0.0135 | 0.0027 |
| Uranus | 98160-09-15 14:24 G | 37573522.01 | 37573522.10 | 37573522.24 | 0.0135 | 0.0118 |
| Jupiter | 98170-10-13 06:43 G | 37577201.56 | 37577201.78 | 37577202.00 | 0.0528 | 0.0165 |
| Saturn | 98172-04-05 20:38 G | 37577742.27 | 37577742.36 | 37577742.45 | 0.0258 | 0.0238 |
| Saturn | 98173-04-17 11:02 G | 37578118.72 | 37578118.96 | 37578119.21 | 0.0257 | 0.0018 |
| Saturn | 98174-04-28 16:48 G | 37578495.05 | 37578495.20 | 37578495.36 | 0.0257 | 0.0204 |
| Mars | 98179-07-18 02:09 G | 37580401.41 | 37580401.59 | 37580401.78 | 0.1931 | 0.0214 |
| Saturn | 98187-10-09 21:07 G | 37583407.18 | 37583407.38 | 37583407.60 | 0.0305 | 0.0141 |
| Saturn | 98188-10-24 03:50 G | 37583787.50 | 37583787.66 | 37583787.84 | 0.0305 | 0.0212 |
| Uranus | 98200-03-09 04:19 G | 37587940.46 | 37587940.68 | 37587940.92 | 0.0143 | 0.0071 |
| Jupiter | 98200-04-09 17:16 G | 37587972.12 | 37587972.22 | 37587972.34 | 0.0498 | 0.0443 |
| Uranus | 98201-03-14 09:21 G | 37588310.66 | 37588310.89 | 37588311.14 | 0.0143 | 0.0036 |
| Uranus | 98202-03-19 10:04 G | 37588680.81 | 37588680.92 | 37588681.07 | 0.0143 | 0.0126 |
| Saturn | 98202-04-13 08:52 G | 37588705.65 | 37588705.87 | 37588706.10 | 0.0258 | 0.0121 |
| Saturn | 98203-04-24 18:14 G | 37589082.05 | 37589082.26 | 37589082.49 | 0.0257 | 0.0104 |
| Jupiter | 98212-04-14 07:11 G | 37592359.57 | 37592359.80 | 37592360.03 | 0.0498 | 0.0022 |
| Saturn | 98216-10-03 00:28 G | 37593992.49 | 37593992.52 | 37593992.57 | 0.0304 | 0.0298 |
| Saturn | 98217-10-18 03:21 G | 37594372.41 | 37594372.64 | 37594372.88 | 0.0305 | 0.0049 |
| Jupiter | 98224-04-18 21:21 G | 37596747.27 | 37596747.39 | 37596747.52 | 0.0498 | 0.0419 |

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| Neptune | 98227-03-20 00:57 G | 37597812.47 | 37597812.54 | 37597812.65 | 0.0088 | 0.0082 |
| Neptune | 98228-03-21 06:57 G | 37598179.66 | 37598179.79 | 37598179.94 | 0.0088 | 0.0073 |
| Neptune | 98229-03-24 00:43 G | 37598547.31 | 37598547.53 | 37598547.77 | 0.0088 | 0.0046 |
| Neptune | 98230-03-26 09:21 G | 37598914.67 | 37598914.89 | 37598915.13 | 0.0088 | 0.0037 |
| Neptune | 98231-03-28 22:33 G | 37599282.18 | 37599282.44 | 37599282.72 | 0.0088 | 0.0010 |
| Saturn | 98231-04-08 19:55 G | 37599293.22 | 37599293.33 | 37599293.47 | 0.0258 | 0.0222 |
| Neptune | 98232-03-30 12:14 G | 37599649.76 | 37599650.01 | 37599650.26 | 0.0088 | 0.0001 |
| Saturn | 98232-04-19 05:02 G | 37599669.46 | 37599669.71 | 37599669.97 | 0.0258 | 0.0004 |
| Neptune | 98233-04-01 20:38 G | 37600017.13 | 37600017.36 | 37600017.63 | 0.0088 | 0.0028 |
| Saturn | 98233-04-30 06:43 G | 37600045.67 | 37600045.78 | 37600045.91 | 0.0257 | 0.0225 |
| Neptune | 98234-04-04 15:07 G | 37600384.90 | 37600385.13 | 37600385.37 | 0.0088 | 0.0038 |
| Neptune | 98235-04-06 20:38 G | 37600752.20 | 37600752.36 | 37600752.56 | 0.0088 | 0.0065 |
| Neptune | 98236-04-08 16:19 G | 37601120.06 | 37601120.18 | 37601120.35 | 0.0088 | 0.0074 |
| Uranus | 98241-09-05 12:28 G | 37603095.95 | 37603096.02 | 37603096.11 | 0.0134 | 0.0128 |
| Jupiter | 98241-10-08 19:40 G | 37603129.15 | 37603129.32 | 37603129.49 | 0.0528 | 0.0356 |
| Uranus | 98242-09-09 13:26 G | 37603464.84 | 37603465.06 | 37603465.30 | 0.0135 | 0.0046 |
| Uranus | 98243-09-14 01:11 G | 37603834.31 | 37603834.55 | 37603834.80 | 0.0135 | 0.0040 |
| Uranus | 98244-09-17 01:26 G | 37604203.44 | 37604203.56 | 37604203.71 | 0.0135 | 0.0111 |
| Saturn | 98246-10-11 14:52 G | 37604957.90 | 37604958.12 | 37604958.35 | 0.0305 | 0.0120 |
| Saturn | 98247-10-26 17:45 G | 37605338.09 | 37605338.24 | 37605338.42 | 0.0305 | 0.0231 |
| Jupiter | 98253-10-13 09:35 G | 37607516.67 | 37607516.90 | 37607517.13 | 0.0528 | 0.0114 |
| Saturn | 98261-04-14 04:04 G | 37610256.46 | 37610256.67 | 37610256.90 | 0.0258 | 0.0104 |
| Saturn | 98262-04-25 18:00 G | 37610633.04 | 37610633.25 | 37610633.47 | 0.0257 | 0.0124 |
| Saturn | 98275-10-04 18:43 G | 37615543.20 | 37615543.28 | 37615543.38 | 0.0304 | 0.0280 |
| Saturn | 98276-10-19 00:57 G | 37615923.31 | 37615923.54 | 37615923.77 | 0.0305 | 0.0068 |
| Jupiter | 98283-04-09 23:45 G | 37618287.47 | 37618287.49 | 37618287.52 | 0.0497 | 0.0494 |
| Uranus | 98284-03-09 10:33 G | 37618621.72 | 37618621.94 | 37618622.18 | 0.0143 | 0.0069 |
| Uranus | 98285-03-14 16:33 G | 37618991.95 | 37618992.19 | 37618992.44 | 0.0143 | 0.0030 |
| Uranus | 98286-03-19 15:35 G | 37619362.15 | 37619362.15 | 37619362.21 | 0.0143 | 0.0143 |
| Saturn | 98290-04-09 16:19 G | 37620844.03 | 37620844.18 | 37620844.34 | 0.0259 | 0.0203 |

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| Saturn | 98291-04-20 20:24 G | 37621220.10 | 37621220.35 | 37621220.61 | 0.0258 | 0.0022 |
| Saturn | 98292-05-01 03:35 G | 37621596.58 | 37621596.65 | 37621596.74 | 0.0258 | 0.0243 |
| Jupiter | 98295-04-14 18:43 G | 37622675.04 | 37622675.28 | 37622675.53 | 0.0498 | 0.0062 |
| Saturn | 98305-10-13 06:14 G | 37626508.52 | 37626508.76 | 37626509.00 | 0.0305 | 0.0099 |
| Saturn | 98306-10-28 08:24 G | 37626888.72 | 37626888.85 | 37626889.00 | 0.0305 | 0.0251 |
| Jupiter | 98307-04-20 03:07 G | 37627062.49 | 37627062.63 | 37627062.78 | 0.0498 | 0.0394 |
| Neptune | 98308-09-18 20:24 G | 37627580.34 | 37627580.35 | 37627580.39 | 0.0089 | 0.0089 |
| Neptune | 98309-09-21 00:28 G | 37627947.36 | 37627947.52 | 37627947.72 | 0.0089 | 0.0062 |
| Neptune | 98310-09-23 17:45 G | 37628315.04 | 37628315.24 | 37628315.47 | 0.0089 | 0.0052 |
| Pluto | 98311-08-25 00:57 G | 37628650.34 | 37628650.54 | 37628650.75 | 0.0063 | 0.0035 |
| Neptune | 98311-09-26 00:43 G | 37628682.30 | 37628682.53 | 37628682.78 | 0.0089 | 0.0024 |
| Pluto | 98312-08-25 09:07 G | 37629016.70 | 37629016.88 | 37629017.11 | 0.0064 | 0.0040 |
| Neptune | 98312-09-27 14:09 G | 37629049.85 | 37629050.09 | 37629050.37 | 0.0089 | 0.0015 |
| Neptune | 98313-09-30 01:26 G | 37629417.32 | 37629417.56 | 37629417.81 | 0.0089 | 0.0014 |
| Neptune | 98314-10-02 09:21 G | 37629784.65 | 37629784.89 | 37629785.16 | 0.0089 | 0.0025 |
| Neptune | 98315-10-05 00:43 G | 37630152.35 | 37630152.53 | 37630152.75 | 0.0089 | 0.0053 |
| Neptune | 98316-10-06 05:16 G | 37630519.56 | 37630519.72 | 37630519.93 | 0.0089 | 0.0062 |
| Neptune | 98317-10-08 23:02 G | 37630887.46 | 37630887.46 | 37630887.51 | 0.0089 | 0.0089 |
| Saturn | 98320-04-16 05:31 G | 37631807.51 | 37631807.73 | 37631807.96 | 0.0258 | 0.0082 |
| Saturn | 98321-04-27 15:21 G | 37632183.94 | 37632184.14 | 37632184.36 | 0.0258 | 0.0142 |
| Jupiter | 98324-10-08 19:26 G | 37633444.17 | 37633444.31 | 37633444.45 | 0.0528 | 0.0416 |
| Uranus | 98325-09-06 22:19 G | 37633777.32 | 37633777.43 | 37633777.57 | 0.0135 | 0.0118 |
| Uranus | 98326-09-11 00:14 G | 37634146.28 | 37634146.51 | 37634146.75 | 0.0135 | 0.0040 |
| Uranus | 98327-09-15 11:02 G | 37634515.73 | 37634515.96 | 37634516.22 | 0.0135 | 0.0039 |
| Uranus | 98328-09-18 12:43 G | 37634884.97 | 37634885.03 | 37634885.12 | 0.0135 | 0.0128 |
| Saturn | 98334-10-06 20:09 G | 37637094.23 | 37637094.34 | 37637094.47 | 0.0304 | 0.0256 |
| Saturn | 98335-10-22 01:40 G | 37637474.34 | 37637474.57 | 37637474.80 | 0.0305 | 0.0092 |
| Jupiter | 98336-10-14 00:14 G | 37637832.29 | 37637832.51 | 37637832.73 | 0.0528 | 0.0055 |
| Mars | 98344-01-15 23:31 G | 37640482.29 | 37640482.48 | 37640482.67 | 0.1614 | 0.0234 |
| Jupiter | 98348-10-18 23:02 G | 37642220.39 | 37642220.46 | 37642220.54 | 0.0528 | 0.0502 |

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| Saturn | 98349-04-11 08:52 G | 37642394.70 | 37642394.87 | 37642395.07 | 0.0259 | 0.0182 |
| Saturn | 98350-04-22 17:02 G | 37642770.98 | 37642771.21 | 37642771.46 | 0.0258 | 0.0042 |
| Saturn | 98364-10-14 04:04 G | 37648059.43 | 37648059.67 | 37648059.90 | 0.0304 | 0.0073 |
| Saturn | 98365-10-29 09:35 G | 37648439.81 | 37648439.90 | 37648440.01 | 0.0305 | 0.0274 |
| Uranus | 98368-03-10 17:02 G | 37649302.99 | 37649303.21 | 37649303.47 | 0.0143 | 0.0065 |
| Uranus | 98369-03-16 00:14 G | 37649673.28 | 37649673.51 | 37649673.76 | 0.0143 | 0.0040 |
| Uranus | 98370-03-20 22:04 G | 37650043.34 | 37650043.42 | 37650043.55 | 0.0143 | 0.0132 |
| Jupiter | 98378-04-14 23:02 G | 37652990.23 | 37652990.46 | 37652990.69 | 0.0498 | 0.0088 |
| Saturn | 98379-04-18 06:28 G | 37653358.53 | 37653358.77 | 37653359.02 | 0.0258 | 0.0059 |
| Saturn | 98380-04-28 10:33 G | 37653734.76 | 37653734.94 | 37653735.15 | 0.0258 | 0.0164 |
| Jupiter | 98390-04-19 20:24 G | 37657378.20 | 37657378.35 | 37657378.51 | 0.0498 | 0.0360 |
| Neptune | 98392-03-21 19:55 G | 37658080.19 | 37658080.33 | 37658080.48 | 0.0088 | 0.0073 |
| Neptune | 98393-03-24 05:16 G | 37658447.55 | 37658447.72 | 37658447.93 | 0.0088 | 0.0057 |
| Saturn | 98393-10-08 01:26 G | 37658645.41 | 37658645.56 | 37658645.73 | 0.0303 | 0.0227 |
| Neptune | 98394-03-26 18:14 G | 37658815.02 | 37658815.26 | 37658815.51 | 0.0088 | 0.0036 |
| Saturn | 98394-10-23 03:07 G | 37659025.40 | 37659025.63 | 37659025.86 | 0.0304 | 0.0117 |
| Neptune | 98395-03-29 08:52 G | 37659182.63 | 37659182.87 | 37659183.13 | 0.0088 | 0.0019 |
| Neptune | 98396-03-30 17:02 G | 37659549.94 | 37659550.21 | 37659550.48 | 0.0088 | 0.0001 |
| Neptune | 98397-04-02 11:16 G | 37659917.72 | 37659917.97 | 37659918.23 | 0.0088 | 0.0017 |
| Neptune | 98398-04-04 16:19 G | 37660284.95 | 37660285.18 | 37660285.43 | 0.0088 | 0.0038 |
| Neptune | 98399-04-07 11:31 G | 37660652.80 | 37660652.98 | 37660653.22 | 0.0088 | 0.0053 |
| Neptune | 98400-04-08 17:45 G | 37661020.13 | 37661020.24 | 37661020.39 | 0.0088 | 0.0075 |
| Pluto | 98402-02-23 06:28 G | 37661705.51 | 37661705.77 | 37661706.03 | 0.0081 | 0.0020 |
| Jupiter | 98407-10-09 10:04 G | 37663759.82 | 37663759.92 | 37663760.03 | 0.0529 | 0.0462 |
| Saturn | 98408-04-12 07:55 G | 37663945.64 | 37663945.83 | 37663946.02 | 0.0259 | 0.0159 |
| Saturn | 98409-04-23 22:04 G | 37664322.19 | 37664322.42 | 37664322.66 | 0.0258 | 0.0066 |
| Uranus | 98409-09-07 07:40 G | 37664458.72 | 37664458.82 | 37664458.95 | 0.0135 | 0.0120 |
| Uranus | 98410-09-11 11:02 G | 37664827.72 | 37664827.96 | 37664828.19 | 0.0135 | 0.0034 |
| Uranus | 98411-09-15 20:38 G | 37665197.13 | 37665197.36 | 37665197.61 | 0.0135 | 0.0049 |
| Uranus | 98412-09-18 22:48 G | 37665566.37 | 37665566.45 | 37665566.57 | 0.0135 | 0.0123 |

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| Jupiter | 98419-10-14 06:28 G | 37668147.53 | 37668147.77 | 37668148.01 | 0.0528 | 0.0005 |
| Mars | 98423-01-18 01:40 G | 37669339.53 | 37669339.57 | 37669339.62 | 0.1611 | 0.1563 |
| Saturn | 98423-10-16 12:00 G | 37669610.77 | 37669611.00 | 37669611.23 | 0.0304 | 0.0044 |
| Saturn | 98424-10-30 18:43 G | 37669991.26 | 37669991.28 | 37669991.32 | 0.0305 | 0.0302 |
| Jupiter | 98431-10-19 01:11 G | 37672535.43 | 37672535.55 | 37672535.68 | 0.0528 | 0.0436 |
| Saturn | 98438-04-19 04:04 G | 37674909.42 | 37674909.67 | 37674909.93 | 0.0258 | 0.0034 |
| Saturn | 98439-04-30 10:19 G | 37675285.77 | 37675285.93 | 37675286.11 | 0.0258 | 0.0187 |
| Uranus | 98452-03-11 01:26 G | 37679984.34 | 37679984.56 | 37679984.81 | 0.0143 | 0.0064 |
| Saturn | 98452-10-09 07:26 G | 37680196.62 | 37680196.81 | 37680197.00 | 0.0303 | 0.0194 |
| Uranus | 98453-03-16 09:07 G | 37680354.64 | 37680354.88 | 37680355.13 | 0.0143 | 0.0038 |
| Saturn | 98453-10-24 07:40 G | 37680576.61 | 37680576.82 | 37680577.04 | 0.0304 | 0.0149 |
| Jupiter | 98461-04-14 10:04 G | 37683305.70 | 37683305.92 | 37683306.15 | 0.0497 | 0.0140 |
| Mars | 98463-07-19 20:24 G | 37684132.17 | 37684132.35 | 37684132.53 | 0.1924 | 0.0790 |
| Saturn | 98467-04-14 14:52 G | 37685496.92 | 37685497.12 | 37685497.33 | 0.0259 | 0.0135 |
| Saturn | 98468-04-25 05:02 G | 37685873.48 | 37685873.71 | 37685873.95 | 0.0258 | 0.0091 |
| Jupiter | 98473-04-18 16:19 G | 37687692.99 | 37687693.18 | 37687693.38 | 0.0497 | 0.0291 |
| Neptune | 98473-09-20 16:04 G | 37687848.03 | 37687848.17 | 37687848.35 | 0.0089 | 0.0070 |
| Neptune | 98474-09-22 23:45 G | 37688215.31 | 37688215.49 | 37688215.69 | 0.0089 | 0.0055 |
| Neptune | 98475-09-25 11:31 G | 37688582.75 | 37688582.98 | 37688583.24 | 0.0089 | 0.0032 |
| Neptune | 98476-09-27 00:00 G | 37688950.26 | 37688950.50 | 37688950.75 | 0.0089 | 0.0016 |
| Neptune | 98477-09-29 07:40 G | 37689317.56 | 37689317.82 | 37689318.08 | 0.0089 | 0.0006 |
| Neptune | 98478-10-02 00:28 G | 37689685.28 | 37689685.52 | 37689685.76 | 0.0089 | 0.0021 |
| Neptune | 98479-10-04 04:33 G | 37690052.48 | 37690052.69 | 37690052.93 | 0.0089 | 0.0044 |
| Neptune | 98480-10-05 22:19 G | 37690420.26 | 37690420.43 | 37690420.65 | 0.0089 | 0.0059 |
| Neptune | 98481-10-08 03:07 G | 37690787.55 | 37690787.63 | 37690787.75 | 0.0089 | 0.0081 |
| Saturn | 98482-10-18 04:48 G | 37691162.47 | 37691162.70 | 37691162.94 | 0.0304 | 0.0011 |
| Uranus | 98493-09-07 16:04 G | 37695140.04 | 37695140.17 | 37695140.35 | 0.0135 | 0.0108 |
| Uranus | 98494-09-11 20:52 G | 37695509.14 | 37695509.37 | 37695509.61 | 0.0135 | 0.0032 |
| Uranus | 98495-09-16 05:16 G | 37695878.49 | 37695878.72 | 37695878.97 | 0.0135 | 0.0050 |
| Saturn | 98496-04-08 22:48 G | 37696084.35 | 37696084.45 | 37696084.55 | 0.0259 | 0.0237 |

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| Saturn | 98497-04-20 06:14 G | 37696460.51 | 37696460.76 | 37696461.01 | 0.0258 | 0.0008 |
| Saturn | 98498-05-01 18:57 G | 37696837.17 | 37696837.29 | 37696837.44 | 0.0258 | 0.0210 |
| Jupiter | 98502-10-14 04:04 G | 37698462.46 | 37698462.67 | 37698462.89 | 0.0528 | 0.0096 |
| Saturn | 98511-10-12 18:28 G | 37701748.07 | 37701748.27 | 37701748.48 | 0.0303 | 0.0159 |
| Saturn | 98512-10-26 21:21 G | 37702128.20 | 37702128.39 | 37702128.58 | 0.0304 | 0.0186 |
| Jupiter | 98514-10-19 05:45 G | 37702850.57 | 37702850.74 | 37702850.93 | 0.0528 | 0.0349 |
| Saturn | 98526-04-17 00:14 G | 37707048.30 | 37707048.51 | 37707048.74 | 0.0259 | 0.0111 |
| Saturn | 98527-04-28 08:24 G | 37707424.63 | 37707424.85 | 37707425.09 | 0.0259 | 0.0115 |
| Uranus | 98536-03-12 12:43 G | 37710665.80 | 37710666.03 | 37710666.29 | 0.0143 | 0.0051 |
| Uranus | 98537-03-17 21:07 G | 37711036.15 | 37711036.38 | 37711036.63 | 0.0143 | 0.0050 |
| Uranus | 98538-03-22 16:48 G | 37711406.20 | 37711406.20 | 37711406.20 | 0.0143 | 0.0143 |
| Saturn | 98541-10-20 23:16 G | 37712714.23 | 37712714.47 | 37712714.72 | 0.0304 | 0.0031 |
| Jupiter | 98544-04-14 05:45 G | 37713620.52 | 37713620.74 | 37713620.96 | 0.0497 | 0.0208 |
| Mars | 98549-01-14 14:52 G | 37715357.01 | 37715357.12 | 37715357.23 | 0.1622 | 0.1274 |
| Saturn | 98555-04-12 02:24 G | 37717635.47 | 37717635.60 | 37717635.76 | 0.0260 | 0.0212 |
| Neptune | 98556-03-22 02:52 G | 37717980.52 | 37717980.62 | 37717980.78 | 0.0088 | 0.0075 |
| Jupiter | 98556-04-19 00:00 G | 37718008.30 | 37718008.50 | 37718008.71 | 0.0498 | 0.0229 |
| Saturn | 98556-04-22 16:48 G | 37718011.96 | 37718012.20 | 37718012.44 | 0.0259 | 0.0017 |
| Neptune | 98557-03-24 13:26 G | 37718347.91 | 37718348.06 | 37718348.27 | 0.0088 | 0.0065 |
| Saturn | 98557-05-04 07:11 G | 37718388.72 | 37718388.80 | 37718388.92 | 0.0258 | 0.0235 |
| Neptune | 98558-03-27 06:00 G | 37718715.52 | 37718715.75 | 37718715.99 | 0.0088 | 0.0037 |
| Pluto | 98558-08-27 11:16 G | 37718868.78 | 37718868.97 | 37718869.22 | 0.0063 | 0.0030 |
| Neptune | 98559-03-29 12:28 G | 37719082.78 | 37719083.02 | 37719083.28 | 0.0088 | 0.0028 |
| Pluto | 98559-08-29 00:00 G | 37719235.34 | 37719235.50 | 37719235.67 | 0.0064 | 0.0050 |
| Neptune | 98560-03-31 07:55 G | 37719450.57 | 37719450.83 | 37719451.09 | 0.0088 | 0.0000 |
| Neptune | 98561-04-02 12:57 G | 37719817.79 | 37719818.04 | 37719818.30 | 0.0088 | 0.0009 |
| Neptune | 98562-04-05 07:26 G | 37720185.59 | 37720185.81 | 37720186.08 | 0.0088 | 0.0037 |
| Neptune | 98563-04-07 14:52 G | 37720552.92 | 37720553.12 | 37720553.35 | 0.0088 | 0.0046 |
| Neptune | 98564-04-09 06:57 G | 37720920.66 | 37720920.79 | 37720920.95 | 0.0088 | 0.0074 |
| Neptune | 98565-04-11 18:14 G | 37721288.20 | 37721288.26 | 37721288.36 | 0.0088 | 0.0083 |

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| Saturn | 98570-10-14 16:19 G | 37723299.97 | 37723300.18 | 37723300.40 | 0.0303 | 0.0120 |
| Saturn | 98571-10-29 21:21 G | 37723680.25 | 37723680.39 | 37723680.56 | 0.0304 | 0.0225 |
| Uranus | 98577-09-09 01:26 G | 37725821.42 | 37725821.56 | 37725821.70 | 0.0135 | 0.0113 |
| Uranus | 98578-09-13 07:26 G | 37726190.57 | 37726190.81 | 37726191.05 | 0.0135 | 0.0024 |
| Uranus | 98579-09-17 14:09 G | 37726559.87 | 37726560.09 | 37726560.34 | 0.0135 | 0.0056 |
| Uranus | 98580-09-20 19:26 G | 37726929.31 | 37726929.31 | 37726929.36 | 0.0135 | 0.0134 |
| Saturn | 98585-04-18 08:09 G | 37728599.61 | 37728599.84 | 37728600.09 | 0.0259 | 0.0085 |
| Jupiter | 98585-10-13 06:00 G | 37728777.53 | 37728777.75 | 37728777.98 | 0.0529 | 0.0184 |
| Saturn | 98586-04-29 13:40 G | 37728975.86 | 37728976.07 | 37728976.28 | 0.0259 | 0.0141 |
| Jupiter | 98597-10-17 22:04 G | 37733165.23 | 37733165.42 | 37733165.62 | 0.0528 | 0.0262 |
| Saturn | 98599-10-08 19:55 G | 37733886.22 | 37733886.33 | 37733886.45 | 0.0302 | 0.0267 |
| Saturn | 98600-10-23 17:31 G | 37734265.99 | 37734266.23 | 37734266.48 | 0.0304 | 0.0071 |
| Saturn | 98614-04-14 13:11 G | 37739186.89 | 37739187.05 | 37739187.23 | 0.0259 | 0.0184 |
| Saturn | 98615-04-26 06:43 G | 37739563.54 | 37739563.78 | 37739564.02 | 0.0259 | 0.0045 |
| Saturn | 98616-05-06 16:04 G | 37739940.15 | 37739940.17 | 37739940.20 | 0.0258 | 0.0257 |
| Uranus | 98619-03-10 05:45 G | 37740977.72 | 37740977.74 | 37740977.80 | 0.0143 | 0.0142 |
| Uranus | 98620-03-14 00:28 G | 37741347.28 | 37741347.52 | 37741347.76 | 0.0143 | 0.0052 |
| Uranus | 98621-03-19 08:52 G | 37741717.64 | 37741717.87 | 37741718.11 | 0.0143 | 0.0053 |
| Jupiter | 98627-04-15 12:14 G | 37743935.82 | 37743936.01 | 37743936.20 | 0.0497 | 0.0277 |
| Mars | 98628-01-18 17:16 G | 37744214.07 | 37744214.22 | 37744214.39 | 0.1618 | 0.0922 |
| Saturn | 98629-10-17 19:26 G | 37744852.08 | 37744852.31 | 37744852.54 | 0.0304 | 0.0077 |
| Saturn | 98630-11-02 00:28 G | 37745232.41 | 37745232.52 | 37745232.63 | 0.0304 | 0.0267 |
| Neptune | 98637-09-21 23:45 G | 37747748.40 | 37747748.49 | 37747748.62 | 0.0090 | 0.0080 |
| Neptune | 98638-09-24 10:33 G | 37748115.75 | 37748115.94 | 37748116.17 | 0.0089 | 0.0054 |
| Jupiter | 98639-04-19 21:50 G | 37748323.18 | 37748323.41 | 37748323.65 | 0.0497 | 0.0153 |
| Neptune | 98639-09-27 00:14 G | 37748483.32 | 37748483.51 | 37748483.75 | 0.0089 | 0.0043 |
| Neptune | 98640-09-28 06:43 G | 37748850.53 | 37748850.78 | 37748851.04 | 0.0089 | 0.0016 |
| Neptune | 98641-10-01 00:00 G | 37749218.25 | 37749218.50 | 37749218.75 | 0.0089 | 0.0005 |
| Neptune | 98642-10-03 04:04 G | 37749585.43 | 37749585.67 | 37749585.92 | 0.0089 | 0.0022 |
| Neptune | 98643-10-05 21:35 G | 37749953.16 | 37749953.40 | 37749953.64 | 0.0089 | 0.0033 |

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| Saturn | 98644-04-20 14:38 G | 37750150.86 | 37750151.11 | 37750151.36 | 0.0259 | 0.0053 |
| Neptune | 98644-10-07 02:24 G | 37750320.44 | 37750320.60 | 37750320.81 | 0.0089 | 0.0061 |
| Saturn | 98645-05-02 00:57 G | 37750527.36 | 37750527.54 | 37750527.73 | 0.0259 | 0.0167 |
| Neptune | 98645-10-09 17:16 G | 37750688.08 | 37750688.22 | 37750688.40 | 0.0089 | 0.0071 |
| Pluto | 98649-02-27 00:43 G | 37751924.33 | 37751924.53 | 37751924.75 | 0.0080 | 0.0051 |
| Saturn | 98658-10-11 16:33 G | 37755438.03 | 37755438.19 | 37755438.37 | 0.0303 | 0.0222 |
| Saturn | 98659-10-26 16:04 G | 37755817.95 | 37755818.17 | 37755818.40 | 0.0304 | 0.0117 |
| Uranus | 98661-09-10 09:50 G | 37756502.73 | 37756502.91 | 37756503.09 | 0.0135 | 0.0098 |
| Uranus | 98662-09-14 17:31 G | 37756871.99 | 37756872.23 | 37756872.47 | 0.0135 | 0.0026 |
| Uranus | 98663-09-18 22:48 G | 37757241.22 | 37757241.45 | 37757241.69 | 0.0135 | 0.0060 |
| Jupiter | 98668-10-12 23:02 G | 37759092.27 | 37759092.46 | 37759092.65 | 0.0528 | 0.0277 |
| Saturn | 98673-04-16 05:16 G | 37760738.53 | 37760738.72 | 37760738.92 | 0.0259 | 0.0152 |
| Saturn | 98674-04-27 18:14 G | 37761115.01 | 37761115.26 | 37761115.50 | 0.0259 | 0.0072 |
| Jupiter | 98680-10-18 00:14 G | 37763480.29 | 37763480.51 | 37763480.73 | 0.0528 | 0.0158 |
| Saturn | 98688-10-19 21:35 G | 37766404.16 | 37766404.40 | 37766404.64 | 0.0304 | 0.0029 |
| Saturn | 98702-04-12 13:11 G | 37771325.97 | 37771326.05 | 37771326.13 | 0.0260 | 0.0247 |
| Saturn | 98703-04-24 00:14 G | 37771702.27 | 37771702.51 | 37771702.76 | 0.0259 | 0.0024 |
| Uranus | 98704-03-15 11:02 G | 37772028.72 | 37772028.96 | 37772029.21 | 0.0143 | 0.0037 |
| Saturn | 98704-05-04 15:21 G | 37772078.99 | 37772079.14 | 37772079.31 | 0.0259 | 0.0193 |
| Uranus | 98705-03-20 19:40 G | 37772399.10 | 37772399.32 | 37772399.57 | 0.0143 | 0.0061 |
| Jupiter | 98710-04-15 08:52 G | 37774250.70 | 37774250.87 | 37774251.05 | 0.0497 | 0.0346 |
| Saturn | 98717-10-14 13:40 G | 37776989.88 | 37776990.07 | 37776990.27 | 0.0303 | 0.0176 |
| Saturn | 98718-10-29 17:02 G | 37777370.02 | 37777370.21 | 37777370.42 | 0.0304 | 0.0163 |
| Neptune | 98720-03-23 08:52 G | 37777880.79 | 37777880.87 | 37777880.98 | 0.0088 | 0.0081 |
| Neptune | 98721-03-26 02:38 G | 37778248.46 | 37778248.61 | 37778248.79 | 0.0088 | 0.0067 |
| Neptune | 98722-03-28 08:24 G | 37778615.65 | 37778615.85 | 37778616.10 | 0.0088 | 0.0046 |
| Jupiter | 98722-04-19 18:43 G | 37778638.05 | 37778638.28 | 37778638.50 | 0.0497 | 0.0069 |
| Neptune | 98723-03-31 04:19 G | 37778983.45 | 37778983.68 | 37778983.94 | 0.0088 | 0.0030 |
| Neptune | 98724-04-01 10:04 G | 37779350.67 | 37779350.92 | 37779351.18 | 0.0088 | 0.0009 |
| Neptune | 98725-04-04 04:19 G | 37779718.42 | 37779718.68 | 37779718.96 | 0.0088 | 0.0009 |

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| Neptune | 98726-04-06 12:28 G | 37780085.80 | 37780086.02 | 37780086.27 | 0.0088 | 0.0029 |
| Neptune | 98727-04-09 02:38 G | 37780453.38 | 37780453.61 | 37780453.85 | 0.0088 | 0.0045 |
| Neptune | 98728-04-10 15:21 G | 37780820.98 | 37780821.14 | 37780821.32 | 0.0088 | 0.0065 |
| Neptune | 98729-04-13 00:43 G | 37781188.43 | 37781188.53 | 37781188.63 | 0.0088 | 0.0082 |
| Saturn | 98732-04-18 18:00 G | 37782290.03 | 37782290.25 | 37782290.48 | 0.0259 | 0.0120 |
| Saturn | 98733-04-30 00:28 G | 37782666.29 | 37782666.52 | 37782666.77 | 0.0258 | 0.0101 |
| Jupiter | 98734-04-24 11:45 G | 37783025.88 | 37783025.99 | 37783026.11 | 0.0498 | 0.0438 |
| Uranus | 98745-09-11 18:43 G | 37787184.13 | 37787184.28 | 37787184.44 | 0.0135 | 0.0107 |
| Uranus | 98746-09-16 03:35 G | 37787553.42 | 37787553.65 | 37787553.90 | 0.0135 | 0.0015 |
| Uranus | 98747-09-20 07:26 G | 37787922.59 | 37787922.81 | 37787923.05 | 0.0135 | 0.0061 |
| Saturn | 98747-10-23 18:14 G | 37787956.01 | 37787956.26 | 37787956.51 | 0.0304 | 0.0015 |
| Jupiter | 98751-10-14 00:00 G | 37789407.34 | 37789407.50 | 37789407.66 | 0.0528 | 0.0387 |
| Saturn | 98761-04-13 22:04 G | 37792877.30 | 37792877.42 | 37792877.57 | 0.0260 | 0.0219 |
| Saturn | 98762-04-25 14:38 G | 37793253.87 | 37793254.11 | 37793254.35 | 0.0259 | 0.0006 |
| Saturn | 98763-05-07 03:21 G | 37793630.52 | 37793630.64 | 37793630.78 | 0.0259 | 0.0220 |
| Jupiter | 98763-10-18 12:14 G | 37793794.78 | 37793795.01 | 37793795.25 | 0.0529 | 0.0053 |
| Saturn | 98776-10-16 12:43 G | 37798541.82 | 37798542.03 | 37798542.24 | 0.0303 | 0.0135 |
| Saturn | 98777-10-31 17:45 G | 37798922.08 | 37798922.24 | 37798922.42 | 0.0304 | 0.0206 |
| Uranus | 98787-03-12 00:00 G | 37802340.42 | 37802340.50 | 37802340.62 | 0.0143 | 0.0133 |
| Uranus | 98788-03-15 19:26 G | 37802710.07 | 37802710.31 | 37802710.55 | 0.0143 | 0.0045 |
| Uranus | 98789-03-21 03:50 G | 37803080.44 | 37803080.66 | 37803080.90 | 0.0143 | 0.0064 |
| Saturn | 98791-04-20 23:45 G | 37803841.25 | 37803841.49 | 37803841.74 | 0.0259 | 0.0091 |
| Saturn | 98792-05-01 06:28 G | 37804217.57 | 37804217.77 | 37804218.00 | 0.0258 | 0.0129 |
| Jupiter | 98793-04-14 07:11 G | 37804565.69 | 37804565.80 | 37804565.92 | 0.0497 | 0.0424 |
| Neptune | 98801-09-22 09:21 G | 37807648.83 | 37807648.89 | 37807648.99 | 0.0089 | 0.0085 |
| Neptune | 98802-09-25 00:43 G | 37808016.34 | 37808016.53 | 37808016.71 | 0.0089 | 0.0059 |
| Neptune | 98803-09-27 05:45 G | 37808383.53 | 37808383.74 | 37808383.96 | 0.0089 | 0.0048 |
| Neptune | 98804-09-28 23:31 G | 37808751.25 | 37808751.48 | 37808751.74 | 0.0089 | 0.0022 |
| Jupiter | 98805-04-19 00:57 G | 37808953.30 | 37808953.54 | 37808953.78 | 0.0498 | 0.0003 |
| Pluto | 98805-08-30 21:07 G | 37809087.17 | 37809087.38 | 37809087.64 | 0.0063 | 0.0022 |

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| Neptune | 98805-10-01 03:50 G | 37809118.41 | 37809118.66 | 37809118.91 | 0.0089 | 0.0009 |
| Saturn | 98805-10-10 08:24 G | 37809127.76 | 37809127.85 | 37809127.93 | 0.0303 | 0.0282 |
| Pluto | 98806-09-01 12:00 G | 37809453.85 | 37809454.00 | 37809454.20 | 0.0064 | 0.0047 |
| Neptune | 98806-10-03 21:07 G | 37809486.12 | 37809486.38 | 37809486.63 | 0.0089 | 0.0017 |
| Saturn | 98806-10-25 06:57 G | 37809507.55 | 37809507.79 | 37809508.03 | 0.0304 | 0.0053 |
| Neptune | 98807-10-06 03:07 G | 37809853.41 | 37809853.63 | 37809853.88 | 0.0089 | 0.0030 |
| Neptune | 98808-10-07 17:02 G | 37810221.01 | 37810221.21 | 37810221.43 | 0.0089 | 0.0054 |
| Neptune | 98809-10-10 03:35 G | 37810588.51 | 37810588.65 | 37810588.84 | 0.0089 | 0.0067 |
| Jupiter | 98817-04-23 08:38 G | 37813340.72 | 37813340.86 | 37813341.02 | 0.0497 | 0.0378 |
| Saturn | 98820-04-15 09:50 G | 37814428.76 | 37814428.91 | 37814429.08 | 0.0259 | 0.0191 |
| Saturn | 98821-04-27 01:40 G | 37814805.32 | 37814805.57 | 37814805.82 | 0.0258 | 0.0035 |
| Saturn | 98822-05-08 07:40 G | 37815181.74 | 37815181.82 | 37815181.92 | 0.0258 | 0.0242 |
| Uranus | 98829-09-12 02:52 G | 37817865.44 | 37817865.62 | 37817865.82 | 0.0135 | 0.0090 |
| Uranus | 98830-09-16 13:40 G | 37818234.83 | 37818235.07 | 37818235.31 | 0.0135 | 0.0020 |
| Uranus | 98831-09-20 16:04 G | 37818603.96 | 37818604.17 | 37818604.39 | 0.0135 | 0.0070 |
| Mars | 98833-01-18 05:45 G | 37819089.56 | 37819089.74 | 37819089.92 | 0.1625 | 0.0334 |
| Jupiter | 98834-10-12 16:48 G | 37819722.10 | 37819722.20 | 37819722.30 | 0.0529 | 0.0476 |
| Saturn | 98835-10-19 07:26 G | 37820093.59 | 37820093.81 | 37820094.04 | 0.0304 | 0.0098 |
| Saturn | 98836-11-02 11:31 G | 37820473.83 | 37820473.98 | 37820474.12 | 0.0304 | 0.0244 |
| Jupiter | 98846-10-17 23:16 G | 37824110.25 | 37824110.47 | 37824110.70 | 0.0528 | 0.0016 |
| Saturn | 98850-04-22 03:50 G | 37825392.42 | 37825392.66 | 37825392.91 | 0.0258 | 0.0062 |
| Saturn | 98851-05-03 16:19 G | 37825768.99 | 37825769.18 | 37825769.38 | 0.0258 | 0.0153 |
| Jupiter | 98858-10-22 14:38 G | 37828498.03 | 37828498.11 | 37828498.21 | 0.0528 | 0.0490 |
| Saturn | 98864-10-11 16:04 G | 37830679.05 | 37830679.17 | 37830679.32 | 0.0303 | 0.0252 |
| Saturn | 98865-10-26 18:43 G | 37831059.05 | 37831059.28 | 37831059.51 | 0.0305 | 0.0087 |
| Uranus | 98872-03-16 01:55 G | 37833391.33 | 37833391.58 | 37833391.83 | 0.0143 | 0.0031 |
| Uranus | 98873-03-21 09:50 G | 37833761.69 | 37833761.91 | 37833762.15 | 0.0143 | 0.0063 |
| Jupiter | 98876-04-13 16:33 G | 37834881.12 | 37834881.19 | 37834881.29 | 0.0497 | 0.0465 |
| Saturn | 98879-04-17 19:26 G | 37835980.12 | 37835980.31 | 37835980.50 | 0.0259 | 0.0163 |
| Saturn | 98880-04-28 03:50 G | 37836356.41 | 37836356.66 | 37836356.92 | 0.0258 | 0.0059 |

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| Neptune | 98885-03-25 06:00 G | 37838148.58 | 37838148.75 | 37838148.92 | 0.0088 | 0.0066 |
| Neptune | 98886-03-28 00:57 G | 37838516.36 | 37838516.54 | 37838516.76 | 0.0088 | 0.0056 |
| Neptune | 98887-03-30 07:11 G | 37838883.57 | 37838883.80 | 37838884.06 | 0.0088 | 0.0029 |
| Neptune | 98888-04-01 00:00 G | 37839251.25 | 37839251.50 | 37839251.78 | 0.0088 | 0.0019 |
| Jupiter | 98888-04-18 00:28 G | 37839268.29 | 37839268.52 | 37839268.76 | 0.0497 | 0.0051 |
| Neptune | 98889-04-03 10:04 G | 37839618.67 | 37839618.92 | 37839619.18 | 0.0088 | 0.0009 |
| Neptune | 98890-04-05 22:48 G | 37839986.19 | 37839986.45 | 37839986.72 | 0.0088 | 0.0018 |
| Neptune | 98891-04-08 13:40 G | 37840353.86 | 37840354.07 | 37840354.29 | 0.0088 | 0.0046 |
| Neptune | 98892-04-09 21:21 G | 37840721.20 | 37840721.39 | 37840721.61 | 0.0088 | 0.0056 |
| Neptune | 98893-04-12 15:35 G | 37841089.09 | 37841089.15 | 37841089.26 | 0.0088 | 0.0084 |
| Saturn | 98894-10-20 14:52 G | 37841644.89 | 37841645.12 | 37841645.37 | 0.0304 | 0.0069 |
| Saturn | 98895-11-04 16:19 G | 37842025.08 | 37842025.18 | 37842025.30 | 0.0304 | 0.0270 |
| Pluto | 98896-03-01 13:40 G | 37842142.88 | 37842143.07 | 37842143.27 | 0.0080 | 0.0056 |
| Jupiter | 98900-04-23 17:02 G | 37843656.03 | 37843656.21 | 37843656.40 | 0.0498 | 0.0304 |
| Saturn | 98909-04-24 09:35 G | 37846943.67 | 37846943.90 | 37846944.14 | 0.0258 | 0.0039 |
| Saturn | 98910-05-06 00:00 G | 37847320.32 | 37847320.50 | 37847320.68 | 0.0258 | 0.0173 |
| Uranus | 98913-09-13 11:31 G | 37848546.82 | 37848546.98 | 37848547.16 | 0.0135 | 0.0101 |
| Uranus | 98914-09-17 23:31 G | 37848916.23 | 37848916.48 | 37848916.72 | 0.0135 | 0.0005 |
| Uranus | 98915-09-22 00:43 G | 37849285.31 | 37849285.53 | 37849285.76 | 0.0135 | 0.0067 |
| Saturn | 98923-10-14 22:33 G | 37852230.29 | 37852230.44 | 37852230.60 | 0.0304 | 0.0226 |
| Saturn | 98924-10-29 04:04 G | 37852610.46 | 37852610.67 | 37852610.89 | 0.0305 | 0.0112 |
| Jupiter | 98929-10-17 21:07 G | 37854425.15 | 37854425.38 | 37854425.62 | 0.0528 | 0.0090 |
| Saturn | 98938-04-19 20:52 G | 37857531.16 | 37857531.37 | 37857531.59 | 0.0259 | 0.0138 |
| Saturn | 98939-05-01 01:26 G | 37857907.32 | 37857907.56 | 37857907.81 | 0.0258 | 0.0080 |
| Jupiter | 98941-10-22 19:26 G | 37858813.18 | 37858813.31 | 37858813.44 | 0.0528 | 0.0423 |
| Saturn | 98953-10-22 13:26 G | 37863195.82 | 37863196.06 | 37863196.31 | 0.0304 | 0.0047 |
| Saturn | 98954-11-06 15:50 G | 37863576.11 | 37863576.16 | 37863576.24 | 0.0304 | 0.0292 |
| Uranus | 98955-03-13 11:45 G | 37863702.89 | 37863702.99 | 37863703.12 | 0.0143 | 0.0129 |
| Uranus | 98956-03-17 09:21 G | 37864072.65 | 37864072.89 | 37864073.13 | 0.0143 | 0.0042 |
| Uranus | 98957-03-22 16:04 G | 37864442.95 | 37864443.17 | 37864443.41 | 0.0143 | 0.0071 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 98965-09-23 00:57 G | 37867549.48 | 37867549.54 | 37867549.63 | 0.0090 | 0.0085 |
| Neptune | 98966-09-25 05:45 G | 37867916.59 | 37867916.74 | 37867916.91 | 0.0089 | 0.0070 |
| Saturn | 98967-04-14 22:33 G | 37868118.35 | 37868118.44 | 37868118.54 | 0.0259 | 0.0236 |
| Neptune | 98967-09-27 23:59 G | 37868284.28 | 37868284.50 | 37868284.72 | 0.0089 | 0.0046 |
| Saturn | 98968-04-25 14:38 G | 37868494.87 | 37868495.11 | 37868495.35 | 0.0258 | 0.0015 |
| Neptune | 98968-09-29 04:19 G | 37868651.46 | 37868651.68 | 37868651.93 | 0.0089 | 0.0032 |
| Saturn | 98969-05-06 22:33 G | 37868871.28 | 37868871.44 | 37868871.62 | 0.0258 | 0.0190 |
| Neptune | 98969-10-01 20:52 G | 37869019.11 | 37869019.37 | 37869019.63 | 0.0089 | 0.0007 |
| Neptune | 98970-10-04 04:04 G | 37869386.43 | 37869386.67 | 37869386.92 | 0.0089 | 0.0006 |
| Jupiter | 98971-04-19 11:31 G | 37869583.75 | 37869583.98 | 37869584.21 | 0.0497 | 0.0113 |
| Neptune | 98971-10-06 15:35 G | 37869753.91 | 37869754.15 | 37869754.41 | 0.0089 | 0.0029 |
| Neptune | 98972-10-08 03:35 G | 37870121.46 | 37870121.65 | 37870121.89 | 0.0089 | 0.0044 |
| Neptune | 98973-10-10 10:33 G | 37870488.80 | 37870488.94 | 37870489.14 | 0.0089 | 0.0068 |
| Neptune | 98974-10-13 03:07 G | 37870856.56 | 37870856.63 | 37870856.76 | 0.0089 | 0.0082 |
| Saturn | 98982-10-16 01:40 G | 37873781.41 | 37873781.57 | 37873781.75 | 0.0304 | 0.0206 |
| Jupiter | 98983-04-23 19:11 G | 37873971.10 | 37873971.30 | 37873971.51 | 0.0498 | 0.0257 |
| Saturn | 98983-10-31 05:59 G | 37874161.53 | 37874161.75 | 37874161.97 | 0.0305 | 0.0131 |
| Saturn | 98997-04-20 14:38 G | 37879081.89 | 37879082.11 | 37879082.35 | 0.0258 | 0.0113 |
| Uranus | 98997-09-13 19:26 G | 37879228.13 | 37879228.31 | 37879228.53 | 0.0135 | 0.0083 |
| Saturn | 98998-05-02 00:43 G | 37879458.31 | 37879458.53 | 37879458.76 | 0.0258 | 0.0099 |
| Uranus | 98998-09-18 08:38 G | 37879597.62 | 37879597.86 | 37879598.11 | 0.0135 | 0.0014 |
| Uranus | 98999-09-22 09:21 G | 37879966.69 | 37879966.89 | 37879967.10 | 0.0135 | 0.0080 |

100TH MILLENNIUM CE

This is a list of transits of Moon in the 100th millennium CE.

| | FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------|-------|---|-------------|-------------|-------------|--------|--------|---|
| | TRANSIT | | | | | | | | |
| | TIME | | | | | | | | |
| Jupiter | 99012-10-18 | 08:38 | G | 37884740.65 | 37884740.86 | 37884741.08 | 0.0528 | 0.0137 | |
| Saturn | 99012-10-24 | 09:21 | G | 37884746.65 | 37884746.89 | 37884747.12 | 0.0304 | 0.0027 | |
| Jupiter | 99024-10-23 | 11:16 | G | 37889128.82 | 37889128.97 | 37889129.12 | 0.0528 | 0.0402 | |
| Saturn | 99026-04-17 | 01:40 | G | 37889669.43 | 37889669.57 | 37889669.71 | 0.0259 | 0.0211 | |
| Saturn | 99027-04-28 | 12:57 | G | 37890045.79 | 37890046.04 | 37890046.30 | 0.0258 | 0.0007 | |
| Saturn | 99028-05-08 | 15:07 | G | 37890421.99 | 37890422.13 | 37890422.30 | 0.0257 | 0.0204 | |
| Mars | 99038-01-18 | 18:28 | G | 37893964.12 | 37893964.27 | 37893964.41 | 0.1633 | 0.1090 | |
| Uranus | 99039-03-14 | 19:26 | G | 37894384.26 | 37894384.31 | 37894384.39 | 0.0143 | 0.0138 | |
| Uranus | 99040-03-18 | 18:57 | G | 37894754.04 | 37894754.29 | 37894754.54 | 0.0143 | 0.0023 | |
| Uranus | 99041-03-24 | 00:28 | G | 37895124.30 | 37895124.52 | 37895124.76 | 0.0143 | 0.0068 | |
| Saturn | 99041-10-17 | 21:50 | G | 37895332.22 | 37895332.41 | 37895332.60 | 0.0304 | 0.0187 | |
| Saturn | 99042-11-01 | 22:04 | G | 37895712.21 | 37895712.42 | 37895712.65 | 0.0305 | 0.0146 | |
| Neptune | 99049-03-26 | 21:21 | G | 37898049.25 | 37898049.39 | 37898049.56 | 0.0088 | 0.0071 | |
| Neptune | 99050-03-29 | 04:33 | G | 37898416.52 | 37898416.69 | 37898416.90 | 0.0088 | 0.0059 | |
| Neptune | 99051-03-31 | 20:23 | G | 37898784.11 | 37898784.35 | 37898784.61 | 0.0088 | 0.0035 | |
| Neptune | 99052-04-02 | 08:23 | G | 37899151.60 | 37899151.85 | 37899152.09 | 0.0088 | 0.0022 | |
| Pluto | 99052-09-03 | 02:09 | G | 37899305.41 | 37899305.59 | 37899305.81 | 0.0063 | 0.0037 | |
| Neptune | 99053-04-04 | 19:11 | G | 37899519.02 | 37899519.30 | 37899519.57 | 0.0088 | 0.0002 | |
| Pluto | 99053-09-04 | 18:28 | G | 37899672.08 | 37899672.27 | 37899672.50 | 0.0064 | 0.0039 | |
| Neptune | 99054-04-07 | 11:02 | G | 37899886.72 | 37899886.96 | 37899887.22 | 0.0088 | 0.0016 | |
| Jupiter | 99054-04-19 | 17:02 | G | 37899898.98 | 37899899.21 | 37899899.44 | 0.0498 | 0.0146 | |
| Neptune | 99055-04-09 | 17:31 | G | 37900254.01 | 37900254.23 | 37900254.48 | 0.0088 | 0.0040 | |
| Neptune | 99056-04-11 | 12:28 | G | 37900621.85 | 37900622.02 | 37900622.26 | 0.0088 | 0.0055 | |
| Saturn | 99056-04-22 | 11:02 | G | 37900632.73 | 37900632.96 | 37900633.19 | 0.0258 | 0.0092 | |
| Neptune | 99057-04-13 | 18:14 | G | 37900989.15 | 37900989.26 | 37900989.40 | 0.0088 | 0.0076 | |
| Saturn | 99057-05-04 | 01:11 | G | 37901009.34 | 37901009.55 | 37901009.77 | 0.0258 | 0.0116 | |
| Jupiter | 99066-04-24 | 13:40 | G | 37904286.87 | 37904287.07 | 37904287.28 | 0.0498 | 0.0220 | |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 99071-10-26 06:43 G | 37906297.55 | 37906297.78 | 37906298.01 | 0.0304 | 0.0013 |
| Uranus | 99081-09-15 04:19 G | 37909909.50 | 37909909.68 | 37909909.86 | 0.0135 | 0.0094 |
| Uranus | 99082-09-19 17:45 G | 37910278.99 | 37910279.24 | 37910279.49 | 0.0135 | 0.0004 |
| Uranus | 99083-09-23 17:31 G | 37910648.04 | 37910648.23 | 37910648.46 | 0.0135 | 0.0074 |
| Saturn | 99085-04-17 21:50 G | 37911220.24 | 37911220.41 | 37911220.58 | 0.0259 | 0.0191 |
| Saturn | 99086-04-29 03:35 G | 37911596.40 | 37911596.65 | 37911596.91 | 0.0258 | 0.0023 |
| Saturn | 99087-05-10 10:19 G | 37911972.81 | 37911972.93 | 37911973.07 | 0.0257 | 0.0219 |
| Jupiter | 99095-10-18 23:31 G | 37915056.25 | 37915056.48 | 37915056.70 | 0.0528 | 0.0157 |
| Saturn | 99100-10-19 09:07 G | 37916882.69 | 37916882.88 | 37916883.09 | 0.0304 | 0.0179 |
| Saturn | 99101-11-03 10:33 G | 37917262.73 | 37917262.94 | 37917263.15 | 0.0305 | 0.0156 |
| Jupiter | 99107-10-24 16:04 G | 37919444.01 | 37919444.17 | 37919444.33 | 0.0528 | 0.0364 |
| Mars | 99110-07-27 00:43 G | 37920450.37 | 37920450.53 | 37920450.69 | 0.1913 | 0.1149 |
| Saturn | 99115-04-25 10:33 G | 37922183.71 | 37922183.94 | 37922184.17 | 0.0258 | 0.0075 |
| Saturn | 99116-05-05 21:21 G | 37922560.18 | 37922560.39 | 37922560.62 | 0.0258 | 0.0130 |
| Mars | 99117-01-22 04:47 G | 37922821.50 | 37922821.70 | 37922821.90 | 0.1629 | 0.0389 |
| Uranus | 99123-03-16 06:43 G | 37925065.66 | 37925065.78 | 37925065.96 | 0.0143 | 0.0118 |
| Uranus | 99124-03-20 07:26 G | 37925435.57 | 37925435.81 | 37925436.06 | 0.0143 | 0.0030 |
| Uranus | 99125-03-25 11:45 G | 37925805.78 | 37925805.99 | 37925806.21 | 0.0143 | 0.0084 |
| Neptune | 99129-09-24 05:02 G | 37927449.67 | 37927449.71 | 37927449.79 | 0.0090 | 0.0087 |
| Neptune | 99130-09-26 23:02 G | 37927817.35 | 37927817.46 | 37927817.61 | 0.0089 | 0.0077 |
| Saturn | 99130-10-28 02:09 G | 37927848.35 | 37927848.59 | 37927848.83 | 0.0304 | 0.0001 |
| Neptune | 99131-09-29 04:33 G | 37928184.49 | 37928184.69 | 37928184.91 | 0.0089 | 0.0049 |
| Neptune | 99132-09-30 19:55 G | 37928552.10 | 37928552.33 | 37928552.57 | 0.0089 | 0.0039 |
| Neptune | 99133-10-03 04:47 G | 37928919.47 | 37928919.70 | 37928919.95 | 0.0089 | 0.0012 |
| Neptune | 99134-10-05 15:50 G | 37929286.90 | 37929287.16 | 37929287.42 | 0.0089 | 0.0001 |
| Neptune | 99135-10-08 05:31 G | 37929654.51 | 37929654.73 | 37929654.98 | 0.0089 | 0.0027 |
| Neptune | 99136-10-09 11:16 G | 37930021.76 | 37930021.97 | 37930022.23 | 0.0089 | 0.0038 |
| Jupiter | 99137-04-20 06:57 G | 37930214.58 | 37930214.79 | 37930215.00 | 0.0497 | 0.0199 |
| Neptune | 99137-10-12 04:47 G | 37930389.53 | 37930389.70 | 37930389.88 | 0.0089 | 0.0065 |
| Neptune | 99138-10-14 08:23 G | 37930756.73 | 37930756.85 | 37930757.01 | 0.0089 | 0.0075 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 99143-03-06 20:09 G | 37932361.11 | 37932361.34 | 37932361.60 | 0.0080 | 0.0035 |
| Saturn | 99144-04-19 11:31 G | 37932770.80 | 37932770.98 | 37932771.18 | 0.0259 | 0.0174 |
| Saturn | 99145-04-30 20:38 G | 37933147.12 | 37933147.36 | 37933147.61 | 0.0258 | 0.0036 |
| Saturn | 99146-05-12 09:07 G | 37933523.79 | 37933523.88 | 37933524.00 | 0.0258 | 0.0230 |
| Jupiter | 99149-04-24 18:14 G | 37934602.03 | 37934602.26 | 37934602.49 | 0.0497 | 0.0166 |
| Saturn | 99159-10-20 23:45 G | 37938433.30 | 37938433.49 | 37938433.69 | 0.0304 | 0.0170 |
| Saturn | 99160-11-04 04:33 G | 37938813.51 | 37938813.69 | 37938813.89 | 0.0305 | 0.0170 |
| Uranus | 99165-09-16 13:11 G | 37940590.85 | 37940591.05 | 37940591.26 | 0.0135 | 0.0076 |
| Uranus | 99166-09-21 03:07 G | 37940960.38 | 37940960.63 | 37940960.88 | 0.0135 | 0.0007 |
| Uranus | 99167-09-25 02:38 G | 37941329.44 | 37941329.61 | 37941329.81 | 0.0135 | 0.0090 |
| Saturn | 99174-04-26 06:14 G | 37943734.52 | 37943734.76 | 37943735.01 | 0.0258 | 0.0060 |
| Saturn | 99175-05-07 11:16 G | 37944110.75 | 37944110.97 | 37944111.19 | 0.0258 | 0.0138 |
| Jupiter | 99178-10-19 03:21 G | 37945371.44 | 37945371.64 | 37945371.85 | 0.0528 | 0.0206 |
| Saturn | 99189-10-28 15:35 G | 37949398.90 | 37949399.15 | 37949399.40 | 0.0304 | 0.0009 |
| Jupiter | 99190-10-24 10:19 G | 37949759.76 | 37949759.93 | 37949760.12 | 0.0528 | 0.0330 |
| Saturn | 99203-04-21 04:19 G | 37954321.49 | 37954321.68 | 37954321.88 | 0.0260 | 0.0158 |
| Saturn | 99204-05-01 19:55 G | 37954698.10 | 37954698.33 | 37954698.57 | 0.0258 | 0.0047 |
| Saturn | 99205-05-13 06:43 G | 37955074.70 | 37955074.78 | 37955074.88 | 0.0258 | 0.0240 |
| Uranus | 99207-03-16 17:31 G | 37955747.11 | 37955747.23 | 37955747.37 | 0.0143 | 0.0124 |
| Uranus | 99208-03-20 19:40 G | 37956117.08 | 37956117.32 | 37956117.57 | 0.0143 | 0.0009 |
| Uranus | 99209-03-25 22:33 G | 37956487.24 | 37956487.44 | 37956487.67 | 0.0143 | 0.0081 |
| Neptune | 99213-03-27 03:07 G | 37957949.57 | 37957949.63 | 37957949.75 | 0.0088 | 0.0082 |
| Neptune | 99214-03-29 17:02 G | 37958317.02 | 37958317.21 | 37958317.43 | 0.0088 | 0.0058 |
| Neptune | 99215-04-01 05:31 G | 37958684.54 | 37958684.73 | 37958684.97 | 0.0088 | 0.0046 |
| Neptune | 99216-04-02 14:52 G | 37959051.87 | 37959052.12 | 37959052.39 | 0.0088 | 0.0021 |
| Neptune | 99217-04-05 08:38 G | 37959419.61 | 37959419.86 | 37959420.12 | 0.0088 | 0.0008 |
| Neptune | 99218-04-07 14:23 G | 37959786.85 | 37959787.10 | 37959787.37 | 0.0088 | 0.0017 |
| Saturn | 99218-10-21 22:19 G | 37959984.24 | 37959984.43 | 37959984.63 | 0.0303 | 0.0158 |
| Neptune | 99219-04-10 09:50 G | 37960154.68 | 37960154.91 | 37960155.18 | 0.0088 | 0.0029 |
| Saturn | 99219-11-06 03:07 G | 37960364.45 | 37960364.63 | 37960364.83 | 0.0305 | 0.0182 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 99220-04-11 15:50 G | 37960521.96 | 37960522.16 | 37960522.37 | 0.0088 | 0.0054 |
| Jupiter | 99220-04-19 16:04 G | 37960529.96 | 37960530.17 | 37960530.39 | 0.0497 | 0.0230 |
| Neptune | 99221-04-14 10:04 G | 37960889.76 | 37960889.92 | 37960890.12 | 0.0088 | 0.0065 |
| Saturn | 99232-04-15 12:28 G | 37964909.00 | 37964909.02 | 37964909.06 | 0.0260 | 0.0258 |
| Jupiter | 99232-04-24 08:09 G | 37964917.62 | 37964917.84 | 37964918.06 | 0.0498 | 0.0140 |
| Saturn | 99233-04-26 21:21 G | 37965285.14 | 37965285.39 | 37965285.65 | 0.0259 | 0.0048 |
| Saturn | 99234-05-08 04:04 G | 37965661.47 | 37965661.67 | 37965661.88 | 0.0258 | 0.0148 |
| Saturn | 99248-10-29 06:57 G | 37970949.55 | 37970949.79 | 37970950.04 | 0.0304 | 0.0023 |
| Uranus | 99249-09-16 22:04 G | 37971272.24 | 37971272.42 | 37971272.62 | 0.0135 | 0.0087 |
| Uranus | 99250-09-21 12:14 G | 37971641.75 | 37971642.01 | 37971642.26 | 0.0135 | 0.0011 |
| Uranus | 99251-09-25 11:59 G | 37972010.80 | 37972011.00 | 37972011.20 | 0.0135 | 0.0080 |
| Jupiter | 99261-10-18 23:16 G | 37975687.27 | 37975687.47 | 37975687.68 | 0.0529 | 0.0228 |
| Saturn | 99262-04-22 03:50 G | 37975872.46 | 37975872.66 | 37975872.86 | 0.0260 | 0.0143 |
| Saturn | 99263-05-03 18:43 G | 37976249.04 | 37976249.28 | 37976249.53 | 0.0258 | 0.0059 |
| Saturn | 99264-05-13 23:16 G | 37976625.42 | 37976625.47 | 37976625.55 | 0.0258 | 0.0249 |
| Jupiter | 99273-10-23 14:09 G | 37980074.91 | 37980075.09 | 37980075.29 | 0.0529 | 0.0294 |
| Saturn | 99277-10-22 23:02 G | 37981535.25 | 37981535.46 | 37981535.68 | 0.0303 | 0.0140 |
| Saturn | 99278-11-07 00:14 G | 37981915.34 | 37981915.51 | 37981915.71 | 0.0305 | 0.0199 |
| Uranus | 99291-03-17 03:50 G | 37986428.50 | 37986428.66 | 37986428.85 | 0.0143 | 0.0107 |
| Saturn | 99291-04-17 05:59 G | 37986459.66 | 37986459.75 | 37986459.86 | 0.0260 | 0.0240 |
| Uranus | 99292-03-21 07:26 G | 37986798.57 | 37986798.81 | 37986799.06 | 0.0143 | 0.0018 |
| Saturn | 99292-04-27 15:50 G | 37986835.91 | 37986836.16 | 37986836.41 | 0.0259 | 0.0033 |
| Uranus | 99293-03-26 08:52 G | 37987168.68 | 37987168.87 | 37987169.07 | 0.0143 | 0.0098 |
| Saturn | 99293-05-09 05:31 G | 37987212.55 | 37987212.73 | 37987212.93 | 0.0258 | 0.0161 |
| Neptune | 99294-09-26 04:47 G | 37987717.58 | 37987717.70 | 37987717.83 | 0.0090 | 0.0077 |
| Neptune | 99295-09-28 18:57 G | 37988085.11 | 37988085.29 | 37988085.50 | 0.0089 | 0.0060 |
| Neptune | 99296-09-30 05:16 G | 37988452.52 | 37988452.72 | 37988452.96 | 0.0089 | 0.0040 |
| Neptune | 99297-10-02 14:38 G | 37988819.87 | 37988820.11 | 37988820.38 | 0.0089 | 0.0021 |
| Neptune | 99298-10-05 05:45 G | 37989187.50 | 37989187.74 | 37989187.99 | 0.0089 | 0.0002 |
| Pluto | 99299-09-06 04:47 G | 37989523.62 | 37989523.70 | 37989523.85 | 0.0063 | 0.0056 |

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|---------|---------------------|-------------|-------------|-------------|--------|----------|
| Neptune | 99299-10-07 11:02 G | 37989554.71 | 37989554.96 | 37989555.22 | 0.0089 | 0.0018 |
| Pluto | 99300-09-07 22:19 G | 37989890.21 | 37989890.43 | 37989890.70 | 0.0064 | 0.0024 |
| Neptune | 99300-10-10 04:33 G | 37989922.47 | 37989922.69 | 37989922.93 | 0.0089 | 0.0038 |
| Neptune | 99301-10-12 08:23 G | 37990289.67 | 37990289.85 | 37990290.07 | 0.0089 | 0.0054 |
| Neptune | 99302-10-15 01:26 G | 37990657.44 | 37990657.56 | 37990657.72 | 0.0089 | 0.0076 |
| Jupiter | 99303-04-21 03:50 G | 37990845.47 | 37990845.66 | 37990845.85 | 0.0497 | 0.0269 |
| Saturn | 99306-10-17 06:57 G | 37992120.74 | 37992120.79 | 37992120.87 | 0.0302 | 0.0290 |
| Saturn | 99307-11-01 09:21 G | 37992500.66 | 37992500.89 | 37992501.12 | 0.0304 | 0.0044 |
| Jupiter | 99315-04-25 17:16 G | 37995232.98 | 37995233.22 | 37995233.46 | 0.0497 | 0.0090 |
| Saturn | 99321-04-24 05:59 G | 37997423.54 | 37997423.75 | 37997423.97 | 0.0260 | 0.0125 |
| Mars | 99322-01-22 02:52 G | 37997696.45 | 37997696.62 | 37997696.80 | 0.1638 | 0.0282 |
| Saturn | 99322-05-05 14:23 G | 37997799.85 | 37997800.10 | 37997800.35 | 0.0259 | 0.0072 |
| Uranus | 99333-09-18 08:09 G | 38001953.64 | 38001953.84 | 38001954.06 | 0.0135 | 0.0070 |
| Uranus | 99334-09-22 21:21 G | 38002323.14 | 38002323.39 | 38002323.64 | 0.0135 | 0.0001 |
| Uranus | 99335-09-26 21:07 G | 38002692.22 | 38002692.38 | 38002692.56 | 0.0135 | 0.0098 |
| Saturn | 99336-10-24 23:16 G | 38003086.25 | 38003086.47 | 38003086.71 | 0.0303 | 0.0114 |
| Saturn | 99337-11-08 22:47 G | 38003466.29 | 38003466.45 | 38003466.63 | 0.0304 | 0.0222 |
| Jupiter | 99344-10-18 22:19 G | 38006002.24 | 38006002.43 | 38006002.63 | 0.0529 | 0.0286 |
| Saturn | 99350-04-19 01:55 G | 38008010.45 | 38008010.58 | 38008010.71 | 0.0260 | 0.0221 |
| Saturn | 99351-04-30 18:14 G | 38008387.02 | 38008387.26 | 38008387.50 | 0.0259 | 0.0018 |
| Saturn | 99352-05-11 09:21 G | 38008763.72 | 38008763.89 | 38008764.08 | 0.0258 | 0.0175 |
| Jupiter | 99356-10-24 00:43 G | 38010390.33 | 38010390.53 | 38010390.74 | 0.0528 | 0.0226 |
| Saturn | 99365-10-18 17:02 G | 38013672.10 | 38013672.21 | 38013672.33 | 0.0302 | 0.0261 |
| Saturn | 99366-11-02 19:55 G | 38014052.10 | 38014052.33 | 38014052.56 | 0.0304 | 0.0072 |
| Uranus | 99375-03-18 10:47 G | 38017109.79 | 38017109.95 | 38017110.11 | 0.0143 | 0.0115 |
| Uranus | 99376-03-22 15:50 G | 38017479.91 | 38017480.16 | 38017480.41 | 0.0143 | 0.0002 |
| Uranus | 99377-03-27 15:21 G | 38017849.95 | 38017850.14 | 38017850.37 | 0.0143 | 0.0090 |
| Neptune | 99377-03-27 13:55 G | 38017850.08 | 38017850.08 | 38017850.09 | 0.0088 | 0.0088 * |
| Neptune | 99378-03-30 03:50 G | 38018217.51 | 38018217.66 | 38018217.87 | 0.0088 | 0.0062 |
| Neptune | 99379-04-01 11:59 G | 38018584.81 | 38018585.00 | 38018585.24 | 0.0088 | 0.0051 |

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| Neptune | 99380-04-03 06:43 G | 38018952.54 | 38018952.78 | 38018953.03 | 0.0088 | 0.0024 |
| Saturn | 99380-04-25 05:45 G | 38018974.50 | 38018974.74 | 38018974.97 | 0.0260 | 0.0107 |
| Neptune | 99381-04-05 11:59 G | 38019319.75 | 38019320.00 | 38019320.26 | 0.0088 | 0.0014 |
| Saturn | 99381-05-06 12:28 G | 38019350.79 | 38019351.02 | 38019351.26 | 0.0259 | 0.0088 |
| Neptune | 99382-04-08 07:26 G | 38019687.55 | 38019687.81 | 38019688.07 | 0.0088 | 0.0012 |
| Neptune | 99383-04-10 12:57 G | 38020054.81 | 38020055.04 | 38020055.30 | 0.0088 | 0.0024 |
| Neptune | 99384-04-12 06:28 G | 38020422.55 | 38020422.77 | 38020423.00 | 0.0088 | 0.0049 |
| Neptune | 99385-04-14 15:35 G | 38020789.99 | 38020790.15 | 38020790.35 | 0.0088 | 0.0062 |
| Neptune | 99386-04-17 04:19 G | 38021157.67 | 38021157.68 | 38021157.75 | 0.0088 | 0.0087 |
| Jupiter | 99386-04-20 11:02 G | 38021160.77 | 38021160.96 | 38021161.14 | 0.0496 | 0.0324 |
| Pluto | 99390-03-08 20:09 G | 38022579.07 | 38022579.34 | 38022579.61 | 0.0080 | 0.0003 |
| Mars | 99394-07-27 22:19 G | 38024181.25 | 38024181.43 | 38024181.61 | 0.1905 | 0.0371 |
| Saturn | 99395-10-27 05:02 G | 38024637.48 | 38024637.71 | 38024637.95 | 0.0303 | 0.0084 |
| Saturn | 99396-11-10 06:43 G | 38025017.66 | 38025017.78 | 38025017.93 | 0.0304 | 0.0253 |
| Jupiter | 99398-04-24 18:43 G | 38025548.05 | 38025548.28 | 38025548.51 | 0.0497 | 0.0039 |
| Mars | 99401-01-25 01:26 G | 38026553.42 | 38026553.56 | 38026553.70 | 0.1634 | 0.1059 |
| Saturn | 99409-04-21 07:40 G | 38029561.67 | 38029561.82 | 38029561.97 | 0.0261 | 0.0203 |
| Jupiter | 99410-04-30 15:07 G | 38029936.06 | 38029936.13 | 38029936.22 | 0.0497 | 0.0468 |
| Saturn | 99410-05-03 02:09 G | 38029938.34 | 38029938.59 | 38029938.83 | 0.0259 | 0.0003 |
| Saturn | 99411-05-14 11:16 G | 38030314.81 | 38030314.97 | 38030315.15 | 0.0258 | 0.0195 |
| Uranus | 99417-09-19 17:02 G | 38032635.03 | 38032635.21 | 38032635.43 | 0.0135 | 0.0079 |
| Uranus | 99418-09-24 05:59 G | 38033004.50 | 38033004.75 | 38033005.01 | 0.0135 | 0.0019 |
| Uranus | 99419-09-28 06:28 G | 38033373.60 | 38033373.77 | 38033373.97 | 0.0135 | 0.0088 |
| Saturn | 99424-10-21 08:09 G | 38035223.69 | 38035223.84 | 38035224.00 | 0.0302 | 0.0230 |
| Saturn | 99425-11-05 08:09 G | 38035603.61 | 38035603.84 | 38035604.07 | 0.0304 | 0.0105 |
| Jupiter | 99427-10-20 06:14 G | 38036317.60 | 38036317.76 | 38036317.93 | 0.0529 | 0.0362 |
| Saturn | 99439-04-28 05:45 G | 38040525.51 | 38040525.74 | 38040525.98 | 0.0260 | 0.0089 |
| Jupiter | 99439-10-24 22:47 G | 38040705.22 | 38040705.45 | 38040705.68 | 0.0529 | 0.0154 |
| Saturn | 99440-05-08 18:43 G | 38040902.07 | 38040902.28 | 38040902.51 | 0.0259 | 0.0109 |
| Saturn | 99454-10-29 21:50 G | 38046189.18 | 38046189.41 | 38046189.64 | 0.0303 | 0.0047 |

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| Saturn | 99455-11-14 02:38 G | 38046569.55 | 38046569.61 | 38046569.68 | 0.0304 | 0.0291 |
| Neptune | 99458-09-27 18:14 G | 38047618.14 | 38047618.26 | 38047618.40 | 0.0090 | 0.0078 |
| Uranus | 99459-03-19 17:02 G | 38047791.04 | 38047791.21 | 38047791.41 | 0.0143 | 0.0104 |
| Neptune | 99459-09-30 05:02 G | 38047985.58 | 38047985.71 | 38047985.89 | 0.0090 | 0.0069 |
| Uranus | 99460-03-23 23:31 G | 38048161.23 | 38048161.48 | 38048161.73 | 0.0143 | 0.0012 |
| Neptune | 99460-10-01 13:40 G | 38048352.85 | 38048353.07 | 38048353.32 | 0.0089 | 0.0040 |
| Uranus | 99461-03-28 21:35 G | 38048531.23 | 38048531.40 | 38048531.58 | 0.0143 | 0.0105 |
| Neptune | 99461-10-04 05:45 G | 38048720.52 | 38048720.74 | 38048720.99 | 0.0089 | 0.0031 |
| Neptune | 99462-10-06 11:16 G | 38049087.71 | 38049087.97 | 38049088.22 | 0.0089 | 0.0002 |
| Neptune | 99463-10-09 05:16 G | 38049455.47 | 38049455.72 | 38049455.97 | 0.0089 | 0.0008 |
| Neptune | 99464-10-10 09:21 G | 38049822.68 | 38049822.89 | 38049823.13 | 0.0089 | 0.0037 |
| Neptune | 99465-10-13 01:55 G | 38050190.38 | 38050190.58 | 38050190.82 | 0.0089 | 0.0047 |
| Neptune | 99466-10-15 09:21 G | 38050557.76 | 38050557.89 | 38050558.03 | 0.0089 | 0.0075 |
| Neptune | 99467-10-17 20:38 G | 38050925.31 | 38050925.36 | 38050925.48 | 0.0089 | 0.0085 |
| Saturn | 99468-04-22 18:43 G | 38051113.11 | 38051113.28 | 38051113.46 | 0.0261 | 0.0182 |
| Jupiter | 99469-04-20 09:21 G | 38051475.75 | 38051475.89 | 38051476.03 | 0.0497 | 0.0392 |
| Saturn | 99469-05-04 08:38 G | 38051489.61 | 38051489.86 | 38051490.11 | 0.0259 | 0.0021 |
| Saturn | 99470-05-15 13:55 G | 38051865.95 | 38051866.08 | 38051866.23 | 0.0258 | 0.0214 |
| Jupiter | 99481-04-25 05:45 G | 38055863.50 | 38055863.74 | 38055863.97 | 0.0497 | 0.0022 |
| Saturn | 99483-10-24 01:11 G | 38056775.36 | 38056775.55 | 38056775.74 | 0.0302 | 0.0192 |
| Saturn | 99484-11-06 22:04 G | 38057155.21 | 38057155.42 | 38057155.65 | 0.0304 | 0.0144 |
| Jupiter | 99493-04-29 09:35 G | 38060250.76 | 38060250.90 | 38060251.04 | 0.0497 | 0.0400 |
| Saturn | 99498-04-29 14:23 G | 38062076.87 | 38062077.10 | 38062077.34 | 0.0260 | 0.0069 |
| Saturn | 99499-05-11 07:11 G | 38062453.60 | 38062453.80 | 38062454.02 | 0.0259 | 0.0130 |
| Uranus | 99501-09-21 03:35 G | 38063316.44 | 38063316.65 | 38063316.87 | 0.0135 | 0.0063 |
| Uranus | 99502-09-25 14:52 G | 38063685.87 | 38063686.12 | 38063686.38 | 0.0135 | 0.0009 |
| Uranus | 99503-09-29 15:50 G | 38064055.03 | 38064055.16 | 38064055.33 | 0.0135 | 0.0107 |
| Jupiter | 99510-10-19 23:45 G | 38066632.37 | 38066632.49 | 38066632.62 | 0.0529 | 0.0440 |
| Saturn | 99513-11-01 21:35 G | 38067741.17 | 38067741.40 | 38067741.64 | 0.0303 | 0.0009 |
| Jupiter | 99522-10-25 00:14 G | 38071020.29 | 38071020.51 | 38071020.73 | 0.0529 | 0.0074 |

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| Saturn | 99527-04-26 04:19 G | 38072664.48 | 38072664.68 | 38072664.89 | 0.0261 | 0.0157 |
| Saturn | 99528-05-06 13:11 G | 38073040.79 | 38073041.05 | 38073041.30 | 0.0259 | 0.0041 |
| Saturn | 99529-05-17 22:47 G | 38073417.36 | 38073417.45 | 38073417.54 | 0.0259 | 0.0238 |
| Jupiter | 99534-10-29 20:52 G | 38075408.31 | 38075408.37 | 38075408.44 | 0.0529 | 0.0507 |
| Neptune | 99541-03-29 02:23 G | 38077750.58 | 38077750.60 | 38077750.63 | 0.0088 | 0.0087 |
| Neptune | 99542-03-31 08:23 G | 38078117.72 | 38078117.85 | 38078118.04 | 0.0088 | 0.0071 |
| Saturn | 99542-10-26 19:11 G | 38078327.09 | 38078327.30 | 38078327.52 | 0.0302 | 0.0151 |
| Uranus | 99543-03-20 23:02 G | 38078472.31 | 38078472.46 | 38078472.66 | 0.0143 | 0.0109 |
| Neptune | 99543-04-03 03:21 G | 38078485.45 | 38078485.64 | 38078485.88 | 0.0088 | 0.0050 |
| Saturn | 99543-11-10 17:59 G | 38078707.06 | 38078707.25 | 38078707.45 | 0.0304 | 0.0184 |
| Uranus | 99544-03-25 06:43 G | 38078842.53 | 38078842.78 | 38078843.04 | 0.0143 | 0.0006 |
| Neptune | 99544-04-04 08:38 G | 38078852.64 | 38078852.86 | 38078853.12 | 0.0088 | 0.0035 |
| Uranus | 99545-03-30 03:07 G | 38079212.46 | 38079212.63 | 38079212.86 | 0.0143 | 0.0095 |
| Neptune | 99545-04-07 03:50 G | 38079220.41 | 38079220.66 | 38079220.93 | 0.0088 | 0.0013 |
| Neptune | 99546-04-09 10:33 G | 38079587.69 | 38079587.94 | 38079588.20 | 0.0088 | 0.0002 |
| Neptune | 99547-04-12 02:38 G | 38079955.37 | 38079955.61 | 38079955.88 | 0.0088 | 0.0025 |
| Pluto | 99547-09-11 21:21 G | 38080108.14 | 38080108.39 | 38080108.64 | 0.0063 | 0.0014 |
| Neptune | 99548-04-13 13:40 G | 38080322.86 | 38080323.07 | 38080323.31 | 0.0088 | 0.0040 |
| Neptune | 99549-04-16 01:11 G | 38080690.37 | 38080690.55 | 38080690.75 | 0.0088 | 0.0062 |
| Neptune | 99550-04-18 16:33 G | 38081058.08 | 38081058.19 | 38081058.33 | 0.0088 | 0.0076 |
| Jupiter | 99552-04-20 17:45 G | 38081791.15 | 38081791.24 | 38081791.32 | 0.0496 | 0.0462 |
| Saturn | 99556-04-20 08:23 G | 38083251.78 | 38083251.85 | 38083251.94 | 0.0262 | 0.0247 |
| Saturn | 99557-05-02 05:02 G | 38083628.47 | 38083628.71 | 38083628.95 | 0.0260 | 0.0045 |
| Saturn | 99558-05-13 18:57 G | 38084005.10 | 38084005.29 | 38084005.51 | 0.0259 | 0.0152 |
| Jupiter | 99564-04-24 22:19 G | 38086178.20 | 38086178.43 | 38086178.67 | 0.0496 | 0.0094 |
| Saturn | 99571-10-21 00:28 G | 38088913.48 | 38088913.52 | 38088913.58 | 0.0301 | 0.0293 |
| Saturn | 99572-11-03 23:59 G | 38089293.26 | 38089293.50 | 38089293.74 | 0.0303 | 0.0036 |
| Jupiter | 99576-04-29 15:21 G | 38090565.97 | 38090566.14 | 38090566.32 | 0.0497 | 0.0327 |
| Uranus | 99585-09-21 11:45 G | 38093997.80 | 38093997.99 | 38093998.22 | 0.0135 | 0.0070 |
| Saturn | 99586-04-27 11:31 G | 38094215.77 | 38094215.98 | 38094216.22 | 0.0260 | 0.0133 |

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| Uranus | 99586-09-25 22:33 G | 38094367.19 | 38094367.44 | 38094367.70 | 0.0135 | 0.0026 |
| Saturn | 99587-05-08 22:33 G | 38094592.20 | 38094592.44 | 38094592.68 | 0.0259 | 0.0064 |
| Uranus | 99587-09-30 00:57 G | 38094736.39 | 38094736.54 | 38094736.73 | 0.0135 | 0.0096 |
| Saturn | 99601-10-28 16:19 G | 38099878.96 | 38099879.18 | 38099879.40 | 0.0303 | 0.0109 |
| Saturn | 99602-11-12 18:28 G | 38100259.12 | 38100259.27 | 38100259.43 | 0.0304 | 0.0228 |
| Jupiter | 99605-10-23 19:26 G | 38101335.07 | 38101335.31 | 38101335.55 | 0.0529 | 0.0033 |
| Mars | 99606-01-25 12:43 G | 38101428.85 | 38101429.03 | 38101429.21 | 0.1642 | 0.0564 |
| Saturn | 99615-04-22 23:31 G | 38104803.36 | 38104803.48 | 38104803.62 | 0.0261 | 0.0220 |
| Saturn | 99616-05-03 18:14 G | 38105180.01 | 38105180.26 | 38105180.51 | 0.0260 | 0.0019 |
| Saturn | 99617-05-15 01:40 G | 38105556.40 | 38105556.57 | 38105556.78 | 0.0259 | 0.0175 |
| Jupiter | 99617-10-28 11:02 G | 38105722.82 | 38105722.96 | 38105723.11 | 0.0529 | 0.0408 |
| Neptune | 99622-09-28 05:45 G | 38107518.70 | 38107518.74 | 38107518.83 | 0.0090 | 0.0087 |
| Neptune | 99623-09-30 12:57 G | 38107885.90 | 38107886.04 | 38107886.23 | 0.0090 | 0.0070 |
| Neptune | 99624-10-02 05:59 G | 38108253.55 | 38108253.75 | 38108253.97 | 0.0090 | 0.0049 |
| Neptune | 99625-10-04 10:04 G | 38108620.70 | 38108620.92 | 38108621.18 | 0.0089 | 0.0033 |
| Neptune | 99626-10-07 04:19 G | 38108988.43 | 38108988.68 | 38108988.94 | 0.0089 | 0.0012 |
| Uranus | 99627-03-21 09:35 G | 38109153.72 | 38109153.90 | 38109154.10 | 0.0143 | 0.0096 |
| Neptune | 99627-10-09 09:07 G | 38109355.63 | 38109355.88 | 38109356.13 | 0.0089 | 0.0007 |
| Uranus | 99628-03-25 17:45 G | 38109523.98 | 38109524.24 | 38109524.49 | 0.0143 | 0.0003 |
| Neptune | 99628-10-11 00:43 G | 38109723.29 | 38109723.53 | 38109723.79 | 0.0089 | 0.0027 |
| Uranus | 99629-03-30 12:57 G | 38109893.89 | 38109894.04 | 38109894.20 | 0.0143 | 0.0115 |
| Neptune | 99629-10-13 08:52 G | 38110090.68 | 38110090.87 | 38110091.10 | 0.0089 | 0.0047 |
| Neptune | 99630-10-15 20:23 G | 38110458.19 | 38110458.35 | 38110458.55 | 0.0089 | 0.0065 |
| Saturn | 99630-10-23 01:11 G | 38110465.42 | 38110465.55 | 38110465.69 | 0.0301 | 0.0249 |
| Neptune | 99631-10-18 09:50 G | 38110825.84 | 38110825.91 | 38110826.02 | 0.0089 | 0.0083 |
| Saturn | 99631-11-06 22:19 G | 38110845.20 | 38110845.43 | 38110845.67 | 0.0303 | 0.0082 |
| Pluto | 99637-03-11 11:31 G | 38112796.81 | 38112796.98 | 38112797.17 | 0.0081 | 0.0059 |
| Saturn | 99645-04-28 20:38 G | 38115767.13 | 38115767.36 | 38115767.59 | 0.0260 | 0.0104 |
| Saturn | 99646-05-10 13:11 G | 38116143.82 | 38116144.05 | 38116144.27 | 0.0259 | 0.0090 |
| Jupiter | 99647-04-25 03:07 G | 38116493.41 | 38116493.63 | 38116493.85 | 0.0497 | 0.0175 |

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| Jupiter | 99659-04-29 10:47 G | 38120880.74 | 38120880.95 | 38120881.16 | 0.0497 | 0.0251 |
| Saturn | 99660-10-30 17:45 G | 38121431.02 | 38121431.24 | 38121431.47 | 0.0303 | 0.0063 |
| Saturn | 99661-11-14 21:50 G | 38121811.32 | 38121811.41 | 38121811.53 | 0.0304 | 0.0272 |
| Uranus | 99669-09-21 22:04 G | 38124679.22 | 38124679.42 | 38124679.66 | 0.0135 | 0.0058 |
| Uranus | 99670-09-26 06:57 G | 38125048.54 | 38125048.79 | 38125049.05 | 0.0135 | 0.0017 |
| Uranus | 99671-09-30 11:02 G | 38125417.84 | 38125417.96 | 38125418.09 | 0.0135 | 0.0114 |
| Saturn | 99674-04-24 14:52 G | 38126354.95 | 38126355.12 | 38126355.28 | 0.0261 | 0.0191 |
| Saturn | 99675-05-06 02:38 G | 38126731.35 | 38126731.61 | 38126731.87 | 0.0260 | 0.0008 |
| Saturn | 99676-05-16 08:52 G | 38127107.72 | 38127107.87 | 38127108.04 | 0.0259 | 0.0199 |
| Mars | 99678-07-28 23:59 G | 38127911.31 | 38127911.50 | 38127911.68 | 0.1895 | 0.1037 |
| Jupiter | 99688-10-22 12:57 G | 38131649.82 | 38131650.04 | 38131650.26 | 0.0529 | 0.0129 |
| Saturn | 99689-10-24 18:43 G | 38132017.11 | 38132017.28 | 38132017.48 | 0.0302 | 0.0205 |
| Saturn | 99690-11-08 15:21 G | 38132396.92 | 38132397.14 | 38132397.37 | 0.0303 | 0.0127 |
| Jupiter | 99700-10-28 17:45 G | 38136038.05 | 38136038.24 | 38136038.42 | 0.0529 | 0.0321 |
| Saturn | 99704-05-01 09:07 G | 38137318.66 | 38137318.88 | 38137319.12 | 0.0260 | 0.0080 |
| Saturn | 99705-05-13 02:09 G | 38137695.38 | 38137695.59 | 38137695.82 | 0.0259 | 0.0115 |
| Neptune | 99706-04-01 00:43 G | 38138018.45 | 38138018.53 | 38138018.66 | 0.0088 | 0.0080 |
| Neptune | 99707-04-03 06:28 G | 38138385.58 | 38138385.77 | 38138385.99 | 0.0088 | 0.0052 |
| Neptune | 99708-04-05 00:43 G | 38138753.32 | 38138753.53 | 38138753.79 | 0.0088 | 0.0043 |
| Neptune | 99709-04-07 08:52 G | 38139120.63 | 38139120.87 | 38139121.13 | 0.0088 | 0.0015 |
| Neptune | 99710-04-09 23:16 G | 38139488.21 | 38139488.47 | 38139488.75 | 0.0088 | 0.0005 |
| Uranus | 99711-03-22 20:23 G | 38139835.17 | 38139835.35 | 38139835.56 | 0.0143 | 0.0094 |
| Neptune | 99711-04-12 11:16 G | 38139855.74 | 38139855.97 | 38139856.23 | 0.0088 | 0.0023 |
| Uranus | 99712-03-27 05:02 G | 38140205.46 | 38140205.71 | 38140205.96 | 0.0143 | 0.0017 |
| Neptune | 99712-04-13 20:52 G | 38140223.13 | 38140223.37 | 38140223.63 | 0.0088 | 0.0032 |
| Uranus | 99713-03-31 23:31 G | 38140575.32 | 38140575.48 | 38140575.67 | 0.0143 | 0.0106 |
| Neptune | 99713-04-16 13:40 G | 38140590.90 | 38140591.07 | 38140591.28 | 0.0088 | 0.0060 |
| Neptune | 99714-04-18 20:09 G | 38140958.19 | 38140958.34 | 38140958.51 | 0.0088 | 0.0069 |
| Saturn | 99719-11-03 16:33 G | 38142982.96 | 38142983.19 | 38142983.43 | 0.0303 | 0.0021 |
| Jupiter | 99730-04-25 00:14 G | 38146808.30 | 38146808.51 | 38146808.73 | 0.0497 | 0.0235 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 99733-04-26 22:19 G | 38147906.25 | 38147906.43 | 38147906.64 | 0.0261 | 0.0167 |
| Saturn | 99734-05-08 07:26 G | 38148282.56 | 38148282.81 | 38148283.06 | 0.0259 | 0.0030 |
| Saturn | 99735-05-19 19:26 G | 38148659.20 | 38148659.31 | 38148659.44 | 0.0259 | 0.0225 |
| Jupiter | 99742-04-29 16:04 G | 38151195.96 | 38151196.17 | 38151196.38 | 0.0497 | 0.0196 |
| Saturn | 99748-10-27 07:55 G | 38153568.64 | 38153568.83 | 38153569.05 | 0.0302 | 0.0167 |
| Saturn | 99749-11-11 08:23 G | 38153948.66 | 38153948.85 | 38153949.05 | 0.0304 | 0.0167 |
| Uranus | 99753-09-23 07:11 G | 38155360.60 | 38155360.80 | 38155361.03 | 0.0135 | 0.0061 |
| Uranus | 99754-09-27 14:52 G | 38155729.87 | 38155730.12 | 38155730.38 | 0.0135 | 0.0032 |
| Uranus | 99755-10-01 20:52 G | 38156099.22 | 38156099.37 | 38156099.52 | 0.0135 | 0.0104 |
| Saturn | 99762-04-22 02:38 G | 38158493.57 | 38158493.61 | 38158493.64 | 0.0261 | 0.0258 |
| Saturn | 99763-05-03 22:19 G | 38158870.19 | 38158870.43 | 38158870.67 | 0.0259 | 0.0056 |
| Saturn | 99764-05-14 09:21 G | 38159246.67 | 38159246.89 | 38159247.10 | 0.0258 | 0.0139 |
| Jupiter | 99771-10-23 19:11 G | 38161965.09 | 38161965.30 | 38161965.52 | 0.0529 | 0.0206 |
| Saturn | 99778-11-05 06:28 G | 38164534.53 | 38164534.77 | 38164535.02 | 0.0304 | 0.0015 |
| Jupiter | 99783-10-28 08:52 G | 38166352.67 | 38166352.87 | 38166353.08 | 0.0529 | 0.0223 |
| Neptune | 99787-10-01 05:16 G | 38167786.59 | 38167786.72 | 38167786.90 | 0.0090 | 0.0070 |
| Neptune | 99788-10-02 09:35 G | 38168153.73 | 38168153.90 | 38168154.11 | 0.0090 | 0.0060 |
| Neptune | 99789-10-05 03:21 G | 38168521.42 | 38168521.64 | 38168521.90 | 0.0090 | 0.0032 |
| Neptune | 99790-10-07 09:21 G | 38168888.65 | 38168888.89 | 38168889.13 | 0.0089 | 0.0021 |
| Neptune | 99791-10-09 23:59 G | 38169256.24 | 38169256.50 | 38169256.77 | 0.0089 | 0.0007 |
| Saturn | 99792-04-28 00:28 G | 38169457.32 | 38169457.52 | 38169457.75 | 0.0260 | 0.0146 |
| Neptune | 99792-10-11 09:50 G | 38169623.68 | 38169623.91 | 38169624.16 | 0.0089 | 0.0018 |
| Saturn | 99793-05-09 13:55 G | 38169833.84 | 38169834.08 | 38169834.32 | 0.0259 | 0.0052 |
| Neptune | 99793-10-13 19:26 G | 38169991.09 | 38169991.31 | 38169991.54 | 0.0089 | 0.0045 |
| Saturn | 99794-05-21 04:47 G | 38170210.65 | 38170210.70 | 38170210.79 | 0.0258 | 0.0248 |
| Pluto | 99794-09-13 16:47 G | 38170326.05 | 38170326.20 | 38170326.40 | 0.0063 | 0.0046 |
| Neptune | 99794-10-16 09:21 G | 38170358.72 | 38170358.89 | 38170359.11 | 0.0089 | 0.0056 |
| Uranus | 99795-03-23 08:52 G | 38170516.66 | 38170516.87 | 38170517.08 | 0.0143 | 0.0085 |
| Pluto | 99795-09-14 20:52 G | 38170692.16 | 38170692.37 | 38170692.62 | 0.0064 | 0.0029 |
| Neptune | 99795-10-18 14:52 G | 38170726.05 | 38170726.12 | 38170726.24 | 0.0089 | 0.0083 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 99796-03-27 17:45 G | 38170886.98 | 38170887.24 | 38170887.49 | 0.0143 | 0.0012 |
| Uranus | 99797-04-01 11:31 G | 38171256.89 | 38171256.98 | 38171257.11 | 0.0143 | 0.0129 |
| Saturn | 99807-10-30 19:11 G | 38175120.09 | 38175120.30 | 38175120.52 | 0.0302 | 0.0133 |
| Saturn | 99808-11-13 23:02 G | 38175500.30 | 38175500.46 | 38175500.65 | 0.0304 | 0.0205 |
| Mars | 99811-01-25 20:38 G | 38176303.23 | 38176303.36 | 38176303.49 | 0.1652 | 0.1194 |
| Jupiter | 99813-04-25 03:21 G | 38177123.47 | 38177123.64 | 38177123.82 | 0.0497 | 0.0308 |
| Saturn | 99821-04-24 13:11 G | 38180044.94 | 38180045.05 | 38180045.15 | 0.0261 | 0.0234 |
| Saturn | 99822-05-06 03:50 G | 38180421.41 | 38180421.66 | 38180421.92 | 0.0259 | 0.0036 |
| Saturn | 99823-05-17 09:35 G | 38180797.70 | 38180797.90 | 38180798.10 | 0.0258 | 0.0158 |
| Jupiter | 99825-04-29 17:16 G | 38181510.99 | 38181511.22 | 38181511.46 | 0.0497 | 0.0128 |
| Saturn | 99836-10-23 14:38 G | 38185706.03 | 38185706.11 | 38185706.20 | 0.0302 | 0.0282 |
| Uranus | 99837-09-24 18:28 G | 38186042.05 | 38186042.27 | 38186042.50 | 0.0135 | 0.0052 |
| Saturn | 99837-11-07 10:47 G | 38186085.70 | 38186085.95 | 38186086.20 | 0.0304 | 0.0048 |
| Uranus | 99838-09-28 23:45 G | 38186411.24 | 38186411.49 | 38186411.75 | 0.0135 | 0.0027 |
| Uranus | 99839-10-03 06:43 G | 38186780.70 | 38186780.78 | 38186780.90 | 0.0135 | 0.0122 |
| Saturn | 99851-05-01 04:47 G | 38191008.49 | 38191008.70 | 38191008.92 | 0.0260 | 0.0125 |
| Saturn | 99852-05-11 21:50 G | 38191385.18 | 38191385.41 | 38191385.65 | 0.0259 | 0.0070 |
| Jupiter | 99854-10-23 13:26 G | 38192279.87 | 38192280.06 | 38192280.25 | 0.0529 | 0.0292 |
| Jupiter | 99866-10-28 20:23 G | 38196668.13 | 38196668.35 | 38196668.56 | 0.0529 | 0.0149 |
| Saturn | 99866-11-01 04:33 G | 38196671.48 | 38196671.69 | 38196671.92 | 0.0303 | 0.0103 |
| Saturn | 99867-11-16 08:09 G | 38197051.69 | 38197051.84 | 38197052.00 | 0.0304 | 0.0233 |
| Neptune | 99870-04-01 03:21 G | 38197918.55 | 38197918.64 | 38197918.73 | 0.0088 | 0.0081 |
| Neptune | 99871-04-03 20:23 G | 38198286.16 | 38198286.35 | 38198286.54 | 0.0088 | 0.0061 |
| Neptune | 99872-04-05 05:16 G | 38198653.51 | 38198653.72 | 38198653.95 | 0.0088 | 0.0043 |
| Neptune | 99873-04-07 18:14 G | 38199021.01 | 38199021.26 | 38199021.53 | 0.0088 | 0.0024 |
| Neptune | 99874-04-10 08:52 G | 38199388.62 | 38199388.87 | 38199389.13 | 0.0088 | 0.0006 |
| Neptune | 99875-04-12 17:02 G | 38199755.96 | 38199756.21 | 38199756.49 | 0.0088 | 0.0013 |
| Neptune | 99876-04-14 11:16 G | 38200123.74 | 38200123.97 | 38200124.22 | 0.0088 | 0.0032 |
| Neptune | 99877-04-16 16:19 G | 38200490.99 | 38200491.18 | 38200491.42 | 0.0088 | 0.0051 |
| Neptune | 99878-04-19 11:45 G | 38200858.86 | 38200858.99 | 38200859.17 | 0.0088 | 0.0071 |

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|---------|---------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 99879-03-24 18:28 G | 38201198.08 | 38201198.27 | 38201198.49 | 0.0143 | 0.0081 |
| Neptune | 99879-04-21 18:14 G | 38201226.24 | 38201226.26 | 38201226.28 | 0.0088 | 0.0087 |
| Uranus | 99880-03-29 03:07 G | 38201568.39 | 38201568.63 | 38201568.89 | 0.0143 | 0.0028 |
| Saturn | 99880-04-25 16:47 G | 38201596.06 | 38201596.20 | 38201596.36 | 0.0261 | 0.0212 |
| Uranus | 99881-04-02 21:21 G | 38201938.27 | 38201938.39 | 38201938.55 | 0.0143 | 0.0119 |
| Saturn | 99881-05-07 01:11 G | 38201972.30 | 38201972.55 | 38201972.81 | 0.0259 | 0.0020 |
| Saturn | 99882-05-18 09:50 G | 38202348.74 | 38202348.91 | 38202349.10 | 0.0258 | 0.0177 |
| Pluto | 99885-03-15 22:19 G | 38203381.19 | 38203381.43 | 38203381.69 | 0.0080 | 0.0021 |
| Mars | 99890-01-28 03:21 G | 38205160.49 | 38205160.64 | 38205160.79 | 0.1648 | 0.1076 |
| Saturn | 99895-10-25 10:47 G | 38207256.82 | 38207256.95 | 38207257.08 | 0.0302 | 0.0254 |
| Jupiter | 99896-04-24 11:31 G | 38207438.81 | 38207438.98 | 38207439.16 | 0.0497 | 0.0348 |
| Saturn | 99896-11-08 09:35 G | 38207636.67 | 38207636.90 | 38207637.13 | 0.0304 | 0.0075 |
| Jupiter | 99908-04-29 23:16 G | 38211826.25 | 38211826.47 | 38211826.70 | 0.0497 | 0.0095 |
| Saturn | 99910-05-03 09:50 G | 38212559.69 | 38212559.91 | 38212560.13 | 0.0260 | 0.0108 |
| Saturn | 99911-05-14 23:45 G | 38212936.25 | 38212936.49 | 38212936.73 | 0.0258 | 0.0086 |
| Uranus | 99921-09-26 04:04 G | 38216723.46 | 38216723.67 | 38216723.91 | 0.0135 | 0.0051 |
| Uranus | 99922-09-30 08:23 G | 38217092.61 | 38217092.85 | 38217093.11 | 0.0135 | 0.0039 |
| Uranus | 99923-10-04 17:16 G | 38217462.11 | 38217462.22 | 38217462.37 | 0.0135 | 0.0114 |
| Saturn | 99925-11-03 06:14 G | 38218222.53 | 38218222.76 | 38218223.00 | 0.0303 | 0.0076 |
| Saturn | 99926-11-18 06:43 G | 38218602.65 | 38218602.78 | 38218602.91 | 0.0304 | 0.0259 |
| Jupiter | 99937-10-24 08:52 G | 38222595.70 | 38222595.87 | 38222596.05 | 0.0529 | 0.0327 |
| Saturn | 99939-04-28 12:43 G | 38223146.87 | 38223147.03 | 38223147.21 | 0.0261 | 0.0196 |
| Saturn | 99940-05-08 23:31 G | 38223523.23 | 38223523.48 | 38223523.72 | 0.0259 | 0.0005 |
| Saturn | 99941-05-20 13:26 G | 38223899.91 | 38223900.06 | 38223900.22 | 0.0258 | 0.0196 |
| Jupiter | 99949-10-29 01:11 G | 38226983.32 | 38226983.55 | 38226983.78 | 0.0529 | 0.0105 |
| Neptune | 99951-10-02 09:07 G | 38227686.77 | 38227686.88 | 38227687.03 | 0.0090 | 0.0077 |
| Neptune | 99952-10-04 02:23 G | 38228054.44 | 38228054.60 | 38228054.81 | 0.0090 | 0.0063 |
| Neptune | 99953-10-06 09:07 G | 38228421.67 | 38228421.88 | 38228422.12 | 0.0090 | 0.0039 |
| Neptune | 99954-10-08 22:19 G | 38228789.19 | 38228789.43 | 38228789.69 | 0.0089 | 0.0024 |
| Saturn | 99954-10-27 08:09 G | 38228807.69 | 38228807.84 | 38228807.99 | 0.0302 | 0.0229 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 99955-10-11 09:35 G | 38229156.65 | 38229156.90 | 38229157.15 | 0.0089 | 0.0001 |
| Saturn | 99955-11-11 10:19 G | 38229187.71 | 38229187.93 | 38229188.15 | 0.0304 | 0.0103 |
| Neptune | 99956-10-12 17:45 G | 38229523.99 | 38229524.24 | 38229524.51 | 0.0089 | 0.0014 |
| Neptune | 99957-10-15 09:50 G | 38229891.69 | 38229891.91 | 38229892.14 | 0.0089 | 0.0038 |
| Neptune | 99958-10-17 14:23 G | 38230258.91 | 38230259.10 | 38230259.32 | 0.0089 | 0.0053 |
| Neptune | 99959-10-20 08:09 G | 38230626.73 | 38230626.84 | 38230627.00 | 0.0089 | 0.0076 |
| Uranus | 99963-03-26 02:52 G | 38231879.42 | 38231879.62 | 38231879.84 | 0.0143 | 0.0079 |
| Uranus | 99964-03-30 11:45 G | 38232249.74 | 38232249.99 | 38232250.25 | 0.0143 | 0.0023 |
| Uranus | 99965-04-04 06:28 G | 38232619.71 | 38232619.77 | 38232619.84 | 0.0143 | 0.0137 |
| Saturn | 99969-05-04 10:04 G | 38234110.68 | 38234110.92 | 38234111.15 | 0.0259 | 0.0091 |
| Saturn | 99970-05-15 16:47 G | 38234486.97 | 38234487.20 | 38234487.44 | 0.0258 | 0.0103 |
| Jupiter | 99979-04-25 19:26 G | 38237754.17 | 38237754.31 | 38237754.47 | 0.0497 | 0.0381 |
| Saturn | 99984-11-03 20:52 G | 38239773.12 | 38239773.37 | 38239773.62 | 0.0303 | 0.0048 |
| Saturn | 99985-11-18 20:52 G | 38240153.30 | 38240153.37 | 38240153.46 | 0.0304 | 0.0286 |
| Jupiter | 99991-04-30 11:45 G | 38242141.75 | 38242141.99 | 38242142.23 | 0.0497 | 0.0048 |
| Saturn | 99998-04-29 07:11 G | 38244697.63 | 38244697.80 | 38244697.99 | 0.0261 | 0.0182 |
| Saturn | 99999-05-11 00:28 G | 38245074.28 | 38245074.52 | 38245074.76 | 0.0259 | 0.0013 |
| Saturn | 100000-05-21 12:57 G | 38245450.91 | 38245451.04 | 38245451.19 | 0.0258 | 0.0213 |

101ST MILLENNIUM CE

This is a list of transits of Moon in the 101st millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|----------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Jupiter | 100003-05-04 18:14 G | 38246529.19 | 38246529.26 | 38246529.36 | 0.0497 | 0.0459 | | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 100004-09-22 05:31 G | 38247035.65 | 38247035.73 | 38247035.83 | 0.0135 | 0.0125 |
| Uranus | 100005-09-26 15:50 G | 38247404.94 | 38247405.16 | 38247405.40 | 0.0135 | 0.0045 |
| Uranus | 100006-09-30 18:14 G | 38247774.02 | 38247774.26 | 38247774.52 | 0.0135 | 0.0038 |
| Uranus | 100007-10-05 04:33 G | 38248143.64 | 38248143.69 | 38248143.76 | 0.0135 | 0.0130 |
| Saturn | 100013-10-28 06:28 G | 38250358.61 | 38250358.77 | 38250358.95 | 0.0302 | 0.0205 |
| Saturn | 100014-11-12 08:09 G | 38250738.63 | 38250738.84 | 38250739.07 | 0.0304 | 0.0128 |
| Jupiter | 100020-10-23 12:14 G | 38252910.85 | 38252911.01 | 38252911.18 | 0.0529 | 0.0371 |
| Saturn | 100028-05-05 02:38 G | 38255661.37 | 38255661.61 | 38255661.86 | 0.0259 | 0.0079 |
| Saturn | 100029-05-16 10:04 G | 38256037.71 | 38256037.92 | 38256038.15 | 0.0258 | 0.0120 |
| Jupiter | 100032-10-28 13:11 G | 38257298.83 | 38257299.05 | 38257299.27 | 0.0529 | 0.0051 |
| Neptune | 100034-04-01 15:35 G | 38257819.07 | 38257819.15 | 38257819.27 | 0.0088 | 0.0081 |
| Neptune | 100035-04-04 02:52 G | 38258186.48 | 38258186.62 | 38258186.78 | 0.0088 | 0.0071 |
| Neptune | 100036-04-05 13:55 G | 38258553.85 | 38258554.08 | 38258554.32 | 0.0088 | 0.0044 |
| Neptune | 100037-04-08 05:16 G | 38258921.50 | 38258921.72 | 38258921.97 | 0.0088 | 0.0035 |
| Neptune | 100038-04-10 12:14 G | 38259288.75 | 38259289.01 | 38259289.29 | 0.0088 | 0.0007 |
| Neptune | 100039-04-13 07:26 G | 38259656.55 | 38259656.81 | 38259657.07 | 0.0088 | 0.0003 |
| Neptune | 100040-04-14 12:14 G | 38260023.78 | 38260024.01 | 38260024.27 | 0.0088 | 0.0032 |
| Neptune | 100041-04-17 07:26 G | 38260391.59 | 38260391.81 | 38260392.06 | 0.0088 | 0.0041 |
| Neptune | 100042-04-19 13:55 G | 38260758.95 | 38260759.08 | 38260759.26 | 0.0088 | 0.0069 |
| Pluto | 100042-09-17 13:26 G | 38260909.83 | 38260910.06 | 38260910.31 | 0.0063 | 0.0022 |
| Neptune | 100043-04-22 05:59 G | 38261126.65 | 38261126.75 | 38261126.90 | 0.0088 | 0.0078 |
| Pluto | 100043-09-19 06:43 G | 38261276.69 | 38261276.78 | 38261276.88 | 0.0064 | 0.0059 |
| Saturn | 100043-11-05 11:45 G | 38261323.75 | 38261323.99 | 38261324.23 | 0.0303 | 0.0023 |
| Jupiter | 100044-11-02 12:14 G | 38261686.96 | 38261687.01 | 38261687.07 | 0.0529 | 0.0514 |
| Uranus | 100047-03-26 10:33 G | 38262560.73 | 38262560.94 | 38262561.16 | 0.0143 | 0.0074 |
| Uranus | 100048-03-30 17:59 G | 38262931.00 | 38262931.25 | 38262931.51 | 0.0143 | 0.0032 |
| Uranus | 100049-04-04 12:57 G | 38263300.95 | 38263301.04 | 38263301.18 | 0.0143 | 0.0128 |
| Saturn | 100057-04-30 06:14 G | 38266248.59 | 38266248.76 | 38266248.95 | 0.0261 | 0.0173 |
| Saturn | 100058-05-11 23:16 G | 38266625.23 | 38266625.47 | 38266625.72 | 0.0259 | 0.0026 |
| Saturn | 100059-05-23 04:47 G | 38267001.60 | 38267001.70 | 38267001.82 | 0.0258 | 0.0232 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 100062-04-25 09:50 G | 38268069.79 | 38268069.91 | 38268070.04 | 0.0496 | 0.0420 |
| Saturn | 100072-10-29 00:28 G | 38271909.33 | 38271909.52 | 38271909.72 | 0.0302 | 0.0184 |
| Saturn | 100073-11-12 22:04 G | 38272289.21 | 38272289.42 | 38272289.64 | 0.0304 | 0.0150 |
| Jupiter | 100074-04-29 17:16 G | 38272456.98 | 38272457.22 | 38272457.45 | 0.0497 | 0.0021 |
| Jupiter | 100086-05-04 15:35 G | 38276845.05 | 38276845.15 | 38276845.27 | 0.0497 | 0.0433 |
| Saturn | 100087-05-06 17:59 G | 38277212.01 | 38277212.25 | 38277212.49 | 0.0259 | 0.0069 |
| Saturn | 100088-05-17 08:23 G | 38277588.66 | 38277588.85 | 38277589.06 | 0.0258 | 0.0137 |
| Uranus | 100088-09-22 13:40 G | 38277717.02 | 38277717.07 | 38277717.17 | 0.0135 | 0.0129 |
| Uranus | 100089-09-27 01:55 G | 38278086.35 | 38278086.58 | 38278086.82 | 0.0135 | 0.0039 |
| Uranus | 100090-10-01 03:21 G | 38278455.41 | 38278455.64 | 38278455.89 | 0.0135 | 0.0047 |
| Uranus | 100091-10-05 15:07 G | 38278825.05 | 38278825.13 | 38278825.23 | 0.0135 | 0.0125 |
| Mars | 100095-01-28 09:07 G | 38280035.70 | 38280035.88 | 38280036.06 | 0.1657 | 0.0224 |
| Saturn | 100102-11-07 07:55 G | 38282874.60 | 38282874.83 | 38282875.06 | 0.0303 | 0.0004 |
| Jupiter | 100103-10-25 03:21 G | 38283226.51 | 38283226.64 | 38283226.78 | 0.0529 | 0.0418 |
| Neptune | 100115-10-02 23:59 G | 38287587.46 | 38287587.50 | 38287587.55 | 0.0090 | 0.0088 |
| Jupiter | 100115-10-30 02:23 G | 38287614.36 | 38287614.60 | 38287614.84 | 0.0530 | 0.0021 |
| Saturn | 100116-05-02 05:45 G | 38287799.54 | 38287799.74 | 38287799.93 | 0.0261 | 0.0163 |
| Neptune | 100116-10-04 08:09 G | 38287954.68 | 38287954.84 | 38287955.02 | 0.0090 | 0.0063 |
| Saturn | 100117-05-13 16:19 G | 38288175.93 | 38288176.18 | 38288176.44 | 0.0259 | 0.0040 |
| Neptune | 100117-10-06 20:23 G | 38288322.13 | 38288322.35 | 38288322.57 | 0.0090 | 0.0050 |
| Saturn | 100118-05-24 20:52 G | 38288552.33 | 38288552.37 | 38288552.43 | 0.0258 | 0.0251 |
| Neptune | 100118-10-09 09:21 G | 38288689.66 | 38288689.89 | 38288690.13 | 0.0090 | 0.0025 |
| Neptune | 100119-10-11 16:33 G | 38289056.93 | 38289057.19 | 38289057.45 | 0.0090 | 0.0012 |
| Neptune | 100120-10-13 09:07 G | 38289424.64 | 38289424.88 | 38289425.13 | 0.0089 | 0.0015 |
| Neptune | 100121-10-15 13:26 G | 38289791.82 | 38289792.06 | 38289792.30 | 0.0089 | 0.0027 |
| Neptune | 100122-10-18 06:43 G | 38290159.60 | 38290159.78 | 38290160.00 | 0.0089 | 0.0054 |
| Neptune | 100123-10-20 11:31 G | 38290526.83 | 38290526.98 | 38290527.17 | 0.0089 | 0.0065 |
| Jupiter | 100127-11-03 23:02 G | 38292002.39 | 38292002.46 | 38292002.54 | 0.0529 | 0.0498 |
| Uranus | 100131-03-27 19:40 G | 38293242.11 | 38293242.32 | 38293242.53 | 0.0143 | 0.0075 |
| Saturn | 100131-10-31 14:52 G | 38293459.91 | 38293460.12 | 38293460.34 | 0.0302 | 0.0162 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 100132-03-18 02:38 G | 38293598.56 | 38293598.61 | 38293598.73 | 0.0081 | 0.0076 |
| Uranus | 100132-04-01 02:23 G | 38293612.35 | 38293612.60 | 38293612.86 | 0.0143 | 0.0032 |
| Saturn | 100132-11-14 11:45 G | 38293839.80 | 38293839.99 | 38293840.20 | 0.0304 | 0.0174 |
| Jupiter | 100145-04-25 15:21 G | 38298385.05 | 38298385.14 | 38298385.25 | 0.0497 | 0.0445 |
| Saturn | 100145-04-26 21:07 G | 38298386.37 | 38298386.38 | 38298386.42 | 0.0262 | 0.0260 |
| Saturn | 100146-05-08 15:50 G | 38298762.92 | 38298763.16 | 38298763.39 | 0.0260 | 0.0057 |
| Saturn | 100147-05-20 07:40 G | 38299139.63 | 38299139.82 | 38299140.02 | 0.0258 | 0.0152 |
| Jupiter | 100157-04-30 13:26 G | 38302772.83 | 38302773.06 | 38302773.30 | 0.0497 | 0.0009 |
| Saturn | 100161-11-08 05:59 G | 38304425.51 | 38304425.75 | 38304425.99 | 0.0303 | 0.0019 |
| Jupiter | 100169-05-04 18:43 G | 38307160.13 | 38307160.28 | 38307160.44 | 0.0496 | 0.0383 |
| Uranus | 100172-09-24 00:14 G | 38308398.39 | 38308398.51 | 38308398.66 | 0.0135 | 0.0114 |
| Uranus | 100173-09-28 13:11 G | 38308767.82 | 38308768.05 | 38308768.29 | 0.0135 | 0.0037 |
| Uranus | 100174-10-02 13:26 G | 38309136.84 | 38309137.06 | 38309137.31 | 0.0135 | 0.0050 |
| Saturn | 100175-05-03 22:33 G | 38309350.24 | 38309350.44 | 38309350.66 | 0.0261 | 0.0152 |
| Saturn | 100176-05-14 07:40 G | 38309726.57 | 38309726.82 | 38309727.07 | 0.0259 | 0.0054 |
| Jupiter | 100186-10-24 13:26 G | 38313541.94 | 38313542.06 | 38313542.18 | 0.0530 | 0.0451 |
| Saturn | 100190-11-01 08:38 G | 38315010.65 | 38315010.86 | 38315011.08 | 0.0302 | 0.0140 |
| Saturn | 100191-11-16 09:21 G | 38315390.72 | 38315390.89 | 38315391.08 | 0.0304 | 0.0193 |
| Jupiter | 100198-10-29 10:19 G | 38317929.70 | 38317929.93 | 38317930.15 | 0.0529 | 0.0030 |
| Neptune | 100199-04-04 07:26 G | 38318086.71 | 38318086.81 | 38318086.98 | 0.0088 | 0.0076 |
| Neptune | 100200-04-07 01:11 G | 38318454.35 | 38318454.55 | 38318454.76 | 0.0088 | 0.0052 |
| Neptune | 100201-04-09 06:57 G | 38318821.57 | 38318821.79 | 38318822.04 | 0.0088 | 0.0038 |
| Neptune | 100202-04-12 02:38 G | 38319189.36 | 38319189.61 | 38319189.88 | 0.0088 | 0.0014 |
| Neptune | 100203-04-14 08:09 G | 38319556.58 | 38319556.84 | 38319557.10 | 0.0088 | 0.0001 |
| Neptune | 100204-04-16 02:23 G | 38319924.36 | 38319924.60 | 38319924.88 | 0.0088 | 0.0023 |
| Saturn | 100204-04-28 19:40 G | 38319937.25 | 38319937.32 | 38319937.40 | 0.0262 | 0.0248 |
| Neptune | 100205-04-18 10:47 G | 38320291.73 | 38320291.95 | 38320292.19 | 0.0088 | 0.0038 |
| Saturn | 100205-05-10 16:47 G | 38320313.96 | 38320314.20 | 38320314.44 | 0.0260 | 0.0043 |
| Neptune | 100206-04-21 00:43 G | 38320659.36 | 38320659.53 | 38320659.76 | 0.0088 | 0.0060 |
| Saturn | 100206-05-22 02:52 G | 38320690.44 | 38320690.62 | 38320690.82 | 0.0258 | 0.0170 |

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| Neptune | 100207-04-23 13:40 G | 38321026.95 | 38321027.07 | 38321027.19 | 0.0088 | 0.0076 |
| Jupiter | 100210-11-04 11:59 G | 38322317.87 | 38322318.00 | 38322318.12 | 0.0529 | 0.0444 |
| Uranus | 100215-03-29 07:40 G | 38323923.60 | 38323923.82 | 38323924.05 | 0.0143 | 0.0061 |
| Uranus | 100216-04-02 12:43 G | 38324293.79 | 38324294.03 | 38324294.30 | 0.0143 | 0.0041 |
| Uranus | 100217-04-07 09:50 G | 38324663.88 | 38324663.91 | 38324663.98 | 0.0143 | 0.0140 |
| Saturn | 100219-10-27 08:38 G | 38325596.80 | 38325596.86 | 38325596.94 | 0.0300 | 0.0285 |
| Saturn | 100220-11-10 02:52 G | 38325976.38 | 38325976.62 | 38325976.87 | 0.0303 | 0.0040 |
| Jupiter | 100228-04-26 07:11 G | 38328700.74 | 38328700.80 | 38328700.88 | 0.0496 | 0.0473 |
| Saturn | 100234-05-05 15:21 G | 38330900.93 | 38330901.14 | 38330901.36 | 0.0261 | 0.0139 |
| Saturn | 100235-05-17 06:28 G | 38331277.54 | 38331277.77 | 38331278.01 | 0.0259 | 0.0073 |
| Jupiter | 100240-04-30 15:21 G | 38333087.90 | 38333088.14 | 38333088.39 | 0.0496 | 0.0039 |
| Saturn | 100249-11-03 12:57 G | 38336561.82 | 38336562.04 | 38336562.25 | 0.0301 | 0.0116 |
| Saturn | 100250-11-18 14:52 G | 38336941.96 | 38336942.12 | 38336942.29 | 0.0304 | 0.0217 |
| Jupiter | 100252-05-05 07:26 G | 38337475.65 | 38337475.81 | 38337475.97 | 0.0496 | 0.0346 |
| Uranus | 100256-09-25 10:04 G | 38339079.81 | 38339079.92 | 38339080.04 | 0.0135 | 0.0120 |
| Uranus | 100257-09-29 23:16 G | 38339449.23 | 38339449.47 | 38339449.72 | 0.0135 | 0.0027 |
| Uranus | 100258-10-03 23:16 G | 38339818.25 | 38339818.47 | 38339818.71 | 0.0135 | 0.0056 |
| Saturn | 100263-04-30 21:50 G | 38341488.32 | 38341488.41 | 38341488.53 | 0.0262 | 0.0235 |
| Saturn | 100264-05-11 13:55 G | 38341864.83 | 38341865.08 | 38341865.34 | 0.0260 | 0.0025 |
| Saturn | 100265-05-22 21:07 G | 38342241.22 | 38342241.38 | 38342241.56 | 0.0259 | 0.0191 |
| Jupiter | 100269-10-24 17:02 G | 38343857.19 | 38343857.21 | 38343857.24 | 0.0529 | 0.0524 |
| Saturn | 100278-10-28 08:23 G | 38347147.74 | 38347147.85 | 38347147.99 | 0.0300 | 0.0257 |
| Saturn | 100279-11-12 01:55 G | 38347527.34 | 38347527.58 | 38347527.82 | 0.0303 | 0.0067 |
| Neptune | 100280-10-04 16:47 G | 38347855.06 | 38347855.20 | 38347855.40 | 0.0090 | 0.0069 |
| Neptune | 100281-10-07 07:40 G | 38348222.64 | 38348222.82 | 38348223.02 | 0.0090 | 0.0057 |
| Jupiter | 100281-10-29 20:23 G | 38348245.12 | 38348245.35 | 38348245.58 | 0.0530 | 0.0097 |
| Neptune | 100282-10-09 13:26 G | 38348589.83 | 38348590.06 | 38348590.32 | 0.0090 | 0.0030 |
| Neptune | 100283-10-12 07:26 G | 38348957.57 | 38348957.81 | 38348958.06 | 0.0090 | 0.0018 |
| Neptune | 100284-10-13 11:31 G | 38349324.74 | 38349324.98 | 38349325.24 | 0.0089 | 0.0009 |
| Neptune | 100285-10-16 05:02 G | 38349692.47 | 38349692.71 | 38349692.97 | 0.0089 | 0.0021 |

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| Neptune | 100286-10-18 11:02 G | 38350059.75 | 38350059.96 | 38350060.17 | 0.0089 | 0.0047 |
| Neptune | 100287-10-21 00:57 G | 38350427.37 | 38350427.54 | 38350427.76 | 0.0089 | 0.0060 |
| Neptune | 100288-10-22 11:16 G | 38350794.92 | 38350794.97 | 38350795.05 | 0.0089 | 0.0086 |
| Pluto | 100290-09-21 22:19 G | 38351494.17 | 38351494.43 | 38351494.69 | 0.0064 | 0.0005 |
| Saturn | 100293-05-06 16:19 G | 38352451.97 | 38352452.18 | 38352452.40 | 0.0261 | 0.0122 |
| Jupiter | 100293-11-03 11:16 G | 38352632.82 | 38352632.97 | 38352633.13 | 0.0530 | 0.0389 |
| Saturn | 100294-05-18 11:31 G | 38352828.76 | 38352828.98 | 38352829.21 | 0.0260 | 0.0094 |
| Uranus | 100299-03-29 21:21 G | 38354605.17 | 38354605.39 | 38354605.61 | 0.0143 | 0.0062 |
| Mars | 100300-01-28 17:02 G | 38354910.10 | 38354910.21 | 38354910.31 | 0.1668 | 0.1386 |
| Uranus | 100300-04-04 01:26 G | 38354975.31 | 38354975.56 | 38354975.81 | 0.0143 | 0.0049 |
| Saturn | 100308-11-06 00:14 G | 38358113.28 | 38358113.51 | 38358113.74 | 0.0301 | 0.0084 |
| Saturn | 100309-11-20 23:16 G | 38358493.33 | 38358493.47 | 38358493.61 | 0.0303 | 0.0245 |
| Saturn | 100322-05-02 23:16 G | 38363039.35 | 38363039.47 | 38363039.63 | 0.0262 | 0.0217 |
| Jupiter | 100323-05-02 01:26 G | 38363403.34 | 38363403.56 | 38363403.79 | 0.0496 | 0.0082 |
| Saturn | 100323-05-14 10:33 G | 38363415.69 | 38363415.94 | 38363416.20 | 0.0260 | 0.0006 |
| Saturn | 100324-05-24 23:02 G | 38363792.33 | 38363792.46 | 38363792.60 | 0.0259 | 0.0215 |
| Mars | 100325-08-06 06:14 G | 38364230.74 | 38364230.76 | 38364230.78 | 0.1883 | 0.1870 |
| Jupiter | 100335-05-06 14:52 G | 38367790.93 | 38367791.12 | 38367791.33 | 0.0496 | 0.0298 |
| Saturn | 100337-10-30 14:23 G | 38368698.96 | 38368699.10 | 38368699.27 | 0.0300 | 0.0226 |
| Saturn | 100338-11-14 11:31 G | 38369078.76 | 38369078.98 | 38369079.20 | 0.0303 | 0.0099 |
| Uranus | 100340-09-26 21:21 G | 38369761.25 | 38369761.39 | 38369761.57 | 0.0135 | 0.0103 |
| Uranus | 100341-10-01 11:16 G | 38370130.73 | 38370130.97 | 38370131.22 | 0.0135 | 0.0028 |
| Uranus | 100342-10-05 10:33 G | 38370499.73 | 38370499.94 | 38370500.18 | 0.0135 | 0.0063 |
| Saturn | 100352-05-08 23:31 G | 38374003.26 | 38374003.48 | 38374003.71 | 0.0261 | 0.0102 |
| Saturn | 100353-05-20 14:38 G | 38374379.90 | 38374380.11 | 38374380.35 | 0.0260 | 0.0118 |
| Neptune | 100363-04-05 21:35 G | 38377987.28 | 38377987.40 | 38377987.54 | 0.0088 | 0.0075 |
| Neptune | 100364-04-07 02:09 G | 38378354.44 | 38378354.59 | 38378354.80 | 0.0088 | 0.0063 |
| Jupiter | 100364-10-29 16:19 G | 38378559.96 | 38378560.18 | 38378560.40 | 0.0530 | 0.0165 |
| Neptune | 100365-04-09 21:50 G | 38378722.18 | 38378722.41 | 38378722.65 | 0.0088 | 0.0037 |
| Neptune | 100366-04-12 03:35 G | 38379089.41 | 38379089.65 | 38379089.90 | 0.0088 | 0.0026 |

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| Neptune | 100367-04-14 20:09 G | 38379457.07 | 38379457.34 | 38379457.61 | 0.0088 | 0.0001 |
| Saturn | 100367-11-08 12:14 G | 38379664.77 | 38379665.01 | 38379665.26 | 0.0301 | 0.0051 |
| Neptune | 100368-04-16 05:45 G | 38379824.50 | 38379824.74 | 38379825.00 | 0.0088 | 0.0012 |
| Saturn | 100368-11-22 08:23 G | 38380044.75 | 38380044.85 | 38380044.96 | 0.0303 | 0.0276 |
| Neptune | 100369-04-18 17:31 G | 38380192.01 | 38380192.23 | 38380192.50 | 0.0088 | 0.0038 |
| Neptune | 100370-04-21 08:38 G | 38380559.67 | 38380559.86 | 38380560.09 | 0.0088 | 0.0050 |
| Neptune | 100371-04-23 16:19 G | 38380927.08 | 38380927.18 | 38380927.35 | 0.0088 | 0.0076 |
| Neptune | 100372-04-25 11:02 G | 38381294.95 | 38381294.96 | 38381295.03 | 0.0088 | 0.0087 |
| Jupiter | 100376-11-03 22:19 G | 38382948.26 | 38382948.43 | 38382948.62 | 0.0530 | 0.0324 |
| Mars | 100379-02-01 06:28 G | 38383767.57 | 38383767.77 | 38383767.96 | 0.1662 | 0.0493 |
| Pluto | 100380-03-22 17:16 G | 38384182.96 | 38384183.22 | 38384183.48 | 0.0080 | 0.0020 |
| Saturn | 100381-05-03 23:45 G | 38384590.33 | 38384590.49 | 38384590.66 | 0.0262 | 0.0198 |
| Saturn | 100382-05-15 15:07 G | 38384966.89 | 38384967.13 | 38384967.38 | 0.0260 | 0.0020 |
| Uranus | 100383-03-31 11:16 G | 38385286.73 | 38385286.97 | 38385287.21 | 0.0143 | 0.0044 |
| Saturn | 100383-05-27 08:52 G | 38385343.79 | 38385343.87 | 38385343.96 | 0.0259 | 0.0240 |
| Uranus | 100384-04-04 13:11 G | 38385656.81 | 38385657.05 | 38385657.31 | 0.0143 | 0.0055 |
| Saturn | 100396-11-01 07:40 G | 38390250.65 | 38390250.82 | 38390251.01 | 0.0300 | 0.0192 |
| Saturn | 100397-11-16 06:57 G | 38390630.58 | 38390630.79 | 38390631.00 | 0.0303 | 0.0134 |
| Jupiter | 100406-05-01 04:47 G | 38393718.47 | 38393718.70 | 38393718.94 | 0.0496 | 0.0135 |
| Saturn | 100411-05-11 07:26 G | 38395554.58 | 38395554.81 | 38395555.06 | 0.0261 | 0.0080 |
| Saturn | 100412-05-21 16:33 G | 38395930.99 | 38395931.19 | 38395931.42 | 0.0260 | 0.0145 |
| Jupiter | 100418-05-05 15:21 G | 38398105.94 | 38398106.14 | 38398106.34 | 0.0496 | 0.0236 |
| Uranus | 100424-09-27 08:38 G | 38400442.74 | 38400442.86 | 38400443.02 | 0.0135 | 0.0111 |
| Uranus | 100425-10-01 22:19 G | 38400812.18 | 38400812.43 | 38400812.68 | 0.0135 | 0.0014 |
| Uranus | 100426-10-05 21:21 G | 38401181.18 | 38401181.39 | 38401181.62 | 0.0135 | 0.0065 |
| Saturn | 100426-11-10 02:09 G | 38401216.34 | 38401216.59 | 38401216.84 | 0.0301 | 0.0013 |
| Saturn | 100440-05-05 05:45 G | 38406141.57 | 38406141.74 | 38406141.93 | 0.0262 | 0.0176 |
| Saturn | 100441-05-17 02:52 G | 38406518.39 | 38406518.62 | 38406518.86 | 0.0260 | 0.0046 |
| Neptune | 100444-10-05 04:33 G | 38407755.60 | 38407755.69 | 38407755.83 | 0.0090 | 0.0080 |
| Neptune | 100445-10-07 09:50 G | 38408122.73 | 38408122.91 | 38408123.12 | 0.0090 | 0.0058 |

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| Neptune | 100446-10-10 04:33 G | 38408490.46 | 38408490.69 | 38408490.92 | 0.0090 | 0.0041 |
| Neptune | 100447-10-12 09:07 G | 38408857.64 | 38408857.88 | 38408858.13 | 0.0090 | 0.0019 |
| Jupiter | 100447-10-29 21:50 G | 38408875.21 | 38408875.41 | 38408875.61 | 0.0529 | 0.0253 |
| Neptune | 100448-10-14 02:09 G | 38409225.33 | 38409225.59 | 38409225.85 | 0.0090 | 0.0003 |
| Neptune | 100449-10-16 09:35 G | 38409592.66 | 38409592.90 | 38409593.14 | 0.0089 | 0.0020 |
| Neptune | 100450-10-18 21:21 G | 38409960.17 | 38409960.39 | 38409960.65 | 0.0089 | 0.0037 |
| Neptune | 100451-10-21 09:07 G | 38410327.72 | 38410327.88 | 38410328.09 | 0.0089 | 0.0060 |
| Neptune | 100452-10-22 16:33 G | 38410695.07 | 38410695.19 | 38410695.35 | 0.0089 | 0.0075 |
| Saturn | 100455-11-04 07:40 G | 38411802.62 | 38411802.82 | 38411803.02 | 0.0301 | 0.0153 |
| Saturn | 100456-11-18 05:31 G | 38412182.54 | 38412182.73 | 38412182.94 | 0.0303 | 0.0174 |
| Jupiter | 100459-11-03 11:16 G | 38413262.76 | 38413262.97 | 38413263.18 | 0.0530 | 0.0220 |
| Uranus | 100466-03-26 17:02 G | 38415598.19 | 38415598.21 | 38415598.26 | 0.0144 | 0.0142 |
| Uranus | 100467-03-31 22:33 G | 38415968.21 | 38415968.44 | 38415968.68 | 0.0144 | 0.0050 |
| Uranus | 100468-04-04 23:02 G | 38416338.24 | 38416338.46 | 38416338.71 | 0.0143 | 0.0066 |
| Saturn | 100470-05-12 12:57 G | 38417105.78 | 38417106.04 | 38417106.29 | 0.0261 | 0.0052 |
| Saturn | 100471-05-23 23:59 G | 38417482.32 | 38417482.50 | 38417482.69 | 0.0260 | 0.0171 |
| Saturn | 100484-10-28 05:59 G | 38422388.69 | 38422388.75 | 38422388.81 | 0.0299 | 0.0287 |
| Saturn | 100485-11-11 22:47 G | 38422768.21 | 38422768.45 | 38422768.69 | 0.0302 | 0.0029 |
| Jupiter | 100489-04-30 02:52 G | 38424033.42 | 38424033.62 | 38424033.83 | 0.0496 | 0.0212 |
| Saturn | 100499-05-07 20:38 G | 38427693.17 | 38427693.36 | 38427693.57 | 0.0262 | 0.0148 |
| Saturn | 100500-05-19 16:19 G | 38428069.94 | 38428070.18 | 38428070.42 | 0.0260 | 0.0072 |
| Jupiter | 100501-05-05 19:11 G | 38428421.07 | 38428421.30 | 38428421.54 | 0.0496 | 0.0157 |
| Uranus | 100508-09-28 21:35 G | 38431124.24 | 38431124.40 | 38431124.60 | 0.0134 | 0.0090 |
| Uranus | 100509-10-03 10:47 G | 38431493.70 | 38431493.95 | 38431494.20 | 0.0134 | 0.0017 |
| Uranus | 100510-10-07 10:19 G | 38431862.74 | 38431862.93 | 38431863.14 | 0.0135 | 0.0077 |
| Saturn | 100514-11-07 06:43 G | 38433354.56 | 38433354.78 | 38433355.02 | 0.0301 | 0.0111 |
| Saturn | 100515-11-22 01:55 G | 38433734.41 | 38433734.58 | 38433734.76 | 0.0303 | 0.0213 |
| Neptune | 100527-04-05 21:07 G | 38437887.30 | 38437887.38 | 38437887.51 | 0.0088 | 0.0080 |
| Neptune | 100528-04-07 15:21 G | 38438255.00 | 38438255.14 | 38438255.32 | 0.0088 | 0.0070 |
| Saturn | 100528-05-03 06:14 G | 38438280.66 | 38438280.76 | 38438280.87 | 0.0263 | 0.0239 |

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| Neptune | 100529-04-09 22:47 G | 38438622.25 | 38438622.45 | 38438622.69 | 0.0088 | 0.0044 |
| Saturn | 100529-05-14 20:38 G | 38438657.11 | 38438657.36 | 38438657.61 | 0.0261 | 0.0023 |
| Neptune | 100530-04-12 13:26 G | 38438989.83 | 38438990.06 | 38438990.33 | 0.0088 | 0.0033 |
| Saturn | 100530-05-26 13:11 G | 38439033.91 | 38439034.05 | 38439034.22 | 0.0260 | 0.0199 |
| Jupiter | 100530-10-29 07:55 G | 38439189.66 | 38439189.83 | 38439190.00 | 0.0530 | 0.0357 |
| Neptune | 100531-04-15 02:09 G | 38439357.34 | 38439357.59 | 38439357.85 | 0.0088 | 0.0006 |
| Neptune | 100532-04-16 11:45 G | 38439724.73 | 38439724.99 | 38439725.27 | 0.0088 | 0.0006 |
| Neptune | 100533-04-19 04:33 G | 38440092.46 | 38440092.69 | 38440092.93 | 0.0088 | 0.0032 |
| Neptune | 100534-04-21 10:04 G | 38440459.71 | 38440459.92 | 38440460.17 | 0.0088 | 0.0043 |
| Neptune | 100535-04-24 05:31 G | 38440827.59 | 38440827.73 | 38440827.91 | 0.0088 | 0.0069 |
| Neptune | 100536-04-25 10:33 G | 38441194.87 | 38441194.94 | 38441195.07 | 0.0088 | 0.0081 |
| Pluto | 100537-09-24 09:35 G | 38441711.80 | 38441711.90 | 38441712.06 | 0.0063 | 0.0055 |
| Pluto | 100538-09-25 15:07 G | 38442077.93 | 38442078.13 | 38442078.38 | 0.0064 | 0.0026 |
| Jupiter | 100542-11-03 13:11 G | 38443577.83 | 38443578.05 | 38443578.27 | 0.0530 | 0.0132 |
| Saturn | 100543-11-01 04:19 G | 38443940.55 | 38443940.68 | 38443940.82 | 0.0299 | 0.0245 |
| Saturn | 100544-11-15 01:26 G | 38444320.34 | 38444320.56 | 38444320.79 | 0.0302 | 0.0072 |
| Uranus | 100551-04-02 09:07 G | 38446649.63 | 38446649.88 | 38446650.12 | 0.0144 | 0.0032 |
| Uranus | 100552-04-06 07:11 G | 38447019.58 | 38447019.80 | 38447020.06 | 0.0144 | 0.0063 |
| Saturn | 100558-05-10 12:14 G | 38449244.79 | 38449245.01 | 38449245.24 | 0.0261 | 0.0118 |
| Saturn | 100559-05-22 01:11 G | 38449621.32 | 38449621.55 | 38449621.79 | 0.0260 | 0.0103 |
| Jupiter | 100572-04-30 06:57 G | 38454348.59 | 38454348.79 | 38454348.99 | 0.0496 | 0.0280 |
| Saturn | 100573-11-09 01:40 G | 38454906.33 | 38454906.57 | 38454906.82 | 0.0301 | 0.0070 |
| Saturn | 100574-11-23 20:52 G | 38455286.25 | 38455286.37 | 38455286.51 | 0.0303 | 0.0255 |
| Mars | 100584-01-31 22:33 G | 38458642.29 | 38458642.44 | 38458642.60 | 0.1673 | 0.0752 |
| Jupiter | 100584-05-04 14:38 G | 38458735.88 | 38458736.11 | 38458736.34 | 0.0496 | 0.0088 |
| Saturn | 100587-05-05 15:21 G | 38459832.00 | 38459832.14 | 38459832.30 | 0.0262 | 0.0210 |
| Saturn | 100588-05-16 11:02 G | 38460208.72 | 38460208.96 | 38460209.20 | 0.0261 | 0.0009 |
| Saturn | 100589-05-28 04:33 G | 38460585.58 | 38460585.69 | 38460585.81 | 0.0260 | 0.0228 |
| Uranus | 100592-09-29 10:04 G | 38461805.77 | 38461805.92 | 38461806.11 | 0.0134 | 0.0098 |
| Uranus | 100593-10-03 22:04 G | 38462175.16 | 38462175.42 | 38462175.68 | 0.0134 | 0.0001 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 100594-10-07 22:19 G | 38462544.23 | 38462544.43 | 38462544.63 | 0.0135 | 0.0076 |
| Jupiter | 100596-05-09 10:04 G | 38463123.82 | 38463123.92 | 38463124.03 | 0.0496 | 0.0440 |
| Saturn | 100602-11-04 05:02 G | 38465492.55 | 38465492.71 | 38465492.89 | 0.0300 | 0.0204 |
| Saturn | 100603-11-19 03:07 G | 38465872.42 | 38465872.63 | 38465872.86 | 0.0302 | 0.0117 |
| Mars | 100609-08-07 22:47 G | 38467961.27 | 38467961.45 | 38467961.63 | 0.1874 | 0.0975 |
| Neptune | 100609-10-08 23:59 G | 38468023.34 | 38468023.50 | 38468023.71 | 0.0090 | 0.0062 |
| Neptune | 100610-10-11 05:45 G | 38468390.55 | 38468390.74 | 38468390.96 | 0.0090 | 0.0052 |
| Neptune | 100611-10-13 20:38 G | 38468758.11 | 38468758.36 | 38468758.62 | 0.0090 | 0.0023 |
| Neptune | 100612-10-15 06:28 G | 38469125.53 | 38469125.77 | 38469126.02 | 0.0090 | 0.0012 |
| Neptune | 100613-10-17 16:47 G | 38469492.95 | 38469493.20 | 38469493.46 | 0.0090 | 0.0017 |
| Jupiter | 100613-10-29 15:21 G | 38469505.03 | 38469505.14 | 38469505.28 | 0.0530 | 0.0437 |
| Neptune | 100614-10-20 07:40 G | 38469860.59 | 38469860.82 | 38469861.06 | 0.0089 | 0.0027 |
| Neptune | 100615-10-22 12:57 G | 38470227.87 | 38470228.04 | 38470228.27 | 0.0089 | 0.0056 |
| Neptune | 100616-10-24 06:57 G | 38470595.63 | 38470595.79 | 38470595.97 | 0.0089 | 0.0065 |
| Saturn | 100617-05-12 22:04 G | 38470796.18 | 38470796.42 | 38470796.67 | 0.0261 | 0.0086 |
| Saturn | 100618-05-24 07:40 G | 38471172.62 | 38471172.82 | 38471173.05 | 0.0260 | 0.0136 |
| Jupiter | 100625-11-03 07:26 G | 38473892.58 | 38473892.81 | 38473893.05 | 0.0529 | 0.0041 |
| Pluto | 100628-03-26 18:57 G | 38474767.06 | 38474767.29 | 38474767.55 | 0.0080 | 0.0018 |
| Saturn | 100632-11-11 18:43 G | 38476458.04 | 38476458.28 | 38476458.53 | 0.0302 | 0.0026 |
| Saturn | 100633-11-26 18:14 G | 38476838.22 | 38476838.26 | 38476838.31 | 0.0303 | 0.0298 |
| Uranus | 100634-03-29 08:38 G | 38476960.80 | 38476960.86 | 38476960.97 | 0.0144 | 0.0136 |
| Uranus | 100635-04-03 17:16 G | 38477330.99 | 38477331.22 | 38477331.47 | 0.0144 | 0.0044 |
| Uranus | 100636-04-07 14:23 G | 38477700.89 | 38477701.10 | 38477701.33 | 0.0144 | 0.0077 |
| Saturn | 100646-05-08 04:04 G | 38481383.51 | 38481383.67 | 38481383.85 | 0.0262 | 0.0181 |
| Saturn | 100647-05-20 02:09 G | 38481760.34 | 38481760.59 | 38481760.83 | 0.0260 | 0.0042 |
| Saturn | 100648-05-30 13:26 G | 38482137.04 | 38482137.06 | 38482137.12 | 0.0259 | 0.0257 |
| Jupiter | 100655-05-01 03:35 G | 38484663.49 | 38484663.65 | 38484663.82 | 0.0496 | 0.0346 |
| Saturn | 100661-11-06 02:23 G | 38487044.41 | 38487044.60 | 38487044.81 | 0.0300 | 0.0163 |
| Saturn | 100662-11-20 22:18 G | 38487424.22 | 38487424.43 | 38487424.64 | 0.0302 | 0.0158 |
| Mars | 100663-02-03 22:33 G | 38487499.32 | 38487499.44 | 38487499.57 | 0.1669 | 0.1231 |

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|---------|----------------------|-------------|-------------|-------------|--------|----------|
| Jupiter | 100667-05-05 19:40 G | 38489051.08 | 38489051.32 | 38489051.56 | 0.0496 | 0.0007 |
| Saturn | 100676-05-14 04:33 G | 38492347.44 | 38492347.69 | 38492347.94 | 0.0261 | 0.0055 |
| Uranus | 100676-09-30 23:30 G | 38492487.28 | 38492487.48 | 38492487.69 | 0.0135 | 0.0076 |
| Saturn | 100677-05-25 18:42 G | 38492724.10 | 38492724.28 | 38492724.47 | 0.0259 | 0.0166 |
| Uranus | 100677-10-05 10:04 G | 38492856.66 | 38492856.92 | 38492857.18 | 0.0135 | 0.0005 |
| Uranus | 100678-10-09 11:45 G | 38493225.82 | 38493225.99 | 38493226.17 | 0.0135 | 0.0092 |
| Jupiter | 100679-05-10 00:14 G | 38493438.35 | 38493438.51 | 38493438.68 | 0.0496 | 0.0358 |
| Saturn | 100691-11-14 11:16 G | 38498009.74 | 38498009.97 | 38498010.21 | 0.0302 | 0.0011 |
| Neptune | 100692-04-07 19:11 G | 38498155.16 | 38498155.30 | 38498155.45 | 0.0088 | 0.0072 |
| Neptune | 100693-04-10 06:14 G | 38498522.57 | 38498522.76 | 38498523.00 | 0.0088 | 0.0054 |
| Neptune | 100694-04-12 20:52 G | 38498890.15 | 38498890.37 | 38498890.62 | 0.0088 | 0.0034 |
| Neptune | 100695-04-15 04:18 G | 38499257.42 | 38499257.68 | 38499257.95 | 0.0088 | 0.0016 |
| Neptune | 100696-04-16 22:47 G | 38499625.20 | 38499625.45 | 38499625.71 | 0.0088 | 0.0005 |
| Jupiter | 100696-10-28 07:54 G | 38499819.82 | 38499819.83 | 38499819.84 | 0.0529 | 0.0529 |
| Neptune | 100697-04-19 03:35 G | 38499992.41 | 38499992.65 | 38499992.92 | 0.0088 | 0.0021 |
| Neptune | 100698-04-21 22:33 G | 38500360.23 | 38500360.44 | 38500360.70 | 0.0088 | 0.0042 |
| Neptune | 100699-04-24 05:02 G | 38500727.53 | 38500727.71 | 38500727.92 | 0.0088 | 0.0058 |
| Neptune | 100700-04-26 21:50 G | 38501095.32 | 38501095.41 | 38501095.53 | 0.0088 | 0.0080 |
| Saturn | 100705-05-10 17:16 G | 38502935.04 | 38502935.22 | 38502935.43 | 0.0262 | 0.0154 |
| Saturn | 100706-05-22 09:50 G | 38503311.66 | 38503311.91 | 38503312.16 | 0.0260 | 0.0069 |
| Jupiter | 100708-11-03 05:30 G | 38504207.51 | 38504207.73 | 38504207.95 | 0.0530 | 0.0058 |
| Uranus | 100718-03-30 19:40 G | 38507642.30 | 38507642.32 | 38507642.37 | 0.0144 | 0.0142 |
| Uranus | 100719-04-05 04:47 G | 38508012.46 | 38508012.70 | 38508012.96 | 0.0144 | 0.0022 |
| Uranus | 100720-04-09 00:28 G | 38508382.29 | 38508382.52 | 38508382.75 | 0.0144 | 0.0070 |
| Jupiter | 100720-11-08 05:45 G | 38508595.63 | 38508595.74 | 38508595.86 | 0.0530 | 0.0458 |
| Saturn | 100720-11-08 13:40 G | 38508595.85 | 38508596.07 | 38508596.30 | 0.0300 | 0.0129 * |
| Saturn | 100721-11-23 07:54 G | 38508975.65 | 38508975.83 | 38508976.03 | 0.0303 | 0.0192 |
| Saturn | 100734-05-05 19:26 G | 38513522.23 | 38513522.31 | 38513522.40 | 0.0263 | 0.0248 |
| Saturn | 100735-05-17 11:59 G | 38513898.76 | 38513899.00 | 38513899.25 | 0.0260 | 0.0029 |
| Saturn | 100736-05-28 06:28 G | 38514275.61 | 38514275.77 | 38514275.93 | 0.0259 | 0.0194 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 100738-05-01 10:18 G | 38514978.80 | 38514978.93 | 38514979.05 | 0.0496 | 0.0417 |
| Saturn | 100749-11-02 04:33 G | 38519181.62 | 38519181.69 | 38519181.79 | 0.0300 | 0.0276 |
| Jupiter | 100750-05-05 16:04 G | 38519365.93 | 38519366.17 | 38519366.41 | 0.0496 | 0.0050 |
| Saturn | 100750-11-17 02:09 G | 38519561.36 | 38519561.59 | 38519561.82 | 0.0302 | 0.0040 |
| Uranus | 100760-10-02 11:59 G | 38523168.83 | 38523169.00 | 38523169.21 | 0.0135 | 0.0084 |
| Uranus | 100761-10-06 20:52 G | 38523538.11 | 38523538.37 | 38523538.63 | 0.0135 | 0.0015 |
| Jupiter | 100762-05-10 13:54 G | 38523753.91 | 38523754.08 | 38523754.26 | 0.0496 | 0.0313 |
| Uranus | 100762-10-10 23:45 G | 38523907.32 | 38523907.49 | 38523907.69 | 0.0135 | 0.0088 |
| Saturn | 100764-05-12 00:42 G | 38524486.31 | 38524486.53 | 38524486.76 | 0.0261 | 0.0127 |
| Saturn | 100765-05-23 10:18 G | 38524862.70 | 38524862.93 | 38524863.18 | 0.0260 | 0.0098 |
| Neptune | 100773-10-09 01:54 G | 38527923.45 | 38527923.58 | 38527923.75 | 0.0090 | 0.0072 |
| Neptune | 100774-10-11 14:38 G | 38528290.93 | 38528291.11 | 38528291.34 | 0.0090 | 0.0056 |
| Neptune | 100775-10-14 03:35 G | 38528658.42 | 38528658.65 | 38528658.88 | 0.0090 | 0.0032 |
| Neptune | 100776-10-15 11:02 G | 38529025.71 | 38529025.96 | 38529026.23 | 0.0090 | 0.0017 |
| Neptune | 100777-10-18 03:35 G | 38529393.41 | 38529393.65 | 38529393.91 | 0.0090 | 0.0007 |
| Neptune | 100778-10-20 08:23 G | 38529760.60 | 38529760.85 | 38529761.10 | 0.0090 | 0.0022 |
| Neptune | 100779-10-23 02:23 G | 38530128.39 | 38530128.60 | 38530128.83 | 0.0089 | 0.0045 |
| Saturn | 100779-11-10 15:50 G | 38530146.93 | 38530147.16 | 38530147.40 | 0.0301 | 0.0104 |
| Neptune | 100780-10-24 07:26 G | 38530495.63 | 38530495.81 | 38530495.99 | 0.0089 | 0.0062 |
| Saturn | 100780-11-24 13:11 G | 38530526.90 | 38530527.05 | 38530527.23 | 0.0303 | 0.0219 |
| Neptune | 100781-10-26 23:16 G | 38530863.40 | 38530863.47 | 38530863.58 | 0.0089 | 0.0084 |
| Pluto | 100785-09-28 00:57 G | 38532295.39 | 38532295.54 | 38532295.75 | 0.0063 | 0.0044 |
| Pluto | 100786-09-29 14:09 G | 38532661.89 | 38532662.09 | 38532662.34 | 0.0064 | 0.0034 |
| Jupiter | 100791-11-03 14:09 G | 38534522.85 | 38534523.09 | 38534523.32 | 0.0530 | 0.0107 |
| Saturn | 100793-05-06 23:16 G | 38535073.35 | 38535073.47 | 38535073.60 | 0.0262 | 0.0224 |
| Saturn | 100794-05-18 20:38 G | 38535450.12 | 38535450.36 | 38535450.60 | 0.0260 | 0.0003 |
| Saturn | 100795-05-30 11:02 G | 38535826.82 | 38535826.96 | 38535827.10 | 0.0259 | 0.0216 |
| Uranus | 100802-03-31 07:11 G | 38538323.70 | 38538323.80 | 38538323.95 | 0.0144 | 0.0124 |
| Uranus | 100803-04-05 17:02 G | 38538693.96 | 38538694.21 | 38538694.47 | 0.0144 | 0.0030 |
| Jupiter | 100803-11-08 09:21 G | 38538910.75 | 38538910.89 | 38538911.04 | 0.0529 | 0.0404 |

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| Uranus | 100804-04-09 11:59 G | 38539063.81 | 38539064.00 | 38539064.21 | 0.0144 | 0.0092 |
| Saturn | 100808-11-03 11:59 G | 38540732.89 | 38540733.00 | 38540733.14 | 0.0300 | 0.0251 |
| Saturn | 100809-11-18 07:11 G | 38541112.56 | 38541112.80 | 38541113.04 | 0.0303 | 0.0064 |
| Jupiter | 100821-04-30 10:33 G | 38545293.87 | 38545293.94 | 38545294.04 | 0.0496 | 0.0460 |
| Saturn | 100823-05-13 22:18 G | 38546037.20 | 38546037.43 | 38546037.68 | 0.0261 | 0.0100 |
| Saturn | 100824-05-24 10:33 G | 38546413.73 | 38546413.94 | 38546414.16 | 0.0259 | 0.0121 |
| Jupiter | 100833-05-05 08:09 G | 38549681.62 | 38549681.84 | 38549682.07 | 0.0496 | 0.0093 |
| Saturn | 100838-11-11 18:14 G | 38551698.04 | 38551698.26 | 38551698.49 | 0.0301 | 0.0083 |
| Saturn | 100839-11-26 19:26 G | 38552078.18 | 38552078.31 | 38552078.46 | 0.0303 | 0.0239 |
| Uranus | 100844-10-03 01:54 G | 38553850.38 | 38553850.58 | 38553850.81 | 0.0135 | 0.0064 |
| Jupiter | 100845-05-09 11:59 G | 38554068.79 | 38554069.00 | 38554069.21 | 0.0496 | 0.0250 |
| Uranus | 100845-10-07 09:21 G | 38554219.63 | 38554219.89 | 38554220.15 | 0.0135 | 0.0009 |
| Uranus | 100846-10-11 13:54 G | 38554588.96 | 38554589.08 | 38554589.25 | 0.0135 | 0.0108 |
| Saturn | 100852-05-08 05:02 G | 38556624.57 | 38556624.71 | 38556624.88 | 0.0262 | 0.0199 |
| Saturn | 100853-05-19 23:59 G | 38557001.25 | 38557001.50 | 38557001.75 | 0.0260 | 0.0022 |
| Saturn | 100854-05-31 06:57 G | 38557377.70 | 38557377.79 | 38557377.91 | 0.0259 | 0.0236 |
| Neptune | 100856-04-07 22:47 G | 38558055.33 | 38558055.45 | 38558055.62 | 0.0088 | 0.0074 |
| Neptune | 100857-04-10 16:04 G | 38558423.01 | 38558423.17 | 38558423.36 | 0.0088 | 0.0064 |
| Neptune | 100858-04-12 22:04 G | 38558790.19 | 38558790.42 | 38558790.67 | 0.0088 | 0.0036 |
| Neptune | 100859-04-15 17:16 G | 38559157.98 | 38559158.22 | 38559158.48 | 0.0088 | 0.0027 |
| Neptune | 100860-04-16 22:33 G | 38559525.19 | 38559525.44 | 38559525.70 | 0.0088 | 0.0002 |
| Neptune | 100861-04-19 16:47 G | 38559892.94 | 38559893.20 | 38559893.47 | 0.0088 | 0.0011 |
| Neptune | 100862-04-21 23:59 G | 38560260.29 | 38560260.50 | 38560260.75 | 0.0088 | 0.0040 |
| Neptune | 100863-04-24 14:09 G | 38560627.87 | 38560628.09 | 38560628.32 | 0.0088 | 0.0049 |
| Neptune | 100864-04-26 02:09 G | 38560995.49 | 38560995.59 | 38560995.73 | 0.0088 | 0.0077 |
| Neptune | 100865-04-28 11:30 G | 38561362.95 | 38561362.98 | 38561363.05 | 0.0088 | 0.0086 |
| Saturn | 100867-11-05 09:06 G | 38562283.74 | 38562283.88 | 38562284.05 | 0.0300 | 0.0232 |
| Mars | 100868-02-04 03:21 G | 38562374.45 | 38562374.64 | 38562374.84 | 0.1679 | 0.0071 |
| Saturn | 100868-11-19 01:11 G | 38562663.31 | 38562663.55 | 38562663.80 | 0.0303 | 0.0079 |
| Jupiter | 100874-11-02 18:42 G | 38564838.07 | 38564838.28 | 38564838.49 | 0.0530 | 0.0162 |

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| Pluto | 100876-03-29 18:42 G | 38565351.04 | 38565351.28 | 38565351.53 | 0.0080 | 0.0034 |
| Saturn | 100882-05-14 18:57 G | 38567588.06 | 38567588.29 | 38567588.53 | 0.0261 | 0.0076 |
| Saturn | 100883-05-26 13:11 G | 38567964.85 | 38567965.05 | 38567965.25 | 0.0259 | 0.0143 |
| Uranus | 100886-03-31 22:47 G | 38569005.33 | 38569005.45 | 38569005.59 | 0.0144 | 0.0124 |
| Jupiter | 100886-11-07 19:40 G | 38569226.14 | 38569226.32 | 38569226.50 | 0.0530 | 0.0341 |
| Uranus | 100887-04-06 08:09 G | 38569375.59 | 38569375.84 | 38569376.10 | 0.0144 | 0.0005 |
| Uranus | 100888-04-10 02:52 G | 38569745.43 | 38569745.62 | 38569745.83 | 0.0144 | 0.0087 |
| Mars | 100893-08-08 02:38 G | 38571691.42 | 38571691.61 | 38571691.80 | 0.1863 | 0.0149 |
| Saturn | 100897-11-12 19:26 G | 38573249.08 | 38573249.31 | 38573249.54 | 0.0301 | 0.0068 |
| Saturn | 100898-11-27 20:09 G | 38573629.21 | 38573629.34 | 38573629.47 | 0.0303 | 0.0253 |
| Saturn | 100911-05-11 05:59 G | 38578175.56 | 38578175.75 | 38578175.93 | 0.0262 | 0.0177 |
| Saturn | 100912-05-21 17:45 G | 38578551.99 | 38578552.24 | 38578552.50 | 0.0260 | 0.0046 |
| Saturn | 100913-06-02 02:09 G | 38578928.56 | 38578928.59 | 38578928.63 | 0.0259 | 0.0255 |
| Jupiter | 100916-05-05 08:23 G | 38579996.62 | 38579996.85 | 38579997.09 | 0.0496 | 0.0145 |
| Saturn | 100926-11-06 23:59 G | 38583834.34 | 38583834.50 | 38583834.67 | 0.0300 | 0.0220 |
| Saturn | 100927-11-21 18:42 G | 38584214.06 | 38584214.28 | 38584214.52 | 0.0303 | 0.0093 |
| Jupiter | 100928-05-10 01:26 G | 38584384.36 | 38584384.56 | 38584384.77 | 0.0496 | 0.0219 |
| Uranus | 100928-10-04 15:50 G | 38584531.96 | 38584532.16 | 38584532.38 | 0.0134 | 0.0068 |
| Uranus | 100929-10-08 20:52 G | 38584901.12 | 38584901.37 | 38584901.63 | 0.0134 | 0.0030 |
| Uranus | 100930-10-13 03:35 G | 38585270.50 | 38585270.65 | 38585270.81 | 0.0135 | 0.0102 |
| Neptune | 100937-10-09 07:54 G | 38587823.75 | 38587823.83 | 38587823.95 | 0.0090 | 0.0083 |
| Neptune | 100938-10-11 22:18 G | 38588191.27 | 38588191.43 | 38588191.65 | 0.0090 | 0.0058 |
| Neptune | 100939-10-14 04:33 G | 38588558.48 | 38588558.69 | 38588558.93 | 0.0090 | 0.0045 |
| Neptune | 100940-10-15 22:33 G | 38588926.21 | 38588926.44 | 38588926.70 | 0.0090 | 0.0019 |
| Saturn | 100941-05-16 19:40 G | 38589139.09 | 38589139.32 | 38589139.56 | 0.0261 | 0.0054 |
| Neptune | 100941-10-18 02:52 G | 38589293.38 | 38589293.62 | 38589293.88 | 0.0090 | 0.0007 |
| Saturn | 100942-05-28 12:42 G | 38589515.84 | 38589516.03 | 38589516.23 | 0.0259 | 0.0162 |
| Neptune | 100942-10-20 20:38 G | 38589661.11 | 38589661.36 | 38589661.62 | 0.0090 | 0.0021 |
| Neptune | 100943-10-23 02:38 G | 38590028.40 | 38590028.61 | 38590028.86 | 0.0090 | 0.0034 |
| Neptune | 100944-10-24 17:30 G | 38590396.04 | 38590396.23 | 38590396.43 | 0.0090 | 0.0060 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 100945-10-27 03:35 G | 38590763.52 | 38590763.65 | 38590763.81 | 0.0089 | 0.0072 |
| Saturn | 100956-11-14 14:38 G | 38594799.87 | 38594800.11 | 38594800.35 | 0.0301 | 0.0053 |
| Jupiter | 100957-11-03 08:23 G | 38595153.63 | 38595153.85 | 38595154.06 | 0.0530 | 0.0200 |
| Saturn | 100957-11-29 10:47 G | 38595179.84 | 38595179.95 | 38595180.08 | 0.0303 | 0.0264 |
| Jupiter | 100969-11-08 02:38 G | 38599541.44 | 38599541.61 | 38599541.80 | 0.0530 | 0.0317 |
| Uranus | 100970-04-02 11:16 G | 38599686.82 | 38599686.97 | 38599687.14 | 0.0144 | 0.0109 |
| Saturn | 100970-05-11 21:35 G | 38599726.21 | 38599726.40 | 38599726.62 | 0.0262 | 0.0156 |
| Uranus | 100971-04-07 20:23 G | 38600057.09 | 38600057.35 | 38600057.61 | 0.0144 | 0.0012 |
| Saturn | 100971-05-23 10:04 G | 38600102.68 | 38600102.92 | 38600103.17 | 0.0260 | 0.0067 |
| Uranus | 100972-04-11 15:21 G | 38600426.99 | 38600427.14 | 38600427.32 | 0.0144 | 0.0111 |
| Saturn | 100985-11-07 17:02 G | 38605385.05 | 38605385.21 | 38605385.38 | 0.0300 | 0.0210 |
| Saturn | 100986-11-22 15:21 G | 38605764.93 | 38605765.14 | 38605765.36 | 0.0303 | 0.0105 |
| Jupiter | 100999-05-06 00:42 G | 38610312.32 | 38610312.53 | 38610312.74 | 0.0496 | 0.0179 |
| Saturn | 100999-05-06 18:57 G | 38610313.28 | 38610313.29 | 38610313.31 | 0.0263 | 0.0262 |
| Saturn | 101000-05-18 17:59 G | 38610690.00 | 38610690.25 | 38610690.50 | 0.0261 | 0.0034 |

102ND MILLENNIUM CE

This is a list of transits of Moon in the 102nd millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|----------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Saturn | 101001-05-30 04:18 G | 38611066.50 | 38611066.68 | 38611066.88 | 0.0259 | 0.0177 | | |
| Jupiter | 101011-05-11 16:33 G | 38614699.96 | 38614700.19 | 38614700.41 | 0.0496 | 0.0192 | | |
| Uranus | 101012-10-06 06:42 G | 38615213.56 | 38615213.78 | 38615214.01 | 0.0134 | 0.0050 | | |
| Uranus | 101013-10-10 10:33 G | 38615582.68 | 38615582.94 | 38615583.20 | 0.0134 | 0.0024 | | |

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| Uranus | 101014-10-14 18:57 G | 38615952.19 | 38615952.29 | 38615952.39 | 0.0134 | 0.0123 |
| Saturn | 101015-11-17 03:21 G | 38616350.39 | 38616350.64 | 38616350.88 | 0.0301 | 0.0045 |
| Saturn | 101016-11-30 23:59 G | 38616730.41 | 38616730.50 | 38616730.61 | 0.0303 | 0.0274 |
| Neptune | 101020-04-09 10:33 G | 38617955.85 | 38617955.94 | 38617956.03 | 0.0088 | 0.0082 |
| Neptune | 101021-04-11 14:52 G | 38618322.99 | 38618323.12 | 38618323.31 | 0.0088 | 0.0070 |
| Neptune | 101022-04-14 10:04 G | 38618690.72 | 38618690.92 | 38618691.17 | 0.0088 | 0.0046 |
| Neptune | 101023-04-16 16:18 G | 38619057.95 | 38619058.18 | 38619058.42 | 0.0088 | 0.0031 |
| Neptune | 101024-04-18 08:38 G | 38619425.59 | 38619425.86 | 38619426.13 | 0.0088 | 0.0007 |
| Neptune | 101025-04-20 18:42 G | 38619793.03 | 38619793.28 | 38619793.53 | 0.0088 | 0.0008 |
| Neptune | 101026-04-23 06:42 G | 38620160.52 | 38620160.78 | 38620161.03 | 0.0088 | 0.0030 |
| Neptune | 101027-04-25 21:35 G | 38620528.19 | 38620528.40 | 38620528.62 | 0.0088 | 0.0045 |
| Neptune | 101028-04-27 04:04 G | 38620895.53 | 38620895.67 | 38620895.87 | 0.0088 | 0.0068 |
| Neptune | 101029-04-29 23:02 G | 38621263.39 | 38621263.46 | 38621263.55 | 0.0088 | 0.0083 |
| Saturn | 101029-05-13 13:26 G | 38621276.85 | 38621277.06 | 38621277.28 | 0.0262 | 0.0137 |
| Saturn | 101030-05-25 08:52 G | 38621653.64 | 38621653.87 | 38621654.10 | 0.0260 | 0.0082 |
| Pluto | 101033-10-01 20:38 G | 38622879.18 | 38622879.36 | 38622879.60 | 0.0063 | 0.0039 |
| Pluto | 101034-10-03 08:23 G | 38623245.64 | 38623245.85 | 38623246.08 | 0.0064 | 0.0030 |
| Jupiter | 101040-11-03 15:21 G | 38625468.93 | 38625469.14 | 38625469.35 | 0.0530 | 0.0218 |
| Saturn | 101044-11-09 15:21 G | 38626935.98 | 38626936.14 | 38626936.33 | 0.0300 | 0.0202 |
| Saturn | 101045-11-24 12:14 G | 38627315.79 | 38627316.01 | 38627316.23 | 0.0303 | 0.0116 |
| Jupiter | 101052-11-08 21:21 G | 38629857.21 | 38629857.39 | 38629857.59 | 0.0530 | 0.0285 |
| Uranus | 101054-04-04 00:28 G | 38630368.37 | 38630368.52 | 38630368.70 | 0.0144 | 0.0108 |
| Uranus | 101055-04-09 08:52 G | 38630738.61 | 38630738.87 | 38630739.14 | 0.0144 | 0.0010 |
| Uranus | 101056-04-13 05:02 G | 38631108.53 | 38631108.71 | 38631108.89 | 0.0144 | 0.0102 |
| Saturn | 101058-05-08 17:16 G | 38631864.13 | 38631864.22 | 38631864.31 | 0.0263 | 0.0245 |
| Saturn | 101059-05-20 09:35 G | 38632240.64 | 38632240.90 | 38632241.16 | 0.0261 | 0.0018 |
| Saturn | 101060-05-30 19:11 G | 38632617.13 | 38632617.30 | 38632617.47 | 0.0259 | 0.0191 |
| Mars | 101073-02-03 05:30 G | 38637248.65 | 38637248.73 | 38637248.82 | 0.1692 | 0.1467 |
| Saturn | 101074-11-17 17:59 G | 38637901.01 | 38637901.25 | 38637901.49 | 0.0301 | 0.0035 |
| Saturn | 101075-12-02 18:42 G | 38638281.23 | 38638281.28 | 38638281.36 | 0.0303 | 0.0289 |

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| Jupiter | 101082-05-06 11:16 G | 38640627.75 | 38640627.97 | 38640628.19 | 0.0496 | 0.0218 |
| Saturn | 101088-05-14 11:02 G | 38642827.75 | 38642827.96 | 38642828.17 | 0.0262 | 0.0121 |
| Saturn | 101089-05-26 07:54 G | 38643204.61 | 38643204.83 | 38643205.07 | 0.0260 | 0.0098 |
| Jupiter | 101094-05-10 21:06 G | 38645015.17 | 38645015.38 | 38645015.60 | 0.0496 | 0.0153 |
| Uranus | 101095-10-03 11:45 G | 38645525.92 | 38645525.99 | 38645526.07 | 0.0134 | 0.0129 |
| Uranus | 101096-10-06 21:21 G | 38645895.17 | 38645895.39 | 38645895.62 | 0.0134 | 0.0052 |
| Uranus | 101097-10-10 23:30 G | 38646264.24 | 38646264.48 | 38646264.73 | 0.0134 | 0.0045 |
| Uranus | 101098-10-15 08:38 G | 38646633.77 | 38646633.86 | 38646634.00 | 0.0134 | 0.0118 |
| Neptune | 101102-10-12 22:18 G | 38648091.28 | 38648091.43 | 38648091.64 | 0.0090 | 0.0065 |
| Neptune | 101103-10-15 17:16 G | 38648459.02 | 38648459.22 | 38648459.43 | 0.0090 | 0.0053 |
| Saturn | 101103-11-12 12:14 G | 38648486.83 | 38648487.01 | 38648487.21 | 0.0300 | 0.0190 |
| Neptune | 101104-10-16 22:04 G | 38648826.18 | 38648826.42 | 38648826.66 | 0.0090 | 0.0025 |
| Saturn | 101104-11-26 05:02 G | 38648866.48 | 38648866.71 | 38648866.94 | 0.0302 | 0.0129 |
| Neptune | 101105-10-19 14:23 G | 38649193.86 | 38649194.10 | 38649194.37 | 0.0090 | 0.0014 |
| Neptune | 101106-10-21 22:04 G | 38649561.18 | 38649561.42 | 38649561.67 | 0.0090 | 0.0014 |
| Neptune | 101107-10-24 10:04 G | 38649928.68 | 38649928.92 | 38649929.18 | 0.0090 | 0.0026 |
| Neptune | 101108-10-25 22:18 G | 38650296.25 | 38650296.43 | 38650296.65 | 0.0090 | 0.0053 |
| Neptune | 101109-10-28 06:28 G | 38650663.59 | 38650663.77 | 38650663.95 | 0.0090 | 0.0064 |
| Saturn | 101117-05-10 10:18 G | 38653414.81 | 38653414.93 | 38653415.07 | 0.0263 | 0.0224 |
| Saturn | 101118-05-22 01:11 G | 38653791.30 | 38653791.55 | 38653791.81 | 0.0261 | 0.0005 |
| Saturn | 101119-06-02 17:45 G | 38654168.09 | 38654168.24 | 38654168.39 | 0.0259 | 0.0202 |
| Jupiter | 101123-11-05 06:14 G | 38655784.56 | 38655784.76 | 38655784.96 | 0.0530 | 0.0261 |
| Pluto | 101124-04-03 17:59 G | 38655935.06 | 38655935.25 | 38655935.47 | 0.0080 | 0.0048 |
| Saturn | 101133-11-19 19:11 G | 38659452.07 | 38659452.30 | 38659452.53 | 0.0301 | 0.0020 |
| Jupiter | 101135-11-09 22:47 G | 38660172.24 | 38660172.45 | 38660172.66 | 0.0530 | 0.0230 |
| Uranus | 101138-04-05 09:21 G | 38661049.72 | 38661049.89 | 38661050.07 | 0.0144 | 0.0101 |
| Uranus | 101139-04-10 16:18 G | 38661419.92 | 38661420.18 | 38661420.45 | 0.0144 | 0.0003 |
| Uranus | 101140-04-14 13:26 G | 38661789.93 | 38661790.06 | 38661790.20 | 0.0144 | 0.0122 |
| Saturn | 101147-05-17 11:45 G | 38664378.76 | 38664378.99 | 38664379.21 | 0.0263 | 0.0102 |
| Saturn | 101148-05-28 02:38 G | 38664755.38 | 38664755.61 | 38664755.85 | 0.0260 | 0.0110 |

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| Mars | 101152-02-07 12:14 G | 38666105.82 | 38666106.01 | 38666106.20 | 0.1686 | 0.0227 |
| Saturn | 101162-11-13 06:42 G | 38670037.59 | 38670037.78 | 38670037.99 | 0.0299 | 0.0172 |
| Saturn | 101163-11-27 23:30 G | 38670417.27 | 38670417.48 | 38670417.70 | 0.0302 | 0.0145 |
| Jupiter | 101165-05-06 18:14 G | 38670943.06 | 38670943.26 | 38670943.46 | 0.0496 | 0.0254 |
| Saturn | 101176-05-11 02:52 G | 38674965.47 | 38674965.62 | 38674965.79 | 0.0264 | 0.0203 |
| Jupiter | 101177-05-11 14:09 G | 38675330.86 | 38675331.09 | 38675331.32 | 0.0496 | 0.0123 |
| Saturn | 101177-05-23 00:28 G | 38675342.28 | 38675342.52 | 38675342.76 | 0.0261 | 0.0014 |
| Mars | 101177-08-11 11:16 G | 38675422.78 | 38675422.97 | 38675423.16 | 0.1854 | 0.0182 |
| Saturn | 101178-06-03 19:54 G | 38675719.20 | 38675719.33 | 38675719.48 | 0.0259 | 0.0213 |
| Uranus | 101179-10-05 00:42 G | 38676207.45 | 38676207.53 | 38676207.64 | 0.0134 | 0.0124 |
| Uranus | 101180-10-08 12:14 G | 38676576.78 | 38676577.01 | 38676577.25 | 0.0134 | 0.0034 |
| Uranus | 101181-10-12 13:26 G | 38676945.82 | 38676946.06 | 38676946.31 | 0.0134 | 0.0041 |
| Neptune | 101185-04-12 02:52 G | 38678223.49 | 38678223.62 | 38678223.81 | 0.0088 | 0.0070 |
| Neptune | 101186-04-14 10:47 G | 38678590.77 | 38678590.95 | 38678591.15 | 0.0088 | 0.0057 |
| Neptune | 101187-04-17 01:11 G | 38678958.31 | 38678958.55 | 38678958.82 | 0.0088 | 0.0032 |
| Neptune | 101188-04-18 13:26 G | 38679325.83 | 38679326.06 | 38679326.32 | 0.0088 | 0.0020 |
| Neptune | 101189-04-20 23:02 G | 38679693.19 | 38679693.46 | 38679693.73 | 0.0088 | 0.0006 |
| Neptune | 101190-04-23 15:35 G | 38680060.90 | 38680061.15 | 38680061.40 | 0.0088 | 0.0018 |
| Neptune | 101191-04-25 21:06 G | 38680428.16 | 38680428.38 | 38680428.62 | 0.0088 | 0.0044 |
| Neptune | 101192-04-27 16:04 G | 38680795.99 | 38680796.17 | 38680796.39 | 0.0088 | 0.0056 |
| Saturn | 101192-11-20 23:59 G | 38681003.26 | 38681003.50 | 38681003.74 | 0.0301 | 0.0001 |
| Neptune | 101193-04-29 20:52 G | 38681163.32 | 38681163.37 | 38681163.49 | 0.0088 | 0.0083 |
| Saturn | 101206-05-18 09:50 G | 38685929.67 | 38685929.91 | 38685930.15 | 0.0263 | 0.0083 |
| Jupiter | 101206-11-04 05:59 G | 38686099.56 | 38686099.75 | 38686099.94 | 0.0531 | 0.0316 |
| Saturn | 101207-05-29 21:21 G | 38686306.17 | 38686306.39 | 38686306.62 | 0.0261 | 0.0124 |
| Jupiter | 101218-11-09 11:02 G | 38690487.76 | 38690487.96 | 38690488.17 | 0.0531 | 0.0183 |
| Saturn | 101221-11-14 09:50 G | 38691588.71 | 38691588.91 | 38691589.13 | 0.0299 | 0.0149 |
| Uranus | 101222-04-05 20:38 G | 38691731.19 | 38691731.36 | 38691731.56 | 0.0144 | 0.0097 |
| Saturn | 101222-11-29 06:14 G | 38691968.57 | 38691968.76 | 38691968.96 | 0.0302 | 0.0171 |
| Uranus | 101223-04-11 02:38 G | 38692101.35 | 38692101.61 | 38692101.88 | 0.0144 | 0.0017 |

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| Uranus | 101224-04-15 00:42 G | 38692471.39 | 38692471.53 | 38692471.69 | 0.0144 | 0.0113 |
| Saturn | 101235-05-13 04:18 G | 38696516.52 | 38696516.68 | 38696516.86 | 0.0264 | 0.0184 |
| Saturn | 101236-05-24 05:02 G | 38696893.47 | 38696893.71 | 38696893.96 | 0.0261 | 0.0033 |
| Saturn | 101237-06-04 19:54 G | 38697270.21 | 38697270.33 | 38697270.45 | 0.0260 | 0.0228 |
| Jupiter | 101248-05-06 08:52 G | 38701258.68 | 38701258.87 | 38701259.07 | 0.0496 | 0.0295 |
| Saturn | 101250-11-08 15:06 G | 38702175.06 | 38702175.13 | 38702175.21 | 0.0298 | 0.0284 |
| Saturn | 101251-11-23 04:04 G | 38702554.42 | 38702554.67 | 38702554.92 | 0.0301 | 0.0027 |
| Jupiter | 101260-05-10 13:40 G | 38705645.84 | 38705646.07 | 38705646.31 | 0.0495 | 0.0082 |
| Uranus | 101263-10-05 13:54 G | 38706888.97 | 38706889.08 | 38706889.24 | 0.0134 | 0.0115 |
| Uranus | 101264-10-09 01:54 G | 38707258.35 | 38707258.58 | 38707258.83 | 0.0134 | 0.0035 |
| Saturn | 101265-05-19 06:42 G | 38707480.53 | 38707480.78 | 38707481.03 | 0.0263 | 0.0063 |
| Uranus | 101265-10-13 02:23 G | 38707627.38 | 38707627.60 | 38707627.84 | 0.0134 | 0.0061 |
| Saturn | 101266-05-30 23:02 G | 38707857.27 | 38707857.46 | 38707857.67 | 0.0261 | 0.0143 |
| Neptune | 101266-10-12 10:04 G | 38707991.81 | 38707991.92 | 38707992.06 | 0.0090 | 0.0078 |
| Uranus | 101266-10-17 13:54 G | 38707997.07 | 38707997.08 | 38707997.11 | 0.0134 | 0.0134 |
| Neptune | 101267-10-14 15:21 G | 38708358.96 | 38708359.14 | 38708359.35 | 0.0090 | 0.0055 |
| Neptune | 101268-10-16 07:26 G | 38708726.57 | 38708726.81 | 38708727.04 | 0.0090 | 0.0038 |
| Neptune | 101269-10-18 16:18 G | 38709093.95 | 38709094.18 | 38709094.43 | 0.0090 | 0.0016 |
| Neptune | 101270-10-21 03:50 G | 38709461.40 | 38709461.66 | 38709461.92 | 0.0090 | 0.0001 |
| Neptune | 101271-10-23 17:30 G | 38709829.00 | 38709829.23 | 38709829.48 | 0.0090 | 0.0024 |
| Neptune | 101272-10-24 23:45 G | 38710196.27 | 38710196.49 | 38710196.73 | 0.0090 | 0.0040 |
| Neptune | 101273-10-27 16:47 G | 38710564.04 | 38710564.20 | 38710564.39 | 0.0090 | 0.0064 |
| Neptune | 101274-10-29 21:06 G | 38710931.28 | 38710931.38 | 38710931.52 | 0.0090 | 0.0079 |
| Saturn | 101280-11-15 22:47 G | 38713140.24 | 38713140.45 | 38713140.67 | 0.0299 | 0.0117 |
| Pluto | 101281-10-04 11:30 G | 38713462.83 | 38713462.98 | 38713463.18 | 0.0063 | 0.0045 |
| Saturn | 101281-11-30 20:52 G | 38713520.19 | 38713520.37 | 38713520.54 | 0.0302 | 0.0202 |
| Pluto | 101282-10-05 18:57 G | 38713829.07 | 38713829.29 | 38713829.55 | 0.0064 | 0.0027 |
| Jupiter | 101289-11-03 16:18 G | 38716415.03 | 38716415.18 | 38716415.35 | 0.0530 | 0.0370 |
| Saturn | 101294-05-14 12:14 G | 38718067.83 | 38718068.01 | 38718068.21 | 0.0264 | 0.0163 |
| Saturn | 101295-05-26 09:35 G | 38718444.65 | 38718444.90 | 38718445.15 | 0.0261 | 0.0053 |

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| Saturn | 101296-06-05 19:11 G | 38718821.23 | 38718821.30 | 38718821.40 | 0.0260 | 0.0244 |
| Jupiter | 101301-11-09 11:16 G | 38720802.73 | 38720802.97 | 38720803.21 | 0.0530 | 0.0100 |
| Uranus | 101306-04-07 06:57 G | 38722412.62 | 38722412.79 | 38722413.00 | 0.0144 | 0.0091 |
| Uranus | 101307-04-12 11:59 G | 38722782.74 | 38722783.00 | 38722783.27 | 0.0144 | 0.0014 |
| Uranus | 101308-04-16 10:33 G | 38723152.87 | 38723152.94 | 38723153.05 | 0.0144 | 0.0134 |
| Saturn | 101309-11-11 00:57 G | 38723726.42 | 38723726.54 | 38723726.68 | 0.0298 | 0.0251 |
| Saturn | 101310-11-25 13:11 G | 38724105.81 | 38724106.05 | 38724106.30 | 0.0301 | 0.0060 |
| Jupiter | 101313-11-14 05:30 G | 38725190.69 | 38725190.73 | 38725190.79 | 0.0530 | 0.0516 |
| Saturn | 101323-05-10 13:11 G | 38728655.03 | 38728655.05 | 38728655.10 | 0.0265 | 0.0263 |
| Saturn | 101324-05-21 10:47 G | 38729031.71 | 38729031.95 | 38729032.19 | 0.0263 | 0.0041 |
| Saturn | 101325-06-02 08:09 G | 38729408.66 | 38729408.84 | 38729409.03 | 0.0261 | 0.0162 |
| Jupiter | 101331-05-07 06:28 G | 38731573.60 | 38731573.77 | 38731573.94 | 0.0495 | 0.0351 |
| Saturn | 101339-11-19 17:59 G | 38734692.02 | 38734692.25 | 38734692.48 | 0.0299 | 0.0082 |
| Saturn | 101340-12-03 13:40 G | 38735071.93 | 38735072.07 | 38735072.23 | 0.0302 | 0.0237 |
| Jupiter | 101343-05-11 23:45 G | 38735961.25 | 38735961.49 | 38735961.72 | 0.0495 | 0.0033 |
| Uranus | 101347-10-07 03:21 G | 38737570.49 | 38737570.64 | 38737570.79 | 0.0134 | 0.0108 |
| Uranus | 101348-10-10 15:50 G | 38737939.92 | 38737940.16 | 38737940.40 | 0.0134 | 0.0018 |
| Neptune | 101349-04-12 04:33 G | 38738123.59 | 38738123.69 | 38738123.85 | 0.0088 | 0.0076 |
| Uranus | 101349-10-14 16:04 G | 38738308.95 | 38738309.17 | 38738309.41 | 0.0134 | 0.0057 |
| Neptune | 101350-04-14 17:59 G | 38738491.09 | 38738491.25 | 38738491.46 | 0.0088 | 0.0064 |
| Neptune | 101351-04-17 06:28 G | 38738858.56 | 38738858.77 | 38738859.02 | 0.0088 | 0.0039 |
| Neptune | 101352-04-18 15:35 G | 38739225.90 | 38739226.15 | 38739226.41 | 0.0088 | 0.0027 |
| Neptune | 101353-04-21 09:06 G | 38739593.63 | 38739593.88 | 38739594.14 | 0.0088 | 0.0002 |
| Saturn | 101353-05-16 20:09 G | 38739619.14 | 38739619.34 | 38739619.56 | 0.0264 | 0.0139 |
| Neptune | 101354-04-23 14:38 G | 38739960.86 | 38739961.11 | 38739961.38 | 0.0088 | 0.0012 |
| Saturn | 101354-05-28 11:30 G | 38739995.74 | 38739995.98 | 38739996.24 | 0.0261 | 0.0073 |
| Neptune | 101355-04-26 09:50 G | 38740328.69 | 38740328.91 | 38740329.16 | 0.0088 | 0.0038 |
| Jupiter | 101355-05-16 06:57 G | 38740348.70 | 38740348.79 | 38740348.89 | 0.0496 | 0.0452 |
| Neptune | 101356-04-27 15:21 G | 38740695.94 | 38740696.14 | 38740696.36 | 0.0088 | 0.0050 |
| Mars | 101357-02-06 12:14 G | 38740980.84 | 38740981.01 | 38740981.18 | 0.1698 | 0.0673 |

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| Neptune | 101357-04-30 08:52 G | 38741063.76 | 38741063.87 | 38741064.04 | 0.0088 | 0.0075 |
| Saturn | 101368-11-12 14:09 G | 38745277.94 | 38745278.09 | 38745278.27 | 0.0298 | 0.0219 |
| Saturn | 101369-11-27 05:59 G | 38745657.53 | 38745657.75 | 38745657.98 | 0.0301 | 0.0096 |
| Pluto | 101372-04-06 01:54 G | 38746518.37 | 38746518.58 | 38746518.83 | 0.0080 | 0.0042 |
| Jupiter | 101372-11-03 11:16 G | 38746729.86 | 38746729.97 | 38746730.10 | 0.0530 | 0.0456 |
| Saturn | 101382-05-11 19:40 G | 38750206.23 | 38750206.32 | 38750206.44 | 0.0265 | 0.0238 |
| Saturn | 101383-05-23 22:33 G | 38750583.20 | 38750583.44 | 38750583.68 | 0.0263 | 0.0019 |
| Saturn | 101384-06-03 18:57 G | 38750960.12 | 38750960.29 | 38750960.47 | 0.0261 | 0.0183 |
| Jupiter | 101384-11-08 04:47 G | 38751117.47 | 38751117.70 | 38751117.92 | 0.0531 | 0.0008 |
| Uranus | 101390-04-07 22:33 G | 38753094.24 | 38753094.44 | 38753094.65 | 0.0144 | 0.0081 |
| Uranus | 101391-04-13 02:52 G | 38753464.37 | 38753464.62 | 38753464.89 | 0.0144 | 0.0033 |
| Uranus | 101392-04-17 02:23 G | 38753834.49 | 38753834.60 | 38753834.71 | 0.0144 | 0.0129 |
| Jupiter | 101396-11-13 10:04 G | 38755505.79 | 38755505.92 | 38755506.06 | 0.0531 | 0.0425 |
| Saturn | 101398-11-21 14:52 G | 38756243.88 | 38756244.12 | 38756244.37 | 0.0300 | 0.0044 |
| Saturn | 101399-12-06 08:09 G | 38756623.74 | 38756623.84 | 38756623.94 | 0.0302 | 0.0276 |
| Saturn | 101412-05-19 03:06 G | 38761170.40 | 38761170.63 | 38761170.86 | 0.0263 | 0.0114 |
| Saturn | 101413-05-30 18:14 G | 38761547.02 | 38761547.26 | 38761547.49 | 0.0261 | 0.0095 |
| Jupiter | 101414-05-07 12:42 G | 38761888.92 | 38761889.03 | 38761889.16 | 0.0496 | 0.0428 |
| Jupiter | 101426-05-11 20:38 G | 38766276.11 | 38766276.36 | 38766276.60 | 0.0496 | 0.0031 |
| Saturn | 101427-11-16 10:47 G | 38766829.77 | 38766829.95 | 38766830.15 | 0.0299 | 0.0180 |
| Saturn | 101428-11-30 05:59 G | 38767209.55 | 38767209.75 | 38767209.97 | 0.0301 | 0.0138 |
| Neptune | 101430-10-13 08:52 G | 38767891.86 | 38767891.87 | 38767891.94 | 0.0090 | 0.0089 |
| Uranus | 101431-10-08 17:16 G | 38768252.05 | 38768252.22 | 38768252.39 | 0.0134 | 0.0099 |
| Neptune | 101431-10-16 00:57 G | 38768259.36 | 38768259.54 | 38768259.75 | 0.0090 | 0.0060 |
| Uranus | 101432-10-12 05:45 G | 38768621.49 | 38768621.74 | 38768621.98 | 0.0134 | 0.0019 |
| Neptune | 101432-10-17 10:18 G | 38768626.75 | 38768626.93 | 38768627.16 | 0.0090 | 0.0050 |
| Uranus | 101433-10-16 05:16 G | 38768990.53 | 38768990.72 | 38768990.94 | 0.0134 | 0.0077 |
| Neptune | 101433-10-19 21:06 G | 38768994.13 | 38768994.38 | 38768994.64 | 0.0090 | 0.0021 |
| Neptune | 101434-10-22 11:30 G | 38769361.73 | 38769361.98 | 38769362.22 | 0.0090 | 0.0010 |
| Neptune | 101435-10-24 17:16 G | 38769728.98 | 38769729.22 | 38769729.49 | 0.0090 | 0.0020 |

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| Mars | 101436-02-10 14:38 G | 38769837.96 | 38769838.11 | 38769838.26 | 0.1692 | 0.0929 |
| Neptune | 101436-10-26 11:02 G | 38770096.73 | 38770096.96 | 38770097.21 | 0.0090 | 0.0030 |
| Neptune | 101437-10-28 15:35 G | 38770463.96 | 38770464.15 | 38770464.34 | 0.0090 | 0.0058 |
| Jupiter | 101438-05-16 11:30 G | 38770663.85 | 38770663.98 | 38770664.12 | 0.0495 | 0.0398 |
| Neptune | 101438-10-31 08:52 G | 38770831.73 | 38770831.87 | 38770832.06 | 0.0090 | 0.0069 |
| Saturn | 101441-05-14 08:52 G | 38771757.74 | 38771757.87 | 38771758.03 | 0.0265 | 0.0211 |
| Saturn | 101442-05-26 11:30 G | 38772134.74 | 38772134.98 | 38772135.23 | 0.0262 | 0.0009 |
| Saturn | 101443-06-07 01:40 G | 38772511.43 | 38772511.57 | 38772511.75 | 0.0261 | 0.0205 |
| Saturn | 101457-11-24 09:50 G | 38777795.66 | 38777795.91 | 38777796.16 | 0.0300 | 0.0004 |
| Mars | 101461-08-12 20:09 G | 38779153.14 | 38779153.34 | 38779153.54 | 0.1843 | 0.0708 |
| Jupiter | 101467-11-09 10:47 G | 38781432.72 | 38781432.95 | 38781433.18 | 0.0531 | 0.0081 |
| Saturn | 101471-05-21 11:02 G | 38782721.72 | 38782721.96 | 38782722.20 | 0.0263 | 0.0084 |
| Saturn | 101472-06-01 07:11 G | 38783098.59 | 38783098.80 | 38783099.02 | 0.0261 | 0.0121 |
| Uranus | 101474-04-09 11:45 G | 38783775.78 | 38783775.99 | 38783776.21 | 0.0144 | 0.0073 |
| Uranus | 101475-04-14 15:21 G | 38784145.88 | 38784146.14 | 38784146.40 | 0.0144 | 0.0032 |
| Jupiter | 101479-11-13 23:30 G | 38785820.31 | 38785820.48 | 38785820.66 | 0.0530 | 0.0331 |
| Saturn | 101486-11-18 11:59 G | 38788381.80 | 38788382.00 | 38788382.22 | 0.0299 | 0.0139 |
| Saturn | 101487-12-03 08:09 G | 38788761.66 | 38788761.84 | 38788762.04 | 0.0302 | 0.0178 |
| Jupiter | 101497-05-06 10:04 G | 38792203.89 | 38792203.92 | 38792203.96 | 0.0495 | 0.0490 |
| Saturn | 101500-05-17 01:54 G | 38793309.40 | 38793309.58 | 38793309.75 | 0.0264 | 0.0179 |
| Saturn | 101501-05-28 22:18 G | 38793686.17 | 38793686.43 | 38793686.68 | 0.0262 | 0.0036 |
| Saturn | 101502-06-09 08:23 G | 38794062.74 | 38794062.85 | 38794062.99 | 0.0261 | 0.0227 |
| Jupiter | 101509-05-12 00:28 G | 38796591.29 | 38796591.52 | 38796591.74 | 0.0495 | 0.0091 |
| Neptune | 101514-04-16 01:26 G | 38798391.40 | 38798391.56 | 38798391.74 | 0.0088 | 0.0065 |
| Neptune | 101515-04-18 09:35 G | 38798758.69 | 38798758.90 | 38798759.13 | 0.0088 | 0.0051 |
| Uranus | 101515-10-10 06:28 G | 38798933.59 | 38798933.77 | 38798933.96 | 0.0134 | 0.0093 |
| Saturn | 101515-11-13 17:02 G | 38798968.11 | 38798968.21 | 38798968.33 | 0.0297 | 0.0264 |
| Neptune | 101516-04-20 02:52 G | 38799126.39 | 38799126.62 | 38799126.88 | 0.0088 | 0.0027 |
| Uranus | 101516-10-13 19:26 G | 38799303.06 | 38799303.31 | 38799303.56 | 0.0134 | 0.0003 |
| Saturn | 101516-11-27 04:47 G | 38799347.46 | 38799347.70 | 38799347.94 | 0.0300 | 0.0042 |

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| Neptune | 101517-04-22 08:09 G | 38799493.58 | 38799493.84 | 38799494.10 | 0.0088 | 0.0013 |
| Uranus | 101517-10-17 19:11 G | 38799672.09 | 38799672.30 | 38799672.52 | 0.0134 | 0.0073 |
| Neptune | 101518-04-25 03:06 G | 38799861.38 | 38799861.63 | 38799861.90 | 0.0088 | 0.0012 |
| Neptune | 101519-04-27 08:09 G | 38800228.61 | 38800228.84 | 38800229.10 | 0.0088 | 0.0025 |
| Neptune | 101520-04-29 01:26 G | 38800596.36 | 38800596.56 | 38800596.80 | 0.0088 | 0.0050 |
| Neptune | 101521-05-01 10:18 G | 38800963.76 | 38800963.93 | 38800964.11 | 0.0088 | 0.0062 |
| Jupiter | 101521-05-16 09:35 G | 38800978.72 | 38800978.90 | 38800979.10 | 0.0495 | 0.0316 |
| Neptune | 101522-05-03 23:45 G | 38801331.49 | 38801331.49 | 38801331.51 | 0.0088 | 0.0088 |
| Pluto | 101529-10-08 20:38 G | 38804046.32 | 38804046.36 | 38804046.44 | 0.0063 | 0.0062 |
| Saturn | 101530-05-23 23:30 G | 38804273.24 | 38804273.48 | 38804273.72 | 0.0263 | 0.0055 |
| Pluto | 101530-10-10 11:45 G | 38804412.76 | 38804412.99 | 38804413.24 | 0.0064 | 0.0016 |
| Saturn | 101531-06-04 22:18 G | 38804650.24 | 38804650.43 | 38804650.64 | 0.0261 | 0.0147 |
| Saturn | 101545-11-21 11:30 G | 38809933.76 | 38809933.98 | 38809934.21 | 0.0300 | 0.0097 |
| Saturn | 101546-12-06 05:59 G | 38810313.58 | 38810313.75 | 38810313.92 | 0.0302 | 0.0218 |
| Jupiter | 101550-11-08 22:18 G | 38811747.22 | 38811747.43 | 38811747.64 | 0.0530 | 0.0183 |
| Uranus | 101558-04-11 02:23 G | 38814457.39 | 38814457.60 | 38814457.83 | 0.0144 | 0.0064 |
| Uranus | 101559-04-16 05:30 G | 38814827.49 | 38814827.73 | 38814827.99 | 0.0144 | 0.0050 |
| Saturn | 101559-05-19 13:40 G | 38814860.87 | 38814861.07 | 38814861.30 | 0.0264 | 0.0148 |
| Saturn | 101560-05-30 05:16 G | 38815237.47 | 38815237.72 | 38815237.97 | 0.0262 | 0.0063 |
| Saturn | 101561-06-10 18:42 G | 38815614.24 | 38815614.28 | 38815614.34 | 0.0260 | 0.0254 |
| Jupiter | 101562-11-14 00:14 G | 38816135.31 | 38816135.51 | 38816135.72 | 0.0531 | 0.0223 |
| Saturn | 101574-11-15 09:06 G | 38820519.73 | 38820519.88 | 38820520.05 | 0.0298 | 0.0226 |
| Saturn | 101575-11-30 01:26 G | 38820899.33 | 38820899.56 | 38820899.79 | 0.0301 | 0.0084 |
| Saturn | 101588-05-13 12:57 G | 38825447.96 | 38825448.04 | 38825448.14 | 0.0265 | 0.0245 |
| Saturn | 101589-05-25 15:35 G | 38825824.91 | 38825825.15 | 38825825.39 | 0.0262 | 0.0026 |
| Saturn | 101590-06-06 10:18 G | 38826201.76 | 38826201.93 | 38826202.13 | 0.0260 | 0.0176 |
| Jupiter | 101592-05-10 22:33 G | 38826906.21 | 38826906.44 | 38826906.67 | 0.0495 | 0.0168 |
| Neptune | 101595-10-16 03:06 G | 38828159.51 | 38828159.63 | 38828159.79 | 0.0090 | 0.0074 |
| Neptune | 101596-10-17 13:40 G | 38828526.87 | 38828527.07 | 38828527.30 | 0.0090 | 0.0052 |
| Neptune | 101597-10-20 05:02 G | 38828894.49 | 38828894.71 | 38828894.95 | 0.0090 | 0.0034 |

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| Neptune | 101598-10-22 11:30 G | 38829261.72 | 38829261.98 | 38829262.24 | 0.0090 | 0.0012 |
| Uranus | 101599-10-10 20:38 G | 38829615.18 | 38829615.36 | 38829615.58 | 0.0134 | 0.0084 |
| Neptune | 101599-10-25 05:30 G | 38829629.48 | 38829629.73 | 38829629.98 | 0.0090 | 0.0005 |
| Uranus | 101600-10-14 09:50 G | 38829984.66 | 38829984.91 | 38829985.16 | 0.0134 | 0.0003 |
| Neptune | 101600-10-26 09:35 G | 38829996.67 | 38829996.90 | 38829997.15 | 0.0090 | 0.0028 |
| Uranus | 101601-10-18 08:38 G | 38830353.70 | 38830353.86 | 38830354.06 | 0.0134 | 0.0094 |
| Neptune | 101601-10-29 03:35 G | 38830364.43 | 38830364.65 | 38830364.88 | 0.0090 | 0.0044 |
| Neptune | 101602-10-31 09:06 G | 38830731.74 | 38830731.88 | 38830732.06 | 0.0090 | 0.0068 |
| Neptune | 101603-11-02 23:02 G | 38831099.39 | 38831099.46 | 38831099.58 | 0.0090 | 0.0084 |
| Jupiter | 101604-05-15 07:26 G | 38831293.61 | 38831293.81 | 38831294.01 | 0.0496 | 0.0251 |
| Saturn | 101604-11-23 03:35 G | 38831485.41 | 38831485.65 | 38831485.90 | 0.0300 | 0.0057 |
| Saturn | 101605-12-07 20:09 G | 38831865.22 | 38831865.34 | 38831865.48 | 0.0302 | 0.0259 |
| Saturn | 101618-05-20 20:09 G | 38836412.12 | 38836412.34 | 38836412.58 | 0.0263 | 0.0119 |
| Saturn | 101619-06-01 12:42 G | 38836788.80 | 38836789.03 | 38836789.27 | 0.0261 | 0.0090 |
| Pluto | 101620-04-09 19:11 G | 38837102.06 | 38837102.30 | 38837102.56 | 0.0080 | 0.0022 |
| Jupiter | 101633-11-08 03:21 G | 38842062.45 | 38842062.64 | 38842062.84 | 0.0530 | 0.0278 |
| Saturn | 101633-11-17 01:11 G | 38842071.38 | 38842071.55 | 38842071.74 | 0.0298 | 0.0189 |
| Saturn | 101634-12-01 21:06 G | 38842451.17 | 38842451.38 | 38842451.59 | 0.0301 | 0.0124 |
| Mars | 101641-02-09 03:06 G | 38844712.42 | 38844712.63 | 38844712.83 | 0.1705 | 0.0179 |
| Uranus | 101642-04-11 12:28 G | 38845138.80 | 38845139.02 | 38845139.26 | 0.0144 | 0.0060 |
| Uranus | 101643-04-16 14:38 G | 38845508.86 | 38845509.11 | 38845509.36 | 0.0144 | 0.0046 |
| Jupiter | 101645-11-12 22:33 G | 38846450.21 | 38846450.44 | 38846450.67 | 0.0531 | 0.0149 |
| Saturn | 101647-05-16 02:52 G | 38846999.50 | 38846999.62 | 38846999.77 | 0.0265 | 0.0218 |
| Saturn | 101648-05-27 03:35 G | 38847376.40 | 38847376.65 | 38847376.90 | 0.0262 | 0.0003 |
| Saturn | 101649-06-07 16:04 G | 38847753.01 | 38847753.17 | 38847753.34 | 0.0260 | 0.0197 |
| Saturn | 101663-11-25 11:30 G | 38853036.74 | 38853036.98 | 38853037.24 | 0.0301 | 0.0024 |
| Saturn | 101664-12-09 05:59 G | 38853416.71 | 38853416.75 | 38853416.82 | 0.0303 | 0.0295 |
| Jupiter | 101675-05-10 23:45 G | 38857221.28 | 38857221.49 | 38857221.70 | 0.0496 | 0.0213 |
| Saturn | 101677-05-22 02:09 G | 38857963.36 | 38857963.59 | 38857963.82 | 0.0263 | 0.0092 |
| Neptune | 101678-04-15 02:52 G | 38858291.48 | 38858291.62 | 38858291.81 | 0.0088 | 0.0070 |

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| Saturn | 101678-06-02 23:30 G | 38858340.26 | 38858340.48 | 38858340.69 | 0.0261 | 0.0113 |
| Neptune | 101679-04-17 20:38 G | 38858659.19 | 38858659.36 | 38858659.58 | 0.0088 | 0.0059 |
| Neptune | 101680-04-19 01:54 G | 38859026.35 | 38859026.58 | 38859026.84 | 0.0088 | 0.0032 |
| Neptune | 101681-04-21 21:06 G | 38859394.13 | 38859394.38 | 38859394.64 | 0.0088 | 0.0021 |
| Neptune | 101682-04-24 02:38 G | 38859761.36 | 38859761.61 | 38859761.87 | 0.0088 | 0.0005 |
| Neptune | 101683-04-26 19:54 G | 38860129.07 | 38860129.33 | 38860129.60 | 0.0088 | 0.0018 |
| Uranus | 101683-10-11 10:18 G | 38860296.72 | 38860296.93 | 38860297.14 | 0.0134 | 0.0077 |
| Neptune | 101684-04-28 04:47 G | 38860496.49 | 38860496.70 | 38860496.93 | 0.0088 | 0.0044 |
| Uranus | 101684-10-14 23:16 G | 38860666.23 | 38860666.47 | 38860666.72 | 0.0134 | 0.0014 |
| Neptune | 101685-04-30 17:45 G | 38860864.03 | 38860864.24 | 38860864.45 | 0.0088 | 0.0056 |
| Uranus | 101685-10-18 22:18 G | 38861035.25 | 38861035.43 | 38861035.63 | 0.0134 | 0.0089 |
| Neptune | 101686-05-03 06:42 G | 38861231.72 | 38861231.78 | 38861231.90 | 0.0088 | 0.0082 |
| Jupiter | 101687-05-15 19:26 G | 38861609.10 | 38861609.31 | 38861609.53 | 0.0495 | 0.0203 |
| Saturn | 101692-11-18 14:38 G | 38863622.91 | 38863623.11 | 38863623.31 | 0.0299 | 0.0159 |
| Saturn | 101693-12-03 09:50 G | 38864002.71 | 38864002.91 | 38864003.12 | 0.0301 | 0.0156 |
| Saturn | 101706-05-18 13:40 G | 38868550.91 | 38868551.07 | 38868551.25 | 0.0264 | 0.0190 |
| Saturn | 101707-05-30 07:40 G | 38868927.56 | 38868927.82 | 38868928.08 | 0.0262 | 0.0024 |
| Saturn | 101708-06-09 18:14 G | 38869304.12 | 38869304.26 | 38869304.40 | 0.0260 | 0.0217 |
| Jupiter | 101716-11-08 03:06 G | 38872377.46 | 38872377.63 | 38872377.82 | 0.0530 | 0.0343 |
| Mars | 101720-02-13 17:59 G | 38873570.20 | 38873570.25 | 38873570.29 | 0.1699 | 0.1650 |
| Saturn | 101722-11-27 16:33 G | 38874587.95 | 38874588.19 | 38874588.43 | 0.0301 | 0.0006 |
| Uranus | 101726-04-12 22:33 G | 38875820.23 | 38875820.44 | 38875820.69 | 0.0144 | 0.0054 |
| Uranus | 101727-04-18 00:14 G | 38876190.27 | 38876190.51 | 38876190.75 | 0.0144 | 0.0059 |
| Jupiter | 101728-11-13 03:50 G | 38876765.45 | 38876765.66 | 38876765.88 | 0.0530 | 0.0077 |
| Saturn | 101736-05-24 08:52 G | 38879514.64 | 38879514.87 | 38879515.11 | 0.0263 | 0.0070 |
| Saturn | 101737-06-05 07:26 G | 38879891.61 | 38879891.81 | 38879892.03 | 0.0261 | 0.0133 |
| Mars | 101745-08-14 11:30 G | 38882883.83 | 38882883.98 | 38882884.13 | 0.1833 | 0.1090 |
| Saturn | 101751-11-21 20:09 G | 38885174.13 | 38885174.34 | 38885174.56 | 0.0299 | 0.0134 |
| Saturn | 101752-12-05 12:28 G | 38885553.83 | 38885554.02 | 38885554.23 | 0.0302 | 0.0183 |
| Jupiter | 101758-05-11 09:06 G | 38887536.68 | 38887536.88 | 38887537.08 | 0.0495 | 0.0260 |

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| Neptune | 101759-10-16 08:23 G | 38888059.77 | 38888059.85 | 38888059.94 | 0.0090 | 0.0084 |
| Neptune | 101760-10-17 23:02 G | 38888427.29 | 38888427.46 | 38888427.68 | 0.0090 | 0.0056 |
| Neptune | 101761-10-20 04:47 G | 38888794.50 | 38888794.70 | 38888794.94 | 0.0090 | 0.0046 |
| Neptune | 101762-10-22 23:16 G | 38889162.22 | 38889162.47 | 38889162.72 | 0.0090 | 0.0016 |
| Neptune | 101763-10-25 03:50 G | 38889529.41 | 38889529.66 | 38889529.91 | 0.0090 | 0.0006 |
| Neptune | 101764-10-26 21:06 G | 38889897.14 | 38889897.38 | 38889897.64 | 0.0090 | 0.0024 |
| Saturn | 101765-05-19 16:47 G | 38890102.01 | 38890102.20 | 38890102.41 | 0.0264 | 0.0166 |
| Neptune | 101765-10-29 03:35 G | 38890264.44 | 38890264.65 | 38890264.89 | 0.0090 | 0.0035 |
| Saturn | 101766-05-31 07:26 G | 38890478.56 | 38890478.81 | 38890479.06 | 0.0261 | 0.0044 |
| Neptune | 101766-10-31 17:59 G | 38890632.07 | 38890632.25 | 38890632.44 | 0.0090 | 0.0063 |
| Saturn | 101767-06-11 22:33 G | 38890855.35 | 38890855.44 | 38890855.55 | 0.0260 | 0.0236 |
| Uranus | 101767-10-12 23:30 G | 38890978.28 | 38890978.48 | 38890978.71 | 0.0134 | 0.0067 |
| Neptune | 101767-11-03 04:47 G | 38890999.57 | 38890999.70 | 38890999.84 | 0.0090 | 0.0074 |
| Uranus | 101768-10-16 12:57 G | 38891347.79 | 38891348.04 | 38891348.29 | 0.0134 | 0.0013 |
| Uranus | 101769-10-20 11:16 G | 38891716.85 | 38891716.97 | 38891717.14 | 0.0134 | 0.0110 |
| Jupiter | 101770-05-15 14:38 G | 38891923.89 | 38891924.11 | 38891924.34 | 0.0495 | 0.0140 |
| Pluto | 101778-10-12 14:52 G | 38894995.86 | 38894996.12 | 38894996.38 | 0.0064 | 0.0004 |
| Saturn | 101780-11-14 03:50 G | 38895759.58 | 38895759.66 | 38895759.75 | 0.0298 | 0.0278 |
| Saturn | 101781-11-28 20:23 G | 38896139.12 | 38896139.35 | 38896139.59 | 0.0301 | 0.0032 |
| Saturn | 101795-05-26 14:23 G | 38901065.86 | 38901066.10 | 38901066.34 | 0.0262 | 0.0049 |
| Saturn | 101796-06-06 07:26 G | 38901442.61 | 38901442.81 | 38901443.03 | 0.0260 | 0.0150 |
| Jupiter | 101799-11-08 09:35 G | 38902692.78 | 38902692.90 | 38902693.04 | 0.0530 | 0.0426 |
| Uranus | 101810-04-14 07:26 G | 38906501.58 | 38906501.81 | 38906502.05 | 0.0144 | 0.0051 |
| Saturn | 101810-11-23 15:50 G | 38906724.93 | 38906725.16 | 38906725.40 | 0.0299 | 0.0110 |
| Uranus | 101811-04-19 06:57 G | 38906871.56 | 38906871.79 | 38906872.05 | 0.0144 | 0.0056 |
| Jupiter | 101811-11-14 10:04 G | 38907080.69 | 38907080.92 | 38907081.16 | 0.0531 | 0.0015 |
| Saturn | 101811-12-08 07:54 G | 38907104.66 | 38907104.83 | 38907105.02 | 0.0302 | 0.0207 |
| Jupiter | 101823-11-19 07:40 G | 38911468.79 | 38911468.82 | 38911468.86 | 0.0531 | 0.0523 |
| Saturn | 101824-05-21 12:14 G | 38911652.81 | 38911653.01 | 38911653.24 | 0.0264 | 0.0145 |
| Saturn | 101825-06-02 07:26 G | 38912029.58 | 38912029.81 | 38912030.06 | 0.0261 | 0.0063 |

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| Saturn | 101826-06-14 03:06 G | 38912406.57 | 38912406.63 | 38912406.70 | 0.0260 | 0.0249 |
| Saturn | 101839-11-17 05:02 G | 38917310.61 | 38917310.71 | 38917310.84 | 0.0298 | 0.0257 |
| Saturn | 101840-11-30 22:04 G | 38917690.19 | 38917690.42 | 38917690.65 | 0.0301 | 0.0053 |
| Jupiter | 101841-05-11 11:16 G | 38917851.78 | 38917851.97 | 38917852.17 | 0.0496 | 0.0293 |
| Neptune | 101842-04-16 15:35 G | 38918192.07 | 38918192.15 | 38918192.25 | 0.0088 | 0.0082 |
| Neptune | 101843-04-18 20:09 G | 38918559.17 | 38918559.34 | 38918559.56 | 0.0088 | 0.0060 |
| Neptune | 101844-04-20 15:06 G | 38918926.93 | 38918927.13 | 38918927.38 | 0.0088 | 0.0046 |
| Neptune | 101845-04-22 21:06 G | 38919294.15 | 38919294.38 | 38919294.64 | 0.0088 | 0.0022 |
| Neptune | 101846-04-25 13:54 G | 38919661.81 | 38919662.08 | 38919662.34 | 0.0088 | 0.0007 |
| Neptune | 101847-04-27 22:47 G | 38920029.21 | 38920029.45 | 38920029.71 | 0.0088 | 0.0018 |
| Neptune | 101848-04-29 10:18 G | 38920396.69 | 38920396.93 | 38920397.20 | 0.0088 | 0.0032 |
| Neptune | 101849-05-02 00:42 G | 38920764.36 | 38920764.53 | 38920764.75 | 0.0088 | 0.0056 |
| Neptune | 101850-05-04 08:23 G | 38921131.71 | 38921131.85 | 38921132.04 | 0.0088 | 0.0069 |
| Uranus | 101851-10-14 11:30 G | 38921659.76 | 38921659.98 | 38921660.20 | 0.0135 | 0.0062 |
| Uranus | 101852-10-18 00:42 G | 38922029.29 | 38922029.53 | 38922029.78 | 0.0135 | 0.0029 |
| Jupiter | 101853-05-16 08:52 G | 38922239.64 | 38922239.87 | 38922240.09 | 0.0496 | 0.0110 |
| Saturn | 101853-05-16 14:09 G | 38922240.01 | 38922240.09 | 38922240.18 | 0.0265 | 0.0246 * |
| Uranus | 101853-10-21 23:45 G | 38922398.34 | 38922398.49 | 38922398.65 | 0.0135 | 0.0104 |
| Saturn | 101854-05-28 13:40 G | 38922616.82 | 38922617.07 | 38922617.33 | 0.0262 | 0.0031 |
| Saturn | 101855-06-09 01:11 G | 38922993.35 | 38922993.55 | 38922993.75 | 0.0260 | 0.0162 |
| Jupiter | 101865-05-20 18:28 G | 38926627.18 | 38926627.27 | 38926627.37 | 0.0496 | 0.0457 |
| Pluto | 101868-04-12 15:50 G | 38927684.93 | 38927685.16 | 38927685.43 | 0.0080 | 0.0024 |
| Saturn | 101869-11-24 07:26 G | 38928275.58 | 38928275.81 | 38928276.05 | 0.0299 | 0.0088 |
| Saturn | 101870-12-09 03:06 G | 38928655.48 | 38928655.63 | 38928655.79 | 0.0302 | 0.0230 |
| Jupiter | 101882-11-08 21:50 G | 38933008.31 | 38933008.41 | 38933008.54 | 0.0531 | 0.0461 |
| Saturn | 101883-05-23 09:21 G | 38933203.68 | 38933203.89 | 38933204.11 | 0.0264 | 0.0129 |
| Saturn | 101884-06-03 09:21 G | 38933580.66 | 38933580.89 | 38933581.12 | 0.0261 | 0.0075 |
| Uranus | 101894-04-14 19:54 G | 38937183.09 | 38937183.33 | 38937183.57 | 0.0144 | 0.0041 |
| Jupiter | 101894-11-13 19:26 G | 38937396.08 | 38937396.31 | 38937396.53 | 0.0531 | 0.0016 |
| Uranus | 101895-04-19 18:28 G | 38937553.04 | 38937553.27 | 38937553.51 | 0.0144 | 0.0069 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 101898-11-18 02:23 G | 38938861.46 | 38938861.60 | 38938861.75 | 0.0298 | 0.0236 |
| Saturn | 101899-12-02 15:06 G | 38939240.89 | 38939241.13 | 38939241.38 | 0.0301 | 0.0075 |
| Jupiter | 101906-11-20 00:28 G | 38941784.43 | 38941784.52 | 38941784.60 | 0.0531 | 0.0493 |
| Saturn | 101912-05-18 10:33 G | 38943790.82 | 38943790.94 | 38943791.07 | 0.0265 | 0.0229 |
| Saturn | 101913-05-30 05:02 G | 38944167.45 | 38944167.71 | 38944167.97 | 0.0262 | 0.0019 |
| Saturn | 101914-06-10 19:54 G | 38944544.16 | 38944544.33 | 38944544.52 | 0.0260 | 0.0176 |
| Neptune | 101923-10-17 17:59 G | 38947960.22 | 38947960.25 | 38947960.32 | 0.0090 | 0.0088 |
| Jupiter | 101924-05-12 06:57 G | 38948167.62 | 38948167.79 | 38948167.97 | 0.0496 | 0.0314 |
| Neptune | 101924-10-18 23:16 G | 38948327.32 | 38948327.47 | 38948327.66 | 0.0090 | 0.0068 |
| Mars | 101925-02-12 12:42 G | 38948443.84 | 38948444.03 | 38948444.21 | 0.1713 | 0.0282 |
| Neptune | 101925-10-21 17:45 G | 38948695.04 | 38948695.24 | 38948695.47 | 0.0090 | 0.0049 |
| Neptune | 101926-10-23 22:33 G | 38949062.21 | 38949062.44 | 38949062.69 | 0.0090 | 0.0029 |
| Neptune | 101927-10-26 16:04 G | 38949429.91 | 38949430.17 | 38949430.43 | 0.0090 | 0.0008 |
| Neptune | 101928-10-27 23:45 G | 38949797.25 | 38949797.49 | 38949797.73 | 0.0090 | 0.0012 |
| Saturn | 101928-11-26 04:04 G | 38949826.45 | 38949826.67 | 38949826.90 | 0.0299 | 0.0069 |
| Neptune | 101929-10-30 12:28 G | 38950164.78 | 38950165.02 | 38950165.27 | 0.0090 | 0.0032 |
| Saturn | 101929-12-11 01:54 G | 38950206.45 | 38950206.58 | 38950206.71 | 0.0302 | 0.0252 |
| Neptune | 101930-11-01 23:59 G | 38950532.32 | 38950532.50 | 38950532.72 | 0.0090 | 0.0051 |
| Neptune | 101931-11-04 08:09 G | 38950899.70 | 38950899.84 | 38950900.01 | 0.0090 | 0.0071 |
| Uranus | 101935-10-15 23:45 G | 38952341.26 | 38952341.49 | 38952341.72 | 0.0135 | 0.0055 |
| Jupiter | 101936-05-16 13:11 G | 38952554.81 | 38952555.05 | 38952555.29 | 0.0495 | 0.0069 |
| Uranus | 101936-10-19 12:57 G | 38952710.80 | 38952711.04 | 38952711.30 | 0.0135 | 0.0028 |
| Uranus | 101937-10-23 11:45 G | 38953079.91 | 38953079.99 | 38953080.11 | 0.0135 | 0.0123 |
| Saturn | 101942-05-25 09:35 G | 38954754.69 | 38954754.90 | 38954755.12 | 0.0264 | 0.0117 |
| Saturn | 101943-06-06 07:11 G | 38955131.57 | 38955131.80 | 38955132.04 | 0.0261 | 0.0087 |
| Jupiter | 101948-05-21 03:50 G | 38956942.54 | 38956942.66 | 38956942.79 | 0.0495 | 0.0412 |
| Saturn | 101957-11-19 16:33 G | 38960412.03 | 38960412.19 | 38960412.38 | 0.0297 | 0.0217 |
| Saturn | 101958-12-04 03:35 G | 38960791.42 | 38960791.65 | 38960791.89 | 0.0301 | 0.0099 |
| Jupiter | 101965-11-09 06:28 G | 38963323.71 | 38963323.77 | 38963323.86 | 0.0530 | 0.0500 |
| Saturn | 101971-05-20 00:14 G | 38965341.38 | 38965341.51 | 38965341.67 | 0.0265 | 0.0219 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 101972-05-30 21:50 G | 38965718.16 | 38965718.41 | 38965718.66 | 0.0262 | 0.0010 |
| Saturn | 101973-06-11 18:57 G | 38966095.13 | 38966095.29 | 38966095.46 | 0.0260 | 0.0185 |
| Uranus | 101977-04-11 01:26 G | 38967494.50 | 38967494.56 | 38967494.65 | 0.0143 | 0.0137 |
| Jupiter | 101977-11-14 09:06 G | 38967711.65 | 38967711.88 | 38967712.12 | 0.0531 | 0.0059 |
| Uranus | 101978-04-16 08:52 G | 38967864.63 | 38967864.87 | 38967865.11 | 0.0143 | 0.0038 |
| Uranus | 101979-04-21 05:30 G | 38968234.51 | 38968234.73 | 38968234.97 | 0.0144 | 0.0073 |
| Saturn | 101987-11-28 02:09 G | 38971377.35 | 38971377.59 | 38971377.82 | 0.0299 | 0.0048 |
| Saturn | 101988-12-11 20:52 G | 38971757.27 | 38971757.37 | 38971757.47 | 0.0302 | 0.0272 |
| Jupiter | 101989-11-19 01:40 G | 38972099.46 | 38972099.57 | 38972099.70 | 0.0531 | 0.0451 |

103RD MILLENNIUM CE

This is a list of transits of Moon in the 103rd millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|-------------|-------------|-------------|--------|--------|-------|---|
| Saturn | 102001-05-26 06:14 G | 38976305.54 | 38976305.76 | 38976306.00 | 0.0264 | 0.0106 | | |
| Saturn | 102002-06-06 22:18 G | 38976682.19 | 38976682.43 | 38976682.67 | 0.0262 | 0.0093 | | |
| Neptune | 102007-04-19 09:21 G | 38978459.73 | 38978459.89 | 38978460.09 | 0.0088 | 0.0064 | | |
| Jupiter | 102007-05-12 12:28 G | 38978482.85 | 38978483.02 | 38978483.20 | 0.0495 | 0.0342 | | |
| Neptune | 102008-04-20 15:50 G | 38978826.98 | 38978827.16 | 38978827.38 | 0.0088 | 0.0054 | | |
| Neptune | 102009-04-23 07:11 G | 38979194.56 | 38979194.80 | 38979195.08 | 0.0088 | 0.0026 | | |
| Neptune | 102010-04-25 18:57 G | 38979562.04 | 38979562.29 | 38979562.54 | 0.0088 | 0.0015 | | |
| Neptune | 102011-04-28 05:16 G | 38979929.46 | 38979929.72 | 38979929.99 | 0.0088 | 0.0013 | | |
| Neptune | 102012-04-29 21:06 G | 38980297.14 | 38980297.38 | 38980297.63 | 0.0088 | 0.0023 | | |
| Neptune | 102013-05-02 02:52 G | 38980664.42 | 38980664.62 | 38980664.85 | 0.0088 | 0.0051 | | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 102014-05-04 21:35 G | 38981032.23 | 38981032.40 | 38981032.60 | 0.0088 | 0.0062 |
| Saturn | 102016-11-20 08:52 G | 38981962.69 | 38981962.87 | 38981963.05 | 0.0297 | 0.0197 |
| Saturn | 102017-12-04 23:16 G | 38982342.26 | 38982342.47 | 38982342.70 | 0.0301 | 0.0119 |
| Jupiter | 102019-05-17 02:38 G | 38982870.38 | 38982870.61 | 38982870.84 | 0.0495 | 0.0036 |
| Uranus | 102019-10-16 11:02 G | 38983022.74 | 38983022.96 | 38983023.21 | 0.0135 | 0.0049 |
| Uranus | 102020-10-20 00:14 G | 38983392.27 | 38983392.51 | 38983392.76 | 0.0135 | 0.0040 |
| Uranus | 102021-10-23 23:59 G | 38983761.38 | 38983761.50 | 38983761.62 | 0.0135 | 0.0118 |
| Pluto | 102026-10-16 03:50 G | 38985579.46 | 38985579.66 | 38985579.89 | 0.0064 | 0.0034 |
| Pluto | 102027-10-17 08:23 G | 38985945.69 | 38985945.85 | 38985946.05 | 0.0064 | 0.0044 |
| Mars | 102029-08-17 01:26 G | 38986615.38 | 38986615.56 | 38986615.73 | 0.1824 | 0.0703 |
| Saturn | 102030-05-20 17:16 G | 38986892.07 | 38986892.22 | 38986892.38 | 0.0265 | 0.0206 |
| Jupiter | 102031-05-21 19:54 G | 38987258.18 | 38987258.33 | 38987258.49 | 0.0495 | 0.0376 |
| Saturn | 102031-06-01 20:52 G | 38987269.13 | 38987269.37 | 38987269.62 | 0.0263 | 0.0005 |
| Saturn | 102032-06-12 17:16 G | 38987646.06 | 38987646.22 | 38987646.39 | 0.0260 | 0.0194 |
| Saturn | 102046-11-28 20:52 G | 38992928.12 | 38992928.37 | 38992928.62 | 0.0299 | 0.0029 |
| Saturn | 102047-12-13 11:45 G | 38993307.94 | 38993307.99 | 38993308.05 | 0.0302 | 0.0293 |
| Saturn | 102060-05-26 21:35 G | 38997856.17 | 38997856.40 | 38997856.65 | 0.0264 | 0.0097 |
| Jupiter | 102060-11-13 11:59 G | 38998026.77 | 38998027.00 | 38998027.23 | 0.0531 | 0.0094 |
| Uranus | 102061-04-11 14:23 G | 38998176.09 | 38998176.10 | 38998176.15 | 0.0143 | 0.0143 |
| Saturn | 102061-06-07 14:23 G | 38998232.87 | 38998233.10 | 38998233.33 | 0.0262 | 0.0101 |
| Uranus | 102062-04-16 22:47 G | 38998546.21 | 38998546.45 | 38998546.70 | 0.0143 | 0.0023 |
| Uranus | 102063-04-21 19:26 G | 38998916.10 | 38998916.31 | 38998916.53 | 0.0143 | 0.0084 |
| Jupiter | 102072-11-18 19:26 G | 39002415.18 | 39002415.31 | 39002415.44 | 0.0531 | 0.0431 |
| Saturn | 102075-11-22 08:23 G | 39003513.67 | 39003513.85 | 39003514.04 | 0.0297 | 0.0176 |
| Saturn | 102076-12-06 01:26 G | 39003893.36 | 39003893.56 | 39003893.77 | 0.0300 | 0.0141 |
| Neptune | 102088-10-18 13:26 G | 39008227.96 | 39008228.06 | 39008228.19 | 0.0090 | 0.0080 |
| Saturn | 102089-05-21 16:33 G | 39008443.04 | 39008443.19 | 39008443.37 | 0.0266 | 0.0196 |
| Neptune | 102089-10-20 18:28 G | 39008595.08 | 39008595.27 | 39008595.49 | 0.0090 | 0.0051 |
| Jupiter | 102090-05-12 00:28 G | 39008798.37 | 39008798.52 | 39008798.67 | 0.0495 | 0.0370 |
| Saturn | 102090-06-02 20:23 G | 39008820.10 | 39008820.35 | 39008820.59 | 0.0263 | 0.0009 |

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| Neptune | 102090-10-23 10:33 G | 39008962.72 | 39008962.94 | 39008963.19 | 0.0090 | 0.0040 |
| Saturn | 102091-06-14 10:33 G | 39009196.79 | 39009196.94 | 39009197.10 | 0.0261 | 0.0204 |
| Neptune | 102091-10-25 19:11 G | 39009330.06 | 39009330.30 | 39009330.55 | 0.0090 | 0.0011 |
| Neptune | 102092-10-27 06:42 G | 39009697.52 | 39009697.78 | 39009698.05 | 0.0090 | 0.0001 |
| Neptune | 102093-10-29 20:09 G | 39010065.12 | 39010065.34 | 39010065.58 | 0.0090 | 0.0029 |
| Neptune | 102094-11-01 03:06 G | 39010432.42 | 39010432.63 | 39010432.89 | 0.0090 | 0.0040 |
| Neptune | 102095-11-03 20:38 G | 39010800.21 | 39010800.36 | 39010800.53 | 0.0090 | 0.0069 |
| Neptune | 102096-11-05 01:11 G | 39011167.44 | 39011167.55 | 39011167.68 | 0.0090 | 0.0079 |
| Jupiter | 102102-05-17 17:30 G | 39013185.99 | 39013186.23 | 39013186.48 | 0.0495 | 0.0008 |
| Uranus | 102102-10-13 23:16 G | 39013335.38 | 39013335.47 | 39013335.57 | 0.0135 | 0.0125 |
| Uranus | 102103-10-17 23:59 G | 39013704.27 | 39013704.50 | 39013704.74 | 0.0135 | 0.0044 |
| Uranus | 102104-10-21 12:57 G | 39014073.79 | 39014074.04 | 39014074.28 | 0.0135 | 0.0041 |
| Saturn | 102105-11-30 16:04 G | 39014478.92 | 39014479.17 | 39014479.42 | 0.0299 | 0.0005 |
| Jupiter | 102114-05-21 23:02 G | 39017573.29 | 39017573.46 | 39017573.63 | 0.0495 | 0.0340 |
| Pluto | 102116-04-16 01:11 G | 39018268.46 | 39018268.55 | 39018268.70 | 0.0080 | 0.0071 |
| Saturn | 102119-05-29 15:35 G | 39019406.92 | 39019407.15 | 39019407.39 | 0.0264 | 0.0085 |
| Saturn | 102120-06-09 14:52 G | 39019783.91 | 39019784.12 | 39019784.35 | 0.0262 | 0.0114 |
| Saturn | 102134-11-24 15:21 G | 39025064.94 | 39025065.14 | 39025065.35 | 0.0297 | 0.0149 |
| Saturn | 102135-12-09 05:59 G | 39025444.54 | 39025444.75 | 39025444.95 | 0.0300 | 0.0164 |
| Jupiter | 102143-11-15 03:21 G | 39028342.43 | 39028342.64 | 39028342.86 | 0.0531 | 0.0130 |
| Uranus | 102145-04-13 02:23 G | 39028857.48 | 39028857.60 | 39028857.75 | 0.0143 | 0.0122 |
| Uranus | 102146-04-18 11:02 G | 39029227.71 | 39029227.96 | 39029228.21 | 0.0143 | 0.0023 |
| Uranus | 102147-04-23 06:28 G | 39029597.57 | 39029597.77 | 39029597.98 | 0.0143 | 0.0089 |
| Saturn | 102148-05-23 18:28 G | 39029994.10 | 39029994.27 | 39029994.46 | 0.0266 | 0.0180 |
| Saturn | 102149-06-04 16:04 G | 39030370.91 | 39030371.17 | 39030371.43 | 0.0263 | 0.0022 |
| Saturn | 102150-06-16 04:47 G | 39030747.58 | 39030747.70 | 39030747.85 | 0.0261 | 0.0218 |
| Jupiter | 102155-11-19 19:40 G | 39032730.16 | 39032730.32 | 39032730.50 | 0.0531 | 0.0367 |
| Saturn | 102163-11-18 09:21 G | 39035650.82 | 39035650.89 | 39035650.97 | 0.0295 | 0.0280 |
| Saturn | 102164-12-01 18:42 G | 39036030.05 | 39036030.28 | 39036030.52 | 0.0299 | 0.0023 |
| Neptune | 102171-04-19 11:45 G | 39038359.87 | 39038359.99 | 39038360.13 | 0.0088 | 0.0075 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 102172-04-21 01:26 G | 39038727.38 | 39038727.56 | 39038727.80 | 0.0088 | 0.0055 |
| Neptune | 102173-04-23 13:54 G | 39039094.87 | 39039095.08 | 39039095.33 | 0.0088 | 0.0038 |
| Jupiter | 102173-05-12 12:42 G | 39039113.89 | 39039114.03 | 39039114.18 | 0.0495 | 0.0396 |
| Neptune | 102174-04-25 23:02 G | 39039462.20 | 39039462.46 | 39039462.73 | 0.0088 | 0.0017 |
| Neptune | 102175-04-28 16:04 G | 39039829.91 | 39039830.17 | 39039830.42 | 0.0088 | 0.0001 |
| Neptune | 102176-04-29 21:50 G | 39040197.15 | 39040197.41 | 39040197.66 | 0.0088 | 0.0022 |
| Neptune | 102177-05-02 16:33 G | 39040564.98 | 39040565.19 | 39040565.44 | 0.0088 | 0.0040 |
| Neptune | 102178-05-04 21:35 G | 39040932.24 | 39040932.40 | 39040932.61 | 0.0088 | 0.0062 |
| Saturn | 102178-05-30 17:45 G | 39040958.01 | 39040958.24 | 39040958.48 | 0.0264 | 0.0069 |
| Neptune | 102179-05-07 15:35 G | 39041300.05 | 39041300.15 | 39041300.31 | 0.0088 | 0.0077 |
| Saturn | 102179-06-11 19:11 G | 39041335.09 | 39041335.30 | 39041335.52 | 0.0262 | 0.0128 |
| Jupiter | 102185-05-16 19:11 G | 39043501.07 | 39043501.30 | 39043501.53 | 0.0494 | 0.0042 |
| Uranus | 102186-10-14 11:02 G | 39044016.89 | 39044016.96 | 39044017.06 | 0.0135 | 0.0127 |
| Uranus | 102187-10-18 12:28 G | 39044385.78 | 39044386.02 | 39044386.25 | 0.0135 | 0.0035 |
| Uranus | 102188-10-22 00:14 G | 39044755.27 | 39044755.51 | 39044755.75 | 0.0135 | 0.0052 |
| Uranus | 102189-10-26 00:57 G | 39045124.50 | 39045124.54 | 39045124.59 | 0.0135 | 0.0132 |
| Saturn | 102193-11-25 23:45 G | 39046616.27 | 39046616.49 | 39046616.72 | 0.0297 | 0.0117 |
| Saturn | 102194-12-10 11:02 G | 39046995.77 | 39046995.96 | 39046996.15 | 0.0300 | 0.0193 |
| Jupiter | 102197-05-21 13:54 G | 39047888.89 | 39047889.08 | 39047889.27 | 0.0495 | 0.0295 |
| Saturn | 102207-05-26 18:42 G | 39051545.09 | 39051545.28 | 39051545.49 | 0.0266 | 0.0164 |
| Saturn | 102208-06-06 13:40 G | 39051921.82 | 39051922.07 | 39051922.33 | 0.0263 | 0.0037 |
| Mars | 102209-02-15 16:18 G | 39052176.03 | 39052176.18 | 39052176.33 | 0.1720 | 0.0980 |
| Saturn | 102209-06-18 08:52 G | 39052298.78 | 39052298.87 | 39052298.98 | 0.0261 | 0.0237 |
| Saturn | 102222-11-20 19:54 G | 39057202.22 | 39057202.33 | 39057202.46 | 0.0296 | 0.0250 |
| Saturn | 102223-12-05 08:38 G | 39057581.63 | 39057581.86 | 39057582.09 | 0.0299 | 0.0055 |
| Jupiter | 102226-11-14 23:16 G | 39058657.26 | 39058657.47 | 39058657.69 | 0.0531 | 0.0207 |
| Uranus | 102229-04-14 11:59 G | 39059538.92 | 39059539.00 | 39059539.12 | 0.0143 | 0.0132 |
| Uranus | 102230-04-19 21:06 G | 39059909.13 | 39059909.38 | 39059909.64 | 0.0143 | 0.0011 |
| Uranus | 102231-04-24 16:33 G | 39060279.00 | 39060279.19 | 39060279.39 | 0.0143 | 0.0095 |
| Saturn | 102236-05-20 17:45 G | 39062132.20 | 39062132.24 | 39062132.30 | 0.0267 | 0.0260 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 102237-06-02 01:26 G | 39062509.32 | 39062509.56 | 39062509.80 | 0.0264 | 0.0052 |
| Saturn | 102238-06-13 21:35 G | 39062886.20 | 39062886.40 | 39062886.62 | 0.0262 | 0.0148 |
| Jupiter | 102238-11-19 22:04 G | 39063045.24 | 39063045.42 | 39063045.60 | 0.0532 | 0.0293 |
| Neptune | 102252-10-19 15:06 G | 39068128.05 | 39068128.13 | 39068128.23 | 0.0090 | 0.0083 |
| Saturn | 102252-11-28 08:09 G | 39068167.60 | 39068167.84 | 39068168.08 | 0.0297 | 0.0082 |
| Neptune | 102253-10-22 06:28 G | 39068495.60 | 39068495.77 | 39068495.99 | 0.0090 | 0.0061 |
| Saturn | 102253-12-12 19:54 G | 39068547.18 | 39068547.33 | 39068547.49 | 0.0300 | 0.0229 |
| Neptune | 102254-10-24 16:33 G | 39068862.99 | 39068863.19 | 39068863.42 | 0.0090 | 0.0044 |
| Neptune | 102255-10-27 03:21 G | 39069230.39 | 39069230.64 | 39069230.91 | 0.0090 | 0.0022 |
| Jupiter | 102256-05-12 10:33 G | 39069428.85 | 39069428.94 | 39069429.04 | 0.0495 | 0.0451 |
| Neptune | 102256-10-28 17:45 G | 39069597.99 | 39069598.24 | 39069598.49 | 0.0090 | 0.0004 |
| Neptune | 102257-10-30 23:45 G | 39069965.24 | 39069965.49 | 39069965.74 | 0.0090 | 0.0019 |
| Neptune | 102258-11-02 17:16 G | 39070332.99 | 39070333.22 | 39070333.45 | 0.0090 | 0.0037 |
| Neptune | 102259-11-04 21:06 G | 39070700.22 | 39070700.38 | 39070700.60 | 0.0090 | 0.0059 |
| Neptune | 102260-11-06 14:38 G | 39071068.01 | 39071068.11 | 39071068.28 | 0.0090 | 0.0077 |
| Saturn | 102266-05-27 19:26 G | 39073096.11 | 39073096.31 | 39073096.53 | 0.0266 | 0.0147 |
| Saturn | 102267-06-08 19:11 G | 39073473.07 | 39073473.30 | 39073473.54 | 0.0263 | 0.0059 |
| Jupiter | 102268-05-17 06:14 G | 39073816.53 | 39073816.76 | 39073817.00 | 0.0495 | 0.0101 |
| Saturn | 102268-06-19 18:28 G | 39073850.25 | 39073850.27 | 39073850.30 | 0.0261 | 0.0259 |
| Uranus | 102270-10-15 22:33 G | 39074698.31 | 39074698.44 | 39074698.60 | 0.0135 | 0.0112 |
| Uranus | 102271-10-20 00:57 G | 39075067.31 | 39075067.54 | 39075067.78 | 0.0135 | 0.0032 |
| Uranus | 102272-10-23 12:14 G | 39075436.79 | 39075437.01 | 39075437.26 | 0.0135 | 0.0056 |
| Pluto | 102275-10-20 17:59 G | 39076529.01 | 39076529.25 | 39076529.53 | 0.0064 | 0.0013 |
| Jupiter | 102280-05-21 11:02 G | 39078203.76 | 39078203.96 | 39078204.18 | 0.0495 | 0.0241 |
| Saturn | 102281-11-22 14:23 G | 39078753.95 | 39078754.10 | 39078754.27 | 0.0296 | 0.0216 |
| Saturn | 102282-12-07 03:21 G | 39079133.41 | 39079133.64 | 39079133.87 | 0.0299 | 0.0092 |
| Saturn | 102295-05-23 05:30 G | 39083683.63 | 39083683.73 | 39083683.85 | 0.0267 | 0.0239 |
| Saturn | 102296-06-03 08:52 G | 39084060.62 | 39084060.87 | 39084061.13 | 0.0264 | 0.0032 |
| Saturn | 102297-06-15 00:14 G | 39084437.32 | 39084437.51 | 39084437.71 | 0.0262 | 0.0169 |
| Jupiter | 102309-11-15 00:28 G | 39088972.34 | 39088972.52 | 39088972.71 | 0.0531 | 0.0289 |

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| Saturn | 102311-12-01 23:45 G | 39089719.26 | 39089719.49 | 39089719.73 | 0.0297 | 0.0043 |
| Saturn | 102312-12-15 15:35 G | 39090099.05 | 39090099.15 | 39090099.26 | 0.0300 | 0.0269 |
| Uranus | 102313-04-15 20:38 G | 39090220.22 | 39090220.36 | 39090220.53 | 0.0143 | 0.0113 |
| Mars | 102313-08-19 20:09 G | 39090346.15 | 39090346.34 | 39090346.53 | 0.1814 | 0.0774 |
| Uranus | 102314-04-21 05:45 G | 39090590.49 | 39090590.74 | 39090591.00 | 0.0143 | 0.0016 |
| Uranus | 102315-04-26 00:14 G | 39090960.34 | 39090960.51 | 39090960.71 | 0.0143 | 0.0100 |
| Jupiter | 102321-11-20 01:26 G | 39093360.35 | 39093360.56 | 39093360.78 | 0.0531 | 0.0223 |
| Saturn | 102325-05-30 04:18 G | 39094647.48 | 39094647.68 | 39094647.91 | 0.0265 | 0.0126 |
| Saturn | 102326-06-11 07:54 G | 39095024.60 | 39095024.83 | 39095025.06 | 0.0263 | 0.0080 |
| Neptune | 102335-04-20 20:23 G | 39098260.29 | 39098260.35 | 39098260.41 | 0.0088 | 0.0085 |
| Neptune | 102336-04-22 09:35 G | 39098627.73 | 39098627.90 | 39098628.10 | 0.0088 | 0.0058 |
| Neptune | 102337-04-24 17:45 G | 39098995.03 | 39098995.24 | 39098995.48 | 0.0088 | 0.0048 |
| Neptune | 102338-04-27 11:59 G | 39099362.75 | 39099363.00 | 39099363.25 | 0.0088 | 0.0019 |
| Neptune | 102339-04-29 17:16 G | 39099729.96 | 39099730.22 | 39099730.48 | 0.0088 | 0.0009 |
| Neptune | 102340-05-01 12:28 G | 39100097.77 | 39100098.02 | 39100098.28 | 0.0088 | 0.0020 |
| Saturn | 102340-11-25 10:33 G | 39100305.76 | 39100305.94 | 39100306.14 | 0.0296 | 0.0179 |
| Neptune | 102341-05-03 17:45 G | 39100465.01 | 39100465.24 | 39100465.50 | 0.0088 | 0.0030 |
| Saturn | 102341-12-09 20:38 G | 39100685.14 | 39100685.36 | 39100685.59 | 0.0300 | 0.0130 |
| Neptune | 102342-05-06 10:47 G | 39100832.77 | 39100832.95 | 39100833.17 | 0.0088 | 0.0058 |
| Neptune | 102343-05-08 19:26 G | 39101200.16 | 39101200.31 | 39101200.48 | 0.0088 | 0.0068 |
| Jupiter | 102351-05-18 02:09 G | 39104131.37 | 39104131.59 | 39104131.82 | 0.0495 | 0.0159 |
| Saturn | 102354-05-25 16:33 G | 39105235.05 | 39105235.19 | 39105235.35 | 0.0267 | 0.0212 |
| Uranus | 102354-10-17 09:06 G | 39105379.77 | 39105379.88 | 39105380.03 | 0.0135 | 0.0116 |
| Saturn | 102355-06-06 14:09 G | 39105611.83 | 39105612.09 | 39105612.35 | 0.0264 | 0.0009 |
| Uranus | 102355-10-21 12:28 G | 39105748.79 | 39105749.02 | 39105749.27 | 0.0135 | 0.0022 |
| Saturn | 102356-06-17 07:54 G | 39105988.66 | 39105988.83 | 39105988.99 | 0.0262 | 0.0193 |
| Uranus | 102356-10-24 22:33 G | 39106118.22 | 39106118.44 | 39106118.68 | 0.0135 | 0.0064 |
| Jupiter | 102363-05-22 20:09 G | 39108519.13 | 39108519.34 | 39108519.55 | 0.0494 | 0.0184 |
| Pluto | 102365-04-21 02:52 G | 39109218.37 | 39109218.62 | 39109218.89 | 0.0080 | 0.0019 |
| Saturn | 102370-12-03 22:18 G | 39111271.19 | 39111271.43 | 39111271.66 | 0.0298 | 0.0006 |

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| Saturn | 102384-05-31 20:23 G | 39116199.13 | 39116199.35 | 39116199.58 | 0.0265 | 0.0099 |
| Saturn | 102385-06-12 21:21 G | 39116576.16 | 39116576.39 | 39116576.62 | 0.0263 | 0.0104 |
| Jupiter | 102392-11-13 22:33 G | 39119287.28 | 39119287.44 | 39119287.62 | 0.0531 | 0.0369 |
| Uranus | 102397-04-16 05:45 G | 39120901.63 | 39120901.74 | 39120901.88 | 0.0143 | 0.0124 |
| Uranus | 102398-04-21 14:37 G | 39121271.85 | 39121272.11 | 39121272.37 | 0.0143 | 0.0001 |
| Uranus | 102399-04-26 08:52 G | 39121641.70 | 39121641.87 | 39121642.07 | 0.0143 | 0.0102 |
| Saturn | 102399-11-28 05:45 G | 39121857.52 | 39121857.74 | 39121857.96 | 0.0297 | 0.0139 |
| Saturn | 102400-12-11 14:23 G | 39122236.90 | 39122237.10 | 39122237.31 | 0.0300 | 0.0171 |
| Jupiter | 102404-11-18 16:04 G | 39123674.96 | 39123675.17 | 39123675.39 | 0.0531 | 0.0124 |
| Saturn | 102413-05-27 01:11 G | 39126786.38 | 39126786.55 | 39126786.75 | 0.0266 | 0.0185 |
| Mars | 102414-02-14 12:13 G | 39127049.92 | 39127050.01 | 39127050.09 | 0.1735 | 0.1567 |
| Saturn | 102414-06-07 23:16 G | 39127163.23 | 39127163.47 | 39127163.72 | 0.0264 | 0.0016 |
| Saturn | 102415-06-19 21:49 G | 39127540.30 | 39127540.41 | 39127540.55 | 0.0262 | 0.0221 |
| Neptune | 102416-10-20 02:37 G | 39128028.55 | 39128028.61 | 39128028.72 | 0.0090 | 0.0085 |
| Neptune | 102417-10-22 13:40 G | 39128395.95 | 39128396.07 | 39128396.23 | 0.0090 | 0.0074 |
| Neptune | 102418-10-24 22:47 G | 39128763.24 | 39128763.45 | 39128763.70 | 0.0090 | 0.0046 |
| Neptune | 102419-10-27 14:37 G | 39129130.89 | 39129131.11 | 39129131.35 | 0.0090 | 0.0034 |
| Neptune | 102420-10-28 20:23 G | 39129498.09 | 39129498.35 | 39129498.61 | 0.0090 | 0.0005 |
| Neptune | 102421-10-31 14:37 G | 39129865.86 | 39129866.11 | 39129866.37 | 0.0090 | 0.0007 |
| Neptune | 102422-11-02 18:42 G | 39130233.07 | 39130233.28 | 39130233.53 | 0.0090 | 0.0036 |
| Neptune | 102423-11-05 12:13 G | 39130600.80 | 39130601.01 | 39130601.25 | 0.0090 | 0.0046 |
| Neptune | 102424-11-06 18:57 G | 39130968.17 | 39130968.29 | 39130968.44 | 0.0090 | 0.0075 |
| Neptune | 102425-11-09 08:23 G | 39131335.80 | 39131335.85 | 39131335.95 | 0.0090 | 0.0086 |
| Saturn | 102428-11-21 11:45 G | 39132443.90 | 39132443.99 | 39132444.10 | 0.0295 | 0.0263 |
| Saturn | 102429-12-05 23:30 G | 39132823.25 | 39132823.48 | 39132823.71 | 0.0298 | 0.0039 |
| Jupiter | 102434-05-17 06:28 G | 39134446.57 | 39134446.77 | 39134446.97 | 0.0495 | 0.0243 |
| Uranus | 102438-10-17 18:42 G | 39136061.12 | 39136061.28 | 39136061.46 | 0.0135 | 0.0100 |
| Uranus | 102439-10-21 23:59 G | 39136430.26 | 39136430.50 | 39136430.74 | 0.0135 | 0.0022 |
| Uranus | 102440-10-25 09:06 G | 39136799.67 | 39136799.88 | 39136800.11 | 0.0135 | 0.0069 |
| Saturn | 102443-06-03 11:45 G | 39137750.75 | 39137750.99 | 39137751.23 | 0.0265 | 0.0071 |

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| Saturn | 102444-06-14 05:45 G | 39138127.52 | 39138127.74 | 39138127.97 | 0.0262 | 0.0131 |
| Jupiter | 102446-05-21 14:09 G | 39138833.85 | 39138834.09 | 39138834.33 | 0.0495 | 0.0100 |
| Saturn | 102458-11-29 21:21 G | 39143409.17 | 39143409.39 | 39143409.63 | 0.0297 | 0.0097 |
| Saturn | 102459-12-14 09:49 G | 39143788.75 | 39143788.91 | 39143789.09 | 0.0300 | 0.0213 |
| Saturn | 102472-05-28 11:16 G | 39148337.77 | 39148337.97 | 39148338.18 | 0.0266 | 0.0157 |
| Saturn | 102473-06-09 14:09 G | 39148714.86 | 39148715.09 | 39148715.33 | 0.0263 | 0.0045 |
| Saturn | 102474-06-21 12:57 G | 39149091.97 | 39149092.04 | 39149092.13 | 0.0261 | 0.0247 |
| Jupiter | 102475-11-13 12:42 G | 39149601.94 | 39149602.03 | 39149602.13 | 0.0531 | 0.0478 |
| Uranus | 102481-04-16 17:30 G | 39151583.07 | 39151583.23 | 39151583.42 | 0.0143 | 0.0101 |
| Uranus | 102482-04-22 01:40 G | 39151953.31 | 39151953.57 | 39151953.83 | 0.0143 | 0.0007 |
| Uranus | 102483-04-26 19:54 G | 39152323.18 | 39152323.33 | 39152323.50 | 0.0143 | 0.0113 |
| Jupiter | 102487-11-18 17:16 G | 39153989.99 | 39153990.22 | 39153990.45 | 0.0531 | 0.0028 |
| Saturn | 102487-11-24 11:30 G | 39153995.83 | 39153995.98 | 39153996.14 | 0.0295 | 0.0221 |
| Saturn | 102488-12-07 22:04 G | 39154375.18 | 39154375.42 | 39154375.65 | 0.0299 | 0.0081 |
| Mars | 102493-02-17 11:01 G | 39155907.86 | 39155907.96 | 39155908.07 | 0.1727 | 0.1472 |
| Jupiter | 102499-11-23 10:47 G | 39158377.85 | 39158377.95 | 39158378.06 | 0.0532 | 0.0474 |
| Neptune | 102500-04-22 12:57 G | 39158527.90 | 39158528.04 | 39158528.24 | 0.0088 | 0.0067 |
| Neptune | 102501-04-25 07:40 G | 39158895.63 | 39158895.82 | 39158896.05 | 0.0088 | 0.0050 |
| Saturn | 102501-05-24 21:49 G | 39158925.33 | 39158925.41 | 39158925.51 | 0.0267 | 0.0246 |
| Neptune | 102502-04-27 12:28 G | 39159262.79 | 39159263.02 | 39159263.28 | 0.0088 | 0.0029 |
| Saturn | 102502-06-05 22:18 G | 39159302.18 | 39159302.43 | 39159302.69 | 0.0264 | 0.0042 |
| Neptune | 102503-04-30 07:40 G | 39159630.56 | 39159630.82 | 39159631.08 | 0.0088 | 0.0011 |
| Saturn | 102503-06-17 13:40 G | 39159678.87 | 39159679.07 | 39159679.27 | 0.0262 | 0.0158 |
| Neptune | 102504-05-01 13:54 G | 39159997.83 | 39159998.08 | 39159998.34 | 0.0088 | 0.0009 |
| Neptune | 102505-05-04 05:30 G | 39160365.49 | 39160365.73 | 39160366.00 | 0.0088 | 0.0028 |
| Neptune | 102506-05-06 16:18 G | 39160732.99 | 39160733.18 | 39160733.41 | 0.0088 | 0.0048 |
| Neptune | 102507-05-09 03:35 G | 39161100.50 | 39161100.65 | 39161100.85 | 0.0088 | 0.0067 |
| Neptune | 102508-05-10 18:57 G | 39161468.28 | 39161468.29 | 39161468.35 | 0.0088 | 0.0087 |
| Jupiter | 102517-05-17 02:52 G | 39164761.44 | 39164761.62 | 39164761.81 | 0.0495 | 0.0314 |
| Saturn | 102517-12-02 14:23 G | 39164960.87 | 39164961.10 | 39164961.34 | 0.0298 | 0.0056 |

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| Saturn | 102518-12-17 07:11 G | 39165340.69 | 39165340.80 | 39165340.94 | 0.0301 | 0.0253 |
| Uranus | 102522-10-19 03:35 G | 39166742.51 | 39166742.65 | 39166742.82 | 0.0135 | 0.0108 |
| Uranus | 102523-10-23 10:18 G | 39167111.69 | 39167111.93 | 39167112.18 | 0.0135 | 0.0010 |
| Pluto | 102523-10-23 18:42 G | 39167112.06 | 39167112.28 | 39167112.51 | 0.0064 | 0.0027 * |
| Pluto | 102524-10-24 04:04 G | 39167478.55 | 39167478.67 | 39167478.86 | 0.0064 | 0.0052 |
| Uranus | 102524-10-26 17:30 G | 39167481.02 | 39167481.23 | 39167481.46 | 0.0135 | 0.0072 |
| Jupiter | 102529-05-21 17:59 G | 39169149.02 | 39169149.25 | 39169149.48 | 0.0495 | 0.0041 |
| Saturn | 102531-06-01 00:42 G | 39169889.32 | 39169889.53 | 39169889.74 | 0.0265 | 0.0130 |
| Saturn | 102532-06-12 04:47 G | 39170266.46 | 39170266.70 | 39170266.93 | 0.0263 | 0.0072 |
| Jupiter | 102541-05-26 07:54 G | 39173536.73 | 39173536.83 | 39173536.94 | 0.0495 | 0.0442 |
| Saturn | 102546-11-27 03:06 G | 39175547.45 | 39175547.63 | 39175547.83 | 0.0296 | 0.0182 |
| Saturn | 102547-12-11 11:30 G | 39175926.75 | 39175926.98 | 39175927.21 | 0.0299 | 0.0120 |
| Saturn | 102560-05-26 08:09 G | 39180476.71 | 39180476.84 | 39180477.00 | 0.0267 | 0.0221 |
| Saturn | 102561-06-07 05:01 G | 39180853.46 | 39180853.71 | 39180853.97 | 0.0264 | 0.0018 |
| Saturn | 102562-06-19 01:11 G | 39181230.38 | 39181230.55 | 39181230.72 | 0.0262 | 0.0186 |
| Uranus | 102565-04-18 05:45 G | 39182264.60 | 39182264.74 | 39182264.92 | 0.0143 | 0.0110 |
| Uranus | 102566-04-23 13:11 G | 39182634.79 | 39182635.05 | 39182635.31 | 0.0143 | 0.0014 |
| Uranus | 102567-04-28 08:09 G | 39183004.69 | 39183004.84 | 39183004.99 | 0.0143 | 0.0114 |
| Jupiter | 102570-11-18 12:13 G | 39184304.78 | 39184305.01 | 39184305.24 | 0.0531 | 0.0045 |
| Saturn | 102576-12-04 08:09 G | 39186512.60 | 39186512.84 | 39186513.07 | 0.0298 | 0.0020 |
| Saturn | 102577-12-19 01:54 G | 39186892.53 | 39186892.58 | 39186892.65 | 0.0301 | 0.0291 |
| Neptune | 102581-10-22 20:09 G | 39188296.24 | 39188296.34 | 39188296.48 | 0.0090 | 0.0079 |
| Neptune | 102582-10-25 13:11 G | 39188663.87 | 39188664.05 | 39188664.28 | 0.0090 | 0.0053 |
| Jupiter | 102582-11-23 17:01 G | 39188693.06 | 39188693.21 | 39188693.37 | 0.0531 | 0.0389 |
| Neptune | 102583-10-27 18:13 G | 39189031.04 | 39189031.26 | 39189031.50 | 0.0090 | 0.0039 |
| Neptune | 102584-10-29 12:42 G | 39189398.78 | 39189399.03 | 39189399.29 | 0.0090 | 0.0013 |
| Neptune | 102585-10-31 17:45 G | 39189765.99 | 39189766.24 | 39189766.49 | 0.0090 | 0.0001 |
| Neptune | 102586-11-03 09:35 G | 39190133.66 | 39190133.90 | 39190134.16 | 0.0090 | 0.0027 |
| Neptune | 102587-11-05 17:45 G | 39190501.02 | 39190501.24 | 39190501.46 | 0.0090 | 0.0042 |
| Neptune | 102588-11-07 05:30 G | 39190868.56 | 39190868.73 | 39190868.91 | 0.0090 | 0.0067 |

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| Neptune | 102589-11-09 18:13 G | 39191236.18 | 39191236.26 | 39191236.38 | 0.0090 | 0.0082 |
| Saturn | 102590-06-02 14:52 G | 39191440.90 | 39191441.12 | 39191441.35 | 0.0265 | 0.0107 |
| Saturn | 102591-06-14 13:11 G | 39191817.82 | 39191818.05 | 39191818.30 | 0.0262 | 0.0098 |
| Mars | 102597-08-20 17:30 G | 39194077.06 | 39194077.23 | 39194077.39 | 0.1804 | 0.0795 |
| Jupiter | 102600-05-17 09:21 G | 39195076.75 | 39195076.89 | 39195077.04 | 0.0495 | 0.0374 |
| Saturn | 102605-11-29 10:04 G | 39197098.71 | 39197098.92 | 39197099.14 | 0.0296 | 0.0148 |
| Uranus | 102606-10-20 12:42 G | 39197423.86 | 39197424.03 | 39197424.25 | 0.0135 | 0.0091 |
| Saturn | 102606-12-13 19:40 G | 39197478.12 | 39197478.32 | 39197478.53 | 0.0299 | 0.0157 |
| Uranus | 102607-10-24 21:35 G | 39197793.16 | 39197793.40 | 39197793.64 | 0.0135 | 0.0014 |
| Uranus | 102608-10-28 03:21 G | 39198162.45 | 39198162.64 | 39198162.87 | 0.0135 | 0.0081 |
| Jupiter | 102612-05-21 19:11 G | 39199464.05 | 39199464.30 | 39199464.54 | 0.0495 | 0.0031 |
| Pluto | 102613-04-23 22:47 G | 39199801.26 | 39199801.45 | 39199801.68 | 0.0080 | 0.0045 |
| Saturn | 102619-05-29 12:42 G | 39202027.86 | 39202028.03 | 39202028.20 | 0.0266 | 0.0200 |
| Saturn | 102620-06-09 12:57 G | 39202404.79 | 39202405.04 | 39202405.28 | 0.0263 | 0.0006 |
| Saturn | 102621-06-21 12:13 G | 39202781.88 | 39202782.01 | 39202782.16 | 0.0261 | 0.0212 |
| Jupiter | 102624-05-26 03:35 G | 39203851.51 | 39203851.65 | 39203851.81 | 0.0495 | 0.0375 |
| Saturn | 102634-11-23 09:21 G | 39207684.85 | 39207684.89 | 39207684.95 | 0.0295 | 0.0286 |
| Saturn | 102635-12-07 19:25 G | 39208064.07 | 39208064.31 | 39208064.55 | 0.0299 | 0.0013 |
| Uranus | 102649-04-19 19:25 G | 39212946.11 | 39212946.31 | 39212946.51 | 0.0143 | 0.0087 |
| Saturn | 102649-06-04 21:21 G | 39212992.16 | 39212992.39 | 39212992.64 | 0.0264 | 0.0087 |
| Uranus | 102650-04-25 01:25 G | 39213316.30 | 39213316.56 | 39213316.83 | 0.0143 | 0.0009 |
| Saturn | 102650-06-16 14:09 G | 39213368.87 | 39213369.09 | 39213369.33 | 0.0262 | 0.0119 |
| Uranus | 102651-04-29 21:06 G | 39213686.27 | 39213686.38 | 39213686.49 | 0.0143 | 0.0129 |
| Jupiter | 102653-11-18 18:42 G | 39214620.06 | 39214620.28 | 39214620.51 | 0.0531 | 0.0128 |
| Neptune | 102664-04-23 04:18 G | 39218428.58 | 39218428.68 | 39218428.81 | 0.0088 | 0.0078 |
| Saturn | 102664-11-30 13:25 G | 39218649.84 | 39218650.06 | 39218650.28 | 0.0297 | 0.0120 |
| Neptune | 102665-04-25 09:06 G | 39218795.69 | 39218795.88 | 39218796.11 | 0.0088 | 0.0051 |
| Jupiter | 102665-11-23 11:30 G | 39219007.79 | 39219007.98 | 39219008.18 | 0.0531 | 0.0306 |
| Saturn | 102665-12-15 03:49 G | 39219029.48 | 39219029.66 | 39219029.85 | 0.0300 | 0.0186 |
| Neptune | 102666-04-28 02:52 G | 39219163.41 | 39219163.62 | 39219163.88 | 0.0088 | 0.0041 |

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| Neptune | 102667-04-30 11:16 G | 39219530.72 | 39219530.97 | 39219531.22 | 0.0088 | 0.0013 |
| Neptune | 102668-05-02 01:25 G | 39219898.29 | 39219898.56 | 39219898.83 | 0.0088 | 0.0002 |
| Neptune | 102669-05-04 13:11 G | 39220265.82 | 39220266.05 | 39220266.31 | 0.0088 | 0.0027 |
| Neptune | 102670-05-06 22:18 G | 39220633.20 | 39220633.43 | 39220633.69 | 0.0088 | 0.0038 |
| Neptune | 102671-05-09 14:52 G | 39221000.98 | 39221001.12 | 39221001.32 | 0.0088 | 0.0066 |
| Neptune | 102672-05-10 20:52 G | 39221368.27 | 39221368.37 | 39221368.53 | 0.0088 | 0.0076 |
| Mars | 102676-08-24 13:40 G | 39222935.00 | 39222935.07 | 39222935.14 | 0.1811 | 0.1685 |
| Saturn | 102678-05-30 18:13 G | 39223579.09 | 39223579.26 | 39223579.45 | 0.0266 | 0.0179 |
| Saturn | 102679-06-11 22:33 G | 39223956.20 | 39223956.44 | 39223956.68 | 0.0263 | 0.0027 |
| Saturn | 102680-06-22 18:28 G | 39224333.16 | 39224333.27 | 39224333.39 | 0.0261 | 0.0231 |
| Jupiter | 102683-05-17 12:42 G | 39225391.92 | 39225392.03 | 39225392.15 | 0.0495 | 0.0431 |
| Uranus | 102690-10-20 22:18 G | 39228105.27 | 39228105.43 | 39228105.62 | 0.0135 | 0.0100 |
| Uranus | 102691-10-25 08:09 G | 39228474.60 | 39228474.84 | 39228475.09 | 0.0135 | 0.0002 |
| Uranus | 102692-10-28 12:13 G | 39228843.81 | 39228844.01 | 39228844.23 | 0.0135 | 0.0079 |
| Saturn | 102693-11-24 14:37 G | 39229236.00 | 39229236.11 | 39229236.22 | 0.0295 | 0.0259 |
| Saturn | 102694-12-08 20:37 G | 39229615.11 | 39229615.36 | 39229615.61 | 0.0299 | 0.0037 |
| Jupiter | 102695-05-21 22:18 G | 39229779.20 | 39229779.43 | 39229779.66 | 0.0495 | 0.0075 |
| Mars | 102698-02-17 05:16 G | 39230781.58 | 39230781.72 | 39230781.87 | 0.1743 | 0.1053 |
| Jupiter | 102707-05-27 18:28 G | 39234167.10 | 39234167.27 | 39234167.44 | 0.0495 | 0.0346 |
| Saturn | 102708-06-06 19:25 G | 39234543.07 | 39234543.31 | 39234543.57 | 0.0264 | 0.0069 |
| Saturn | 102709-06-18 14:23 G | 39234919.90 | 39234920.10 | 39234920.32 | 0.0262 | 0.0139 |
| Saturn | 102723-12-03 16:47 G | 39240200.99 | 39240201.20 | 39240201.43 | 0.0297 | 0.0099 |
| Saturn | 102724-12-17 09:35 G | 39240580.74 | 39240580.90 | 39240581.08 | 0.0300 | 0.0208 |
| Uranus | 102733-04-21 05:59 G | 39243627.58 | 39243627.75 | 39243627.95 | 0.0143 | 0.0097 |
| Uranus | 102734-04-26 10:47 G | 39243997.70 | 39243997.95 | 39243998.22 | 0.0143 | 0.0028 |
| Uranus | 102735-05-01 07:11 G | 39244367.69 | 39244367.80 | 39244367.93 | 0.0143 | 0.0125 |
| Jupiter | 102736-11-18 20:52 G | 39244935.15 | 39244935.37 | 39244935.60 | 0.0532 | 0.0174 |
| Saturn | 102737-06-01 23:59 G | 39245130.32 | 39245130.50 | 39245130.71 | 0.0266 | 0.0162 |
| Saturn | 102738-06-14 02:23 G | 39245507.36 | 39245507.60 | 39245507.85 | 0.0263 | 0.0045 |
| Saturn | 102739-06-25 16:04 G | 39245884.11 | 39245884.17 | 39245884.23 | 0.0261 | 0.0252 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 102745-10-24 11:16 G | 39248196.85 | 39248196.97 | 39248197.09 | 0.0090 | 0.0079 |
| Neptune | 102746-10-26 15:35 G | 39248563.99 | 39248564.15 | 39248564.33 | 0.0090 | 0.0065 |
| Neptune | 102747-10-29 09:35 G | 39248931.69 | 39248931.90 | 39248932.15 | 0.0090 | 0.0040 |
| Neptune | 102748-10-30 15:49 G | 39249298.93 | 39249299.16 | 39249299.41 | 0.0090 | 0.0026 |
| Jupiter | 102748-11-24 02:09 G | 39249323.40 | 39249323.59 | 39249323.78 | 0.0531 | 0.0260 |
| Neptune | 102749-11-02 07:25 G | 39249666.55 | 39249666.81 | 39249667.07 | 0.0090 | 0.0001 |
| Neptune | 102750-11-04 17:16 G | 39250033.99 | 39250034.22 | 39250034.47 | 0.0090 | 0.0016 |
| Neptune | 102751-11-07 03:35 G | 39250401.43 | 39250401.65 | 39250401.90 | 0.0090 | 0.0042 |
| Neptune | 102752-11-08 17:45 G | 39250769.07 | 39250769.24 | 39250769.46 | 0.0090 | 0.0056 |
| Saturn | 102752-11-26 09:21 G | 39250786.76 | 39250786.89 | 39250787.05 | 0.0295 | 0.0238 |
| Neptune | 102753-11-10 23:45 G | 39251136.40 | 39251136.49 | 39251136.62 | 0.0090 | 0.0081 |
| Saturn | 102753-12-10 15:06 G | 39251165.89 | 39251166.13 | 39251166.37 | 0.0299 | 0.0057 |
| Jupiter | 102766-05-17 19:11 G | 39255707.24 | 39255707.30 | 39255707.37 | 0.0495 | 0.0471 |
| Saturn | 102766-05-27 17:01 G | 39255717.16 | 39255717.21 | 39255717.29 | 0.0267 | 0.0257 |
| Saturn | 102767-06-08 17:45 G | 39256094.00 | 39256094.24 | 39256094.49 | 0.0264 | 0.0051 |
| Saturn | 102768-06-19 17:59 G | 39256471.07 | 39256471.25 | 39256471.45 | 0.0262 | 0.0160 |
| Pluto | 102772-10-27 10:04 G | 39258061.69 | 39258061.92 | 39258062.18 | 0.0064 | 0.0012 |
| Uranus | 102774-10-22 08:09 G | 39258786.65 | 39258786.84 | 39258787.07 | 0.0135 | 0.0081 |
| Uranus | 102775-10-26 19:40 G | 39259156.07 | 39259156.32 | 39259156.56 | 0.0135 | 0.0006 |
| Uranus | 102776-10-29 22:33 G | 39259525.26 | 39259525.44 | 39259525.64 | 0.0135 | 0.0092 |
| Mars | 102777-02-20 14:37 G | 39259639.06 | 39259639.11 | 39259639.17 | 0.1736 | 0.1646 |
| Jupiter | 102778-05-22 15:06 G | 39260094.90 | 39260095.13 | 39260095.37 | 0.0495 | 0.0100 |
| Saturn | 102782-12-04 17:45 G | 39261752.01 | 39261752.24 | 39261752.47 | 0.0297 | 0.0078 |
| Saturn | 102783-12-19 07:11 G | 39262131.65 | 39262131.80 | 39262131.97 | 0.0300 | 0.0226 |
| Jupiter | 102790-05-26 17:30 G | 39264482.05 | 39264482.23 | 39264482.43 | 0.0494 | 0.0305 |
| Saturn | 102796-06-03 01:40 G | 39266681.36 | 39266681.57 | 39266681.78 | 0.0266 | 0.0146 |
| Saturn | 102797-06-14 21:06 G | 39267058.13 | 39267058.38 | 39267058.63 | 0.0263 | 0.0063 |
| Saturn | 102811-11-28 01:54 G | 39272337.42 | 39272337.58 | 39272337.74 | 0.0295 | 0.0219 |
| Saturn | 102812-12-11 11:59 G | 39272716.77 | 39272717.00 | 39272717.22 | 0.0299 | 0.0074 |
| Uranus | 102817-04-21 15:49 G | 39274308.96 | 39274309.16 | 39274309.37 | 0.0143 | 0.0079 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 102818-04-26 19:11 G | 39274679.04 | 39274679.30 | 39274679.57 | 0.0143 | 0.0017 |
| Uranus | 102819-05-01 17:01 G | 39275049.17 | 39275049.21 | 39275049.27 | 0.0143 | 0.0139 |
| Jupiter | 102819-11-19 11:59 G | 39275250.80 | 39275251.00 | 39275251.21 | 0.0531 | 0.0213 |
| Saturn | 102825-05-28 11:16 G | 39277267.89 | 39277267.97 | 39277268.07 | 0.0267 | 0.0247 |
| Saturn | 102826-06-09 18:28 G | 39277645.03 | 39277645.27 | 39277645.51 | 0.0264 | 0.0034 |
| Saturn | 102827-06-21 18:28 G | 39278022.10 | 39278022.27 | 39278022.47 | 0.0262 | 0.0179 |
| Neptune | 102828-04-23 06:57 G | 39278328.75 | 39278328.79 | 39278328.90 | 0.0088 | 0.0084 |
| Neptune | 102829-04-25 23:45 G | 39278696.32 | 39278696.49 | 39278696.72 | 0.0088 | 0.0059 |
| Neptune | 102830-04-28 08:37 G | 39279063.66 | 39279063.86 | 39279064.10 | 0.0088 | 0.0045 |
| Neptune | 102831-04-30 20:52 G | 39279431.12 | 39279431.37 | 39279431.65 | 0.0088 | 0.0020 |
| Jupiter | 102831-11-24 07:54 G | 39279638.61 | 39279638.83 | 39279639.05 | 0.0531 | 0.0197 |
| Neptune | 102832-05-02 11:01 G | 39279798.71 | 39279798.96 | 39279799.21 | 0.0088 | 0.0005 |
| Neptune | 102833-05-04 18:57 G | 39280166.03 | 39280166.29 | 39280166.55 | 0.0088 | 0.0019 |
| Neptune | 102834-05-07 12:57 G | 39280533.81 | 39280534.04 | 39280534.28 | 0.0088 | 0.0033 |
| Neptune | 102835-05-09 17:59 G | 39280901.07 | 39280901.25 | 39280901.46 | 0.0088 | 0.0057 |
| Neptune | 102836-05-11 12:42 G | 39281268.92 | 39281269.03 | 39281269.21 | 0.0088 | 0.0073 |
| Saturn | 102841-12-05 11:01 G | 39283302.72 | 39283302.96 | 39283303.21 | 0.0297 | 0.0064 |
| Saturn | 102842-12-19 21:06 G | 39283682.24 | 39283682.38 | 39283682.54 | 0.0300 | 0.0237 |
| Saturn | 102855-06-04 19:25 G | 39288232.09 | 39288232.31 | 39288232.54 | 0.0266 | 0.0133 |
| Saturn | 102856-06-15 14:52 G | 39288608.88 | 39288609.12 | 39288609.35 | 0.0263 | 0.0080 |
| Uranus | 102858-10-22 17:30 G | 39289468.06 | 39289468.23 | 39289468.44 | 0.0135 | 0.0091 |
| Uranus | 102859-10-27 05:59 G | 39289837.50 | 39289837.75 | 39289837.99 | 0.0135 | 0.0012 |
| Uranus | 102860-10-30 07:11 G | 39290206.62 | 39290206.80 | 39290207.01 | 0.0135 | 0.0087 |
| Jupiter | 102861-05-21 16:47 G | 39290409.98 | 39290410.20 | 39290410.43 | 0.0494 | 0.0135 |
| Pluto | 102862-04-27 23:45 G | 39290751.27 | 39290751.49 | 39290751.75 | 0.0080 | 0.0028 |
| Saturn | 102870-11-28 23:01 G | 39293888.30 | 39293888.46 | 39293888.63 | 0.0295 | 0.0208 |
| Saturn | 102871-12-13 10:47 G | 39294267.72 | 39294267.95 | 39294268.17 | 0.0299 | 0.0087 |
| Jupiter | 102873-05-26 12:57 G | 39294797.85 | 39294798.04 | 39294798.23 | 0.0495 | 0.0285 |
| Mars | 102881-08-23 12:42 G | 39297808.85 | 39297809.03 | 39297809.22 | 0.1795 | 0.0337 |
| Saturn | 102884-05-29 10:33 G | 39298818.84 | 39298818.94 | 39298819.05 | 0.0267 | 0.0238 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 102885-06-10 17:45 G | 39299195.99 | 39299196.24 | 39299196.49 | 0.0264 | 0.0021 |
| Saturn | 102886-06-22 11:01 G | 39299572.81 | 39299572.96 | 39299573.14 | 0.0262 | 0.0198 |
| Saturn | 102900-12-07 00:28 G | 39304853.28 | 39304853.52 | 39304853.76 | 0.0297 | 0.0053 |
| Uranus | 102901-04-22 23:30 G | 39304990.30 | 39304990.48 | 39304990.69 | 0.0143 | 0.0089 |
| Saturn | 102901-12-21 13:11 G | 39305232.93 | 39305233.05 | 39305233.20 | 0.0300 | 0.0249 |
| Uranus | 102902-04-28 00:28 G | 39305360.26 | 39305360.52 | 39305360.78 | 0.0143 | 0.0034 |
| Jupiter | 102902-11-19 17:59 G | 39305566.05 | 39305566.25 | 39305566.46 | 0.0531 | 0.0259 |
| Uranus | 102903-05-03 00:13 G | 39305730.42 | 39305730.51 | 39305730.62 | 0.0143 | 0.0130 |
| Neptune | 102909-10-24 14:09 G | 39308097.04 | 39308097.09 | 39308097.20 | 0.0090 | 0.0085 |
| Neptune | 102910-10-27 08:09 G | 39308464.69 | 39308464.84 | 39308464.99 | 0.0090 | 0.0073 |
| Neptune | 102911-10-29 15:21 G | 39308831.94 | 39308832.14 | 39308832.37 | 0.0090 | 0.0045 |
| Neptune | 102912-10-31 04:33 G | 39309199.46 | 39309199.69 | 39309199.95 | 0.0090 | 0.0033 |
| Neptune | 102913-11-02 16:47 G | 39309566.95 | 39309567.20 | 39309567.44 | 0.0090 | 0.0004 |
| Saturn | 102914-06-06 10:33 G | 39309782.72 | 39309782.94 | 39309783.16 | 0.0266 | 0.0123 |
| Neptune | 102914-11-05 00:42 G | 39309934.28 | 39309934.53 | 39309934.80 | 0.0090 | 0.0008 |
| Jupiter | 102914-11-24 16:47 G | 39309953.99 | 39309954.20 | 39309954.41 | 0.0532 | 0.0165 |
| Saturn | 102915-06-18 13:11 G | 39310159.83 | 39310160.05 | 39310160.28 | 0.0263 | 0.0099 |
| Neptune | 102915-11-07 16:47 G | 39310302.00 | 39310302.20 | 39310302.45 | 0.0090 | 0.0037 |
| Neptune | 102916-11-08 22:04 G | 39310669.22 | 39310669.42 | 39310669.65 | 0.0090 | 0.0048 |
| Neptune | 102917-11-11 16:04 G | 39311037.06 | 39311037.17 | 39311037.32 | 0.0090 | 0.0077 |
| Neptune | 102918-11-13 20:23 G | 39311404.34 | 39311404.35 | 39311404.43 | 0.0090 | 0.0089 |
| Saturn | 102929-11-30 22:47 G | 39315439.28 | 39315439.45 | 39315439.63 | 0.0295 | 0.0197 |
| Saturn | 102930-12-15 06:28 G | 39315818.54 | 39315818.77 | 39315819.01 | 0.0298 | 0.0097 |
| Uranus | 102942-10-24 02:23 G | 39320149.39 | 39320149.60 | 39320149.82 | 0.0135 | 0.0072 |
| Saturn | 102943-06-01 09:35 G | 39320369.78 | 39320369.90 | 39320370.03 | 0.0267 | 0.0228 |
| Uranus | 102943-10-28 16:18 G | 39320518.93 | 39320519.18 | 39320519.43 | 0.0135 | 0.0002 |
| Jupiter | 102944-05-22 12:28 G | 39320725.80 | 39320726.02 | 39320726.24 | 0.0495 | 0.0159 |
| Saturn | 102944-06-12 10:33 G | 39320746.68 | 39320746.94 | 39320747.19 | 0.0264 | 0.0006 |
| Uranus | 102944-10-31 16:18 G | 39320888.03 | 39320888.18 | 39320888.35 | 0.0135 | 0.0104 |
| Saturn | 102945-06-24 02:37 G | 39321123.48 | 39321123.61 | 39321123.75 | 0.0262 | 0.0219 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 102956-05-26 19:25 G | 39325113.11 | 39325113.31 | 39325113.53 | 0.0495 | 0.0256 |
| Saturn | 102959-12-08 20:23 G | 39326404.12 | 39326404.35 | 39326404.58 | 0.0297 | 0.0045 |
| Saturn | 102960-12-22 12:28 G | 39326783.91 | 39326784.02 | 39326784.14 | 0.0300 | 0.0257 |
| Saturn | 102973-06-07 08:37 G | 39331333.64 | 39331333.86 | 39331334.08 | 0.0266 | 0.0109 |
| Saturn | 102974-06-19 12:57 G | 39331710.82 | 39331711.04 | 39331711.27 | 0.0263 | 0.0115 |
| Mars | 102982-02-20 05:30 G | 39334513.53 | 39334513.73 | 39334513.92 | 0.1751 | 0.0295 |
| Uranus | 102985-04-23 09:21 G | 39335671.69 | 39335671.89 | 39335672.11 | 0.0143 | 0.0075 |
| Jupiter | 102985-11-19 03:49 G | 39335881.48 | 39335881.66 | 39335881.85 | 0.0532 | 0.0294 |
| Uranus | 102986-04-28 07:54 G | 39336041.57 | 39336041.83 | 39336042.10 | 0.0143 | 0.0023 |
| Saturn | 102988-12-01 18:13 G | 39336990.08 | 39336990.26 | 39336990.47 | 0.0294 | 0.0185 |
| Saturn | 102989-12-15 23:16 G | 39337369.24 | 39337369.47 | 39337369.70 | 0.0298 | 0.0106 |
| Neptune | 102992-04-23 19:25 G | 39338229.26 | 39338229.31 | 39338229.41 | 0.0088 | 0.0084 |
| Neptune | 102993-04-26 07:25 G | 39338596.67 | 39338596.81 | 39338596.98 | 0.0088 | 0.0069 |
| Neptune | 102994-04-28 17:16 G | 39338964.01 | 39338964.22 | 39338964.47 | 0.0088 | 0.0045 |
| Neptune | 102995-05-01 09:35 G | 39339331.68 | 39339331.90 | 39339332.15 | 0.0088 | 0.0031 |
| Neptune | 102996-05-02 15:35 G | 39339698.89 | 39339699.15 | 39339699.42 | 0.0088 | 0.0006 |
| Neptune | 102997-05-05 10:33 G | 39340066.68 | 39340066.94 | 39340067.20 | 0.0088 | 0.0007 |
| Jupiter | 102997-11-24 08:09 G | 39340269.61 | 39340269.84 | 39340270.07 | 0.0532 | 0.0126 |
| Neptune | 102998-05-07 15:06 G | 39340433.91 | 39340434.13 | 39340434.39 | 0.0088 | 0.0033 |
| Neptune | 102999-05-10 09:35 G | 39340801.68 | 39340801.90 | 39340802.13 | 0.0088 | 0.0046 |
| Neptune | 103000-05-12 15:49 G | 39341169.05 | 39341169.16 | 39341169.34 | 0.0088 | 0.0073 |

104TH MILLENNIUM CE

This is a list of transits of Moon in the 104th millennium CE.

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|------|------|---|-------|-----|-----|--------|-------|---|
| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
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TRANSIT

TIME

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 103001-05-15 07:11 G | 39341536.75 | 39341536.80 | 39341536.89 | 0.0088 | 0.0085 |
| Saturn | 103002-06-03 01:54 G | 39341920.44 | 39341920.58 | 39341920.75 | 0.0268 | 0.0213 |
| Saturn | 103003-06-15 02:09 G | 39342297.33 | 39342297.59 | 39342297.84 | 0.0264 | 0.0012 |
| Saturn | 103004-06-26 00:42 G | 39342674.44 | 39342674.53 | 39342674.65 | 0.0262 | 0.0234 |
| Saturn | 103018-12-10 23:16 G | 39347955.24 | 39347955.47 | 39347955.71 | 0.0297 | 0.0033 |
| Saturn | 103019-12-25 13:25 G | 39348334.97 | 39348335.06 | 39348335.18 | 0.0300 | 0.0270 |
| Pluto | 103020-10-30 05:01 G | 39348644.52 | 39348644.71 | 39348644.95 | 0.0064 | 0.0034 |
| Pluto | 103021-10-31 22:47 G | 39349011.30 | 39349011.45 | 39349011.65 | 0.0064 | 0.0047 |
| Uranus | 103026-10-25 10:04 G | 39350830.74 | 39350830.92 | 39350831.14 | 0.0135 | 0.0083 |
| Jupiter | 103027-05-23 17:01 G | 39351040.99 | 39351041.21 | 39351041.44 | 0.0494 | 0.0183 |
| Uranus | 103027-10-30 00:28 G | 39351200.27 | 39351200.52 | 39351200.77 | 0.0135 | 0.0020 |
| Uranus | 103028-11-01 23:59 G | 39351569.34 | 39351569.50 | 39351569.70 | 0.0135 | 0.0094 |
| Saturn | 103032-06-09 09:35 G | 39352884.68 | 39352884.90 | 39352885.14 | 0.0266 | 0.0092 |
| Saturn | 103033-06-21 08:37 G | 39353261.65 | 39353261.86 | 39353262.10 | 0.0264 | 0.0133 |
| Jupiter | 103039-05-28 10:04 G | 39355428.72 | 39355428.92 | 39355429.12 | 0.0494 | 0.0231 |
| Saturn | 103047-12-04 14:23 G | 39358540.91 | 39358541.10 | 39358541.30 | 0.0294 | 0.0175 |
| Saturn | 103048-12-17 22:18 G | 39358920.22 | 39358920.43 | 39358920.65 | 0.0298 | 0.0118 |
| Saturn | 103061-06-03 18:57 G | 39363471.13 | 39363471.29 | 39363471.47 | 0.0268 | 0.0192 |
| Saturn | 103062-06-16 02:23 G | 39363848.37 | 39363848.60 | 39363848.84 | 0.0265 | 0.0039 |
| Saturn | 103063-06-28 03:35 G | 39364225.62 | 39364225.65 | 39364225.71 | 0.0262 | 0.0257 |
| Jupiter | 103068-11-19 11:30 G | 39366196.81 | 39366196.98 | 39366197.17 | 0.0531 | 0.0341 |
| Uranus | 103069-04-24 20:37 G | 39366353.15 | 39366353.36 | 39366353.59 | 0.0143 | 0.0074 |
| Uranus | 103070-04-29 15:06 G | 39366722.88 | 39366723.13 | 39366723.38 | 0.0143 | 0.0038 |
| Uranus | 103071-05-04 21:21 G | 39367093.35 | 39367093.39 | 39367093.47 | 0.0143 | 0.0138 |
| Neptune | 103074-10-27 16:47 G | 39368365.08 | 39368365.20 | 39368365.33 | 0.0090 | 0.0077 |
| Neptune | 103075-10-29 23:59 G | 39368732.31 | 39368732.50 | 39368732.73 | 0.0090 | 0.0052 |
| Neptune | 103076-10-31 17:30 G | 39369100.02 | 39369100.23 | 39369100.47 | 0.0090 | 0.0038 |
| Neptune | 103077-11-02 22:18 G | 39369467.18 | 39369467.43 | 39369467.69 | 0.0090 | 0.0013 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 103077-12-12 00:57 G | 39369506.29 | 39369506.54 | 39369506.79 | 0.0297 | 0.0024 |
| Neptune | 103078-11-05 16:47 G | 39369834.95 | 39369835.20 | 39369835.46 | 0.0090 | 0.0004 |
| Saturn | 103078-12-26 10:47 G | 39369885.87 | 39369885.95 | 39369886.05 | 0.0300 | 0.0277 |
| Neptune | 103079-11-07 22:18 G | 39370202.21 | 39370202.43 | 39370202.68 | 0.0090 | 0.0029 |
| Neptune | 103080-11-09 13:54 G | 39370569.87 | 39370570.08 | 39370570.33 | 0.0090 | 0.0045 |
| Jupiter | 103080-11-24 08:23 G | 39370584.63 | 39370584.85 | 39370585.07 | 0.0532 | 0.0085 |
| Neptune | 103081-11-11 23:16 G | 39370937.33 | 39370937.47 | 39370937.64 | 0.0090 | 0.0069 |
| Neptune | 103082-11-14 09:21 G | 39371304.83 | 39371304.89 | 39371305.01 | 0.0090 | 0.0084 |
| Saturn | 103091-06-11 03:49 G | 39374435.41 | 39374435.66 | 39374435.92 | 0.0266 | 0.0058 |
| Saturn | 103092-06-22 01:40 G | 39374812.39 | 39374812.57 | 39374812.78 | 0.0264 | 0.0165 |
| Jupiter | 103092-11-29 10:18 G | 39374972.85 | 39374972.93 | 39374973.01 | 0.0533 | 0.0498 |
| Saturn | 103106-12-07 00:28 G | 39380092.33 | 39380092.52 | 39380092.72 | 0.0294 | 0.0160 |
| Saturn | 103107-12-21 11:01 G | 39380471.75 | 39380471.96 | 39380472.17 | 0.0298 | 0.0136 |
| Pluto | 103110-05-01 14:09 G | 39381333.89 | 39381334.09 | 39381334.33 | 0.0080 | 0.0039 |
| Jupiter | 103110-05-24 07:54 G | 39381356.63 | 39381356.83 | 39381357.04 | 0.0494 | 0.0233 |
| Uranus | 103110-10-26 20:37 G | 39381512.17 | 39381512.36 | 39381512.58 | 0.0135 | 0.0076 |
| Uranus | 103111-10-31 06:28 G | 39381881.51 | 39381881.77 | 39381882.03 | 0.0135 | 0.0015 |
| Uranus | 103112-11-03 10:47 G | 39382250.83 | 39382250.95 | 39382251.11 | 0.0135 | 0.0109 |
| Saturn | 103120-06-06 01:40 G | 39385022.38 | 39385022.57 | 39385022.78 | 0.0268 | 0.0157 |
| Saturn | 103121-06-18 06:42 G | 39385399.54 | 39385399.78 | 39385400.03 | 0.0265 | 0.0069 |
| Jupiter | 103122-05-28 12:13 G | 39385743.79 | 39385744.01 | 39385744.24 | 0.0494 | 0.0149 |
| Saturn | 103135-12-01 00:13 G | 39390678.46 | 39390678.51 | 39390678.56 | 0.0293 | 0.0285 |
| Saturn | 103136-12-14 03:49 G | 39391057.42 | 39391057.66 | 39391057.90 | 0.0297 | 0.0005 |
| Saturn | 103149-05-31 19:11 G | 39395609.21 | 39395609.30 | 39395609.39 | 0.0270 | 0.0251 |
| Saturn | 103150-06-13 05:45 G | 39395986.50 | 39395986.74 | 39395986.98 | 0.0266 | 0.0029 |
| Saturn | 103151-06-25 10:33 G | 39396363.76 | 39396363.94 | 39396364.12 | 0.0264 | 0.0176 |
| Jupiter | 103151-11-20 14:52 G | 39396512.01 | 39396512.12 | 39396512.24 | 0.0532 | 0.0452 |
| Uranus | 103153-04-26 05:01 G | 39397034.50 | 39397034.71 | 39397034.95 | 0.0143 | 0.0075 |
| Uranus | 103154-05-01 05:01 G | 39397404.49 | 39397404.71 | 39397404.95 | 0.0143 | 0.0049 |
| Neptune | 103157-04-27 16:18 G | 39398497.05 | 39398497.18 | 39398497.35 | 0.0088 | 0.0071 |

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| Neptune | 103158-04-30 03:06 G | 39398864.45 | 39398864.63 | 39398864.87 | 0.0088 | 0.0056 |
| Neptune | 103159-05-02 18:13 G | 39399232.04 | 39399232.26 | 39399232.51 | 0.0088 | 0.0033 |
| Neptune | 103160-05-04 01:11 G | 39399599.30 | 39399599.55 | 39399599.83 | 0.0088 | 0.0017 |
| Neptune | 103161-05-06 20:09 G | 39399967.09 | 39399967.34 | 39399967.60 | 0.0088 | 0.0008 |
| Neptune | 103162-05-09 00:42 G | 39400334.29 | 39400334.53 | 39400334.79 | 0.0088 | 0.0024 |
| Neptune | 103163-05-11 19:25 G | 39400702.10 | 39400702.31 | 39400702.55 | 0.0088 | 0.0046 |
| Jupiter | 103163-11-25 08:37 G | 39400899.63 | 39400899.86 | 39400900.10 | 0.0532 | 0.0039 |
| Neptune | 103164-05-13 02:09 G | 39401069.43 | 39401069.59 | 39401069.79 | 0.0088 | 0.0062 |
| Neptune | 103165-05-15 17:01 G | 39401437.16 | 39401437.21 | 39401437.32 | 0.0088 | 0.0084 |
| Mars | 103165-08-26 09:35 G | 39401539.75 | 39401539.90 | 39401540.05 | 0.1785 | 0.0937 |
| Saturn | 103165-12-08 10:47 G | 39401643.73 | 39401643.95 | 39401644.19 | 0.0295 | 0.0116 |
| Saturn | 103166-12-22 16:04 G | 39402022.99 | 39402023.17 | 39402023.37 | 0.0298 | 0.0187 |
| Jupiter | 103175-11-30 15:21 G | 39405288.06 | 39405288.14 | 39405288.22 | 0.0532 | 0.0492 |
| Saturn | 103179-06-08 00:57 G | 39406573.32 | 39406573.54 | 39406573.77 | 0.0268 | 0.0133 |
| Saturn | 103180-06-19 03:35 G | 39406950.41 | 39406950.65 | 39406950.89 | 0.0265 | 0.0075 |
| Jupiter | 103193-05-23 09:35 G | 39411671.70 | 39411671.90 | 39411672.10 | 0.0495 | 0.0236 |
| Uranus | 103194-10-27 09:35 G | 39412193.69 | 39412193.90 | 39412194.13 | 0.0135 | 0.0066 |
| Saturn | 103194-12-02 17:45 G | 39412230.11 | 39412230.24 | 39412230.39 | 0.0293 | 0.0233 |
| Uranus | 103195-10-31 10:47 G | 39412562.71 | 39412562.95 | 39412563.20 | 0.0135 | 0.0012 |
| Saturn | 103195-12-16 23:45 G | 39412609.26 | 39412609.49 | 39412609.73 | 0.0297 | 0.0063 |
| Uranus | 103196-11-04 00:13 G | 39412932.38 | 39412932.51 | 39412932.64 | 0.0135 | 0.0114 |
| Jupiter | 103205-05-27 23:01 G | 39416059.22 | 39416059.46 | 39416059.70 | 0.0494 | 0.0107 |
| Saturn | 103208-06-02 08:09 G | 39417160.73 | 39417160.84 | 39417160.96 | 0.0269 | 0.0237 |
| Saturn | 103209-06-14 14:09 G | 39417537.84 | 39417538.09 | 39417538.35 | 0.0266 | 0.0026 |
| Saturn | 103210-06-26 09:06 G | 39417914.70 | 39417914.88 | 39417915.08 | 0.0264 | 0.0176 |
| Jupiter | 103217-06-01 09:35 G | 39420446.82 | 39420446.90 | 39420446.97 | 0.0494 | 0.0464 |
| Saturn | 103224-12-09 23:30 G | 39423195.25 | 39423195.48 | 39423195.71 | 0.0295 | 0.0062 |
| Saturn | 103225-12-24 11:30 G | 39423574.85 | 39423574.98 | 39423575.13 | 0.0298 | 0.0236 |
| Uranus | 103237-04-26 13:11 G | 39427715.84 | 39427716.05 | 39427716.28 | 0.0143 | 0.0069 |
| Uranus | 103238-05-01 19:40 G | 39428086.08 | 39428086.32 | 39428086.57 | 0.0143 | 0.0050 |

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| Saturn | 103238-06-09 10:47 G | 39428124.75 | 39428124.95 | 39428125.17 | 0.0267 | 0.0132 |
| Neptune | 103238-10-28 05:30 G | 39428265.65 | 39428265.73 | 39428265.85 | 0.0090 | 0.0082 |
| Saturn | 103239-06-21 17:30 G | 39428501.99 | 39428502.23 | 39428502.47 | 0.0265 | 0.0083 |
| Neptune | 103239-10-30 10:18 G | 39428632.77 | 39428632.93 | 39428633.14 | 0.0090 | 0.0061 |
| Neptune | 103240-11-01 03:06 G | 39429000.42 | 39429000.63 | 39429000.88 | 0.0090 | 0.0043 |
| Neptune | 103241-11-03 11:16 G | 39429367.73 | 39429367.97 | 39429368.21 | 0.0090 | 0.0020 |
| Neptune | 103242-11-05 23:16 G | 39429735.21 | 39429735.47 | 39429735.74 | 0.0090 | 0.0002 |
| Neptune | 103243-11-08 12:13 G | 39430102.77 | 39430103.01 | 39430103.25 | 0.0090 | 0.0021 |
| Neptune | 103244-11-09 19:25 G | 39430470.09 | 39430470.31 | 39430470.56 | 0.0090 | 0.0040 |
| Neptune | 103245-11-12 12:42 G | 39430837.86 | 39430838.03 | 39430838.23 | 0.0090 | 0.0061 |
| Neptune | 103246-11-14 17:45 G | 39431205.13 | 39431205.24 | 39431205.36 | 0.0090 | 0.0079 |
| Jupiter | 103246-11-24 14:23 G | 39431214.86 | 39431215.10 | 39431215.33 | 0.0532 | 0.0092 |
| Saturn | 103253-12-04 06:28 G | 39433781.58 | 39433781.77 | 39433781.96 | 0.0294 | 0.0191 |
| Saturn | 103254-12-18 09:21 G | 39434160.66 | 39434160.89 | 39434161.12 | 0.0297 | 0.0097 |
| Jupiter | 103258-11-29 07:25 G | 39435602.67 | 39435602.81 | 39435602.97 | 0.0532 | 0.0392 |
| Mars | 103266-02-22 12:42 G | 39438244.83 | 39438245.03 | 39438245.24 | 0.1760 | 0.0203 |
| Saturn | 103267-06-04 10:33 G | 39438711.82 | 39438711.94 | 39438712.08 | 0.0269 | 0.0231 |
| Saturn | 103268-06-15 17:30 G | 39439088.99 | 39439089.23 | 39439089.48 | 0.0266 | 0.0009 |
| Saturn | 103269-06-27 22:33 G | 39439466.31 | 39439466.44 | 39439466.58 | 0.0263 | 0.0216 |
| Pluto | 103269-11-02 15:49 G | 39439593.90 | 39439594.16 | 39439594.41 | 0.0064 | 0.0003 |
| Jupiter | 103276-05-22 10:04 G | 39441986.73 | 39441986.92 | 39441987.12 | 0.0494 | 0.0280 |
| Uranus | 103278-10-27 11:59 G | 39442874.79 | 39442875.00 | 39442875.24 | 0.0135 | 0.0060 |
| Uranus | 103279-11-01 02:37 G | 39443244.36 | 39443244.61 | 39443244.85 | 0.0135 | 0.0015 |
| Uranus | 103280-11-04 02:37 G | 39443613.50 | 39443613.61 | 39443613.75 | 0.0135 | 0.0116 |
| Saturn | 103283-12-12 23:45 G | 39444747.25 | 39444747.49 | 39444747.74 | 0.0295 | 0.0038 |
| Saturn | 103284-12-26 07:11 G | 39445126.67 | 39445126.80 | 39445126.93 | 0.0298 | 0.0254 |
| Jupiter | 103288-05-27 02:52 G | 39446374.39 | 39446374.62 | 39446374.86 | 0.0494 | 0.0090 |
| Saturn | 103297-06-10 22:04 G | 39449676.19 | 39449676.42 | 39449676.67 | 0.0267 | 0.0101 |
| Saturn | 103298-06-22 20:09 G | 39450053.13 | 39450053.34 | 39450053.57 | 0.0264 | 0.0129 |
| Jupiter | 103300-06-01 05:59 G | 39450761.64 | 39450761.75 | 39450761.87 | 0.0494 | 0.0429 |

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| Saturn | 103312-12-07 01:25 G | 39455333.39 | 39455333.56 | 39455333.76 | 0.0294 | 0.0178 |
| Saturn | 103313-12-21 11:01 G | 39455712.75 | 39455712.96 | 39455713.18 | 0.0298 | 0.0112 |
| Uranus | 103321-04-28 05:01 G | 39458397.48 | 39458397.71 | 39458397.95 | 0.0143 | 0.0059 |
| Neptune | 103321-04-28 06:13 G | 39458397.65 | 39458397.76 | 39458397.87 | 0.0088 | 0.0079 * |
| Neptune | 103322-04-30 10:47 G | 39458764.77 | 39458764.95 | 39458765.15 | 0.0088 | 0.0059 |
| Uranus | 103322-05-02 23:01 G | 39458767.22 | 39458767.46 | 39458767.71 | 0.0143 | 0.0048 |
| Neptune | 103323-05-03 05:01 G | 39459132.49 | 39459132.71 | 39459132.97 | 0.0088 | 0.0040 |
| Neptune | 103324-05-04 12:42 G | 39459499.80 | 39459500.03 | 39459500.29 | 0.0088 | 0.0020 |
| Neptune | 103325-05-07 03:06 G | 39459867.36 | 39459867.63 | 39459867.90 | 0.0088 | 0.0001 |
| Neptune | 103326-05-09 14:52 G | 39460234.89 | 39460235.12 | 39460235.38 | 0.0088 | 0.0020 |
| Saturn | 103326-06-07 02:52 G | 39460263.46 | 39460263.62 | 39460263.80 | 0.0268 | 0.0191 |
| Neptune | 103327-05-11 23:30 G | 39460602.26 | 39460602.48 | 39460602.74 | 0.0088 | 0.0038 |
| Saturn | 103327-06-19 11:01 G | 39460640.71 | 39460640.96 | 39460641.20 | 0.0266 | 0.0041 |
| Neptune | 103328-05-13 16:33 G | 39460970.03 | 39460970.19 | 39460970.41 | 0.0088 | 0.0059 |
| Saturn | 103328-06-30 05:01 G | 39461017.66 | 39461017.71 | 39461017.79 | 0.0263 | 0.0255 |
| Neptune | 103329-05-15 22:47 G | 39461337.33 | 39461337.45 | 39461337.57 | 0.0088 | 0.0077 |
| Jupiter | 103329-11-24 08:23 G | 39461529.64 | 39461529.85 | 39461530.07 | 0.0532 | 0.0191 |
| Jupiter | 103341-11-29 00:42 G | 39465917.33 | 39465917.53 | 39465917.74 | 0.0532 | 0.0241 |
| Saturn | 103342-12-15 12:57 G | 39466298.80 | 39466299.04 | 39466299.29 | 0.0296 | 0.0019 |
| Saturn | 103343-12-30 01:40 G | 39466678.50 | 39466678.57 | 39466678.65 | 0.0299 | 0.0283 |
| Saturn | 103356-06-13 08:09 G | 39471227.60 | 39471227.84 | 39471228.08 | 0.0267 | 0.0050 |
| Saturn | 103357-06-25 14:52 G | 39471604.93 | 39471605.12 | 39471605.31 | 0.0264 | 0.0164 |
| Pluto | 103359-05-05 13:11 G | 39472283.80 | 39472284.05 | 39472284.30 | 0.0080 | 0.0019 |
| Jupiter | 103359-05-23 10:33 G | 39472301.81 | 39472301.94 | 39472302.09 | 0.0495 | 0.0407 |
| Uranus | 103362-10-29 03:06 G | 39473556.41 | 39473556.63 | 39473556.85 | 0.0135 | 0.0058 |
| Uranus | 103363-11-02 06:57 G | 39473925.53 | 39473925.79 | 39473926.05 | 0.0135 | 0.0023 |
| Uranus | 103364-11-05 16:47 G | 39474295.10 | 39474295.20 | 39474295.35 | 0.0135 | 0.0115 |
| Jupiter | 103371-05-27 23:45 G | 39476689.26 | 39476689.49 | 39476689.72 | 0.0494 | 0.0015 |
| Saturn | 103371-12-09 23:59 G | 39476885.29 | 39476885.50 | 39476885.72 | 0.0295 | 0.0145 |
| Saturn | 103372-12-23 04:33 G | 39477264.47 | 39477264.69 | 39477264.90 | 0.0298 | 0.0154 |

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| Jupiter | 103383-06-01 12:13 G | 39481076.86 | 39481077.01 | 39481077.17 | 0.0494 | 0.0385 |
| Saturn | 103385-06-08 14:52 G | 39481814.91 | 39481815.12 | 39481815.35 | 0.0268 | 0.0140 |
| Saturn | 103386-06-20 16:04 G | 39482191.93 | 39482192.17 | 39482192.41 | 0.0265 | 0.0073 |
| Saturn | 103400-12-04 10:18 G | 39487471.83 | 39487471.93 | 39487472.05 | 0.0292 | 0.0254 |
| Saturn | 103401-12-18 16:33 G | 39487850.96 | 39487851.19 | 39487851.43 | 0.0296 | 0.0038 |
| Neptune | 103402-10-29 12:13 G | 39488165.94 | 39488166.01 | 39488166.10 | 0.0090 | 0.0085 |
| Neptune | 103403-11-01 01:25 G | 39488533.43 | 39488533.56 | 39488533.73 | 0.0090 | 0.0070 |
| Neptune | 103404-11-02 09:06 G | 39488900.66 | 39488900.88 | 39488901.11 | 0.0090 | 0.0044 |
| Uranus | 103405-04-29 06:28 G | 39489078.53 | 39489078.77 | 39489079.03 | 0.0143 | 0.0050 |
| Neptune | 103405-11-05 02:37 G | 39489268.38 | 39489268.61 | 39489268.86 | 0.0090 | 0.0029 |
| Uranus | 103406-05-04 11:59 G | 39489448.77 | 39489449.00 | 39489449.24 | 0.0143 | 0.0048 |
| Neptune | 103406-11-07 07:25 G | 39489635.55 | 39489635.81 | 39489636.06 | 0.0090 | 0.0004 |
| Neptune | 103407-11-10 01:25 G | 39490003.31 | 39490003.56 | 39490003.82 | 0.0090 | 0.0011 |
| Neptune | 103408-11-11 06:42 G | 39490370.57 | 39490370.78 | 39490371.02 | 0.0090 | 0.0037 |
| Neptune | 103409-11-13 21:49 G | 39490738.21 | 39490738.41 | 39490738.64 | 0.0090 | 0.0052 |
| Neptune | 103410-11-16 07:11 G | 39491105.70 | 39491105.80 | 39491105.95 | 0.0090 | 0.0078 |
| Jupiter | 103412-11-24 05:01 G | 39491844.51 | 39491844.71 | 39491844.92 | 0.0532 | 0.0222 |
| Saturn | 103414-06-04 18:42 G | 39492402.18 | 39492402.28 | 39492402.40 | 0.0269 | 0.0237 |
| Saturn | 103415-06-17 03:06 G | 39492779.38 | 39492779.63 | 39492779.89 | 0.0266 | 0.0024 |
| Saturn | 103416-06-27 22:18 G | 39493156.24 | 39493156.43 | 39493156.63 | 0.0264 | 0.0171 |
| Jupiter | 103424-11-29 05:45 G | 39496232.53 | 39496232.74 | 39496232.96 | 0.0532 | 0.0212 |
| Saturn | 103430-12-12 11:59 G | 39498436.77 | 39498437.00 | 39498437.23 | 0.0295 | 0.0084 |
| Saturn | 103431-12-26 23:16 G | 39498816.32 | 39498816.47 | 39498816.64 | 0.0299 | 0.0217 |
| Jupiter | 103442-05-23 17:16 G | 39502617.12 | 39502617.22 | 39502617.34 | 0.0495 | 0.0437 |
| Saturn | 103444-06-11 02:37 G | 39503366.40 | 39503366.61 | 39503366.83 | 0.0267 | 0.0122 |
| Saturn | 103445-06-23 11:16 G | 39503743.73 | 39503743.97 | 39503744.20 | 0.0265 | 0.0080 |
| Uranus | 103446-10-30 11:45 G | 39504237.77 | 39504237.99 | 39504238.24 | 0.0135 | 0.0060 |
| Uranus | 103447-11-03 16:47 G | 39504606.97 | 39504607.20 | 39504607.44 | 0.0135 | 0.0035 |
| Uranus | 103448-11-07 02:23 G | 39504976.47 | 39504976.60 | 39504976.75 | 0.0135 | 0.0113 |
| Mars | 103449-08-28 19:25 G | 39505271.11 | 39505271.31 | 39505271.51 | 0.1776 | 0.0467 |

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| Jupiter | 103454-05-27 22:18 G | 39507004.20 | 39507004.43 | 39507004.67 | 0.0494 | 0.0101 |
| Saturn | 103459-12-07 03:21 G | 39509023.46 | 39509023.64 | 39509023.83 | 0.0293 | 0.0195 |
| Saturn | 103460-12-20 04:47 G | 39509402.47 | 39509402.70 | 39509402.94 | 0.0297 | 0.0096 |
| Jupiter | 103466-06-01 14:23 G | 39511391.90 | 39511392.10 | 39511392.30 | 0.0494 | 0.0259 |
| Saturn | 103473-06-06 05:45 G | 39513953.61 | 39513953.74 | 39513953.89 | 0.0269 | 0.0224 |
| Saturn | 103474-06-18 09:21 G | 39514330.64 | 39514330.89 | 39514331.14 | 0.0266 | 0.0016 |
| Saturn | 103475-06-30 12:28 G | 39514707.88 | 39514708.02 | 39514708.20 | 0.0263 | 0.0197 |
| Neptune | 103485-04-28 12:42 G | 39518297.98 | 39518298.03 | 39518298.10 | 0.0088 | 0.0085 |
| Neptune | 103486-05-01 00:57 G | 39518665.37 | 39518665.54 | 39518665.72 | 0.0088 | 0.0063 |
| Neptune | 103487-05-03 09:49 G | 39519032.68 | 39519032.91 | 39519033.13 | 0.0088 | 0.0046 |
| Neptune | 103488-05-05 02:52 G | 39519400.38 | 39519400.62 | 39519400.88 | 0.0088 | 0.0025 |
| Uranus | 103489-04-29 16:04 G | 39519759.94 | 39519760.17 | 39519760.42 | 0.0143 | 0.0045 |
| Neptune | 103489-05-07 08:37 G | 39519767.60 | 39519767.86 | 39519768.12 | 0.0088 | 0.0008 |
| Saturn | 103489-12-14 10:18 G | 39519988.69 | 39519988.93 | 39519989.17 | 0.0296 | 0.0040 |
| Uranus | 103490-05-04 18:28 G | 39520130.03 | 39520130.27 | 39520130.52 | 0.0143 | 0.0052 |
| Neptune | 103490-05-10 03:35 G | 39520135.39 | 39520135.65 | 39520135.91 | 0.0088 | 0.0015 |
| Saturn | 103490-12-28 18:42 G | 39520368.16 | 39520368.28 | 39520368.42 | 0.0299 | 0.0252 |
| Neptune | 103491-05-12 08:52 G | 39520502.65 | 39520502.87 | 39520503.13 | 0.0088 | 0.0032 |
| Neptune | 103492-05-14 02:23 G | 39520870.40 | 39520870.60 | 39520870.82 | 0.0088 | 0.0055 |
| Neptune | 103493-05-16 11:01 G | 39521237.83 | 39521237.96 | 39521238.12 | 0.0088 | 0.0071 |
| Jupiter | 103495-11-24 00:28 G | 39522159.35 | 39522159.52 | 39522159.69 | 0.0531 | 0.0353 |
| Saturn | 103503-06-14 18:42 G | 39524918.05 | 39524918.28 | 39524918.52 | 0.0267 | 0.0111 |
| Saturn | 103504-06-25 15:49 G | 39525294.93 | 39525295.16 | 39525295.40 | 0.0264 | 0.0111 |
| Jupiter | 103507-11-30 02:37 G | 39526547.39 | 39526547.61 | 39526547.83 | 0.0532 | 0.0127 |
| Pluto | 103517-11-06 21:49 G | 39530177.25 | 39530177.41 | 39530177.62 | 0.0064 | 0.0044 |
| Pluto | 103518-11-08 04:47 G | 39530543.50 | 39530543.70 | 39530543.93 | 0.0064 | 0.0032 |
| Saturn | 103518-12-09 11:30 G | 39530574.79 | 39530574.98 | 39530575.18 | 0.0294 | 0.0170 |
| Saturn | 103519-12-23 20:52 G | 39530954.16 | 39530954.37 | 39530954.59 | 0.0297 | 0.0116 |
| Jupiter | 103525-05-23 15:21 G | 39532932.10 | 39532932.14 | 39532932.19 | 0.0495 | 0.0484 |
| Uranus | 103530-10-31 16:04 G | 39534918.96 | 39534919.17 | 39534919.40 | 0.0135 | 0.0063 |

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| Uranus | 103531-11-05 05:59 G | 39535288.52 | 39535288.75 | 39535289.00 | 0.0135 | 0.0042 |
| Saturn | 103532-06-08 17:16 G | 39535505.08 | 39535505.22 | 39535505.38 | 0.0269 | 0.0209 |
| Uranus | 103532-11-08 06:42 G | 39535657.67 | 39535657.78 | 39535657.91 | 0.0135 | 0.0116 |
| Saturn | 103533-06-21 02:52 G | 39535882.38 | 39535882.62 | 39535882.87 | 0.0265 | 0.0020 |
| Saturn | 103534-07-02 22:47 G | 39536259.37 | 39536259.45 | 39536259.57 | 0.0263 | 0.0241 |
| Jupiter | 103537-05-28 00:28 G | 39537319.28 | 39537319.52 | 39537319.76 | 0.0494 | 0.0117 |
| Saturn | 103548-12-16 13:25 G | 39541539.82 | 39541540.06 | 39541540.30 | 0.0296 | 0.0034 |
| Jupiter | 103549-06-01 13:54 G | 39541706.88 | 39541707.08 | 39541707.29 | 0.0494 | 0.0220 |
| Saturn | 103549-12-31 00:28 G | 39541919.41 | 39541919.52 | 39541919.64 | 0.0299 | 0.0260 |
| Mars | 103550-02-25 17:45 G | 39541976.06 | 39541976.24 | 39541976.41 | 0.1769 | 0.0266 |
| Saturn | 103562-06-15 21:06 G | 39546469.15 | 39546469.38 | 39546469.62 | 0.0267 | 0.0071 |
| Saturn | 103563-06-28 03:21 G | 39546846.46 | 39546846.64 | 39546846.85 | 0.0264 | 0.0156 |
| Neptune | 103567-11-01 13:54 G | 39548433.93 | 39548434.08 | 39548434.26 | 0.0090 | 0.0069 |
| Neptune | 103568-11-02 19:25 G | 39548801.14 | 39548801.31 | 39548801.52 | 0.0090 | 0.0058 |
| Neptune | 103569-11-05 11:16 G | 39549168.73 | 39549168.97 | 39549169.23 | 0.0090 | 0.0029 |
| Neptune | 103570-11-07 20:37 G | 39549536.13 | 39549536.36 | 39549536.61 | 0.0090 | 0.0017 |
| Neptune | 103571-11-10 07:11 G | 39549903.54 | 39549903.80 | 39549904.06 | 0.0090 | 0.0012 |
| Neptune | 103572-11-11 21:49 G | 39550271.18 | 39550271.41 | 39550271.66 | 0.0090 | 0.0025 |
| Uranus | 103573-05-01 04:04 G | 39550441.43 | 39550441.67 | 39550441.93 | 0.0143 | 0.0045 |
| Neptune | 103573-11-14 04:04 G | 39550638.47 | 39550638.67 | 39550638.89 | 0.0090 | 0.0053 |
| Uranus | 103574-05-05 22:33 G | 39550811.23 | 39550811.44 | 39550811.68 | 0.0143 | 0.0063 |
| Neptune | 103574-11-16 21:35 G | 39551006.25 | 39551006.40 | 39551006.60 | 0.0090 | 0.0065 |
| Saturn | 103577-12-11 01:40 G | 39552126.38 | 39552126.57 | 39552126.78 | 0.0294 | 0.0165 |
| Jupiter | 103578-11-24 02:37 G | 39552474.48 | 39552474.61 | 39552474.75 | 0.0531 | 0.0435 |
| Saturn | 103578-12-25 05:59 G | 39552505.53 | 39552505.75 | 39552505.98 | 0.0298 | 0.0127 |
| Jupiter | 103590-11-29 03:49 G | 39556862.44 | 39556862.66 | 39556862.88 | 0.0532 | 0.0016 |
| Saturn | 103591-06-11 04:18 G | 39557056.49 | 39557056.68 | 39557056.90 | 0.0268 | 0.0166 |
| Saturn | 103592-06-22 03:35 G | 39557433.41 | 39557433.65 | 39557433.90 | 0.0265 | 0.0064 |
| Jupiter | 103602-12-04 06:57 G | 39561250.74 | 39561250.79 | 39561250.87 | 0.0532 | 0.0510 |
| Pluto | 103607-05-07 22:18 G | 39562866.24 | 39562866.43 | 39562866.64 | 0.0080 | 0.0052 |

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| Saturn | 103607-12-19 00:13 G | 39563091.28 | 39563091.51 | 39563091.74 | 0.0296 | 0.0013 |
| Saturn | 103609-01-01 12:57 G | 39563470.99 | 39563471.04 | 39563471.10 | 0.0299 | 0.0291 |
| Uranus | 103613-10-27 16:47 G | 39565231.20 | 39565231.20 | 39565231.23 | 0.0135 | 0.0135 |
| Uranus | 103614-11-01 06:42 G | 39565600.57 | 39565600.78 | 39565601.01 | 0.0135 | 0.0059 |
| Uranus | 103615-11-05 07:54 G | 39565969.60 | 39565969.83 | 39565970.08 | 0.0135 | 0.0043 |
| Uranus | 103616-11-08 21:35 G | 39566339.32 | 39566339.40 | 39566339.49 | 0.0135 | 0.0126 |
| Jupiter | 103620-05-27 11:59 G | 39567634.78 | 39567635.00 | 39567635.23 | 0.0495 | 0.0170 |
| Saturn | 103620-06-04 21:21 G | 39567643.33 | 39567643.39 | 39567643.45 | 0.0270 | 0.0260 |
| Saturn | 103621-06-17 09:06 G | 39568020.64 | 39568020.88 | 39568021.13 | 0.0266 | 0.0033 |
| Saturn | 103622-06-29 06:57 G | 39568397.60 | 39568397.79 | 39568397.99 | 0.0264 | 0.0171 |
| Jupiter | 103632-05-31 17:45 G | 39572022.03 | 39572022.24 | 39572022.45 | 0.0494 | 0.0217 |
| Saturn | 103636-12-11 21:06 G | 39573677.16 | 39573677.38 | 39573677.59 | 0.0294 | 0.0135 |
| Saturn | 103637-12-26 06:28 G | 39574056.58 | 39574056.77 | 39574056.97 | 0.0298 | 0.0169 |
| Neptune | 103649-04-28 18:57 G | 39578198.26 | 39578198.29 | 39578198.36 | 0.0088 | 0.0086 |
| Neptune | 103650-05-01 14:09 G | 39578565.96 | 39578566.09 | 39578566.23 | 0.0088 | 0.0074 |
| Saturn | 103650-06-12 03:21 G | 39578607.43 | 39578607.64 | 39578607.85 | 0.0268 | 0.0134 |
| Neptune | 103651-05-03 18:57 G | 39578933.09 | 39578933.29 | 39578933.52 | 0.0088 | 0.0048 |
| Saturn | 103651-06-24 12:28 G | 39578984.79 | 39578985.02 | 39578985.25 | 0.0265 | 0.0071 |
| Neptune | 103652-05-05 12:28 G | 39579300.79 | 39579301.02 | 39579301.28 | 0.0088 | 0.0036 |
| Neptune | 103653-05-07 20:52 G | 39579668.12 | 39579668.37 | 39579668.62 | 0.0088 | 0.0008 |
| Neptune | 103654-05-10 09:35 G | 39580035.63 | 39580035.90 | 39580036.18 | 0.0088 | 0.0005 |
| Neptune | 103655-05-12 23:16 G | 39580403.23 | 39580403.47 | 39580403.70 | 0.0088 | 0.0031 |
| Neptune | 103656-05-14 06:42 G | 39580770.57 | 39580770.78 | 39580771.04 | 0.0088 | 0.0044 |
| Uranus | 103657-05-01 07:54 G | 39581122.59 | 39581122.83 | 39581123.08 | 0.0143 | 0.0046 |
| Neptune | 103657-05-17 01:11 G | 39581138.41 | 39581138.55 | 39581138.71 | 0.0088 | 0.0070 |
| Uranus | 103658-05-06 15:21 G | 39581492.94 | 39581493.14 | 39581493.37 | 0.0143 | 0.0075 |
| Neptune | 103658-05-19 06:13 G | 39581505.69 | 39581505.76 | 39581505.87 | 0.0088 | 0.0082 |
| Jupiter | 103661-11-23 15:49 G | 39582790.03 | 39582790.16 | 39582790.31 | 0.0532 | 0.0424 |
| Saturn | 103665-12-05 22:47 G | 39584263.35 | 39584263.45 | 39584263.58 | 0.0292 | 0.0259 |
| Saturn | 103666-12-19 21:35 G | 39584642.16 | 39584642.40 | 39584642.65 | 0.0296 | 0.0034 |

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| Jupiter | 103673-11-28 08:09 G | 39587177.60 | 39587177.84 | 39587178.07 | 0.0532 | 0.0015 |
| Saturn | 103679-06-06 23:59 G | 39589194.39 | 39589194.50 | 39589194.63 | 0.0270 | 0.0239 |
| Saturn | 103680-06-18 03:35 G | 39589571.40 | 39589571.65 | 39589571.90 | 0.0266 | 0.0034 |
| Saturn | 103681-06-30 06:13 G | 39589948.58 | 39589948.76 | 39589948.95 | 0.0263 | 0.0169 |
| Jupiter | 103685-12-03 11:45 G | 39591565.85 | 39591565.99 | 39591566.14 | 0.0532 | 0.0403 |
| Saturn | 103695-12-14 02:23 G | 39595228.38 | 39595228.60 | 39595228.83 | 0.0294 | 0.0093 |
| Saturn | 103696-12-27 09:35 G | 39595607.73 | 39595607.90 | 39595608.09 | 0.0298 | 0.0203 |
| Uranus | 103698-11-01 11:16 G | 39596281.74 | 39596281.97 | 39596282.23 | 0.0135 | 0.0051 |
| Uranus | 103699-11-05 20:23 G | 39596651.12 | 39596651.35 | 39596651.59 | 0.0135 | 0.0039 |
| Uranus | 103700-11-10 01:54 G | 39597020.57 | 39597020.58 | 39597020.61 | 0.0135 | 0.0134 |
| Jupiter | 103703-05-28 17:01 G | 39597950.02 | 39597950.21 | 39597950.41 | 0.0494 | 0.0253 |
| Saturn | 103709-06-14 10:04 G | 39600158.70 | 39600158.92 | 39600159.13 | 0.0268 | 0.0137 |
| Saturn | 103710-06-26 09:21 G | 39600535.65 | 39600535.89 | 39600536.14 | 0.0265 | 0.0072 |
| Jupiter | 103715-06-02 03:35 G | 39602337.41 | 39602337.65 | 39602337.89 | 0.0494 | 0.0135 |
| Saturn | 103724-12-07 14:23 G | 39605813.97 | 39605814.10 | 39605814.26 | 0.0292 | 0.0230 |
| Saturn | 103725-12-21 20:52 G | 39606193.14 | 39606193.37 | 39606193.60 | 0.0296 | 0.0048 |
| Neptune | 103731-11-01 19:25 G | 39608334.26 | 39608334.31 | 39608334.43 | 0.0090 | 0.0085 |
| Neptune | 103732-11-03 11:01 G | 39608701.77 | 39608701.96 | 39608702.15 | 0.0090 | 0.0055 |
| Mars | 103733-08-30 22:18 G | 39609002.25 | 39609002.43 | 39609002.61 | 0.1766 | 0.0128 |
| Neptune | 103733-11-05 17:30 G | 39609069.02 | 39609069.23 | 39609069.47 | 0.0090 | 0.0044 |
| Neptune | 103734-11-08 11:30 G | 39609436.73 | 39609436.98 | 39609437.23 | 0.0090 | 0.0014 |
| Neptune | 103735-11-10 16:04 G | 39609803.92 | 39609804.17 | 39609804.43 | 0.0090 | 0.0003 |
| Neptune | 103736-11-12 10:04 G | 39610171.68 | 39610171.92 | 39610172.17 | 0.0090 | 0.0027 |
| Neptune | 103737-11-14 15:49 G | 39610538.95 | 39610539.16 | 39610539.40 | 0.0090 | 0.0038 |
| Saturn | 103738-06-08 19:11 G | 39610745.22 | 39610745.30 | 39610745.41 | 0.0270 | 0.0247 |
| Neptune | 103738-11-17 05:59 G | 39610906.58 | 39610906.75 | 39610906.93 | 0.0090 | 0.0067 |
| Saturn | 103739-06-21 08:23 G | 39611122.61 | 39611122.85 | 39611123.09 | 0.0266 | 0.0025 |
| Neptune | 103739-11-19 16:04 G | 39611274.08 | 39611274.17 | 39611274.31 | 0.0090 | 0.0079 |
| Uranus | 103740-04-27 20:23 G | 39611434.30 | 39611434.35 | 39611434.41 | 0.0143 | 0.0139 |
| Saturn | 103740-07-02 08:23 G | 39611499.69 | 39611499.85 | 39611500.04 | 0.0263 | 0.0194 |

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| Uranus | 103741-05-03 00:28 G | 39611804.28 | 39611804.52 | 39611804.76 | 0.0143 | 0.0043 |
| Uranus | 103742-05-07 22:18 G | 39612174.22 | 39612174.43 | 39612174.66 | 0.0143 | 0.0081 |
| Jupiter | 103744-11-23 19:25 G | 39613105.26 | 39613105.31 | 39613105.37 | 0.0531 | 0.0510 |
| Saturn | 103754-12-15 15:35 G | 39616778.93 | 39616779.15 | 39616779.39 | 0.0294 | 0.0096 |
| Saturn | 103755-12-29 23:45 G | 39617158.32 | 39617158.49 | 39617158.68 | 0.0298 | 0.0194 |
| Jupiter | 103756-11-28 17:59 G | 39617493.01 | 39617493.25 | 39617493.49 | 0.0532 | 0.0030 |
| Pluto | 103766-11-10 04:04 G | 39621126.42 | 39621126.67 | 39621126.94 | 0.0064 | 0.0015 |
| Pluto | 103767-11-11 16:47 G | 39621493.10 | 39621493.20 | 39621493.36 | 0.0064 | 0.0055 |
| Saturn | 103768-06-15 00:13 G | 39621709.30 | 39621709.51 | 39621709.74 | 0.0268 | 0.0123 |
| Jupiter | 103768-12-03 17:01 G | 39621881.08 | 39621881.21 | 39621881.35 | 0.0533 | 0.0413 |
| Saturn | 103769-06-27 07:25 G | 39622086.60 | 39622086.81 | 39622087.04 | 0.0265 | 0.0106 |
| Uranus | 103782-11-02 18:57 G | 39626963.06 | 39626963.29 | 39626963.53 | 0.0135 | 0.0041 |
| Uranus | 103783-11-07 06:28 G | 39627332.52 | 39627332.77 | 39627333.02 | 0.0135 | 0.0038 |
| Saturn | 103783-12-09 16:33 G | 39627365.06 | 39627365.19 | 39627365.34 | 0.0292 | 0.0238 |
| Saturn | 103784-12-22 16:04 G | 39627743.92 | 39627744.17 | 39627744.42 | 0.0296 | 0.0041 |
| Jupiter | 103786-05-27 23:16 G | 39628265.28 | 39628265.47 | 39628265.68 | 0.0494 | 0.0242 |
| Saturn | 103797-06-09 19:11 G | 39632296.17 | 39632296.30 | 39632296.45 | 0.0270 | 0.0224 |
| Jupiter | 103798-06-01 19:54 G | 39632653.09 | 39632653.33 | 39632653.56 | 0.0494 | 0.0095 |
| Saturn | 103798-06-21 22:33 G | 39632673.19 | 39632673.44 | 39632673.70 | 0.0266 | 0.0014 |
| Saturn | 103799-07-03 22:18 G | 39633050.32 | 39633050.43 | 39633050.56 | 0.0263 | 0.0228 |
| Jupiter | 103810-06-07 01:40 G | 39637040.50 | 39637040.57 | 39637040.66 | 0.0494 | 0.0461 |
| Saturn | 103813-12-17 15:49 G | 39638329.94 | 39638330.16 | 39638330.39 | 0.0294 | 0.0093 |
| Neptune | 103814-05-02 19:25 G | 39638466.18 | 39638466.31 | 39638466.49 | 0.0088 | 0.0072 |
| Saturn | 103815-01-01 00:42 G | 39638709.36 | 39638709.53 | 39638709.71 | 0.0298 | 0.0204 |
| Neptune | 103815-05-05 09:21 G | 39638833.71 | 39638833.89 | 39638834.07 | 0.0088 | 0.0061 |
| Neptune | 103816-05-06 16:47 G | 39639200.96 | 39639201.20 | 39639201.46 | 0.0088 | 0.0033 |
| Neptune | 103817-05-09 11:01 G | 39639568.71 | 39639568.96 | 39639569.21 | 0.0088 | 0.0022 |
| Neptune | 103818-05-11 15:49 G | 39639935.91 | 39639936.16 | 39639936.43 | 0.0088 | 0.0007 |
| Neptune | 103819-05-14 10:47 G | 39640303.70 | 39640303.95 | 39640304.22 | 0.0088 | 0.0017 |
| Neptune | 103820-05-15 16:33 G | 39640670.99 | 39640671.19 | 39640671.43 | 0.0088 | 0.0046 |

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| Neptune | 103821-05-18 08:52 G | 39641038.69 | 39641038.87 | 39641039.10 | 0.0088 | 0.0057 |
| Neptune | 103822-05-20 18:28 G | 39641406.24 | 39641406.27 | 39641406.35 | 0.0088 | 0.0086 |
| Uranus | 103824-04-29 07:25 G | 39642115.74 | 39642115.81 | 39642115.92 | 0.0143 | 0.0133 |
| Uranus | 103825-05-04 10:33 G | 39642485.70 | 39642485.94 | 39642486.21 | 0.0143 | 0.0036 |
| Uranus | 103826-05-09 08:09 G | 39642855.65 | 39642855.84 | 39642856.06 | 0.0143 | 0.0081 |
| Saturn | 103827-06-18 02:52 G | 39643260.39 | 39643260.62 | 39643260.86 | 0.0268 | 0.0086 |
| Saturn | 103828-06-29 04:47 G | 39643637.48 | 39643637.70 | 39643637.93 | 0.0265 | 0.0131 |
| Mars | 103834-02-28 12:28 G | 39645707.85 | 39645708.02 | 39645708.20 | 0.1777 | 0.0896 |
| Jupiter | 103839-11-30 09:21 G | 39647808.67 | 39647808.89 | 39647809.12 | 0.0532 | 0.0106 |
| Saturn | 103842-12-11 04:47 G | 39648915.55 | 39648915.70 | 39648915.86 | 0.0292 | 0.0222 |
| Saturn | 103843-12-25 09:21 G | 39649294.67 | 39649294.89 | 39649295.12 | 0.0296 | 0.0071 |
| Jupiter | 103851-12-05 02:52 G | 39652196.46 | 39652196.62 | 39652196.78 | 0.0532 | 0.0388 |
| Pluto | 103856-05-11 17:01 G | 39653815.96 | 39653816.21 | 39653816.47 | 0.0080 | 0.0001 |
| Saturn | 103856-06-11 08:37 G | 39653846.70 | 39653846.86 | 39653847.04 | 0.0270 | 0.0192 |
| Saturn | 103857-06-23 21:49 G | 39654224.17 | 39654224.41 | 39654224.65 | 0.0266 | 0.0026 |
| Saturn | 103858-07-06 00:28 G | 39654601.41 | 39654601.52 | 39654601.67 | 0.0263 | 0.0226 |
| Uranus | 103866-11-04 10:04 G | 39657644.68 | 39657644.92 | 39657645.16 | 0.0135 | 0.0034 |
| Uranus | 103867-11-08 10:04 G | 39658013.69 | 39658013.92 | 39658014.17 | 0.0135 | 0.0042 |
| Jupiter | 103869-05-28 13:11 G | 39658580.85 | 39658581.05 | 39658581.27 | 0.0495 | 0.0247 |
| Saturn | 103872-12-18 06:13 G | 39659880.52 | 39659880.76 | 39659881.01 | 0.0294 | 0.0053 |
| Saturn | 103874-01-01 11:59 G | 39660259.88 | 39660260.00 | 39660260.14 | 0.0298 | 0.0247 |
| Jupiter | 103881-06-02 05:01 G | 39662968.49 | 39662968.71 | 39662968.93 | 0.0494 | 0.0121 |
| Saturn | 103886-06-18 14:37 G | 39664810.87 | 39664811.11 | 39664811.35 | 0.0268 | 0.0084 |
| Saturn | 103887-06-30 19:54 G | 39665188.13 | 39665188.33 | 39665188.56 | 0.0265 | 0.0123 |
| Jupiter | 103893-06-06 16:18 G | 39667356.09 | 39667356.18 | 39667356.28 | 0.0493 | 0.0453 |
| Neptune | 103895-11-02 03:35 G | 39668234.56 | 39668234.65 | 39668234.77 | 0.0090 | 0.0082 |
| Neptune | 103896-11-03 21:49 G | 39668602.26 | 39668602.41 | 39668602.59 | 0.0090 | 0.0070 |
| Neptune | 103897-11-06 03:49 G | 39668969.46 | 39668969.66 | 39668969.90 | 0.0090 | 0.0042 |
| Neptune | 103898-11-08 18:28 G | 39669337.04 | 39669337.27 | 39669337.54 | 0.0090 | 0.0030 |
| Neptune | 103899-11-11 05:59 G | 39669704.50 | 39669704.75 | 39669704.99 | 0.0090 | 0.0001 |

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| Neptune | 103900-11-13 15:35 G | 39670071.90 | 39670072.15 | 39670072.42 | 0.0090 | 0.0012 |
| Neptune | 103901-11-16 07:25 G | 39670439.59 | 39670439.81 | 39670440.04 | 0.0090 | 0.0041 |
| Saturn | 103901-12-13 08:23 G | 39670466.67 | 39670466.85 | 39670467.05 | 0.0292 | 0.0181 |
| Neptune | 103902-11-18 12:28 G | 39670806.83 | 39670807.02 | 39670807.25 | 0.0090 | 0.0053 |
| Saturn | 103902-12-27 09:21 G | 39670845.66 | 39670845.89 | 39670846.13 | 0.0296 | 0.0107 |
| Neptune | 103903-11-21 06:42 G | 39671174.70 | 39671174.78 | 39671174.90 | 0.0090 | 0.0082 |
| Uranus | 103908-04-30 21:21 G | 39672797.32 | 39672797.39 | 39672797.51 | 0.0143 | 0.0133 |
| Uranus | 103909-05-05 15:49 G | 39673166.91 | 39673167.16 | 39673167.41 | 0.0143 | 0.0025 |
| Uranus | 103910-05-10 23:16 G | 39673537.27 | 39673537.47 | 39673537.70 | 0.0143 | 0.0079 |
| Saturn | 103915-06-14 10:04 G | 39675397.75 | 39675397.92 | 39675398.09 | 0.0270 | 0.0197 |
| Saturn | 103916-06-25 15:06 G | 39675774.87 | 39675775.13 | 39675775.39 | 0.0266 | 0.0016 |
| Saturn | 103917-07-07 12:57 G | 39676151.92 | 39676152.04 | 39676152.17 | 0.0264 | 0.0225 |
| Jupiter | 103922-11-30 13:54 G | 39678123.87 | 39678124.08 | 39678124.30 | 0.0532 | 0.0157 |
| Saturn | 103931-12-21 05:59 G | 39681431.52 | 39681431.75 | 39681431.99 | 0.0294 | 0.0035 |
| Saturn | 103933-01-03 15:35 G | 39681811.05 | 39681811.15 | 39681811.28 | 0.0298 | 0.0259 |
| Jupiter | 103934-12-05 13:40 G | 39682511.87 | 39682512.07 | 39682512.27 | 0.0532 | 0.0287 |
| Saturn | 103945-06-20 16:47 G | 39686361.97 | 39686362.20 | 39686362.43 | 0.0268 | 0.0088 |
| Saturn | 103946-07-02 21:49 G | 39686739.20 | 39686739.41 | 39686739.64 | 0.0265 | 0.0132 |
| Uranus | 103949-11-01 11:45 G | 39687956.97 | 39687956.99 | 39687957.05 | 0.0135 | 0.0133 |
| Uranus | 103950-11-05 13:40 G | 39688325.83 | 39688326.07 | 39688326.33 | 0.0135 | 0.0033 |
| Uranus | 103951-11-10 02:09 G | 39688695.37 | 39688695.59 | 39688695.82 | 0.0135 | 0.0053 |
| Jupiter | 103952-05-29 07:11 G | 39688896.61 | 39688896.80 | 39688896.98 | 0.0494 | 0.0315 |
| Saturn | 103960-12-14 00:57 G | 39692017.36 | 39692017.54 | 39692017.74 | 0.0292 | 0.0176 |
| Saturn | 103961-12-28 03:21 G | 39692396.42 | 39692396.64 | 39692396.86 | 0.0296 | 0.0105 |
| Jupiter | 103964-06-02 11:01 G | 39693283.73 | 39693283.96 | 39693284.19 | 0.0494 | 0.0073 |
| Saturn | 103974-06-14 23:01 G | 39696948.30 | 39696948.46 | 39696948.64 | 0.0270 | 0.0193 |
| Saturn | 103975-06-27 11:01 G | 39697325.73 | 39697325.96 | 39697326.20 | 0.0267 | 0.0039 |
| Jupiter | 103976-06-07 06:28 G | 39697671.70 | 39697671.77 | 39697671.87 | 0.0494 | 0.0461 |
| Saturn | 103976-07-08 16:47 G | 39697703.18 | 39697703.20 | 39697703.23 | 0.0264 | 0.0262 |
| Neptune | 103978-05-03 02:23 G | 39698366.59 | 39698366.60 | 39698366.66 | 0.0088 | 0.0087 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 103979-05-05 21:21 G | 39698734.21 | 39698734.39 | 39698734.60 | 0.0088 | 0.0058 |
| Neptune | 103980-05-07 03:06 G | 39699101.43 | 39699101.63 | 39699101.85 | 0.0088 | 0.0048 |
| Neptune | 103981-05-09 18:57 G | 39699469.04 | 39699469.29 | 39699469.57 | 0.0088 | 0.0020 |
| Neptune | 103982-05-12 04:33 G | 39699836.45 | 39699836.69 | 39699836.95 | 0.0088 | 0.0009 |
| Neptune | 103983-05-14 15:21 G | 39700203.90 | 39700204.14 | 39700204.42 | 0.0088 | 0.0021 |
| Neptune | 103984-05-16 06:28 G | 39700571.55 | 39700571.77 | 39700572.02 | 0.0088 | 0.0032 |
| Neptune | 103985-05-18 13:25 G | 39700938.88 | 39700939.06 | 39700939.27 | 0.0088 | 0.0060 |
| Neptune | 103986-05-21 08:23 G | 39701306.70 | 39701306.85 | 39701307.02 | 0.0088 | 0.0070 |
| Saturn | 103990-12-22 06:28 G | 39702982.53 | 39702982.77 | 39702983.02 | 0.0294 | 0.0039 |
| Saturn | 103992-01-05 10:33 G | 39703361.82 | 39703361.94 | 39703362.09 | 0.0298 | 0.0252 |
| Uranus | 103992-04-30 21:49 G | 39703478.35 | 39703478.41 | 39703478.51 | 0.0143 | 0.0136 |
| Uranus | 103993-05-06 05:45 G | 39703848.49 | 39703848.74 | 39703848.99 | 0.0143 | 0.0016 |
| Uranus | 103994-05-11 00:13 G | 39704218.31 | 39704218.51 | 39704218.75 | 0.0143 | 0.0080 |

105TH MILLENNIUM CE

This is a list of transits of Moon in the 105th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 104004-06-21 09:49 G | | 39707912.66 | 39707912.91 | 39707913.16 | 0.0268 | 0.0055 | |
| Saturn | 104005-07-03 12:57 G | | 39708289.87 | 39708290.04 | 39708290.24 | 0.0265 | 0.0172 | |
| Jupiter | 104005-11-29 13:11 G | | 39708438.84 | 39708439.05 | 39708439.27 | 0.0533 | 0.0163 | |
| Pluto | 104015-11-14 11:30 G | | 39712075.73 | 39712075.98 | 39712076.24 | 0.0064 | 0.0012 | |
| Mars | 104017-09-02 17:45 G | | 39712734.04 | 39712734.24 | 39712734.44 | 0.1758 | 0.0272 | |
| Jupiter | 104017-12-04 23:01 G | | 39712827.26 | 39712827.46 | 39712827.66 | 0.0533 | 0.0264 | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 104019-12-16 10:33 G | 39713568.75 | 39713568.94 | 39713569.13 | 0.0292 | 0.0172 |
| Saturn | 104020-12-29 13:25 G | 39713947.84 | 39713948.06 | 39713948.29 | 0.0296 | 0.0114 |
| Saturn | 104033-06-16 06:13 G | 39718499.56 | 39718499.76 | 39718499.96 | 0.0270 | 0.0152 |
| Uranus | 104033-11-01 18:42 G | 39718638.19 | 39718638.28 | 39718638.40 | 0.0135 | 0.0122 |
| Saturn | 104034-06-28 13:25 G | 39718876.82 | 39718877.06 | 39718877.31 | 0.0267 | 0.0075 |
| Uranus | 104034-11-06 02:37 G | 39719007.38 | 39719007.61 | 39719007.84 | 0.0135 | 0.0035 |
| Jupiter | 104035-05-29 12:57 G | 39719211.88 | 39719212.04 | 39719212.20 | 0.0494 | 0.0354 |
| Uranus | 104035-11-10 09:21 G | 39719376.68 | 39719376.89 | 39719377.14 | 0.0135 | 0.0063 |
| Jupiter | 104047-06-02 22:04 G | 39723599.18 | 39723599.42 | 39723599.67 | 0.0494 | 0.0005 |
| Saturn | 104049-12-23 09:35 G | 39724533.66 | 39724533.90 | 39724534.13 | 0.0294 | 0.0012 |
| Saturn | 104051-01-06 20:09 G | 39724913.30 | 39724913.34 | 39724913.41 | 0.0298 | 0.0289 |
| Jupiter | 104059-06-07 13:11 G | 39727986.92 | 39727987.05 | 39727987.20 | 0.0493 | 0.0386 |
| Neptune | 104060-11-04 02:52 G | 39728502.48 | 39728502.62 | 39728502.81 | 0.0090 | 0.0070 |
| Neptune | 104061-11-06 18:57 G | 39728870.11 | 39728870.29 | 39728870.50 | 0.0090 | 0.0056 |
| Saturn | 104062-06-10 19:40 G | 39729086.24 | 39729086.32 | 39729086.43 | 0.0272 | 0.0249 |
| Neptune | 104062-11-09 00:42 G | 39729237.30 | 39729237.53 | 39729237.78 | 0.0090 | 0.0029 |
| Saturn | 104063-06-23 12:42 G | 39729463.79 | 39729464.03 | 39729464.27 | 0.0268 | 0.0023 |
| Neptune | 104063-11-11 19:11 G | 39729605.06 | 39729605.30 | 39729605.56 | 0.0090 | 0.0014 |
| Saturn | 104064-07-04 20:37 G | 39729841.19 | 39729841.36 | 39729841.55 | 0.0265 | 0.0184 |
| Neptune | 104064-11-13 00:13 G | 39729972.26 | 39729972.51 | 39729972.76 | 0.0090 | 0.0013 |
| Neptune | 104065-11-15 17:01 G | 39730339.98 | 39730340.21 | 39730340.47 | 0.0090 | 0.0028 |
| Neptune | 104066-11-18 00:13 G | 39730707.33 | 39730707.51 | 39730707.73 | 0.0090 | 0.0054 |
| Neptune | 104067-11-20 12:57 G | 39731074.89 | 39731075.04 | 39731075.24 | 0.0090 | 0.0068 |
| Uranus | 104076-05-01 11:01 G | 39734159.91 | 39734159.96 | 39734160.05 | 0.0143 | 0.0137 |
| Uranus | 104077-05-06 09:21 G | 39734529.63 | 39734529.89 | 39734530.16 | 0.0143 | 0.0013 |
| Uranus | 104078-05-11 11:30 G | 39734899.78 | 39734899.98 | 39734900.18 | 0.0143 | 0.0087 |
| Saturn | 104078-12-17 15:06 G | 39735119.91 | 39735120.13 | 39735120.36 | 0.0292 | 0.0126 |
| Saturn | 104079-12-31 15:21 G | 39735498.95 | 39735499.14 | 39735499.35 | 0.0296 | 0.0166 |
| Jupiter | 104088-11-28 23:59 G | 39738754.29 | 39738754.50 | 39738754.72 | 0.0532 | 0.0239 |
| Saturn | 104092-06-17 01:54 G | 39740050.37 | 39740050.58 | 39740050.82 | 0.0270 | 0.0128 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 104093-06-29 11:01 G | 39740427.74 | 39740427.96 | 39740428.20 | 0.0267 | 0.0083 |
| Jupiter | 104100-12-04 22:33 G | 39743142.24 | 39743142.44 | 39743142.64 | 0.0532 | 0.0235 |
| Pluto | 104104-05-14 10:47 G | 39744398.91 | 39744398.95 | 39744399.00 | 0.0080 | 0.0078 |
| Pluto | 104105-05-16 15:49 G | 39744766.02 | 39744766.16 | 39744766.31 | 0.0079 | 0.0065 |
| Saturn | 104107-12-13 02:23 G | 39745706.48 | 39745706.60 | 39745706.75 | 0.0290 | 0.0241 |
| Saturn | 104108-12-26 00:13 G | 39746085.27 | 39746085.51 | 39746085.76 | 0.0295 | 0.0042 |
| Uranus | 104117-11-03 01:54 G | 39749319.47 | 39749319.58 | 39749319.74 | 0.0135 | 0.0114 |
| Mars | 104118-03-02 08:37 G | 39749438.69 | 39749438.86 | 39749439.04 | 0.1787 | 0.0619 |
| Jupiter | 104118-05-29 15:35 G | 39749526.99 | 39749527.15 | 39749527.32 | 0.0494 | 0.0346 |
| Uranus | 104118-11-07 14:37 G | 39749688.87 | 39749689.11 | 39749689.36 | 0.0135 | 0.0035 |
| Uranus | 104119-11-11 16:18 G | 39750057.98 | 39750058.18 | 39750058.40 | 0.0135 | 0.0069 |
| Saturn | 104121-06-13 07:25 G | 39750637.70 | 39750637.81 | 39750637.95 | 0.0272 | 0.0233 |
| Saturn | 104122-06-25 17:16 G | 39751014.96 | 39751015.22 | 39751015.48 | 0.0268 | 0.0019 |
| Saturn | 104123-07-07 17:30 G | 39751392.05 | 39751392.23 | 39751392.41 | 0.0265 | 0.0184 |
| Jupiter | 104130-06-03 11:16 G | 39753914.73 | 39753914.97 | 39753915.21 | 0.0494 | 0.0007 |
| Saturn | 104137-12-20 04:47 G | 39756671.48 | 39756671.70 | 39756671.93 | 0.0292 | 0.0078 |
| Saturn | 104139-01-03 11:01 G | 39757050.80 | 39757050.96 | 39757051.13 | 0.0296 | 0.0208 |
| Neptune | 104142-05-03 13:54 G | 39758267.06 | 39758267.08 | 39758267.17 | 0.0088 | 0.0086 |
| Jupiter | 104142-06-07 12:57 G | 39758301.86 | 39758302.04 | 39758302.22 | 0.0493 | 0.0316 |
| Neptune | 104143-05-06 01:25 G | 39758634.43 | 39758634.56 | 39758634.73 | 0.0088 | 0.0073 |
| Neptune | 104144-05-07 16:47 G | 39759002.00 | 39759002.20 | 39759002.43 | 0.0088 | 0.0046 |
| Neptune | 104145-05-09 23:45 G | 39759369.24 | 39759369.49 | 39759369.74 | 0.0088 | 0.0033 |
| Neptune | 104146-05-12 18:13 G | 39759737.00 | 39759737.26 | 39759737.52 | 0.0088 | 0.0006 |
| Neptune | 104147-05-14 22:47 G | 39760104.20 | 39760104.45 | 39760104.71 | 0.0088 | 0.0006 |
| Neptune | 104148-05-16 17:01 G | 39760471.98 | 39760472.21 | 39760472.47 | 0.0088 | 0.0033 |
| Neptune | 104149-05-18 23:30 G | 39760839.29 | 39760839.48 | 39760839.72 | 0.0088 | 0.0046 |
| Neptune | 104150-05-21 14:09 G | 39761206.96 | 39761207.09 | 39761207.27 | 0.0088 | 0.0072 |
| Neptune | 104151-05-24 02:09 G | 39761574.53 | 39761574.59 | 39761574.64 | 0.0088 | 0.0085 |
| Saturn | 104151-06-20 13:25 G | 39761601.85 | 39761602.06 | 39761602.27 | 0.0270 | 0.0127 |
| Saturn | 104152-07-01 23:01 G | 39761979.23 | 39761979.46 | 39761979.70 | 0.0266 | 0.0089 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 104160-05-02 19:40 G | 39764841.22 | 39764841.32 | 39764841.44 | 0.0143 | 0.0130 |
| Uranus | 104161-05-07 17:01 G | 39765210.97 | 39765211.21 | 39765211.47 | 0.0143 | 0.0014 |
| Uranus | 104162-05-12 22:18 G | 39765581.25 | 39765581.43 | 39765581.63 | 0.0143 | 0.0098 |
| Saturn | 104166-12-14 10:33 G | 39767257.77 | 39767257.94 | 39767258.12 | 0.0291 | 0.0203 |
| Saturn | 104167-12-28 08:37 G | 39767636.63 | 39767636.86 | 39767637.10 | 0.0295 | 0.0072 |
| Jupiter | 104171-11-30 02:37 G | 39769069.44 | 39769069.61 | 39769069.78 | 0.0532 | 0.0360 |
| Saturn | 104180-06-14 08:09 G | 39772188.72 | 39772188.84 | 39772188.98 | 0.0271 | 0.0230 |
| Saturn | 104181-06-26 22:04 G | 39772566.17 | 39772566.42 | 39772566.66 | 0.0268 | 0.0006 |
| Saturn | 104182-07-09 07:11 G | 39772943.67 | 39772943.80 | 39772943.93 | 0.0265 | 0.0221 |
| Jupiter | 104183-12-04 13:25 G | 39773456.83 | 39773457.06 | 39773457.29 | 0.0533 | 0.0081 |
| Saturn | 104196-12-21 23:59 G | 39778223.26 | 39778223.50 | 39778223.75 | 0.0292 | 0.0057 |
| Saturn | 104198-01-04 23:59 G | 39778602.34 | 39778602.50 | 39778602.67 | 0.0296 | 0.0220 |
| Jupiter | 104201-05-29 17:59 G | 39779842.15 | 39779842.25 | 39779842.36 | 0.0494 | 0.0444 |
| Uranus | 104201-11-04 16:47 G | 39780001.06 | 39780001.20 | 39780001.36 | 0.0135 | 0.0108 |
| Uranus | 104202-11-08 17:16 G | 39780369.98 | 39780370.22 | 39780370.47 | 0.0135 | 0.0030 |
| Uranus | 104203-11-13 07:40 G | 39780739.61 | 39780739.82 | 39780740.04 | 0.0135 | 0.0069 |
| Saturn | 104210-06-22 21:06 G | 39783153.14 | 39783153.38 | 39783153.62 | 0.0269 | 0.0099 |
| Saturn | 104211-07-05 01:11 G | 39783530.34 | 39783530.55 | 39783530.77 | 0.0266 | 0.0134 |
| Jupiter | 104213-06-03 09:35 G | 39784229.67 | 39784229.90 | 39784230.13 | 0.0494 | 0.0052 |
| Neptune | 104224-11-05 11:30 G | 39788402.88 | 39788402.98 | 39788403.09 | 0.0090 | 0.0081 |
| Jupiter | 104225-06-07 17:30 G | 39788617.04 | 39788617.23 | 39788617.42 | 0.0494 | 0.0308 |
| Neptune | 104225-11-08 04:18 G | 39788770.51 | 39788770.68 | 39788770.90 | 0.0090 | 0.0059 |
| Saturn | 104225-12-17 06:57 G | 39788809.61 | 39788809.79 | 39788809.96 | 0.0291 | 0.0192 |
| Neptune | 104226-11-10 12:13 G | 39789137.79 | 39789138.01 | 39789138.23 | 0.0090 | 0.0039 |
| Saturn | 104226-12-31 09:21 G | 39789188.66 | 39789188.89 | 39789189.12 | 0.0295 | 0.0085 |
| Neptune | 104227-11-13 01:11 G | 39789505.30 | 39789505.55 | 39789505.82 | 0.0090 | 0.0017 |
| Neptune | 104228-11-14 14:09 G | 39789872.84 | 39789873.09 | 39789873.33 | 0.0090 | 0.0002 |
| Neptune | 104229-11-16 22:18 G | 39790240.18 | 39790240.43 | 39790240.69 | 0.0090 | 0.0024 |
| Neptune | 104230-11-19 15:06 G | 39790607.92 | 39790608.13 | 39790608.36 | 0.0090 | 0.0043 |
| Neptune | 104231-11-21 19:40 G | 39790975.17 | 39790975.32 | 39790975.52 | 0.0090 | 0.0066 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 104232-11-23 13:54 G | 39791343.03 | 39791343.08 | 39791343.19 | 0.0090 | 0.0085 |
| Saturn | 104239-06-18 01:25 G | 39793740.40 | 39793740.56 | 39793740.74 | 0.0271 | 0.0192 |
| Saturn | 104240-06-29 12:57 G | 39794117.79 | 39794118.04 | 39794118.29 | 0.0268 | 0.0044 |
| Saturn | 104241-07-11 11:01 G | 39794494.94 | 39794494.96 | 39794495.01 | 0.0265 | 0.0262 |
| Uranus | 104244-05-04 02:09 G | 39795522.46 | 39795522.59 | 39795522.74 | 0.0143 | 0.0118 |
| Uranus | 104245-05-09 10:04 G | 39795892.66 | 39795892.92 | 39795893.18 | 0.0143 | 0.0014 |
| Uranus | 104246-05-14 03:06 G | 39796262.49 | 39796262.63 | 39796262.82 | 0.0143 | 0.0110 |
| Jupiter | 104254-11-29 18:57 G | 39799384.16 | 39799384.29 | 39799384.44 | 0.0532 | 0.0405 |
| Saturn | 104255-12-25 14:09 G | 39799774.85 | 39799775.09 | 39799775.33 | 0.0293 | 0.0037 |
| Saturn | 104257-01-07 22:33 G | 39800154.32 | 39800154.44 | 39800154.56 | 0.0296 | 0.0255 |
| Pluto | 104263-11-17 13:25 G | 39802658.89 | 39802659.06 | 39802659.29 | 0.0064 | 0.0039 |
| Pluto | 104264-11-17 18:28 G | 39803025.07 | 39803025.27 | 39803025.51 | 0.0064 | 0.0031 |
| Jupiter | 104266-12-04 18:28 G | 39803772.03 | 39803772.27 | 39803772.50 | 0.0533 | 0.0014 |
| Saturn | 104269-06-24 09:06 G | 39804704.65 | 39804704.88 | 39804705.12 | 0.0269 | 0.0049 |
| Saturn | 104270-07-06 19:40 G | 39805082.14 | 39805082.32 | 39805082.52 | 0.0266 | 0.0171 |
| Jupiter | 104278-12-09 17:16 G | 39808160.10 | 39808160.22 | 39808160.34 | 0.0533 | 0.0444 |
| Saturn | 104284-12-19 01:11 G | 39810361.34 | 39810361.55 | 39810361.76 | 0.0292 | 0.0159 |
| Uranus | 104285-11-04 20:23 G | 39810682.22 | 39810682.35 | 39810682.52 | 0.0135 | 0.0108 |
| Saturn | 104286-01-01 22:47 G | 39810740.23 | 39810740.45 | 39810740.68 | 0.0296 | 0.0130 |
| Uranus | 104286-11-09 08:37 G | 39811051.62 | 39811051.86 | 39811052.10 | 0.0135 | 0.0019 |
| Uranus | 104287-11-13 11:16 G | 39811420.75 | 39811420.97 | 39811421.19 | 0.0135 | 0.0067 |
| Jupiter | 104296-06-02 07:11 G | 39814544.59 | 39814544.80 | 39814545.02 | 0.0494 | 0.0161 |
| Saturn | 104298-06-19 10:33 G | 39815291.73 | 39815291.94 | 39815292.17 | 0.0270 | 0.0141 |
| Saturn | 104299-07-01 18:28 G | 39815669.04 | 39815669.27 | 39815669.51 | 0.0267 | 0.0078 |
| Mars | 104301-09-05 18:13 G | 39816465.07 | 39816465.26 | 39816465.44 | 0.1748 | 0.0029 |
| Neptune | 104307-05-07 08:23 G | 39818534.72 | 39818534.85 | 39818535.01 | 0.0088 | 0.0073 |
| Neptune | 104308-05-09 02:52 G | 39818902.43 | 39818902.62 | 39818902.83 | 0.0088 | 0.0057 |
| Jupiter | 104308-06-08 01:40 G | 39818932.37 | 39818932.57 | 39818932.79 | 0.0494 | 0.0236 |
| Neptune | 104309-05-11 09:35 G | 39819269.67 | 39819269.90 | 39819270.14 | 0.0088 | 0.0034 |
| Neptune | 104310-05-13 23:45 G | 39819637.23 | 39819637.49 | 39819637.76 | 0.0088 | 0.0019 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 104311-05-16 11:30 G | 39820004.73 | 39820004.98 | 39820005.23 | 0.0088 | 0.0005 |
| Neptune | 104312-05-17 20:52 G | 39820372.12 | 39820372.37 | 39820372.64 | 0.0088 | 0.0021 |
| Neptune | 104313-05-20 13:11 G | 39820739.85 | 39820740.05 | 39820740.29 | 0.0088 | 0.0046 |
| Saturn | 104313-12-14 17:30 G | 39820948.15 | 39820948.23 | 39820948.33 | 0.0290 | 0.0265 |
| Neptune | 104314-05-22 18:57 G | 39821107.11 | 39821107.29 | 39821107.49 | 0.0088 | 0.0061 |
| Saturn | 104314-12-28 16:18 G | 39821326.94 | 39821327.18 | 39821327.42 | 0.0294 | 0.0017 |
| Neptune | 104315-05-25 13:25 G | 39821475.02 | 39821475.06 | 39821475.16 | 0.0088 | 0.0085 |
| Saturn | 104327-06-15 14:23 G | 39825878.98 | 39825879.10 | 39825879.21 | 0.0272 | 0.0238 |
| Uranus | 104328-05-05 19:40 G | 39826204.17 | 39826204.32 | 39826204.50 | 0.0143 | 0.0106 |
| Saturn | 104328-06-27 02:09 G | 39826256.34 | 39826256.59 | 39826256.85 | 0.0268 | 0.0022 |
| Uranus | 104329-05-10 14:52 G | 39826573.86 | 39826574.12 | 39826574.38 | 0.0143 | 0.0010 |
| Saturn | 104329-07-09 01:54 G | 39826633.40 | 39826633.58 | 39826633.78 | 0.0266 | 0.0177 |
| Uranus | 104330-05-15 21:06 G | 39826944.25 | 39826944.38 | 39826944.54 | 0.0143 | 0.0115 |
| Jupiter | 104337-11-29 14:52 G | 39829699.04 | 39829699.12 | 39829699.22 | 0.0532 | 0.0488 |
| Saturn | 104343-12-22 15:21 G | 39831912.93 | 39831913.14 | 39831913.37 | 0.0292 | 0.0102 |
| Saturn | 104345-01-04 21:49 G | 39832292.24 | 39832292.41 | 39832292.60 | 0.0296 | 0.0191 |
| Jupiter | 104349-12-04 18:57 G | 39834087.05 | 39834087.29 | 39834087.52 | 0.0532 | 0.0028 |
| Pluto | 104353-05-18 21:35 G | 39835348.17 | 39835348.40 | 39835348.66 | 0.0080 | 0.0033 |
| Saturn | 104357-06-22 01:40 G | 39836843.36 | 39836843.57 | 39836843.79 | 0.0270 | 0.0121 |
| Saturn | 104358-07-04 14:09 G | 39837220.86 | 39837221.09 | 39837221.33 | 0.0267 | 0.0084 |
| Jupiter | 104361-12-09 05:45 G | 39838474.58 | 39838474.74 | 39838474.91 | 0.0533 | 0.0372 |
| Uranus | 104369-11-06 07:54 G | 39841363.71 | 39841363.83 | 39841363.99 | 0.0135 | 0.0111 |
| Uranus | 104370-11-10 17:01 G | 39841732.95 | 39841733.21 | 39841733.47 | 0.0135 | 0.0010 |
| Uranus | 104371-11-14 23:01 G | 39842102.26 | 39842102.46 | 39842102.68 | 0.0135 | 0.0068 |
| Saturn | 104372-12-16 08:09 G | 39842499.66 | 39842499.84 | 39842500.01 | 0.0290 | 0.0206 |
| Saturn | 104373-12-30 03:35 G | 39842878.41 | 39842878.65 | 39842878.88 | 0.0294 | 0.0073 |
| Jupiter | 104379-06-03 05:30 G | 39844859.51 | 39844859.73 | 39844859.95 | 0.0494 | 0.0210 |
| Saturn | 104386-06-16 23:30 G | 39847430.36 | 39847430.48 | 39847430.64 | 0.0271 | 0.0226 |
| Saturn | 104387-06-29 10:33 G | 39847807.69 | 39847807.94 | 39847808.18 | 0.0268 | 0.0014 |
| Saturn | 104388-07-10 18:57 G | 39848185.13 | 39848185.29 | 39848185.45 | 0.0265 | 0.0199 |

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| Neptune | 104388-11-06 01:11 G | 39848303.49 | 39848303.55 | 39848303.60 | 0.0090 | 0.0087 |
| Neptune | 104389-11-08 08:52 G | 39848670.71 | 39848670.87 | 39848671.07 | 0.0090 | 0.0065 |
| Neptune | 104390-11-11 01:54 G | 39849038.39 | 39849038.58 | 39849038.81 | 0.0090 | 0.0047 |
| Jupiter | 104391-06-07 22:04 G | 39849247.20 | 39849247.42 | 39849247.64 | 0.0494 | 0.0122 |
| Neptune | 104391-11-13 06:42 G | 39849405.55 | 39849405.78 | 39849406.04 | 0.0090 | 0.0025 |
| Neptune | 104392-11-15 01:25 G | 39849773.31 | 39849773.56 | 39849773.82 | 0.0090 | 0.0006 |
| Neptune | 104393-11-17 06:28 G | 39850140.54 | 39850140.77 | 39850141.03 | 0.0090 | 0.0018 |
| Neptune | 104394-11-19 22:33 G | 39850508.21 | 39850508.44 | 39850508.69 | 0.0090 | 0.0036 |
| Neptune | 104395-11-22 07:40 G | 39850875.64 | 39850875.82 | 39850876.01 | 0.0090 | 0.0059 |
| Neptune | 104396-11-23 18:42 G | 39851243.16 | 39851243.28 | 39851243.43 | 0.0090 | 0.0077 |
| Mars | 104402-03-05 06:13 G | 39853170.58 | 39853170.76 | 39853170.93 | 0.1795 | 0.0768 |
| Saturn | 104402-12-24 12:28 G | 39853464.78 | 39853465.02 | 39853465.26 | 0.0293 | 0.0058 |
| Jupiter | 104403-06-12 05:30 G | 39853634.70 | 39853634.73 | 39853634.77 | 0.0494 | 0.0487 |
| Saturn | 104404-01-07 12:42 G | 39853843.87 | 39853844.03 | 39853844.20 | 0.0297 | 0.0219 |
| Uranus | 104412-05-06 03:21 G | 39856885.46 | 39856885.64 | 39856885.84 | 0.0143 | 0.0100 |
| Uranus | 104413-05-11 05:30 G | 39857255.49 | 39857255.73 | 39857255.98 | 0.0143 | 0.0003 |
| Uranus | 104414-05-16 06:57 G | 39857625.64 | 39857625.79 | 39857625.96 | 0.0143 | 0.0114 |
| Saturn | 104416-06-23 15:49 G | 39858394.94 | 39858395.16 | 39858395.41 | 0.0269 | 0.0110 |
| Saturn | 104417-07-05 18:28 G | 39858772.05 | 39858772.27 | 39858772.50 | 0.0266 | 0.0113 |
| Saturn | 104431-12-18 19:40 G | 39864051.15 | 39864051.32 | 39864051.51 | 0.0291 | 0.0182 |
| Jupiter | 104432-12-03 12:42 G | 39864401.82 | 39864402.03 | 39864402.24 | 0.0532 | 0.0168 |
| Saturn | 104432-12-31 23:30 G | 39864430.26 | 39864430.48 | 39864430.71 | 0.0295 | 0.0090 |
| Jupiter | 104444-12-08 11:16 G | 39868789.79 | 39868789.97 | 39868790.17 | 0.0533 | 0.0327 |
| Saturn | 104445-06-18 15:49 G | 39868982.01 | 39868982.16 | 39868982.32 | 0.0271 | 0.0208 |
| Saturn | 104446-07-01 05:16 G | 39869359.47 | 39869359.72 | 39869359.97 | 0.0268 | 0.0023 |
| Saturn | 104447-07-13 04:33 G | 39869736.61 | 39869736.69 | 39869736.80 | 0.0265 | 0.0245 |
| Uranus | 104453-11-06 23:30 G | 39872045.35 | 39872045.48 | 39872045.65 | 0.0135 | 0.0108 |
| Uranus | 104454-11-11 01:11 G | 39872414.30 | 39872414.55 | 39872414.80 | 0.0135 | 0.0003 |
| Uranus | 104455-11-15 13:54 G | 39872783.88 | 39872784.08 | 39872784.30 | 0.0135 | 0.0076 |
| Saturn | 104461-12-25 17:30 G | 39875015.99 | 39875016.23 | 39875016.47 | 0.0293 | 0.0052 |

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| Jupiter | 104462-06-02 12:42 G | 39875174.82 | 39875175.03 | 39875175.25 | 0.0495 | 0.0236 |
| Saturn | 104463-01-09 00:42 G | 39875395.38 | 39875395.53 | 39875395.67 | 0.0297 | 0.0231 |
| Neptune | 104471-05-06 20:09 G | 39878435.29 | 39878435.34 | 39878435.45 | 0.0088 | 0.0083 |
| Neptune | 104472-05-08 05:30 G | 39878802.57 | 39878802.73 | 39878802.95 | 0.0088 | 0.0063 |
| Neptune | 104473-05-10 22:33 G | 39879170.24 | 39879170.44 | 39879170.68 | 0.0088 | 0.0044 |
| Neptune | 104474-05-13 04:18 G | 39879537.43 | 39879537.68 | 39879537.94 | 0.0088 | 0.0023 |
| Jupiter | 104474-06-06 21:06 G | 39879562.16 | 39879562.38 | 39879562.61 | 0.0494 | 0.0112 |
| Neptune | 104475-05-15 23:16 G | 39879905.21 | 39879905.47 | 39879905.74 | 0.0088 | 0.0004 |
| Saturn | 104475-06-25 22:18 G | 39879946.20 | 39879946.43 | 39879946.67 | 0.0269 | 0.0069 |
| Neptune | 104476-05-17 04:18 G | 39880272.44 | 39880272.68 | 39880272.94 | 0.0088 | 0.0018 |
| Saturn | 104476-07-07 09:35 G | 39880323.71 | 39880323.90 | 39880324.09 | 0.0266 | 0.0161 |
| Neptune | 104477-05-19 21:49 G | 39880640.17 | 39880640.41 | 39880640.66 | 0.0088 | 0.0037 |
| Neptune | 104478-05-22 05:16 G | 39881007.55 | 39881007.72 | 39881007.93 | 0.0088 | 0.0057 |
| Neptune | 104479-05-24 17:45 G | 39881375.14 | 39881375.24 | 39881375.41 | 0.0088 | 0.0076 |
| Jupiter | 104486-06-11 15:35 G | 39883950.04 | 39883950.15 | 39883950.26 | 0.0494 | 0.0437 |
| Saturn | 104490-12-20 08:52 G | 39885602.67 | 39885602.87 | 39885603.07 | 0.0291 | 0.0175 |
| Saturn | 104492-01-03 05:30 G | 39885981.50 | 39885981.73 | 39885981.97 | 0.0295 | 0.0106 |
| Uranus | 104496-05-06 11:30 G | 39887566.81 | 39887566.98 | 39887567.16 | 0.0143 | 0.0101 |
| Uranus | 104497-05-11 17:16 G | 39887936.97 | 39887937.22 | 39887937.49 | 0.0143 | 0.0013 |
| Uranus | 104498-05-16 13:25 G | 39888306.91 | 39888307.06 | 39888307.21 | 0.0143 | 0.0114 |
| Saturn | 104504-06-21 01:54 G | 39890533.37 | 39890533.58 | 39890533.79 | 0.0271 | 0.0163 |
| Saturn | 104505-07-03 06:57 G | 39890910.55 | 39890910.79 | 39890911.04 | 0.0267 | 0.0069 |
| Mars | 104506-09-05 07:25 G | 39891339.80 | 39891339.81 | 39891339.81 | 0.1735 | 0.1731 |
| Pluto | 104512-11-20 21:35 G | 39893608.15 | 39893608.40 | 39893608.66 | 0.0064 | 0.0014 |
| Pluto | 104513-11-22 05:59 G | 39893974.67 | 39893974.75 | 39893974.90 | 0.0064 | 0.0058 |
| Jupiter | 104515-12-04 13:25 G | 39894716.86 | 39894717.06 | 39894717.26 | 0.0532 | 0.0233 |
| Saturn | 104520-12-28 07:11 G | 39896567.56 | 39896567.80 | 39896568.03 | 0.0294 | 0.0026 |
| Saturn | 104522-01-11 11:30 G | 39896946.89 | 39896946.98 | 39896947.10 | 0.0297 | 0.0269 |
| Jupiter | 104527-12-09 18:42 G | 39899105.07 | 39899105.28 | 39899105.49 | 0.0532 | 0.0211 |
| Saturn | 104533-06-15 19:54 G | 39901120.28 | 39901120.33 | 39901120.41 | 0.0272 | 0.0260 |

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| Saturn | 104534-06-28 11:30 G | 39901497.73 | 39901497.98 | 39901498.23 | 0.0268 | 0.0028 |
| Saturn | 104535-07-10 12:42 G | 39901874.86 | 39901875.03 | 39901875.23 | 0.0265 | 0.0181 |
| Uranus | 104537-11-08 04:47 G | 39902726.53 | 39902726.70 | 39902726.87 | 0.0135 | 0.0099 |
| Uranus | 104538-11-12 18:57 G | 39903096.04 | 39903096.29 | 39903096.54 | 0.0135 | 0.0002 |
| Uranus | 104539-11-16 18:57 G | 39903465.11 | 39903465.29 | 39903465.50 | 0.0135 | 0.0088 |
| Jupiter | 104545-06-02 20:37 G | 39905490.19 | 39905490.36 | 39905490.54 | 0.0495 | 0.0330 |
| Saturn | 104549-12-22 07:40 G | 39907153.62 | 39907153.82 | 39907154.03 | 0.0292 | 0.0142 |
| Saturn | 104551-01-05 12:42 G | 39907532.84 | 39907533.03 | 39907533.24 | 0.0295 | 0.0154 |
| Neptune | 104553-11-08 17:01 G | 39908571.10 | 39908571.21 | 39908571.35 | 0.0090 | 0.0077 |
| Neptune | 104554-11-11 09:06 G | 39908938.68 | 39908938.88 | 39908939.11 | 0.0090 | 0.0050 |
| Neptune | 104555-11-13 18:42 G | 39909306.05 | 39909306.28 | 39909306.51 | 0.0090 | 0.0035 |
| Neptune | 104556-11-15 05:59 G | 39909673.50 | 39909673.75 | 39909674.02 | 0.0090 | 0.0009 |
| Jupiter | 104557-06-07 00:13 G | 39909877.26 | 39909877.51 | 39909877.75 | 0.0494 | 0.0057 |
| Neptune | 104557-11-17 20:37 G | 39910041.11 | 39910041.36 | 39910041.61 | 0.0090 | 0.0007 |
| Neptune | 104558-11-20 02:52 G | 39910408.39 | 39910408.62 | 39910408.87 | 0.0090 | 0.0033 |
| Neptune | 104559-11-22 20:09 G | 39910776.15 | 39910776.34 | 39910776.58 | 0.0090 | 0.0048 |
| Neptune | 104560-11-24 00:42 G | 39911143.41 | 39911143.53 | 39911143.70 | 0.0090 | 0.0074 |
| Neptune | 104561-11-26 18:57 G | 39911511.26 | 39911511.29 | 39911511.35 | 0.0090 | 0.0088 |
| Saturn | 104563-06-23 05:59 G | 39912084.55 | 39912084.75 | 39912084.97 | 0.0270 | 0.0132 |
| Saturn | 104564-07-04 19:25 G | 39912462.09 | 39912462.31 | 39912462.55 | 0.0267 | 0.0080 |
| Jupiter | 104569-06-11 17:59 G | 39914265.15 | 39914265.25 | 39914265.36 | 0.0493 | 0.0436 |
| Saturn | 104578-12-16 11:01 G | 39917739.85 | 39917739.96 | 39917740.07 | 0.0289 | 0.0259 |
| Saturn | 104579-12-30 03:35 G | 39918118.41 | 39918118.65 | 39918118.90 | 0.0294 | 0.0023 |
| Uranus | 104580-05-08 01:25 G | 39918248.40 | 39918248.56 | 39918248.76 | 0.0143 | 0.0104 |
| Uranus | 104581-05-12 19:40 G | 39918618.08 | 39918618.32 | 39918618.58 | 0.0143 | 0.0021 |
| Uranus | 104582-05-18 04:04 G | 39918988.54 | 39918988.67 | 39918988.83 | 0.0143 | 0.0117 |
| Mars | 104585-09-07 21:21 G | 39920197.20 | 39920197.39 | 39920197.57 | 0.1741 | 0.0553 |
| Saturn | 104592-06-16 21:06 G | 39922671.28 | 39922671.38 | 39922671.52 | 0.0272 | 0.0240 |
| Saturn | 104593-06-29 07:54 G | 39923048.59 | 39923048.83 | 39923049.08 | 0.0268 | 0.0029 |
| Saturn | 104594-07-11 16:18 G | 39923426.02 | 39923426.18 | 39923426.37 | 0.0265 | 0.0179 |

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| Jupiter | 104598-12-03 15:49 G | 39925031.95 | 39925032.16 | 39925032.37 | 0.0531 | 0.0241 |
| Pluto | 104602-05-23 14:37 G | 39926297.87 | 39926298.11 | 39926298.37 | 0.0079 | 0.0025 |
| Saturn | 104608-12-24 14:09 G | 39928704.86 | 39928705.09 | 39928705.32 | 0.0292 | 0.0101 |
| Saturn | 104610-01-07 13:25 G | 39929083.87 | 39929084.06 | 39929084.26 | 0.0296 | 0.0182 |
| Jupiter | 104610-12-09 19:54 G | 39929420.12 | 39929420.33 | 39929420.54 | 0.0532 | 0.0168 |
| Uranus | 104621-11-09 21:49 G | 39933408.23 | 39933408.41 | 39933408.60 | 0.0135 | 0.0086 |
| Saturn | 104622-06-25 12:57 G | 39933635.82 | 39933636.04 | 39933636.26 | 0.0270 | 0.0133 |
| Uranus | 104622-11-14 01:54 G | 39933777.32 | 39933777.58 | 39933777.84 | 0.0135 | 0.0002 |
| Saturn | 104623-07-07 16:47 G | 39934012.96 | 39934013.20 | 39934013.45 | 0.0267 | 0.0080 |
| Uranus | 104623-11-18 11:30 G | 39934146.83 | 39934146.98 | 39934147.15 | 0.0135 | 0.0100 |
| Jupiter | 104628-06-02 22:33 G | 39935805.29 | 39935805.44 | 39935805.59 | 0.0494 | 0.0370 |
| Neptune | 104636-05-09 12:57 G | 39938702.88 | 39938703.04 | 39938703.20 | 0.0088 | 0.0068 |
| Neptune | 104637-05-12 05:30 G | 39939070.53 | 39939070.73 | 39939070.96 | 0.0088 | 0.0052 |
| Saturn | 104637-12-18 07:54 G | 39939290.70 | 39939290.83 | 39939290.97 | 0.0289 | 0.0235 |
| Neptune | 104638-05-14 13:54 G | 39939437.85 | 39939438.08 | 39939438.33 | 0.0088 | 0.0028 |
| Saturn | 104639-01-01 08:23 G | 39939669.61 | 39939669.85 | 39939670.08 | 0.0294 | 0.0033 |
| Neptune | 104639-05-17 02:23 G | 39939805.34 | 39939805.60 | 39939805.88 | 0.0088 | 0.0012 |
| Neptune | 104640-05-18 16:18 G | 39940172.94 | 39940173.18 | 39940173.44 | 0.0088 | 0.0012 |
| Jupiter | 104640-06-07 14:37 G | 39940192.86 | 39940193.11 | 39940193.35 | 0.0494 | 0.0021 |
| Neptune | 104641-05-20 23:59 G | 39940540.26 | 39940540.50 | 39940540.77 | 0.0088 | 0.0028 |
| Neptune | 104642-05-23 18:13 G | 39940908.05 | 39940908.26 | 39940908.47 | 0.0088 | 0.0051 |
| Neptune | 104643-05-25 22:47 G | 39941275.30 | 39941275.45 | 39941275.63 | 0.0088 | 0.0068 |
| Saturn | 104651-06-19 22:47 G | 39944222.35 | 39944222.45 | 39944222.56 | 0.0272 | 0.0244 |
| Jupiter | 104652-06-11 22:33 G | 39944580.30 | 39944580.44 | 39944580.60 | 0.0494 | 0.0367 |
| Saturn | 104652-07-01 15:49 G | 39944599.91 | 39944600.16 | 39944600.41 | 0.0268 | 0.0020 |
| Saturn | 104653-07-13 18:57 G | 39944977.13 | 39944977.29 | 39944977.46 | 0.0265 | 0.0201 |
| Uranus | 104664-05-09 03:49 G | 39948929.50 | 39948929.66 | 39948929.86 | 0.0143 | 0.0102 |
| Uranus | 104665-05-14 10:18 G | 39949299.69 | 39949299.93 | 39949300.18 | 0.0143 | 0.0024 |
| Uranus | 104666-05-19 07:11 G | 39949669.70 | 39949669.80 | 39949669.94 | 0.0143 | 0.0126 |
| Saturn | 104667-12-26 04:47 G | 39950255.48 | 39950255.70 | 39950255.93 | 0.0292 | 0.0106 |

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| Saturn | 104669-01-08 08:52 G | 39950634.68 | 39950634.87 | 39950635.06 | 0.0296 | 0.0175 |
| Saturn | 104681-06-26 05:59 G | 39955186.54 | 39955186.75 | 39955186.98 | 0.0270 | 0.0119 |
| Jupiter | 104681-12-04 05:16 G | 39955347.52 | 39955347.72 | 39955347.91 | 0.0532 | 0.0308 |
| Saturn | 104682-07-08 18:57 G | 39955564.08 | 39955564.29 | 39955564.51 | 0.0267 | 0.0113 |
| Mars | 104686-03-06 19:40 G | 39956901.14 | 39956901.32 | 39956901.50 | 0.1806 | 0.0577 |
| Jupiter | 104693-12-09 01:40 G | 39959735.36 | 39959735.57 | 39959735.78 | 0.0533 | 0.0172 |
| Saturn | 104696-12-19 08:09 G | 39960841.71 | 39960841.84 | 39960841.98 | 0.0289 | 0.0242 |
| Saturn | 104698-01-02 00:42 G | 39961220.28 | 39961220.53 | 39961220.78 | 0.0294 | 0.0027 |
| Uranus | 104705-11-11 08:23 G | 39964089.64 | 39964089.85 | 39964090.07 | 0.0135 | 0.0075 |
| Uranus | 104706-11-15 12:57 G | 39964458.80 | 39964459.04 | 39964459.28 | 0.0135 | 0.0002 |
| Uranus | 104707-11-19 23:01 G | 39964828.30 | 39964828.46 | 39964828.62 | 0.0135 | 0.0105 |
| Saturn | 104710-06-21 21:06 G | 39965773.23 | 39965773.38 | 39965773.54 | 0.0272 | 0.0218 |
| Jupiter | 104711-06-04 06:57 G | 39966120.63 | 39966120.79 | 39966120.97 | 0.0495 | 0.0349 |
| Saturn | 104711-07-04 06:13 G | 39966150.51 | 39966150.76 | 39966151.01 | 0.0268 | 0.0019 |
| Saturn | 104712-07-15 11:59 G | 39966527.91 | 39966528.00 | 39966528.12 | 0.0265 | 0.0238 |
| Neptune | 104717-11-10 05:16 G | 39968471.62 | 39968471.72 | 39968471.87 | 0.0090 | 0.0078 |
| Neptune | 104718-11-12 11:59 G | 39968838.84 | 39968839.00 | 39968839.20 | 0.0090 | 0.0065 |
| Neptune | 104719-11-15 06:28 G | 39969206.54 | 39969206.77 | 39969207.00 | 0.0090 | 0.0035 |
| Neptune | 104720-11-16 11:16 G | 39969573.73 | 39969573.97 | 39969574.22 | 0.0090 | 0.0023 |
| Neptune | 104721-11-19 05:16 G | 39969941.46 | 39969941.72 | 39969941.98 | 0.0090 | 0.0006 |
| Neptune | 104722-11-21 11:16 G | 39970308.73 | 39970308.97 | 39970309.22 | 0.0090 | 0.0018 |
| Jupiter | 104723-06-09 03:35 G | 39970508.41 | 39970508.65 | 39970508.88 | 0.0494 | 0.0016 |
| Neptune | 104723-11-24 01:40 G | 39970676.35 | 39970676.57 | 39970676.80 | 0.0090 | 0.0047 |
| Neptune | 104724-11-25 12:57 G | 39971043.87 | 39971044.04 | 39971044.23 | 0.0090 | 0.0060 |
| Neptune | 104725-11-27 21:49 G | 39971411.40 | 39971411.41 | 39971411.48 | 0.0090 | 0.0089 |
| Saturn | 104726-12-28 07:11 G | 39971806.58 | 39971806.80 | 39971807.02 | 0.0292 | 0.0101 |
| Saturn | 104728-01-11 08:23 G | 39972185.66 | 39972185.85 | 39972186.05 | 0.0296 | 0.0187 |
| Jupiter | 104735-06-13 08:37 G | 39974895.68 | 39974895.86 | 39974896.05 | 0.0493 | 0.0318 |
| Saturn | 104740-06-28 09:49 G | 39976737.67 | 39976737.91 | 39976738.15 | 0.0270 | 0.0079 |
| Saturn | 104741-07-10 15:06 G | 39977114.92 | 39977115.13 | 39977115.36 | 0.0267 | 0.0141 |

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| Uranus | 104748-05-10 17:30 G | 39979611.05 | 39979611.23 | 39979611.43 | 0.0143 | 0.0093 |
| Uranus | 104749-05-15 19:11 G | 39979981.04 | 39979981.30 | 39979981.57 | 0.0143 | 0.0022 |
| Uranus | 104750-05-20 18:28 G | 39980351.23 | 39980351.27 | 39980351.34 | 0.0143 | 0.0140 |
| Saturn | 104755-12-21 23:30 G | 39982392.34 | 39982392.48 | 39982392.64 | 0.0289 | 0.0222 |
| Saturn | 104757-01-03 23:01 G | 39982771.24 | 39982771.46 | 39982771.70 | 0.0294 | 0.0061 |
| Pluto | 104761-11-25 01:25 G | 39984557.29 | 39984557.56 | 39984557.82 | 0.0064 | 0.0002 |
| Jupiter | 104764-12-04 17:16 G | 39985663.06 | 39985663.22 | 39985663.37 | 0.0532 | 0.0381 |
| Saturn | 104769-06-22 13:40 G | 39987323.90 | 39987324.07 | 39987324.25 | 0.0272 | 0.0187 |
| Saturn | 104770-07-05 07:40 G | 39987701.58 | 39987701.82 | 39987702.06 | 0.0268 | 0.0036 |
| Saturn | 104771-07-17 13:25 G | 39988078.96 | 39988079.06 | 39988079.18 | 0.0265 | 0.0238 |
| Jupiter | 104776-12-09 10:18 G | 39990050.70 | 39990050.93 | 39990051.17 | 0.0532 | 0.0077 |
| Saturn | 104785-12-28 19:40 G | 39993357.08 | 39993357.32 | 39993357.56 | 0.0292 | 0.0059 |
| Saturn | 104787-01-11 21:06 G | 39993736.25 | 39993736.38 | 39993736.54 | 0.0296 | 0.0230 |
| Uranus | 104789-11-11 15:21 G | 39994770.94 | 39994771.14 | 39994771.36 | 0.0135 | 0.0070 |
| Mars | 104790-09-07 09:49 G | 39995070.76 | 39995070.91 | 39995071.05 | 0.1725 | 0.1153 |
| Uranus | 104790-11-16 05:16 G | 39995140.47 | 39995140.72 | 39995140.98 | 0.0135 | 0.0012 |
| Uranus | 104791-11-20 05:16 G | 39995509.58 | 39995509.72 | 39995509.88 | 0.0135 | 0.0107 |
| Jupiter | 104794-06-04 00:42 G | 39996436.38 | 39996436.53 | 39996436.68 | 0.0494 | 0.0390 |
| Saturn | 104799-06-29 21:21 G | 39998288.15 | 39998288.39 | 39998288.63 | 0.0270 | 0.0074 |
| Neptune | 104800-05-10 00:57 G | 39998603.46 | 39998603.54 | 39998603.68 | 0.0088 | 0.0080 |
| Saturn | 104800-07-11 09:06 G | 39998665.68 | 39998665.88 | 39998666.10 | 0.0267 | 0.0135 |
| Neptune | 104801-05-12 08:37 G | 39998970.66 | 39998970.86 | 39998971.08 | 0.0088 | 0.0053 |
| Neptune | 104802-05-15 02:09 G | 39999338.38 | 39999338.59 | 39999338.84 | 0.0088 | 0.0041 |
| Neptune | 104803-05-17 06:57 G | 39999705.55 | 39999705.79 | 39999706.06 | 0.0088 | 0.0015 |
| Neptune | 104804-05-19 01:54 G | 40000073.31 | 40000073.58 | 40000073.84 | 0.0088 | 0.0001 |
| Neptune | 104805-05-21 07:25 G | 40000440.58 | 40000440.81 | 40000441.07 | 0.0088 | 0.0027 |
| Neptune | 104806-05-23 23:01 G | 40000808.24 | 40000808.46 | 40000808.72 | 0.0088 | 0.0040 |
| Jupiter | 104806-06-08 10:04 G | 40000823.69 | 40000823.92 | 40000824.15 | 0.0494 | 0.0012 |
| Neptune | 104807-05-26 08:52 G | 40001175.73 | 40001175.87 | 40001176.06 | 0.0088 | 0.0067 |
| Neptune | 104808-05-27 19:54 G | 40001543.24 | 40001543.33 | 40001543.47 | 0.0088 | 0.0079 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 104814-12-23 02:09 G | 40003943.41 | 40003943.59 | 40003943.79 | 0.0289 | 0.0181 |
| Saturn | 104816-01-05 19:25 G | 40004322.07 | 40004322.31 | 40004322.55 | 0.0293 | 0.0093 |
| Jupiter | 104818-06-13 02:23 G | 40005211.43 | 40005211.60 | 40005211.78 | 0.0493 | 0.0340 |
| Saturn | 104828-06-23 13:11 G | 40008874.88 | 40008875.05 | 40008875.24 | 0.0272 | 0.0191 |
| Saturn | 104829-07-05 22:47 G | 40009252.20 | 40009252.45 | 40009252.71 | 0.0269 | 0.0026 |
| Saturn | 104830-07-18 02:37 G | 40009629.51 | 40009629.61 | 40009629.73 | 0.0265 | 0.0237 |
| Uranus | 104832-05-11 08:09 G | 40010292.64 | 40010292.84 | 40010293.08 | 0.0143 | 0.0078 |
| Uranus | 104833-05-16 03:35 G | 40010662.41 | 40010662.65 | 40010662.90 | 0.0143 | 0.0024 |
| Saturn | 104844-12-29 22:18 G | 40014908.20 | 40014908.43 | 40014908.66 | 0.0292 | 0.0042 |
| Saturn | 104846-01-13 00:28 G | 40015287.40 | 40015287.52 | 40015287.68 | 0.0296 | 0.0239 |
| Jupiter | 104847-12-04 18:28 G | 40015978.12 | 40015978.27 | 40015978.43 | 0.0532 | 0.0385 |
| Pluto | 104850-05-25 04:33 G | 40016880.63 | 40016880.69 | 40016880.76 | 0.0080 | 0.0077 |
| Pluto | 104851-05-27 05:16 G | 40017247.67 | 40017247.72 | 40017247.82 | 0.0079 | 0.0075 |
| Saturn | 104858-06-30 23:59 G | 40019839.27 | 40019839.50 | 40019839.74 | 0.0270 | 0.0081 |
| Saturn | 104859-07-13 07:54 G | 40020216.62 | 40020216.83 | 40020217.06 | 0.0267 | 0.0142 |
| Jupiter | 104859-12-09 21:49 G | 40020366.18 | 40020366.41 | 40020366.65 | 0.0533 | 0.0017 |
| Mars | 104869-09-09 20:52 G | 40023928.22 | 40023928.37 | 40023928.53 | 0.1732 | 0.0975 |
| Jupiter | 104871-12-14 17:45 G | 40024754.14 | 40024754.24 | 40024754.35 | 0.0534 | 0.0465 |
| Uranus | 104873-11-12 08:52 G | 40025452.66 | 40025452.87 | 40025453.08 | 0.0135 | 0.0070 |
| Saturn | 104873-12-23 17:59 G | 40025494.07 | 40025494.25 | 40025494.44 | 0.0289 | 0.0178 |
| Uranus | 104874-11-16 09:49 G | 40025821.66 | 40025821.91 | 40025822.17 | 0.0135 | 0.0023 |
| Saturn | 104875-01-06 15:49 G | 40025872.94 | 40025873.16 | 40025873.39 | 0.0293 | 0.0091 |
| Uranus | 104875-11-20 22:33 G | 40026191.31 | 40026191.44 | 40026191.61 | 0.0135 | 0.0107 |
| Jupiter | 104877-06-03 13:25 G | 40026751.98 | 40026752.06 | 40026752.15 | 0.0494 | 0.0457 |
| Neptune | 104882-11-11 19:54 G | 40028739.16 | 40028739.33 | 40028739.50 | 0.0090 | 0.0064 |
| Neptune | 104883-11-14 10:04 G | 40029106.73 | 40029106.92 | 40029107.16 | 0.0090 | 0.0053 |
| Neptune | 104884-11-15 22:18 G | 40029474.20 | 40029474.43 | 40029474.67 | 0.0090 | 0.0023 |
| Neptune | 104885-11-18 07:40 G | 40029841.56 | 40029841.82 | 40029842.08 | 0.0090 | 0.0011 |
| Neptune | 104886-11-20 23:30 G | 40030209.25 | 40030209.48 | 40030209.73 | 0.0090 | 0.0020 |
| Saturn | 104887-06-25 02:37 G | 40030425.44 | 40030425.61 | 40030425.78 | 0.0272 | 0.0190 |

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| Neptune | 104887-11-23 04:47 G | 40030576.47 | 40030576.70 | 40030576.95 | 0.0090 | 0.0031 |
| Saturn | 104888-07-06 20:37 G | 40030803.13 | 40030803.36 | 40030803.60 | 0.0269 | 0.0047 |
| Neptune | 104888-11-24 23:01 G | 40030944.29 | 40030944.46 | 40030944.66 | 0.0090 | 0.0061 |
| Jupiter | 104889-06-07 19:11 G | 40031139.07 | 40031139.30 | 40031139.54 | 0.0494 | 0.0087 |
| Neptune | 104889-11-27 03:35 G | 40031311.52 | 40031311.65 | 40031311.82 | 0.0090 | 0.0072 |
| Mars | 104891-03-05 14:52 G | 40031775.08 | 40031775.12 | 40031775.17 | 0.1823 | 0.1754 |
| Jupiter | 104901-06-13 14:09 G | 40035526.91 | 40035527.09 | 40035527.27 | 0.0494 | 0.0310 |
| Saturn | 104904-01-01 17:59 G | 40036459.00 | 40036459.25 | 40036459.49 | 0.0292 | 0.0049 |
| Saturn | 104905-01-14 17:01 G | 40036838.07 | 40036838.21 | 40036838.36 | 0.0295 | 0.0232 |
| Uranus | 104916-05-12 14:09 G | 40040973.86 | 40040974.09 | 40040974.32 | 0.0143 | 0.0067 |
| Uranus | 104917-05-17 22:18 G | 40041344.19 | 40041344.43 | 40041344.69 | 0.0143 | 0.0030 |
| Saturn | 104917-07-02 14:09 G | 40041389.85 | 40041390.09 | 40041390.35 | 0.0271 | 0.0050 |
| Saturn | 104918-07-15 00:13 G | 40041767.34 | 40041767.51 | 40041767.70 | 0.0267 | 0.0181 |
| Jupiter | 104930-12-04 23:30 G | 40046293.35 | 40046293.48 | 40046293.63 | 0.0532 | 0.0423 |
| Saturn | 104932-12-26 03:21 G | 40047045.46 | 40047045.64 | 40047045.84 | 0.0289 | 0.0175 |
| Saturn | 104934-01-08 22:18 G | 40047424.20 | 40047424.43 | 40047424.67 | 0.0293 | 0.0102 |
| Jupiter | 104942-12-10 06:57 G | 40050681.57 | 40050681.79 | 40050682.02 | 0.0533 | 0.0034 |
| Saturn | 104946-06-27 08:09 G | 40051976.63 | 40051976.84 | 40051977.05 | 0.0272 | 0.0149 |
| Saturn | 104947-07-09 18:28 G | 40052354.03 | 40052354.27 | 40052354.52 | 0.0269 | 0.0082 |
| Jupiter | 104954-12-15 01:40 G | 40055069.44 | 40055069.57 | 40055069.71 | 0.0533 | 0.0439 |
| Uranus | 104957-11-13 17:59 G | 40056134.04 | 40056134.25 | 40056134.48 | 0.0135 | 0.0069 |
| Uranus | 104958-11-18 02:23 G | 40056503.37 | 40056503.60 | 40056503.84 | 0.0135 | 0.0034 |
| Uranus | 104959-11-22 07:11 G | 40056872.68 | 40056872.80 | 40056872.97 | 0.0135 | 0.0111 |
| Jupiter | 104960-06-03 17:45 G | 40057067.16 | 40057067.24 | 40057067.35 | 0.0495 | 0.0450 |
| Saturn | 104963-01-02 23:01 G | 40058010.23 | 40058010.46 | 40058010.70 | 0.0292 | 0.0020 |
| Saturn | 104964-01-17 03:35 G | 40058389.57 | 40058389.65 | 40058389.74 | 0.0295 | 0.0273 |
| Neptune | 104964-05-10 09:49 G | 40058503.82 | 40058503.91 | 40058504.04 | 0.0088 | 0.0079 |
| Neptune | 104965-05-12 15:21 G | 40058871.01 | 40058871.14 | 40058871.33 | 0.0088 | 0.0069 |
| Neptune | 104966-05-15 06:57 G | 40059238.56 | 40059238.79 | 40059239.04 | 0.0088 | 0.0040 |
| Neptune | 104967-05-17 17:01 G | 40059605.99 | 40059606.21 | 40059606.46 | 0.0088 | 0.0029 |

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| Neptune | 104968-05-19 03:49 G | 40059973.39 | 40059973.66 | 40059973.93 | 0.0088 | 0.0000 |
| Neptune | 104969-05-21 19:25 G | 40060341.06 | 40060341.31 | 40060341.57 | 0.0088 | 0.0012 |
| Mars | 104970-03-09 14:37 G | 40060632.97 | 40060633.11 | 40060633.25 | 0.1815 | 0.1233 |
| Neptune | 104970-05-24 01:11 G | 40060708.33 | 40060708.55 | 40060708.80 | 0.0088 | 0.0040 |
| Neptune | 104971-05-26 19:54 G | 40061076.13 | 40061076.33 | 40061076.56 | 0.0088 | 0.0051 |
| Neptune | 104972-05-28 00:28 G | 40061443.44 | 40061443.52 | 40061443.65 | 0.0088 | 0.0080 |
| Jupiter | 104972-06-08 11:16 G | 40061454.73 | 40061454.97 | 40061455.20 | 0.0494 | 0.0118 |
| Saturn | 104975-06-21 19:11 G | 40062563.21 | 40062563.30 | 40062563.41 | 0.0274 | 0.0248 |
| Saturn | 104976-07-03 18:13 G | 40062941.02 | 40062941.26 | 40062941.50 | 0.0271 | 0.0018 |
| Saturn | 104977-07-16 05:16 G | 40063318.54 | 40063318.72 | 40063318.89 | 0.0267 | 0.0193 |
| Jupiter | 104984-06-12 18:57 G | 40065842.09 | 40065842.29 | 40065842.50 | 0.0493 | 0.0231 |
| Saturn | 104991-12-28 03:21 G | 40068596.42 | 40068596.64 | 40068596.86 | 0.0289 | 0.0130 |
| Saturn | 104993-01-09 23:16 G | 40068975.27 | 40068975.47 | 40068975.67 | 0.0293 | 0.0153 |
| Uranus | 105000-05-14 07:54 G | 40071655.61 | 40071655.83 | 40071656.06 | 0.0143 | 0.0062 |

106TH MILLENNIUM CE

This is a list of transits of Moon in the 106th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|----------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Uranus | 105001-05-19 05:30 G | 40072025.47 | 40072025.73 | 40072025.98 | 0.0143 | 0.0042 | | |
| Saturn | 105005-06-29 01:54 G | 40073527.36 | 40073527.58 | 40073527.80 | 0.0272 | 0.0124 | | |
| Saturn | 105006-07-11 17:59 G | 40073905.03 | 40073905.25 | 40073905.48 | 0.0269 | 0.0088 | | |
| Pluto | 105009-11-28 01:54 G | 40075140.42 | 40075140.58 | 40075140.80 | 0.0064 | 0.0042 | | |
| Pluto | 105010-11-29 07:25 G | 40075506.60 | 40075506.81 | 40075507.07 | 0.0064 | 0.0028 | | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 105013-12-05 09:49 G | 40076608.89 | 40076608.91 | 40076608.96 | 0.0532 | 0.0525 |
| Saturn | 105020-12-22 18:13 G | 40079183.13 | 40079183.26 | 40079183.40 | 0.0288 | 0.0241 |
| Saturn | 105022-01-05 07:40 G | 40079561.57 | 40079561.82 | 40079562.07 | 0.0292 | 0.0030 |
| Jupiter | 105025-12-10 03:35 G | 40080996.43 | 40080996.65 | 40080996.87 | 0.0532 | 0.0058 |
| Saturn | 105034-06-24 04:33 G | 40084114.56 | 40084114.69 | 40084114.83 | 0.0274 | 0.0230 |
| Saturn | 105035-07-06 17:45 G | 40084491.99 | 40084492.24 | 40084492.50 | 0.0270 | 0.0016 |
| Saturn | 105036-07-18 00:57 G | 40084869.37 | 40084869.54 | 40084869.71 | 0.0267 | 0.0191 |
| Jupiter | 105037-12-15 05:01 G | 40085384.56 | 40085384.71 | 40085384.87 | 0.0533 | 0.0399 |
| Uranus | 105041-11-15 05:16 G | 40086815.51 | 40086815.72 | 40086815.94 | 0.0135 | 0.0063 |
| Uranus | 105042-11-19 16:47 G | 40087184.95 | 40087185.20 | 40087185.45 | 0.0135 | 0.0040 |
| Jupiter | 105043-06-05 00:42 G | 40087382.48 | 40087382.53 | 40087382.60 | 0.0495 | 0.0477 |
| Uranus | 105043-11-23 18:42 G | 40087554.20 | 40087554.28 | 40087554.40 | 0.0135 | 0.0123 |
| Neptune | 105046-11-13 06:13 G | 40088639.69 | 40088639.76 | 40088639.88 | 0.0090 | 0.0083 |
| Neptune | 105047-11-15 11:59 G | 40089006.81 | 40089007.00 | 40089007.22 | 0.0090 | 0.0052 |
| Neptune | 105048-11-17 06:42 G | 40089374.57 | 40089374.78 | 40089375.02 | 0.0090 | 0.0040 |
| Neptune | 105049-11-19 12:13 G | 40089741.76 | 40089742.01 | 40089742.26 | 0.0090 | 0.0010 |
| Neptune | 105050-11-22 05:16 G | 40090109.46 | 40090109.72 | 40090109.98 | 0.0090 | 0.0002 |
| Saturn | 105050-12-30 18:28 G | 40090148.05 | 40090148.27 | 40090148.50 | 0.0289 | 0.0086 |
| Neptune | 105051-11-24 13:11 G | 40090476.84 | 40090477.05 | 40090477.30 | 0.0090 | 0.0032 |
| Saturn | 105052-01-13 17:01 G | 40090527.03 | 40090527.21 | 40090527.40 | 0.0293 | 0.0188 |
| Neptune | 105052-11-26 01:40 G | 40090844.36 | 40090844.57 | 40090844.82 | 0.0090 | 0.0044 |
| Neptune | 105053-11-28 14:52 G | 40091212.01 | 40091212.12 | 40091212.29 | 0.0090 | 0.0074 |
| Neptune | 105054-11-30 22:33 G | 40091579.37 | 40091579.44 | 40091579.54 | 0.0090 | 0.0085 |
| Jupiter | 105055-06-09 17:30 G | 40091770.01 | 40091770.23 | 40091770.46 | 0.0494 | 0.0117 |
| Saturn | 105064-06-30 13:25 G | 40095078.85 | 40095079.06 | 40095079.29 | 0.0272 | 0.0125 |
| Saturn | 105065-07-13 01:54 G | 40095456.35 | 40095456.58 | 40095456.83 | 0.0269 | 0.0095 |
| Jupiter | 105067-06-13 22:18 G | 40096157.22 | 40096157.43 | 40096157.65 | 0.0493 | 0.0207 |
| Mars | 105074-09-10 11:16 G | 40098802.80 | 40098802.97 | 40098803.15 | 0.1718 | 0.0534 |
| Saturn | 105079-12-24 22:33 G | 40100734.29 | 40100734.44 | 40100734.62 | 0.0288 | 0.0208 |
| Saturn | 105081-01-06 16:47 G | 40101112.97 | 40101113.20 | 40101113.43 | 0.0292 | 0.0053 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 105084-05-14 16:04 G | 40102336.95 | 40102337.17 | 40102337.42 | 0.0143 | 0.0063 |
| Uranus | 105085-05-19 15:21 G | 40102706.93 | 40102707.14 | 40102707.39 | 0.0143 | 0.0055 |
| Saturn | 105093-06-25 03:49 G | 40105665.54 | 40105665.66 | 40105665.81 | 0.0274 | 0.0229 |
| Saturn | 105094-07-08 01:11 G | 40106043.31 | 40106043.55 | 40106043.79 | 0.0270 | 0.0005 |
| Saturn | 105095-07-20 13:40 G | 40106420.96 | 40106421.07 | 40106421.21 | 0.0267 | 0.0228 |
| Pluto | 105099-05-29 18:42 G | 40107830.03 | 40107830.28 | 40107830.55 | 0.0079 | 0.0022 |
| Jupiter | 105108-12-10 00:13 G | 40111311.29 | 40111311.51 | 40111311.73 | 0.0533 | 0.0184 |
| Saturn | 105110-01-02 06:57 G | 40111699.55 | 40111699.79 | 40111700.03 | 0.0290 | 0.0071 |
| Saturn | 105111-01-16 01:11 G | 40112078.38 | 40112078.55 | 40112078.74 | 0.0294 | 0.0196 |
| Jupiter | 105120-12-15 07:25 G | 40115699.62 | 40115699.81 | 40115700.00 | 0.0533 | 0.0283 |
| Saturn | 105123-07-03 17:30 G | 40116629.99 | 40116630.23 | 40116630.48 | 0.0272 | 0.0094 |
| Saturn | 105124-07-15 05:01 G | 40117007.51 | 40117007.71 | 40117007.93 | 0.0268 | 0.0141 |
| Uranus | 105124-11-12 10:47 G | 40117127.94 | 40117127.95 | 40117127.99 | 0.0135 | 0.0134 |
| Uranus | 105125-11-17 01:11 G | 40117497.32 | 40117497.55 | 40117497.79 | 0.0135 | 0.0050 |
| Uranus | 105126-11-21 00:57 G | 40117866.31 | 40117866.54 | 40117866.78 | 0.0135 | 0.0043 |
| Neptune | 105129-05-14 04:04 G | 40118771.53 | 40118771.67 | 40118771.85 | 0.0088 | 0.0067 |
| Neptune | 105130-05-16 09:35 G | 40119138.71 | 40119138.90 | 40119139.12 | 0.0088 | 0.0056 |
| Neptune | 105131-05-19 04:04 G | 40119506.44 | 40119506.67 | 40119506.93 | 0.0088 | 0.0027 |
| Neptune | 105132-05-20 08:37 G | 40119873.62 | 40119873.86 | 40119874.13 | 0.0088 | 0.0017 |
| Neptune | 105133-05-23 02:23 G | 40120241.34 | 40120241.60 | 40120241.87 | 0.0088 | 0.0013 |
| Neptune | 105134-05-25 09:21 G | 40120608.65 | 40120608.89 | 40120609.14 | 0.0088 | 0.0024 |
| Neptune | 105135-05-27 22:33 G | 40120976.24 | 40120976.44 | 40120976.67 | 0.0088 | 0.0053 |
| Neptune | 105136-05-29 11:30 G | 40121343.81 | 40121343.98 | 40121344.16 | 0.0088 | 0.0064 |
| Jupiter | 105138-06-09 15:49 G | 40122084.96 | 40122085.16 | 40122085.37 | 0.0494 | 0.0205 |
| Saturn | 105138-12-27 19:54 G | 40122286.16 | 40122286.33 | 40122286.50 | 0.0289 | 0.0198 |
| Saturn | 105140-01-10 13:54 G | 40122664.85 | 40122665.08 | 40122665.33 | 0.0293 | 0.0068 |
| Jupiter | 105150-06-14 08:09 G | 40126472.61 | 40126472.84 | 40126473.07 | 0.0494 | 0.0185 |
| Saturn | 105152-06-27 21:49 G | 40127217.24 | 40127217.41 | 40127217.59 | 0.0273 | 0.0189 |
| Saturn | 105153-07-10 11:59 G | 40127594.75 | 40127595.00 | 40127595.26 | 0.0270 | 0.0051 |
| Uranus | 105168-05-15 22:47 G | 40133018.23 | 40133018.45 | 40133018.68 | 0.0143 | 0.0063 |

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| Saturn | 105169-01-03 23:30 G | 40133251.26 | 40133251.48 | 40133251.72 | 0.0290 | 0.0047 |
| Uranus | 105169-05-21 06:13 G | 40133388.54 | 40133388.76 | 40133389.00 | 0.0143 | 0.0063 |
| Saturn | 105170-01-18 02:23 G | 40133630.47 | 40133630.60 | 40133630.74 | 0.0294 | 0.0237 |
| Saturn | 105182-07-05 09:06 G | 40138181.65 | 40138181.88 | 40138182.12 | 0.0271 | 0.0045 |
| Saturn | 105183-07-17 23:16 G | 40138559.28 | 40138559.47 | 40138559.65 | 0.0268 | 0.0178 |
| Jupiter | 105191-12-10 05:59 G | 40141626.53 | 40141626.75 | 40141626.97 | 0.0532 | 0.0202 |
| Saturn | 105197-12-29 08:09 G | 40143837.64 | 40143837.84 | 40143838.05 | 0.0289 | 0.0163 |
| Saturn | 105199-01-12 00:57 G | 40144216.33 | 40144216.54 | 40144216.77 | 0.0293 | 0.0118 |
| Jupiter | 105203-12-14 23:16 G | 40146014.27 | 40146014.47 | 40146014.68 | 0.0533 | 0.0190 |
| Uranus | 105208-11-13 05:45 G | 40147809.71 | 40147809.74 | 40147809.78 | 0.0135 | 0.0133 |
| Uranus | 105209-11-17 08:09 G | 40148178.59 | 40148178.84 | 40148179.09 | 0.0135 | 0.0036 |
| Neptune | 105210-11-13 11:01 G | 40148539.86 | 40148539.96 | 40148540.07 | 0.0090 | 0.0082 |
| Uranus | 105210-11-21 19:54 G | 40148548.10 | 40148548.33 | 40148548.57 | 0.0135 | 0.0045 |
| Saturn | 105211-06-30 04:47 G | 40148768.49 | 40148768.70 | 40148768.93 | 0.0273 | 0.0140 |
| Neptune | 105211-11-15 19:25 G | 40148907.18 | 40148907.31 | 40148907.49 | 0.0090 | 0.0069 |
| Saturn | 105212-07-11 20:37 G | 40149146.13 | 40149146.36 | 40149146.59 | 0.0269 | 0.0082 |
| Neptune | 105212-11-17 08:09 G | 40149274.62 | 40149274.84 | 40149275.09 | 0.0090 | 0.0041 |
| Neptune | 105213-11-19 22:04 G | 40149642.20 | 40149642.42 | 40149642.67 | 0.0090 | 0.0028 |
| Neptune | 105214-11-22 05:45 G | 40150009.48 | 40150009.74 | 40150010.00 | 0.0090 | 0.0001 |
| Neptune | 105215-11-24 23:16 G | 40150377.23 | 40150377.47 | 40150377.72 | 0.0090 | 0.0015 |
| Neptune | 105216-11-26 03:49 G | 40150744.45 | 40150744.66 | 40150744.89 | 0.0090 | 0.0044 |
| Neptune | 105217-11-28 21:49 G | 40151112.24 | 40151112.41 | 40151112.63 | 0.0090 | 0.0058 |
| Neptune | 105218-12-01 03:49 G | 40151479.60 | 40151479.66 | 40151479.76 | 0.0090 | 0.0085 |
| Jupiter | 105221-06-08 16:33 G | 40152400.00 | 40152400.19 | 40152400.39 | 0.0495 | 0.0284 |
| Saturn | 105226-12-24 07:25 G | 40154424.73 | 40154424.81 | 40154424.91 | 0.0287 | 0.0265 |
| Saturn | 105228-01-06 21:35 G | 40154803.16 | 40154803.40 | 40154803.65 | 0.0291 | 0.0011 |
| Jupiter | 105233-06-13 08:52 G | 40156787.64 | 40156787.87 | 40156788.10 | 0.0494 | 0.0066 |
| Saturn | 105240-06-24 08:09 G | 40159355.72 | 40159355.84 | 40159355.95 | 0.0274 | 0.0240 |
| Saturn | 105241-07-06 23:01 G | 40159733.20 | 40159733.46 | 40159733.72 | 0.0271 | 0.0021 |
| Saturn | 105242-07-19 04:47 G | 40160110.52 | 40160110.70 | 40160110.88 | 0.0268 | 0.0185 |

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| Jupiter | 105245-06-17 12:42 G | 40161174.93 | 40161175.03 | 40161175.13 | 0.0493 | 0.0445 |
| Uranus | 105252-05-16 14:23 G | 40163699.88 | 40163700.10 | 40163700.34 | 0.0143 | 0.0060 |
| Uranus | 105253-05-21 08:52 G | 40164069.65 | 40164069.87 | 40164070.11 | 0.0143 | 0.0065 |
| Mars | 105254-03-10 23:16 G | 40164363.30 | 40164363.47 | 40164363.64 | 0.1826 | 0.0860 |
| Saturn | 105256-12-31 02:52 G | 40165389.41 | 40165389.62 | 40165389.84 | 0.0290 | 0.0107 |
| Saturn | 105258-01-14 02:52 G | 40165768.43 | 40165768.62 | 40165768.81 | 0.0294 | 0.0175 |
| Pluto | 105258-12-01 11:45 G | 40166089.75 | 40166089.99 | 40166090.23 | 0.0064 | 0.0022 |
| Pluto | 105259-12-02 17:16 G | 40166456.12 | 40166456.22 | 40166456.36 | 0.0064 | 0.0057 |
| Saturn | 105270-07-01 23:59 G | 40170320.29 | 40170320.50 | 40170320.72 | 0.0272 | 0.0123 |
| Saturn | 105271-07-14 15:35 G | 40170697.92 | 40170698.15 | 40170698.39 | 0.0269 | 0.0090 |
| Jupiter | 105274-12-09 00:28 G | 40171941.33 | 40171941.52 | 40171941.70 | 0.0532 | 0.0316 |
| Saturn | 105285-12-25 18:13 G | 40175976.10 | 40175976.26 | 40175976.44 | 0.0288 | 0.0209 |
| Jupiter | 105286-12-13 16:04 G | 40176328.94 | 40176329.17 | 40176329.40 | 0.0533 | 0.0141 |
| Saturn | 105287-01-08 09:35 G | 40176354.67 | 40176354.90 | 40176355.13 | 0.0292 | 0.0058 |
| Uranus | 105292-11-13 17:01 G | 40178491.15 | 40178491.21 | 40178491.28 | 0.0135 | 0.0130 |
| Neptune | 105293-05-13 09:49 G | 40178671.85 | 40178671.91 | 40178672.03 | 0.0088 | 0.0083 |
| Uranus | 105293-11-17 23:30 G | 40178860.25 | 40178860.48 | 40178860.73 | 0.0135 | 0.0026 |
| Neptune | 105294-05-15 17:16 G | 40179039.05 | 40179039.22 | 40179039.44 | 0.0088 | 0.0056 |
| Uranus | 105294-11-22 07:11 G | 40179229.58 | 40179229.80 | 40179230.06 | 0.0135 | 0.0053 |
| Neptune | 105295-05-18 06:28 G | 40179406.56 | 40179406.77 | 40179407.03 | 0.0088 | 0.0044 |
| Neptune | 105296-05-19 19:40 G | 40179774.08 | 40179774.32 | 40179774.58 | 0.0088 | 0.0015 |
| Neptune | 105297-05-22 04:04 G | 40180141.40 | 40180141.67 | 40180141.94 | 0.0088 | 0.0003 |
| Neptune | 105298-05-24 20:52 G | 40180509.13 | 40180509.37 | 40180509.63 | 0.0088 | 0.0026 |
| Neptune | 105299-05-27 01:25 G | 40180876.34 | 40180876.56 | 40180876.82 | 0.0088 | 0.0037 |
| Saturn | 105299-06-26 16:47 G | 40180907.07 | 40180907.20 | 40180907.34 | 0.0274 | 0.0229 |
| Neptune | 105300-05-29 20:09 G | 40181244.19 | 40181244.34 | 40181244.54 | 0.0088 | 0.0065 |
| Saturn | 105300-07-09 11:30 G | 40181284.74 | 40181284.98 | 40181285.23 | 0.0270 | 0.0011 |
| Neptune | 105301-06-01 01:11 G | 40181611.46 | 40181611.55 | 40181611.71 | 0.0088 | 0.0077 |
| Saturn | 105301-07-22 00:42 G | 40181662.38 | 40181662.53 | 40181662.69 | 0.0267 | 0.0205 |
| Jupiter | 105304-06-08 18:28 G | 40182715.08 | 40182715.27 | 40182715.47 | 0.0494 | 0.0301 |

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| Saturn | 105316-01-03 19:40 G | 40186941.08 | 40186941.32 | 40186941.57 | 0.0290 | 0.0072 |
| Jupiter | 105316-06-13 05:16 G | 40187102.49 | 40187102.72 | 40187102.95 | 0.0494 | 0.0018 |
| Saturn | 105317-01-16 13:11 G | 40187319.87 | 40187320.05 | 40187320.24 | 0.0294 | 0.0194 |
| Jupiter | 105328-06-17 19:40 G | 40191490.15 | 40191490.32 | 40191490.50 | 0.0494 | 0.0351 |
| Saturn | 105329-07-04 11:30 G | 40191871.75 | 40191871.98 | 40191872.22 | 0.0272 | 0.0107 |
| Saturn | 105330-07-16 20:37 G | 40192249.15 | 40192249.36 | 40192249.60 | 0.0268 | 0.0119 |
| Uranus | 105336-05-17 22:04 G | 40194381.17 | 40194381.42 | 40194381.68 | 0.0143 | 0.0047 |
| Uranus | 105337-05-23 01:25 G | 40194751.35 | 40194751.56 | 40194751.79 | 0.0143 | 0.0066 |
| Saturn | 105344-12-28 11:16 G | 40197527.80 | 40197527.97 | 40197528.15 | 0.0288 | 0.0190 |
| Saturn | 105346-01-11 07:40 G | 40197906.59 | 40197906.82 | 40197907.06 | 0.0292 | 0.0071 |
| Pluto | 105348-06-02 07:25 G | 40198779.59 | 40198779.81 | 40198780.06 | 0.0079 | 0.0035 |
| Jupiter | 105357-12-08 21:21 G | 40202256.27 | 40202256.39 | 40202256.53 | 0.0532 | 0.0431 |
| Saturn | 105358-06-29 13:25 G | 40202458.91 | 40202459.06 | 40202459.22 | 0.0273 | 0.0208 |
| Mars | 105358-09-12 20:37 G | 40202534.16 | 40202534.36 | 40202534.55 | 0.1710 | 0.0501 |
| Saturn | 105359-07-12 05:45 G | 40202836.49 | 40202836.74 | 40202837.00 | 0.0270 | 0.0028 |
| Saturn | 105360-07-23 09:06 G | 40203213.81 | 40203213.88 | 40203213.97 | 0.0267 | 0.0252 |
| Jupiter | 105369-12-13 23:16 G | 40206644.24 | 40206644.47 | 40206644.71 | 0.0533 | 0.0038 |
| Saturn | 105375-01-05 04:33 G | 40208492.46 | 40208492.69 | 40208492.92 | 0.0291 | 0.0065 |
| Neptune | 105375-11-16 04:47 G | 40208807.58 | 40208807.70 | 40208807.88 | 0.0090 | 0.0073 |
| Saturn | 105376-01-19 06:28 G | 40208871.62 | 40208871.77 | 40208871.94 | 0.0294 | 0.0210 |
| Uranus | 105376-11-15 01:40 G | 40209172.50 | 40209172.57 | 40209172.69 | 0.0135 | 0.0125 |
| Neptune | 105376-11-17 10:04 G | 40209174.73 | 40209174.92 | 40209175.12 | 0.0090 | 0.0056 |
| Uranus | 105377-11-19 15:06 G | 40209541.89 | 40209542.13 | 40209542.39 | 0.0135 | 0.0022 |
| Neptune | 105377-11-20 04:18 G | 40209542.45 | 40209542.68 | 40209542.94 | 0.0090 | 0.0031 |
| Neptune | 105378-11-22 10:47 G | 40209909.71 | 40209909.95 | 40209910.20 | 0.0090 | 0.0013 |
| Uranus | 105378-11-23 16:18 G | 40209910.97 | 40209911.18 | 40209911.40 | 0.0135 | 0.0065 |
| Neptune | 105379-11-25 01:54 G | 40210277.32 | 40210277.58 | 40210277.84 | 0.0090 | 0.0012 |
| Neptune | 105380-11-26 12:42 G | 40210644.80 | 40210645.03 | 40210645.27 | 0.0090 | 0.0029 |
| Neptune | 105381-11-28 22:47 G | 40211012.26 | 40211012.45 | 40211012.68 | 0.0090 | 0.0054 |
| Jupiter | 105381-12-18 18:28 G | 40211032.21 | 40211032.27 | 40211032.34 | 0.0533 | 0.0508 |

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| Neptune | 105382-12-01 14:09 G | 40211379.96 | 40211380.09 | 40211380.27 | 0.0090 | 0.0071 |
| Jupiter | 105387-06-09 01:11 G | 40213030.40 | 40213030.55 | 40213030.71 | 0.0495 | 0.0369 |
| Saturn | 105388-07-05 23:01 G | 40213423.23 | 40213423.46 | 40213423.70 | 0.0271 | 0.0065 |
| Saturn | 105389-07-18 14:52 G | 40213800.93 | 40213801.12 | 40213801.31 | 0.0268 | 0.0167 |
| Jupiter | 105399-06-13 05:45 G | 40217417.50 | 40217417.74 | 40217417.98 | 0.0494 | 0.0006 |
| Saturn | 105403-12-31 20:09 G | 40219079.16 | 40219079.34 | 40219079.55 | 0.0289 | 0.0180 |
| Saturn | 105405-01-13 11:30 G | 40219457.75 | 40219457.98 | 40219458.22 | 0.0293 | 0.0092 |
| Jupiter | 105411-06-18 22:47 G | 40221805.28 | 40221805.45 | 40221805.62 | 0.0493 | 0.0338 |
| Saturn | 105417-07-01 20:52 G | 40224010.16 | 40224010.37 | 40224010.58 | 0.0273 | 0.0158 |
| Saturn | 105418-07-14 09:35 G | 40224387.67 | 40224387.90 | 40224388.14 | 0.0269 | 0.0075 |
| Uranus | 105420-05-19 10:18 G | 40225062.70 | 40225062.93 | 40225063.18 | 0.0143 | 0.0033 |
| Uranus | 105421-05-24 15:35 G | 40225432.91 | 40225433.15 | 40225433.38 | 0.0143 | 0.0068 |
| Saturn | 105434-01-07 18:42 G | 40230044.04 | 40230044.28 | 40230044.52 | 0.0291 | 0.0032 |
| Saturn | 105435-01-21 15:06 G | 40230423.02 | 40230423.13 | 40230423.27 | 0.0295 | 0.0253 |
| Jupiter | 105440-12-08 20:23 G | 40232571.23 | 40232571.35 | 40232571.48 | 0.0531 | 0.0445 |
| Saturn | 105446-06-26 16:33 G | 40234597.11 | 40234597.19 | 40234597.28 | 0.0275 | 0.0258 |
| Saturn | 105447-07-09 11:01 G | 40234974.71 | 40234974.96 | 40234975.22 | 0.0271 | 0.0024 |
| Saturn | 105448-07-20 17:01 G | 40235352.04 | 40235352.21 | 40235352.40 | 0.0267 | 0.0189 |
| Jupiter | 105452-12-14 00:28 G | 40236959.29 | 40236959.52 | 40236959.74 | 0.0532 | 0.0058 |
| Neptune | 105457-05-14 11:16 G | 40238571.92 | 40238571.97 | 40238572.08 | 0.0088 | 0.0084 |
| Neptune | 105458-05-17 04:47 G | 40238939.56 | 40238939.70 | 40238939.87 | 0.0088 | 0.0070 |
| Neptune | 105459-05-19 09:21 G | 40239306.68 | 40239306.89 | 40239307.14 | 0.0088 | 0.0044 |
| Neptune | 105460-05-21 04:04 G | 40239674.44 | 40239674.67 | 40239674.94 | 0.0088 | 0.0030 |
| Uranus | 105460-11-16 21:35 G | 40239854.28 | 40239854.40 | 40239854.56 | 0.0135 | 0.0111 |
| Neptune | 105461-05-23 09:35 G | 40240041.64 | 40240041.90 | 40240042.15 | 0.0088 | 0.0003 |
| Uranus | 105461-11-20 22:18 G | 40240223.19 | 40240223.43 | 40240223.69 | 0.0135 | 0.0021 |
| Neptune | 105462-05-26 01:25 G | 40240409.29 | 40240409.56 | 40240409.83 | 0.0088 | 0.0010 |
| Uranus | 105462-11-25 12:13 G | 40240592.82 | 40240593.01 | 40240593.22 | 0.0135 | 0.0079 |
| Saturn | 105463-01-02 00:57 G | 40240630.34 | 40240630.54 | 40240630.75 | 0.0289 | 0.0141 |
| Neptune | 105463-05-28 10:47 G | 40240776.72 | 40240776.95 | 40240777.18 | 0.0088 | 0.0036 |

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| Saturn | 105464-01-16 00:13 G | 40241009.30 | 40241009.51 | 40241009.71 | 0.0293 | 0.0142 |
| Neptune | 105464-05-29 22:04 G | 40241144.20 | 40241144.42 | 40241144.64 | 0.0088 | 0.0050 |
| Jupiter | 105464-12-18 16:04 G | 40241347.01 | 40241347.17 | 40241347.34 | 0.0533 | 0.0369 |
| Neptune | 105465-06-01 12:28 G | 40241511.92 | 40241512.02 | 40241512.16 | 0.0088 | 0.0077 |
| Jupiter | 105470-06-09 00:42 G | 40243345.46 | 40243345.53 | 40243345.62 | 0.0495 | 0.0464 |
| Saturn | 105476-07-03 06:42 G | 40245561.57 | 40245561.78 | 40245561.99 | 0.0273 | 0.0131 |
| Saturn | 105477-07-16 00:28 G | 40245939.28 | 40245939.52 | 40245939.75 | 0.0269 | 0.0087 |
| Jupiter | 105482-06-13 13:11 G | 40247732.81 | 40247733.05 | 40247733.30 | 0.0494 | 0.0089 |
| Saturn | 105491-12-27 03:35 G | 40251216.54 | 40251216.65 | 40251216.78 | 0.0287 | 0.0253 |
| Saturn | 105493-01-08 15:49 G | 40251594.92 | 40251595.16 | 40251595.41 | 0.0291 | 0.0018 |
| Jupiter | 105494-06-18 00:28 G | 40252120.34 | 40252120.52 | 40252120.71 | 0.0494 | 0.0294 |
| Uranus | 105504-05-21 06:13 G | 40255744.51 | 40255744.76 | 40255745.02 | 0.0143 | 0.0020 |
| Uranus | 105505-05-25 23:59 G | 40256114.30 | 40256114.50 | 40256114.73 | 0.0143 | 0.0078 |
| Saturn | 105505-06-28 15:35 G | 40256148.05 | 40256148.15 | 40256148.28 | 0.0274 | 0.0243 |
| Saturn | 105506-07-11 10:33 G | 40256525.69 | 40256525.94 | 40256526.18 | 0.0271 | 0.0023 |
| Pluto | 105506-12-05 05:45 G | 40256672.67 | 40256672.74 | 40256672.85 | 0.0064 | 0.0059 |
| Saturn | 105507-07-24 00:42 G | 40256903.37 | 40256903.53 | 40256903.71 | 0.0267 | 0.0188 |
| Pluto | 105507-12-06 21:06 G | 40257039.12 | 40257039.38 | 40257039.64 | 0.0064 | 0.0011 |
| Saturn | 105522-01-04 05:59 G | 40262181.52 | 40262181.75 | 40262181.98 | 0.0289 | 0.0104 |
| Saturn | 105523-01-17 22:04 G | 40262560.22 | 40262560.42 | 40262560.63 | 0.0293 | 0.0168 |
| Jupiter | 105523-12-10 01:54 G | 40262886.50 | 40262886.58 | 40262886.67 | 0.0531 | 0.0494 |
| Saturn | 105535-07-06 11:30 G | 40267112.76 | 40267112.98 | 40267113.21 | 0.0273 | 0.0131 |
| Jupiter | 105535-12-15 01:11 G | 40267274.33 | 40267274.55 | 40267274.77 | 0.0533 | 0.0056 |
| Saturn | 105536-07-17 21:06 G | 40267490.15 | 40267490.38 | 40267490.63 | 0.0269 | 0.0087 |
| Mars | 105538-03-14 14:23 G | 40268094.93 | 40268095.10 | 40268095.27 | 0.1835 | 0.0804 |
| Neptune | 105539-11-17 06:57 G | 40268707.72 | 40268707.79 | 40268707.91 | 0.0090 | 0.0084 |
| Neptune | 105540-11-18 18:28 G | 40269075.11 | 40269075.27 | 40269075.47 | 0.0090 | 0.0062 |
| Neptune | 105541-11-21 04:18 G | 40269442.47 | 40269442.68 | 40269442.94 | 0.0090 | 0.0042 |
| Neptune | 105542-11-23 20:23 G | 40269810.11 | 40269810.35 | 40269810.60 | 0.0090 | 0.0020 |
| Neptune | 105543-11-26 02:09 G | 40270177.33 | 40270177.59 | 40270177.84 | 0.0090 | 0.0001 |

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| Uranus | 105544-11-18 06:13 G | 40270535.60 | 40270535.76 | 40270535.96 | 0.0135 | 0.0097 |
| Neptune | 105544-11-27 20:23 G | 40270545.11 | 40270545.35 | 40270545.61 | 0.0090 | 0.0022 |
| Uranus | 105545-11-22 17:01 G | 40270904.97 | 40270905.21 | 40270905.45 | 0.0135 | 0.0017 |
| Neptune | 105545-11-30 00:57 G | 40270912.34 | 40270912.54 | 40270912.78 | 0.0090 | 0.0043 |
| Uranus | 105546-11-26 20:52 G | 40271274.20 | 40271274.37 | 40271274.59 | 0.0135 | 0.0089 |
| Neptune | 105546-12-02 18:42 G | 40271280.11 | 40271280.28 | 40271280.47 | 0.0090 | 0.0064 |
| Neptune | 105547-12-05 02:23 G | 40271647.53 | 40271647.60 | 40271647.68 | 0.0090 | 0.0085 |
| Jupiter | 105547-12-20 05:30 G | 40271662.55 | 40271662.73 | 40271662.90 | 0.0533 | 0.0354 |
| Saturn | 105550-12-29 06:28 G | 40272767.64 | 40272767.77 | 40272767.91 | 0.0287 | 0.0233 |
| Saturn | 105552-01-11 23:45 G | 40273146.26 | 40273146.49 | 40273146.73 | 0.0291 | 0.0026 |
| Jupiter | 105553-06-09 04:33 G | 40273660.61 | 40273660.69 | 40273660.77 | 0.0495 | 0.0463 |
| Saturn | 105564-06-29 21:49 G | 40277699.31 | 40277699.41 | 40277699.53 | 0.0274 | 0.0245 |
| Jupiter | 105565-06-14 01:25 G | 40278048.33 | 40278048.56 | 40278048.79 | 0.0494 | 0.0139 |
| Saturn | 105565-07-12 18:42 G | 40278077.03 | 40278077.28 | 40278077.53 | 0.0270 | 0.0016 |
| Saturn | 105566-07-25 01:11 G | 40278454.40 | 40278454.55 | 40278454.71 | 0.0267 | 0.0211 |
| Jupiter | 105577-06-18 06:13 G | 40282435.55 | 40282435.76 | 40282435.98 | 0.0494 | 0.0210 |
| Saturn | 105581-01-04 23:16 G | 40283732.26 | 40283732.47 | 40283732.70 | 0.0289 | 0.0112 |
| Saturn | 105582-01-18 22:47 G | 40284111.26 | 40284111.45 | 40284111.65 | 0.0293 | 0.0160 |
| Uranus | 105587-05-17 16:18 G | 40286056.16 | 40286056.18 | 40286056.23 | 0.0143 | 0.0142 |
| Uranus | 105588-05-21 11:01 G | 40286425.70 | 40286425.96 | 40286426.22 | 0.0143 | 0.0016 |
| Uranus | 105589-05-26 18:42 G | 40286796.09 | 40286796.28 | 40286796.48 | 0.0143 | 0.0090 |
| Saturn | 105594-07-07 08:52 G | 40288663.66 | 40288663.87 | 40288664.10 | 0.0273 | 0.0113 |
| Saturn | 105595-07-20 03:21 G | 40289041.42 | 40289041.64 | 40289041.85 | 0.0269 | 0.0123 |
| Pluto | 105596-06-05 05:59 G | 40289362.57 | 40289362.75 | 40289362.99 | 0.0080 | 0.0048 |
| Saturn | 105609-12-30 02:23 G | 40294318.48 | 40294318.60 | 40294318.75 | 0.0287 | 0.0242 |
| Saturn | 105611-01-12 14:09 G | 40294696.85 | 40294697.09 | 40294697.33 | 0.0291 | 0.0020 |
| Jupiter | 105618-12-14 08:09 G | 40297589.62 | 40297589.84 | 40297590.06 | 0.0532 | 0.0123 |
| Neptune | 105622-05-17 06:57 G | 40298839.67 | 40298839.79 | 40298839.98 | 0.0088 | 0.0072 |
| Neptune | 105623-05-19 19:54 G | 40299207.16 | 40299207.33 | 40299207.54 | 0.0088 | 0.0058 |
| Saturn | 105623-07-01 16:33 G | 40299250.03 | 40299250.19 | 40299250.36 | 0.0274 | 0.0208 |

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| Neptune | 105624-05-21 04:33 G | 40299574.45 | 40299574.69 | 40299574.95 | 0.0088 | 0.0032 |
| Saturn | 105624-07-13 09:49 G | 40299627.67 | 40299627.91 | 40299628.16 | 0.0271 | 0.0029 |
| Neptune | 105625-05-23 21:49 G | 40299942.16 | 40299942.41 | 40299942.67 | 0.0088 | 0.0018 |
| Saturn | 105625-07-25 23:59 G | 40300005.42 | 40300005.50 | 40300005.60 | 0.0267 | 0.0247 |
| Neptune | 105626-05-26 02:37 G | 40300309.36 | 40300309.61 | 40300309.88 | 0.0088 | 0.0009 |
| Neptune | 105627-05-28 21:06 G | 40300677.15 | 40300677.38 | 40300677.65 | 0.0088 | 0.0024 |
| Neptune | 105628-05-30 02:23 G | 40301044.41 | 40301044.60 | 40301044.83 | 0.0088 | 0.0050 |
| Uranus | 105628-11-18 22:47 G | 40301217.28 | 40301217.45 | 40301217.65 | 0.0135 | 0.0087 |
| Neptune | 105629-06-01 18:13 G | 40301412.11 | 40301412.26 | 40301412.48 | 0.0088 | 0.0064 |
| Uranus | 105629-11-23 06:57 G | 40301586.53 | 40301586.79 | 40301587.05 | 0.0135 | 0.0008 |
| Uranus | 105630-11-27 13:40 G | 40301955.91 | 40301956.07 | 40301956.24 | 0.0135 | 0.0096 |
| Jupiter | 105630-12-19 14:09 G | 40301977.92 | 40301978.09 | 40301978.27 | 0.0533 | 0.0346 |
| Jupiter | 105636-06-08 16:33 G | 40303976.14 | 40303976.19 | 40303976.24 | 0.0495 | 0.0483 |
| Saturn | 105640-01-07 01:11 G | 40305283.32 | 40305283.55 | 40305283.79 | 0.0289 | 0.0098 |
| Saturn | 105641-01-19 17:30 G | 40305662.05 | 40305662.23 | 40305662.43 | 0.0293 | 0.0186 |
| Mars | 105642-09-15 21:21 G | 40306266.22 | 40306266.39 | 40306266.57 | 0.1703 | 0.0048 |
| Jupiter | 105648-06-13 09:49 G | 40308363.69 | 40308363.91 | 40308364.13 | 0.0494 | 0.0107 |
| Saturn | 105653-07-08 09:49 G | 40310214.66 | 40310214.91 | 40310215.16 | 0.0273 | 0.0072 |
| Saturn | 105654-07-20 19:11 G | 40310592.09 | 40310592.30 | 40310592.51 | 0.0269 | 0.0145 |
| Jupiter | 105660-06-17 19:40 G | 40312751.11 | 40312751.32 | 40312751.54 | 0.0493 | 0.0230 |
| Saturn | 105668-12-31 00:57 G | 40315869.39 | 40315869.54 | 40315869.72 | 0.0287 | 0.0207 |
| Saturn | 105670-01-13 17:59 G | 40316248.01 | 40316248.25 | 40316248.48 | 0.0291 | 0.0066 |
| Uranus | 105671-05-17 21:35 G | 40316737.33 | 40316737.40 | 40316737.51 | 0.0143 | 0.0134 |
| Uranus | 105672-05-22 05:01 G | 40317107.46 | 40317107.71 | 40317107.97 | 0.0143 | 0.0012 |
| Uranus | 105673-05-27 00:13 G | 40317477.34 | 40317477.51 | 40317477.72 | 0.0143 | 0.0099 |
| Saturn | 105682-07-02 17:45 G | 40320801.07 | 40320801.24 | 40320801.42 | 0.0274 | 0.0190 |
| Saturn | 105683-07-15 12:28 G | 40321178.77 | 40321179.02 | 40321179.28 | 0.0271 | 0.0029 |
| Saturn | 105684-07-26 17:16 G | 40321556.11 | 40321556.22 | 40321556.35 | 0.0267 | 0.0232 |
| Saturn | 105699-01-07 17:45 G | 40326834.01 | 40326834.24 | 40326834.47 | 0.0289 | 0.0061 |
| Saturn | 105700-01-21 16:47 G | 40327213.03 | 40327213.20 | 40327213.37 | 0.0293 | 0.0205 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 105701-12-14 15:06 G | 40327904.92 | 40327905.13 | 40327905.35 | 0.0532 | 0.0158 |
| Neptune | 105703-11-17 11:01 G | 40328607.93 | 40328607.96 | 40328608.03 | 0.0090 | 0.0088 |
| Neptune | 105704-11-18 21:06 G | 40328975.27 | 40328975.38 | 40328975.54 | 0.0090 | 0.0076 |
| Neptune | 105705-11-21 13:11 G | 40329342.85 | 40329343.05 | 40329343.28 | 0.0090 | 0.0046 |
| Neptune | 105706-11-23 18:57 G | 40329710.07 | 40329710.29 | 40329710.54 | 0.0090 | 0.0035 |
| Neptune | 105707-11-26 13:54 G | 40330077.82 | 40330078.08 | 40330078.33 | 0.0090 | 0.0003 |
| Neptune | 105708-11-27 18:57 G | 40330445.04 | 40330445.29 | 40330445.54 | 0.0090 | 0.0008 |
| Neptune | 105709-11-30 11:45 G | 40330812.77 | 40330812.99 | 40330813.24 | 0.0090 | 0.0039 |
| Neptune | 105710-12-02 20:09 G | 40331180.15 | 40331180.34 | 40331180.56 | 0.0090 | 0.0051 |
| Neptune | 105711-12-05 07:54 G | 40331547.73 | 40331547.83 | 40331547.96 | 0.0090 | 0.0080 |
| Saturn | 105712-07-10 06:57 G | 40331765.56 | 40331765.79 | 40331766.03 | 0.0273 | 0.0088 |
| Uranus | 105712-11-20 10:33 G | 40331898.74 | 40331898.94 | 40331899.15 | 0.0135 | 0.0080 |
| Saturn | 105713-07-22 20:52 G | 40332143.16 | 40332143.37 | 40332143.59 | 0.0269 | 0.0143 |
| Uranus | 105713-11-24 23:30 G | 40332268.24 | 40332268.48 | 40332268.73 | 0.0135 | 0.0002 |
| Jupiter | 105713-12-19 20:23 G | 40332293.14 | 40332293.35 | 40332293.56 | 0.0533 | 0.0245 |
| Uranus | 105714-11-29 00:28 G | 40332637.39 | 40332637.52 | 40332637.70 | 0.0135 | 0.0107 |
| Saturn | 105728-01-02 17:45 G | 40337420.07 | 40337420.24 | 40337420.40 | 0.0286 | 0.0206 |
| Saturn | 105729-01-15 11:16 G | 40337798.75 | 40337798.97 | 40337799.21 | 0.0291 | 0.0056 |
| Jupiter | 105731-06-14 23:59 G | 40338679.28 | 40338679.50 | 40338679.72 | 0.0494 | 0.0176 |
| Saturn | 105741-07-04 09:21 G | 40342351.71 | 40342351.89 | 40342352.07 | 0.0275 | 0.0180 |
| Saturn | 105742-07-17 08:37 G | 40342729.63 | 40342729.86 | 40342730.10 | 0.0271 | 0.0061 |
| Jupiter | 105743-06-19 04:47 G | 40343066.48 | 40343066.70 | 40343066.92 | 0.0494 | 0.0160 |
| Uranus | 105755-05-19 09:49 G | 40347418.79 | 40347418.91 | 40347419.06 | 0.0143 | 0.0122 |
| Pluto | 105755-12-08 18:13 G | 40347622.03 | 40347622.26 | 40347622.50 | 0.0064 | 0.0029 |
| Uranus | 105756-05-23 11:01 G | 40347788.72 | 40347788.96 | 40347789.21 | 0.0143 | 0.0005 |
| Pluto | 105756-12-09 11:01 G | 40347988.82 | 40347988.96 | 40347989.16 | 0.0065 | 0.0049 |
| Uranus | 105757-05-28 13:25 G | 40348158.87 | 40348159.06 | 40348159.26 | 0.0143 | 0.0096 |
| Saturn | 105758-01-09 11:01 G | 40348384.73 | 40348384.96 | 40348385.20 | 0.0289 | 0.0054 |
| Saturn | 105759-01-23 09:35 G | 40348763.76 | 40348763.90 | 40348764.05 | 0.0293 | 0.0228 |
| Saturn | 105771-07-11 22:18 G | 40353316.19 | 40353316.43 | 40353316.67 | 0.0273 | 0.0051 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 105772-07-23 17:01 G | 40353694.01 | 40353694.21 | 40353694.40 | 0.0269 | 0.0162 |
| Jupiter | 105784-12-14 02:09 G | 40358220.40 | 40358220.59 | 40358220.79 | 0.0533 | 0.0245 |
| Neptune | 105786-05-17 15:35 G | 40358740.04 | 40358740.15 | 40358740.28 | 0.0088 | 0.0078 |
| Saturn | 105787-01-03 16:33 G | 40358970.99 | 40358971.19 | 40358971.40 | 0.0286 | 0.0159 |
| Neptune | 105787-05-20 00:13 G | 40359107.38 | 40359107.51 | 40359107.70 | 0.0088 | 0.0068 |
| Saturn | 105788-01-17 05:01 G | 40359349.49 | 40359349.71 | 40359349.94 | 0.0291 | 0.0105 |
| Neptune | 105788-05-21 10:47 G | 40359474.73 | 40359474.95 | 40359475.22 | 0.0088 | 0.0039 |
| Neptune | 105789-05-24 02:08 G | 40359842.35 | 40359842.59 | 40359842.83 | 0.0088 | 0.0027 |
| Neptune | 105790-05-26 08:37 G | 40360209.59 | 40360209.86 | 40360210.12 | 0.0088 | 0.0003 |
| Neptune | 105791-05-29 02:52 G | 40360577.38 | 40360577.62 | 40360577.89 | 0.0088 | 0.0014 |
| Neptune | 105792-05-30 07:25 G | 40360944.60 | 40360944.81 | 40360945.05 | 0.0088 | 0.0043 |
| Neptune | 105793-06-02 01:11 G | 40361312.37 | 40361312.55 | 40361312.79 | 0.0088 | 0.0054 |
| Neptune | 105794-06-04 08:52 G | 40361679.81 | 40361679.87 | 40361679.97 | 0.0088 | 0.0083 |
| Uranus | 105796-11-21 04:18 G | 40362580.49 | 40362580.68 | 40362580.91 | 0.0135 | 0.0082 |
| Jupiter | 105796-12-19 05:01 G | 40362608.50 | 40362608.71 | 40362608.94 | 0.0533 | 0.0207 |
| Uranus | 105797-11-25 09:20 G | 40362949.65 | 40362949.89 | 40362950.13 | 0.0135 | 0.0021 |
| Uranus | 105798-11-29 19:11 G | 40363319.16 | 40363319.30 | 40363319.47 | 0.0135 | 0.0107 |
| Saturn | 105800-07-06 02:08 G | 40363902.41 | 40363902.59 | 40363902.79 | 0.0275 | 0.0180 |
| Saturn | 105801-07-18 22:47 G | 40364280.21 | 40364280.45 | 40364280.69 | 0.0271 | 0.0046 |
| Saturn | 105802-07-31 14:23 G | 40364658.08 | 40364658.10 | 40364658.13 | 0.0268 | 0.0266 |
| Jupiter | 105814-06-15 10:47 G | 40368994.73 | 40368994.95 | 40368995.17 | 0.0495 | 0.0192 |
| Saturn | 105815-12-30 06:56 G | 40369557.76 | 40369557.79 | 40369557.84 | 0.0285 | 0.0280 |
| Saturn | 105817-01-11 13:54 G | 40369935.83 | 40369936.08 | 40369936.33 | 0.0289 | 0.0033 |
| Saturn | 105818-01-25 05:30 G | 40370314.58 | 40370314.73 | 40370314.88 | 0.0293 | 0.0230 |
| Mars | 105822-03-16 03:49 G | 40371825.45 | 40371825.66 | 40371825.88 | 0.1846 | 0.0233 |
| Jupiter | 105826-06-19 16:47 G | 40373381.99 | 40373382.20 | 40373382.42 | 0.0493 | 0.0190 |
| Saturn | 105830-07-13 18:56 G | 40374867.04 | 40374867.29 | 40374867.54 | 0.0273 | 0.0056 |
| Saturn | 105831-07-26 06:56 G | 40375244.61 | 40375244.79 | 40375244.98 | 0.0269 | 0.0177 |
| Uranus | 105839-05-21 00:56 G | 40378100.39 | 40378100.54 | 40378100.70 | 0.0143 | 0.0111 |
| Uranus | 105840-05-24 21:06 G | 40378470.11 | 40378470.38 | 40378470.64 | 0.0143 | 0.0002 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 105841-05-30 01:11 G | 40378840.39 | 40378840.55 | 40378840.73 | 0.0143 | 0.0106 |
| Pluto | 105845-06-10 05:16 G | 40380312.48 | 40380312.72 | 40380312.96 | 0.0079 | 0.0034 |
| Saturn | 105846-01-05 22:47 G | 40380522.26 | 40380522.45 | 40380522.65 | 0.0286 | 0.0165 |
| Saturn | 105847-01-19 13:25 G | 40380900.83 | 40380901.06 | 40380901.29 | 0.0291 | 0.0096 |
| Mars | 105847-09-16 11:01 G | 40381140.87 | 40381140.96 | 40381141.06 | 0.1691 | 0.1455 |
| Saturn | 105859-07-08 06:42 G | 40385453.59 | 40385453.78 | 40385453.99 | 0.0275 | 0.0159 |
| Saturn | 105860-07-19 23:59 G | 40385831.27 | 40385831.50 | 40385831.76 | 0.0271 | 0.0084 |
| Jupiter | 105867-12-15 08:08 G | 40388535.64 | 40388535.84 | 40388536.04 | 0.0532 | 0.0224 |
| Neptune | 105868-11-19 05:59 G | 40388875.71 | 40388875.75 | 40388875.86 | 0.0090 | 0.0086 |
| Neptune | 105869-11-21 15:06 G | 40389242.94 | 40389243.13 | 40389243.33 | 0.0090 | 0.0055 |
| Neptune | 105870-11-24 03:20 G | 40389610.42 | 40389610.64 | 40389610.89 | 0.0090 | 0.0043 |
| Neptune | 105871-11-26 16:47 G | 40389977.96 | 40389978.20 | 40389978.45 | 0.0090 | 0.0013 |
| Neptune | 105872-11-28 00:28 G | 40390345.26 | 40390345.52 | 40390345.78 | 0.0090 | 0.0001 |
| Neptune | 105873-11-30 17:30 G | 40390713.01 | 40390713.23 | 40390713.48 | 0.0090 | 0.0030 |
| Neptune | 105874-12-02 22:32 G | 40391080.22 | 40391080.44 | 40391080.67 | 0.0090 | 0.0041 |
| Neptune | 105875-12-05 16:47 G | 40391448.06 | 40391448.20 | 40391448.37 | 0.0090 | 0.0072 |
| Saturn | 105876-01-13 14:37 G | 40391486.88 | 40391487.11 | 40391487.34 | 0.0289 | 0.0029 |
| Neptune | 105876-12-06 22:32 G | 40391815.38 | 40391815.44 | 40391815.55 | 0.0090 | 0.0084 |
| Saturn | 105877-01-26 13:11 G | 40391865.94 | 40391866.05 | 40391866.18 | 0.0293 | 0.0252 |
| Jupiter | 105879-12-20 12:42 G | 40392923.81 | 40392924.03 | 40392924.25 | 0.0533 | 0.0184 |
| Uranus | 105880-11-22 14:08 G | 40393261.89 | 40393262.09 | 40393262.30 | 0.0135 | 0.0074 |
| Uranus | 105881-11-27 01:11 G | 40393631.30 | 40393631.55 | 40393631.80 | 0.0135 | 0.0026 |
| Uranus | 105882-12-01 04:04 G | 40394000.56 | 40394000.67 | 40394000.81 | 0.0135 | 0.0116 |
| Saturn | 105888-07-01 15:06 G | 40396040.05 | 40396040.13 | 40396040.24 | 0.0277 | 0.0253 |
| Saturn | 105889-07-14 19:40 G | 40396418.08 | 40396418.32 | 40396418.57 | 0.0273 | 0.0012 |
| Saturn | 105890-07-27 11:59 G | 40396795.86 | 40396796.00 | 40396796.17 | 0.0269 | 0.0211 |
| Jupiter | 105897-06-14 22:47 G | 40399310.24 | 40399310.45 | 40399310.66 | 0.0494 | 0.0219 |
| Saturn | 105905-01-07 21:35 G | 40402073.19 | 40402073.40 | 40402073.63 | 0.0286 | 0.0136 |
| Saturn | 105906-01-21 11:44 G | 40402451.79 | 40402451.99 | 40402452.21 | 0.0291 | 0.0141 |
| Jupiter | 105909-06-20 02:08 G | 40403697.36 | 40403697.59 | 40403697.83 | 0.0493 | 0.0100 |

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| Saturn | 105918-07-09 23:59 G | 40407004.28 | 40407004.50 | 40407004.73 | 0.0275 | 0.0119 |
| Saturn | 105919-07-22 21:49 G | 40407382.19 | 40407382.41 | 40407382.64 | 0.0271 | 0.0101 |
| Jupiter | 105921-06-24 19:54 G | 40408085.26 | 40408085.33 | 40408085.42 | 0.0493 | 0.0459 |
| Uranus | 105923-05-22 07:25 G | 40408781.66 | 40408781.81 | 40408782.01 | 0.0143 | 0.0106 |
| Uranus | 105924-05-26 11:59 G | 40409151.75 | 40409152.00 | 40409152.25 | 0.0143 | 0.0007 |
| Uranus | 105925-05-31 10:18 G | 40409521.78 | 40409521.93 | 40409522.12 | 0.0143 | 0.0111 |
| Mars | 105926-09-19 16:18 G | 40409997.99 | 40409998.18 | 40409998.38 | 0.1696 | 0.0524 |
| Saturn | 105934-01-02 14:37 G | 40412659.99 | 40412660.11 | 40412660.24 | 0.0285 | 0.0242 |
| Saturn | 105935-01-15 20:52 G | 40413038.12 | 40413038.37 | 40413038.63 | 0.0289 | 0.0024 |
| Saturn | 105947-07-04 22:47 G | 40417591.31 | 40417591.45 | 40417591.59 | 0.0276 | 0.0227 |
| Saturn | 105948-07-16 17:16 G | 40417968.96 | 40417969.22 | 40417969.48 | 0.0273 | 0.0009 |
| Saturn | 105949-07-29 06:28 G | 40418346.62 | 40418346.77 | 40418346.94 | 0.0269 | 0.0203 |
| Jupiter | 105950-12-15 05:01 G | 40418850.55 | 40418850.71 | 40418850.88 | 0.0532 | 0.0365 |
| Neptune | 105951-05-21 08:37 G | 40419007.70 | 40419007.86 | 40419008.04 | 0.0088 | 0.0067 |
| Neptune | 105952-05-22 18:42 G | 40419375.10 | 40419375.28 | 40419375.50 | 0.0088 | 0.0054 |
| Neptune | 105953-05-25 05:16 G | 40419742.47 | 40419742.72 | 40419742.98 | 0.0088 | 0.0027 |
| Neptune | 105954-05-27 20:37 G | 40420110.12 | 40420110.36 | 40420110.62 | 0.0088 | 0.0014 |
| Neptune | 105955-05-30 02:23 G | 40420477.34 | 40420477.60 | 40420477.86 | 0.0088 | 0.0013 |
| Neptune | 105956-05-31 20:52 G | 40420845.13 | 40420845.37 | 40420845.62 | 0.0088 | 0.0027 |
| Neptune | 105957-06-03 01:25 G | 40421212.37 | 40421212.56 | 40421212.78 | 0.0088 | 0.0054 |
| Neptune | 105958-06-05 18:56 G | 40421580.15 | 40421580.29 | 40421580.48 | 0.0088 | 0.0068 |
| Jupiter | 105962-12-20 13:11 G | 40423238.83 | 40423239.05 | 40423239.27 | 0.0533 | 0.0117 |
| Saturn | 105964-01-10 12:13 G | 40423624.79 | 40423625.01 | 40423625.24 | 0.0287 | 0.0087 |
| Uranus | 105964-11-24 06:13 G | 40423943.55 | 40423943.76 | 40423944.00 | 0.0135 | 0.0065 |
| Saturn | 105965-01-23 02:52 G | 40424003.43 | 40424003.62 | 40424003.83 | 0.0291 | 0.0176 |
| Uranus | 105965-11-28 08:23 G | 40424312.62 | 40424312.85 | 40424313.10 | 0.0135 | 0.0030 |
| Uranus | 105966-12-02 21:06 G | 40424682.31 | 40424682.38 | 40424682.49 | 0.0135 | 0.0126 |
| Saturn | 105977-07-11 10:47 G | 40428555.74 | 40428555.95 | 40428556.19 | 0.0274 | 0.0123 |
| Saturn | 105978-07-24 02:52 G | 40428933.39 | 40428933.62 | 40428933.87 | 0.0271 | 0.0102 |
| Jupiter | 105980-06-15 00:42 G | 40429625.34 | 40429625.53 | 40429625.73 | 0.0494 | 0.0240 |

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| Jupiter | 105992-06-19 10:47 G | 40434012.71 | 40434012.95 | 40434013.19 | 0.0494 | 0.0110 |
| Saturn | 105993-01-03 17:01 G | 40434211.05 | 40434211.21 | 40434211.38 | 0.0285 | 0.0205 |
| Saturn | 105994-01-17 06:56 G | 40434589.56 | 40434589.79 | 40434590.02 | 0.0290 | 0.0042 |

107TH MILLENNIUM CE

This is a list of transits of Moon in the 107th millennium CE.

| | FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|----------------------|-------------------------|-------------|-------------|--------|--------|--------|-------|---|
| Pluto | 106003-12-11 22:47 G | 40438205.37 | 40438205.45 | 40438205.61 | 0.0064 | 0.0057 | | | |
| Jupiter | 106004-06-23 23:44 G | 40438400.39 | 40438400.49 | 40438400.60 | 0.0493 | 0.0433 | | | |
| Pluto | 106004-12-12 15:35 G | 40438571.92 | 40438572.15 | 40438572.41 | 0.0064 | 0.0013 | | | |
| Saturn | 106006-07-05 22:32 G | 40439142.32 | 40439142.44 | 40439142.59 | 0.0276 | 0.0228 | | | |
| Uranus | 106007-05-23 00:13 G | 40439463.35 | 40439463.51 | 40439463.70 | 0.0143 | 0.0102 | | | |
| Saturn | 106007-07-19 02:08 G | 40439520.35 | 40439520.59 | 40439520.83 | 0.0272 | 0.0008 | | | |
| Uranus | 106008-05-27 00:56 G | 40439833.28 | 40439833.54 | 40439833.80 | 0.0143 | 0.0019 | | | |
| Saturn | 106008-07-30 18:13 G | 40439898.14 | 40439898.26 | 40439898.38 | 0.0269 | 0.0234 | | | |
| Uranus | 106009-05-31 23:59 G | 40440203.37 | 40440203.50 | 40440203.65 | 0.0143 | 0.0119 | | | |
| Saturn | 106023-01-11 19:25 G | 40445176.08 | 40445176.31 | 40445176.55 | 0.0287 | 0.0079 | | | |
| Saturn | 106024-01-25 10:04 G | 40445554.74 | 40445554.92 | 40445555.12 | 0.0291 | 0.0181 | | | |
| Neptune | 106032-11-19 05:30 G | 40448775.68 | 40448775.73 | 40448775.82 | 0.0090 | 0.0086 | | | |
| Neptune | 106033-11-21 23:30 G | 40449143.36 | 40449143.48 | 40449143.66 | 0.0090 | 0.0073 | | | |
| Jupiter | 106033-12-14 11:16 G | 40449165.81 | 40449165.97 | 40449166.13 | 0.0532 | 0.0385 | | | |
| Neptune | 106034-11-24 06:42 G | 40449510.58 | 40449510.78 | 40449511.01 | 0.0090 | 0.0044 | | | |
| Neptune | 106035-11-26 22:04 G | 40449878.17 | 40449878.42 | 40449878.67 | 0.0090 | 0.0030 | | | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 106036-07-12 11:44 G | 40450106.76 | 40450106.99 | 40450107.23 | 0.0274 | 0.0088 |
| Neptune | 106036-11-28 09:20 G | 40450245.65 | 40450245.89 | 40450246.14 | 0.0090 | 0.0002 |
| Saturn | 106037-07-25 07:25 G | 40450484.62 | 40450484.81 | 40450485.02 | 0.0271 | 0.0149 |
| Neptune | 106037-11-30 18:42 G | 40450613.03 | 40450613.28 | 40450613.55 | 0.0090 | 0.0013 |
| Neptune | 106038-12-03 10:32 G | 40450980.73 | 40450980.94 | 40450981.17 | 0.0090 | 0.0042 |
| Neptune | 106039-12-05 16:04 G | 40451347.97 | 40451348.17 | 40451348.37 | 0.0090 | 0.0055 |
| Neptune | 106040-12-07 10:04 G | 40451715.85 | 40451715.92 | 40451716.02 | 0.0090 | 0.0084 |
| Jupiter | 106045-12-19 13:54 G | 40453553.86 | 40453554.08 | 40453554.30 | 0.0533 | 0.0016 |
| Uranus | 106048-11-24 12:42 G | 40454624.81 | 40454625.03 | 40454625.27 | 0.0135 | 0.0055 |
| Uranus | 106049-11-29 03:06 G | 40454994.39 | 40454994.63 | 40454994.88 | 0.0135 | 0.0032 |
| Saturn | 106052-01-06 13:11 G | 40455762.88 | 40455763.05 | 40455763.23 | 0.0286 | 0.0200 |
| Saturn | 106053-01-18 21:49 G | 40456141.16 | 40456141.41 | 40456141.66 | 0.0290 | 0.0058 |
| Jupiter | 106057-12-24 10:47 G | 40457941.82 | 40457941.95 | 40457942.08 | 0.0533 | 0.0445 |
| Jupiter | 106063-06-15 01:25 G | 40459940.40 | 40459940.56 | 40459940.73 | 0.0495 | 0.0345 |
| Saturn | 106065-07-07 13:25 G | 40460693.87 | 40460694.06 | 40460694.26 | 0.0276 | 0.0182 |
| Saturn | 106066-07-20 06:42 G | 40461071.54 | 40461071.78 | 40461072.04 | 0.0272 | 0.0060 |
| Jupiter | 106075-06-19 20:23 G | 40464328.11 | 40464328.35 | 40464328.59 | 0.0494 | 0.0034 |
| Saturn | 106082-01-13 15:49 G | 40466727.93 | 40466728.16 | 40466728.40 | 0.0288 | 0.0046 |
| Saturn | 106083-01-27 09:35 G | 40467106.77 | 40467106.90 | 40467107.07 | 0.0291 | 0.0228 |
| Jupiter | 106087-06-23 22:47 G | 40468715.32 | 40468715.45 | 40468715.59 | 0.0493 | 0.0400 |
| Uranus | 106091-05-23 13:11 G | 40470144.87 | 40470145.05 | 40470145.26 | 0.0143 | 0.0098 |
| Uranus | 106092-05-27 10:32 G | 40470514.70 | 40470514.94 | 40470515.19 | 0.0143 | 0.0028 |
| Uranus | 106093-06-01 15:20 G | 40470885.04 | 40470885.14 | 40470885.28 | 0.0143 | 0.0126 |
| Pluto | 106093-06-12 01:25 G | 40470895.33 | 40470895.56 | 40470895.80 | 0.0079 | 0.0030 |
| Saturn | 106095-07-15 06:28 G | 40471658.53 | 40471658.77 | 40471659.02 | 0.0274 | 0.0039 |
| Saturn | 106096-07-26 21:35 G | 40472036.22 | 40472036.40 | 40472036.60 | 0.0270 | 0.0181 |
| Mars | 106106-03-18 10:04 G | 40475556.73 | 40475556.92 | 40475557.12 | 0.1855 | 0.0329 |
| Saturn | 106111-01-08 21:06 G | 40477314.18 | 40477314.38 | 40477314.59 | 0.0286 | 0.0154 |
| Saturn | 106112-01-22 11:59 G | 40477692.79 | 40477693.00 | 40477693.22 | 0.0290 | 0.0117 |
| Neptune | 106115-05-21 10:04 G | 40478907.83 | 40478907.92 | 40478908.04 | 0.0088 | 0.0080 |

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| Neptune | 106116-05-23 03:49 G | 40479275.46 | 40479275.66 | 40479275.87 | 0.0088 | 0.0056 |
| Jupiter | 106116-12-14 13:40 G | 40479480.95 | 40479481.07 | 40479481.21 | 0.0531 | 0.0444 |
| Neptune | 106117-05-25 10:32 G | 40479642.73 | 40479642.94 | 40479643.18 | 0.0088 | 0.0041 |
| Neptune | 106118-05-27 23:59 G | 40480010.25 | 40480010.50 | 40480010.78 | 0.0088 | 0.0017 |
| Neptune | 106119-05-30 12:42 G | 40480377.78 | 40480378.03 | 40480378.29 | 0.0088 | 0.0001 |
| Neptune | 106120-05-31 21:06 G | 40480745.14 | 40480745.38 | 40480745.65 | 0.0088 | 0.0025 |
| Neptune | 106121-06-03 14:08 G | 40481112.88 | 40481113.09 | 40481113.33 | 0.0088 | 0.0042 |
| Neptune | 106122-06-05 19:11 G | 40481480.14 | 40481480.30 | 40481480.49 | 0.0088 | 0.0065 |
| Neptune | 106123-06-08 13:54 G | 40481848.01 | 40481848.08 | 40481848.21 | 0.0088 | 0.0081 |
| Saturn | 106124-07-09 20:23 G | 40482245.15 | 40482245.35 | 40482245.56 | 0.0275 | 0.0142 |
| Saturn | 106125-07-22 20:52 G | 40482623.14 | 40482623.37 | 40482623.60 | 0.0271 | 0.0081 |
| Jupiter | 106128-12-19 02:52 G | 40483868.39 | 40483868.62 | 40483868.84 | 0.0532 | 0.0029 |
| Mars | 106131-09-18 21:35 G | 40484872.23 | 40484872.40 | 40484872.56 | 0.1684 | 0.0698 |
| Uranus | 106132-11-26 08:08 G | 40485306.61 | 40485306.84 | 40485307.08 | 0.0135 | 0.0044 |
| Uranus | 106133-11-30 08:52 G | 40485675.64 | 40485675.87 | 40485676.13 | 0.0135 | 0.0037 |
| Saturn | 106140-01-04 00:42 G | 40487901.42 | 40487901.53 | 40487901.65 | 0.0284 | 0.0249 |
| Jupiter | 106140-12-24 07:40 G | 40488256.65 | 40488256.82 | 40488256.98 | 0.0533 | 0.0371 |
| Saturn | 106141-01-16 05:01 G | 40488279.46 | 40488279.71 | 40488279.96 | 0.0288 | 0.0015 |
| Saturn | 106142-01-29 20:52 G | 40488658.34 | 40488658.37 | 40488658.42 | 0.0292 | 0.0287 |
| Jupiter | 106146-06-15 01:11 G | 40490255.39 | 40490255.55 | 40490255.72 | 0.0495 | 0.0361 |
| Saturn | 106153-07-04 17:44 G | 40492832.14 | 40492832.24 | 40492832.35 | 0.0277 | 0.0251 |
| Saturn | 106154-07-17 13:25 G | 40493209.81 | 40493210.06 | 40493210.31 | 0.0273 | 0.0030 |
| Saturn | 106155-07-30 05:16 G | 40493587.55 | 40493587.72 | 40493587.90 | 0.0270 | 0.0186 |
| Jupiter | 106158-06-19 19:25 G | 40494643.08 | 40494643.31 | 40494643.54 | 0.0494 | 0.0047 |
| Saturn | 106170-01-10 20:23 G | 40498866.13 | 40498866.35 | 40498866.58 | 0.0287 | 0.0102 |
| Jupiter | 106170-06-23 23:16 G | 40499030.27 | 40499030.47 | 40499030.67 | 0.0494 | 0.0283 |
| Saturn | 106171-01-24 09:20 G | 40499244.69 | 40499244.89 | 40499245.10 | 0.0291 | 0.0160 |
| Uranus | 106175-05-24 21:20 G | 40500826.22 | 40500826.39 | 40500826.60 | 0.0143 | 0.0093 |
| Uranus | 106176-05-29 04:18 G | 40501196.43 | 40501196.68 | 40501196.94 | 0.0143 | 0.0033 |
| Uranus | 106177-06-02 21:35 G | 40501566.35 | 40501566.40 | 40501566.50 | 0.0143 | 0.0137 |

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| Saturn | 106183-07-12 17:16 G | 40503797.02 | 40503797.22 | 40503797.45 | 0.0274 | 0.0136 |
| Saturn | 106184-07-24 09:35 G | 40504174.66 | 40504174.90 | 40504175.15 | 0.0271 | 0.0089 |
| Neptune | 106197-11-21 23:44 G | 40509043.37 | 40509043.49 | 40509043.66 | 0.0090 | 0.0075 |
| Neptune | 106198-11-24 18:28 G | 40509411.11 | 40509411.27 | 40509411.48 | 0.0090 | 0.0061 |
| Saturn | 106199-01-05 10:32 G | 40509452.78 | 40509452.94 | 40509453.10 | 0.0285 | 0.0209 |
| Neptune | 106199-11-26 23:44 G | 40509778.27 | 40509778.49 | 40509778.74 | 0.0090 | 0.0032 |
| Saturn | 106200-01-18 23:59 G | 40509831.27 | 40509831.50 | 40509831.73 | 0.0289 | 0.0041 |
| Neptune | 106200-11-29 17:44 G | 40510145.98 | 40510146.24 | 40510146.50 | 0.0090 | 0.0017 |
| Neptune | 106201-12-02 00:42 G | 40510513.30 | 40510513.53 | 40510513.79 | 0.0090 | 0.0012 |
| Neptune | 106202-12-04 14:23 G | 40510880.86 | 40510881.10 | 40510881.36 | 0.0090 | 0.0026 |
| Neptune | 106203-12-07 02:37 G | 40511248.43 | 40511248.61 | 40511248.83 | 0.0090 | 0.0054 |
| Neptune | 106204-12-08 11:01 G | 40511615.81 | 40511615.96 | 40511616.15 | 0.0090 | 0.0068 |
| Mars | 106210-09-22 11:44 G | 40513729.90 | 40513729.99 | 40513730.07 | 0.1689 | 0.1468 |
| Jupiter | 106211-12-20 01:54 G | 40514183.36 | 40514183.58 | 40514183.80 | 0.0532 | 0.0145 |
| Saturn | 106212-07-07 07:54 G | 40514383.73 | 40514383.83 | 40514383.96 | 0.0276 | 0.0243 |
| Saturn | 106213-07-20 10:47 G | 40514761.71 | 40514761.95 | 40514762.19 | 0.0273 | 0.0009 |
| Saturn | 106214-08-02 01:25 G | 40515139.43 | 40515139.56 | 40515139.72 | 0.0269 | 0.0218 |
| Uranus | 106216-11-27 15:35 G | 40515987.91 | 40515988.15 | 40515988.41 | 0.0135 | 0.0034 |
| Uranus | 106217-12-02 03:06 G | 40516357.41 | 40516357.63 | 40516357.87 | 0.0135 | 0.0045 |
| Jupiter | 106223-12-25 09:06 G | 40518571.70 | 40518571.88 | 40518572.06 | 0.0533 | 0.0329 |
| Saturn | 106229-01-13 04:47 G | 40520417.47 | 40520417.70 | 40520417.93 | 0.0288 | 0.0091 |
| Jupiter | 106229-06-15 05:16 G | 40520570.59 | 40520570.72 | 40520570.85 | 0.0495 | 0.0419 |
| Saturn | 106230-01-26 20:23 G | 40520796.16 | 40520796.35 | 40520796.54 | 0.0291 | 0.0170 |
| Jupiter | 106241-06-19 16:18 G | 40524957.95 | 40524958.18 | 40524958.41 | 0.0495 | 0.0056 |
| Saturn | 106242-07-15 00:42 G | 40525348.31 | 40525348.53 | 40525348.77 | 0.0274 | 0.0102 |
| Saturn | 106243-07-27 21:35 G | 40525726.19 | 40525726.40 | 40525726.61 | 0.0270 | 0.0135 |
| Pluto | 106252-12-15 15:20 G | 40529154.90 | 40529155.14 | 40529155.39 | 0.0064 | 0.0014 |
| Jupiter | 106253-06-24 06:42 G | 40529345.58 | 40529345.78 | 40529345.99 | 0.0494 | 0.0274 |
| Pluto | 106253-12-17 04:32 G | 40529521.63 | 40529521.69 | 40529521.83 | 0.0065 | 0.0060 |
| Saturn | 106258-01-08 06:56 G | 40531004.63 | 40531004.79 | 40531004.97 | 0.0286 | 0.0204 |

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| Saturn | 106259-01-21 15:35 G | 40531382.91 | 40531383.15 | 40531383.40 | 0.0290 | 0.0053 |
| Uranus | 106259-05-26 13:40 G | 40531507.87 | 40531508.07 | 40531508.28 | 0.0143 | 0.0085 |
| Uranus | 106260-05-30 06:42 G | 40531877.54 | 40531877.78 | 40531878.04 | 0.0143 | 0.0035 |
| Saturn | 106271-07-10 03:49 G | 40535935.50 | 40535935.66 | 40535935.86 | 0.0276 | 0.0197 |
| Saturn | 106272-07-21 21:20 G | 40536313.14 | 40536313.39 | 40536313.65 | 0.0272 | 0.0045 |
| Saturn | 106273-08-03 08:23 G | 40536690.85 | 40536690.85 | 40536690.87 | 0.0269 | 0.0269 |
| Neptune | 106279-05-21 22:47 G | 40538808.43 | 40538808.45 | 40538808.53 | 0.0088 | 0.0086 |
| Neptune | 106280-05-23 04:32 G | 40539175.54 | 40539175.69 | 40539175.87 | 0.0088 | 0.0068 |
| Neptune | 106281-05-25 22:47 G | 40539543.25 | 40539543.45 | 40539543.70 | 0.0088 | 0.0045 |
| Neptune | 106282-05-28 03:49 G | 40539910.42 | 40539910.66 | 40539910.91 | 0.0088 | 0.0027 |
| Neptune | 106283-05-30 21:20 G | 40540278.13 | 40540278.39 | 40540278.66 | 0.0088 | 0.0003 |
| Neptune | 106284-06-01 04:32 G | 40540645.45 | 40540645.69 | 40540645.95 | 0.0088 | 0.0013 |
| Neptune | 106285-06-03 17:30 G | 40541012.99 | 40541013.23 | 40541013.48 | 0.0088 | 0.0036 |
| Neptune | 106286-06-06 05:59 G | 40541380.56 | 40541380.75 | 40541380.96 | 0.0088 | 0.0054 |
| Neptune | 106287-06-08 14:08 G | 40541747.98 | 40541748.09 | 40541748.24 | 0.0088 | 0.0077 |
| Saturn | 106288-01-15 23:30 G | 40541969.25 | 40541969.48 | 40541969.71 | 0.0288 | 0.0070 |
| Saturn | 106289-01-28 17:01 G | 40542348.03 | 40542348.21 | 40542348.38 | 0.0292 | 0.0202 |
| Jupiter | 106294-12-19 05:44 G | 40544498.52 | 40544498.74 | 40544498.96 | 0.0532 | 0.0224 |
| Uranus | 106299-11-24 21:20 G | 40546300.37 | 40546300.39 | 40546300.45 | 0.0135 | 0.0134 |
| Uranus | 106300-11-29 06:13 G | 40546669.52 | 40546669.76 | 40546670.00 | 0.0135 | 0.0028 |
| Saturn | 106301-07-17 22:04 G | 40546900.18 | 40546900.42 | 40546900.67 | 0.0273 | 0.0049 |
| Uranus | 106301-12-03 13:11 G | 40547038.83 | 40547039.05 | 40547039.31 | 0.0135 | 0.0056 |
| Saturn | 106302-07-30 13:11 G | 40547277.86 | 40547278.05 | 40547278.25 | 0.0270 | 0.0175 |
| Jupiter | 106306-12-24 23:59 G | 40548886.29 | 40548886.50 | 40548886.71 | 0.0532 | 0.0177 |
| Saturn | 106317-01-10 10:18 G | 40552555.74 | 40552555.93 | 40552556.13 | 0.0286 | 0.0171 |
| Saturn | 106318-01-24 01:25 G | 40552934.34 | 40552934.56 | 40552934.78 | 0.0290 | 0.0099 |
| Jupiter | 106324-06-19 14:08 G | 40555272.87 | 40555273.09 | 40555273.32 | 0.0495 | 0.0160 |
| Saturn | 106330-07-12 11:59 G | 40557486.81 | 40557487.00 | 40557487.22 | 0.0275 | 0.0151 |
| Saturn | 106331-07-25 12:28 G | 40557864.80 | 40557865.02 | 40557865.26 | 0.0272 | 0.0075 |
| Jupiter | 106336-06-24 10:18 G | 40559660.72 | 40559660.93 | 40559661.15 | 0.0494 | 0.0225 |

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| Pluto | 106341-06-15 21:06 G | 40561478.32 | 40561478.38 | 40561478.50 | 0.0080 | 0.0075 |
| Pluto | 106342-06-18 09:35 G | 40561845.78 | 40561845.90 | 40561846.07 | 0.0079 | 0.0066 |
| Uranus | 106343-05-27 17:01 G | 40562189.00 | 40562189.21 | 40562189.44 | 0.0143 | 0.0076 |
| Uranus | 106344-05-31 23:16 G | 40562559.23 | 40562559.47 | 40562559.72 | 0.0143 | 0.0035 |
| Saturn | 106346-01-05 00:56 G | 40563142.50 | 40563142.54 | 40563142.62 | 0.0284 | 0.0275 |
| Saturn | 106347-01-18 05:01 G | 40563520.46 | 40563520.71 | 40563520.96 | 0.0288 | 0.0015 |
| Saturn | 106348-01-31 20:52 G | 40563899.26 | 40563899.37 | 40563899.48 | 0.0292 | 0.0259 |
| Saturn | 106359-07-07 04:32 G | 40568073.61 | 40568073.69 | 40568073.79 | 0.0277 | 0.0259 |
| Saturn | 106360-07-19 02:08 G | 40568451.34 | 40568451.59 | 40568451.84 | 0.0273 | 0.0033 |
| Saturn | 106361-07-31 18:56 G | 40568829.12 | 40568829.29 | 40568829.48 | 0.0270 | 0.0179 |
| Neptune | 106361-11-23 09:49 G | 40568943.91 | 40568943.91 | 40568943.94 | 0.0090 | 0.0089 |
| Neptune | 106362-11-25 20:08 G | 40569311.16 | 40569311.34 | 40569311.54 | 0.0090 | 0.0062 |
| Neptune | 106363-11-28 12:28 G | 40569678.81 | 40569679.02 | 40569679.23 | 0.0090 | 0.0046 |
| Neptune | 106364-11-29 18:28 G | 40570046.02 | 40570046.27 | 40570046.52 | 0.0090 | 0.0019 |
| Neptune | 106365-12-02 12:56 G | 40570413.79 | 40570414.04 | 40570414.30 | 0.0090 | 0.0005 |
| Neptune | 106366-12-04 18:13 G | 40570781.02 | 40570781.26 | 40570781.50 | 0.0090 | 0.0023 |
| Neptune | 106367-12-07 11:01 G | 40571148.75 | 40571148.96 | 40571149.22 | 0.0090 | 0.0039 |
| Neptune | 106368-12-08 18:13 G | 40571516.12 | 40571516.26 | 40571516.45 | 0.0090 | 0.0067 |
| Neptune | 106369-12-11 07:25 G | 40571883.73 | 40571883.81 | 40571883.95 | 0.0090 | 0.0082 |
| Saturn | 106376-01-13 00:42 G | 40574107.32 | 40574107.53 | 40574107.75 | 0.0286 | 0.0123 |
| Saturn | 106377-01-25 12:56 G | 40574485.83 | 40574486.04 | 40574486.26 | 0.0290 | 0.0141 |
| Jupiter | 106377-12-19 06:56 G | 40574813.59 | 40574813.79 | 40574814.00 | 0.0531 | 0.0248 |
| Uranus | 106383-11-26 07:54 G | 40576981.75 | 40576981.83 | 40576981.93 | 0.0136 | 0.0126 |
| Uranus | 106384-11-29 19:54 G | 40577351.08 | 40577351.33 | 40577351.59 | 0.0135 | 0.0027 |
| Uranus | 106385-12-03 23:16 G | 40577720.27 | 40577720.47 | 40577720.70 | 0.0135 | 0.0067 |
| Saturn | 106389-07-14 05:30 G | 40579038.52 | 40579038.73 | 40579038.95 | 0.0275 | 0.0144 |
| Jupiter | 106389-12-23 23:16 G | 40579201.25 | 40579201.47 | 40579201.68 | 0.0533 | 0.0158 |
| Mars | 106390-03-19 14:37 G | 40579286.93 | 40579287.11 | 40579287.29 | 0.1866 | 0.0350 |
| Saturn | 106390-07-26 21:49 G | 40579416.16 | 40579416.41 | 40579416.66 | 0.0271 | 0.0077 |
| Saturn | 106405-01-06 01:25 G | 40584693.44 | 40584693.56 | 40584693.69 | 0.0284 | 0.0240 |

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| Saturn | 106406-01-19 13:25 G | 40585071.83 | 40585072.06 | 40585072.29 | 0.0288 | 0.0009 |
| Saturn | 106407-02-02 09:49 G | 40585450.83 | 40585450.91 | 40585451.01 | 0.0292 | 0.0270 |
| Jupiter | 106407-06-19 21:06 G | 40585588.16 | 40585588.38 | 40585588.61 | 0.0495 | 0.0202 |
| Mars | 106415-09-22 01:40 G | 40588604.37 | 40588604.57 | 40588604.77 | 0.1677 | 0.0349 |
| Saturn | 106418-07-08 10:04 G | 40589624.85 | 40589624.92 | 40589625.00 | 0.0277 | 0.0261 |
| Jupiter | 106419-06-24 12:13 G | 40589975.79 | 40589976.01 | 40589976.23 | 0.0494 | 0.0129 |
| Saturn | 106419-07-21 14:52 G | 40590002.88 | 40590003.12 | 40590003.36 | 0.0273 | 0.0029 |
| Saturn | 106420-08-02 06:42 G | 40590380.63 | 40590380.78 | 40590380.97 | 0.0269 | 0.0199 |
| Uranus | 106427-05-28 07:11 G | 40592870.59 | 40592870.80 | 40592871.03 | 0.0143 | 0.0064 |
| Uranus | 106428-06-01 05:44 G | 40593240.49 | 40593240.74 | 40593241.00 | 0.0143 | 0.0037 |
| Jupiter | 106431-06-28 23:16 G | 40594363.47 | 40594363.47 | 40594363.50 | 0.0494 | 0.0493 |
| Saturn | 106435-01-13 21:20 G | 40595658.17 | 40595658.39 | 40595658.62 | 0.0287 | 0.0116 |
| Saturn | 106436-01-27 11:59 G | 40596036.79 | 40596037.00 | 40596037.21 | 0.0291 | 0.0142 |
| Neptune | 106444-05-23 14:23 G | 40599075.97 | 40599076.10 | 40599076.25 | 0.0088 | 0.0072 |
| Neptune | 106445-05-26 00:56 G | 40599443.35 | 40599443.54 | 40599443.76 | 0.0088 | 0.0055 |
| Neptune | 106446-05-28 16:18 G | 40599810.95 | 40599811.18 | 40599811.42 | 0.0088 | 0.0032 |
| Neptune | 106447-05-30 22:32 G | 40600178.19 | 40600178.44 | 40600178.71 | 0.0088 | 0.0015 |
| Neptune | 106448-06-01 17:01 G | 40600545.96 | 40600546.21 | 40600546.47 | 0.0088 | 0.0009 |
| Saturn | 106448-07-15 04:18 G | 40600589.46 | 40600589.68 | 40600589.90 | 0.0275 | 0.0133 |
| Neptune | 106449-06-03 21:20 G | 40600913.15 | 40600913.39 | 40600913.65 | 0.0088 | 0.0026 |
| Saturn | 106449-07-28 02:08 G | 40600967.38 | 40600967.59 | 40600967.82 | 0.0271 | 0.0107 |
| Neptune | 106450-06-06 15:20 G | 40601280.95 | 40601281.14 | 40601281.38 | 0.0088 | 0.0051 |
| Neptune | 106451-06-08 22:18 G | 40601648.28 | 40601648.43 | 40601648.61 | 0.0088 | 0.0067 |
| Jupiter | 106460-12-18 11:44 G | 40605128.82 | 40605128.99 | 40605129.16 | 0.0532 | 0.0344 |
| Saturn | 106464-01-08 09:49 G | 40606244.80 | 40606244.91 | 40606245.05 | 0.0284 | 0.0243 |
| Saturn | 106465-01-20 15:06 G | 40606622.88 | 40606623.13 | 40606623.38 | 0.0288 | 0.0006 |
| Saturn | 106466-02-03 05:44 G | 40607001.66 | 40607001.74 | 40607001.83 | 0.0292 | 0.0273 |
| Uranus | 106467-11-26 22:32 G | 40607663.32 | 40607663.44 | 40607663.58 | 0.0136 | 0.0115 |
| Uranus | 106468-11-29 23:59 G | 40608032.26 | 40608032.50 | 40608032.75 | 0.0135 | 0.0028 |
| Uranus | 106469-12-04 15:06 G | 40608401.92 | 40608402.13 | 40608402.34 | 0.0135 | 0.0077 |

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| Jupiter | 106472-12-23 09:35 G | 40609516.67 | 40609516.90 | 40609517.13 | 0.0532 | 0.0126 |
| Saturn | 106477-07-09 17:59 G | 40611176.14 | 40611176.25 | 40611176.39 | 0.0277 | 0.0238 |
| Saturn | 106478-07-22 14:08 G | 40611553.83 | 40611554.09 | 40611554.35 | 0.0273 | 0.0011 |
| Saturn | 106479-08-04 03:35 G | 40611931.56 | 40611931.65 | 40611931.77 | 0.0269 | 0.0243 |
| Jupiter | 106490-06-19 09:49 G | 40615903.69 | 40615903.91 | 40615904.14 | 0.0495 | 0.0194 |
| Saturn | 106494-01-15 02:52 G | 40617209.41 | 40617209.62 | 40617209.84 | 0.0287 | 0.0116 |
| Saturn | 106495-01-28 17:44 G | 40617588.03 | 40617588.24 | 40617588.45 | 0.0291 | 0.0154 |
| Pluto | 106500-12-19 00:42 G | 40619738.33 | 40619738.53 | 40619738.78 | 0.0064 | 0.0036 |
| Pluto | 106501-12-20 15:49 G | 40620104.96 | 40620105.16 | 40620105.37 | 0.0065 | 0.0037 |
| Jupiter | 106502-06-24 15:35 G | 40620290.93 | 40620291.15 | 40620291.38 | 0.0494 | 0.0134 |
| Saturn | 106507-07-18 13:25 G | 40622140.83 | 40622141.06 | 40622141.30 | 0.0275 | 0.0090 |
| Saturn | 106508-07-30 06:56 G | 40622518.57 | 40622518.79 | 40622519.01 | 0.0271 | 0.0144 |
| Uranus | 106511-05-29 20:08 G | 40623552.10 | 40623552.34 | 40623552.59 | 0.0143 | 0.0054 |
| Uranus | 106512-06-02 16:47 G | 40623921.97 | 40623922.20 | 40623922.45 | 0.0143 | 0.0044 |
| Jupiter | 106514-06-29 12:13 G | 40624678.91 | 40624679.01 | 40624679.11 | 0.0493 | 0.0446 |
| Saturn | 106523-01-10 01:54 G | 40627795.45 | 40627795.58 | 40627795.73 | 0.0284 | 0.0230 |
| Saturn | 106524-01-23 13:40 G | 40628173.84 | 40628174.07 | 40628174.31 | 0.0288 | 0.0036 |
| Neptune | 106526-11-26 02:52 G | 40629211.51 | 40629211.62 | 40629211.76 | 0.0090 | 0.0077 |
| Neptune | 106527-11-28 19:25 G | 40629579.09 | 40629579.31 | 40629579.53 | 0.0090 | 0.0048 |
| Neptune | 106528-11-30 04:04 G | 40629946.46 | 40629946.67 | 40629946.91 | 0.0090 | 0.0035 |
| Neptune | 106529-12-02 16:04 G | 40630313.91 | 40630314.17 | 40630314.44 | 0.0090 | 0.0006 |
| Neptune | 106530-12-05 06:28 G | 40630681.53 | 40630681.77 | 40630682.02 | 0.0090 | 0.0009 |
| Neptune | 106531-12-07 13:11 G | 40631048.84 | 40631049.05 | 40631049.31 | 0.0090 | 0.0038 |
| Neptune | 106532-12-09 07:11 G | 40631416.62 | 40631416.80 | 40631417.03 | 0.0090 | 0.0052 |
| Neptune | 106533-12-11 11:59 G | 40631783.91 | 40631784.00 | 40631784.14 | 0.0090 | 0.0080 |
| Saturn | 106536-07-11 12:13 G | 40632726.85 | 40632727.01 | 40632727.19 | 0.0277 | 0.0196 |
| Saturn | 106537-07-24 17:01 G | 40633104.97 | 40633105.21 | 40633105.45 | 0.0273 | 0.0036 |
| Saturn | 106538-08-06 10:47 G | 40633482.86 | 40633482.95 | 40633483.05 | 0.0269 | 0.0248 |
| Jupiter | 106543-12-19 13:54 G | 40635443.93 | 40635444.08 | 40635444.23 | 0.0531 | 0.0391 |
| Uranus | 106551-11-28 02:23 G | 40638344.45 | 40638344.60 | 40638344.76 | 0.0136 | 0.0106 |

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| Uranus | 106552-12-01 17:16 G | 40638713.98 | 40638714.22 | 40638714.47 | 0.0135 | 0.0026 |
| Saturn | 106553-01-16 19:40 G | 40638760.09 | 40638760.32 | 40638760.57 | 0.0287 | 0.0075 |
| Uranus | 106553-12-05 18:42 G | 40639083.09 | 40639083.28 | 40639083.49 | 0.0135 | 0.0083 |
| Saturn | 106554-01-30 08:52 G | 40639138.70 | 40639138.87 | 40639139.05 | 0.0291 | 0.0199 |
| Jupiter | 106555-12-24 18:28 G | 40639832.03 | 40639832.27 | 40639832.50 | 0.0532 | 0.0021 |
| Saturn | 106566-07-19 05:16 G | 40643691.48 | 40643691.72 | 40643691.96 | 0.0275 | 0.0075 |
| Saturn | 106567-08-01 01:40 G | 40644069.37 | 40644069.57 | 40644069.78 | 0.0271 | 0.0141 |
| Jupiter | 106567-12-29 10:04 G | 40644219.82 | 40644219.92 | 40644220.01 | 0.0534 | 0.0477 |
| Jupiter | 106573-06-19 21:20 G | 40646219.20 | 40646219.39 | 40646219.59 | 0.0495 | 0.0264 |
| Saturn | 106582-01-11 06:42 G | 40649346.61 | 40649346.78 | 40649346.97 | 0.0284 | 0.0186 |
| Saturn | 106583-01-24 12:13 G | 40649724.77 | 40649725.01 | 40649725.26 | 0.0288 | 0.0070 |
| Jupiter | 106585-06-24 03:20 G | 40650606.40 | 40650606.64 | 40650606.88 | 0.0494 | 0.0110 |
| Pluto | 106590-06-20 09:49 G | 40652428.70 | 40652428.91 | 40652429.16 | 0.0079 | 0.0032 |
| Uranus | 106595-05-30 03:49 G | 40654233.43 | 40654233.66 | 40654233.90 | 0.0142 | 0.0048 |
| Saturn | 106595-07-13 15:35 G | 40654277.98 | 40654278.15 | 40654278.34 | 0.0277 | 0.0195 |
| Uranus | 106596-06-03 10:04 G | 40654603.70 | 40654603.92 | 40654604.18 | 0.0143 | 0.0056 |
| Saturn | 106596-07-25 11:30 G | 40654655.73 | 40654655.98 | 40654656.24 | 0.0273 | 0.0028 |
| Jupiter | 106597-06-28 19:54 G | 40654994.28 | 40654994.33 | 40654994.41 | 0.0493 | 0.0470 |
| Saturn | 106597-08-07 00:13 G | 40655033.41 | 40655033.51 | 40655033.62 | 0.0269 | 0.0243 |
| Neptune | 106608-05-25 02:08 G | 40658976.53 | 40658976.59 | 40658976.67 | 0.0088 | 0.0084 |
| Neptune | 106609-05-27 06:56 G | 40659343.62 | 40659343.79 | 40659344.00 | 0.0088 | 0.0060 |
| Neptune | 106610-05-29 23:44 G | 40659711.27 | 40659711.49 | 40659711.74 | 0.0088 | 0.0044 |
| Neptune | 106611-06-01 08:23 G | 40660078.61 | 40660078.85 | 40660079.11 | 0.0088 | 0.0019 |
| Saturn | 106612-01-19 20:08 G | 40660311.12 | 40660311.34 | 40660311.58 | 0.0287 | 0.0058 |
| Neptune | 106612-06-02 19:54 G | 40660446.06 | 40660446.33 | 40660446.61 | 0.0088 | 0.0002 |
| Saturn | 106613-02-01 11:44 G | 40660689.82 | 40660689.99 | 40660690.17 | 0.0291 | 0.0200 |
| Neptune | 106613-06-05 09:49 G | 40660813.67 | 40660813.91 | 40660814.16 | 0.0088 | 0.0023 |
| Neptune | 106614-06-07 16:32 G | 40661180.97 | 40661181.19 | 40661181.45 | 0.0088 | 0.0039 |
| Neptune | 106615-06-10 10:47 G | 40661548.78 | 40661548.95 | 40661549.14 | 0.0088 | 0.0063 |
| Neptune | 106616-06-11 15:06 G | 40661916.05 | 40661916.13 | 40661916.27 | 0.0088 | 0.0079 |

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| Mars | 106620-09-21 09:49 G | 40663478.88 | 40663478.91 | 40663478.94 | 0.1666 | 0.1634 |
| Saturn | 106625-07-21 07:54 G | 40665242.60 | 40665242.83 | 40665243.07 | 0.0275 | 0.0082 |
| Saturn | 106626-08-03 03:06 G | 40665620.42 | 40665620.63 | 40665620.85 | 0.0271 | 0.0147 |
| Jupiter | 106626-12-19 17:16 G | 40665759.07 | 40665759.22 | 40665759.38 | 0.0531 | 0.0391 |
| Uranus | 106635-11-29 16:47 G | 40669026.05 | 40669026.20 | 40669026.38 | 0.0136 | 0.0101 |
| Uranus | 106636-12-02 22:18 G | 40669395.18 | 40669395.43 | 40669395.69 | 0.0135 | 0.0020 |
| Uranus | 106637-12-07 09:49 G | 40669764.73 | 40669764.91 | 40669765.11 | 0.0135 | 0.0084 |
| Jupiter | 106638-12-25 02:08 G | 40670147.37 | 40670147.59 | 40670147.82 | 0.0533 | 0.0025 |
| Saturn | 106641-01-12 20:52 G | 40670897.20 | 40670897.37 | 40670897.57 | 0.0284 | 0.0182 |
| Saturn | 106642-01-26 07:25 G | 40671275.58 | 40671275.81 | 40671276.04 | 0.0288 | 0.0063 |
| Jupiter | 106650-12-29 23:44 G | 40674535.35 | 40674535.49 | 40674535.64 | 0.0533 | 0.0419 |
| Saturn | 106654-07-15 04:18 G | 40675828.51 | 40675828.68 | 40675828.86 | 0.0277 | 0.0194 |
| Saturn | 106655-07-28 08:37 G | 40676206.62 | 40676206.86 | 40676207.10 | 0.0273 | 0.0050 |
| Jupiter | 106656-06-20 02:52 G | 40676534.44 | 40676534.62 | 40676534.80 | 0.0495 | 0.0298 |
| Jupiter | 106668-06-24 19:40 G | 40680922.07 | 40680922.32 | 40680922.56 | 0.0494 | 0.0040 |
| Saturn | 106671-01-20 12:42 G | 40681861.79 | 40681862.03 | 40681862.28 | 0.0287 | 0.0065 |
| Saturn | 106672-02-03 00:28 G | 40682240.35 | 40682240.52 | 40682240.70 | 0.0291 | 0.0197 |
| Mars | 106674-03-21 15:35 G | 40683017.99 | 40683018.15 | 40683018.32 | 0.1875 | 0.1168 |
| Uranus | 106679-05-31 23:01 G | 40684915.22 | 40684915.46 | 40684915.70 | 0.0142 | 0.0046 |
| Uranus | 106680-06-04 15:49 G | 40685284.94 | 40685285.16 | 40685285.40 | 0.0143 | 0.0068 |
| Jupiter | 106680-06-29 04:04 G | 40685309.55 | 40685309.67 | 40685309.79 | 0.0493 | 0.0412 |
| Saturn | 106684-07-21 20:37 G | 40686793.12 | 40686793.36 | 40686793.62 | 0.0275 | 0.0046 |
| Saturn | 106685-08-03 16:32 G | 40687171.02 | 40687171.19 | 40687171.37 | 0.0271 | 0.0189 |
| Neptune | 106690-11-26 16:32 G | 40689112.08 | 40689112.19 | 40689112.33 | 0.0090 | 0.0078 |
| Neptune | 106691-11-28 22:18 G | 40689479.26 | 40689479.43 | 40689479.62 | 0.0090 | 0.0064 |
| Neptune | 106692-11-30 16:47 G | 40689846.98 | 40689847.20 | 40689847.45 | 0.0090 | 0.0035 |
| Neptune | 106693-12-02 22:18 G | 40690214.19 | 40690214.43 | 40690214.67 | 0.0090 | 0.0021 |
| Neptune | 106694-12-05 15:20 G | 40690581.88 | 40690582.14 | 40690582.40 | 0.0090 | 0.0008 |
| Neptune | 106695-12-07 23:16 G | 40690949.24 | 40690949.47 | 40690949.72 | 0.0090 | 0.0022 |
| Neptune | 106696-12-09 11:16 G | 40691316.78 | 40691316.97 | 40691317.21 | 0.0090 | 0.0051 |

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| Neptune | 106697-12-12 00:42 G | 40691684.38 | 40691684.53 | 40691684.72 | 0.0090 | 0.0065 |
| Mars | 106699-09-24 22:18 G | 40692336.26 | 40692336.43 | 40692336.61 | 0.1671 | 0.0279 |
| Saturn | 106700-01-15 01:40 G | 40692448.39 | 40692448.57 | 40692448.76 | 0.0284 | 0.0180 |
| Saturn | 106701-01-28 08:08 G | 40692826.60 | 40692826.84 | 40692827.08 | 0.0288 | 0.0080 |
| Jupiter | 106709-12-20 10:32 G | 40696074.83 | 40696074.94 | 40696075.06 | 0.0531 | 0.0464 |
| Saturn | 106713-07-17 06:42 G | 40697379.57 | 40697379.78 | 40697379.99 | 0.0277 | 0.0152 |
| Saturn | 106714-07-30 04:04 G | 40697757.43 | 40697757.67 | 40697757.92 | 0.0273 | 0.0086 |
| Uranus | 106719-12-01 03:35 G | 40699707.49 | 40699707.65 | 40699707.85 | 0.0136 | 0.0098 |
| Uranus | 106720-12-04 11:16 G | 40700076.73 | 40700076.97 | 40700077.22 | 0.0135 | 0.0010 |
| Uranus | 106721-12-08 20:23 G | 40700446.16 | 40700446.35 | 40700446.57 | 0.0135 | 0.0084 |
| Jupiter | 106721-12-25 07:11 G | 40700462.58 | 40700462.80 | 40700463.02 | 0.0532 | 0.0006 |
| Saturn | 106730-01-22 13:54 G | 40703412.85 | 40703413.08 | 40703413.32 | 0.0287 | 0.0032 |
| Saturn | 106731-02-05 05:59 G | 40703791.62 | 40703791.75 | 40703791.88 | 0.0291 | 0.0240 |
| Jupiter | 106733-12-30 10:18 G | 40704850.80 | 40704850.93 | 40704851.08 | 0.0533 | 0.0426 |
| Jupiter | 106739-06-21 13:25 G | 40706849.86 | 40706850.06 | 40706850.26 | 0.0495 | 0.0267 |
| Saturn | 106742-07-11 12:28 G | 40707965.95 | 40707966.02 | 40707966.12 | 0.0279 | 0.0260 |
| Saturn | 106743-07-24 22:04 G | 40708344.18 | 40708344.42 | 40708344.67 | 0.0275 | 0.0022 |
| Saturn | 106744-08-05 18:56 G | 40708722.13 | 40708722.29 | 40708722.47 | 0.0271 | 0.0198 |
| Pluto | 106748-12-22 12:28 G | 40710321.99 | 40710322.02 | 40710322.11 | 0.0064 | 0.0063 |
| Pluto | 106749-12-23 17:59 G | 40710688.02 | 40710688.25 | 40710688.50 | 0.0065 | 0.0021 |
| Jupiter | 106751-06-26 10:47 G | 40711237.72 | 40711237.95 | 40711238.18 | 0.0494 | 0.0062 |
| Saturn | 106759-01-16 18:42 G | 40713999.07 | 40713999.28 | 40713999.51 | 0.0284 | 0.0134 |
| Saturn | 106760-01-30 03:49 G | 40714377.45 | 40714377.66 | 40714377.88 | 0.0288 | 0.0127 |
| Uranus | 106763-06-02 03:20 G | 40715596.40 | 40715596.64 | 40715596.90 | 0.0142 | 0.0045 |
| Jupiter | 106763-06-30 14:23 G | 40715624.95 | 40715625.10 | 40715625.27 | 0.0493 | 0.0370 |
| Uranus | 106764-06-06 07:25 G | 40715966.62 | 40715966.81 | 40715967.04 | 0.0143 | 0.0079 |
| Neptune | 106772-05-25 04:04 G | 40718876.65 | 40718876.67 | 40718876.71 | 0.0088 | 0.0087 |
| Saturn | 106772-07-17 20:08 G | 40718930.13 | 40718930.34 | 40718930.55 | 0.0277 | 0.0143 |
| Neptune | 106773-05-27 20:08 G | 40719244.22 | 40719244.34 | 40719244.51 | 0.0088 | 0.0072 |
| Saturn | 106773-07-30 23:30 G | 40719308.25 | 40719308.48 | 40719308.70 | 0.0273 | 0.0083 |

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| Neptune | 106774-05-30 01:54 G | 40719611.37 | 40719611.58 | 40719611.82 | 0.0088 | 0.0046 |
| Neptune | 106775-06-01 20:37 G | 40719979.13 | 40719979.36 | 40719979.62 | 0.0088 | 0.0031 |
| Neptune | 106776-06-03 01:54 G | 40720346.33 | 40720346.58 | 40720346.84 | 0.0088 | 0.0005 |
| Neptune | 106777-06-05 19:25 G | 40720714.05 | 40720714.31 | 40720714.58 | 0.0088 | 0.0010 |
| Neptune | 106778-06-08 03:06 G | 40721081.42 | 40721081.63 | 40721081.88 | 0.0088 | 0.0036 |
| Neptune | 106779-06-10 15:35 G | 40721448.95 | 40721449.15 | 40721449.39 | 0.0088 | 0.0052 |
| Neptune | 106780-06-12 04:47 G | 40721816.59 | 40721816.70 | 40721816.82 | 0.0088 | 0.0077 |
| Saturn | 106788-01-11 11:59 G | 40724585.89 | 40724586.00 | 40724586.14 | 0.0282 | 0.0243 |
| Saturn | 106789-01-23 12:28 G | 40724963.77 | 40724964.02 | 40724964.27 | 0.0287 | 0.0005 |
| Saturn | 106790-02-05 23:01 G | 40725342.36 | 40725342.46 | 40725342.56 | 0.0291 | 0.0265 |
| Jupiter | 106792-12-19 18:56 G | 40726390.27 | 40726390.29 | 40726390.32 | 0.0531 | 0.0527 |
| Saturn | 106801-07-12 13:40 G | 40729517.00 | 40729517.07 | 40729517.18 | 0.0279 | 0.0259 |
| Saturn | 106802-07-25 15:06 G | 40729894.87 | 40729895.13 | 40729895.38 | 0.0275 | 0.0029 |
| Saturn | 106803-08-07 09:49 G | 40730272.74 | 40730272.91 | 40730273.08 | 0.0271 | 0.0193 |
| Uranus | 106803-12-01 10:47 G | 40730388.80 | 40730388.95 | 40730389.14 | 0.0136 | 0.0098 |
| Uranus | 106804-12-05 01:11 G | 40730758.29 | 40730758.55 | 40730758.80 | 0.0135 | 0.0002 |
| Jupiter | 106804-12-24 05:59 G | 40730777.53 | 40730777.75 | 40730777.98 | 0.0532 | 0.0133 |
| Uranus | 106805-12-09 03:49 G | 40731127.48 | 40731127.66 | 40731127.86 | 0.0135 | 0.0085 |
| Jupiter | 106816-12-29 14:52 G | 40735165.95 | 40735166.12 | 40735166.30 | 0.0533 | 0.0334 |
| Saturn | 106818-01-18 04:32 G | 40735550.47 | 40735550.69 | 40735550.91 | 0.0284 | 0.0111 |
| Saturn | 106819-01-31 12:56 G | 40735928.83 | 40735929.04 | 40735929.26 | 0.0288 | 0.0139 |
| Jupiter | 106822-06-21 03:49 G | 40737165.48 | 40737165.66 | 40737165.84 | 0.0495 | 0.0334 |
| Saturn | 106831-07-20 02:52 G | 40740481.42 | 40740481.62 | 40740481.84 | 0.0277 | 0.0146 |
| Saturn | 106832-08-01 01:11 G | 40740859.32 | 40740859.55 | 40740859.80 | 0.0273 | 0.0091 |
| Jupiter | 106834-06-25 13:54 G | 40741552.85 | 40741553.08 | 40741553.31 | 0.0494 | 0.0038 |
| Pluto | 106838-06-23 17:30 G | 40743011.97 | 40743012.23 | 40743012.51 | 0.0079 | 0.0006 |
| Uranus | 106846-05-28 15:20 G | 40745908.14 | 40745908.14 | 40745908.16 | 0.0142 | 0.0142 |
| Jupiter | 106846-06-30 03:49 G | 40745940.51 | 40745940.66 | 40745940.82 | 0.0494 | 0.0385 |
| Saturn | 106847-01-12 09:35 G | 40746136.78 | 40746136.90 | 40746137.05 | 0.0283 | 0.0234 |
| Uranus | 106847-06-02 16:04 G | 40746277.94 | 40746278.17 | 40746278.41 | 0.0142 | 0.0044 |

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| Saturn | 106848-01-25 17:16 G | 40746514.98 | 40746515.22 | 40746515.45 | 0.0287 | 0.0008 |
| Uranus | 106848-06-06 16:04 G | 40746647.95 | 40746648.17 | 40746648.39 | 0.0143 | 0.0082 |
| Saturn | 106849-02-07 10:18 G | 40746893.83 | 40746893.93 | 40746894.03 | 0.0291 | 0.0263 |
| Neptune | 106855-11-29 10:32 G | 40749379.78 | 40749379.94 | 40749380.13 | 0.0090 | 0.0064 |
| Neptune | 106856-11-30 20:23 G | 40749747.15 | 40749747.35 | 40749747.58 | 0.0090 | 0.0050 |
| Neptune | 106857-12-03 12:13 G | 40750114.78 | 40750115.01 | 40750115.27 | 0.0090 | 0.0022 |
| Neptune | 106858-12-05 18:28 G | 40750482.01 | 40750482.27 | 40750482.53 | 0.0090 | 0.0008 |
| Neptune | 106859-12-08 12:56 G | 40750849.80 | 40750850.04 | 40750850.29 | 0.0090 | 0.0022 |
| Saturn | 106860-07-13 09:35 G | 40751067.81 | 40751067.90 | 40751068.02 | 0.0279 | 0.0250 |
| Neptune | 106860-12-09 17:30 G | 40751217.02 | 40751217.23 | 40751217.48 | 0.0090 | 0.0036 |
| Saturn | 106861-07-26 18:42 G | 40751446.03 | 40751446.28 | 40751446.52 | 0.0275 | 0.0006 |
| Neptune | 106861-12-12 11:16 G | 40751584.80 | 40751584.97 | 40751585.15 | 0.0090 | 0.0065 |
| Saturn | 106862-08-08 16:47 G | 40751824.08 | 40751824.20 | 40751824.33 | 0.0271 | 0.0231 |
| Neptune | 106862-12-14 18:28 G | 40751952.18 | 40751952.27 | 40751952.41 | 0.0090 | 0.0079 |
| Saturn | 106877-01-19 05:16 G | 40757101.50 | 40757101.72 | 40757101.96 | 0.0284 | 0.0110 |
| Saturn | 106878-02-01 12:56 G | 40757479.85 | 40757480.04 | 40757480.26 | 0.0288 | 0.0146 |
| Uranus | 106887-12-02 04:47 G | 40761070.54 | 40761070.70 | 40761070.89 | 0.0136 | 0.0096 |
| Jupiter | 106887-12-24 17:59 G | 40761093.02 | 40761093.25 | 40761093.48 | 0.0532 | 0.0136 |
| Uranus | 106888-12-05 06:28 G | 40761439.52 | 40761439.77 | 40761440.02 | 0.0136 | 0.0011 |
| Uranus | 106889-12-09 21:06 G | 40761809.21 | 40761809.38 | 40761809.59 | 0.0135 | 0.0091 |
| Saturn | 106890-07-20 22:32 G | 40762032.22 | 40762032.44 | 40762032.68 | 0.0277 | 0.0104 |
| Saturn | 106891-08-02 23:59 G | 40762410.30 | 40762410.50 | 40762410.71 | 0.0273 | 0.0137 |
| Jupiter | 106899-12-29 16:47 G | 40765481.01 | 40765481.20 | 40765481.40 | 0.0533 | 0.0258 |
| Mars | 106904-09-24 18:56 G | 40767211.11 | 40767211.29 | 40767211.48 | 0.1661 | 0.0638 |
| Jupiter | 106905-06-21 12:28 G | 40767480.88 | 40767481.02 | 40767481.16 | 0.0496 | 0.0396 |
| Saturn | 106906-01-15 00:13 G | 40767688.38 | 40767688.51 | 40767688.67 | 0.0283 | 0.0225 |
| Saturn | 106907-01-28 03:06 G | 40768066.38 | 40768066.63 | 40768066.88 | 0.0287 | 0.0028 |
| Jupiter | 106917-06-25 18:42 G | 40771868.05 | 40771868.28 | 40771868.52 | 0.0495 | 0.0055 |
| Saturn | 106919-07-16 20:23 G | 40772619.18 | 40772619.35 | 40772619.53 | 0.0278 | 0.0200 |
| Saturn | 106920-07-28 20:52 G | 40772997.12 | 40772997.37 | 40772997.63 | 0.0275 | 0.0041 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 106921-08-10 12:56 G | 40773374.99 | 40773375.04 | 40773375.12 | 0.0271 | 0.0261 |
| Jupiter | 106929-06-30 15:35 G | 40776255.98 | 40776256.15 | 40776256.33 | 0.0494 | 0.0321 |
| Uranus | 106930-05-30 00:13 G | 40776589.45 | 40776589.51 | 40776589.59 | 0.0142 | 0.0136 |
| Uranus | 106931-06-04 02:23 G | 40776959.36 | 40776959.60 | 40776959.87 | 0.0142 | 0.0039 |
| Uranus | 106932-06-07 22:04 G | 40777329.22 | 40777329.42 | 40777329.62 | 0.0143 | 0.0084 |
| Saturn | 106936-01-22 20:23 G | 40778653.13 | 40778653.35 | 40778653.58 | 0.0285 | 0.0071 |
| Saturn | 106937-02-04 07:54 G | 40779031.66 | 40779031.83 | 40779032.01 | 0.0288 | 0.0196 |
| Neptune | 106937-05-28 03:49 G | 40779144.52 | 40779144.66 | 40779144.81 | 0.0088 | 0.0073 |
| Neptune | 106938-05-30 13:54 G | 40779511.91 | 40779512.08 | 40779512.28 | 0.0088 | 0.0059 |
| Neptune | 106939-06-01 23:30 G | 40779879.25 | 40779879.48 | 40779879.74 | 0.0088 | 0.0034 |
| Neptune | 106940-06-03 15:35 G | 40780246.90 | 40780247.15 | 40780247.40 | 0.0088 | 0.0018 |
| Neptune | 106941-06-05 21:20 G | 40780614.13 | 40780614.39 | 40780614.66 | 0.0088 | 0.0008 |
| Neptune | 106942-06-08 16:04 G | 40780981.93 | 40780982.17 | 40780982.43 | 0.0088 | 0.0024 |
| Neptune | 106943-06-10 20:37 G | 40781349.16 | 40781349.36 | 40781349.59 | 0.0088 | 0.0050 |
| Neptune | 106944-06-12 14:52 G | 40781716.94 | 40781717.12 | 40781717.30 | 0.0088 | 0.0064 |
| Saturn | 106949-07-23 12:28 G | 40783583.78 | 40783584.02 | 40783584.26 | 0.0276 | 0.0065 |
| Saturn | 106950-08-05 10:47 G | 40783961.75 | 40783961.95 | 40783962.17 | 0.0273 | 0.0157 |
| Mars | 106958-03-23 04:32 G | 40786748.58 | 40786748.69 | 40786748.79 | 0.1885 | 0.1536 |
| Saturn | 106965-01-16 03:49 G | 40789239.47 | 40789239.66 | 40789239.86 | 0.0283 | 0.0173 |
| Saturn | 106966-01-29 11:01 G | 40789617.74 | 40789617.96 | 40789618.19 | 0.0287 | 0.0084 |
| Jupiter | 106970-12-24 21:49 G | 40791408.20 | 40791408.41 | 40791408.63 | 0.0531 | 0.0183 |
| Uranus | 106971-12-03 06:42 G | 40791751.61 | 40791751.78 | 40791751.98 | 0.0136 | 0.0094 |
| Uranus | 106972-12-06 21:49 G | 40792121.17 | 40792121.41 | 40792121.66 | 0.0136 | 0.0015 |
| Uranus | 106973-12-10 23:44 G | 40792490.32 | 40792490.49 | 40792490.68 | 0.0135 | 0.0097 |
| Saturn | 106978-07-17 21:49 G | 40794170.23 | 40794170.41 | 40794170.61 | 0.0278 | 0.0174 |
| Saturn | 106979-07-31 04:47 G | 40794548.47 | 40794548.70 | 40794548.94 | 0.0274 | 0.0052 |
| Saturn | 106980-08-12 03:06 G | 40794926.58 | 40794926.63 | 40794926.71 | 0.0271 | 0.0261 |
| Jupiter | 106982-12-29 08:08 G | 40795795.63 | 40795795.84 | 40795796.04 | 0.0532 | 0.0224 |
| Mars | 106983-09-27 18:42 G | 40796068.13 | 40796068.28 | 40796068.43 | 0.1665 | 0.1139 |
| Jupiter | 106988-06-20 17:01 G | 40797796.08 | 40797796.21 | 40797796.36 | 0.0496 | 0.0388 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 106994-01-11 09:49 G | 40799826.83 | 40799826.91 | 40799827.00 | 0.0281 | 0.0263 |
| Saturn | 106995-01-24 07:40 G | 40800204.58 | 40800204.82 | 40800205.08 | 0.0285 | 0.0019 |
| Saturn | 106996-02-06 15:06 G | 40800583.01 | 40800583.13 | 40800583.28 | 0.0289 | 0.0240 |
| Pluto | 106997-12-26 11:16 G | 40801271.71 | 40801271.97 | 40801272.24 | 0.0065 | 0.0004 |
| Jupiter | 107000-06-26 00:28 G | 40802183.28 | 40802183.52 | 40802183.77 | 0.0495 | 0.0070 |

108TH MILLENNIUM CE

This is a list of transits of Moon in the 108th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 107008-07-25 17:44 G | | 40805135.00 | 40805135.24 | 40805135.49 | 0.0276 | 0.0062 | |
| Saturn | 107009-08-07 15:06 G | | 40805512.95 | 40805513.13 | 40805513.34 | 0.0272 | 0.0162 | |
| Jupiter | 107012-06-30 13:25 G | | 40806570.86 | 40806571.06 | 40806571.26 | 0.0494 | 0.0239 | |
| Uranus | 107014-05-31 14:08 G | | 40807271.02 | 40807271.09 | 40807271.21 | 0.0142 | 0.0132 | |
| Uranus | 107015-06-05 07:11 G | | 40807640.56 | 40807640.80 | 40807641.06 | 0.0142 | 0.0029 | |
| Uranus | 107016-06-09 13:25 G | | 40808010.87 | 40808011.06 | 40808011.29 | 0.0143 | 0.0084 | |
| Neptune | 107019-11-30 23:01 G | | 40809280.37 | 40809280.46 | 40809280.60 | 0.0090 | 0.0080 | |
| Neptune | 107020-12-02 05:16 G | | 40809647.53 | 40809647.72 | 40809647.94 | 0.0090 | 0.0051 | |
| Neptune | 107021-12-04 21:06 G | | 40810015.15 | 40810015.38 | 40810015.63 | 0.0090 | 0.0037 | |
| Neptune | 107022-12-07 07:11 G | | 40810382.56 | 40810382.80 | 40810383.05 | 0.0090 | 0.0007 | |
| Neptune | 107023-12-09 17:30 G | | 40810749.97 | 40810750.23 | 40810750.50 | 0.0090 | 0.0007 | |
| Saturn | 107024-01-20 00:28 G | | 40810791.31 | 40810791.52 | 40810791.73 | 0.0284 | 0.0131 | |
| Neptune | 107024-12-11 08:37 G | | 40811117.63 | 40811117.86 | 40811118.09 | 0.0090 | 0.0036 | |
| Saturn | 107025-02-01 06:56 G | | 40811169.57 | 40811169.79 | 40811170.02 | 0.0288 | 0.0116 | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 107025-12-13 14:37 G | 40811484.90 | 40811485.11 | 40811485.33 | 0.0090 | 0.0049 |
| Neptune | 107026-12-16 08:37 G | 40811852.76 | 40811852.86 | 40811853.01 | 0.0090 | 0.0079 |
| Saturn | 107037-07-20 17:16 G | 40815722.03 | 40815722.22 | 40815722.43 | 0.0277 | 0.0168 |
| Saturn | 107038-08-02 16:47 G | 40816099.95 | 40816100.20 | 40816100.45 | 0.0274 | 0.0067 |
| Saturn | 107053-01-13 17:01 G | 40821378.09 | 40821378.21 | 40821378.35 | 0.0282 | 0.0235 |
| Jupiter | 107053-12-24 14:37 G | 40821722.94 | 40821723.11 | 40821723.29 | 0.0531 | 0.0335 |
| Saturn | 107054-01-26 23:16 G | 40821756.24 | 40821756.47 | 40821756.70 | 0.0286 | 0.0002 |
| Saturn | 107055-02-09 14:52 G | 40822135.01 | 40822135.12 | 40822135.24 | 0.0289 | 0.0251 |
| Uranus | 107055-12-04 21:06 G | 40822433.21 | 40822433.38 | 40822433.57 | 0.0136 | 0.0089 |
| Uranus | 107056-12-08 02:52 G | 40822802.36 | 40822802.62 | 40822802.88 | 0.0136 | 0.0015 |
| Uranus | 107057-12-12 13:25 G | 40823171.92 | 40823172.06 | 40823172.22 | 0.0136 | 0.0106 |
| Jupiter | 107065-12-29 11:44 G | 40826110.76 | 40826110.99 | 40826111.22 | 0.0532 | 0.0118 |
| Saturn | 107066-07-15 01:25 G | 40826308.55 | 40826308.56 | 40826308.59 | 0.0279 | 0.0278 |
| Saturn | 107067-07-28 11:30 G | 40826686.74 | 40826686.98 | 40826687.22 | 0.0276 | 0.0033 |
| Saturn | 107068-08-09 10:18 G | 40827064.77 | 40827064.93 | 40827065.09 | 0.0272 | 0.0205 |
| Jupiter | 107071-06-21 12:42 G | 40828111.01 | 40828111.03 | 40828111.06 | 0.0496 | 0.0493 |
| Saturn | 107083-01-21 09:49 G | 40832342.69 | 40832342.91 | 40832343.14 | 0.0284 | 0.0123 |
| Jupiter | 107083-06-26 05:01 G | 40832498.48 | 40832498.71 | 40832498.95 | 0.0495 | 0.0116 |
| Saturn | 107084-02-03 17:01 G | 40832721.00 | 40832721.21 | 40832721.42 | 0.0288 | 0.0126 |
| Pluto | 107086-06-27 08:37 G | 40833595.62 | 40833595.86 | 40833596.12 | 0.0079 | 0.0021 |
| Jupiter | 107095-06-30 11:30 G | 40836885.78 | 40836885.98 | 40836886.19 | 0.0495 | 0.0235 |
| Saturn | 107096-07-22 00:28 G | 40837273.30 | 40837273.52 | 40837273.75 | 0.0277 | 0.0127 |
| Saturn | 107097-08-04 03:06 G | 40837651.42 | 40837651.63 | 40837651.86 | 0.0273 | 0.0119 |
| Uranus | 107098-05-31 18:42 G | 40837952.19 | 40837952.28 | 40837952.40 | 0.0142 | 0.0129 |
| Uranus | 107099-06-06 00:56 G | 40838322.29 | 40838322.54 | 40838322.80 | 0.0142 | 0.0017 |
| Uranus | 107100-06-10 17:01 G | 40838692.02 | 40838692.21 | 40838692.44 | 0.0142 | 0.0086 |
| Neptune | 107101-05-29 07:25 G | 40839044.80 | 40839044.81 | 40839044.88 | 0.0088 | 0.0087 |
| Neptune | 107102-06-01 01:54 G | 40839412.42 | 40839412.58 | 40839412.80 | 0.0088 | 0.0061 |
| Neptune | 107103-06-03 07:54 G | 40839779.63 | 40839779.83 | 40839780.06 | 0.0088 | 0.0046 |
| Neptune | 107104-06-04 23:59 G | 40840147.24 | 40840147.50 | 40840147.77 | 0.0088 | 0.0019 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 107105-06-07 10:18 G | 40840514.67 | 40840514.93 | 40840515.18 | 0.0088 | 0.0004 |
| Neptune | 107106-06-09 20:08 G | 40840882.09 | 40840882.34 | 40840882.62 | 0.0088 | 0.0022 |
| Neptune | 107107-06-12 11:16 G | 40841249.75 | 40841249.97 | 40841250.22 | 0.0088 | 0.0037 |
| Neptune | 107108-06-13 17:01 G | 40841617.05 | 40841617.21 | 40841617.42 | 0.0088 | 0.0063 |
| Neptune | 107109-06-16 11:59 G | 40841984.90 | 40841985.00 | 40841985.13 | 0.0088 | 0.0078 |
| Saturn | 107112-01-17 15:06 G | 40842930.01 | 40842930.13 | 40842930.29 | 0.0282 | 0.0229 |
| Saturn | 107113-01-29 17:30 G | 40843307.98 | 40843308.23 | 40843308.48 | 0.0286 | 0.0020 |
| Saturn | 107114-02-12 02:23 G | 40843686.58 | 40843686.60 | 40843686.65 | 0.0290 | 0.0287 |
| Saturn | 107125-07-18 00:28 G | 40847860.38 | 40847860.52 | 40847860.67 | 0.0279 | 0.0226 |
| Saturn | 107126-07-31 00:13 G | 40848238.26 | 40848238.51 | 40848238.77 | 0.0275 | 0.0022 |
| Saturn | 107127-08-12 16:47 G | 40848616.12 | 40848616.20 | 40848616.31 | 0.0272 | 0.0249 |
| Jupiter | 107136-12-24 12:13 G | 40852037.84 | 40852038.01 | 40852038.18 | 0.0531 | 0.0348 |
| Uranus | 107139-12-06 03:35 G | 40853114.45 | 40853114.65 | 40853114.87 | 0.0136 | 0.0082 |
| Uranus | 107140-12-09 11:01 G | 40853483.72 | 40853483.96 | 40853484.21 | 0.0136 | 0.0012 |
| Uranus | 107141-12-13 20:08 G | 40853853.22 | 40853853.34 | 40853853.51 | 0.0136 | 0.0113 |
| Saturn | 107142-01-24 04:32 G | 40853894.47 | 40853894.69 | 40853894.91 | 0.0285 | 0.0093 |
| Saturn | 107143-02-06 15:49 G | 40854272.97 | 40854273.16 | 40854273.36 | 0.0289 | 0.0174 |
| Jupiter | 107148-12-29 14:23 G | 40856425.86 | 40856426.10 | 40856426.34 | 0.0532 | 0.0028 |
| Saturn | 107155-07-25 21:49 G | 40858825.18 | 40858825.41 | 40858825.65 | 0.0276 | 0.0078 |
| Saturn | 107156-08-06 21:06 G | 40859203.18 | 40859203.38 | 40859203.60 | 0.0273 | 0.0151 |
| Jupiter | 107161-01-03 03:06 G | 40860813.50 | 40860813.63 | 40860813.77 | 0.0532 | 0.0425 |
| Jupiter | 107166-06-26 07:54 G | 40862813.62 | 40862813.83 | 40862814.03 | 0.0496 | 0.0222 |
| Saturn | 107171-01-18 22:04 G | 40864481.24 | 40864481.42 | 40864481.60 | 0.0283 | 0.0190 |
| Saturn | 107172-02-01 04:47 G | 40864859.47 | 40864859.70 | 40864859.93 | 0.0287 | 0.0073 |
| Jupiter | 107178-06-30 11:16 G | 40867200.74 | 40867200.97 | 40867201.21 | 0.0495 | 0.0132 |
| Uranus | 107182-06-02 12:13 G | 40868633.93 | 40868634.01 | 40868634.13 | 0.0142 | 0.0129 |
| Uranus | 107183-06-07 06:28 G | 40869003.51 | 40869003.77 | 40869004.03 | 0.0142 | 0.0008 |
| Neptune | 107183-12-01 01:54 G | 40869180.50 | 40869180.58 | 40869180.74 | 0.0090 | 0.0080 |
| Uranus | 107184-06-11 10:04 G | 40869373.74 | 40869373.92 | 40869374.12 | 0.0142 | 0.0090 |
| Saturn | 107184-07-19 09:49 G | 40869411.74 | 40869411.91 | 40869412.11 | 0.0278 | 0.0184 |

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| Neptune | 107184-12-02 19:54 G | 40869548.18 | 40869548.33 | 40869548.52 | 0.0090 | 0.0066 |
| Saturn | 107185-08-01 16:47 G | 40869789.96 | 40869790.20 | 40869790.44 | 0.0274 | 0.0044 |
| Neptune | 107185-12-05 01:11 G | 40869915.33 | 40869915.55 | 40869915.80 | 0.0090 | 0.0036 |
| Saturn | 107186-08-14 14:23 G | 40870168.03 | 40870168.10 | 40870168.19 | 0.0271 | 0.0255 |
| Neptune | 107186-12-07 20:08 G | 40870283.10 | 40870283.34 | 40870283.60 | 0.0090 | 0.0023 |
| Neptune | 107187-12-10 01:54 G | 40870650.34 | 40870650.58 | 40870650.83 | 0.0090 | 0.0007 |
| Mars | 107188-09-27 13:11 G | 40870942.87 | 40870943.05 | 40870943.22 | 0.1655 | 0.0460 |
| Neptune | 107188-12-11 18:13 G | 40871018.00 | 40871018.26 | 40871018.52 | 0.0090 | 0.0020 |
| Neptune | 107189-12-14 03:35 G | 40871385.45 | 40871385.65 | 40871385.86 | 0.0090 | 0.0050 |
| Neptune | 107190-12-16 13:54 G | 40871752.92 | 40871753.08 | 40871753.29 | 0.0090 | 0.0064 |
| Saturn | 107201-01-25 15:20 G | 40875445.89 | 40875446.14 | 40875446.39 | 0.0285 | 0.0038 |
| Saturn | 107202-02-07 22:47 G | 40875824.31 | 40875824.45 | 40875824.61 | 0.0289 | 0.0224 |
| Saturn | 107214-07-27 06:42 G | 40880376.53 | 40880376.78 | 40880377.03 | 0.0276 | 0.0067 |
| Saturn | 107215-08-09 04:32 G | 40880754.50 | 40880754.69 | 40880754.90 | 0.0272 | 0.0154 |
| Jupiter | 107219-12-24 05:16 G | 40882352.59 | 40882352.72 | 40882352.85 | 0.0530 | 0.0439 |
| Uranus | 107223-12-06 10:47 G | 40883795.74 | 40883795.95 | 40883796.15 | 0.0136 | 0.0073 |
| Uranus | 107224-12-10 00:13 G | 40884165.25 | 40884165.51 | 40884165.76 | 0.0136 | 0.0012 |
| Uranus | 107225-12-14 02:52 G | 40884534.53 | 40884534.62 | 40884534.76 | 0.0136 | 0.0120 |
| Saturn | 107230-01-20 15:20 G | 40886032.94 | 40886033.14 | 40886033.35 | 0.0284 | 0.0141 |
| Saturn | 107231-02-02 21:49 G | 40886411.19 | 40886411.41 | 40886411.65 | 0.0287 | 0.0111 |
| Jupiter | 107231-12-29 10:32 G | 40886740.71 | 40886740.94 | 40886741.17 | 0.0531 | 0.0006 |
| Saturn | 107243-07-22 07:40 G | 40890963.64 | 40890963.82 | 40890964.02 | 0.0278 | 0.0178 |
| Jupiter | 107244-01-03 03:20 G | 40891128.49 | 40891128.64 | 40891128.80 | 0.0533 | 0.0399 |
| Saturn | 107244-08-03 07:11 G | 40891341.55 | 40891341.80 | 40891342.06 | 0.0274 | 0.0052 |
| Pluto | 107245-12-29 22:32 G | 40891855.20 | 40891855.44 | 40891855.69 | 0.0065 | 0.0011 |
| Jupiter | 107249-06-25 04:47 G | 40893128.50 | 40893128.70 | 40893128.90 | 0.0496 | 0.0231 |
| Saturn | 107259-01-14 21:06 G | 40896619.28 | 40896619.38 | 40896619.49 | 0.0282 | 0.0252 |
| Saturn | 107260-01-28 02:37 G | 40896997.38 | 40896997.61 | 40896997.84 | 0.0286 | 0.0019 |
| Saturn | 107261-02-09 17:16 G | 40897376.08 | 40897376.22 | 40897376.37 | 0.0290 | 0.0231 |
| Jupiter | 107261-06-29 17:30 G | 40897515.99 | 40897516.23 | 40897516.48 | 0.0495 | 0.0076 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 107266-05-31 05:30 G | 40899312.60 | 40899312.73 | 40899312.90 | 0.0088 | 0.0072 |
| Uranus | 107266-06-02 18:56 G | 40899315.19 | 40899315.29 | 40899315.43 | 0.0142 | 0.0127 |
| Neptune | 107267-06-02 22:47 G | 40899680.26 | 40899680.45 | 40899680.69 | 0.0088 | 0.0047 |
| Uranus | 107267-06-07 19:40 G | 40899685.07 | 40899685.32 | 40899685.57 | 0.0142 | 0.0003 |
| Mars | 107267-10-01 00:28 G | 40899800.51 | 40899800.52 | 40899800.52 | 0.1659 | 0.1657 |
| Neptune | 107268-06-04 03:49 G | 40900047.43 | 40900047.66 | 40900047.91 | 0.0088 | 0.0032 |
| Uranus | 107268-06-11 18:42 G | 40900055.09 | 40900055.28 | 40900055.48 | 0.0142 | 0.0097 |
| Neptune | 107269-06-06 22:32 G | 40900415.17 | 40900415.44 | 40900415.70 | 0.0088 | 0.0006 |
| Neptune | 107270-06-09 04:04 G | 40900782.42 | 40900782.67 | 40900782.93 | 0.0088 | 0.0009 |
| Neptune | 107271-06-11 19:54 G | 40901150.09 | 40901150.33 | 40901150.59 | 0.0088 | 0.0036 |
| Neptune | 107272-06-13 05:44 G | 40901517.56 | 40901517.74 | 40901517.97 | 0.0088 | 0.0052 |
| Neptune | 107273-06-15 17:01 G | 40901885.10 | 40901885.21 | 40901885.36 | 0.0088 | 0.0077 |
| Jupiter | 107273-07-04 03:20 G | 40901903.51 | 40901903.64 | 40901903.77 | 0.0494 | 0.0403 |
| Saturn | 107273-07-28 23:30 G | 40901928.24 | 40901928.48 | 40901928.72 | 0.0276 | 0.0048 |
| Saturn | 107274-08-10 22:32 G | 40902306.27 | 40902306.44 | 40902306.63 | 0.0272 | 0.0186 |
| Saturn | 107289-01-21 17:44 G | 40907584.02 | 40907584.24 | 40907584.46 | 0.0284 | 0.0136 |
| Saturn | 107290-02-04 00:42 G | 40907962.32 | 40907962.53 | 40907962.76 | 0.0288 | 0.0110 |
| Saturn | 107302-07-24 12:28 G | 40912514.82 | 40912515.02 | 40912515.24 | 0.0277 | 0.0148 |
| Saturn | 107303-08-06 15:49 G | 40912892.93 | 40912893.16 | 40912893.39 | 0.0274 | 0.0096 |
| Uranus | 107307-12-08 01:11 G | 40914477.34 | 40914477.55 | 40914477.78 | 0.0136 | 0.0066 |
| Uranus | 107308-12-11 02:52 G | 40914846.37 | 40914846.62 | 40914846.87 | 0.0136 | 0.0014 |
| Uranus | 107309-12-15 17:30 G | 40915216.15 | 40915216.23 | 40915216.36 | 0.0136 | 0.0123 |
| Jupiter | 107314-12-29 11:01 G | 40917055.74 | 40917055.96 | 40917056.18 | 0.0532 | 0.0110 |
| Saturn | 107318-01-17 10:18 G | 40918170.84 | 40918170.93 | 40918171.04 | 0.0282 | 0.0254 |
| Saturn | 107319-01-30 10:04 G | 40918548.67 | 40918548.92 | 40918549.17 | 0.0286 | 0.0013 |
| Saturn | 107320-02-12 18:13 G | 40918927.14 | 40918927.26 | 40918927.39 | 0.0290 | 0.0248 |
| Mars | 107321-03-28 14:23 G | 40919337.01 | 40919337.10 | 40919337.20 | 0.1888 | 0.1641 |
| Jupiter | 107327-01-03 11:16 G | 40921443.80 | 40921443.97 | 40921444.15 | 0.0532 | 0.0349 |
| Saturn | 107331-07-19 02:23 G | 40923101.50 | 40923101.60 | 40923101.73 | 0.0279 | 0.0251 |
| Jupiter | 107332-06-25 05:01 G | 40923443.52 | 40923443.71 | 40923443.91 | 0.0496 | 0.0279 |

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| Saturn | 107332-07-31 04:47 G | 40923479.44 | 40923479.70 | 40923479.96 | 0.0275 | 0.0002 |
| Saturn | 107333-08-12 23:01 G | 40923857.34 | 40923857.46 | 40923857.60 | 0.0272 | 0.0233 |
| Pluto | 107334-06-30 15:20 G | 40924178.92 | 40924179.14 | 40924179.38 | 0.0079 | 0.0033 |
| Jupiter | 107344-06-30 01:40 G | 40927831.34 | 40927831.57 | 40927831.80 | 0.0495 | 0.0084 |
| Saturn | 107348-01-25 02:52 G | 40929135.42 | 40929135.62 | 40929135.84 | 0.0284 | 0.0123 |
| Neptune | 107348-12-03 03:35 G | 40929448.48 | 40929448.65 | 40929448.84 | 0.0090 | 0.0065 |
| Saturn | 107349-02-06 12:42 G | 40929513.82 | 40929514.03 | 40929514.25 | 0.0288 | 0.0140 |
| Neptune | 107349-12-05 16:18 G | 40929815.98 | 40929816.18 | 40929816.38 | 0.0090 | 0.0052 |
| Uranus | 107350-06-04 04:04 G | 40929996.56 | 40929996.67 | 40929996.80 | 0.0142 | 0.0123 |
| Neptune | 107350-12-08 00:13 G | 40930183.27 | 40930183.51 | 40930183.78 | 0.0090 | 0.0023 |
| Uranus | 107351-06-09 06:28 G | 40930366.51 | 40930366.77 | 40930367.04 | 0.0142 | 0.0003 |
| Neptune | 107351-12-10 17:44 G | 40930550.99 | 40930551.24 | 40930551.49 | 0.0090 | 0.0009 |
| Uranus | 107352-06-13 01:54 G | 40930736.43 | 40930736.58 | 40930736.75 | 0.0142 | 0.0107 |
| Neptune | 107352-12-11 22:32 G | 40930918.20 | 40930918.44 | 40930918.70 | 0.0090 | 0.0022 |
| Neptune | 107353-12-14 17:16 G | 40931285.99 | 40931286.22 | 40931286.47 | 0.0090 | 0.0035 |
| Neptune | 107354-12-16 22:32 G | 40931653.28 | 40931653.44 | 40931653.62 | 0.0090 | 0.0065 |
| Neptune | 107355-12-19 15:06 G | 40932021.00 | 40932021.13 | 40932021.26 | 0.0090 | 0.0077 |
| Jupiter | 107356-07-04 05:16 G | 40932218.59 | 40932218.72 | 40932218.86 | 0.0494 | 0.0404 |
| Saturn | 107361-07-26 03:20 G | 40934066.41 | 40934066.64 | 40934066.87 | 0.0277 | 0.0101 |
| Saturn | 107362-08-08 03:35 G | 40934444.43 | 40934444.65 | 40934444.88 | 0.0274 | 0.0134 |
| Saturn | 107377-01-18 06:13 G | 40939721.63 | 40939721.76 | 40939721.91 | 0.0282 | 0.0228 |
| Saturn | 107378-01-31 11:30 G | 40940099.75 | 40940099.98 | 40940100.21 | 0.0286 | 0.0029 |
| Saturn | 107390-07-20 01:54 G | 40944652.44 | 40944652.58 | 40944652.75 | 0.0279 | 0.0213 |
| Saturn | 107391-08-02 11:30 G | 40945030.75 | 40945030.98 | 40945031.23 | 0.0275 | 0.0023 |
| Uranus | 107391-12-08 05:01 G | 40945158.49 | 40945158.71 | 40945158.95 | 0.0136 | 0.0061 |
| Saturn | 107392-08-14 11:30 G | 40945408.86 | 40945408.98 | 40945409.09 | 0.0272 | 0.0239 |
| Uranus | 107392-12-11 19:54 G | 40945528.09 | 40945528.33 | 40945528.58 | 0.0136 | 0.0022 |
| Mars | 107393-09-27 14:37 G | 40945818.03 | 40945818.11 | 40945818.20 | 0.1645 | 0.1461 |
| Uranus | 107393-12-15 21:35 G | 40945897.31 | 40945897.40 | 40945897.52 | 0.0136 | 0.0124 |
| Jupiter | 107397-12-28 10:18 G | 40947370.71 | 40947370.93 | 40947371.15 | 0.0531 | 0.0166 |

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| Saturn | 107407-01-27 00:13 G | 40950686.27 | 40950686.51 | 40950686.75 | 0.0284 | 0.0077 |
| Saturn | 107408-02-09 06:28 G | 40951064.59 | 40951064.77 | 40951064.96 | 0.0288 | 0.0185 |
| Jupiter | 107410-01-03 16:18 G | 40951758.98 | 40951759.18 | 40951759.39 | 0.0532 | 0.0233 |
| Jupiter | 107415-06-26 15:06 G | 40953758.97 | 40953759.13 | 40953759.30 | 0.0496 | 0.0359 |
| Saturn | 107420-07-28 00:42 G | 40955617.30 | 40955617.53 | 40955617.78 | 0.0277 | 0.0094 |
| Saturn | 107421-08-10 00:56 G | 40955995.34 | 40955995.54 | 40955995.76 | 0.0273 | 0.0131 |
| Jupiter | 107427-07-01 06:42 G | 40958146.55 | 40958146.78 | 40958147.01 | 0.0495 | 0.0008 |
| Neptune | 107430-06-01 16:47 G | 40959213.08 | 40959213.20 | 40959213.35 | 0.0088 | 0.0074 |
| Neptune | 107431-06-04 06:13 G | 40959580.59 | 40959580.76 | 40959580.98 | 0.0088 | 0.0060 |
| Neptune | 107432-06-05 18:56 G | 40959948.06 | 40959948.29 | 40959948.52 | 0.0088 | 0.0033 |
| Neptune | 107433-06-08 03:06 G | 40960315.37 | 40960315.63 | 40960315.89 | 0.0088 | 0.0018 |
| Uranus | 107434-06-05 16:47 G | 40960678.07 | 40960678.20 | 40960678.37 | 0.0142 | 0.0115 |
| Neptune | 107434-06-10 19:40 G | 40960683.06 | 40960683.32 | 40960683.57 | 0.0088 | 0.0009 |
| Uranus | 107435-06-10 09:49 G | 40961047.65 | 40961047.91 | 40961048.16 | 0.0142 | 0.0003 |
| Neptune | 107435-06-13 00:13 G | 40961050.27 | 40961050.51 | 40961050.78 | 0.0088 | 0.0024 |
| Saturn | 107436-01-21 13:54 G | 40961272.91 | 40961273.08 | 40961273.27 | 0.0282 | 0.0187 |
| Uranus | 107436-06-14 15:35 G | 40961418.02 | 40961418.15 | 40961418.32 | 0.0142 | 0.0117 |
| Neptune | 107436-06-14 19:11 G | 40961418.09 | 40961418.30 | 40961418.52 | 0.0088 | 0.0050 * |
| Saturn | 107437-02-02 15:49 G | 40961650.92 | 40961651.16 | 40961651.41 | 0.0286 | 0.0060 |
| Neptune | 107437-06-16 23:59 G | 40961785.34 | 40961785.50 | 40961785.69 | 0.0088 | 0.0064 |
| Jupiter | 107439-07-05 17:30 G | 40962534.08 | 40962534.23 | 40962534.40 | 0.0494 | 0.0374 |
| Saturn | 107449-07-22 10:18 G | 40966203.78 | 40966203.93 | 40966204.10 | 0.0279 | 0.0217 |
| Saturn | 107450-08-04 13:25 G | 40966581.80 | 40966582.06 | 40966582.32 | 0.0275 | 0.0017 |
| Saturn | 107451-08-17 05:44 G | 40966959.64 | 40966959.74 | 40966959.87 | 0.0271 | 0.0241 |
| Saturn | 107466-01-28 01:11 G | 40972237.32 | 40972237.55 | 40972237.78 | 0.0284 | 0.0066 |
| Saturn | 107467-02-10 12:13 G | 40972615.83 | 40972616.01 | 40972616.19 | 0.0288 | 0.0185 |
| Mars | 107472-09-30 14:23 G | 40974674.89 | 40974675.10 | 40974675.30 | 0.1649 | 0.0182 |
| Uranus | 107475-12-09 17:59 G | 40975840.05 | 40975840.25 | 40975840.48 | 0.0136 | 0.0062 |
| Uranus | 107476-12-12 23:44 G | 40976209.25 | 40976209.49 | 40976209.75 | 0.0136 | 0.0030 |
| Uranus | 107477-12-17 11:16 G | 40976578.87 | 40976578.97 | 40976579.07 | 0.0136 | 0.0122 |

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| Saturn | 107479-07-30 06:28 G | 40977168.55 | 40977168.77 | 40977169.00 | 0.0277 | 0.0093 |
| Saturn | 107480-08-11 08:23 G | 40977546.65 | 40977546.85 | 40977547.07 | 0.0273 | 0.0144 |
| Jupiter | 107480-12-28 15:49 G | 40977685.94 | 40977686.16 | 40977686.39 | 0.0531 | 0.0170 |
| Jupiter | 107493-01-02 20:37 G | 40982074.16 | 40982074.36 | 40982074.56 | 0.0533 | 0.0236 |
| Pluto | 107494-01-02 09:35 G | 40982438.65 | 40982438.90 | 40982439.16 | 0.0065 | 0.0008 |
| Pluto | 107495-01-04 03:49 G | 40982805.65 | 40982805.66 | 40982805.73 | 0.0065 | 0.0064 |
| Saturn | 107495-01-22 05:30 G | 40982823.55 | 40982823.73 | 40982823.92 | 0.0282 | 0.0189 |
| Saturn | 107496-02-04 09:06 G | 40983201.64 | 40983201.88 | 40983202.11 | 0.0286 | 0.0051 |
| Jupiter | 107498-06-26 05:59 G | 40984074.58 | 40984074.75 | 40984074.92 | 0.0496 | 0.0347 |
| Saturn | 107508-07-24 01:25 G | 40987754.40 | 40987754.56 | 40987754.74 | 0.0279 | 0.0203 |
| Saturn | 107509-08-06 09:49 G | 40988132.67 | 40988132.91 | 40988133.15 | 0.0275 | 0.0045 |
| Jupiter | 107510-07-01 11:44 G | 40988461.76 | 40988461.99 | 40988462.22 | 0.0495 | 0.0040 |
| Neptune | 107512-12-04 08:51 G | 40989348.79 | 40989348.87 | 40989348.99 | 0.0090 | 0.0082 |
| Neptune | 107513-12-07 03:20 G | 40989716.44 | 40989716.64 | 40989716.87 | 0.0090 | 0.0051 |
| Neptune | 107514-12-09 10:32 G | 40990083.72 | 40990083.94 | 40990084.17 | 0.0090 | 0.0038 |
| Neptune | 107515-12-12 01:39 G | 40990451.31 | 40990451.57 | 40990451.83 | 0.0090 | 0.0007 |
| Neptune | 107516-12-13 13:11 G | 40990818.80 | 40990819.05 | 40990819.30 | 0.0090 | 0.0006 |
| Neptune | 107517-12-15 22:32 G | 40991186.21 | 40991186.44 | 40991186.69 | 0.0090 | 0.0036 |
| Uranus | 107518-06-06 18:27 G | 40991359.11 | 40991359.27 | 40991359.45 | 0.0142 | 0.0106 |
| Neptune | 107518-12-18 14:08 G | 40991553.90 | 40991554.09 | 40991554.32 | 0.0090 | 0.0049 |
| Uranus | 107519-06-12 00:56 G | 40991729.29 | 40991729.54 | 40991729.80 | 0.0142 | 0.0003 |
| Neptune | 107519-12-20 19:39 G | 40991921.22 | 40991921.32 | 40991921.46 | 0.0090 | 0.0079 |
| Uranus | 107520-06-15 17:15 G | 40992099.11 | 40992099.22 | 40992099.37 | 0.0142 | 0.0122 |
| Jupiter | 107522-07-06 07:54 G | 40992849.64 | 40992849.83 | 40992850.02 | 0.0495 | 0.0296 |
| Saturn | 107525-01-29 21:49 G | 40993788.17 | 40993788.41 | 40993788.65 | 0.0284 | 0.0072 |
| Saturn | 107526-02-12 02:37 G | 40994166.43 | 40994166.61 | 40994166.80 | 0.0288 | 0.0185 |
| Saturn | 107538-07-31 23:59 G | 40998719.25 | 40998719.50 | 40998719.76 | 0.0277 | 0.0054 |
| Saturn | 107539-08-13 23:01 G | 40999097.28 | 40999097.46 | 40999097.64 | 0.0273 | 0.0186 |
| Saturn | 107554-01-24 09:35 G | 41004374.73 | 41004374.90 | 41004375.09 | 0.0281 | 0.0183 |
| Saturn | 107555-02-06 12:42 G | 41004752.79 | 41004753.03 | 41004753.27 | 0.0286 | 0.0069 |

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| Uranus | 107559-12-11 02:51 G | 41006521.39 | 41006521.62 | 41006521.85 | 0.0136 | 0.0063 |
| Uranus | 107560-12-14 10:03 G | 41006890.69 | 41006890.92 | 41006891.15 | 0.0136 | 0.0039 |
| Uranus | 107561-12-18 19:54 G | 41007260.23 | 41007260.33 | 41007260.46 | 0.0136 | 0.0122 |
| Jupiter | 107563-12-30 08:37 G | 41008001.65 | 41008001.86 | 41008002.07 | 0.0531 | 0.0239 |
| Saturn | 107567-07-26 05:44 G | 41009305.54 | 41009305.74 | 41009305.95 | 0.0279 | 0.0161 |
| Saturn | 107568-08-07 09:49 G | 41009683.67 | 41009683.91 | 41009684.16 | 0.0275 | 0.0079 |
| Jupiter | 107576-01-04 01:11 G | 41012389.35 | 41012389.55 | 41012389.76 | 0.0532 | 0.0213 |
| Jupiter | 107581-06-26 15:20 G | 41014389.99 | 41014390.14 | 41014390.29 | 0.0497 | 0.0369 |
| Pluto | 107582-07-04 11:01 G | 41014762.71 | 41014762.96 | 41014763.21 | 0.0079 | 0.0028 |
| Saturn | 107584-01-31 17:44 G | 41015339.01 | 41015339.24 | 41015339.47 | 0.0284 | 0.0039 |
| Saturn | 107585-02-13 05:15 G | 41015717.59 | 41015717.72 | 41015717.87 | 0.0288 | 0.0228 |
| Jupiter | 107593-07-01 01:25 G | 41018777.32 | 41018777.56 | 41018777.81 | 0.0495 | 0.0012 |
| Neptune | 107595-06-04 12:27 G | 41019480.85 | 41019481.02 | 41019481.22 | 0.0088 | 0.0060 |
| Neptune | 107596-06-06 06:56 G | 41019848.57 | 41019848.79 | 41019849.02 | 0.0088 | 0.0046 |
| Saturn | 107596-07-19 08:08 G | 41019891.78 | 41019891.84 | 41019891.91 | 0.0281 | 0.0270 |
| Neptune | 107597-06-08 12:56 G | 41020215.79 | 41020216.04 | 41020216.29 | 0.0088 | 0.0018 |
| Saturn | 107597-08-01 22:32 G | 41020270.20 | 41020270.44 | 41020270.68 | 0.0277 | 0.0031 |
| Neptune | 107598-06-11 03:49 G | 41020583.39 | 41020583.66 | 41020583.93 | 0.0088 | 0.0005 |
| Saturn | 107598-08-15 02:08 G | 41020648.42 | 41020648.59 | 41020648.78 | 0.0274 | 0.0191 |
| Neptune | 107599-06-13 14:37 G | 41020950.88 | 41020951.11 | 41020951.37 | 0.0088 | 0.0023 |
| Neptune | 107600-06-15 00:13 G | 41021318.28 | 41021318.51 | 41021318.77 | 0.0088 | 0.0037 |
| Neptune | 107601-06-17 15:49 G | 41021686.02 | 41021686.16 | 41021686.36 | 0.0088 | 0.0065 |
| Uranus | 107602-06-07 09:49 G | 41022040.75 | 41022040.91 | 41022041.11 | 0.0142 | 0.0098 |
| Neptune | 107602-06-19 21:49 G | 41022053.30 | 41022053.41 | 41022053.53 | 0.0088 | 0.0078 |
| Uranus | 107603-06-12 04:18 G | 41022410.42 | 41022410.68 | 41022410.95 | 0.0142 | 0.0003 |
| Uranus | 107604-06-16 07:11 G | 41022780.70 | 41022780.80 | 41022780.94 | 0.0142 | 0.0125 |
| Mars | 107605-03-30 17:15 G | 41023068.03 | 41023068.22 | 41023068.42 | 0.1897 | 0.0706 |
| Jupiter | 107605-07-05 18:42 G | 41023165.11 | 41023165.28 | 41023165.46 | 0.0494 | 0.0311 |
| Saturn | 107613-01-25 03:06 G | 41025925.41 | 41025925.63 | 41025925.84 | 0.0281 | 0.0138 |
| Saturn | 107614-02-07 04:32 G | 41026303.47 | 41026303.69 | 41026303.91 | 0.0286 | 0.0114 |

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| Saturn | 107626-07-26 18:27 G | 41030856.06 | 41030856.27 | 41030856.48 | 0.0279 | 0.0156 |
| Saturn | 107627-08-09 01:25 G | 41031234.33 | 41031234.56 | 41031234.80 | 0.0275 | 0.0074 |
| Saturn | 107642-01-19 21:20 G | 41036512.29 | 41036512.39 | 41036512.53 | 0.0280 | 0.0244 |
| Saturn | 107643-02-01 17:44 G | 41036889.99 | 41036890.24 | 41036890.49 | 0.0284 | 0.0006 |
| Uranus | 107643-12-11 06:13 G | 41037202.56 | 41037202.76 | 41037202.99 | 0.0136 | 0.0066 |
| Saturn | 107644-02-14 20:51 G | 41037268.25 | 41037268.37 | 41037268.52 | 0.0288 | 0.0240 |
| Uranus | 107644-12-14 20:37 G | 41037572.13 | 41037572.36 | 41037572.61 | 0.0136 | 0.0044 |
| Uranus | 107645-12-18 23:15 G | 41037941.39 | 41037941.47 | 41037941.59 | 0.0136 | 0.0125 |
| Jupiter | 107646-12-29 15:20 G | 41038316.95 | 41038317.14 | 41038317.33 | 0.0530 | 0.0293 |
| Saturn | 107655-07-21 09:49 G | 41041442.87 | 41041442.91 | 41041442.97 | 0.0281 | 0.0275 |
| Saturn | 107656-08-02 16:47 G | 41041820.94 | 41041821.20 | 41041821.46 | 0.0277 | 0.0039 |
| Saturn | 107657-08-15 14:51 G | 41042198.95 | 41042199.12 | 41042199.31 | 0.0274 | 0.0189 |
| Jupiter | 107659-01-03 05:01 G | 41042704.48 | 41042704.71 | 41042704.95 | 0.0532 | 0.0093 |
| Jupiter | 107664-06-26 00:42 G | 41044705.43 | 41044705.53 | 41044705.65 | 0.0497 | 0.0434 |
| Saturn | 107672-01-27 06:13 G | 41047476.56 | 41047476.76 | 41047476.98 | 0.0281 | 0.0120 |
| Saturn | 107673-02-08 10:47 G | 41047854.73 | 41047854.95 | 41047855.17 | 0.0285 | 0.0118 |
| Jupiter | 107676-06-30 17:59 G | 41049093.01 | 41049093.25 | 41049093.49 | 0.0495 | 0.0065 |
| Neptune | 107676-12-04 00:42 G | 41049249.44 | 41049249.53 | 41049249.66 | 0.0090 | 0.0080 |
| Mars | 107677-09-30 06:56 G | 41049549.63 | 41049549.79 | 41049549.96 | 0.1639 | 0.0644 |
| Neptune | 107677-12-06 08:23 G | 41049616.69 | 41049616.85 | 41049617.04 | 0.0090 | 0.0067 |
| Neptune | 107678-12-09 01:39 G | 41049984.36 | 41049984.57 | 41049984.82 | 0.0090 | 0.0037 |
| Neptune | 107679-12-11 06:56 G | 41050351.56 | 41050351.79 | 41050352.05 | 0.0090 | 0.0025 |
| Neptune | 107680-12-13 01:54 G | 41050719.32 | 41050719.58 | 41050719.84 | 0.0090 | 0.0007 |
| Neptune | 107681-12-15 07:25 G | 41051086.58 | 41051086.81 | 41051087.06 | 0.0090 | 0.0020 |
| Neptune | 107682-12-17 23:15 G | 41051454.27 | 41051454.47 | 41051454.71 | 0.0090 | 0.0051 |
| Neptune | 107683-12-20 09:20 G | 41051821.74 | 41051821.89 | 41051822.08 | 0.0090 | 0.0064 |
| Saturn | 107685-07-27 21:20 G | 41052407.20 | 41052407.39 | 41052407.60 | 0.0279 | 0.0159 |
| Uranus | 107686-06-07 17:15 G | 41052722.03 | 41052722.22 | 41052722.43 | 0.0142 | 0.0092 |
| Saturn | 107686-08-10 02:51 G | 41052785.38 | 41052785.62 | 41052785.87 | 0.0275 | 0.0086 |
| Uranus | 107687-06-12 17:01 G | 41053091.96 | 41053092.21 | 41053092.46 | 0.0142 | 0.0007 |

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| Uranus | 107688-06-16 17:15 G | 41053462.11 | 41053462.22 | 41053462.36 | 0.0142 | 0.0125 |
| Jupiter | 107688-07-04 23:59 G | 41053480.32 | 41053480.50 | 41053480.69 | 0.0494 | 0.0302 |
| Saturn | 107701-01-21 14:08 G | 41058062.97 | 41058063.09 | 41058063.23 | 0.0280 | 0.0238 |
| Saturn | 107702-02-03 14:37 G | 41058440.88 | 41058441.11 | 41058441.34 | 0.0284 | 0.0009 |
| Saturn | 107703-02-17 02:37 G | 41058819.49 | 41058819.61 | 41058819.75 | 0.0288 | 0.0239 |
| Saturn | 107714-07-23 00:13 G | 41062993.43 | 41062993.51 | 41062993.59 | 0.0281 | 0.0265 |
| Saturn | 107715-08-05 14:23 G | 41063371.86 | 41063372.10 | 41063372.34 | 0.0277 | 0.0012 |
| Saturn | 107716-08-17 19:25 G | 41063750.18 | 41063750.31 | 41063750.44 | 0.0274 | 0.0230 |
| Uranus | 107727-12-12 20:51 G | 41067884.17 | 41067884.37 | 41067884.61 | 0.0136 | 0.0064 |
| Uranus | 107728-12-15 23:01 G | 41068253.23 | 41068253.46 | 41068253.71 | 0.0136 | 0.0045 |
| Uranus | 107729-12-20 14:37 G | 41068623.06 | 41068623.11 | 41068623.18 | 0.0136 | 0.0131 |
| Jupiter | 107729-12-29 14:08 G | 41068631.91 | 41068632.09 | 41068632.28 | 0.0531 | 0.0305 |
| Saturn | 107731-01-29 06:27 G | 41069027.55 | 41069027.77 | 41069028.00 | 0.0282 | 0.0120 |
| Saturn | 107732-02-11 06:27 G | 41069405.55 | 41069405.77 | 41069405.99 | 0.0286 | 0.0127 |
| Jupiter | 107742-01-03 20:23 G | 41073020.11 | 41073020.35 | 41073020.58 | 0.0532 | 0.0092 |
| Pluto | 107742-01-06 09:20 G | 41073022.64 | 41073022.89 | 41073023.15 | 0.0065 | 0.0008 |
| Saturn | 107744-07-29 14:08 G | 41073957.86 | 41073958.09 | 41073958.32 | 0.0279 | 0.0116 |
| Saturn | 107745-08-11 19:39 G | 41074336.11 | 41074336.32 | 41074336.54 | 0.0275 | 0.0129 |
| Jupiter | 107747-06-27 07:25 G | 41075020.70 | 41075020.81 | 41075020.94 | 0.0497 | 0.0429 |
| Jupiter | 107754-01-08 14:37 G | 41077408.02 | 41077408.11 | 41077408.21 | 0.0533 | 0.0478 |
| Mars | 107756-10-03 17:15 G | 41078407.09 | 41078407.22 | 41078407.34 | 0.1644 | 0.1173 |
| Neptune | 107758-06-02 15:06 G | 41079014.09 | 41079014.13 | 41079014.18 | 0.0088 | 0.0086 |
| Neptune | 107759-06-05 03:35 G | 41079381.53 | 41079381.65 | 41079381.79 | 0.0088 | 0.0074 |
| Jupiter | 107759-07-02 02:37 G | 41079408.38 | 41079408.61 | 41079408.83 | 0.0496 | 0.0121 |
| Saturn | 107760-01-23 23:30 G | 41079614.35 | 41079614.48 | 41079614.61 | 0.0280 | 0.0233 |
| Neptune | 107760-06-06 11:15 G | 41079748.76 | 41079748.97 | 41079749.22 | 0.0088 | 0.0046 |
| Saturn | 107761-02-04 22:03 G | 41079992.17 | 41079992.42 | 41079992.67 | 0.0284 | 0.0013 |
| Neptune | 107761-06-09 04:18 G | 41080116.46 | 41080116.68 | 41080116.93 | 0.0088 | 0.0034 |
| Saturn | 107762-02-18 01:11 G | 41080370.50 | 41080370.55 | 41080370.63 | 0.0288 | 0.0279 |
| Neptune | 107762-06-11 09:20 G | 41080483.63 | 41080483.89 | 41080484.16 | 0.0088 | 0.0005 |

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| Neptune | 107763-06-14 03:49 G | 41080851.40 | 41080851.66 | 41080851.93 | 0.0088 | 0.0009 |
| Neptune | 107764-06-15 08:51 G | 41081218.65 | 41081218.87 | 41081219.11 | 0.0088 | 0.0038 |
| Neptune | 107765-06-18 01:11 G | 41081586.33 | 41081586.55 | 41081586.77 | 0.0088 | 0.0050 |
| Neptune | 107766-06-20 09:49 G | 41081953.82 | 41081953.91 | 41081954.04 | 0.0088 | 0.0079 |
| Uranus | 107770-06-09 02:37 G | 41083403.43 | 41083403.61 | 41083403.81 | 0.0142 | 0.0091 |
| Uranus | 107771-06-14 06:42 G | 41083773.52 | 41083773.78 | 41083774.04 | 0.0142 | 0.0020 |
| Jupiter | 107771-07-06 10:47 G | 41083795.74 | 41083795.95 | 41083796.18 | 0.0495 | 0.0220 |
| Uranus | 107772-06-18 00:13 G | 41084143.40 | 41084143.51 | 41084143.64 | 0.0142 | 0.0125 |
| Saturn | 107773-07-24 06:42 G | 41084544.64 | 41084544.78 | 41084544.95 | 0.0281 | 0.0220 |
| Saturn | 107774-08-06 14:23 G | 41084922.84 | 41084923.10 | 41084923.35 | 0.0277 | 0.0026 |
| Saturn | 107775-08-19 11:01 G | 41085300.88 | 41085300.96 | 41085301.07 | 0.0274 | 0.0252 |
| Saturn | 107790-01-30 12:13 G | 41090578.79 | 41090579.01 | 41090579.23 | 0.0282 | 0.0085 |
| Saturn | 107791-02-12 19:11 G | 41090957.11 | 41090957.30 | 41090957.49 | 0.0286 | 0.0177 |
| Saturn | 107803-08-01 21:06 G | 41095509.16 | 41095509.38 | 41095509.61 | 0.0279 | 0.0090 |
| Saturn | 107804-08-14 03:49 G | 41095887.45 | 41095887.66 | 41095887.88 | 0.0275 | 0.0140 |
| Uranus | 107811-12-13 23:15 G | 41098565.25 | 41098565.47 | 41098565.71 | 0.0136 | 0.0057 |
| Uranus | 107812-12-17 13:11 G | 41098934.83 | 41098935.05 | 41098935.29 | 0.0136 | 0.0042 |
| Jupiter | 107812-12-29 19:11 G | 41098947.15 | 41098947.30 | 41098947.46 | 0.0530 | 0.0390 |
| Saturn | 107819-01-26 00:13 G | 41101165.33 | 41101165.51 | 41101165.70 | 0.0281 | 0.0186 |
| Saturn | 107820-02-07 23:01 G | 41101543.23 | 41101543.46 | 41101543.70 | 0.0285 | 0.0065 |
| Jupiter | 107825-01-04 00:27 G | 41103335.30 | 41103335.52 | 41103335.75 | 0.0531 | 0.0058 |
| Jupiter | 107830-06-27 20:37 G | 41105336.25 | 41105336.36 | 41105336.47 | 0.0497 | 0.0444 |
| Pluto | 107830-07-08 09:20 G | 41105346.65 | 41105346.89 | 41105347.14 | 0.0079 | 0.0017 |
| Saturn | 107832-07-26 03:06 G | 41106095.46 | 41106095.63 | 41106095.80 | 0.0281 | 0.0203 |
| Saturn | 107833-08-08 14:37 G | 41106473.87 | 41106474.11 | 41106474.35 | 0.0277 | 0.0029 |
| Saturn | 107834-08-21 19:25 G | 41106852.21 | 41106852.31 | 41106852.41 | 0.0273 | 0.0249 |
| Jupiter | 107837-01-08 11:59 G | 41107722.89 | 41107723.00 | 41107723.13 | 0.0533 | 0.0454 |
| Neptune | 107841-12-07 18:56 G | 41109517.14 | 41109517.29 | 41109517.47 | 0.0090 | 0.0066 |
| Jupiter | 107842-07-02 07:25 G | 41109723.59 | 41109723.81 | 41109724.04 | 0.0496 | 0.0102 |
| Neptune | 107842-12-10 09:35 G | 41109884.72 | 41109884.90 | 41109885.14 | 0.0090 | 0.0054 |

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| Neptune | 107843-12-12 21:35 G | 41110252.17 | 41110252.40 | 41110252.65 | 0.0090 | 0.0023 |
| Neptune | 107844-12-14 07:11 G | 41110619.54 | 41110619.80 | 41110620.07 | 0.0090 | 0.0010 |
| Neptune | 107845-12-16 23:15 G | 41110987.23 | 41110987.47 | 41110987.72 | 0.0090 | 0.0022 |
| Neptune | 107846-12-19 04:32 G | 41111354.47 | 41111354.69 | 41111354.95 | 0.0090 | 0.0034 |
| Neptune | 107847-12-21 23:30 G | 41111722.32 | 41111722.48 | 41111722.66 | 0.0090 | 0.0065 |
| Saturn | 107848-01-21 05:44 G | 41111752.70 | 41111752.74 | 41111752.77 | 0.0278 | 0.0275 |
| Neptune | 107848-12-23 04:32 G | 41112089.58 | 41112089.69 | 41112089.83 | 0.0090 | 0.0077 |
| Saturn | 107849-02-01 22:18 G | 41112130.18 | 41112130.43 | 41112130.68 | 0.0282 | 0.0038 |
| Saturn | 107850-02-14 21:49 G | 41112508.25 | 41112508.41 | 41112508.58 | 0.0286 | 0.0207 |
| Uranus | 107854-06-10 17:44 G | 41114085.06 | 41114085.24 | 41114085.46 | 0.0142 | 0.0092 |
| Jupiter | 107854-07-06 22:03 G | 41114111.20 | 41114111.42 | 41114111.64 | 0.0495 | 0.0204 |
| Uranus | 107855-06-15 10:18 G | 41114454.68 | 41114454.93 | 41114455.19 | 0.0142 | 0.0029 |
| Uranus | 107856-06-19 16:32 G | 41114825.10 | 41114825.19 | 41114825.33 | 0.0142 | 0.0128 |
| Saturn | 107862-08-02 23:01 G | 41117060.22 | 41117060.46 | 41117060.71 | 0.0279 | 0.0089 |
| Saturn | 107863-08-16 01:11 G | 41117438.35 | 41117438.55 | 41117438.77 | 0.0275 | 0.0142 |
| Saturn | 107878-01-27 13:11 G | 41122716.86 | 41122717.05 | 41122717.26 | 0.0281 | 0.0152 |
| Saturn | 107879-02-09 15:06 G | 41123094.90 | 41123095.13 | 41123095.37 | 0.0285 | 0.0083 |
| Mars | 107889-03-31 16:18 G | 41126798.01 | 41126798.18 | 41126798.36 | 0.1907 | 0.0525 |
| Saturn | 107891-07-28 17:44 G | 41127647.07 | 41127647.24 | 41127647.41 | 0.0280 | 0.0197 |
| Saturn | 107892-08-10 01:11 G | 41128025.30 | 41128025.55 | 41128025.80 | 0.0276 | 0.0046 |
| Uranus | 107895-12-14 13:11 G | 41129246.83 | 41129247.05 | 41129247.29 | 0.0136 | 0.0048 |
| Jupiter | 107895-12-29 18:13 G | 41129262.16 | 41129262.26 | 41129262.36 | 0.0529 | 0.0478 |
| Uranus | 107896-12-17 20:23 G | 41129616.12 | 41129616.35 | 41129616.61 | 0.0136 | 0.0042 |
| Saturn | 107907-01-23 09:20 G | 41133303.79 | 41133303.89 | 41133304.00 | 0.0279 | 0.0250 |
| Jupiter | 107908-01-04 17:30 G | 41133650.01 | 41133650.23 | 41133650.45 | 0.0531 | 0.0086 |
| Saturn | 107908-02-05 07:39 G | 41133681.59 | 41133681.82 | 41133682.06 | 0.0283 | 0.0028 |
| Saturn | 107909-02-17 16:32 G | 41134060.04 | 41134060.19 | 41134060.35 | 0.0286 | 0.0215 |
| Jupiter | 107920-01-09 19:39 G | 41138038.15 | 41138038.32 | 41138038.50 | 0.0533 | 0.0367 |
| Saturn | 107921-08-05 11:59 G | 41138611.76 | 41138612.00 | 41138612.23 | 0.0278 | 0.0054 |
| Saturn | 107922-08-18 17:44 G | 41138990.07 | 41138990.24 | 41138990.43 | 0.0275 | 0.0189 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 107923-06-06 15:06 G | 41139282.00 | 41139282.13 | 41139282.29 | 0.0088 | 0.0073 |
| Neptune | 107924-06-07 21:49 G | 41139649.24 | 41139649.41 | 41139649.60 | 0.0088 | 0.0061 |
| Neptune | 107925-06-10 11:44 G | 41140016.75 | 41140016.99 | 41140017.26 | 0.0088 | 0.0032 |
| Jupiter | 107925-07-02 07:25 G | 41140038.59 | 41140038.81 | 41140039.03 | 0.0496 | 0.0185 |
| Neptune | 107926-06-12 23:59 G | 41140384.26 | 41140384.50 | 41140384.75 | 0.0088 | 0.0019 |
| Neptune | 107927-06-15 08:51 G | 41140751.61 | 41140751.87 | 41140752.14 | 0.0088 | 0.0010 |
| Neptune | 107928-06-17 01:25 G | 41141119.32 | 41141119.56 | 41141119.81 | 0.0088 | 0.0023 |
| Neptune | 107929-06-19 05:59 G | 41141486.56 | 41141486.75 | 41141486.99 | 0.0088 | 0.0052 |
| Neptune | 107930-06-22 00:42 G | 41141854.38 | 41141854.53 | 41141854.73 | 0.0088 | 0.0064 |
| Saturn | 107937-01-29 22:03 G | 41144268.21 | 41144268.42 | 41144268.64 | 0.0282 | 0.0145 |
| Jupiter | 107937-07-07 02:23 G | 41144426.38 | 41144426.60 | 41144426.82 | 0.0495 | 0.0181 |
| Saturn | 107938-02-11 21:06 G | 41144646.16 | 41144646.38 | 41144646.61 | 0.0285 | 0.0095 |
| Uranus | 107938-06-11 19:54 G | 41144766.15 | 41144766.33 | 41144766.54 | 0.0142 | 0.0092 |
| Uranus | 107939-06-17 01:39 G | 41145136.33 | 41145136.57 | 41145136.82 | 0.0142 | 0.0035 |
| Uranus | 107940-06-20 18:42 G | 41145506.20 | 41145506.28 | 41145506.39 | 0.0142 | 0.0132 |
| Saturn | 107950-07-30 21:35 G | 41149198.20 | 41149198.40 | 41149198.63 | 0.0280 | 0.0147 |
| Saturn | 107951-08-13 05:59 G | 41149576.52 | 41149576.75 | 41149576.98 | 0.0276 | 0.0099 |
| Mars | 107961-10-04 16:18 G | 41153281.97 | 41153282.18 | 41153282.38 | 0.1635 | 0.0105 |
| Saturn | 107966-01-25 04:03 G | 41154855.56 | 41154855.67 | 41154855.79 | 0.0280 | 0.0245 |
| Saturn | 107967-02-07 01:11 G | 41155233.30 | 41155233.55 | 41155233.80 | 0.0283 | 0.0005 |
| Saturn | 107968-02-20 03:06 G | 41155611.53 | 41155611.63 | 41155611.76 | 0.0287 | 0.0254 |
| Jupiter | 107978-12-29 23:59 G | 41159577.42 | 41159577.50 | 41159577.60 | 0.0529 | 0.0484 |
| Saturn | 107979-07-25 16:32 G | 41159785.09 | 41159785.19 | 41159785.32 | 0.0282 | 0.0250 |
| Uranus | 107979-12-15 23:15 G | 41159928.23 | 41159928.47 | 41159928.73 | 0.0136 | 0.0038 |
| Saturn | 107980-08-07 00:27 G | 41160163.27 | 41160163.52 | 41160163.78 | 0.0278 | 0.0005 |
| Uranus | 107980-12-19 05:15 G | 41160297.50 | 41160297.72 | 41160297.96 | 0.0136 | 0.0044 |
| Saturn | 107981-08-19 23:01 G | 41160541.33 | 41160541.46 | 41160541.61 | 0.0274 | 0.0228 |
| Pluto | 107990-01-10 01:39 G | 41163606.32 | 41163606.57 | 41163606.82 | 0.0065 | 0.0001 |
| Jupiter | 107991-01-03 16:18 G | 41163964.96 | 41163965.18 | 41163965.40 | 0.0531 | 0.0098 |
| Saturn | 107996-02-01 13:54 G | 41165819.86 | 41165820.08 | 41165820.29 | 0.0282 | 0.0108 |

Saturn 107997-02-13 19:11 G 41166198.10 41166198.30 41166198.51 0.0286 0.0148

109TH MILLENNIUM CE

This is a list of transits of Moon in the 109th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 108003-01-08 21:49 | G | 41168353.22 | 41168353.41 | 41168353.61 | 0.0532 | 0.0273 | |
| Neptune | 108005-12-08 10:47 | G | 41169417.88 | 41169417.95 | 41169418.06 | 0.0090 | 0.0083 | |
| Neptune | 108006-12-10 16:18 | G | 41169784.97 | 41169785.18 | 41169785.38 | 0.0090 | 0.0051 | |
| Neptune | 108007-12-13 10:03 | G | 41170152.69 | 41170152.92 | 41170153.16 | 0.0090 | 0.0039 | |
| Jupiter | 108008-07-01 12:13 | G | 41170353.80 | 41170354.01 | 41170354.22 | 0.0497 | 0.0261 | |
| Neptune | 108008-12-14 17:01 | G | 41170519.96 | 41170520.21 | 41170520.46 | 0.0090 | 0.0008 | |
| Saturn | 108009-08-01 18:27 | G | 41170750.05 | 41170750.27 | 41170750.50 | 0.0279 | 0.0107 | |
| Neptune | 108009-12-17 07:25 | G | 41170887.55 | 41170887.81 | 41170888.07 | 0.0090 | 0.0004 | |
| Saturn | 108010-08-15 01:25 | G | 41171128.34 | 41171128.56 | 41171128.79 | 0.0276 | 0.0127 | |
| Neptune | 108010-12-19 18:56 | G | 41171255.08 | 41171255.29 | 41171255.53 | 0.0090 | 0.0036 | |
| Neptune | 108011-12-22 04:32 | G | 41171622.48 | 41171622.69 | 41171622.92 | 0.0090 | 0.0048 | |
| Neptune | 108012-12-23 20:23 | G | 41171990.26 | 41171990.35 | 41171990.49 | 0.0090 | 0.0080 | |
| Jupiter | 108020-07-06 02:08 | G | 41174741.36 | 41174741.59 | 41174741.81 | 0.0496 | 0.0074 | |
| Uranus | 108022-06-12 10:03 | G | 41175447.73 | 41175447.92 | 41175448.11 | 0.0142 | 0.0090 | |
| Uranus | 108023-06-17 04:47 | G | 41175817.45 | 41175817.70 | 41175817.96 | 0.0142 | 0.0037 | |
| Uranus | 108024-06-21 07:39 | G | 41176187.79 | 41176187.82 | 41176187.87 | 0.0142 | 0.0140 | |
| Saturn | 108025-01-26 11:59 | G | 41176406.83 | 41176407.00 | 41176407.18 | 0.0280 | 0.0197 | |
| Saturn | 108026-02-08 11:01 | G | 41176784.73 | 41176784.96 | 41176785.19 | 0.0284 | 0.0054 | |

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| Jupiter | 108032-07-10 11:30 G | 41179128.87 | 41179128.98 | 41179129.11 | 0.0495 | 0.0428 |
| Saturn | 108038-07-27 02:08 G | 41181336.46 | 41181336.59 | 41181336.75 | 0.0281 | 0.0223 |
| Saturn | 108039-08-09 14:37 G | 41181714.87 | 41181715.11 | 41181715.35 | 0.0277 | 0.0013 |
| Saturn | 108040-08-21 19:25 G | 41182093.19 | 41182093.31 | 41182093.45 | 0.0274 | 0.0233 |
| Saturn | 108055-02-03 03:20 G | 41187371.39 | 41187371.64 | 41187371.89 | 0.0282 | 0.0055 |
| Saturn | 108056-02-16 03:06 G | 41187749.46 | 41187749.63 | 41187749.82 | 0.0286 | 0.0193 |
| Uranus | 108063-12-16 05:15 G | 41190609.48 | 41190609.72 | 41190609.96 | 0.0136 | 0.0032 |
| Uranus | 108064-12-19 19:25 G | 41190979.07 | 41190979.31 | 41190979.55 | 0.0136 | 0.0049 |
| Saturn | 108068-08-03 05:01 G | 41192301.48 | 41192301.71 | 41192301.96 | 0.0279 | 0.0101 |
| Saturn | 108069-08-16 08:51 G | 41192679.65 | 41192679.87 | 41192680.09 | 0.0275 | 0.0131 |
| Jupiter | 108074-01-02 11:30 G | 41194279.76 | 41194279.98 | 41194280.21 | 0.0530 | 0.0181 |
| Pluto | 108078-07-11 05:01 G | 41195930.45 | 41195930.71 | 41195930.97 | 0.0079 | 0.0003 |
| Saturn | 108084-01-29 06:27 G | 41197958.58 | 41197958.77 | 41197958.97 | 0.0281 | 0.0156 |
| Saturn | 108085-02-10 07:39 G | 41198336.60 | 41198336.82 | 41198337.06 | 0.0285 | 0.0085 |
| Jupiter | 108086-01-07 13:25 G | 41198667.87 | 41198668.06 | 41198668.26 | 0.0531 | 0.0242 |
| Neptune | 108088-06-07 12:56 G | 41199549.88 | 41199550.04 | 41199550.26 | 0.0088 | 0.0060 |
| Neptune | 108089-06-09 17:44 G | 41199917.04 | 41199917.24 | 41199917.47 | 0.0088 | 0.0047 |
| Neptune | 108090-06-12 11:44 G | 41200284.74 | 41200284.99 | 41200285.26 | 0.0088 | 0.0018 |
| Neptune | 108091-06-14 18:42 G | 41200652.03 | 41200652.28 | 41200652.53 | 0.0088 | 0.0005 |
| Jupiter | 108091-07-01 15:49 G | 41200668.96 | 41200669.16 | 41200669.37 | 0.0497 | 0.0263 |
| Neptune | 108092-06-16 07:54 G | 41201019.59 | 41201019.83 | 41201020.11 | 0.0088 | 0.0024 |
| Neptune | 108093-06-18 20:23 G | 41201387.13 | 41201387.35 | 41201387.59 | 0.0088 | 0.0037 |
| Neptune | 108094-06-21 04:32 G | 41201754.54 | 41201754.69 | 41201754.89 | 0.0088 | 0.0066 |
| Neptune | 108095-06-23 21:49 G | 41202122.32 | 41202122.41 | 41202122.54 | 0.0088 | 0.0079 |
| Saturn | 108097-07-29 03:35 G | 41202888.49 | 41202888.65 | 41202888.81 | 0.0280 | 0.0214 |
| Saturn | 108098-08-11 10:32 G | 41203266.68 | 41203266.94 | 41203267.19 | 0.0277 | 0.0028 |
| Saturn | 108099-08-24 05:15 G | 41203644.66 | 41203644.72 | 41203644.80 | 0.0273 | 0.0263 |
| Jupiter | 108103-07-06 22:18 G | 41205056.20 | 41205056.43 | 41205056.66 | 0.0496 | 0.0049 |
| Uranus | 108106-06-13 15:49 G | 41206128.95 | 41206129.16 | 41206129.38 | 0.0142 | 0.0084 |
| Uranus | 108107-06-18 15:20 G | 41206498.90 | 41206499.14 | 41206499.38 | 0.0142 | 0.0036 |

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| Saturn | 108113-01-23 16:32 G | 41208545.13 | 41208545.19 | 41208545.27 | 0.0279 | 0.0266 |
| Saturn | 108114-02-05 15:06 G | 41208922.90 | 41208923.13 | 41208923.36 | 0.0283 | 0.0041 |
| Saturn | 108115-02-18 23:30 G | 41209301.32 | 41209301.48 | 41209301.65 | 0.0287 | 0.0202 |
| Jupiter | 108115-07-11 16:18 G | 41209444.01 | 41209444.18 | 41209444.35 | 0.0495 | 0.0347 |
| Saturn | 108127-08-06 22:47 G | 41213853.23 | 41213853.45 | 41213853.69 | 0.0278 | 0.0074 |
| Saturn | 108128-08-19 05:59 G | 41214231.57 | 41214231.75 | 41214231.95 | 0.0275 | 0.0170 |
| Saturn | 108143-01-31 15:06 G | 41219509.92 | 41219510.13 | 41219510.34 | 0.0281 | 0.0147 |
| Saturn | 108144-02-13 12:56 G | 41219887.82 | 41219888.04 | 41219888.28 | 0.0285 | 0.0091 |
| Uranus | 108147-12-17 19:39 G | 41221291.09 | 41221291.32 | 41221291.57 | 0.0136 | 0.0033 |
| Uranus | 108148-12-20 21:06 G | 41221660.17 | 41221660.38 | 41221660.63 | 0.0136 | 0.0058 |
| Saturn | 108156-07-31 13:39 G | 41224439.87 | 41224440.07 | 41224440.26 | 0.0280 | 0.0177 |
| Jupiter | 108157-01-02 16:32 G | 41224594.99 | 41224595.19 | 41224595.38 | 0.0530 | 0.0293 |
| Saturn | 108157-08-13 19:39 G | 41224818.09 | 41224818.32 | 41224818.56 | 0.0276 | 0.0071 |
| Mars | 108166-10-04 07:11 G | 41228156.72 | 41228156.80 | 41228156.89 | 0.1626 | 0.1438 |
| Jupiter | 108169-01-07 09:35 G | 41228982.69 | 41228982.90 | 41228983.12 | 0.0531 | 0.0155 |
| Neptune | 108169-12-08 18:27 G | 41229318.19 | 41229318.27 | 41229318.41 | 0.0090 | 0.0082 |
| Neptune | 108170-12-11 05:30 G | 41229685.59 | 41229685.73 | 41229685.91 | 0.0090 | 0.0068 |
| Neptune | 108171-12-13 16:32 G | 41230052.97 | 41230053.19 | 41230053.44 | 0.0090 | 0.0039 |
| Saturn | 108172-01-26 08:23 G | 41230096.76 | 41230096.85 | 41230096.94 | 0.0279 | 0.0257 |
| Neptune | 108172-12-15 07:25 G | 41230420.59 | 41230420.81 | 41230421.07 | 0.0090 | 0.0025 |
| Saturn | 108173-02-07 06:56 G | 41230474.54 | 41230474.79 | 41230475.03 | 0.0283 | 0.0028 |
| Mars | 108173-04-02 06:13 G | 41230528.57 | 41230528.76 | 41230528.95 | 0.1916 | 0.0919 |
| Neptune | 108173-12-17 14:08 G | 41230787.83 | 41230788.09 | 41230788.35 | 0.0090 | 0.0006 |
| Saturn | 108174-02-20 09:20 G | 41230852.74 | 41230852.89 | 41230853.06 | 0.0287 | 0.0222 |
| Jupiter | 108174-07-01 15:06 G | 41230983.97 | 41230984.13 | 41230984.30 | 0.0498 | 0.0342 |
| Neptune | 108174-12-20 08:23 G | 41231155.61 | 41231155.85 | 41231156.10 | 0.0090 | 0.0020 |
| Neptune | 108175-12-22 12:42 G | 41231522.84 | 41231523.03 | 41231523.26 | 0.0090 | 0.0050 |
| Neptune | 108176-12-24 06:27 G | 41231890.62 | 41231890.77 | 41231890.98 | 0.0090 | 0.0064 |
| Jupiter | 108186-07-06 03:35 G | 41235371.40 | 41235371.65 | 41235371.89 | 0.0497 | 0.0018 |
| Saturn | 108186-08-08 15:06 G | 41235404.88 | 41235405.13 | 41235405.39 | 0.0278 | 0.0031 |

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| Saturn | 108187-08-21 14:08 G | 41235782.93 | 41235783.09 | 41235783.25 | 0.0274 | 0.0211 |
| Uranus | 108190-06-13 21:49 G | 41236810.19 | 41236810.41 | 41236810.64 | 0.0142 | 0.0068 |
| Uranus | 108191-06-19 04:03 G | 41237180.42 | 41237180.67 | 41237180.93 | 0.0142 | 0.0031 |
| Jupiter | 108198-07-10 13:54 G | 41239758.91 | 41239759.08 | 41239759.25 | 0.0496 | 0.0333 |
| Saturn | 108202-02-02 21:49 G | 41241061.20 | 41241061.41 | 41241061.62 | 0.0282 | 0.0135 |
| Saturn | 108203-02-16 03:20 G | 41241439.44 | 41241439.64 | 41241439.87 | 0.0286 | 0.0115 |
| Saturn | 108215-08-04 03:49 G | 41245991.45 | 41245991.66 | 41245991.87 | 0.0280 | 0.0133 |
| Saturn | 108216-08-16 14:23 G | 41246369.88 | 41246370.10 | 41246370.32 | 0.0276 | 0.0113 |
| Uranus | 108230-12-14 14:37 G | 41251603.02 | 41251603.11 | 41251603.22 | 0.0136 | 0.0123 |
| Saturn | 108231-01-28 15:06 G | 41251648.02 | 41251648.13 | 41251648.27 | 0.0279 | 0.0241 |
| Uranus | 108231-12-19 02:08 G | 41251972.35 | 41251972.59 | 41251972.85 | 0.0136 | 0.0040 |
| Saturn | 108232-02-10 08:23 G | 41252025.60 | 41252025.85 | 41252026.10 | 0.0283 | 0.0001 |
| Uranus | 108232-12-22 08:23 G | 41252341.65 | 41252341.85 | 41252342.06 | 0.0136 | 0.0069 |
| Saturn | 108233-02-22 14:08 G | 41252404.00 | 41252404.09 | 41252404.20 | 0.0287 | 0.0257 |
| Pluto | 108237-01-12 11:01 G | 41253823.83 | 41253823.96 | 41253824.12 | 0.0065 | 0.0053 |
| Pluto | 108238-01-14 05:59 G | 41254190.50 | 41254190.75 | 41254191.00 | 0.0065 | 0.0018 |
| Jupiter | 108240-01-03 16:18 G | 41254910.02 | 41254910.18 | 41254910.35 | 0.0529 | 0.0345 |
| Saturn | 108244-07-28 09:35 G | 41256577.77 | 41256577.90 | 41256578.03 | 0.0282 | 0.0239 |
| Saturn | 108245-08-10 18:27 G | 41256956.02 | 41256956.27 | 41256956.52 | 0.0278 | 0.0011 |
| Mars | 108245-10-07 10:18 G | 41257013.74 | 41257013.93 | 41257014.11 | 0.1630 | 0.0370 |
| Saturn | 108246-08-23 22:32 G | 41257334.33 | 41257334.44 | 41257334.56 | 0.0274 | 0.0241 |
| Jupiter | 108252-01-08 15:35 G | 41259297.91 | 41259298.15 | 41259298.38 | 0.0530 | 0.0055 |
| Neptune | 108252-06-08 22:47 G | 41259450.33 | 41259450.45 | 41259450.62 | 0.0088 | 0.0073 |
| Neptune | 108253-06-11 03:49 G | 41259817.47 | 41259817.66 | 41259817.89 | 0.0088 | 0.0049 |
| Neptune | 108254-06-13 20:23 G | 41260185.12 | 41260185.35 | 41260185.62 | 0.0088 | 0.0032 |
| Neptune | 108255-06-16 05:30 G | 41260552.48 | 41260552.73 | 41260552.98 | 0.0088 | 0.0007 |
| Neptune | 108256-06-17 17:44 G | 41260919.97 | 41260920.24 | 41260920.51 | 0.0088 | 0.0011 |
| Neptune | 108257-06-20 06:56 G | 41261287.57 | 41261287.79 | 41261288.04 | 0.0088 | 0.0036 |
| Jupiter | 108257-07-01 14:08 G | 41261298.96 | 41261299.09 | 41261299.22 | 0.0498 | 0.0422 |
| Neptune | 108258-06-22 13:54 G | 41261654.88 | 41261655.08 | 41261655.31 | 0.0088 | 0.0052 |

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| Neptune | 108259-06-25 07:25 G | 41262022.71 | 41262022.81 | 41262022.95 | 0.0088 | 0.0077 |
| Saturn | 108261-02-04 09:35 G | 41262612.68 | 41262612.90 | 41262613.13 | 0.0282 | 0.0106 |
| Saturn | 108262-02-17 10:32 G | 41262990.74 | 41262990.94 | 41262991.16 | 0.0286 | 0.0150 |
| Jupiter | 108264-01-13 08:37 G | 41263685.79 | 41263685.86 | 41263685.95 | 0.0532 | 0.0495 |
| Jupiter | 108269-07-06 09:35 G | 41265686.67 | 41265686.90 | 41265687.13 | 0.0497 | 0.0038 |
| Uranus | 108274-06-15 12:27 G | 41267491.80 | 41267492.02 | 41267492.25 | 0.0142 | 0.0064 |
| Saturn | 108274-08-05 18:27 G | 41267543.04 | 41267543.27 | 41267543.51 | 0.0280 | 0.0096 |
| Uranus | 108275-06-20 11:01 G | 41267861.71 | 41267861.96 | 41267862.22 | 0.0142 | 0.0043 |
| Saturn | 108275-08-18 21:49 G | 41267921.20 | 41267921.41 | 41267921.64 | 0.0276 | 0.0140 |
| Jupiter | 108281-07-10 18:56 G | 41270074.10 | 41270074.29 | 41270074.48 | 0.0495 | 0.0315 |
| Saturn | 108290-01-29 15:06 G | 41273198.98 | 41273199.13 | 41273199.29 | 0.0280 | 0.0210 |
| Saturn | 108291-02-11 16:03 G | 41273576.94 | 41273577.17 | 41273577.40 | 0.0284 | 0.0039 |
| Saturn | 108303-07-31 15:20 G | 41278128.99 | 41278129.14 | 41278129.31 | 0.0281 | 0.0211 |
| Saturn | 108304-08-13 06:27 G | 41278507.53 | 41278507.77 | 41278508.01 | 0.0277 | 0.0030 |
| Saturn | 108305-08-26 10:32 G | 41278885.85 | 41278885.94 | 41278886.04 | 0.0274 | 0.0251 |
| Uranus | 108314-12-16 04:03 G | 41282284.57 | 41282284.67 | 41282284.80 | 0.0136 | 0.0120 |
| Uranus | 108315-12-20 06:13 G | 41282653.52 | 41282653.76 | 41282654.01 | 0.0136 | 0.0033 |
| Uranus | 108316-12-23 21:06 G | 41283023.17 | 41283023.38 | 41283023.61 | 0.0136 | 0.0064 |
| Saturn | 108320-02-07 06:13 G | 41284163.52 | 41284163.76 | 41284164.00 | 0.0282 | 0.0066 |
| Saturn | 108321-02-19 07:25 G | 41284541.64 | 41284541.81 | 41284542.00 | 0.0286 | 0.0189 |
| Jupiter | 108323-01-03 15:49 G | 41285224.99 | 41285225.16 | 41285225.33 | 0.0529 | 0.0364 |
| Pluto | 108326-07-16 14:51 G | 41286514.95 | 41286515.12 | 41286515.34 | 0.0079 | 0.0051 |
| Saturn | 108333-08-07 16:18 G | 41289093.95 | 41289094.18 | 41289094.43 | 0.0279 | 0.0084 |
| Saturn | 108334-08-20 22:47 G | 41289472.25 | 41289472.45 | 41289472.66 | 0.0276 | 0.0147 |
| Neptune | 108334-12-12 15:06 G | 41289586.01 | 41289586.13 | 41289586.26 | 0.0090 | 0.0076 |
| Jupiter | 108335-01-08 17:01 G | 41289612.98 | 41289613.21 | 41289613.43 | 0.0531 | 0.0011 |
| Neptune | 108335-12-15 01:11 G | 41289953.34 | 41289953.55 | 41289953.79 | 0.0090 | 0.0047 |
| Neptune | 108336-12-16 17:15 G | 41290320.99 | 41290321.22 | 41290321.46 | 0.0090 | 0.0032 |
| Neptune | 108337-12-18 23:44 G | 41290688.23 | 41290688.49 | 41290688.75 | 0.0090 | 0.0002 |
| Neptune | 108338-12-21 17:59 G | 41291056.01 | 41291056.25 | 41291056.52 | 0.0090 | 0.0013 |

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| Neptune | 108339-12-23 22:47 G | 41291423.25 | 41291423.45 | 41291423.69 | 0.0090 | 0.0042 |
| Jupiter | 108340-07-02 05:30 G | 41291614.64 | 41291614.73 | 41291614.83 | 0.0498 | 0.0452 |
| Neptune | 108340-12-25 17:01 G | 41291791.01 | 41291791.21 | 41291791.42 | 0.0090 | 0.0055 |
| Neptune | 108341-12-28 00:13 G | 41292158.44 | 41292158.51 | 41292158.59 | 0.0090 | 0.0085 |
| Jupiter | 108347-01-13 15:35 G | 41294001.00 | 41294001.15 | 41294001.31 | 0.0532 | 0.0406 |
| Saturn | 108349-01-31 23:30 G | 41294750.29 | 41294750.48 | 41294750.67 | 0.0279 | 0.0171 |
| Saturn | 108350-02-13 20:23 G | 41295128.12 | 41295128.35 | 41295128.60 | 0.0283 | 0.0074 |
| Jupiter | 108352-07-06 11:15 G | 41296001.74 | 41296001.97 | 41296002.20 | 0.0497 | 0.0112 |
| Uranus | 108358-06-17 01:39 G | 41298173.35 | 41298173.57 | 41298173.80 | 0.0142 | 0.0070 |
| Uranus | 108359-06-21 17:30 G | 41298543.00 | 41298543.23 | 41298543.47 | 0.0142 | 0.0057 |
| Saturn | 108362-08-02 00:13 G | 41299680.35 | 41299680.51 | 41299680.68 | 0.0281 | 0.0205 |
| Saturn | 108363-08-15 09:06 G | 41300058.62 | 41300058.88 | 41300059.14 | 0.0277 | 0.0032 |
| Jupiter | 108364-07-11 07:39 G | 41300389.62 | 41300389.82 | 41300390.02 | 0.0496 | 0.0263 |
| Saturn | 108364-08-27 06:13 G | 41300436.68 | 41300436.76 | 41300436.88 | 0.0274 | 0.0253 |
| Saturn | 108378-01-26 10:32 G | 41305336.90 | 41305336.94 | 41305336.98 | 0.0278 | 0.0274 |
| Saturn | 108379-02-08 07:11 G | 41305714.57 | 41305714.80 | 41305715.04 | 0.0282 | 0.0041 |
| Saturn | 108380-02-21 13:39 G | 41306092.91 | 41306093.07 | 41306093.24 | 0.0286 | 0.0205 |
| Saturn | 108392-08-08 22:32 G | 41310645.21 | 41310645.44 | 41310645.67 | 0.0279 | 0.0082 |
| Saturn | 108393-08-22 06:56 G | 41311023.60 | 41311023.79 | 41311024.01 | 0.0276 | 0.0152 |
| Uranus | 108398-12-16 11:01 G | 41312965.88 | 41312965.96 | 41312966.07 | 0.0136 | 0.0125 |
| Uranus | 108399-12-20 18:56 G | 41313335.05 | 41313335.29 | 41313335.53 | 0.0136 | 0.0019 |
| Uranus | 108400-12-24 05:01 G | 41313704.49 | 41313704.71 | 41313704.95 | 0.0136 | 0.0062 |
| Jupiter | 108406-01-03 03:35 G | 41315540.50 | 41315540.65 | 41315540.81 | 0.0529 | 0.0392 |
| Saturn | 108408-02-02 17:59 G | 41316301.05 | 41316301.25 | 41316301.47 | 0.0279 | 0.0152 |
| Saturn | 108409-02-14 13:39 G | 41316678.84 | 41316679.07 | 41316679.31 | 0.0283 | 0.0082 |
| Neptune | 108416-06-09 08:37 G | 41319350.80 | 41319350.86 | 41319350.96 | 0.0088 | 0.0083 |
| Neptune | 108417-06-11 14:37 G | 41319717.91 | 41319718.11 | 41319718.32 | 0.0088 | 0.0053 |
| Jupiter | 108418-01-07 21:35 G | 41319928.17 | 41319928.40 | 41319928.63 | 0.0531 | 0.0007 |
| Neptune | 108418-06-14 05:15 G | 41320085.50 | 41320085.72 | 41320085.97 | 0.0088 | 0.0041 |
| Neptune | 108419-06-16 15:20 G | 41320452.90 | 41320453.14 | 41320453.40 | 0.0088 | 0.0012 |

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| Neptune | 108420-06-18 01:25 G | 41320820.30 | 41320820.56 | 41320820.84 | 0.0088 | 0.0002 |
| Neptune | 108421-06-20 16:47 G | 41321187.98 | 41321188.20 | 41321188.45 | 0.0088 | 0.0031 |
| Saturn | 108421-08-02 16:32 G | 41321231.02 | 41321231.19 | 41321231.37 | 0.0281 | 0.0204 |
| Neptune | 108422-06-22 22:47 G | 41321555.24 | 41321555.45 | 41321555.70 | 0.0088 | 0.0043 |
| Saturn | 108422-08-16 03:35 G | 41321609.41 | 41321609.65 | 41321609.90 | 0.0277 | 0.0041 |
| Neptune | 108423-06-25 17:15 G | 41321923.10 | 41321923.22 | 41321923.39 | 0.0088 | 0.0073 |
| Jupiter | 108423-07-02 10:47 G | 41321929.86 | 41321929.95 | 41321930.04 | 0.0498 | 0.0455 |
| Neptune | 108424-06-26 21:49 G | 41322290.38 | 41322290.41 | 41322290.51 | 0.0088 | 0.0085 |
| Jupiter | 108430-01-13 04:03 G | 41324316.51 | 41324316.67 | 41324316.84 | 0.0531 | 0.0367 |
| Jupiter | 108435-07-07 00:42 G | 41326317.30 | 41326317.53 | 41326317.77 | 0.0497 | 0.0148 |
| Saturn | 108437-01-27 14:51 G | 41326888.05 | 41326888.12 | 41326888.21 | 0.0278 | 0.0261 |
| Saturn | 108438-02-09 08:51 G | 41327265.63 | 41327265.87 | 41327266.12 | 0.0282 | 0.0038 |
| Saturn | 108439-02-22 07:39 G | 41327643.65 | 41327643.82 | 41327644.00 | 0.0286 | 0.0200 |
| Uranus | 108442-06-17 06:56 G | 41328854.56 | 41328854.79 | 41328855.04 | 0.0142 | 0.0064 |
| Uranus | 108443-06-22 08:08 G | 41329224.62 | 41329224.84 | 41329225.08 | 0.0142 | 0.0055 |
| Jupiter | 108447-07-11 11:44 G | 41330704.78 | 41330704.99 | 41330705.20 | 0.0496 | 0.0198 |
| Mars | 108450-10-07 11:59 G | 41331888.84 | 41331889.00 | 41331889.17 | 0.1622 | 0.0649 |
| Saturn | 108451-08-10 21:35 G | 41332196.15 | 41332196.40 | 41332196.65 | 0.0279 | 0.0065 |
| Saturn | 108452-08-22 23:30 G | 41332574.29 | 41332574.48 | 41332574.68 | 0.0276 | 0.0179 |
| Saturn | 108467-02-03 16:47 G | 41337852.01 | 41337852.20 | 41337852.40 | 0.0279 | 0.0152 |
| Saturn | 108468-02-16 18:13 G | 41338230.04 | 41338230.26 | 41338230.49 | 0.0283 | 0.0081 |
| Saturn | 108480-08-03 18:13 G | 41342782.09 | 41342782.26 | 41342782.46 | 0.0281 | 0.0179 |
| Saturn | 108481-08-17 08:08 G | 41343160.60 | 41343160.84 | 41343161.08 | 0.0277 | 0.0073 |
| Uranus | 108482-12-16 17:59 G | 41343647.15 | 41343647.25 | 41343647.37 | 0.0136 | 0.0121 |
| Uranus | 108483-12-21 09:49 G | 41344016.67 | 41344016.91 | 41344017.16 | 0.0136 | 0.0018 |
| Uranus | 108484-12-24 11:01 G | 41344385.76 | 41344385.96 | 41344386.18 | 0.0136 | 0.0074 |
| Pluto | 108485-01-15 18:42 G | 41344408.05 | 41344408.28 | 41344408.52 | 0.0065 | 0.0023 |
| Pluto | 108486-01-17 04:32 G | 41344774.54 | 41344774.69 | 41344774.89 | 0.0065 | 0.0049 |
| Jupiter | 108489-01-02 09:20 G | 41345855.79 | 41345855.89 | 41345856.01 | 0.0528 | 0.0455 |
| Saturn | 108496-01-29 07:54 G | 41348438.76 | 41348438.83 | 41348438.92 | 0.0278 | 0.0262 |

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| Saturn | 108497-02-09 23:15 G | 41348816.23 | 41348816.47 | 41348816.71 | 0.0282 | 0.0038 |
| Saturn | 108498-02-23 04:03 G | 41349194.53 | 41349194.67 | 41349194.84 | 0.0286 | 0.0213 |
| Neptune | 108498-12-12 01:25 G | 41349486.46 | 41349486.56 | 41349486.71 | 0.0090 | 0.0078 |
| Neptune | 108499-12-14 10:03 G | 41349853.74 | 41349853.92 | 41349854.12 | 0.0090 | 0.0061 |
| Neptune | 108500-12-17 03:35 G | 41350221.43 | 41350221.65 | 41350221.89 | 0.0090 | 0.0034 |
| Jupiter | 108501-01-08 10:18 G | 41350243.69 | 41350243.93 | 41350244.16 | 0.0530 | 0.0026 |
| Neptune | 108501-12-19 08:51 G | 41350588.63 | 41350588.87 | 41350589.13 | 0.0090 | 0.0018 |
| Neptune | 108502-12-22 03:49 G | 41350956.40 | 41350956.66 | 41350956.92 | 0.0090 | 0.0010 |
| Neptune | 108503-12-24 08:51 G | 41351323.64 | 41351323.87 | 41351324.12 | 0.0090 | 0.0028 |
| Neptune | 108504-12-26 00:56 G | 41351691.36 | 41351691.54 | 41351691.77 | 0.0090 | 0.0055 |
| Neptune | 108505-12-28 10:18 G | 41352058.80 | 41352058.93 | 41352059.09 | 0.0090 | 0.0072 |
| Jupiter | 108506-07-02 18:13 G | 41352245.16 | 41352245.26 | 41352245.36 | 0.0499 | 0.0454 |
| Saturn | 108509-07-29 20:51 G | 41353368.36 | 41353368.37 | 41353368.41 | 0.0283 | 0.0282 |
| Saturn | 108510-08-12 12:27 G | 41353746.78 | 41353747.02 | 41353747.27 | 0.0279 | 0.0029 |
| Saturn | 108511-08-25 22:18 G | 41354125.29 | 41354125.43 | 41354125.59 | 0.0276 | 0.0214 |
| Jupiter | 108513-01-13 00:13 G | 41354631.35 | 41354631.51 | 41354631.69 | 0.0532 | 0.0350 |
| Jupiter | 108518-07-07 16:03 G | 41356632.95 | 41356633.17 | 41356633.39 | 0.0497 | 0.0132 |
| Saturn | 108526-02-05 19:25 G | 41359403.11 | 41359403.31 | 41359403.53 | 0.0279 | 0.0144 |
| Uranus | 108526-06-18 13:25 G | 41359535.83 | 41359536.06 | 41359536.31 | 0.0142 | 0.0049 |
| Saturn | 108527-02-18 13:11 G | 41359780.82 | 41359781.05 | 41359781.28 | 0.0283 | 0.0101 |
| Uranus | 108527-06-23 19:11 G | 41359906.07 | 41359906.30 | 41359906.56 | 0.0142 | 0.0051 |
| Mars | 108529-10-10 15:35 G | 41360746.05 | 41360746.15 | 41360746.25 | 0.1626 | 0.1333 |
| Jupiter | 108530-07-12 00:27 G | 41361020.29 | 41361020.52 | 41361020.75 | 0.0496 | 0.0167 |
| Mars | 108536-04-07 18:27 G | 41363117.14 | 41363117.27 | 41363117.41 | 0.1918 | 0.1477 |
| Saturn | 108539-08-06 15:06 G | 41364332.92 | 41364333.13 | 41364333.36 | 0.0281 | 0.0141 |
| Saturn | 108540-08-18 22:18 G | 41364711.19 | 41364711.43 | 41364711.67 | 0.0278 | 0.0106 |
| Saturn | 108555-01-31 05:01 G | 41369989.61 | 41369989.71 | 41369989.81 | 0.0278 | 0.0250 |
| Saturn | 108556-02-13 02:51 G | 41370367.38 | 41370367.62 | 41370367.86 | 0.0282 | 0.0012 |
| Saturn | 108557-02-25 06:13 G | 41370745.64 | 41370745.76 | 41370745.90 | 0.0286 | 0.0244 |
| Uranus | 108566-12-18 08:37 G | 41374328.71 | 41374328.86 | 41374329.02 | 0.0136 | 0.0104 |

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| Uranus | 108567-12-22 17:30 G | 41374697.97 | 41374698.23 | 41374698.49 | 0.0136 | 0.0021 |
| Saturn | 108568-07-30 20:51 G | 41374919.26 | 41374919.37 | 41374919.48 | 0.0283 | 0.0250 |
| Uranus | 108568-12-26 01:39 G | 41375067.40 | 41375067.57 | 41375067.77 | 0.0136 | 0.0088 |
| Saturn | 108569-08-13 15:35 G | 41375297.90 | 41375298.15 | 41375298.39 | 0.0279 | 0.0002 |
| Saturn | 108570-08-26 21:06 G | 41375676.25 | 41375676.38 | 41375676.53 | 0.0276 | 0.0230 |
| Pluto | 108573-07-17 20:08 G | 41376732.11 | 41376732.34 | 41376732.60 | 0.0079 | 0.0031 |
| Neptune | 108580-06-09 17:15 G | 41379251.18 | 41379251.22 | 41379251.30 | 0.0088 | 0.0085 |
| Neptune | 108581-06-11 23:44 G | 41379618.34 | 41379618.49 | 41379618.68 | 0.0088 | 0.0065 |
| Neptune | 108582-06-14 14:08 G | 41379985.87 | 41379986.09 | 41379986.34 | 0.0088 | 0.0044 |
| Neptune | 108583-06-17 01:39 G | 41380353.33 | 41380353.57 | 41380353.82 | 0.0088 | 0.0024 |
| Jupiter | 108584-01-08 13:39 G | 41380558.85 | 41380559.07 | 41380559.29 | 0.0530 | 0.0100 |
| Neptune | 108584-06-18 10:47 G | 41380720.68 | 41380720.95 | 41380721.22 | 0.0088 | 0.0002 |
| Saturn | 108585-02-06 11:59 G | 41380953.78 | 41380954.00 | 41380954.23 | 0.0279 | 0.0112 |
| Neptune | 108585-06-21 02:23 G | 41381088.35 | 41381088.60 | 41381088.85 | 0.0088 | 0.0019 |
| Saturn | 108586-02-19 10:32 G | 41381331.74 | 41381331.94 | 41381332.15 | 0.0283 | 0.0137 |
| Neptune | 108586-06-23 07:11 G | 41381455.59 | 41381455.80 | 41381456.05 | 0.0088 | 0.0041 |
| Neptune | 108587-06-26 01:39 G | 41381823.41 | 41381823.57 | 41381823.78 | 0.0088 | 0.0062 |
| Neptune | 108588-06-27 06:13 G | 41382190.70 | 41382190.76 | 41382190.88 | 0.0088 | 0.0082 |
| Jupiter | 108589-07-02 13:25 G | 41382561.02 | 41382561.06 | 41382561.11 | 0.0499 | 0.0488 |
| Jupiter | 108596-01-13 15:20 G | 41384946.95 | 41384947.14 | 41384947.32 | 0.0532 | 0.0338 |
| Saturn | 108598-08-07 06:27 G | 41385883.55 | 41385883.77 | 41385884.00 | 0.0281 | 0.0120 |
| Saturn | 108599-08-20 19:54 G | 41386262.12 | 41386262.33 | 41386262.55 | 0.0278 | 0.0118 |
| Jupiter | 108601-07-07 19:25 G | 41386948.09 | 41386948.31 | 41386948.54 | 0.0497 | 0.0141 |
| Uranus | 108610-06-20 02:51 G | 41390217.39 | 41390217.62 | 41390217.86 | 0.0142 | 0.0047 |
| Uranus | 108611-06-25 00:42 G | 41390587.30 | 41390587.53 | 41390587.78 | 0.0142 | 0.0064 |
| Jupiter | 108613-07-12 14:51 G | 41391335.90 | 41391336.12 | 41391336.34 | 0.0496 | 0.0159 |
| Saturn | 108614-02-02 09:35 G | 41391540.76 | 41391540.90 | 41391541.06 | 0.0278 | 0.0219 |
| Saturn | 108615-02-15 01:11 G | 41391918.30 | 41391918.55 | 41391918.80 | 0.0282 | 0.0024 |
| Saturn | 108616-02-27 23:44 G | 41392296.44 | 41392296.49 | 41392296.55 | 0.0286 | 0.0278 |
| Jupiter | 108625-07-16 23:01 G | 41395723.39 | 41395723.46 | 41395723.54 | 0.0495 | 0.0468 |

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| Saturn | 108627-08-02 20:08 G | 41396470.20 | 41396470.34 | 41396470.49 | 0.0283 | 0.0231 |
| Saturn | 108628-08-15 08:23 G | 41396848.59 | 41396848.85 | 41396849.11 | 0.0279 | 0.0010 |
| Saturn | 108629-08-28 11:30 G | 41397226.86 | 41397226.98 | 41397227.12 | 0.0276 | 0.0234 |
| Saturn | 108644-02-09 17:01 G | 41402504.99 | 41402505.21 | 41402505.44 | 0.0279 | 0.0077 |
| Saturn | 108645-02-21 17:44 G | 41402883.06 | 41402883.24 | 41402883.44 | 0.0283 | 0.0171 |
| Uranus | 108650-12-19 22:32 G | 41405010.29 | 41405010.44 | 41405010.62 | 0.0136 | 0.0102 |
| Uranus | 108651-12-24 01:11 G | 41405379.29 | 41405379.55 | 41405379.81 | 0.0136 | 0.0008 |
| Uranus | 108652-12-27 15:35 G | 41405748.96 | 41405749.15 | 41405749.36 | 0.0135 | 0.0082 |
| Mars | 108655-10-08 13:11 G | 41406764.00 | 41406764.05 | 41406764.09 | 0.1615 | 0.1562 |
| Saturn | 108657-08-09 11:01 G | 41407434.74 | 41407434.96 | 41407435.18 | 0.0281 | 0.0112 |
| Saturn | 108658-08-22 23:01 G | 41407813.25 | 41407813.46 | 41407813.69 | 0.0278 | 0.0125 |
| Neptune | 108662-12-13 07:54 G | 41409386.78 | 41409386.83 | 41409386.94 | 0.0090 | 0.0085 |
| Neptune | 108663-12-15 18:42 G | 41409754.15 | 41409754.28 | 41409754.46 | 0.0090 | 0.0072 |
| Neptune | 108664-12-17 10:32 G | 41410121.74 | 41410121.94 | 41410122.18 | 0.0090 | 0.0041 |
| Neptune | 108665-12-19 17:30 G | 41410489.00 | 41410489.23 | 41410489.49 | 0.0090 | 0.0028 |
| Neptune | 108666-12-22 12:27 G | 41410856.76 | 41410857.02 | 41410857.27 | 0.0090 | 0.0004 |
| Jupiter | 108667-01-08 19:39 G | 41410874.10 | 41410874.32 | 41410874.55 | 0.0530 | 0.0159 |
| Neptune | 108667-12-24 17:30 G | 41411223.98 | 41411224.23 | 41411224.48 | 0.0090 | 0.0017 |
| Neptune | 108668-12-26 11:59 G | 41411591.78 | 41411592.00 | 41411592.22 | 0.0090 | 0.0048 |
| Neptune | 108669-12-28 18:27 G | 41411959.10 | 41411959.27 | 41411959.46 | 0.0090 | 0.0061 |
| Saturn | 108673-02-03 05:59 G | 41413091.57 | 41413091.75 | 41413091.94 | 0.0278 | 0.0183 |
| Saturn | 108674-02-15 21:49 G | 41413469.18 | 41413469.41 | 41413469.65 | 0.0282 | 0.0057 |
| Jupiter | 108679-01-13 22:18 G | 41415262.24 | 41415262.43 | 41415262.61 | 0.0531 | 0.0285 |
| Jupiter | 108684-07-07 12:42 G | 41417263.81 | 41417264.03 | 41417264.26 | 0.0498 | 0.0166 |
| Saturn | 108686-08-03 12:56 G | 41418020.89 | 41418021.04 | 41418021.19 | 0.0283 | 0.0226 |
| Saturn | 108687-08-17 04:03 G | 41418399.43 | 41418399.67 | 41418399.92 | 0.0279 | 0.0016 |
| Saturn | 108688-08-29 14:08 G | 41418777.99 | 41418778.09 | 41418778.21 | 0.0276 | 0.0243 |
| Uranus | 108694-06-20 13:54 G | 41420898.86 | 41420899.08 | 41420899.33 | 0.0142 | 0.0054 |
| Uranus | 108695-06-25 06:13 G | 41421268.55 | 41421268.76 | 41421269.00 | 0.0142 | 0.0073 |
| Jupiter | 108696-07-11 19:54 G | 41421651.11 | 41421651.33 | 41421651.56 | 0.0496 | 0.0158 |

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| Saturn | 108703-02-12 00:27 G | 41424056.28 | 41424056.52 | 41424056.76 | 0.0280 | 0.0045 |
| Saturn | 108704-02-24 18:42 G | 41424434.11 | 41424434.28 | 41424434.47 | 0.0283 | 0.0193 |
| Jupiter | 108708-07-17 15:20 G | 41426039.05 | 41426039.14 | 41426039.24 | 0.0495 | 0.0452 |
| Saturn | 108716-08-11 11:30 G | 41428985.75 | 41428985.98 | 41428986.23 | 0.0281 | 0.0106 |
| Saturn | 108717-08-24 17:59 G | 41429364.03 | 41429364.25 | 41429364.48 | 0.0277 | 0.0131 |
| Pluto | 108732-01-20 14:23 G | 41434626.07 | 41434626.10 | 41434626.19 | 0.0065 | 0.0063 |
| Saturn | 108732-02-06 10:32 G | 41434642.76 | 41434642.94 | 41434643.15 | 0.0279 | 0.0156 |
| Pluto | 108733-01-21 03:49 G | 41434992.43 | 41434992.66 | 41434992.92 | 0.0065 | 0.0012 |
| Saturn | 108733-02-18 09:20 G | 41435020.67 | 41435020.89 | 41435021.12 | 0.0282 | 0.0075 |
| Mars | 108734-10-11 15:35 G | 41435620.97 | 41435621.15 | 41435621.33 | 0.1618 | 0.0395 |
| Uranus | 108734-12-21 07:11 G | 41435691.66 | 41435691.80 | 41435691.98 | 0.0136 | 0.0106 |
| Uranus | 108735-12-25 12:42 G | 41436060.79 | 41436061.03 | 41436061.28 | 0.0136 | 0.0003 |
| Uranus | 108736-12-29 01:11 G | 41436430.36 | 41436430.55 | 41436430.76 | 0.0135 | 0.0087 |
| Neptune | 108745-06-13 08:08 G | 41439518.74 | 41439518.84 | 41439518.98 | 0.0088 | 0.0077 |
| Saturn | 108745-08-05 19:54 G | 41439572.18 | 41439572.33 | 41439572.48 | 0.0283 | 0.0220 |
| Neptune | 108746-06-16 00:13 G | 41439886.31 | 41439886.51 | 41439886.75 | 0.0088 | 0.0049 |
| Saturn | 108746-08-19 12:56 G | 41439950.80 | 41439951.04 | 41439951.29 | 0.0279 | 0.0027 |
| Neptune | 108747-06-18 08:51 G | 41440253.65 | 41440253.87 | 41440254.12 | 0.0088 | 0.0035 |
| Saturn | 108747-09-01 17:15 G | 41440329.15 | 41440329.22 | 41440329.30 | 0.0276 | 0.0263 |
| Neptune | 108748-06-19 20:23 G | 41440621.08 | 41440621.35 | 41440621.62 | 0.0088 | 0.0006 |
| Neptune | 108749-06-22 10:32 G | 41440988.69 | 41440988.94 | 41440989.19 | 0.0088 | 0.0008 |
| Jupiter | 108750-01-09 00:27 G | 41441189.32 | 41441189.52 | 41441189.73 | 0.0529 | 0.0252 |
| Neptune | 108750-06-24 17:01 G | 41441355.98 | 41441356.21 | 41441356.47 | 0.0088 | 0.0036 |
| Neptune | 108751-06-27 11:01 G | 41441723.75 | 41441723.96 | 41441724.18 | 0.0088 | 0.0049 |
| Neptune | 108752-06-28 15:06 G | 41442091.04 | 41442091.13 | 41442091.27 | 0.0088 | 0.0078 |
| Saturn | 108761-01-31 12:56 G | 41445229.94 | 41445230.04 | 41445230.16 | 0.0277 | 0.0250 |
| Jupiter | 108762-01-13 15:35 G | 41445576.94 | 41445577.15 | 41445577.37 | 0.0531 | 0.0167 |
| Saturn | 108762-02-13 00:27 G | 41445607.27 | 41445607.52 | 41445607.76 | 0.0280 | 0.0032 |
| Saturn | 108763-02-26 00:56 G | 41445985.38 | 41445985.54 | 41445985.71 | 0.0284 | 0.0202 |
| Jupiter | 108767-07-08 15:49 G | 41447578.96 | 41447579.16 | 41447579.36 | 0.0498 | 0.0236 |

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| Saturn | 108775-08-13 11:44 G | 41450536.76 | 41450536.99 | 41450537.23 | 0.0281 | 0.0085 |
| Saturn | 108776-08-26 00:42 G | 41450915.35 | 41450915.53 | 41450915.74 | 0.0277 | 0.0165 |
| Uranus | 108778-06-21 21:06 G | 41451580.13 | 41451580.38 | 41451580.64 | 0.0142 | 0.0041 |
| Uranus | 108779-06-26 21:06 G | 41451950.17 | 41451950.38 | 41451950.60 | 0.0142 | 0.0070 |
| Jupiter | 108779-07-13 07:11 G | 41451966.56 | 41451966.80 | 41451967.03 | 0.0497 | 0.0130 |
| Saturn | 108791-02-07 23:01 G | 41456194.25 | 41456194.46 | 41456194.67 | 0.0279 | 0.0145 |
| Jupiter | 108791-07-17 14:23 G | 41456354.01 | 41456354.10 | 41456354.20 | 0.0496 | 0.0452 |
| Saturn | 108792-02-20 14:23 G | 41456571.87 | 41456572.10 | 41456572.35 | 0.0283 | 0.0082 |
| Saturn | 108804-08-07 02:08 G | 41461123.41 | 41461123.59 | 41461123.79 | 0.0282 | 0.0186 |
| Saturn | 108805-08-20 12:27 G | 41461501.77 | 41461502.02 | 41461502.27 | 0.0279 | 0.0067 |
| Uranus | 108818-12-21 12:13 G | 41466372.85 | 41466373.01 | 41466373.21 | 0.0136 | 0.0097 |
| Uranus | 108819-12-26 04:32 G | 41466742.44 | 41466742.69 | 41466742.94 | 0.0136 | 0.0002 |
| Saturn | 108820-02-02 20:37 G | 41466781.25 | 41466781.36 | 41466781.48 | 0.0277 | 0.0242 |
| Mars | 108820-04-08 19:25 G | 41466847.10 | 41466847.31 | 41466847.52 | 0.1927 | 0.0221 |
| Uranus | 108820-12-29 05:44 G | 41467111.59 | 41467111.74 | 41467111.93 | 0.0135 | 0.0100 |
| Saturn | 108821-02-14 16:47 G | 41467158.96 | 41467159.20 | 41467159.43 | 0.0281 | 0.0021 |
| Pluto | 108821-07-22 14:37 G | 41467316.93 | 41467317.11 | 41467317.34 | 0.0079 | 0.0050 |
| Saturn | 108822-02-27 17:01 G | 41467537.07 | 41467537.21 | 41467537.38 | 0.0284 | 0.0220 |
| Neptune | 108827-12-16 02:08 G | 41469654.48 | 41469654.59 | 41469654.75 | 0.0090 | 0.0076 |
| Neptune | 108828-12-17 19:54 G | 41470022.14 | 41470022.33 | 41470022.55 | 0.0090 | 0.0053 |
| Neptune | 108829-12-20 00:56 G | 41470389.32 | 41470389.54 | 41470389.79 | 0.0090 | 0.0032 |
| Neptune | 108830-12-22 20:08 G | 41470757.08 | 41470757.34 | 41470757.60 | 0.0090 | 0.0008 |
| Neptune | 108831-12-25 01:54 G | 41471124.33 | 41471124.58 | 41471124.83 | 0.0090 | 0.0012 |
| Neptune | 108832-12-26 17:44 G | 41471492.02 | 41471492.24 | 41471492.50 | 0.0090 | 0.0036 |
| Jupiter | 108833-01-08 00:42 G | 41471504.34 | 41471504.53 | 41471504.72 | 0.0529 | 0.0268 |
| Neptune | 108833-12-29 03:20 G | 41471859.47 | 41471859.64 | 41471859.86 | 0.0090 | 0.0057 |
| Saturn | 108834-08-15 03:35 G | 41472088.41 | 41472088.65 | 41472088.90 | 0.0280 | 0.0038 |
| Neptune | 108834-12-31 15:06 G | 41472227.04 | 41472227.13 | 41472227.27 | 0.0090 | 0.0080 |
| Saturn | 108835-08-28 10:18 G | 41472466.77 | 41472466.93 | 41472467.11 | 0.0277 | 0.0206 |
| Jupiter | 108845-01-13 02:08 G | 41475892.36 | 41475892.59 | 41475892.83 | 0.0530 | 0.0103 |

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| Saturn | 108850-02-09 02:08 G | 41477745.39 | 41477745.59 | 41477745.82 | 0.0279 | 0.0133 |
| Jupiter | 108850-07-07 15:35 G | 41477893.97 | 41477894.15 | 41477894.34 | 0.0499 | 0.0315 |
| Saturn | 108851-02-22 00:27 G | 41478123.30 | 41478123.52 | 41478123.73 | 0.0283 | 0.0109 |
| Jupiter | 108857-01-17 20:37 G | 41480280.30 | 41480280.36 | 41480280.42 | 0.0532 | 0.0511 |
| Uranus | 108862-06-22 04:47 G | 41482261.46 | 41482261.70 | 41482261.96 | 0.0142 | 0.0029 |
| Jupiter | 108862-07-12 11:59 G | 41482281.77 | 41482282.00 | 41482282.23 | 0.0497 | 0.0043 |
| Uranus | 108863-06-27 10:47 G | 41482631.73 | 41482631.95 | 41482632.19 | 0.0142 | 0.0070 |
| Saturn | 108863-08-09 07:54 G | 41482674.62 | 41482674.83 | 41482675.05 | 0.0282 | 0.0138 |
| Saturn | 108864-08-21 23:59 G | 41483053.29 | 41483053.50 | 41483053.73 | 0.0278 | 0.0111 |
| Jupiter | 108874-07-16 19:39 G | 41486669.19 | 41486669.32 | 41486669.46 | 0.0496 | 0.0407 |
| Saturn | 108879-02-04 12:56 G | 41488332.90 | 41488333.04 | 41488333.19 | 0.0278 | 0.0225 |
| Saturn | 108880-02-17 02:23 G | 41488710.35 | 41488710.60 | 41488710.85 | 0.0281 | 0.0014 |
| Saturn | 108881-02-28 23:44 G | 41489088.42 | 41489088.49 | 41489088.59 | 0.0285 | 0.0267 |
| Saturn | 108892-08-02 21:35 G | 41493261.28 | 41493261.40 | 41493261.53 | 0.0284 | 0.0246 |
| Saturn | 108893-08-16 10:03 G | 41493639.66 | 41493639.92 | 41493640.18 | 0.0280 | 0.0003 |
| Saturn | 108894-08-29 16:32 G | 41494018.07 | 41494018.19 | 41494018.32 | 0.0276 | 0.0233 |
| Uranus | 108902-12-23 03:20 G | 41497054.46 | 41497054.64 | 41497054.84 | 0.0136 | 0.0083 |
| Uranus | 108903-12-27 11:44 G | 41497423.73 | 41497423.99 | 41497424.26 | 0.0136 | 0.0002 |
| Uranus | 108904-12-30 21:06 G | 41497793.23 | 41497793.38 | 41497793.52 | 0.0135 | 0.0108 |
| Saturn | 108909-02-11 20:37 G | 41499297.15 | 41499297.36 | 41499297.59 | 0.0280 | 0.0091 |
| Neptune | 108909-06-13 18:42 G | 41499419.20 | 41499419.28 | 41499419.37 | 0.0088 | 0.0082 |
| Saturn | 108910-02-24 19:11 G | 41499675.11 | 41499675.30 | 41499675.51 | 0.0283 | 0.0158 |
| Neptune | 108910-06-16 06:13 G | 41499786.57 | 41499786.76 | 41499786.97 | 0.0088 | 0.0058 |
| Neptune | 108911-06-18 20:08 G | 41500154.13 | 41500154.34 | 41500154.58 | 0.0088 | 0.0040 |
| Neptune | 108912-06-20 02:37 G | 41500521.36 | 41500521.61 | 41500521.88 | 0.0088 | 0.0017 |
| Neptune | 108913-06-22 20:37 G | 41500889.10 | 41500889.36 | 41500889.61 | 0.0088 | 0.0002 |
| Neptune | 108914-06-25 00:27 G | 41501256.29 | 41501256.52 | 41501256.78 | 0.0088 | 0.0026 |
| Neptune | 108915-06-27 18:27 G | 41501624.06 | 41501624.27 | 41501624.52 | 0.0088 | 0.0044 |
| Jupiter | 108916-01-08 22:18 G | 41501819.25 | 41501819.43 | 41501819.63 | 0.0528 | 0.0298 |
| Neptune | 108916-06-28 23:59 G | 41501991.37 | 41501991.50 | 41501991.68 | 0.0088 | 0.0069 |

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| Neptune | 108917-07-01 15:06 G | 41502359.10 | 41502359.13 | 41502359.20 | 0.0088 | 0.0086 |
| Saturn | 108922-08-12 04:18 G | 41504226.45 | 41504226.68 | 41504226.91 | 0.0281 | 0.0105 |
| Saturn | 108923-08-25 14:08 G | 41504604.88 | 41504605.09 | 41504605.33 | 0.0278 | 0.0132 |
| Jupiter | 108928-01-13 22:18 G | 41506207.21 | 41506207.43 | 41506207.66 | 0.0529 | 0.0063 |
| Jupiter | 108933-07-08 00:27 G | 41508209.34 | 41508209.52 | 41508209.70 | 0.0499 | 0.0331 |
| Saturn | 108938-02-06 18:27 G | 41509884.09 | 41509884.27 | 41509884.46 | 0.0278 | 0.0181 |
| Saturn | 108939-02-19 13:54 G | 41510261.85 | 41510262.08 | 41510262.31 | 0.0282 | 0.0064 |
| Mars | 108939-10-11 22:18 G | 41510496.27 | 41510496.43 | 41510496.59 | 0.1611 | 0.0674 |
| Jupiter | 108940-01-18 13:54 G | 41510594.94 | 41510595.08 | 41510595.23 | 0.0531 | 0.0418 |
| Jupiter | 108945-07-12 07:11 G | 41512596.56 | 41512596.80 | 41512597.03 | 0.0498 | 0.0031 |
| Uranus | 108946-06-23 22:47 G | 41512943.20 | 41512943.45 | 41512943.70 | 0.0142 | 0.0024 |
| Uranus | 108947-06-28 17:15 G | 41513313.02 | 41513313.22 | 41513313.45 | 0.0143 | 0.0085 |
| Saturn | 108951-08-06 08:51 G | 41514812.74 | 41514812.87 | 41514813.04 | 0.0283 | 0.0222 |
| Saturn | 108952-08-19 03:20 G | 41515191.40 | 41515191.64 | 41515191.88 | 0.0279 | 0.0019 |
| Saturn | 108953-09-01 12:56 G | 41515569.94 | 41515570.04 | 41515570.17 | 0.0276 | 0.0243 |
| Jupiter | 108957-07-17 02:51 G | 41516984.44 | 41516984.62 | 41516984.81 | 0.0496 | 0.0312 |
| Saturn | 108968-02-14 07:39 G | 41520848.57 | 41520848.82 | 41520849.07 | 0.0280 | 0.0042 |
| Saturn | 108969-02-26 02:08 G | 41521226.43 | 41521226.59 | 41521226.77 | 0.0284 | 0.0203 |
| Pluto | 108980-01-23 22:47 G | 41525210.21 | 41525210.45 | 41525210.71 | 0.0065 | 0.0014 |
| Pluto | 108981-01-24 15:35 G | 41525577.10 | 41525577.15 | 41525577.26 | 0.0065 | 0.0063 |
| Saturn | 108981-08-13 13:39 G | 41525777.83 | 41525778.07 | 41525778.32 | 0.0281 | 0.0093 |
| Saturn | 108982-08-26 23:01 G | 41526156.25 | 41526156.46 | 41526156.67 | 0.0277 | 0.0142 |
| Uranus | 108986-12-23 18:42 G | 41527736.08 | 41527736.28 | 41527736.50 | 0.0136 | 0.0078 |
| Uranus | 108987-12-27 21:20 G | 41528105.14 | 41528105.39 | 41528105.64 | 0.0136 | 0.0011 |
| Uranus | 108988-12-31 11:44 G | 41528474.85 | 41528474.99 | 41528475.17 | 0.0135 | 0.0106 |
| Neptune | 108991-12-16 08:08 G | 41529554.75 | 41529554.84 | 41529554.98 | 0.0090 | 0.0080 |
| Neptune | 108992-12-18 03:20 G | 41529922.48 | 41529922.64 | 41529922.82 | 0.0090 | 0.0067 |
| Neptune | 108993-12-20 09:20 G | 41530289.66 | 41530289.89 | 41530290.12 | 0.0090 | 0.0036 |
| Neptune | 108994-12-23 02:08 G | 41530657.34 | 41530657.59 | 41530657.84 | 0.0090 | 0.0023 |
| Neptune | 108995-12-25 11:44 G | 41531024.75 | 41531024.99 | 41531025.24 | 0.0090 | 0.0008 |

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| Neptune | 108996-12-26 23:15 | G | 41531392.22 | 41531392.47 | 41531392.74 | 0.0090 | 0.0022 |
| Saturn | 108997-02-08 12:13 | G | 41531435.81 | 41531436.01 | 41531436.21 | 0.0279 | 0.0138 |
| Neptune | 108997-12-29 13:54 | G | 41531759.88 | 41531760.08 | 41531760.28 | 0.0090 | 0.0053 |
| Saturn | 108998-02-21 09:20 | G | 41531813.67 | 41531813.89 | 41531814.13 | 0.0282 | 0.0103 |
| Neptune | 108998-12-31 20:23 | G | 41532127.19 | 41532127.35 | 41532127.54 | 0.0090 | 0.0066 |
| Jupiter | 108999-01-07 22:32 | G | 41532134.29 | 41532134.44 | 41532134.59 | 0.0527 | 0.0412 |

110TH MILLENNIUM CE

This is a list of transits of Moon in the 110th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 109010-08-09 09:20 | G | 41536364.74 | 41536364.89 | 41536365.07 | 0.0283 | 0.0210 | |
| Jupiter | 109011-01-13 15:20 | G | 41536521.92 | 41536522.14 | 41536522.37 | 0.0529 | 0.0014 | |
| Saturn | 109011-08-22 22:32 | G | 41536743.18 | 41536743.44 | 41536743.69 | 0.0279 | 0.0034 | |
| Saturn | 109012-09-03 22:47 | G | 41537121.39 | 41537121.45 | 41537121.52 | 0.0276 | 0.0266 | |
| Jupiter | 109016-07-08 00:56 | G | 41538524.38 | 41538524.54 | 41538524.70 | 0.0499 | 0.0358 | |
| Mars | 109018-10-15 02:51 | G | 41539353.50 | 41539353.62 | 41539353.74 | 0.1614 | 0.1175 | |
| Jupiter | 109023-01-18 21:49 | G | 41540910.27 | 41540910.41 | 41540910.57 | 0.0531 | 0.0408 | |
| Saturn | 109026-02-04 01:25 | G | 41542022.44 | 41542022.56 | 41542022.69 | 0.0277 | 0.0238 | |
| Saturn | 109027-02-16 17:44 | G | 41542400.00 | 41542400.24 | 41542400.48 | 0.0281 | 0.0013 | |
| Saturn | 109028-02-29 20:51 | G | 41542778.23 | 41542778.37 | 41542778.53 | 0.0284 | 0.0221 | |
| Jupiter | 109028-07-12 09:06 | G | 41542911.64 | 41542911.88 | 41542912.13 | 0.0498 | 0.0045 | |
| Uranus | 109029-06-20 05:15 | G | 41543254.67 | 41543254.72 | 41543254.82 | 0.0142 | 0.0137 | |
| Uranus | 109030-06-25 07:11 | G | 41543624.55 | 41543624.80 | 41543625.07 | 0.0142 | 0.0030 | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 109031-06-30 02:51 G | 41543994.45 | 41543994.62 | 41543994.81 | 0.0143 | 0.0098 |
| Jupiter | 109040-07-16 23:15 G | 41547299.28 | 41547299.47 | 41547299.67 | 0.0497 | 0.0249 |
| Saturn | 109040-08-16 06:56 G | 41547329.56 | 41547329.79 | 41547330.02 | 0.0280 | 0.0074 |
| Saturn | 109041-08-29 19:54 G | 41547708.14 | 41547708.33 | 41547708.53 | 0.0277 | 0.0169 |
| Saturn | 109056-02-11 23:01 G | 41552987.24 | 41552987.46 | 41552987.70 | 0.0279 | 0.0114 |
| Saturn | 109057-02-23 15:06 G | 41553364.91 | 41553365.13 | 41553365.36 | 0.0283 | 0.0116 |
| Pluto | 109068-07-25 14:51 G | 41557534.85 | 41557535.12 | 41557535.39 | 0.0079 | 0.0009 |
| Saturn | 109069-08-10 22:03 G | 41557916.24 | 41557916.42 | 41557916.63 | 0.0282 | 0.0183 |
| Saturn | 109070-08-24 08:23 G | 41558294.61 | 41558294.85 | 41558295.09 | 0.0279 | 0.0064 |
| Uranus | 109070-12-25 02:51 G | 41558417.42 | 41558417.62 | 41558417.84 | 0.0136 | 0.0081 |
| Uranus | 109071-12-29 13:54 G | 41558786.85 | 41558787.08 | 41558787.32 | 0.0136 | 0.0028 |
| Uranus | 109073-01-01 20:23 G | 41559156.20 | 41559156.35 | 41559156.51 | 0.0135 | 0.0108 |
| Neptune | 109073-06-14 03:35 G | 41559319.61 | 41559319.65 | 41559319.73 | 0.0088 | 0.0085 |
| Neptune | 109074-06-16 12:42 G | 41559686.89 | 41559687.03 | 41559687.19 | 0.0088 | 0.0072 |
| Neptune | 109075-06-19 04:32 G | 41560054.48 | 41560054.69 | 41560054.92 | 0.0088 | 0.0043 |
| Neptune | 109076-06-20 09:49 G | 41560421.68 | 41560421.91 | 41560422.17 | 0.0088 | 0.0031 |
| Neptune | 109077-06-23 04:32 G | 41560789.43 | 41560789.69 | 41560789.96 | 0.0088 | 0.0002 |
| Neptune | 109078-06-25 09:06 G | 41561156.63 | 41561156.88 | 41561157.14 | 0.0088 | 0.0012 |
| Neptune | 109079-06-28 02:23 G | 41561524.38 | 41561524.60 | 41561524.85 | 0.0088 | 0.0042 |
| Neptune | 109080-06-29 09:20 G | 41561891.71 | 41561891.89 | 41561892.11 | 0.0088 | 0.0055 |
| Neptune | 109081-07-01 23:01 G | 41562259.39 | 41562259.46 | 41562259.56 | 0.0088 | 0.0083 |
| Jupiter | 109082-01-07 22:32 G | 41562449.38 | 41562449.44 | 41562449.51 | 0.0527 | 0.0500 |
| Saturn | 109085-02-05 14:23 G | 41563573.96 | 41563574.10 | 41563574.24 | 0.0277 | 0.0218 |
| Saturn | 109086-02-18 10:32 G | 41563951.71 | 41563951.94 | 41563952.18 | 0.0281 | 0.0007 |
| Saturn | 109087-03-03 10:32 G | 41564329.81 | 41564329.94 | 41564330.08 | 0.0285 | 0.0239 |
| Jupiter | 109094-01-12 21:06 G | 41566837.15 | 41566837.38 | 41566837.62 | 0.0529 | 0.0065 |
| Jupiter | 109099-07-07 18:56 G | 41568839.18 | 41568839.29 | 41568839.42 | 0.0500 | 0.0430 |
| Saturn | 109099-08-19 01:54 G | 41568881.33 | 41568881.58 | 41568881.82 | 0.0280 | 0.0042 |
| Saturn | 109100-09-01 08:08 G | 41569259.67 | 41569259.84 | 41569260.01 | 0.0276 | 0.0203 |
| Mars | 109104-04-10 20:37 G | 41570577.21 | 41570577.36 | 41570577.52 | 0.1935 | 0.1057 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 109106-01-18 13:11 G | 41571224.88 | 41571225.05 | 41571225.22 | 0.0530 | 0.0346 |
| Jupiter | 109111-07-13 14:08 G | 41573226.86 | 41573227.09 | 41573227.31 | 0.0499 | 0.0083 |
| Uranus | 109113-06-21 19:11 G | 41573936.21 | 41573936.30 | 41573936.44 | 0.0142 | 0.0126 |
| Uranus | 109114-06-26 14:37 G | 41574305.85 | 41574306.11 | 41574306.37 | 0.0142 | 0.0019 |
| Saturn | 109115-02-14 03:20 G | 41574538.42 | 41574538.64 | 41574538.88 | 0.0280 | 0.0101 |
| Uranus | 109115-07-01 17:01 G | 41574676.04 | 41574676.21 | 41574676.41 | 0.0143 | 0.0093 |
| Saturn | 109116-02-27 02:08 G | 41574916.38 | 41574916.59 | 41574916.80 | 0.0283 | 0.0132 |
| Jupiter | 109123-07-17 23:15 G | 41577614.25 | 41577614.47 | 41577614.69 | 0.0497 | 0.0213 |
| Saturn | 109128-08-13 10:03 G | 41579467.72 | 41579467.92 | 41579468.13 | 0.0282 | 0.0149 |
| Saturn | 109129-08-27 01:11 G | 41579846.33 | 41579846.55 | 41579846.77 | 0.0278 | 0.0102 |
| Saturn | 109144-02-09 02:08 G | 41585125.44 | 41585125.59 | 41585125.77 | 0.0277 | 0.0203 |
| Mars | 109144-10-11 23:59 G | 41585371.45 | 41585371.50 | 41585371.55 | 0.1605 | 0.1540 |
| Saturn | 109145-02-20 16:32 G | 41585502.94 | 41585503.19 | 41585503.44 | 0.0281 | 0.0019 |
| Saturn | 109146-03-05 13:39 G | 41585880.97 | 41585881.07 | 41585881.18 | 0.0285 | 0.0256 |
| Uranus | 109154-12-26 14:23 G | 41589098.88 | 41589099.10 | 41589099.33 | 0.0136 | 0.0065 |
| Uranus | 109155-12-31 05:30 G | 41589468.49 | 41589468.73 | 41589468.98 | 0.0136 | 0.0024 |
| Neptune | 109156-12-19 09:49 G | 41589822.79 | 41589822.91 | 41589823.06 | 0.0090 | 0.0076 |
| Uranus | 109157-01-03 06:27 G | 41589837.72 | 41589837.77 | 41589837.87 | 0.0135 | 0.0130 |
| Saturn | 109157-08-07 19:39 G | 41590054.23 | 41590054.32 | 41590054.42 | 0.0284 | 0.0261 |
| Neptune | 109157-12-21 14:51 G | 41590189.92 | 41590190.12 | 41590190.35 | 0.0090 | 0.0047 |
| Saturn | 109158-08-21 08:51 G | 41590432.62 | 41590432.87 | 41590433.13 | 0.0280 | 0.0007 |
| Neptune | 109158-12-24 09:35 G | 41590557.68 | 41590557.90 | 41590558.16 | 0.0090 | 0.0032 |
| Saturn | 109159-09-03 13:54 G | 41590810.97 | 41590811.08 | 41590811.22 | 0.0276 | 0.0241 |
| Neptune | 109159-12-26 15:49 G | 41590924.91 | 41590925.16 | 41590925.41 | 0.0090 | 0.0002 |
| Neptune | 109160-12-28 07:39 G | 41591292.57 | 41591292.82 | 41591293.09 | 0.0090 | 0.0014 |
| Neptune | 109161-12-30 17:15 G | 41591660.02 | 41591660.22 | 41591660.46 | 0.0090 | 0.0043 |
| Neptune | 109163-01-02 05:15 G | 41592027.53 | 41592027.72 | 41592027.94 | 0.0090 | 0.0057 |
| Neptune | 109164-01-04 19:39 G | 41592395.28 | 41592395.32 | 41592395.40 | 0.0090 | 0.0087 |
| Saturn | 109174-02-15 13:25 G | 41596089.84 | 41596090.06 | 41596090.28 | 0.0280 | 0.0086 |
| Saturn | 109175-02-28 14:23 G | 41596467.91 | 41596468.10 | 41596468.31 | 0.0284 | 0.0149 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 109177-01-12 18:42 G | 41597152.07 | 41597152.28 | 41597152.49 | 0.0528 | 0.0155 |
| Jupiter | 109182-07-08 05:15 G | 41599154.67 | 41599154.72 | 41599154.78 | 0.0500 | 0.0485 |
| Saturn | 109187-08-16 03:06 G | 41601019.41 | 41601019.63 | 41601019.85 | 0.0282 | 0.0112 |
| Saturn | 109188-08-28 16:32 G | 41601397.98 | 41601398.19 | 41601398.41 | 0.0278 | 0.0138 |
| Jupiter | 109189-01-17 15:35 G | 41601539.95 | 41601540.15 | 41601540.36 | 0.0530 | 0.0273 |
| Jupiter | 109194-07-12 13:54 G | 41603541.84 | 41603542.08 | 41603542.31 | 0.0499 | 0.0118 |
| Uranus | 109197-06-22 05:44 G | 41604617.66 | 41604617.74 | 41604617.82 | 0.0142 | 0.0135 |
| Uranus | 109198-06-26 21:20 G | 41604987.14 | 41604987.39 | 41604987.65 | 0.0143 | 0.0007 |
| Uranus | 109199-07-02 03:20 G | 41605357.48 | 41605357.64 | 41605357.85 | 0.0143 | 0.0097 |
| Saturn | 109203-02-10 03:20 G | 41606676.46 | 41606676.64 | 41606676.82 | 0.0278 | 0.0192 |
| Saturn | 109204-02-22 18:13 G | 41607054.03 | 41607054.26 | 41607054.50 | 0.0281 | 0.0036 |
| Saturn | 109205-03-06 22:47 G | 41607432.44 | 41607432.45 | 41607432.47 | 0.0285 | 0.0284 |
| Jupiter | 109206-07-17 08:37 G | 41607929.65 | 41607929.86 | 41607930.08 | 0.0497 | 0.0197 |
| Saturn | 109216-08-08 22:03 G | 41611605.26 | 41611605.42 | 41611605.58 | 0.0283 | 0.0217 |
| Saturn | 109217-08-22 16:03 G | 41611983.93 | 41611984.17 | 41611984.41 | 0.0280 | 0.0038 |
| Jupiter | 109218-07-21 14:51 G | 41612317.10 | 41612317.12 | 41612317.17 | 0.0496 | 0.0490 |
| Saturn | 109218-09-05 03:20 G | 41612362.63 | 41612362.64 | 41612362.65 | 0.0276 | 0.0275 |
| Mars | 109223-10-15 01:54 G | 41614228.40 | 41614228.58 | 41614228.76 | 0.1608 | 0.0193 |
| Pluto | 109227-01-27 07:10 G | 41615428.62 | 41615428.80 | 41615429.04 | 0.0065 | 0.0038 |
| Pluto | 109228-01-28 14:08 G | 41615794.94 | 41615795.09 | 41615795.28 | 0.0065 | 0.0047 |
| Saturn | 109233-02-16 18:42 G | 41617641.04 | 41617641.28 | 41617641.52 | 0.0280 | 0.0069 |
| Saturn | 109234-03-01 12:13 G | 41618018.83 | 41618019.01 | 41618019.21 | 0.0284 | 0.0180 |
| Neptune | 109238-06-16 21:06 G | 41619587.31 | 41619587.38 | 41619587.52 | 0.0088 | 0.0081 |
| Uranus | 109238-12-27 05:15 G | 41619780.51 | 41619780.72 | 41619780.95 | 0.0136 | 0.0053 |
| Neptune | 109239-06-19 11:01 G | 41619954.78 | 41619954.96 | 41619955.19 | 0.0088 | 0.0052 |
| Uranus | 109239-12-31 15:06 G | 41620149.89 | 41620150.13 | 41620150.40 | 0.0136 | 0.0030 |
| Neptune | 109240-06-20 17:58 G | 41620322.02 | 41620322.25 | 41620322.50 | 0.0088 | 0.0038 |
| Uranus | 109241-01-03 21:49 G | 41620519.38 | 41620519.41 | 41620519.45 | 0.0135 | 0.0134 |
| Neptune | 109241-06-23 11:44 G | 41620689.74 | 41620689.99 | 41620690.25 | 0.0088 | 0.0009 |
| Neptune | 109242-06-25 16:03 G | 41621056.92 | 41621057.17 | 41621057.43 | 0.0088 | 0.0004 |

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| Neptune | 109243-06-28 10:03 G | 41621424.69 | 41621424.92 | 41621425.18 | 0.0088 | 0.0034 |
| Neptune | 109244-06-29 16:03 G | 41621791.96 | 41621792.17 | 41621792.39 | 0.0088 | 0.0046 |
| Neptune | 109245-07-02 06:27 G | 41622159.66 | 41622159.77 | 41622159.93 | 0.0088 | 0.0076 |
| Saturn | 109246-08-17 07:25 G | 41622570.56 | 41622570.81 | 41622571.06 | 0.0281 | 0.0068 |
| Saturn | 109247-08-30 16:03 G | 41622948.98 | 41622949.17 | 41622949.37 | 0.0278 | 0.0173 |
| Jupiter | 109260-01-12 17:58 G | 41627467.05 | 41627467.25 | 41627467.47 | 0.0528 | 0.0232 |
| Saturn | 109262-02-11 08:37 G | 41628227.68 | 41628227.86 | 41628228.05 | 0.0278 | 0.0167 |
| Saturn | 109263-02-24 04:32 G | 41628605.46 | 41628605.69 | 41628605.92 | 0.0281 | 0.0077 |
| Jupiter | 109272-01-18 02:22 G | 41631855.38 | 41631855.60 | 41631855.81 | 0.0530 | 0.0177 |
| Saturn | 109275-08-11 10:18 G | 41633156.75 | 41633156.93 | 41633157.12 | 0.0283 | 0.0188 |
| Saturn | 109276-08-24 02:22 G | 41633535.35 | 41633535.60 | 41633535.85 | 0.0280 | 0.0057 |
| Jupiter | 109277-07-11 23:58 G | 41633857.27 | 41633857.50 | 41633857.72 | 0.0499 | 0.0205 |
| Uranus | 109281-06-22 09:49 G | 41635298.81 | 41635298.91 | 41635299.05 | 0.0142 | 0.0127 |
| Uranus | 109282-06-27 14:51 G | 41635668.87 | 41635669.12 | 41635669.38 | 0.0142 | 0.0006 |
| Uranus | 109283-07-02 09:06 G | 41636038.72 | 41636038.88 | 41636039.06 | 0.0143 | 0.0108 |
| Jupiter | 109289-07-16 09:49 G | 41638244.69 | 41638244.91 | 41638245.12 | 0.0498 | 0.0160 |
| Saturn | 109291-02-06 00:56 G | 41638814.48 | 41638814.54 | 41638814.63 | 0.0277 | 0.0262 |
| Saturn | 109292-02-18 15:20 G | 41639191.91 | 41639192.14 | 41639192.38 | 0.0280 | 0.0024 |
| Saturn | 109293-03-02 17:01 G | 41639570.08 | 41639570.21 | 41639570.37 | 0.0284 | 0.0223 |
| Saturn | 109305-08-19 11:01 G | 41644121.73 | 41644121.96 | 41644122.20 | 0.0281 | 0.0063 |
| Saturn | 109306-09-02 01:54 G | 41644500.38 | 41644500.58 | 41644500.77 | 0.0278 | 0.0171 |
| Pluto | 109315-07-29 16:46 G | 41647752.97 | 41647753.20 | 41647753.46 | 0.0079 | 0.0022 |
| Neptune | 109320-12-19 14:51 G | 41649723.01 | 41649723.12 | 41649723.27 | 0.0090 | 0.0077 |
| Saturn | 109321-02-13 08:37 G | 41649778.64 | 41649778.86 | 41649779.09 | 0.0277 | 0.0125 |
| Neptune | 109321-12-21 23:15 G | 41650090.31 | 41650090.47 | 41650090.65 | 0.0090 | 0.0064 |
| Saturn | 109322-02-25 22:03 G | 41650156.20 | 41650156.42 | 41650156.65 | 0.0281 | 0.0110 |
| Neptune | 109322-12-24 12:56 G | 41650457.82 | 41650458.04 | 41650458.31 | 0.0090 | 0.0033 |
| Uranus | 109322-12-28 21:06 G | 41650462.15 | 41650462.38 | 41650462.63 | 0.0136 | 0.0050 |
| Neptune | 109323-12-27 01:54 G | 41650825.35 | 41650825.58 | 41650825.83 | 0.0090 | 0.0020 |
| Uranus | 109324-01-01 23:44 G | 41650831.26 | 41650831.49 | 41650831.73 | 0.0136 | 0.0041 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 109324-12-28 10:18 G | 41651192.68 | 41651192.93 | 41651193.20 | 0.0090 | 0.0012 |
| Uranus | 109325-01-05 13:39 G | 41651201.05 | 41651201.07 | 41651201.14 | 0.0135 | 0.0133 |
| Neptune | 109325-12-31 03:20 G | 41651560.41 | 41651560.64 | 41651560.89 | 0.0090 | 0.0025 |
| Neptune | 109327-01-02 08:22 G | 41651927.67 | 41651927.85 | 41651928.06 | 0.0090 | 0.0057 |
| Neptune | 109328-01-05 03:20 G | 41652295.48 | 41652295.64 | 41652295.81 | 0.0090 | 0.0069 |
| Saturn | 109334-08-13 04:46 G | 41654707.53 | 41654707.70 | 41654707.90 | 0.0283 | 0.0195 |
| Saturn | 109335-08-26 20:37 G | 41655086.12 | 41655086.36 | 41655086.60 | 0.0280 | 0.0052 |
| Jupiter | 109343-01-13 05:30 G | 41657782.51 | 41657782.73 | 41657782.95 | 0.0528 | 0.0211 |
| Saturn | 109350-02-08 05:15 G | 41660365.60 | 41660365.72 | 41660365.86 | 0.0276 | 0.0230 |
| Saturn | 109351-02-20 20:22 G | 41660743.10 | 41660743.35 | 41660743.59 | 0.0280 | 0.0006 |
| Saturn | 109352-03-04 14:22 G | 41661120.95 | 41661121.10 | 41661121.26 | 0.0284 | 0.0224 |
| Jupiter | 109355-01-18 02:51 G | 41662170.41 | 41662170.62 | 41662170.84 | 0.0529 | 0.0141 |
| Jupiter | 109360-07-12 11:30 G | 41664172.77 | 41664172.98 | 41664173.18 | 0.0499 | 0.0237 |
| Saturn | 109364-08-20 12:56 G | 41665672.79 | 41665673.04 | 41665673.29 | 0.0281 | 0.0058 |
| Uranus | 109365-06-24 00:13 G | 41665980.38 | 41665980.51 | 41665980.66 | 0.0142 | 0.0116 |
| Saturn | 109365-09-02 20:08 G | 41666051.15 | 41666051.34 | 41666051.52 | 0.0278 | 0.0188 |
| Uranus | 109366-06-28 22:03 G | 41666350.15 | 41666350.42 | 41666350.69 | 0.0142 | 0.0006 |
| Jupiter | 109367-01-22 23:01 G | 41666558.40 | 41666558.46 | 41666558.55 | 0.0531 | 0.0503 |
| Uranus | 109367-07-03 21:06 G | 41666720.26 | 41666720.38 | 41666720.53 | 0.0143 | 0.0119 |
| Jupiter | 109372-07-16 20:37 G | 41668560.12 | 41668560.36 | 41668560.59 | 0.0498 | 0.0089 |
| Saturn | 109380-02-15 06:56 G | 41671329.59 | 41671329.79 | 41671330.01 | 0.0277 | 0.0120 |
| Saturn | 109381-02-27 03:49 G | 41671707.45 | 41671707.66 | 41671707.89 | 0.0281 | 0.0106 |
| Jupiter | 109384-07-21 15:49 G | 41672948.07 | 41672948.16 | 41672948.27 | 0.0496 | 0.0446 |
| Saturn | 109393-08-14 08:37 G | 41676258.67 | 41676258.86 | 41676259.05 | 0.0283 | 0.0173 |
| Saturn | 109394-08-28 02:22 G | 41676637.36 | 41676637.60 | 41676637.84 | 0.0280 | 0.0083 |
| Neptune | 109402-06-18 01:54 G | 41679487.49 | 41679487.58 | 41679487.70 | 0.0088 | 0.0080 |
| Neptune | 109403-06-20 19:10 G | 41679855.15 | 41679855.30 | 41679855.48 | 0.0088 | 0.0068 |
| Neptune | 109404-06-22 01:39 G | 41680222.36 | 41680222.57 | 41680222.82 | 0.0088 | 0.0039 |
| Neptune | 109405-06-24 15:20 G | 41680589.90 | 41680590.14 | 41680590.41 | 0.0088 | 0.0027 |
| Neptune | 109406-06-27 03:49 G | 41680957.41 | 41680957.66 | 41680957.91 | 0.0088 | 0.0004 |

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| Uranus | 109406-12-30 02:08 G | 41681143.37 | 41681143.59 | 41681143.84 | 0.0136 | 0.0049 |
| Neptune | 109407-06-29 11:58 G | 41681324.75 | 41681325.00 | 41681325.28 | 0.0088 | 0.0017 |
| Uranus | 109408-01-03 17:58 G | 41681513.03 | 41681513.25 | 41681513.49 | 0.0136 | 0.0054 |
| Neptune | 109408-07-01 04:18 G | 41681692.48 | 41681692.68 | 41681692.91 | 0.0088 | 0.0047 |
| Saturn | 109409-02-09 23:30 G | 41681916.35 | 41681916.48 | 41681916.62 | 0.0276 | 0.0233 |
| Neptune | 109409-07-03 09:06 G | 41682059.70 | 41682059.88 | 41682060.09 | 0.0088 | 0.0059 |
| Saturn | 109410-02-22 11:15 G | 41682293.73 | 41682293.97 | 41682294.21 | 0.0280 | 0.0014 |
| Saturn | 109411-03-07 12:27 G | 41682671.89 | 41682672.02 | 41682672.16 | 0.0284 | 0.0229 |
| Saturn | 109422-08-09 07:39 G | 41686844.77 | 41686844.82 | 41686844.90 | 0.0285 | 0.0275 |
| Saturn | 109423-08-23 06:13 G | 41687223.52 | 41687223.76 | 41687224.00 | 0.0281 | 0.0017 |
| Saturn | 109424-09-04 22:03 G | 41687602.29 | 41687602.42 | 41687602.55 | 0.0278 | 0.0230 |
| Jupiter | 109426-01-13 11:15 G | 41688097.78 | 41688097.97 | 41688098.17 | 0.0527 | 0.0290 |
| Mars | 109428-10-15 15:20 G | 41689103.97 | 41689104.14 | 41689104.30 | 0.1602 | 0.0761 |
| Jupiter | 109438-01-18 04:32 G | 41692485.47 | 41692485.69 | 41692485.91 | 0.0529 | 0.0134 |
| Saturn | 109439-02-17 08:37 G | 41692880.65 | 41692880.86 | 41692881.10 | 0.0277 | 0.0118 |
| Saturn | 109440-02-29 21:06 G | 41693258.17 | 41693258.38 | 41693258.61 | 0.0281 | 0.0123 |
| Jupiter | 109443-07-13 20:22 G | 41694488.14 | 41694488.35 | 41694488.55 | 0.0499 | 0.0213 |
| Uranus | 109449-06-25 13:54 G | 41696661.92 | 41696662.08 | 41696662.28 | 0.0142 | 0.0102 |
| Jupiter | 109450-01-23 13:54 G | 41696874.05 | 41696874.08 | 41696874.12 | 0.0531 | 0.0524 |
| Uranus | 109450-06-30 09:34 G | 41697031.65 | 41697031.90 | 41697032.15 | 0.0142 | 0.0003 |
| Uranus | 109451-07-05 13:25 G | 41697401.96 | 41697402.06 | 41697402.20 | 0.0143 | 0.0126 |
| Saturn | 109452-08-16 02:08 G | 41697809.37 | 41697809.59 | 41697809.82 | 0.0283 | 0.0130 |
| Saturn | 109453-08-29 15:49 G | 41698187.94 | 41698188.16 | 41698188.39 | 0.0280 | 0.0118 |
| Jupiter | 109455-07-18 10:03 G | 41698875.68 | 41698875.92 | 41698876.17 | 0.0498 | 0.0097 |
| Jupiter | 109467-07-22 20:51 G | 41703263.24 | 41703263.37 | 41703263.51 | 0.0497 | 0.0395 |
| Saturn | 109468-02-12 00:13 G | 41703467.38 | 41703467.51 | 41703467.66 | 0.0276 | 0.0219 |
| Saturn | 109469-02-23 16:32 G | 41703844.94 | 41703845.19 | 41703845.43 | 0.0280 | 0.0018 |
| Saturn | 109470-03-08 10:46 G | 41704222.88 | 41704222.95 | 41704223.03 | 0.0284 | 0.0269 |
| Pluto | 109474-01-30 13:10 G | 41705646.89 | 41705647.05 | 41705647.27 | 0.0065 | 0.0043 |
| Pluto | 109475-01-31 19:54 G | 41706013.13 | 41706013.33 | 41706013.57 | 0.0065 | 0.0030 |

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| Saturn | 109481-08-10 11:44 G | 41708395.87 | 41708395.99 | 41708396.13 | 0.0285 | 0.0242 |
| Saturn | 109482-08-24 07:10 G | 41708774.55 | 41708774.80 | 41708775.06 | 0.0281 | 0.0006 |
| Saturn | 109483-09-06 13:54 G | 41709152.95 | 41709153.08 | 41709153.23 | 0.0278 | 0.0231 |
| Neptune | 109485-12-22 09:06 G | 41709990.72 | 41709990.88 | 41709991.06 | 0.0090 | 0.0065 |
| Neptune | 109486-12-24 13:54 G | 41710357.90 | 41710358.08 | 41710358.31 | 0.0090 | 0.0053 |
| Neptune | 109487-12-27 08:22 G | 41710725.61 | 41710725.85 | 41710726.12 | 0.0090 | 0.0021 |
| Neptune | 109488-12-28 15:49 G | 41711092.91 | 41711093.16 | 41711093.41 | 0.0090 | 0.0007 |
| Uranus | 109489-12-26 06:42 G | 41711455.75 | 41711455.78 | 41711455.87 | 0.0136 | 0.0132 |
| Neptune | 109489-12-31 06:13 G | 41711460.52 | 41711460.76 | 41711461.03 | 0.0090 | 0.0025 |
| Uranus | 109490-12-30 21:34 G | 41711825.17 | 41711825.40 | 41711825.64 | 0.0136 | 0.0046 |
| Neptune | 109491-01-02 18:13 G | 41711828.05 | 41711828.26 | 41711828.50 | 0.0090 | 0.0038 |
| Uranus | 109492-01-04 00:42 G | 41712194.32 | 41712194.53 | 41712194.78 | 0.0136 | 0.0063 |
| Neptune | 109492-01-05 03:06 G | 41712195.49 | 41712195.63 | 41712195.83 | 0.0090 | 0.0069 |
| Neptune | 109493-01-06 19:39 G | 41712563.24 | 41712563.32 | 41712563.45 | 0.0090 | 0.0082 |
| Saturn | 109498-02-18 04:03 G | 41714431.45 | 41714431.67 | 41714431.90 | 0.0277 | 0.0074 |
| Saturn | 109499-03-03 01:25 G | 41714809.38 | 41714809.56 | 41714809.76 | 0.0281 | 0.0168 |
| Mars | 109507-10-19 13:25 G | 41717960.89 | 41717961.06 | 41717961.22 | 0.1605 | 0.0906 |
| Jupiter | 109509-01-13 22:32 G | 41718413.27 | 41718413.44 | 41718413.61 | 0.0527 | 0.0349 |
| Saturn | 109511-08-19 01:25 G | 41719360.35 | 41719360.56 | 41719360.77 | 0.0283 | 0.0129 |
| Saturn | 109512-08-31 19:25 G | 41719739.09 | 41719739.31 | 41719739.55 | 0.0280 | 0.0109 |
| Jupiter | 109521-01-18 17:01 G | 41722800.97 | 41722801.21 | 41722801.45 | 0.0529 | 0.0048 |
| Jupiter | 109526-07-14 00:42 G | 41724803.35 | 41724803.53 | 41724803.72 | 0.0500 | 0.0292 |
| Saturn | 109527-02-13 21:34 G | 41725018.22 | 41725018.40 | 41725018.61 | 0.0276 | 0.0172 |
| Saturn | 109528-02-26 08:22 G | 41725395.62 | 41725395.85 | 41725396.09 | 0.0280 | 0.0056 |
| Jupiter | 109533-01-23 17:58 G | 41727189.16 | 41727189.25 | 41727189.34 | 0.0530 | 0.0481 |
| Uranus | 109533-06-26 20:37 G | 41727343.18 | 41727343.36 | 41727343.56 | 0.0142 | 0.0094 |
| Uranus | 109534-07-02 02:08 G | 41727713.33 | 41727713.59 | 41727713.85 | 0.0142 | 0.0005 |
| Uranus | 109535-07-06 18:13 G | 41728083.18 | 41728083.26 | 41728083.39 | 0.0143 | 0.0130 |
| Jupiter | 109538-07-18 23:58 G | 41729191.27 | 41729191.50 | 41729191.74 | 0.0499 | 0.0085 |
| Saturn | 109540-08-12 01:10 G | 41729946.44 | 41729946.55 | 41729946.67 | 0.0285 | 0.0251 |

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| Saturn | 109541-08-25 22:46 G | 41730325.21 | 41730325.45 | 41730325.70 | 0.0281 | 0.0004 |
| Saturn | 109542-09-08 14:37 G | 41730703.99 | 41730704.11 | 41730704.23 | 0.0278 | 0.0237 |
| Jupiter | 109550-07-23 08:08 G | 41733578.73 | 41733578.84 | 41733578.96 | 0.0497 | 0.0429 |
| Saturn | 109556-02-09 00:42 G | 41735605.47 | 41735605.53 | 41735605.60 | 0.0274 | 0.0262 |
| Saturn | 109557-02-20 09:49 G | 41735982.67 | 41735982.91 | 41735983.16 | 0.0278 | 0.0047 |
| Saturn | 109558-03-04 21:49 G | 41736360.22 | 41736360.41 | 41736360.61 | 0.0281 | 0.0170 |
| Pluto | 109562-08-01 21:34 G | 41737971.19 | 41737971.40 | 41737971.66 | 0.0079 | 0.0032 |
| Neptune | 109567-06-20 20:37 G | 41739755.20 | 41739755.36 | 41739755.53 | 0.0088 | 0.0068 |
| Neptune | 109568-06-22 14:08 G | 41740122.91 | 41740123.09 | 41740123.31 | 0.0088 | 0.0057 |
| Neptune | 109569-06-24 18:56 G | 41740490.05 | 41740490.29 | 41740490.54 | 0.0088 | 0.0026 |
| Neptune | 109570-06-27 12:13 G | 41740857.75 | 41740858.01 | 41740858.28 | 0.0088 | 0.0014 |
| Saturn | 109570-08-19 21:34 G | 41740911.17 | 41740911.40 | 41740911.63 | 0.0283 | 0.0120 |
| Neptune | 109571-06-29 18:42 G | 41741225.04 | 41741225.28 | 41741225.54 | 0.0088 | 0.0017 |
| Saturn | 109571-09-02 10:18 G | 41741289.71 | 41741289.93 | 41741290.15 | 0.0280 | 0.0134 |
| Neptune | 109572-07-01 08:22 G | 41741592.60 | 41741592.85 | 41741593.11 | 0.0088 | 0.0029 |
| Neptune | 109573-07-03 20:08 G | 41741960.17 | 41741960.34 | 41741960.54 | 0.0088 | 0.0059 |
| Uranus | 109573-12-28 00:27 G | 41742137.41 | 41742137.52 | 41742137.63 | 0.0136 | 0.0121 |
| Neptune | 109574-07-06 04:46 G | 41742327.56 | 41742327.70 | 41742327.87 | 0.0088 | 0.0071 |
| Uranus | 109575-01-01 07:25 G | 41742506.57 | 41742506.81 | 41742507.07 | 0.0136 | 0.0039 |
| Uranus | 109576-01-05 17:30 G | 41742876.02 | 41742876.23 | 41742876.44 | 0.0136 | 0.0069 |
| Saturn | 109586-02-14 23:15 G | 41746569.28 | 41746569.47 | 41746569.66 | 0.0277 | 0.0163 |
| Saturn | 109587-02-27 16:18 G | 41746946.95 | 41746947.18 | 41746947.42 | 0.0280 | 0.0054 |
| Jupiter | 109592-01-14 01:10 G | 41748728.38 | 41748728.55 | 41748728.72 | 0.0527 | 0.0334 |
| Saturn | 109599-08-14 06:42 G | 41751497.63 | 41751497.78 | 41751497.93 | 0.0285 | 0.0226 |
| Saturn | 109600-08-27 01:39 G | 41751876.32 | 41751876.57 | 41751876.83 | 0.0281 | 0.0036 |
| Jupiter | 109604-01-18 21:20 G | 41753116.15 | 41753116.39 | 41753116.63 | 0.0528 | 0.0005 |
| Jupiter | 109609-07-13 14:22 G | 41755118.91 | 41755119.10 | 41755119.29 | 0.0501 | 0.0315 |
| Saturn | 109615-02-09 21:34 G | 41757156.33 | 41757156.40 | 41757156.48 | 0.0275 | 0.0262 |
| Jupiter | 109616-01-23 15:49 G | 41757504.00 | 41757504.16 | 41757504.32 | 0.0530 | 0.0370 |
| Saturn | 109616-02-22 07:39 G | 41757533.59 | 41757533.82 | 41757534.05 | 0.0278 | 0.0050 |

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| Saturn | 109617-03-06 05:44 G | 41757911.56 | 41757911.74 | 41757911.91 | 0.0281 | 0.0186 |
| Uranus | 109617-06-27 15:20 G | 41758024.96 | 41758025.14 | 41758025.36 | 0.0142 | 0.0088 |
| Uranus | 109618-07-02 07:39 G | 41758394.57 | 41758394.82 | 41758395.08 | 0.0142 | 0.0016 |
| Uranus | 109619-07-07 14:08 G | 41758765.01 | 41758765.09 | 41758765.20 | 0.0143 | 0.0132 |
| Jupiter | 109621-07-18 08:37 G | 41759506.63 | 41759506.86 | 41759507.08 | 0.0499 | 0.0012 |
| Saturn | 109629-08-20 23:58 G | 41762462.27 | 41762462.50 | 41762462.73 | 0.0283 | 0.0074 |
| Saturn | 109630-09-03 17:44 G | 41762841.06 | 41762841.24 | 41762841.44 | 0.0279 | 0.0177 |
| Jupiter | 109633-07-22 17:58 G | 41763894.08 | 41763894.25 | 41763894.43 | 0.0497 | 0.0353 |
| Saturn | 109645-02-16 02:37 G | 41768120.41 | 41768120.61 | 41768120.82 | 0.0277 | 0.0157 |
| Saturn | 109646-02-28 12:56 G | 41768497.81 | 41768498.04 | 41768498.27 | 0.0280 | 0.0081 |
| Neptune | 109649-12-22 08:51 G | 41769890.82 | 41769890.87 | 41769890.99 | 0.0090 | 0.0085 |
| Neptune | 109650-12-25 01:10 G | 41770258.36 | 41770258.55 | 41770258.76 | 0.0090 | 0.0053 |
| Neptune | 109651-12-27 07:39 G | 41770625.60 | 41770625.82 | 41770626.06 | 0.0090 | 0.0040 |
| Neptune | 109652-12-29 02:37 G | 41770993.36 | 41770993.61 | 41770993.86 | 0.0090 | 0.0008 |
| Neptune | 109653-12-31 07:39 G | 41771360.57 | 41771360.82 | 41771361.07 | 0.0090 | 0.0005 |
| Neptune | 109655-01-03 01:10 G | 41771728.33 | 41771728.55 | 41771728.80 | 0.0090 | 0.0037 |
| Neptune | 109656-01-05 08:22 G | 41772095.66 | 41772095.85 | 41772096.07 | 0.0090 | 0.0050 |
| Neptune | 109657-01-06 22:18 G | 41772463.33 | 41772463.43 | 41772463.56 | 0.0090 | 0.0081 |
| Uranus | 109657-12-28 14:51 G | 41772818.98 | 41772819.12 | 41772819.27 | 0.0136 | 0.0112 |
| Saturn | 109658-08-15 01:54 G | 41773048.40 | 41773048.58 | 41773048.79 | 0.0284 | 0.0182 |
| Uranus | 109659-01-01 21:20 G | 41773188.16 | 41773188.39 | 41773188.64 | 0.0136 | 0.0028 |
| Saturn | 109659-08-28 21:49 G | 41773427.17 | 41773427.41 | 41773427.64 | 0.0281 | 0.0068 |
| Uranus | 109660-01-06 09:06 G | 41773557.67 | 41773557.88 | 41773558.10 | 0.0136 | 0.0073 |
| Saturn | 109674-02-11 06:42 G | 41778707.69 | 41778707.78 | 41778707.89 | 0.0275 | 0.0248 |
| Jupiter | 109675-01-12 22:32 G | 41779043.32 | 41779043.44 | 41779043.58 | 0.0526 | 0.0430 |
| Saturn | 109675-02-23 18:56 G | 41779085.04 | 41779085.29 | 41779085.53 | 0.0278 | 0.0012 |
| Saturn | 109676-03-07 08:37 G | 41779462.74 | 41779462.86 | 41779463.01 | 0.0282 | 0.0236 |
| Jupiter | 109687-01-18 06:13 G | 41783431.53 | 41783431.76 | 41783431.99 | 0.0528 | 0.0005 |
| Saturn | 109688-08-22 03:06 G | 41784013.38 | 41784013.63 | 41784013.88 | 0.0283 | 0.0058 |
| Saturn | 109689-09-04 14:08 G | 41784391.90 | 41784392.09 | 41784392.29 | 0.0279 | 0.0178 |

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| Jupiter | 109692-07-13 01:25 G | 41785434.37 | 41785434.56 | 41785434.76 | 0.0501 | 0.0301 |
| Jupiter | 109699-01-22 22:46 G | 41787819.29 | 41787819.45 | 41787819.61 | 0.0530 | 0.0389 |
| Uranus | 109701-06-28 18:42 G | 41788706.09 | 41788706.28 | 41788706.51 | 0.0142 | 0.0087 |
| Uranus | 109702-07-03 23:30 G | 41789076.24 | 41789076.48 | 41789076.73 | 0.0142 | 0.0027 |
| Uranus | 109703-07-08 17:58 G | 41789446.18 | 41789446.25 | 41789446.36 | 0.0143 | 0.0133 |
| Saturn | 109704-02-19 07:39 G | 41789671.62 | 41789671.82 | 41789672.04 | 0.0277 | 0.0111 |
| Jupiter | 109704-07-18 08:37 G | 41789821.63 | 41789821.86 | 41789822.09 | 0.0499 | 0.0006 |
| Saturn | 109705-03-03 02:51 G | 41790049.41 | 41790049.62 | 41790049.84 | 0.0281 | 0.0130 |
| Mars | 109712-10-18 10:03 G | 41792835.74 | 41792835.92 | 41792836.10 | 0.1599 | 0.0317 |
| Jupiter | 109716-07-23 05:01 G | 41794209.52 | 41794209.71 | 41794209.90 | 0.0498 | 0.0304 |
| Saturn | 109717-08-17 13:39 G | 41794599.89 | 41794600.07 | 41794600.27 | 0.0284 | 0.0179 |
| Saturn | 109718-08-31 08:37 G | 41794978.62 | 41794978.86 | 41794979.11 | 0.0281 | 0.0066 |
| Pluto | 109721-02-02 21:34 G | 41795865.23 | 41795865.40 | 41795865.57 | 0.0065 | 0.0048 |
| Pluto | 109722-02-04 04:32 G | 41796231.47 | 41796231.69 | 41796231.92 | 0.0065 | 0.0028 |
| Neptune | 109731-06-21 05:30 G | 41799655.71 | 41799655.73 | 41799655.81 | 0.0088 | 0.0086 |
| Neptune | 109732-06-22 15:34 G | 41800022.96 | 41800023.15 | 41800023.37 | 0.0088 | 0.0056 |
| Saturn | 109733-02-13 10:32 G | 41800258.78 | 41800258.94 | 41800259.13 | 0.0275 | 0.0198 |
| Neptune | 109733-06-25 07:10 G | 41800390.59 | 41800390.80 | 41800391.03 | 0.0088 | 0.0043 |
| Saturn | 109734-02-25 20:51 G | 41800636.13 | 41800636.37 | 41800636.61 | 0.0279 | 0.0031 |
| Neptune | 109734-06-27 12:27 G | 41800757.77 | 41800758.02 | 41800758.29 | 0.0088 | 0.0014 |
| Saturn | 109735-03-10 19:25 G | 41801014.23 | 41801014.31 | 41801014.40 | 0.0282 | 0.0262 |
| Neptune | 109735-06-30 06:56 G | 41801125.53 | 41801125.79 | 41801126.05 | 0.0088 | 0.0001 |
| Neptune | 109736-07-01 11:01 G | 41801492.73 | 41801492.96 | 41801493.21 | 0.0088 | 0.0029 |
| Neptune | 109737-07-04 04:03 G | 41801860.46 | 41801860.67 | 41801860.93 | 0.0088 | 0.0042 |
| Neptune | 109738-07-06 11:15 G | 41802227.85 | 41802227.97 | 41802228.14 | 0.0088 | 0.0072 |
| Neptune | 109739-07-09 00:27 G | 41802595.46 | 41802595.52 | 41802595.60 | 0.0088 | 0.0084 |
| Uranus | 109741-12-30 00:56 G | 41803500.40 | 41803500.54 | 41803500.70 | 0.0136 | 0.0107 |
| Uranus | 109743-01-03 16:03 G | 41803869.91 | 41803870.17 | 41803870.42 | 0.0136 | 0.0013 |
| Uranus | 109744-01-07 18:27 G | 41804239.07 | 41804239.27 | 41804239.48 | 0.0136 | 0.0078 |
| Saturn | 109747-08-25 11:01 G | 41805564.73 | 41805564.96 | 41805565.20 | 0.0282 | 0.0053 |

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| Saturn | 109748-09-07 03:49 G | 41805943.50 | 41805943.66 | 41805943.85 | 0.0279 | 0.0192 |
| Mars | 109751-04-17 19:25 G | 41806896.14 | 41806896.31 | 41806896.48 | 0.1943 | 0.0653 |
| Jupiter | 109758-01-13 08:08 G | 41809358.76 | 41809358.84 | 41809358.93 | 0.0526 | 0.0491 |
| Saturn | 109763-02-20 18:27 G | 41811223.03 | 41811223.27 | 41811223.51 | 0.0277 | 0.0080 |
| Saturn | 109764-03-04 05:44 G | 41811600.53 | 41811600.74 | 41811600.96 | 0.0281 | 0.0140 |
| Jupiter | 109770-01-18 05:30 G | 41813746.52 | 41813746.73 | 41813746.95 | 0.0527 | 0.0117 |
| Jupiter | 109775-07-14 05:44 G | 41815749.60 | 41815749.74 | 41815749.88 | 0.0501 | 0.0397 |
| Saturn | 109776-08-18 17:30 G | 41816151.02 | 41816151.23 | 41816151.44 | 0.0284 | 0.0158 |
| Saturn | 109777-09-01 09:49 G | 41816529.69 | 41816529.91 | 41816530.15 | 0.0280 | 0.0096 |
| Jupiter | 109782-01-22 22:32 G | 41818134.24 | 41818134.44 | 41818134.64 | 0.0529 | 0.0285 |
| Uranus | 109785-06-29 10:46 G | 41819387.77 | 41819387.95 | 41819388.16 | 0.0142 | 0.0085 |
| Uranus | 109786-07-04 08:22 G | 41819757.60 | 41819757.85 | 41819758.11 | 0.0142 | 0.0037 |
| Uranus | 109787-07-09 08:22 G | 41820127.82 | 41820127.85 | 41820127.94 | 0.0143 | 0.0139 |
| Jupiter | 109787-07-18 13:25 G | 41820136.82 | 41820137.06 | 41820137.30 | 0.0500 | 0.0028 |
| Mars | 109791-10-21 17:30 G | 41821693.13 | 41821693.23 | 41821693.33 | 0.1601 | 0.1322 |
| Saturn | 109792-02-15 23:15 G | 41821810.30 | 41821810.47 | 41821810.65 | 0.0276 | 0.0180 |
| Saturn | 109793-02-27 14:37 G | 41822187.87 | 41822188.11 | 41822188.36 | 0.0279 | 0.0036 |
| Saturn | 109794-03-12 07:54 G | 41822565.76 | 41822565.83 | 41822565.92 | 0.0282 | 0.0266 |
| Jupiter | 109799-07-23 09:06 G | 41824524.71 | 41824524.88 | 41824525.06 | 0.0498 | 0.0318 |
| Saturn | 109805-08-14 06:27 G | 41826737.69 | 41826737.77 | 41826737.87 | 0.0285 | 0.0265 |
| Saturn | 109806-08-28 01:10 G | 41827116.30 | 41827116.55 | 41827116.81 | 0.0282 | 0.0008 |
| Saturn | 109807-09-10 09:20 G | 41827494.79 | 41827494.89 | 41827495.03 | 0.0279 | 0.0244 |
| Pluto | 109809-08-05 09:34 G | 41828189.68 | 41828189.90 | 41828190.16 | 0.0079 | 0.0029 |
| Neptune | 109813-12-23 12:13 G | 41829790.96 | 41829791.01 | 41829791.11 | 0.0090 | 0.0086 |
| Neptune | 109814-12-26 03:20 G | 41830158.52 | 41830158.64 | 41830158.83 | 0.0090 | 0.0073 |
| Neptune | 109815-12-28 14:51 G | 41830525.92 | 41830526.12 | 41830526.36 | 0.0090 | 0.0042 |
| Neptune | 109816-12-30 01:54 G | 41830893.34 | 41830893.58 | 41830893.84 | 0.0090 | 0.0028 |
| Neptune | 109818-01-01 18:13 G | 41831261.01 | 41831261.26 | 41831261.51 | 0.0090 | 0.0004 |
| Neptune | 109819-01-04 00:27 G | 41831628.27 | 41831628.52 | 41831628.78 | 0.0090 | 0.0017 |
| Neptune | 109820-01-06 18:42 G | 41831996.09 | 41831996.28 | 41831996.52 | 0.0090 | 0.0050 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 109821-01-07 23:58 G | 41832363.33 | 41832363.50 | 41832363.70 | 0.0090 | 0.0062 |
| Saturn | 109822-02-23 02:08 G | 41832774.37 | 41832774.59 | 41832774.82 | 0.0278 | 0.0077 |
| Saturn | 109823-03-07 23:01 G | 41833152.27 | 41833152.46 | 41833152.66 | 0.0281 | 0.0155 |
| Uranus | 109825-12-31 20:37 G | 41834182.20 | 41834182.36 | 41834182.52 | 0.0136 | 0.0104 |
| Uranus | 109827-01-04 22:46 G | 41834551.20 | 41834551.45 | 41834551.71 | 0.0136 | 0.0003 |
| Uranus | 109828-01-09 14:51 G | 41834920.92 | 41834921.12 | 41834921.32 | 0.0136 | 0.0082 |
| Saturn | 109835-08-22 10:32 G | 41837702.72 | 41837702.94 | 41837703.17 | 0.0283 | 0.0104 |
| Saturn | 109836-09-04 05:15 G | 41838081.51 | 41838081.72 | 41838081.93 | 0.0280 | 0.0148 |
| Jupiter | 109841-01-13 08:22 G | 41839673.80 | 41839673.85 | 41839673.92 | 0.0524 | 0.0505 |
| Saturn | 109851-02-18 08:37 G | 41843361.68 | 41843361.86 | 41843362.07 | 0.0276 | 0.0172 |
| Saturn | 109852-03-01 19:25 G | 41843739.08 | 41843739.31 | 41843739.55 | 0.0280 | 0.0061 |
| Jupiter | 109853-01-17 21:34 G | 41844061.18 | 41844061.40 | 41844061.61 | 0.0526 | 0.0162 |
| Jupiter | 109858-07-14 04:32 G | 41846064.59 | 41846064.69 | 41846064.80 | 0.0502 | 0.0437 |
| Saturn | 109864-08-15 14:37 G | 41848288.96 | 41848289.11 | 41848289.29 | 0.0285 | 0.0212 |
| Jupiter | 109865-01-23 02:51 G | 41848449.41 | 41848449.62 | 41848449.84 | 0.0529 | 0.0193 |
| Saturn | 109865-08-29 11:58 G | 41848667.76 | 41848668.00 | 41848668.24 | 0.0281 | 0.0039 |
| Saturn | 109866-09-12 03:06 G | 41849046.59 | 41849046.63 | 41849046.69 | 0.0278 | 0.0271 |
| Uranus | 109869-06-30 22:18 G | 41850069.21 | 41850069.43 | 41850069.64 | 0.0142 | 0.0082 |
| Uranus | 109870-07-05 18:42 G | 41850439.05 | 41850439.28 | 41850439.52 | 0.0142 | 0.0045 |
| Jupiter | 109870-07-18 18:27 G | 41850452.04 | 41850452.27 | 41850452.52 | 0.0500 | 0.0124 |
| Saturn | 109880-02-13 08:22 G | 41853948.81 | 41853948.85 | 41853948.90 | 0.0275 | 0.0269 |
| Saturn | 109881-02-24 18:56 G | 41854326.05 | 41854326.29 | 41854326.54 | 0.0278 | 0.0038 |
| Saturn | 109882-03-09 08:37 G | 41854703.69 | 41854703.86 | 41854704.03 | 0.0282 | 0.0208 |
| Jupiter | 109882-07-23 05:44 G | 41854839.53 | 41854839.74 | 41854839.95 | 0.0499 | 0.0215 |
| Saturn | 109894-08-23 23:15 G | 41859254.22 | 41859254.47 | 41859254.72 | 0.0283 | 0.0075 |
| Neptune | 109895-06-21 15:49 G | 41859556.13 | 41859556.16 | 41859556.23 | 0.0088 | 0.0086 |
| Saturn | 109895-09-06 11:44 G | 41859632.80 | 41859632.99 | 41859633.21 | 0.0279 | 0.0163 |
| Neptune | 109896-06-22 21:20 G | 41859923.29 | 41859923.39 | 41859923.56 | 0.0088 | 0.0074 |
| Neptune | 109897-06-25 11:44 G | 41860290.78 | 41860290.99 | 41860291.25 | 0.0088 | 0.0045 |
| Neptune | 109898-06-27 22:32 G | 41860658.21 | 41860658.44 | 41860658.68 | 0.0088 | 0.0031 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 109899-06-30 07:39 G | 41861025.55 | 41861025.82 | 41861026.09 | 0.0088 | 0.0002 |
| Neptune | 109900-07-02 23:30 G | 41861393.23 | 41861393.48 | 41861393.74 | 0.0088 | 0.0012 |
| Neptune | 109901-07-05 04:46 G | 41861760.47 | 41861760.70 | 41861760.93 | 0.0088 | 0.0041 |
| Neptune | 109902-07-07 22:32 G | 41862128.26 | 41862128.44 | 41862128.67 | 0.0088 | 0.0055 |
| Neptune | 109903-07-10 03:06 G | 41862495.59 | 41862495.63 | 41862495.74 | 0.0088 | 0.0084 |
| Uranus | 109910-01-02 02:08 G | 41864863.43 | 41864863.59 | 41864863.77 | 0.0136 | 0.0102 |
| Saturn | 109910-02-20 21:06 G | 41864913.17 | 41864913.38 | 41864913.59 | 0.0277 | 0.0126 |
| Uranus | 109911-01-06 17:44 G | 41865232.99 | 41865233.24 | 41865233.49 | 0.0136 | 0.0008 |
| Saturn | 109911-03-05 15:34 G | 41865290.93 | 41865291.15 | 41865291.37 | 0.0280 | 0.0116 |
| Uranus | 109912-01-10 20:22 G | 41865602.18 | 41865602.35 | 41865602.56 | 0.0136 | 0.0089 |
| Mars | 109917-10-20 02:37 G | 41867711.43 | 41867711.61 | 41867711.78 | 0.1594 | 0.0629 |
| Saturn | 109923-08-19 15:20 G | 41869840.97 | 41869841.14 | 41869841.32 | 0.0284 | 0.0198 |
| Saturn | 109924-09-01 09:49 G | 41870219.66 | 41870219.91 | 41870220.16 | 0.0281 | 0.0048 |
| Saturn | 109925-09-14 15:34 G | 41870598.13 | 41870598.15 | 41870598.19 | 0.0278 | 0.0276 |
| Jupiter | 109936-01-18 23:44 G | 41874376.27 | 41874376.49 | 41874376.71 | 0.0526 | 0.0203 |
| Saturn | 109939-02-15 14:22 G | 41875499.95 | 41875500.10 | 41875500.25 | 0.0275 | 0.0216 |
| Saturn | 109940-02-28 01:25 G | 41875877.32 | 41875877.56 | 41875877.79 | 0.0279 | 0.0013 |
| Saturn | 109941-03-11 23:58 G | 41876255.38 | 41876255.50 | 41876255.62 | 0.0282 | 0.0243 |
| Jupiter | 109941-07-14 01:10 G | 41876379.46 | 41876379.55 | 41876379.64 | 0.0502 | 0.0459 |
| Jupiter | 109948-01-24 02:22 G | 41878764.40 | 41878764.60 | 41878764.81 | 0.0528 | 0.0195 |
| Uranus | 109953-07-02 07:54 G | 41880750.63 | 41880750.83 | 41880751.05 | 0.0142 | 0.0075 |
| Jupiter | 109953-07-18 21:20 G | 41880767.16 | 41880767.39 | 41880767.62 | 0.0501 | 0.0129 |
| Saturn | 109953-08-26 15:34 G | 41880805.92 | 41880806.15 | 41880806.39 | 0.0282 | 0.0068 |
| Uranus | 109954-07-07 12:13 G | 41881120.77 | 41881121.01 | 41881121.26 | 0.0142 | 0.0052 |
| Saturn | 109954-09-09 09:20 G | 41881184.72 | 41881184.89 | 41881185.09 | 0.0279 | 0.0177 |
| Jupiter | 109965-07-23 03:49 G | 41885154.44 | 41885154.66 | 41885154.88 | 0.0500 | 0.0166 |
| Pluto | 109968-02-07 09:06 G | 41886083.72 | 41886083.88 | 41886084.09 | 0.0065 | 0.0046 |
| Pluto | 109969-02-07 17:58 G | 41886450.07 | 41886450.25 | 41886450.47 | 0.0065 | 0.0040 |
| Saturn | 109969-02-22 08:51 G | 41886464.64 | 41886464.87 | 41886465.12 | 0.0277 | 0.0090 |
| Saturn | 109970-03-06 20:51 G | 41886842.16 | 41886842.37 | 41886842.59 | 0.0281 | 0.0136 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 109977-07-27 23:58 G | 41889542.43 | 41889542.50 | 41889542.58 | 0.0498 | 0.0469 |
| Neptune | 109978-12-26 04:46 G | 41890058.57 | 41890058.70 | 41890058.85 | 0.0090 | 0.0074 |
| Neptune | 109979-12-28 22:46 G | 41890426.28 | 41890426.45 | 41890426.66 | 0.0090 | 0.0061 |
| Neptune | 109980-12-30 06:13 G | 41890793.54 | 41890793.76 | 41890794.01 | 0.0090 | 0.0030 |
| Neptune | 109982-01-01 20:08 G | 41891161.09 | 41891161.34 | 41891161.62 | 0.0090 | 0.0016 |
| Saturn | 109982-08-21 02:22 G | 41891392.41 | 41891392.60 | 41891392.80 | 0.0284 | 0.0180 |
| Neptune | 109983-01-04 08:37 G | 41891528.62 | 41891528.86 | 41891529.11 | 0.0090 | 0.0016 |
| Saturn | 109983-09-03 19:54 G | 41891771.10 | 41891771.33 | 41891771.57 | 0.0281 | 0.0075 |
| Neptune | 109984-01-06 17:30 G | 41891896.00 | 41891896.23 | 41891896.49 | 0.0090 | 0.0030 |
| Neptune | 109985-01-08 10:32 G | 41892263.78 | 41892263.94 | 41892264.14 | 0.0090 | 0.0061 |
| Neptune | 109986-01-10 16:03 G | 41892631.05 | 41892631.17 | 41892631.33 | 0.0090 | 0.0074 |
| Uranus | 109994-01-02 19:54 G | 41895545.16 | 41895545.33 | 41895545.51 | 0.0136 | 0.0096 |
| Uranus | 109995-01-07 02:22 G | 41895914.34 | 41895914.60 | 41895914.86 | 0.0136 | 0.0014 |
| Uranus | 109996-01-11 14:37 G | 41896283.95 | 41896284.11 | 41896284.29 | 0.0136 | 0.0098 |
| Mars | 109996-10-22 00:13 G | 41896568.34 | 41896568.51 | 41896568.68 | 0.1596 | 0.0851 |
| Saturn | 109998-02-17 05:44 G | 41897051.59 | 41897051.74 | 41897051.91 | 0.0276 | 0.0198 |
| Saturn | 109999-03-01 19:25 G | 41897429.06 | 41897429.31 | 41897429.55 | 0.0279 | 0.0020 |
| Saturn | 110000-03-13 10:32 G | 41897806.83 | 41897806.94 | 41897807.07 | 0.0282 | 0.0246 |

111TH MILLENNIUM CE

This is a list of transits of Moon in the 111th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|----------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Saturn | 110012-08-28 07:10 G | 41902357.54 | 41902357.80 | 41902358.06 | 0.0282 | 0.0024 | | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 110013-09-10 16:46 G | 41902736.07 | 41902736.20 | 41902736.35 | 0.0279 | 0.0230 |
| Jupiter | 110019-01-18 01:25 G | 41904691.37 | 41904691.56 | 41904691.75 | 0.0525 | 0.0314 |
| Saturn | 110028-02-24 16:18 G | 41908015.96 | 41908016.18 | 41908016.41 | 0.0278 | 0.0090 |
| Saturn | 110029-03-08 12:56 G | 41908393.84 | 41908394.04 | 41908394.25 | 0.0281 | 0.0142 |
| Jupiter | 110031-01-22 19:39 G | 41909079.10 | 41909079.32 | 41909079.54 | 0.0527 | 0.0074 |
| Mars | 110035-04-18 18:27 G | 41910626.05 | 41910626.27 | 41910626.49 | 0.1950 | 0.0327 |
| Jupiter | 110036-07-17 22:18 G | 41911082.22 | 41911082.43 | 41911082.64 | 0.0501 | 0.0209 |
| Uranus | 110037-07-03 02:37 G | 41911432.39 | 41911432.61 | 41911432.85 | 0.0142 | 0.0066 |
| Uranus | 110038-07-07 18:13 G | 41911802.04 | 41911802.26 | 41911802.51 | 0.0142 | 0.0057 |
| Saturn | 110041-08-22 23:15 G | 41912944.25 | 41912944.47 | 41912944.69 | 0.0284 | 0.0124 |
| Saturn | 110042-09-05 17:15 G | 41913323.00 | 41913323.22 | 41913323.44 | 0.0280 | 0.0131 |
| Jupiter | 110043-01-27 18:42 G | 41913467.20 | 41913467.28 | 41913467.37 | 0.0529 | 0.0492 |
| Jupiter | 110048-07-22 07:10 G | 41915469.57 | 41915469.80 | 41915470.03 | 0.0499 | 0.0152 |
| Pluto | 110056-08-08 01:39 G | 41918408.33 | 41918408.57 | 41918408.83 | 0.0079 | 0.0020 |
| Saturn | 110057-02-18 10:18 G | 41918602.75 | 41918602.93 | 41918603.10 | 0.0276 | 0.0194 |
| Saturn | 110058-03-02 21:20 G | 41918980.16 | 41918980.39 | 41918980.63 | 0.0279 | 0.0037 |
| Neptune | 110060-06-23 09:06 G | 41919823.76 | 41919823.88 | 41919824.02 | 0.0088 | 0.0076 |
| Jupiter | 110060-07-27 01:25 G | 41919857.50 | 41919857.56 | 41919857.62 | 0.0498 | 0.0477 |
| Neptune | 110061-06-25 13:25 G | 41920190.90 | 41920191.06 | 41920191.27 | 0.0088 | 0.0061 |
| Neptune | 110062-06-28 06:42 G | 41920558.54 | 41920558.78 | 41920559.04 | 0.0088 | 0.0033 |
| Neptune | 110063-06-30 15:06 G | 41920925.88 | 41920926.13 | 41920926.37 | 0.0088 | 0.0017 |
| Neptune | 110064-07-02 02:37 G | 41921293.35 | 41921293.61 | 41921293.89 | 0.0088 | 0.0010 |
| Neptune | 110065-07-04 15:34 G | 41921660.92 | 41921661.15 | 41921661.41 | 0.0088 | 0.0026 |
| Neptune | 110066-07-06 22:32 G | 41922028.23 | 41922028.44 | 41922028.66 | 0.0088 | 0.0051 |
| Neptune | 110067-07-09 15:49 G | 41922396.01 | 41922396.16 | 41922396.34 | 0.0088 | 0.0068 |
| Saturn | 110070-08-16 18:13 G | 41923530.13 | 41923530.26 | 41923530.41 | 0.0285 | 0.0233 |
| Saturn | 110071-08-30 18:56 G | 41923909.05 | 41923909.29 | 41923909.53 | 0.0282 | 0.0019 |
| Saturn | 110072-09-12 11:58 G | 41924287.90 | 41924288.00 | 41924288.10 | 0.0278 | 0.0254 |
| Uranus | 110078-01-03 06:42 G | 41926226.60 | 41926226.78 | 41926226.99 | 0.0136 | 0.0089 |
| Uranus | 110079-01-07 17:15 G | 41926595.98 | 41926596.22 | 41926596.46 | 0.0136 | 0.0019 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 110080-01-12 00:56 G | 41926965.40 | 41926965.54 | 41926965.72 | 0.0136 | 0.0108 |
| Saturn | 110087-02-26 02:37 G | 41929567.36 | 41929567.61 | 41929567.85 | 0.0278 | 0.0059 |
| Saturn | 110088-03-09 14:51 G | 41929944.95 | 41929945.12 | 41929945.31 | 0.0281 | 0.0192 |
| Saturn | 110100-08-25 06:27 G | 41934495.54 | 41934495.77 | 41934496.02 | 0.0283 | 0.0098 |
| Saturn | 110101-09-07 22:03 G | 41934874.22 | 41934874.42 | 41934874.64 | 0.0280 | 0.0141 |
| Jupiter | 110102-01-18 02:51 G | 41935006.44 | 41935006.62 | 41935006.81 | 0.0525 | 0.0320 |
| Jupiter | 110114-01-22 18:56 G | 41939394.07 | 41939394.29 | 41939394.52 | 0.0527 | 0.0031 |
| Saturn | 110116-02-21 20:08 G | 41940154.15 | 41940154.34 | 41940154.54 | 0.0276 | 0.0150 |
| Saturn | 110117-03-05 10:46 G | 41940531.72 | 41940531.95 | 41940532.19 | 0.0279 | 0.0088 |
| Jupiter | 110119-07-18 23:15 G | 41941397.28 | 41941397.47 | 41941397.66 | 0.0501 | 0.0270 |
| Uranus | 110121-07-04 08:37 G | 41942113.64 | 41942113.86 | 41942114.11 | 0.0142 | 0.0056 |
| Uranus | 110122-07-09 14:51 G | 41942483.89 | 41942484.12 | 41942484.36 | 0.0142 | 0.0061 |
| Jupiter | 110126-01-28 01:25 G | 41943782.41 | 41943782.56 | 41943782.72 | 0.0529 | 0.0389 |
| Saturn | 110129-08-19 11:15 G | 41945081.84 | 41945081.97 | 41945082.14 | 0.0285 | 0.0226 |
| Saturn | 110130-09-02 05:44 G | 41945460.48 | 41945460.74 | 41945461.00 | 0.0282 | 0.0020 |
| Jupiter | 110131-07-23 13:10 G | 41945784.81 | 41945785.05 | 41945785.30 | 0.0500 | 0.0049 |
| Saturn | 110131-09-15 14:08 G | 41945839.00 | 41945839.09 | 41945839.20 | 0.0278 | 0.0254 |
| Jupiter | 110143-07-28 01:25 G | 41950172.43 | 41950172.56 | 41950172.70 | 0.0499 | 0.0396 |
| Neptune | 110143-12-28 21:34 G | 41950326.23 | 41950326.40 | 41950326.59 | 0.0090 | 0.0063 |
| Neptune | 110144-12-30 16:18 G | 41950693.97 | 41950694.18 | 41950694.42 | 0.0090 | 0.0047 |
| Saturn | 110145-02-15 15:06 G | 41950741.02 | 41950741.13 | 41950741.26 | 0.0275 | 0.0240 |
| Neptune | 110146-01-01 22:46 G | 41951061.21 | 41951061.45 | 41951061.70 | 0.0090 | 0.0018 |
| Saturn | 110146-02-28 03:34 G | 41951118.42 | 41951118.65 | 41951118.89 | 0.0278 | 0.0018 |
| Neptune | 110147-01-04 15:06 G | 41951428.87 | 41951429.13 | 41951429.40 | 0.0090 | 0.0002 |
| Saturn | 110147-03-13 01:25 G | 41951496.41 | 41951496.56 | 41951496.72 | 0.0282 | 0.0212 |
| Neptune | 110148-01-07 01:10 G | 41951796.33 | 41951796.55 | 41951796.80 | 0.0090 | 0.0027 |
| Neptune | 110149-01-08 11:44 G | 41952163.78 | 41952163.99 | 41952164.24 | 0.0090 | 0.0044 |
| Neptune | 110150-01-11 03:20 G | 41952531.50 | 41952531.64 | 41952531.79 | 0.0090 | 0.0072 |
| Neptune | 110151-01-13 09:06 G | 41952898.87 | 41952898.88 | 41952898.96 | 0.0090 | 0.0089 |
| Saturn | 110159-08-27 20:37 G | 41956047.13 | 41956047.36 | 41956047.59 | 0.0283 | 0.0093 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 110160-09-09 13:39 G | 41956425.87 | 41956426.07 | 41956426.29 | 0.0280 | 0.0155 |
| Uranus | 110162-01-04 19:54 G | 41956908.15 | 41956908.33 | 41956908.54 | 0.0136 | 0.0079 |
| Uranus | 110163-01-09 07:25 G | 41957277.57 | 41957277.81 | 41957278.08 | 0.0136 | 0.0025 |
| Uranus | 110164-01-13 14:37 G | 41957647.01 | 41957647.11 | 41957647.23 | 0.0136 | 0.0120 |
| Saturn | 110175-02-22 20:51 G | 41961705.16 | 41961705.37 | 41961705.60 | 0.0276 | 0.0122 |
| Saturn | 110176-03-06 08:22 G | 41962082.63 | 41962082.85 | 41962083.08 | 0.0279 | 0.0093 |
| Jupiter | 110185-01-17 10:18 G | 41965321.78 | 41965321.93 | 41965322.07 | 0.0525 | 0.0399 |
| Saturn | 110188-08-20 10:46 G | 41966632.79 | 41966632.95 | 41966633.13 | 0.0285 | 0.0208 |
| Saturn | 110189-09-03 10:32 G | 41967011.71 | 41967011.94 | 41967012.18 | 0.0282 | 0.0054 |
| Jupiter | 110197-01-22 00:27 G | 41969709.28 | 41969709.52 | 41969709.76 | 0.0526 | 0.0011 |
| Mars | 110201-10-23 01:39 G | 41971443.40 | 41971443.57 | 41971443.75 | 0.1592 | 0.0362 |
| Jupiter | 110202-07-18 23:58 G | 41971712.31 | 41971712.50 | 41971712.70 | 0.0502 | 0.0263 |
| Saturn | 110204-02-19 00:42 G | 41972292.40 | 41972292.53 | 41972292.66 | 0.0275 | 0.0230 |
| Saturn | 110205-03-02 08:08 G | 41972669.59 | 41972669.84 | 41972670.09 | 0.0278 | 0.0020 |
| Uranus | 110205-07-06 03:20 G | 41972795.41 | 41972795.64 | 41972795.89 | 0.0142 | 0.0046 |
| Saturn | 110206-03-14 21:20 G | 41973047.23 | 41973047.39 | 41973047.55 | 0.0282 | 0.0208 |
| Uranus | 110206-07-10 19:10 G | 41973165.07 | 41973165.30 | 41973165.53 | 0.0142 | 0.0065 |
| Jupiter | 110209-01-28 03:06 G | 41974097.49 | 41974097.63 | 41974097.78 | 0.0528 | 0.0399 |
| Jupiter | 110214-07-23 22:46 G | 41976100.22 | 41976100.45 | 41976100.69 | 0.0500 | 0.0063 |
| Pluto | 110215-02-10 22:32 G | 41976302.24 | 41976302.44 | 41976302.71 | 0.0065 | 0.0031 |
| Pluto | 110216-02-12 13:10 G | 41976668.94 | 41976669.05 | 41976669.18 | 0.0066 | 0.0057 |
| Saturn | 110218-08-29 19:25 G | 41977598.06 | 41977598.31 | 41977598.56 | 0.0283 | 0.0044 |
| Saturn | 110219-09-12 10:46 G | 41977976.80 | 41977976.95 | 41977977.12 | 0.0280 | 0.0207 |
| Neptune | 110224-06-24 08:22 G | 41979723.83 | 41979723.85 | 41979723.88 | 0.0088 | 0.0087 |
| Neptune | 110225-06-27 02:37 G | 41980091.45 | 41980091.61 | 41980091.78 | 0.0088 | 0.0066 |
| Neptune | 110226-06-29 06:42 G | 41980458.58 | 41980458.78 | 41980459.02 | 0.0088 | 0.0046 |
| Jupiter | 110226-07-28 08:08 G | 41980487.69 | 41980487.84 | 41980488.00 | 0.0499 | 0.0364 |
| Neptune | 110227-07-02 00:27 G | 41980826.26 | 41980826.52 | 41980826.78 | 0.0088 | 0.0024 |
| Neptune | 110228-07-03 07:25 G | 41981193.56 | 41981193.81 | 41981194.07 | 0.0088 | 0.0003 |
| Neptune | 110229-07-05 20:51 G | 41981561.11 | 41981561.37 | 41981561.64 | 0.0088 | 0.0019 |

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| Neptune | 110230-07-08 09:06 G | 41981928.66 | 41981928.88 | 41981929.11 | 0.0088 | 0.0041 |
| Neptune | 110231-07-10 16:32 G | 41982296.02 | 41982296.19 | 41982296.40 | 0.0088 | 0.0062 |
| Neptune | 110232-07-12 09:49 G | 41982663.84 | 41982663.91 | 41982663.99 | 0.0088 | 0.0083 |
| Saturn | 110234-02-25 02:22 G | 41983256.40 | 41983256.60 | 41983256.81 | 0.0276 | 0.0126 |
| Saturn | 110235-03-09 16:18 G | 41983633.96 | 41983634.18 | 41983634.41 | 0.0279 | 0.0106 |
| Uranus | 110246-01-06 12:56 G | 41987589.81 | 41987590.04 | 41987590.27 | 0.0136 | 0.0067 |
| Uranus | 110247-01-10 18:27 G | 41987959.04 | 41987959.27 | 41987959.52 | 0.0136 | 0.0031 |
| Saturn | 110247-08-23 20:51 G | 41988184.16 | 41988184.37 | 41988184.58 | 0.0285 | 0.0158 |
| Uranus | 110248-01-15 06:27 G | 41988328.72 | 41988328.77 | 41988328.86 | 0.0136 | 0.0131 |
| Saturn | 110248-09-05 14:22 G | 41988562.86 | 41988563.10 | 41988563.35 | 0.0282 | 0.0093 |
| Saturn | 110263-02-19 17:15 G | 41993843.09 | 41993843.22 | 41993843.36 | 0.0275 | 0.0227 |
| Saturn | 110264-03-03 06:27 G | 41994220.54 | 41994220.77 | 41994221.01 | 0.0278 | 0.0010 |
| Saturn | 110265-03-16 03:49 G | 41994598.56 | 41994598.66 | 41994598.77 | 0.0282 | 0.0254 |
| Jupiter | 110268-01-18 12:27 G | 41995636.91 | 41995637.02 | 41995637.14 | 0.0524 | 0.0448 |
| Saturn | 110276-08-16 22:32 G | 41998770.39 | 41998770.44 | 41998770.51 | 0.0286 | 0.0277 |
| Saturn | 110277-08-31 02:37 G | 41999149.37 | 41999149.61 | 41999149.85 | 0.0283 | 0.0024 |
| Saturn | 110278-09-13 19:10 G | 41999528.15 | 41999528.30 | 41999528.47 | 0.0280 | 0.0214 |
| Jupiter | 110280-01-23 04:32 G | 42000024.46 | 42000024.69 | 42000024.93 | 0.0526 | 0.0107 |
| Mars | 110280-10-25 10:03 G | 42000300.82 | 42000300.92 | 42000301.01 | 0.1594 | 0.1348 |
| Jupiter | 110285-07-18 11:30 G | 42002027.81 | 42002027.98 | 42002028.16 | 0.0502 | 0.0343 |
| Uranus | 110289-07-06 07:54 G | 42003476.59 | 42003476.83 | 42003477.09 | 0.0142 | 0.0037 |
| Uranus | 110290-07-11 12:13 G | 42003846.81 | 42003847.01 | 42003847.25 | 0.0142 | 0.0070 |
| Jupiter | 110292-01-28 03:49 G | 42004412.48 | 42004412.66 | 42004412.84 | 0.0529 | 0.0297 |
| Saturn | 110293-02-25 22:03 G | 42004807.19 | 42004807.42 | 42004807.66 | 0.0276 | 0.0081 |
| Saturn | 110294-03-10 10:18 G | 42005184.75 | 42005184.93 | 42005185.14 | 0.0279 | 0.0155 |
| Jupiter | 110297-07-23 09:20 G | 42006415.66 | 42006415.89 | 42006416.12 | 0.0500 | 0.0023 |
| Pluto | 110303-08-14 00:13 G | 42008627.26 | 42008627.51 | 42008627.78 | 0.0079 | 0.0018 |
| Saturn | 110306-08-25 13:54 G | 42009734.88 | 42009735.08 | 42009735.28 | 0.0285 | 0.0163 |
| Saturn | 110307-09-08 13:25 G | 42010113.83 | 42010114.06 | 42010114.29 | 0.0282 | 0.0086 |
| Neptune | 110307-12-30 09:49 G | 42010226.81 | 42010226.91 | 42010227.06 | 0.0090 | 0.0077 |

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| Neptune | 110308-12-31 15:20 G | 42010593.95 | 42010594.14 | 42010594.35 | 0.0090 | 0.0055 |
| Jupiter | 110309-07-28 16:32 G | 42010803.04 | 42010803.19 | 42010803.35 | 0.0499 | 0.0372 |
| Neptune | 110310-01-03 10:18 G | 42010961.70 | 42010961.93 | 42010962.18 | 0.0090 | 0.0032 |
| Neptune | 110311-01-05 16:03 G | 42011328.92 | 42011329.17 | 42011329.42 | 0.0090 | 0.0009 |
| Neptune | 110312-01-08 08:08 G | 42011696.58 | 42011696.84 | 42011697.11 | 0.0090 | 0.0014 |
| Neptune | 110313-01-09 17:44 G | 42012064.03 | 42012064.24 | 42012064.48 | 0.0090 | 0.0037 |
| Neptune | 110314-01-12 05:15 G | 42012431.55 | 42012431.72 | 42012431.95 | 0.0090 | 0.0059 |
| Neptune | 110315-01-14 20:22 G | 42012799.27 | 42012799.35 | 42012799.48 | 0.0090 | 0.0081 |
| Saturn | 110322-02-21 22:46 G | 42015394.28 | 42015394.45 | 42015394.65 | 0.0275 | 0.0180 |
| Saturn | 110323-03-06 05:15 G | 42015771.48 | 42015771.72 | 42015771.97 | 0.0278 | 0.0044 |
| Saturn | 110324-03-17 18:56 G | 42016149.24 | 42016149.29 | 42016149.37 | 0.0282 | 0.0270 |
| Uranus | 110330-01-07 21:20 G | 42018271.17 | 42018271.39 | 42018271.62 | 0.0136 | 0.0056 |
| Uranus | 110331-01-12 11:58 G | 42018640.75 | 42018641.00 | 42018641.25 | 0.0136 | 0.0036 |
| Saturn | 110335-08-19 21:20 G | 42020321.37 | 42020321.39 | 42020321.44 | 0.0286 | 0.0284 |
| Saturn | 110336-09-01 18:56 G | 42020700.04 | 42020700.29 | 42020700.55 | 0.0283 | 0.0030 |
| Saturn | 110337-09-15 11:01 G | 42021078.82 | 42021078.96 | 42021079.12 | 0.0280 | 0.0219 |
| Jupiter | 110351-01-18 13:54 G | 42025951.98 | 42025952.08 | 42025952.18 | 0.0524 | 0.0462 |
| Saturn | 110351-02-16 16:18 G | 42025981.17 | 42025981.18 | 42025981.21 | 0.0273 | 0.0272 |
| Saturn | 110352-02-29 03:06 G | 42026358.40 | 42026358.63 | 42026358.86 | 0.0276 | 0.0064 |
| Saturn | 110353-03-12 15:49 G | 42026735.97 | 42026736.16 | 42026736.38 | 0.0279 | 0.0155 |
| Jupiter | 110363-01-23 18:56 G | 42030340.06 | 42030340.29 | 42030340.52 | 0.0526 | 0.0077 |
| Saturn | 110365-08-26 18:42 G | 42031286.07 | 42031286.28 | 42031286.50 | 0.0285 | 0.0147 |
| Saturn | 110366-09-09 11:30 G | 42031664.75 | 42031664.98 | 42031665.22 | 0.0282 | 0.0114 |
| Jupiter | 110368-07-18 22:32 G | 42032343.26 | 42032343.44 | 42032343.63 | 0.0502 | 0.0326 |
| Uranus | 110373-07-08 00:56 G | 42034158.30 | 42034158.54 | 42034158.79 | 0.0142 | 0.0028 |
| Uranus | 110374-07-12 18:13 G | 42034528.04 | 42034528.26 | 42034528.49 | 0.0142 | 0.0073 |
| Jupiter | 110375-01-28 11:15 G | 42034727.79 | 42034727.97 | 42034728.17 | 0.0528 | 0.0274 |
| Jupiter | 110380-07-23 15:06 G | 42036730.91 | 42036731.13 | 42036731.36 | 0.0501 | 0.0032 |
| Saturn | 110381-02-22 14:51 G | 42036944.94 | 42036945.12 | 42036945.30 | 0.0275 | 0.0180 |
| Saturn | 110382-03-07 04:03 G | 42037322.44 | 42037322.67 | 42037322.91 | 0.0278 | 0.0036 |

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| Saturn | 110383-03-20 00:27 G | 42037700.45 | 42037700.52 | 42037700.61 | 0.0282 | 0.0266 |
| Neptune | 110389-06-27 01:39 G | 42039991.44 | 42039991.57 | 42039991.73 | 0.0088 | 0.0073 |
| Neptune | 110390-06-29 19:39 G | 42040359.15 | 42040359.32 | 42040359.54 | 0.0088 | 0.0059 |
| Neptune | 110391-07-02 00:27 G | 42040726.29 | 42040726.52 | 42040726.78 | 0.0088 | 0.0030 |
| Neptune | 110392-07-03 18:27 G | 42041094.01 | 42041094.27 | 42041094.54 | 0.0088 | 0.0015 |
| Jupiter | 110392-07-28 05:44 G | 42041118.54 | 42041118.74 | 42041118.95 | 0.0499 | 0.0288 |
| Neptune | 110393-07-06 00:56 G | 42041461.30 | 42041461.54 | 42041461.80 | 0.0088 | 0.0014 |
| Neptune | 110394-07-08 14:22 G | 42041828.85 | 42041829.10 | 42041829.36 | 0.0088 | 0.0028 |
| Saturn | 110394-08-20 18:56 G | 42041872.17 | 42041872.29 | 42041872.41 | 0.0286 | 0.0247 |
| Neptune | 110395-07-11 02:08 G | 42042196.41 | 42042196.59 | 42042196.80 | 0.0088 | 0.0056 |
| Saturn | 110395-09-03 22:18 G | 42042251.19 | 42042251.43 | 42042251.68 | 0.0283 | 0.0016 |
| Neptune | 110396-07-12 10:46 G | 42042563.79 | 42042563.95 | 42042564.11 | 0.0088 | 0.0070 |
| Saturn | 110396-09-16 13:39 G | 42042630.00 | 42042630.07 | 42042630.17 | 0.0280 | 0.0264 |
| Mars | 110406-10-23 09:34 G | 42046318.72 | 42046318.90 | 42046319.08 | 0.1587 | 0.0747 |
| Saturn | 110411-03-01 20:37 G | 42047909.12 | 42047909.36 | 42047909.60 | 0.0276 | 0.0067 |
| Saturn | 110412-03-13 09:49 G | 42048286.74 | 42048286.91 | 42048287.11 | 0.0279 | 0.0168 |
| Uranus | 110414-01-08 14:37 G | 42048952.87 | 42048953.11 | 42048953.35 | 0.0136 | 0.0048 |
| Uranus | 110415-01-12 17:58 G | 42049322.02 | 42049322.25 | 42049322.49 | 0.0136 | 0.0040 |
| Saturn | 110424-08-27 09:49 G | 42052836.69 | 42052836.91 | 42052837.14 | 0.0285 | 0.0102 |
| Saturn | 110425-09-10 09:49 G | 42053215.72 | 42053215.91 | 42053216.13 | 0.0282 | 0.0147 |
| Saturn | 110440-02-24 20:22 G | 42058496.16 | 42058496.35 | 42058496.55 | 0.0275 | 0.0167 |
| Saturn | 110441-03-08 02:08 G | 42058873.35 | 42058873.59 | 42058873.84 | 0.0278 | 0.0069 |
| Jupiter | 110446-01-23 03:34 G | 42060655.43 | 42060655.65 | 42060655.87 | 0.0525 | 0.0153 |
| Jupiter | 110451-07-19 11:58 G | 42062658.83 | 42062659.00 | 42062659.17 | 0.0503 | 0.0363 |
| Saturn | 110453-08-21 14:51 G | 42063422.96 | 42063423.12 | 42063423.29 | 0.0286 | 0.0220 |
| Saturn | 110454-09-04 12:27 G | 42063801.78 | 42063802.02 | 42063802.27 | 0.0283 | 0.0028 |
| Saturn | 110455-09-18 06:13 G | 42064180.68 | 42064180.76 | 42064180.84 | 0.0280 | 0.0261 |
| Uranus | 110456-07-03 14:08 G | 42064470.08 | 42064470.09 | 42064470.13 | 0.0142 | 0.0141 |
| Uranus | 110457-07-08 07:39 G | 42064839.56 | 42064839.82 | 42064840.09 | 0.0142 | 0.0020 |
| Jupiter | 110458-01-27 12:42 G | 42065042.82 | 42065043.03 | 42065043.23 | 0.0527 | 0.0243 |

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| Uranus | 110458-07-13 09:34 G | 42065209.69 | 42065209.90 | 42065210.10 | 0.0142 | 0.0080 |
| Pluto | 110462-02-13 17:15 G | 42066520.96 | 42066521.22 | 42066521.48 | 0.0065 | 0.0001 |
| Jupiter | 110463-07-24 01:25 G | 42067046.33 | 42067046.56 | 42067046.79 | 0.0501 | 0.0007 |
| Saturn | 110469-02-18 17:15 G | 42069083.13 | 42069083.22 | 42069083.31 | 0.0273 | 0.0249 |
| Saturn | 110470-03-03 03:34 G | 42069460.41 | 42069460.65 | 42069460.88 | 0.0276 | 0.0021 |
| Saturn | 110471-03-15 15:20 G | 42069838.00 | 42069838.14 | 42069838.31 | 0.0279 | 0.0214 |
| Neptune | 110471-12-29 11:15 G | 42070126.97 | 42070126.97 | 42070127.00 | 0.0090 | 0.0089 |
| Neptune | 110472-12-31 05:01 G | 42070494.53 | 42070494.71 | 42070494.90 | 0.0090 | 0.0060 |
| Neptune | 110474-01-02 10:03 G | 42070861.72 | 42070861.92 | 42070862.16 | 0.0090 | 0.0045 |
| Neptune | 110475-01-05 05:01 G | 42071229.47 | 42071229.71 | 42071229.98 | 0.0090 | 0.0016 |
| Jupiter | 110475-07-28 20:51 G | 42071434.18 | 42071434.37 | 42071434.56 | 0.0499 | 0.0314 |
| Neptune | 110476-01-07 10:46 G | 42071596.70 | 42071596.95 | 42071597.21 | 0.0090 | 0.0002 |
| Neptune | 110477-01-09 03:20 G | 42071964.40 | 42071964.64 | 42071964.90 | 0.0090 | 0.0029 |
| Neptune | 110478-01-11 12:13 G | 42072331.80 | 42072332.01 | 42072332.23 | 0.0090 | 0.0046 |
| Neptune | 110479-01-13 23:30 G | 42072699.36 | 42072699.48 | 42072699.65 | 0.0090 | 0.0075 |
| Saturn | 110483-08-29 13:39 G | 42074387.84 | 42074388.07 | 42074388.32 | 0.0285 | 0.0105 |
| Saturn | 110484-09-11 05:30 G | 42074766.50 | 42074766.73 | 42074766.95 | 0.0281 | 0.0138 |
| Mars | 110485-10-25 04:32 G | 42075175.52 | 42075175.69 | 42075175.86 | 0.1589 | 0.0708 |
| Uranus | 110498-01-08 18:42 G | 42079634.05 | 42079634.28 | 42079634.53 | 0.0136 | 0.0040 |
| Uranus | 110499-01-13 11:15 G | 42080003.74 | 42080003.97 | 42080004.22 | 0.0136 | 0.0044 |
| Saturn | 110499-02-25 13:54 G | 42080046.87 | 42080047.08 | 42080047.30 | 0.0275 | 0.0119 |
| Saturn | 110500-03-10 04:03 G | 42080424.46 | 42080424.67 | 42080424.90 | 0.0278 | 0.0103 |
| Saturn | 110512-08-23 14:22 G | 42084973.96 | 42084974.10 | 42084974.25 | 0.0286 | 0.0226 |
| Saturn | 110513-09-06 17:30 G | 42085352.98 | 42085353.23 | 42085353.47 | 0.0283 | 0.0030 |
| Saturn | 110514-09-20 08:22 G | 42085731.81 | 42085731.85 | 42085731.90 | 0.0280 | 0.0274 |
| Saturn | 110528-02-21 21:49 G | 42090634.25 | 42090634.41 | 42090634.57 | 0.0273 | 0.0208 |
| Jupiter | 110529-01-23 03:06 G | 42090970.43 | 42090970.63 | 42090970.84 | 0.0525 | 0.0208 |
| Saturn | 110529-03-04 23:58 G | 42091011.25 | 42091011.50 | 42091011.74 | 0.0276 | 0.0003 |
| Saturn | 110530-03-17 13:54 G | 42091388.94 | 42091389.08 | 42091389.23 | 0.0279 | 0.0217 |
| Jupiter | 110534-07-20 00:13 G | 42092974.39 | 42092974.51 | 42092974.64 | 0.0503 | 0.0427 |

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| Uranus | 110540-07-04 23:44 G | 42095151.45 | 42095151.49 | 42095151.58 | 0.0141 | 0.0137 |
| Jupiter | 110541-01-28 01:10 G | 42095358.32 | 42095358.55 | 42095358.78 | 0.0527 | 0.0158 |
| Uranus | 110541-07-09 22:32 G | 42095521.19 | 42095521.44 | 42095521.69 | 0.0142 | 0.0012 |
| Uranus | 110542-07-14 21:06 G | 42095891.17 | 42095891.38 | 42095891.59 | 0.0142 | 0.0087 |
| Saturn | 110542-08-31 08:51 G | 42095938.64 | 42095938.87 | 42095939.11 | 0.0285 | 0.0085 |
| Saturn | 110543-09-14 07:54 G | 42096317.65 | 42096317.83 | 42096318.03 | 0.0281 | 0.0174 |
| Jupiter | 110546-07-24 07:54 G | 42097361.60 | 42097361.83 | 42097362.07 | 0.0502 | 0.0090 |
| Pluto | 110549-08-14 17:01 G | 42098479.11 | 42098479.21 | 42098479.37 | 0.0079 | 0.0068 |
| Pluto | 110550-08-17 02:08 G | 42098846.53 | 42098846.59 | 42098846.70 | 0.0078 | 0.0075 |
| Neptune | 110554-06-29 20:08 G | 42100259.15 | 42100259.34 | 42100259.54 | 0.0088 | 0.0059 |
| Neptune | 110555-07-02 13:10 G | 42100626.85 | 42100627.05 | 42100627.28 | 0.0088 | 0.0047 |
| Neptune | 110556-07-03 17:44 G | 42100994.00 | 42100994.24 | 42100994.51 | 0.0088 | 0.0017 |
| Neptune | 110557-07-06 12:27 G | 42101361.76 | 42101362.02 | 42101362.29 | 0.0088 | 0.0004 |
| Saturn | 110558-02-27 23:30 G | 42101598.26 | 42101598.48 | 42101598.71 | 0.0275 | 0.0110 |
| Neptune | 110558-07-08 17:44 G | 42101729.01 | 42101729.24 | 42101729.50 | 0.0088 | 0.0027 |
| Jupiter | 110558-07-29 04:32 G | 42101749.49 | 42101749.69 | 42101749.89 | 0.0500 | 0.0266 |
| Saturn | 110559-03-12 05:44 G | 42101975.51 | 42101975.74 | 42101975.98 | 0.0278 | 0.0101 |
| Neptune | 110559-07-11 09:34 G | 42102096.68 | 42102096.90 | 42102097.16 | 0.0088 | 0.0040 |
| Neptune | 110560-07-12 19:10 G | 42102464.16 | 42102464.30 | 42102464.46 | 0.0088 | 0.0070 |
| Neptune | 110561-07-15 05:15 G | 42102831.66 | 42102831.72 | 42102831.84 | 0.0088 | 0.0083 |
| Saturn | 110571-08-25 14:37 G | 42106524.92 | 42106525.11 | 42106525.31 | 0.0286 | 0.0187 |
| Saturn | 110572-09-07 10:46 G | 42106903.71 | 42106903.95 | 42106904.20 | 0.0283 | 0.0078 |
| Uranus | 110582-01-10 11:44 G | 42110315.76 | 42110315.99 | 42110316.24 | 0.0136 | 0.0034 |
| Uranus | 110583-01-14 14:51 G | 42110684.89 | 42110685.12 | 42110685.37 | 0.0136 | 0.0048 |
| Saturn | 110587-02-22 21:34 G | 42112185.25 | 42112185.40 | 42112185.55 | 0.0274 | 0.0208 |
| Saturn | 110588-03-06 09:49 G | 42112562.67 | 42112562.91 | 42112563.14 | 0.0276 | 0.0005 |
| Saturn | 110589-03-19 00:27 G | 42112940.39 | 42112940.52 | 42112940.66 | 0.0280 | 0.0233 |
| Saturn | 110601-09-02 17:58 G | 42117490.00 | 42117490.25 | 42117490.50 | 0.0284 | 0.0038 |
| Saturn | 110602-09-16 09:34 G | 42117868.74 | 42117868.90 | 42117869.08 | 0.0281 | 0.0211 |
| Jupiter | 110612-01-24 06:42 G | 42121285.58 | 42121285.78 | 42121286.00 | 0.0525 | 0.0194 |

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| Saturn | 110617-03-01 21:20 G | 42123149.18 | 42123149.39 | 42123149.63 | 0.0275 | 0.0104 |
| Jupiter | 110617-07-20 00:27 G | 42123289.40 | 42123289.52 | 42123289.64 | 0.0504 | 0.0420 |
| Saturn | 110618-03-14 10:46 G | 42123526.75 | 42123526.95 | 42123527.16 | 0.0279 | 0.0130 |
| Jupiter | 110624-01-29 11:01 G | 42125673.74 | 42125673.96 | 42125674.18 | 0.0526 | 0.0152 |
| Uranus | 110624-07-06 10:03 G | 42125832.84 | 42125832.92 | 42125833.03 | 0.0141 | 0.0130 |
| Uranus | 110625-07-11 13:10 G | 42126202.79 | 42126203.05 | 42126203.32 | 0.0142 | 0.0009 |
| Uranus | 110626-07-16 05:01 G | 42126572.55 | 42126572.71 | 42126572.90 | 0.0142 | 0.0102 |
| Jupiter | 110629-07-24 18:56 G | 42127677.05 | 42127677.29 | 42127677.53 | 0.0502 | 0.0121 |
| Saturn | 110630-08-27 18:13 G | 42128076.06 | 42128076.26 | 42128076.46 | 0.0286 | 0.0151 |
| Saturn | 110631-09-10 20:22 G | 42128455.13 | 42128455.35 | 42128455.58 | 0.0282 | 0.0104 |
| Jupiter | 110636-02-02 19:39 G | 42130061.22 | 42130061.32 | 42130061.42 | 0.0528 | 0.0476 |
| Neptune | 110637-01-01 10:03 G | 42130394.79 | 42130394.92 | 42130395.08 | 0.0090 | 0.0075 |
| Neptune | 110638-01-03 19:39 G | 42130762.14 | 42130762.32 | 42130762.55 | 0.0090 | 0.0050 |
| Neptune | 110639-01-06 07:10 G | 42131129.56 | 42131129.80 | 42131130.05 | 0.0090 | 0.0031 |
| Neptune | 110640-01-08 22:46 G | 42131497.20 | 42131497.45 | 42131497.70 | 0.0090 | 0.0004 |
| Neptune | 110641-01-10 05:30 G | 42131864.47 | 42131864.73 | 42131864.99 | 0.0090 | 0.0015 |
| Jupiter | 110641-07-29 06:56 G | 42132064.58 | 42132064.79 | 42132065.01 | 0.0501 | 0.0197 |
| Neptune | 110642-01-12 23:44 G | 42132232.27 | 42132232.49 | 42132232.72 | 0.0090 | 0.0042 |
| Neptune | 110643-01-15 04:32 G | 42132599.51 | 42132599.69 | 42132599.89 | 0.0090 | 0.0060 |
| Neptune | 110644-01-17 22:32 G | 42132967.39 | 42132967.44 | 42132967.54 | 0.0090 | 0.0086 |
| Saturn | 110646-02-25 09:34 G | 42133736.74 | 42133736.90 | 42133737.07 | 0.0274 | 0.0195 |
| Saturn | 110647-03-09 13:39 G | 42134113.82 | 42134114.07 | 42134114.32 | 0.0277 | 0.0038 |
| Saturn | 110659-08-21 18:56 G | 42138662.22 | 42138662.29 | 42138662.38 | 0.0287 | 0.0272 |
| Saturn | 110660-09-03 18:13 G | 42139041.01 | 42139041.26 | 42139041.51 | 0.0284 | 0.0021 |
| Saturn | 110661-09-17 13:25 G | 42139419.93 | 42139420.06 | 42139420.22 | 0.0281 | 0.0221 |
| Uranus | 110666-01-11 19:39 G | 42140997.08 | 42140997.32 | 42140997.58 | 0.0136 | 0.0033 |
| Uranus | 110667-01-16 05:15 G | 42141366.51 | 42141366.72 | 42141366.94 | 0.0136 | 0.0062 |
| Saturn | 110676-03-03 10:46 G | 42144700.72 | 42144700.95 | 42144701.18 | 0.0276 | 0.0063 |
| Saturn | 110677-03-15 23:01 G | 42145078.27 | 42145078.46 | 42145078.65 | 0.0279 | 0.0177 |
| Mars | 110682-04-25 21:34 G | 42146945.27 | 42146945.40 | 42146945.52 | 0.1956 | 0.1424 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 110689-08-29 06:27 G | 42149627.56 | 42149627.77 | 42149628.00 | 0.0285 | 0.0138 |
| Saturn | 110690-09-12 01:10 G | 42150006.31 | 42150006.55 | 42150006.79 | 0.0282 | 0.0107 |
| Mars | 110690-10-26 16:18 G | 42150051.00 | 42150051.18 | 42150051.36 | 0.1585 | 0.0104 |
| Jupiter | 110695-01-23 08:08 G | 42151600.64 | 42151600.84 | 42151601.04 | 0.0523 | 0.0289 |
| Jupiter | 110700-07-20 02:22 G | 42153604.50 | 42153604.60 | 42153604.70 | 0.0505 | 0.0454 |
| Saturn | 110705-02-27 11:01 G | 42155287.76 | 42155287.96 | 42155288.17 | 0.0275 | 0.0152 |
| Saturn | 110706-03-11 22:18 G | 42155665.22 | 42155665.43 | 42155665.66 | 0.0277 | 0.0084 |
| Jupiter | 110707-01-29 04:32 G | 42155988.47 | 42155988.69 | 42155988.90 | 0.0526 | 0.0107 |
| Pluto | 110708-02-18 06:42 G | 42156373.63 | 42156373.78 | 42156374.00 | 0.0065 | 0.0044 |
| Uranus | 110708-07-08 04:18 G | 42156514.54 | 42156514.68 | 42156514.83 | 0.0141 | 0.0116 |
| Pluto | 110709-02-18 19:10 G | 42156740.12 | 42156740.30 | 42156740.51 | 0.0066 | 0.0044 |
| Uranus | 110709-07-12 19:10 G | 42156884.05 | 42156884.30 | 42156884.57 | 0.0142 | 0.0010 |
| Uranus | 110710-07-17 23:44 G | 42157254.35 | 42157254.49 | 42157254.64 | 0.0142 | 0.0115 |
| Jupiter | 110712-07-25 00:56 G | 42157992.31 | 42157992.54 | 42157992.76 | 0.0503 | 0.0113 |
| Neptune | 110718-07-01 02:51 G | 42160159.50 | 42160159.62 | 42160159.76 | 0.0088 | 0.0075 |
| Saturn | 110718-08-24 07:25 G | 42160213.73 | 42160213.81 | 42160213.91 | 0.0287 | 0.0265 |
| Jupiter | 110719-02-03 03:20 G | 42160376.54 | 42160376.64 | 42160376.74 | 0.0528 | 0.0473 |
| Neptune | 110719-07-03 20:22 G | 42160527.14 | 42160527.35 | 42160527.57 | 0.0088 | 0.0050 |
| Saturn | 110719-09-07 11:44 G | 42160592.75 | 42160592.99 | 42160593.23 | 0.0284 | 0.0014 |
| Neptune | 110720-07-05 02:51 G | 42160894.41 | 42160894.62 | 42160894.87 | 0.0088 | 0.0033 |
| Saturn | 110720-09-20 05:15 G | 42160971.59 | 42160971.72 | 42160971.88 | 0.0280 | 0.0230 |
| Neptune | 110721-07-07 16:18 G | 42161261.92 | 42161262.18 | 42161262.45 | 0.0088 | 0.0007 |
| Neptune | 110722-07-10 04:03 G | 42161629.43 | 42161629.67 | 42161629.93 | 0.0088 | 0.0012 |
| Neptune | 110723-07-12 12:42 G | 42161996.79 | 42161997.03 | 42161997.27 | 0.0088 | 0.0037 |
| Neptune | 110724-07-14 05:01 G | 42162364.54 | 42162364.71 | 42162364.93 | 0.0088 | 0.0055 |
| Jupiter | 110724-07-29 09:20 G | 42162379.67 | 42162379.89 | 42162380.12 | 0.0501 | 0.0186 |
| Neptune | 110725-07-16 10:03 G | 42162731.84 | 42162731.92 | 42162732.06 | 0.0088 | 0.0080 |
| Saturn | 110734-02-22 14:37 G | 42165875.01 | 42165875.11 | 42165875.22 | 0.0273 | 0.0244 |
| Saturn | 110735-03-06 16:18 G | 42166251.93 | 42166252.18 | 42166252.43 | 0.0276 | 0.0021 |
| Saturn | 110736-03-18 02:37 G | 42166629.46 | 42166629.61 | 42166629.79 | 0.0279 | 0.0204 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 110736-08-03 03:34 G | 42166767.59 | 42166767.65 | 42166767.73 | 0.0499 | 0.0476 |
| Saturn | 110748-08-31 11:44 G | 42171178.78 | 42171178.99 | 42171179.22 | 0.0285 | 0.0127 |
| Uranus | 110749-01-08 23:30 G | 42171309.40 | 42171309.48 | 42171309.59 | 0.0137 | 0.0126 |
| Saturn | 110749-09-14 11:15 G | 42171557.76 | 42171557.97 | 42171558.19 | 0.0282 | 0.0129 |
| Uranus | 110750-01-13 04:18 G | 42171678.45 | 42171678.68 | 42171678.92 | 0.0136 | 0.0035 |
| Uranus | 110751-01-17 19:39 G | 42172048.12 | 42172048.32 | 42172048.55 | 0.0136 | 0.0074 |
| Saturn | 110764-03-01 02:51 G | 42176839.41 | 42176839.62 | 42176839.84 | 0.0275 | 0.0114 |
| Saturn | 110765-03-13 12:42 G | 42177216.80 | 42177217.03 | 42177217.26 | 0.0278 | 0.0103 |
| Mars | 110769-10-29 21:49 G | 42178908.40 | 42178908.41 | 42178908.42 | 0.1587 | 0.1583 |
| Saturn | 110777-08-26 00:42 G | 42181765.41 | 42181765.53 | 42181765.69 | 0.0286 | 0.0239 |
| Jupiter | 110778-01-23 13:39 G | 42181915.91 | 42181916.07 | 42181916.23 | 0.0523 | 0.0380 |
| Saturn | 110778-09-08 20:51 G | 42182144.12 | 42182144.37 | 42182144.63 | 0.0283 | 0.0025 |
| Saturn | 110779-09-22 11:01 G | 42182522.91 | 42182522.96 | 42182523.02 | 0.0280 | 0.0273 |
| Jupiter | 110790-01-28 03:34 G | 42186303.42 | 42186303.65 | 42186303.88 | 0.0525 | 0.0006 |
| Uranus | 110792-07-08 09:20 G | 42187195.74 | 42187195.89 | 42187196.09 | 0.0141 | 0.0105 |
| Saturn | 110793-02-23 17:44 G | 42187426.10 | 42187426.24 | 42187426.40 | 0.0274 | 0.0214 |
| Uranus | 110793-07-13 10:03 G | 42187565.68 | 42187565.92 | 42187566.17 | 0.0142 | 0.0007 |
| Saturn | 110794-03-08 04:46 G | 42187803.47 | 42187803.70 | 42187803.94 | 0.0277 | 0.0010 |
| Uranus | 110794-07-18 06:13 G | 42187935.64 | 42187935.76 | 42187935.92 | 0.0142 | 0.0120 |
| Saturn | 110795-03-20 21:49 G | 42188181.27 | 42188181.41 | 42188181.58 | 0.0280 | 0.0210 |
| Jupiter | 110795-07-24 20:51 G | 42188307.16 | 42188307.37 | 42188307.58 | 0.0503 | 0.0196 |
| Pluto | 110796-08-19 03:20 G | 42188698.38 | 42188698.64 | 42188698.91 | 0.0079 | 0.0006 |
| Neptune | 110801-01-01 12:56 G | 42190294.98 | 42190295.04 | 42190295.16 | 0.0089 | 0.0084 |
| Neptune | 110802-01-04 07:54 G | 42190662.65 | 42190662.83 | 42190663.03 | 0.0090 | 0.0060 |
| Jupiter | 110802-02-02 08:22 G | 42190691.71 | 42190691.85 | 42190691.99 | 0.0527 | 0.0413 |
| Neptune | 110803-01-06 12:56 G | 42191029.82 | 42191030.04 | 42191030.28 | 0.0090 | 0.0038 |
| Neptune | 110804-01-09 07:39 G | 42191397.57 | 42191397.82 | 42191398.08 | 0.0090 | 0.0014 |
| Neptune | 110805-01-10 14:08 G | 42191764.85 | 42191765.09 | 42191765.34 | 0.0090 | 0.0008 |
| Neptune | 110806-01-13 05:01 G | 42192132.47 | 42192132.71 | 42192132.96 | 0.0090 | 0.0031 |
| Neptune | 110807-01-15 15:34 G | 42192499.96 | 42192500.15 | 42192500.36 | 0.0090 | 0.0052 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 110807-07-29 15:06 G | 42192694.90 | 42192695.13 | 42192695.37 | 0.0502 | 0.0161 |
| Saturn | 110807-09-03 09:34 G | 42192730.66 | 42192730.90 | 42192731.14 | 0.0285 | 0.0077 |
| Neptune | 110808-01-18 01:10 G | 42192867.44 | 42192867.55 | 42192867.72 | 0.0090 | 0.0076 |
| Saturn | 110808-09-16 04:32 G | 42193109.51 | 42193109.69 | 42193109.90 | 0.0281 | 0.0180 |
| Jupiter | 110819-08-03 00:13 G | 42197082.45 | 42197082.51 | 42197082.58 | 0.0500 | 0.0480 |
| Saturn | 110823-03-03 08:37 G | 42198390.64 | 42198390.86 | 42198391.10 | 0.0276 | 0.0110 |
| Saturn | 110824-03-14 18:42 G | 42198768.07 | 42198768.28 | 42198768.51 | 0.0278 | 0.0110 |
| Uranus | 110833-01-09 04:46 G | 42201990.58 | 42201990.70 | 42201990.85 | 0.0137 | 0.0115 |
| Uranus | 110834-01-13 22:03 G | 42202360.19 | 42202360.42 | 42202360.68 | 0.0136 | 0.0032 |
| Uranus | 110835-01-18 01:10 G | 42202729.35 | 42202729.55 | 42202729.76 | 0.0136 | 0.0081 |
| Saturn | 110836-08-27 13:25 G | 42203316.88 | 42203317.06 | 42203317.25 | 0.0286 | 0.0182 |
| Saturn | 110837-09-10 15:20 G | 42203695.91 | 42203696.14 | 42203696.37 | 0.0283 | 0.0078 |
| Saturn | 110852-02-26 11:15 G | 42208977.83 | 42208977.97 | 42208978.13 | 0.0274 | 0.0211 |
| Saturn | 110853-03-09 17:15 G | 42209354.97 | 42209355.22 | 42209355.47 | 0.0277 | 0.0007 |
| Saturn | 110854-03-22 03:20 G | 42209732.53 | 42209732.64 | 42209732.78 | 0.0280 | 0.0242 |
| Jupiter | 110861-01-22 13:25 G | 42212230.92 | 42212231.06 | 42212231.22 | 0.0523 | 0.0380 |
| Saturn | 110866-09-04 18:42 G | 42214282.02 | 42214282.28 | 42214282.53 | 0.0284 | 0.0031 |
| Saturn | 110867-09-18 13:10 G | 42214660.90 | 42214661.05 | 42214661.21 | 0.0281 | 0.0216 |
| Jupiter | 110873-01-27 04:32 G | 42216618.45 | 42216618.69 | 42216618.93 | 0.0524 | 0.0056 |
| Uranus | 110876-07-08 20:51 G | 42217877.20 | 42217877.37 | 42217877.56 | 0.0141 | 0.0098 |
| Uranus | 110877-07-13 22:03 G | 42218247.16 | 42218247.42 | 42218247.69 | 0.0142 | 0.0003 |
| Uranus | 110878-07-18 15:49 G | 42218617.05 | 42218617.16 | 42218617.31 | 0.0142 | 0.0121 |
| Jupiter | 110878-07-23 17:58 G | 42218622.06 | 42218622.25 | 42218622.45 | 0.0504 | 0.0279 |
| Saturn | 110882-03-04 22:32 G | 42219942.22 | 42219942.44 | 42219942.66 | 0.0276 | 0.0088 |
| Neptune | 110882-06-30 14:08 G | 42220060.02 | 42220060.09 | 42220060.20 | 0.0088 | 0.0082 |
| Saturn | 110883-03-17 13:25 G | 42220319.86 | 42220320.06 | 42220320.27 | 0.0279 | 0.0150 |
| Neptune | 110883-07-02 21:49 G | 42220427.25 | 42220427.41 | 42220427.63 | 0.0088 | 0.0061 |
| Neptune | 110884-07-04 15:06 G | 42220794.91 | 42220795.13 | 42220795.37 | 0.0088 | 0.0038 |
| Jupiter | 110885-02-01 00:13 G | 42221006.33 | 42221006.51 | 42221006.70 | 0.0526 | 0.0290 |
| Neptune | 110885-07-06 19:54 G | 42221162.08 | 42221162.33 | 42221162.59 | 0.0088 | 0.0017 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 110886-07-09 14:22 G | 42221529.85 | 42221530.10 | 42221530.37 | 0.0088 | 0.0005 |
| Neptune | 110887-07-11 19:25 G | 42221897.08 | 42221897.31 | 42221897.56 | 0.0088 | 0.0026 |
| Neptune | 110888-07-13 11:44 G | 42222264.77 | 42222264.99 | 42222265.22 | 0.0088 | 0.0047 |
| Neptune | 110889-07-15 20:37 G | 42222632.21 | 42222632.36 | 42222632.52 | 0.0088 | 0.0069 |
| Jupiter | 110890-07-28 16:32 G | 42223009.96 | 42223010.19 | 42223010.42 | 0.0502 | 0.0060 |
| Saturn | 110895-08-30 13:39 G | 42224868.86 | 42224869.07 | 42224869.29 | 0.0286 | 0.0146 |
| Mars | 110895-10-27 06:13 G | 42224926.62 | 42224926.76 | 42224926.90 | 0.1582 | 0.1092 |
| Saturn | 110896-09-12 09:49 G | 42225247.67 | 42225247.91 | 42225248.15 | 0.0282 | 0.0103 |
| Jupiter | 110902-08-03 01:25 G | 42227397.43 | 42227397.56 | 42227397.70 | 0.0500 | 0.0417 |
| Saturn | 110911-02-28 15:34 G | 42230528.97 | 42230529.15 | 42230529.34 | 0.0274 | 0.0182 |
| Saturn | 110912-03-12 00:27 G | 42230906.30 | 42230906.52 | 42230906.76 | 0.0277 | 0.0054 |
| Uranus | 110917-01-10 20:22 G | 42232672.23 | 42232672.35 | 42232672.52 | 0.0137 | 0.0111 |
| Uranus | 110918-01-15 03:34 G | 42233041.40 | 42233041.65 | 42233041.91 | 0.0137 | 0.0022 |
| Uranus | 110919-01-19 17:01 G | 42233411.02 | 42233411.21 | 42233411.41 | 0.0136 | 0.0081 |
| Saturn | 110924-08-24 09:06 G | 42235454.82 | 42235454.88 | 42235454.97 | 0.0287 | 0.0272 |
| Saturn | 110925-09-07 14:37 G | 42235833.87 | 42235834.11 | 42235834.35 | 0.0284 | 0.0019 |
| Saturn | 110926-09-21 11:15 G | 42236212.83 | 42236212.97 | 42236213.12 | 0.0281 | 0.0223 |
| Saturn | 110941-03-07 07:25 G | 42241493.56 | 42241493.81 | 42241494.06 | 0.0276 | 0.0042 |
| Saturn | 110942-03-19 16:03 G | 42241871.01 | 42241871.17 | 42241871.35 | 0.0279 | 0.0196 |
| Jupiter | 110944-01-23 06:42 G | 42242545.68 | 42242545.78 | 42242545.90 | 0.0522 | 0.0452 |
| Saturn | 110954-09-01 22:46 G | 42246420.23 | 42246420.45 | 42246420.67 | 0.0285 | 0.0138 |
| Pluto | 110955-02-21 09:34 G | 42246592.65 | 42246592.90 | 42246593.14 | 0.0065 | 0.0012 |
| Saturn | 110955-09-15 20:37 G | 42246799.14 | 42246799.36 | 42246799.59 | 0.0282 | 0.0112 |
| Jupiter | 110956-01-28 06:27 G | 42246933.54 | 42246933.77 | 42246934.00 | 0.0524 | 0.0076 |
| Uranus | 110960-07-10 12:27 G | 42248558.83 | 42248559.02 | 42248559.20 | 0.0141 | 0.0098 |
| Uranus | 110961-07-15 02:51 G | 42248928.36 | 42248928.62 | 42248928.87 | 0.0141 | 0.0015 |
| Jupiter | 110961-07-24 01:10 G | 42248937.35 | 42248937.55 | 42248937.76 | 0.0504 | 0.0273 |
| Uranus | 110962-07-20 07:25 G | 42249298.69 | 42249298.81 | 42249298.97 | 0.0142 | 0.0119 |
| Neptune | 110965-01-01 22:03 G | 42250195.42 | 42250195.42 | 42250195.42 | 0.0089 | 0.0089 |
| Neptune | 110966-01-04 12:56 G | 42250562.90 | 42250563.04 | 42250563.22 | 0.0089 | 0.0072 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Mars | 110966-04-25 23:01 G | 42250674.27 | 42250674.46 | 42250674.65 | 0.1961 | 0.0853 |
| Neptune | 110967-01-06 23:58 G | 42250930.30 | 42250930.50 | 42250930.73 | 0.0090 | 0.0045 |
| Neptune | 110968-01-09 11:01 G | 42251297.72 | 42251297.96 | 42251298.22 | 0.0090 | 0.0027 |
| Jupiter | 110968-02-01 20:51 G | 42251321.18 | 42251321.37 | 42251321.57 | 0.0526 | 0.0271 |
| Neptune | 110969-01-11 03:20 G | 42251665.39 | 42251665.64 | 42251665.89 | 0.0090 | 0.0002 |
| Neptune | 110970-01-13 09:20 G | 42252032.65 | 42252032.89 | 42252033.15 | 0.0090 | 0.0019 |
| Saturn | 110970-03-02 05:15 G | 42252080.52 | 42252080.72 | 42252080.93 | 0.0274 | 0.0137 |
| Neptune | 110971-01-16 04:03 G | 42252400.46 | 42252400.67 | 42252400.89 | 0.0090 | 0.0047 |
| Saturn | 110971-03-14 16:18 G | 42252457.95 | 42252458.18 | 42252458.41 | 0.0277 | 0.0091 |
| Neptune | 110972-01-18 08:37 G | 42252767.71 | 42252767.86 | 42252768.06 | 0.0090 | 0.0065 |
| Jupiter | 110973-07-28 13:54 G | 42253324.85 | 42253325.08 | 42253325.31 | 0.0502 | 0.0017 |
| Mars | 110974-10-30 02:37 G | 42253783.42 | 42253783.61 | 42253783.81 | 0.1584 | 0.0454 |
| Saturn | 110983-08-27 04:46 G | 42257006.62 | 42257006.70 | 42257006.82 | 0.0287 | 0.0262 |
| Saturn | 110984-09-09 03:49 G | 42257385.40 | 42257385.66 | 42257385.92 | 0.0284 | 0.0004 |
| Jupiter | 110985-08-02 07:39 G | 42257712.64 | 42257712.82 | 42257713.01 | 0.0501 | 0.0321 |
| Saturn | 110985-09-22 17:58 G | 42257764.13 | 42257764.25 | 42257764.37 | 0.0280 | 0.0245 |
| Saturn | 110999-02-25 04:32 G | 42262667.58 | 42262667.69 | 42262667.84 | 0.0274 | 0.0230 |
| Saturn | 111000-03-09 12:56 G | 42263044.80 | 42263045.04 | 42263045.27 | 0.0277 | 0.0014 |

112TH MILLENNIUM CE

This is a list of transits of Moon in the 112th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|----------------------|-------------|-------------|-------------|--------|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Uranus | 111001-01-12 05:15 G | 42263353.59 | 42263353.72 | 42263353.89 | 0.0137 | 0.0112 | | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 111001-03-22 06:13 G | 42263422.61 | 42263422.76 | 42263422.92 | 0.0280 | 0.0208 |
| Uranus | 111002-01-16 13:54 G | 42263722.84 | 42263723.08 | 42263723.33 | 0.0137 | 0.0011 |
| Uranus | 111003-01-21 02:37 G | 42264092.41 | 42264092.61 | 42264092.83 | 0.0136 | 0.0078 |
| Saturn | 111013-09-04 18:13 G | 42267972.05 | 42267972.26 | 42267972.49 | 0.0285 | 0.0112 |
| Saturn | 111014-09-18 16:32 G | 42268350.99 | 42268351.19 | 42268351.41 | 0.0282 | 0.0145 |
| Saturn | 111029-03-04 10:03 G | 42273631.70 | 42273631.92 | 42273632.16 | 0.0274 | 0.0119 |
| Saturn | 111030-03-16 16:18 G | 42274008.96 | 42274009.18 | 42274009.42 | 0.0277 | 0.0094 |
| Jupiter | 111039-01-28 09:20 G | 42277248.68 | 42277248.89 | 42277249.10 | 0.0524 | 0.0163 |
| Pluto | 111042-08-22 15:49 G | 42278550.99 | 42278551.16 | 42278551.38 | 0.0079 | 0.0050 |
| Saturn | 111042-08-29 09:20 G | 42278557.74 | 42278557.89 | 42278558.05 | 0.0287 | 0.0223 |
| Saturn | 111043-09-12 12:27 G | 42278936.78 | 42278937.02 | 42278937.26 | 0.0283 | 0.0041 |
| Uranus | 111044-07-11 16:46 G | 42279240.04 | 42279240.20 | 42279240.41 | 0.0141 | 0.0098 |
| Jupiter | 111044-07-24 06:27 G | 42279252.60 | 42279252.77 | 42279252.95 | 0.0505 | 0.0335 |
| Uranus | 111045-07-16 20:37 G | 42279610.11 | 42279610.36 | 42279610.61 | 0.0141 | 0.0026 |
| Neptune | 111046-07-02 01:39 G | 42279960.57 | 42279960.57 | 42279960.60 | 0.0088 | 0.0088 |
| Uranus | 111046-07-21 13:10 G | 42279979.93 | 42279980.05 | 42279980.19 | 0.0142 | 0.0123 |
| Neptune | 111047-07-04 05:58 G | 42280327.63 | 42280327.75 | 42280327.93 | 0.0088 | 0.0071 |
| Neptune | 111048-07-05 22:32 G | 42280695.23 | 42280695.44 | 42280695.69 | 0.0088 | 0.0045 |
| Neptune | 111049-07-08 06:56 G | 42281062.56 | 42281062.79 | 42281063.03 | 0.0088 | 0.0028 |
| Neptune | 111050-07-10 18:13 G | 42281429.99 | 42281430.26 | 42281430.53 | 0.0088 | 0.0003 |
| Jupiter | 111051-02-02 03:06 G | 42281636.42 | 42281636.63 | 42281636.85 | 0.0525 | 0.0240 |
| Neptune | 111051-07-13 07:54 G | 42281797.59 | 42281797.83 | 42281798.09 | 0.0088 | 0.0016 |
| Neptune | 111052-07-14 14:22 G | 42282164.89 | 42282165.10 | 42282165.36 | 0.0088 | 0.0042 |
| Neptune | 111053-07-17 08:08 G | 42282532.68 | 42282532.84 | 42282533.06 | 0.0088 | 0.0060 |
| Neptune | 111054-07-19 12:42 G | 42282899.99 | 42282900.03 | 42282900.12 | 0.0088 | 0.0085 |
| Jupiter | 111056-07-28 12:42 G | 42283639.79 | 42283640.03 | 42283640.27 | 0.0503 | 0.0010 |
| Saturn | 111058-02-27 15:34 G | 42284219.02 | 42284219.15 | 42284219.29 | 0.0274 | 0.0221 |
| Saturn | 111059-03-11 23:15 G | 42284596.23 | 42284596.47 | 42284596.72 | 0.0277 | 0.0014 |
| Saturn | 111060-03-23 08:22 G | 42284973.70 | 42284973.85 | 42284974.02 | 0.0280 | 0.0211 |
| Jupiter | 111068-08-02 11:44 G | 42288027.81 | 42288027.99 | 42288028.17 | 0.0501 | 0.0317 |

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| Saturn | 111072-09-06 01:25 G | 42289523.31 | 42289523.56 | 42289523.81 | 0.0285 | 0.0060 |
| Saturn | 111073-09-19 19:10 G | 42289902.13 | 42289902.30 | 42289902.49 | 0.0282 | 0.0196 |
| Uranus | 111085-01-12 09:34 G | 42294034.79 | 42294034.90 | 42294035.05 | 0.0137 | 0.0116 |
| Uranus | 111086-01-17 03:34 G | 42294404.39 | 42294404.65 | 42294404.90 | 0.0137 | 0.0004 |
| Uranus | 111087-01-21 06:56 G | 42294773.60 | 42294773.79 | 42294774.00 | 0.0136 | 0.0080 |
| Saturn | 111088-03-05 15:20 G | 42295182.93 | 42295183.14 | 42295183.36 | 0.0274 | 0.0116 |
| Saturn | 111089-03-18 04:46 G | 42295560.48 | 42295560.70 | 42295560.92 | 0.0278 | 0.0108 |
| Saturn | 111101-09-01 00:42 G | 42300109.34 | 42300109.53 | 42300109.72 | 0.0287 | 0.0175 |
| Saturn | 111102-09-15 00:56 G | 42300488.30 | 42300488.54 | 42300488.79 | 0.0283 | 0.0082 |
| Saturn | 111117-03-01 14:37 G | 42305769.96 | 42305770.11 | 42305770.27 | 0.0274 | 0.0214 |
| Saturn | 111118-03-13 19:39 G | 42306147.08 | 42306147.32 | 42306147.56 | 0.0277 | 0.0010 |
| Saturn | 111119-03-26 12:27 G | 42306524.92 | 42306525.02 | 42306525.13 | 0.0280 | 0.0250 |
| Jupiter | 111122-01-28 07:39 G | 42307563.62 | 42307563.82 | 42307564.02 | 0.0523 | 0.0232 |
| Jupiter | 111127-07-25 07:10 G | 42309567.68 | 42309567.80 | 42309567.93 | 0.0506 | 0.0422 |
| Uranus | 111128-07-13 07:39 G | 42309921.65 | 42309921.82 | 42309922.02 | 0.0141 | 0.0095 |
| Uranus | 111129-07-18 04:32 G | 42310291.44 | 42310291.69 | 42310291.96 | 0.0141 | 0.0030 |
| Neptune | 111130-01-05 17:30 G | 42310463.11 | 42310463.23 | 42310463.40 | 0.0090 | 0.0075 |
| Uranus | 111130-07-23 01:25 G | 42310661.50 | 42310661.56 | 42310661.65 | 0.0142 | 0.0135 |
| Saturn | 111130-08-26 00:27 G | 42310695.52 | 42310695.52 | 42310695.55 | 0.0288 | 0.0287 |
| Neptune | 111131-01-08 12:13 G | 42310830.85 | 42310831.01 | 42310831.22 | 0.0090 | 0.0061 |
| Saturn | 111131-09-09 07:39 G | 42311074.58 | 42311074.82 | 42311075.06 | 0.0285 | 0.0031 |
| Neptune | 111132-01-10 17:30 G | 42311198.01 | 42311198.23 | 42311198.48 | 0.0090 | 0.0030 |
| Saturn | 111132-09-22 07:39 G | 42311453.67 | 42311453.82 | 42311453.99 | 0.0282 | 0.0211 |
| Neptune | 111133-01-12 11:58 G | 42311565.74 | 42311566.00 | 42311566.26 | 0.0090 | 0.0015 |
| Neptune | 111134-01-14 19:10 G | 42311933.06 | 42311933.30 | 42311933.55 | 0.0090 | 0.0017 |
| Jupiter | 111134-02-02 06:27 G | 42311951.54 | 42311951.77 | 42311951.99 | 0.0525 | 0.0123 |
| Neptune | 111135-01-17 08:51 G | 42312300.64 | 42312300.87 | 42312301.14 | 0.0090 | 0.0032 |
| Neptune | 111136-01-19 21:20 G | 42312668.22 | 42312668.39 | 42312668.58 | 0.0090 | 0.0062 |
| Neptune | 111137-01-21 06:13 G | 42313035.65 | 42313035.76 | 42313035.92 | 0.0090 | 0.0076 |
| Jupiter | 111139-07-30 02:08 G | 42313955.35 | 42313955.59 | 42313955.84 | 0.0503 | 0.0059 |

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| Saturn | 111147-03-08 21:06 G | 42316734.15 | 42316734.38 | 42316734.62 | 0.0274 | 0.0083 |
| Saturn | 111148-03-20 01:54 G | 42317111.38 | 42317111.58 | 42317111.80 | 0.0277 | 0.0154 |
| Jupiter | 111151-08-03 15:06 G | 42318342.96 | 42318343.13 | 42318343.32 | 0.0501 | 0.0301 |
| Saturn | 111160-09-01 22:46 G | 42321660.25 | 42321660.45 | 42321660.67 | 0.0287 | 0.0164 |
| Saturn | 111161-09-15 22:32 G | 42322039.21 | 42322039.44 | 42322039.68 | 0.0283 | 0.0086 |
| Uranus | 111169-01-14 01:39 G | 42324716.44 | 42324716.57 | 42324716.72 | 0.0137 | 0.0113 |
| Uranus | 111170-01-18 06:27 G | 42325085.51 | 42325085.77 | 42325086.03 | 0.0137 | 0.0001 |
| Uranus | 111171-01-22 22:46 G | 42325455.27 | 42325455.45 | 42325455.65 | 0.0136 | 0.0088 |
| Saturn | 111176-03-02 17:44 G | 42327321.06 | 42327321.24 | 42327321.42 | 0.0274 | 0.0176 |
| Saturn | 111177-03-15 03:49 G | 42327698.43 | 42327698.66 | 42327698.90 | 0.0277 | 0.0054 |
| Mars | 111179-10-31 01:39 G | 42328658.38 | 42328658.57 | 42328658.75 | 0.1580 | 0.0440 |
| Saturn | 111189-08-27 09:49 G | 42332246.91 | 42332246.91 | 42332246.95 | 0.0288 | 0.0287 |
| Saturn | 111190-09-10 12:27 G | 42332625.76 | 42332626.02 | 42332626.27 | 0.0285 | 0.0031 |
| Saturn | 111191-09-24 04:18 G | 42333004.53 | 42333004.68 | 42333004.86 | 0.0282 | 0.0213 |
| Pluto | 111201-02-24 07:10 G | 42336445.57 | 42336445.80 | 42336446.05 | 0.0065 | 0.0018 |
| Pluto | 111202-02-25 13:54 G | 42336811.97 | 42336812.08 | 42336812.21 | 0.0066 | 0.0058 |
| Jupiter | 111205-01-27 11:01 G | 42337878.75 | 42337878.96 | 42337879.17 | 0.0523 | 0.0229 |
| Saturn | 111205-02-25 14:37 G | 42337908.04 | 42337908.11 | 42337908.19 | 0.0272 | 0.0259 |
| Saturn | 111206-03-09 17:30 G | 42338285.00 | 42338285.23 | 42338285.47 | 0.0274 | 0.0041 |
| Saturn | 111207-03-22 06:56 G | 42338662.61 | 42338662.79 | 42338662.97 | 0.0277 | 0.0180 |
| Jupiter | 111210-07-24 12:56 G | 42339882.91 | 42339883.04 | 42339883.18 | 0.0506 | 0.0408 |
| Neptune | 111211-07-04 19:10 G | 42340228.18 | 42340228.30 | 42340228.45 | 0.0088 | 0.0074 |
| Neptune | 111212-07-06 02:08 G | 42340595.42 | 42340595.59 | 42340595.80 | 0.0088 | 0.0060 |
| Uranus | 111212-07-13 21:34 G | 42340603.19 | 42340603.40 | 42340603.62 | 0.0141 | 0.0084 |
| Neptune | 111213-07-08 19:39 G | 42340963.10 | 42340963.32 | 42340963.58 | 0.0088 | 0.0031 |
| Uranus | 111213-07-18 13:39 G | 42340972.83 | 42340973.07 | 42340973.32 | 0.0141 | 0.0030 |
| Neptune | 111214-07-11 00:27 G | 42341330.27 | 42341330.52 | 42341330.78 | 0.0088 | 0.0016 |
| Neptune | 111215-07-13 18:27 G | 42341698.02 | 42341698.27 | 42341698.54 | 0.0088 | 0.0014 |
| Neptune | 111216-07-14 23:58 G | 42342065.28 | 42342065.50 | 42342065.76 | 0.0088 | 0.0028 |
| Jupiter | 111217-02-01 13:54 G | 42342266.86 | 42342267.08 | 42342267.29 | 0.0525 | 0.0109 |

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| Neptune | 111217-07-17 15:06 G | 42342432.93 | 42342433.13 | 42342433.35 | 0.0088 | 0.0056 |
| Neptune | 111218-07-20 00:27 G | 42342800.40 | 42342800.52 | 42342800.70 | 0.0088 | 0.0071 |
| Saturn | 111219-09-04 04:03 G | 42343211.48 | 42343211.67 | 42343211.88 | 0.0287 | 0.0162 |
| Saturn | 111220-09-17 06:42 G | 42343590.55 | 42343590.78 | 42343591.01 | 0.0283 | 0.0096 |
| Jupiter | 111222-07-29 13:10 G | 42344270.82 | 42344271.05 | 42344271.28 | 0.0504 | 0.0110 |
| Jupiter | 111229-02-06 10:32 G | 42346654.83 | 42346654.94 | 42346655.06 | 0.0527 | 0.0455 |
| Jupiter | 111234-08-02 19:10 G | 42348658.09 | 42348658.30 | 42348658.52 | 0.0502 | 0.0209 |
| Saturn | 111235-03-04 17:15 G | 42348872.02 | 42348872.22 | 42348872.45 | 0.0274 | 0.0144 |
| Saturn | 111236-03-15 20:08 G | 42349249.10 | 42349249.34 | 42349249.58 | 0.0277 | 0.0068 |
| Saturn | 111248-08-28 02:22 G | 42353797.53 | 42353797.60 | 42353797.68 | 0.0288 | 0.0274 |
| Saturn | 111249-09-11 07:39 G | 42354176.58 | 42354176.82 | 42354177.06 | 0.0285 | 0.0008 |
| Saturn | 111250-09-25 08:08 G | 42354555.74 | 42354555.84 | 42354555.95 | 0.0281 | 0.0251 |
| Uranus | 111253-01-14 06:56 G | 42355397.65 | 42355397.79 | 42355397.98 | 0.0137 | 0.0105 |
| Uranus | 111254-01-18 20:08 G | 42355767.10 | 42355767.34 | 42355767.59 | 0.0137 | 0.0004 |
| Uranus | 111255-01-23 04:32 G | 42356136.52 | 42356136.69 | 42356136.88 | 0.0136 | 0.0098 |
| Mars | 111258-11-02 02:08 G | 42357515.45 | 42357515.59 | 42357515.73 | 0.1582 | 0.1023 |
| Saturn | 111264-02-27 18:42 G | 42359459.18 | 42359459.28 | 42359459.40 | 0.0272 | 0.0239 |
| Saturn | 111265-03-11 00:27 G | 42359836.27 | 42359836.52 | 42359836.76 | 0.0274 | 0.0035 |
| Saturn | 111266-03-23 05:30 G | 42360213.54 | 42360213.73 | 42360213.93 | 0.0277 | 0.0177 |
| Saturn | 111278-09-05 00:56 G | 42364762.31 | 42364762.54 | 42364762.78 | 0.0286 | 0.0124 |
| Saturn | 111279-09-18 22:18 G | 42365141.21 | 42365141.43 | 42365141.65 | 0.0283 | 0.0142 |
| Jupiter | 111288-01-28 03:34 G | 42368194.46 | 42368194.65 | 42368194.86 | 0.0522 | 0.0271 |
| Pluto | 111289-08-26 08:22 G | 42368770.71 | 42368770.85 | 42368771.03 | 0.0079 | 0.0062 |
| Jupiter | 111293-07-23 23:44 G | 42370198.35 | 42370198.49 | 42370198.63 | 0.0506 | 0.0418 |
| Saturn | 111294-03-05 13:39 G | 42370422.88 | 42370423.07 | 42370423.27 | 0.0274 | 0.0146 |
| Neptune | 111295-01-07 18:42 G | 42370731.09 | 42370731.28 | 42370731.48 | 0.0090 | 0.0060 |
| Saturn | 111295-03-18 00:42 G | 42370800.30 | 42370800.53 | 42370800.76 | 0.0277 | 0.0067 |
| Neptune | 111296-01-10 06:27 G | 42371098.58 | 42371098.77 | 42371099.00 | 0.0090 | 0.0047 |
| Uranus | 111296-07-14 01:39 G | 42371284.37 | 42371284.57 | 42371284.81 | 0.0141 | 0.0073 |
| Neptune | 111297-01-11 16:32 G | 42371465.93 | 42371466.19 | 42371466.46 | 0.0090 | 0.0014 |

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| Uranus | 111297-07-19 06:13 G | 42371654.52 | 42371654.76 | 42371655.01 | 0.0141 | 0.0029 |
| Neptune | 111298-01-14 09:20 G | 42371833.64 | 42371833.89 | 42371834.14 | 0.0090 | 0.0002 |
| Neptune | 111299-01-16 15:06 G | 42372200.89 | 42372201.13 | 42372201.37 | 0.0090 | 0.0031 |
| Neptune | 111300-01-19 09:20 G | 42372568.69 | 42372568.89 | 42372569.14 | 0.0090 | 0.0045 |
| Jupiter | 111300-02-01 16:46 G | 42372581.98 | 42372582.20 | 42372582.42 | 0.0524 | 0.0110 |
| Neptune | 111301-01-21 14:51 G | 42372936.01 | 42372936.12 | 42372936.27 | 0.0090 | 0.0077 |
| Jupiter | 111305-07-29 17:15 G | 42374586.00 | 42374586.22 | 42374586.44 | 0.0504 | 0.0091 |
| Saturn | 111307-08-31 06:27 G | 42375348.63 | 42375348.77 | 42375348.92 | 0.0288 | 0.0230 |
| Saturn | 111308-09-13 10:46 G | 42375727.70 | 42375727.95 | 42375728.21 | 0.0285 | 0.0035 |
| Jupiter | 111312-02-07 15:20 G | 42376970.02 | 42376970.14 | 42376970.27 | 0.0526 | 0.0438 |
| Jupiter | 111317-08-03 13:10 G | 42378973.83 | 42378974.05 | 42378974.28 | 0.0503 | 0.0210 |
| Saturn | 111323-03-01 16:18 G | 42381010.08 | 42381010.18 | 42381010.31 | 0.0272 | 0.0241 |
| Saturn | 111324-03-12 16:32 G | 42381386.95 | 42381387.19 | 42381387.43 | 0.0274 | 0.0032 |
| Saturn | 111325-03-25 04:32 G | 42381764.55 | 42381764.69 | 42381764.87 | 0.0277 | 0.0202 |
| Uranus | 111337-01-15 16:46 G | 42386079.03 | 42386079.20 | 42386079.39 | 0.0137 | 0.0093 |
| Saturn | 111337-09-06 23:15 G | 42386313.24 | 42386313.47 | 42386313.70 | 0.0286 | 0.0092 |
| Uranus | 111338-01-20 07:54 G | 42386448.57 | 42386448.83 | 42386449.09 | 0.0137 | 0.0004 |
| Saturn | 111338-09-21 02:51 G | 42386692.43 | 42386692.62 | 42386692.83 | 0.0283 | 0.0160 |
| Uranus | 111339-01-24 12:56 G | 42386817.91 | 42386818.04 | 42386818.21 | 0.0136 | 0.0107 |
| Saturn | 111353-03-07 17:58 G | 42391974.03 | 42391974.25 | 42391974.46 | 0.0274 | 0.0133 |
| Saturn | 111354-03-19 19:39 G | 42392351.09 | 42392351.32 | 42392351.56 | 0.0277 | 0.0100 |
| Saturn | 111366-08-31 22:32 G | 42396899.28 | 42396899.44 | 42396899.62 | 0.0287 | 0.0211 |
| Saturn | 111367-09-15 01:25 G | 42397278.31 | 42397278.56 | 42397278.80 | 0.0285 | 0.0041 |
| Saturn | 111368-09-27 23:58 G | 42397657.50 | 42397657.50 | 42397657.52 | 0.0281 | 0.0281 |
| Jupiter | 111371-01-28 04:46 G | 42398509.55 | 42398509.70 | 42398509.86 | 0.0521 | 0.0370 |
| Neptune | 111376-07-06 11:44 G | 42400495.81 | 42400495.99 | 42400496.18 | 0.0088 | 0.0059 |
| Jupiter | 111376-07-24 16:18 G | 42400514.11 | 42400514.18 | 42400514.25 | 0.0507 | 0.0483 |
| Neptune | 111377-07-09 02:51 G | 42400863.41 | 42400863.62 | 42400863.87 | 0.0088 | 0.0047 |
| Neptune | 111378-07-11 12:27 G | 42401230.77 | 42401231.02 | 42401231.27 | 0.0088 | 0.0016 |
| Neptune | 111379-07-13 23:15 G | 42401598.20 | 42401598.47 | 42401598.74 | 0.0088 | 0.0003 |

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| Neptune | 111380-07-15 13:39 G | 42401965.85 | 42401966.07 | 42401966.33 | 0.0088 | 0.0028 |
| Uranus | 111380-07-15 17:44 G | 42401966.02 | 42401966.24 | 42401966.47 | 0.0141 | 0.0063 * |
| Neptune | 111381-07-17 19:54 G | 42402333.10 | 42402333.33 | 42402333.57 | 0.0088 | 0.0040 |
| Uranus | 111381-07-20 11:01 G | 42402335.71 | 42402335.96 | 42402336.22 | 0.0141 | 0.0035 |
| Saturn | 111382-03-02 16:18 G | 42402561.04 | 42402561.18 | 42402561.31 | 0.0272 | 0.0219 |
| Neptune | 111382-07-20 13:25 G | 42402700.94 | 42402701.06 | 42402701.24 | 0.0088 | 0.0072 |
| Jupiter | 111383-02-01 21:20 G | 42402897.15 | 42402897.39 | 42402897.62 | 0.0524 | 0.0015 |
| Saturn | 111383-03-14 23:44 G | 42402938.25 | 42402938.49 | 42402938.73 | 0.0275 | 0.0009 |
| Neptune | 111383-07-22 17:44 G | 42403068.20 | 42403068.24 | 42403068.35 | 0.0088 | 0.0084 |
| Saturn | 111384-03-26 07:54 G | 42403315.72 | 42403315.83 | 42403315.96 | 0.0277 | 0.0243 |
| Mars | 111384-10-30 16:03 G | 42403534.01 | 42403534.17 | 42403534.32 | 0.1578 | 0.0783 |
| Jupiter | 111388-07-29 01:39 G | 42404901.34 | 42404901.57 | 42404901.80 | 0.0505 | 0.0116 |
| Jupiter | 111395-02-06 23:01 G | 42407285.34 | 42407285.46 | 42407285.59 | 0.0526 | 0.0426 |
| Saturn | 111396-09-07 23:30 G | 42407864.24 | 42407864.48 | 42407864.73 | 0.0286 | 0.0093 |
| Saturn | 111397-09-21 19:10 G | 42408243.09 | 42408243.30 | 42408243.52 | 0.0283 | 0.0154 |
| Jupiter | 111400-08-04 01:25 G | 42409289.35 | 42409289.56 | 42409289.77 | 0.0503 | 0.0228 |
| Saturn | 111412-03-09 10:46 G | 42413524.73 | 42413524.95 | 42413525.18 | 0.0274 | 0.0089 |
| Saturn | 111413-03-21 21:49 G | 42413902.21 | 42413902.41 | 42413902.62 | 0.0277 | 0.0137 |
| Uranus | 111421-01-17 08:08 G | 42416760.66 | 42416760.84 | 42416761.05 | 0.0137 | 0.0085 |
| Uranus | 111422-01-21 11:58 G | 42417129.75 | 42417130.00 | 42417130.26 | 0.0137 | 0.0002 |
| Uranus | 111423-01-26 04:46 G | 42417499.56 | 42417499.70 | 42417499.86 | 0.0136 | 0.0109 |
| Saturn | 111425-09-03 00:56 G | 42418450.38 | 42418450.54 | 42418450.70 | 0.0287 | 0.0215 |
| Saturn | 111426-09-17 06:42 G | 42418829.54 | 42418829.78 | 42418830.03 | 0.0284 | 0.0043 |
| Saturn | 111441-03-04 20:37 G | 42424112.18 | 42424112.36 | 42424112.56 | 0.0272 | 0.0176 |
| Saturn | 111442-03-16 19:39 G | 42424489.08 | 42424489.32 | 42424489.57 | 0.0275 | 0.0041 |
| Saturn | 111443-03-29 05:15 G | 42424866.64 | 42424866.72 | 42424866.82 | 0.0278 | 0.0256 |
| Pluto | 111447-02-28 03:20 G | 42426298.44 | 42426298.64 | 42426298.86 | 0.0065 | 0.0038 |
| Pluto | 111448-02-29 13:10 G | 42426664.86 | 42426665.05 | 42426665.26 | 0.0066 | 0.0039 |
| Jupiter | 111454-01-28 08:51 G | 42428824.71 | 42428824.87 | 42428825.04 | 0.0521 | 0.0360 |
| Saturn | 111455-09-10 19:54 G | 42429415.10 | 42429415.33 | 42429415.57 | 0.0286 | 0.0078 |

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| Saturn | 111456-09-23 22:32 G | 42429794.26 | 42429794.44 | 42429794.63 | 0.0283 | 0.0182 |
| Neptune | 111459-01-08 23:58 G | 42430631.40 | 42430631.50 | 42430631.65 | 0.0090 | 0.0078 |
| Neptune | 111460-01-11 19:10 G | 42430999.09 | 42430999.30 | 42430999.52 | 0.0090 | 0.0047 |
| Neptune | 111461-01-13 00:13 G | 42431366.29 | 42431366.51 | 42431366.76 | 0.0090 | 0.0033 |
| Neptune | 111462-01-15 18:13 G | 42431734.00 | 42431734.26 | 42431734.53 | 0.0090 | 0.0002 |
| Neptune | 111463-01-18 01:39 G | 42432101.33 | 42432101.57 | 42432101.82 | 0.0090 | 0.0014 |
| Mars | 111463-11-03 20:37 G | 42432391.19 | 42432391.36 | 42432391.52 | 0.1579 | 0.0659 |
| Neptune | 111464-01-20 15:20 G | 42432468.92 | 42432469.14 | 42432469.38 | 0.0090 | 0.0045 |
| Uranus | 111464-07-17 01:39 G | 42432647.35 | 42432647.57 | 42432647.82 | 0.0141 | 0.0062 |
| Neptune | 111465-01-22 04:18 G | 42432836.51 | 42432836.68 | 42432836.88 | 0.0090 | 0.0060 |
| Uranus | 111465-07-21 20:08 G | 42433017.12 | 42433017.34 | 42433017.59 | 0.0141 | 0.0046 |
| Neptune | 111466-01-24 13:10 G | 42433204.05 | 42433204.05 | 42433204.08 | 0.0090 | 0.0090 |
| Jupiter | 111466-02-02 13:25 G | 42433212.83 | 42433213.06 | 42433213.30 | 0.0523 | 0.0030 |
| Saturn | 111470-02-27 14:37 G | 42434699.11 | 42434699.11 | 42434699.12 | 0.0271 | 0.0271 |
| Saturn | 111471-03-11 19:54 G | 42435076.09 | 42435076.33 | 42435076.56 | 0.0274 | 0.0064 |
| Jupiter | 111471-07-30 12:56 G | 42435216.82 | 42435217.04 | 42435217.27 | 0.0505 | 0.0199 |
| Saturn | 111472-03-22 23:58 G | 42435453.29 | 42435453.50 | 42435453.72 | 0.0277 | 0.0142 |
| Jupiter | 111478-02-07 02:22 G | 42437600.42 | 42437600.60 | 42437600.78 | 0.0525 | 0.0332 |
| Jupiter | 111483-08-04 03:20 G | 42439604.43 | 42439604.64 | 42439604.86 | 0.0503 | 0.0157 |
| Saturn | 111484-09-03 23:30 G | 42440001.29 | 42440001.48 | 42440001.69 | 0.0287 | 0.0184 |
| Saturn | 111485-09-17 23:15 G | 42440380.24 | 42440380.47 | 42440380.72 | 0.0284 | 0.0084 |
| Saturn | 111500-03-06 17:58 G | 42445663.06 | 42445663.25 | 42445663.44 | 0.0273 | 0.0161 |
| Saturn | 111501-03-19 03:06 G | 42446040.40 | 42446040.63 | 42446040.86 | 0.0275 | 0.0043 |
| Saturn | 111502-03-31 15:34 G | 42446418.07 | 42446418.15 | 42446418.24 | 0.0278 | 0.0258 |
| Uranus | 111505-01-18 11:44 G | 42447441.80 | 42447441.99 | 42447442.21 | 0.0137 | 0.0083 |
| Uranus | 111506-01-23 03:06 G | 42447811.39 | 42447811.63 | 42447811.88 | 0.0137 | 0.0011 |
| Uranus | 111507-01-27 08:22 G | 42448180.71 | 42448180.85 | 42448181.03 | 0.0137 | 0.0107 |
| Saturn | 111514-09-13 04:46 G | 42450966.45 | 42450966.70 | 42450966.95 | 0.0286 | 0.0030 |
| Saturn | 111515-09-27 00:42 G | 42451345.38 | 42451345.53 | 42451345.68 | 0.0283 | 0.0225 |
| Saturn | 111529-03-01 19:25 G | 42456250.25 | 42456250.31 | 42456250.37 | 0.0272 | 0.0263 |

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| Saturn | 111530-03-13 16:46 G | 42456626.97 | 42456627.20 | 42456627.44 | 0.0274 | 0.0066 |
| Saturn | 111531-03-26 01:54 G | 42457004.39 | 42457004.58 | 42457004.78 | 0.0277 | 0.0154 |
| Pluto | 111535-08-31 07:10 G | 42458623.58 | 42458623.80 | 42458624.05 | 0.0079 | 0.0029 |
| Jupiter | 111537-01-28 17:15 G | 42459140.06 | 42459140.22 | 42459140.39 | 0.0521 | 0.0369 |
| Neptune | 111540-07-08 01:10 G | 42460396.46 | 42460396.55 | 42460396.70 | 0.0088 | 0.0077 |
| Neptune | 111541-07-10 08:22 G | 42460763.63 | 42460763.85 | 42460764.08 | 0.0088 | 0.0046 |
| Neptune | 111542-07-13 02:08 G | 42461131.36 | 42461131.59 | 42461131.83 | 0.0088 | 0.0033 |
| Jupiter | 111542-07-25 22:03 G | 42461144.41 | 42461144.42 | 42461144.43 | 0.0508 | 0.0507 |
| Neptune | 111543-07-15 06:42 G | 42461498.52 | 42461498.78 | 42461499.04 | 0.0088 | 0.0002 |
| Saturn | 111543-09-07 03:06 G | 42461552.42 | 42461552.63 | 42461552.83 | 0.0287 | 0.0141 |
| Neptune | 111544-07-17 00:42 G | 42461866.27 | 42461866.53 | 42461866.80 | 0.0088 | 0.0011 |
| Saturn | 111544-09-20 08:37 G | 42461931.64 | 42461931.86 | 42461932.08 | 0.0284 | 0.0119 |
| Neptune | 111545-07-19 06:27 G | 42462233.55 | 42462233.77 | 42462234.00 | 0.0088 | 0.0041 |
| Neptune | 111546-07-21 20:51 G | 42462601.18 | 42462601.37 | 42462601.60 | 0.0088 | 0.0055 |
| Neptune | 111547-07-24 07:25 G | 42462968.75 | 42462968.81 | 42462968.89 | 0.0088 | 0.0084 |
| Uranus | 111548-07-18 06:42 G | 42463328.57 | 42463328.78 | 42463329.02 | 0.0141 | 0.0065 |
| Jupiter | 111549-02-02 11:44 G | 42463527.76 | 42463527.99 | 42463528.21 | 0.0522 | 0.0032 |
| Uranus | 111549-07-23 10:32 G | 42463698.72 | 42463698.94 | 42463699.19 | 0.0141 | 0.0057 |
| Jupiter | 111554-07-30 23:01 G | 42465532.26 | 42465532.46 | 42465532.68 | 0.0506 | 0.0205 |
| Saturn | 111559-03-09 05:44 G | 42467214.55 | 42467214.74 | 42467214.94 | 0.0273 | 0.0160 |
| Saturn | 111560-03-20 07:25 G | 42467591.57 | 42467591.81 | 42467592.06 | 0.0275 | 0.0062 |
| Jupiter | 111561-02-07 04:32 G | 42467915.50 | 42467915.69 | 42467915.89 | 0.0524 | 0.0290 |
| Jupiter | 111566-08-04 08:22 G | 42469919.62 | 42469919.85 | 42469920.09 | 0.0504 | 0.0097 |
| Saturn | 111572-08-31 00:42 G | 42472138.43 | 42472138.53 | 42472138.63 | 0.0288 | 0.0264 |
| Saturn | 111573-09-14 03:49 G | 42472517.41 | 42472517.66 | 42472517.91 | 0.0286 | 0.0006 |
| Saturn | 111574-09-28 03:20 G | 42472896.53 | 42472896.64 | 42472896.77 | 0.0283 | 0.0242 |
| Jupiter | 111578-08-09 07:10 G | 42474307.69 | 42474307.80 | 42474307.92 | 0.0502 | 0.0431 |
| Saturn | 111588-03-02 20:22 G | 42477801.29 | 42477801.35 | 42477801.43 | 0.0272 | 0.0259 |
| Uranus | 111589-01-18 21:34 G | 42478123.23 | 42478123.40 | 42478123.60 | 0.0137 | 0.0089 |
| Saturn | 111589-03-15 04:18 G | 42478178.45 | 42478178.68 | 42478178.92 | 0.0274 | 0.0037 |

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| Mars | 111589-11-01 06:13 G | 42478409.69 | 42478409.76 | 42478409.82 | 0.1577 | 0.1476 |
| Uranus | 111590-01-23 10:03 G | 42478492.67 | 42478492.92 | 42478493.18 | 0.0137 | 0.0019 |
| Saturn | 111590-03-27 13:39 G | 42478555.90 | 42478556.07 | 42478556.24 | 0.0277 | 0.0199 |
| Uranus | 111591-01-27 18:13 G | 42478862.12 | 42478862.26 | 42478862.44 | 0.0137 | 0.0105 |
| Saturn | 111602-09-08 13:39 G | 42483103.84 | 42483104.07 | 42483104.30 | 0.0287 | 0.0127 |
| Saturn | 111603-09-22 11:30 G | 42483482.76 | 42483482.98 | 42483483.22 | 0.0284 | 0.0124 |
| Mars | 111613-05-02 10:03 G | 42486992.72 | 42486992.92 | 42486993.13 | 0.1965 | 0.0036 |
| Saturn | 111618-03-10 05:44 G | 42488765.53 | 42488765.74 | 42488765.96 | 0.0273 | 0.0127 |
| Saturn | 111619-03-22 13:54 G | 42489142.88 | 42489143.08 | 42489143.31 | 0.0276 | 0.0109 |
| Jupiter | 111620-01-28 21:34 G | 42489455.32 | 42489455.40 | 42489455.51 | 0.0519 | 0.0474 |
| Neptune | 111623-01-09 11:15 G | 42490531.88 | 42490531.97 | 42490532.10 | 0.0089 | 0.0081 |
| Neptune | 111624-01-12 02:22 G | 42490899.42 | 42490899.60 | 42490899.81 | 0.0090 | 0.0061 |
| Neptune | 111625-01-13 14:22 G | 42491266.89 | 42491267.10 | 42491267.34 | 0.0090 | 0.0035 |
| Neptune | 111626-01-15 23:58 G | 42491634.25 | 42491634.50 | 42491634.77 | 0.0090 | 0.0015 |
| Neptune | 111627-01-18 16:18 G | 42492001.94 | 42492002.18 | 42492002.44 | 0.0090 | 0.0012 |
| Neptune | 111628-01-20 21:49 G | 42492369.18 | 42492369.41 | 42492369.67 | 0.0090 | 0.0030 |
| Neptune | 111629-01-22 16:46 G | 42492737.01 | 42492737.20 | 42492737.40 | 0.0090 | 0.0056 |
| Neptune | 111630-01-24 21:20 G | 42493104.28 | 42493104.39 | 42493104.55 | 0.0090 | 0.0076 |
| Saturn | 111631-09-02 14:08 G | 42493689.99 | 42493690.09 | 42493690.20 | 0.0288 | 0.0257 |
| Jupiter | 111632-02-02 10:18 G | 42493842.70 | 42493842.93 | 42493843.15 | 0.0522 | 0.0087 |
| Uranus | 111632-07-18 23:01 G | 42494010.25 | 42494010.46 | 42494010.70 | 0.0141 | 0.0065 |
| Saturn | 111632-09-15 21:20 G | 42494069.14 | 42494069.39 | 42494069.63 | 0.0285 | 0.0005 |
| Uranus | 111633-07-23 14:08 G | 42494379.85 | 42494380.09 | 42494380.32 | 0.0141 | 0.0062 |
| Saturn | 111633-09-29 18:13 G | 42494448.15 | 42494448.26 | 42494448.39 | 0.0282 | 0.0245 |
| Jupiter | 111637-07-29 23:15 G | 42495847.27 | 42495847.47 | 42495847.68 | 0.0506 | 0.0212 |
| Jupiter | 111644-02-07 15:06 G | 42498230.94 | 42498231.13 | 42498231.33 | 0.0524 | 0.0296 |
| Saturn | 111647-03-05 10:18 G | 42499352.79 | 42499352.93 | 42499353.07 | 0.0272 | 0.0220 |
| Saturn | 111648-03-16 09:20 G | 42499729.64 | 42499729.89 | 42499730.14 | 0.0275 | 0.0010 |
| Saturn | 111649-03-28 15:49 G | 42500107.05 | 42500107.16 | 42500107.30 | 0.0278 | 0.0237 |
| Jupiter | 111649-08-03 16:18 G | 42500234.94 | 42500235.18 | 42500235.42 | 0.0504 | 0.0097 |

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| Jupiter | 111661-08-08 03:49 G | 42504622.51 | 42504622.66 | 42504622.80 | 0.0503 | 0.0386 |
| Saturn | 111661-09-09 18:13 G | 42504655.05 | 42504655.26 | 42504655.49 | 0.0286 | 0.0120 |
| Saturn | 111662-09-23 21:49 G | 42505034.20 | 42505034.41 | 42505034.62 | 0.0283 | 0.0138 |
| Mars | 111668-11-03 04:03 G | 42507266.47 | 42507266.67 | 42507266.87 | 0.1577 | 0.0085 |
| Uranus | 111673-01-19 10:18 G | 42508804.74 | 42508804.93 | 42508805.12 | 0.0137 | 0.0090 |
| Uranus | 111674-01-23 14:22 G | 42509173.85 | 42509174.10 | 42509174.34 | 0.0137 | 0.0023 |
| Uranus | 111675-01-28 06:27 G | 42509543.63 | 42509543.77 | 42509543.94 | 0.0137 | 0.0108 |
| Saturn | 111677-03-11 20:22 G | 42510317.13 | 42510317.35 | 42510317.58 | 0.0274 | 0.0083 |
| Saturn | 111678-03-24 03:20 G | 42510694.44 | 42510694.64 | 42510694.87 | 0.0276 | 0.0139 |
| Saturn | 111690-09-04 05:01 G | 42515241.57 | 42515241.71 | 42515241.86 | 0.0288 | 0.0235 |
| Saturn | 111691-09-18 04:46 G | 42515620.44 | 42515620.70 | 42515620.95 | 0.0285 | 0.0028 |
| Saturn | 111692-09-30 23:15 G | 42515999.46 | 42515999.47 | 42515999.50 | 0.0282 | 0.0281 |
| Pluto | 111693-03-01 18:13 G | 42516151.17 | 42516151.26 | 42516151.41 | 0.0065 | 0.0058 |
| Pluto | 111694-03-03 13:39 G | 42516517.83 | 42516518.07 | 42516518.31 | 0.0066 | 0.0020 |
| Jupiter | 111703-01-29 00:27 G | 42519770.51 | 42519770.52 | 42519770.56 | 0.0519 | 0.0516 |
| Neptune | 111704-07-08 12:13 G | 42520296.93 | 42520297.01 | 42520297.16 | 0.0088 | 0.0079 |
| Neptune | 111705-07-10 17:30 G | 42520664.07 | 42520664.23 | 42520664.43 | 0.0088 | 0.0061 |
| Saturn | 111706-03-07 12:13 G | 42520903.84 | 42520904.01 | 42520904.20 | 0.0272 | 0.0178 |
| Neptune | 111706-07-13 09:34 G | 42521031.66 | 42521031.90 | 42521032.15 | 0.0088 | 0.0034 |
| Saturn | 111707-03-19 19:54 G | 42521281.10 | 42521281.33 | 42521281.57 | 0.0275 | 0.0030 |
| Neptune | 111707-07-15 18:42 G | 42521399.05 | 42521399.28 | 42521399.54 | 0.0088 | 0.0017 |
| Saturn | 111708-03-31 10:03 G | 42521658.81 | 42521658.92 | 42521659.03 | 0.0278 | 0.0243 |
| Neptune | 111708-07-17 06:13 G | 42521766.49 | 42521766.76 | 42521767.03 | 0.0088 | 0.0009 |
| Neptune | 111709-07-19 20:22 G | 42522134.13 | 42522134.35 | 42522134.61 | 0.0088 | 0.0027 |
| Neptune | 111710-07-22 02:37 G | 42522501.42 | 42522501.61 | 42522501.84 | 0.0088 | 0.0053 |
| Neptune | 111711-07-24 20:22 G | 42522869.22 | 42522869.35 | 42522869.53 | 0.0088 | 0.0071 |
| Jupiter | 111715-02-02 15:49 G | 42524157.94 | 42524158.16 | 42524158.39 | 0.0521 | 0.0183 |
| Uranus | 111716-07-20 05:44 G | 42524691.50 | 42524691.74 | 42524691.99 | 0.0141 | 0.0057 |
| Uranus | 111717-07-25 03:20 G | 42525061.43 | 42525061.64 | 42525061.87 | 0.0141 | 0.0061 |
| Jupiter | 111720-07-29 20:08 G | 42526162.15 | 42526162.34 | 42526162.52 | 0.0507 | 0.0315 |

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| Saturn | 111720-09-12 15:06 G | 42526206.90 | 42526207.13 | 42526207.37 | 0.0286 | 0.0077 |
| Saturn | 111721-09-26 13:54 G | 42526585.90 | 42526586.08 | 42526586.29 | 0.0283 | 0.0184 |
| Jupiter | 111727-02-07 10:18 G | 42528545.73 | 42528545.93 | 42528546.14 | 0.0523 | 0.0193 |
| Jupiter | 111732-08-03 18:42 G | 42530550.05 | 42530550.28 | 42530550.51 | 0.0506 | 0.0055 |
| Saturn | 111735-03-03 04:18 G | 42531491.65 | 42531491.68 | 42531491.73 | 0.0272 | 0.0268 |
| Saturn | 111736-03-14 02:08 G | 42531868.35 | 42531868.59 | 42531868.84 | 0.0274 | 0.0070 |
| Saturn | 111737-03-26 07:54 G | 42532245.64 | 42532245.83 | 42532246.05 | 0.0277 | 0.0142 |
| Jupiter | 111744-08-08 03:34 G | 42534937.51 | 42534937.65 | 42534937.81 | 0.0503 | 0.0389 |
| Mars | 111747-11-06 23:44 G | 42536123.42 | 42536123.49 | 42536123.57 | 0.1578 | 0.1456 |
| Saturn | 111749-09-06 17:15 G | 42536793.04 | 42536793.22 | 42536793.42 | 0.0287 | 0.0182 |
| Saturn | 111750-09-20 22:46 G | 42537172.22 | 42537172.45 | 42537172.68 | 0.0284 | 0.0082 |
| Uranus | 111757-01-20 11:15 G | 42539485.79 | 42539485.97 | 42539486.19 | 0.0137 | 0.0086 |
| Uranus | 111758-01-25 04:46 G | 42539855.46 | 42539855.70 | 42539855.95 | 0.0137 | 0.0021 |
| Uranus | 111759-01-29 08:22 G | 42540224.74 | 42540224.85 | 42540225.00 | 0.0136 | 0.0117 |
| Saturn | 111765-03-09 04:46 G | 42542455.52 | 42542455.70 | 42542455.89 | 0.0273 | 0.0170 |
| Saturn | 111766-03-21 09:06 G | 42542832.63 | 42542832.88 | 42542833.13 | 0.0275 | 0.0037 |
| Saturn | 111767-04-02 15:34 G | 42543210.07 | 42543210.15 | 42543210.24 | 0.0278 | 0.0260 |
| Saturn | 111779-09-14 23:15 G | 42547758.22 | 42547758.47 | 42547758.72 | 0.0286 | 0.0025 |
| Saturn | 111780-09-27 22:03 G | 42548137.28 | 42548137.42 | 42548137.57 | 0.0283 | 0.0229 |
| Pluto | 111781-09-02 04:03 G | 42548476.40 | 42548476.67 | 42548476.94 | 0.0079 | 0.0003 |
| Neptune | 111788-01-12 08:08 G | 42550799.69 | 42550799.84 | 42550800.02 | 0.0089 | 0.0068 |
| Neptune | 111789-01-14 02:51 G | 42551167.42 | 42551167.62 | 42551167.86 | 0.0090 | 0.0044 |
| Neptune | 111790-01-16 07:54 G | 42551534.60 | 42551534.83 | 42551535.09 | 0.0090 | 0.0024 |
| Neptune | 111791-01-19 02:22 G | 42551902.34 | 42551902.60 | 42551902.86 | 0.0090 | 0.0002 |
| Neptune | 111792-01-21 09:34 G | 42552269.67 | 42552269.90 | 42552270.15 | 0.0090 | 0.0023 |
| Neptune | 111793-01-22 23:44 G | 42552637.29 | 42552637.49 | 42552637.73 | 0.0090 | 0.0048 |
| Neptune | 111794-01-25 12:13 G | 42553004.87 | 42553005.01 | 42553005.18 | 0.0090 | 0.0069 |
| Saturn | 111794-03-04 06:27 G | 42553042.74 | 42553042.77 | 42553042.84 | 0.0272 | 0.0266 |
| Saturn | 111795-03-16 13:39 G | 42553419.85 | 42553420.07 | 42553420.30 | 0.0275 | 0.0060 |
| Saturn | 111796-03-28 02:08 G | 42553797.41 | 42553797.59 | 42553797.79 | 0.0277 | 0.0166 |

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| Jupiter | 111798-02-01 18:13 G | 42554473.05 | 42554473.26 | 42554473.48 | 0.0520 | 0.0211 |
| Uranus | 111800-07-21 14:22 G | 42555372.87 | 42555373.10 | 42555373.34 | 0.0141 | 0.0045 |
| Uranus | 111801-07-26 16:46 G | 42555742.97 | 42555743.20 | 42555743.45 | 0.0141 | 0.0058 |
| Jupiter | 111803-07-30 23:01 G | 42556477.30 | 42556477.46 | 42556477.64 | 0.0508 | 0.0362 |
| Saturn | 111808-09-09 17:15 G | 42558345.00 | 42558345.22 | 42558345.44 | 0.0287 | 0.0137 |
| Saturn | 111809-09-23 17:01 G | 42558723.98 | 42558724.21 | 42558724.45 | 0.0284 | 0.0118 |
| Jupiter | 111810-02-07 04:03 G | 42558860.45 | 42558860.67 | 42558860.90 | 0.0523 | 0.0101 |
| Jupiter | 111815-08-04 16:46 G | 42560864.97 | 42560865.20 | 42560865.42 | 0.0506 | 0.0042 |
| Jupiter | 111822-02-12 08:51 G | 42563248.78 | 42563248.87 | 42563248.98 | 0.0525 | 0.0471 |
| Saturn | 111824-03-11 09:34 G | 42564006.70 | 42564006.90 | 42564007.11 | 0.0273 | 0.0156 |
| Saturn | 111825-03-23 14:22 G | 42564383.87 | 42564384.10 | 42564384.33 | 0.0276 | 0.0071 |
| Jupiter | 111827-08-09 10:18 G | 42565252.74 | 42565252.93 | 42565253.12 | 0.0504 | 0.0309 |
| Saturn | 111837-09-03 10:46 G | 42568930.87 | 42568930.95 | 42568931.06 | 0.0288 | 0.0262 |
| Saturn | 111838-09-17 19:25 G | 42569310.07 | 42569310.31 | 42569310.55 | 0.0285 | 0.0004 |
| Saturn | 111839-10-01 19:54 G | 42569689.22 | 42569689.33 | 42569689.47 | 0.0282 | 0.0242 |
| Uranus | 111841-01-22 00:56 G | 42570167.35 | 42570167.54 | 42570167.76 | 0.0137 | 0.0075 |
| Uranus | 111842-01-26 09:49 G | 42570536.66 | 42570536.91 | 42570537.18 | 0.0137 | 0.0018 |
| Uranus | 111843-01-30 21:06 G | 42570906.31 | 42570906.38 | 42570906.49 | 0.0136 | 0.0127 |
| Saturn | 111853-03-06 21:49 G | 42574594.33 | 42574594.41 | 42574594.52 | 0.0273 | 0.0250 |
| Saturn | 111854-03-19 00:42 G | 42574971.28 | 42574971.53 | 42574971.78 | 0.0275 | 0.0022 |
| Saturn | 111855-03-31 05:30 G | 42575348.58 | 42575348.73 | 42575348.89 | 0.0278 | 0.0216 |
| Saturn | 111867-09-12 02:08 G | 42579896.37 | 42579896.59 | 42579896.83 | 0.0286 | 0.0125 |
| Neptune | 111868-07-08 19:39 G | 42580197.30 | 42580197.32 | 42580197.37 | 0.0088 | 0.0087 |
| Saturn | 111868-09-25 03:49 G | 42580275.45 | 42580275.66 | 42580275.88 | 0.0284 | 0.0128 |
| Neptune | 111869-07-11 08:37 G | 42580564.72 | 42580564.86 | 42580565.05 | 0.0088 | 0.0067 |
| Neptune | 111870-07-13 15:20 G | 42580931.94 | 42580932.14 | 42580932.39 | 0.0088 | 0.0045 |
| Neptune | 111871-07-16 08:51 G | 42581299.64 | 42581299.87 | 42581300.13 | 0.0088 | 0.0024 |
| Neptune | 111872-07-17 13:25 G | 42581666.80 | 42581667.06 | 42581667.32 | 0.0088 | 0.0001 |
| Neptune | 111873-07-20 07:39 G | 42582034.57 | 42582034.82 | 42582035.08 | 0.0088 | 0.0020 |
| Mars | 111873-11-04 02:37 G | 42582141.47 | 42582141.61 | 42582141.76 | 0.1576 | 0.1057 |

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| Neptune | 111874-07-22 12:56 G | 42582401.84 | 42582402.04 | 42582402.27 | 0.0088 | 0.0044 |
| Neptune | 111875-07-25 04:46 G | 42582769.51 | 42582769.70 | 42582769.88 | 0.0088 | 0.0064 |
| Neptune | 111876-07-26 14:37 G | 42583137.09 | 42583137.11 | 42583137.14 | 0.0088 | 0.0087 |
| Jupiter | 111881-02-01 17:30 G | 42584788.03 | 42584788.23 | 42584788.42 | 0.0520 | 0.0246 |
| Saturn | 111883-03-13 21:49 G | 42585558.20 | 42585558.41 | 42585558.63 | 0.0273 | 0.0113 |
| Saturn | 111884-03-25 06:56 G | 42585935.58 | 42585935.79 | 42585936.02 | 0.0276 | 0.0120 |
| Uranus | 111884-07-22 05:30 G | 42586054.50 | 42586054.73 | 42586054.99 | 0.0141 | 0.0035 |
| Uranus | 111885-07-26 19:54 G | 42586424.11 | 42586424.33 | 42586424.57 | 0.0141 | 0.0061 |
| Jupiter | 111886-07-30 05:15 G | 42586792.56 | 42586792.72 | 42586792.89 | 0.0508 | 0.0361 |
| Jupiter | 111893-02-06 10:18 G | 42589175.70 | 42589175.93 | 42589176.17 | 0.0522 | 0.0105 |
| Saturn | 111896-09-05 07:10 G | 42590482.69 | 42590482.80 | 42590482.93 | 0.0288 | 0.0253 |
| Mars | 111897-05-04 00:13 G | 42590723.38 | 42590723.51 | 42590723.65 | 0.1967 | 0.1379 |
| Saturn | 111897-09-19 09:20 G | 42590861.63 | 42590861.89 | 42590862.14 | 0.0285 | 0.0008 |
| Jupiter | 111898-08-03 13:39 G | 42591179.84 | 42591180.07 | 42591180.31 | 0.0506 | 0.0065 |
| Saturn | 111898-10-03 03:06 G | 42591240.54 | 42591240.63 | 42591240.75 | 0.0282 | 0.0255 |
| Jupiter | 111905-02-12 05:58 G | 42593563.63 | 42593563.75 | 42593563.89 | 0.0524 | 0.0424 |
| Jupiter | 111910-08-09 10:46 G | 42595567.74 | 42595567.95 | 42595568.16 | 0.0505 | 0.0224 |
| Saturn | 111912-03-08 23:58 G | 42596145.34 | 42596145.50 | 42596145.67 | 0.0273 | 0.0203 |
| Saturn | 111913-03-21 04:03 G | 42596522.43 | 42596522.67 | 42596522.91 | 0.0275 | 0.0022 |
| Saturn | 111914-04-02 17:58 G | 42596900.15 | 42596900.25 | 42596900.37 | 0.0278 | 0.0245 |
| Uranus | 111925-01-23 11:30 G | 42600848.77 | 42600848.98 | 42600849.22 | 0.0137 | 0.0066 |
| Uranus | 111926-01-27 17:58 G | 42601218.01 | 42601218.25 | 42601218.50 | 0.0137 | 0.0019 |
| Saturn | 111926-09-14 22:46 G | 42601448.23 | 42601448.45 | 42601448.68 | 0.0286 | 0.0107 |
| Uranus | 111927-02-01 09:06 G | 42601587.81 | 42601587.88 | 42601587.97 | 0.0136 | 0.0129 |
| Saturn | 111927-09-29 00:56 G | 42601827.34 | 42601827.54 | 42601827.76 | 0.0283 | 0.0152 |
| Pluto | 111940-03-07 11:30 G | 42606370.72 | 42606370.98 | 42606371.25 | 0.0066 | 0.0012 |
| Saturn | 111942-03-16 05:44 G | 42607109.50 | 42607109.74 | 42607109.98 | 0.0273 | 0.0076 |
| Saturn | 111943-03-28 07:54 G | 42607486.62 | 42607486.83 | 42607487.05 | 0.0276 | 0.0137 |
| Neptune | 111952-01-13 19:25 G | 42610700.17 | 42610700.31 | 42610700.46 | 0.0089 | 0.0073 |
| Mars | 111952-11-07 03:06 G | 42610998.46 | 42610998.63 | 42610998.80 | 0.1576 | 0.0628 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 111953-01-15 10:32 G | 42611067.77 | 42611067.94 | 42611068.17 | 0.0090 | 0.0058 |
| Neptune | 111954-01-17 22:18 G | 42611435.20 | 42611435.43 | 42611435.67 | 0.0090 | 0.0028 |
| Neptune | 111955-01-20 08:37 G | 42611802.60 | 42611802.86 | 42611803.12 | 0.0090 | 0.0011 |
| Saturn | 111955-09-08 12:42 G | 42612033.88 | 42612034.03 | 42612034.18 | 0.0288 | 0.0224 |
| Neptune | 111956-01-23 00:13 G | 42612170.27 | 42612170.51 | 42612170.76 | 0.0090 | 0.0019 |
| Saturn | 111956-09-21 18:27 G | 42612413.04 | 42612413.27 | 42612413.51 | 0.0285 | 0.0043 |
| Neptune | 111957-01-24 06:13 G | 42612537.52 | 42612537.76 | 42612538.00 | 0.0090 | 0.0035 |
| Neptune | 111958-01-27 00:42 G | 42612905.37 | 42612905.53 | 42612905.72 | 0.0090 | 0.0065 |
| Neptune | 111959-01-29 05:30 G | 42613272.64 | 42613272.73 | 42613272.86 | 0.0090 | 0.0080 |
| Jupiter | 111964-02-02 16:03 G | 42615103.01 | 42615103.17 | 42615103.34 | 0.0519 | 0.0341 |
| Uranus | 111968-07-23 09:34 G | 42616735.65 | 42616735.90 | 42616736.17 | 0.0141 | 0.0032 |
| Uranus | 111969-07-28 09:49 G | 42617105.70 | 42617105.91 | 42617106.13 | 0.0141 | 0.0072 |
| Jupiter | 111969-07-30 00:42 G | 42617107.43 | 42617107.53 | 42617107.64 | 0.0509 | 0.0449 |
| Saturn | 111971-03-11 09:34 G | 42617696.73 | 42617696.90 | 42617697.09 | 0.0273 | 0.0176 |
| Saturn | 111972-03-22 16:46 G | 42618073.96 | 42618074.20 | 42618074.44 | 0.0275 | 0.0032 |
| Saturn | 111973-04-03 23:15 G | 42618451.37 | 42618451.47 | 42618451.60 | 0.0278 | 0.0246 |
| Jupiter | 111976-02-07 15:34 G | 42619490.92 | 42619491.15 | 42619491.39 | 0.0521 | 0.0048 |
| Jupiter | 111981-08-03 19:39 G | 42621495.08 | 42621495.32 | 42621495.56 | 0.0507 | 0.0087 |
| Saturn | 111985-09-16 07:39 G | 42622999.57 | 42622999.82 | 42623000.07 | 0.0286 | 0.0059 |
| Saturn | 111986-09-30 04:46 G | 42623378.54 | 42623378.70 | 42623378.88 | 0.0283 | 0.0203 |
| Jupiter | 111988-02-11 23:58 G | 42623878.36 | 42623878.50 | 42623878.65 | 0.0524 | 0.0402 |
| Jupiter | 111993-08-08 12:13 G | 42625882.82 | 42625883.01 | 42625883.22 | 0.0505 | 0.0233 |
| Saturn | 112000-03-05 06:56 G | 42628283.75 | 42628283.79 | 42628283.82 | 0.0271 | 0.0267 |

113TH MILLENNIUM CE

This is a list of transits of Moon in the 113th millennium CE.

| | FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|--------------------|------|-------------|-------------|-------------|--------|--------|-------|---|
| | TRANSIT | | | | | | | | |
| | TIME | | | | | | | | |
| Saturn | 112001-03-17 08:22 | G | 42628660.63 | 42628660.85 | 42628661.09 | 0.0273 | 0.0073 | | |
| Saturn | 112002-03-29 19:25 | G | 42629038.11 | 42629038.31 | 42629038.51 | 0.0276 | 0.0140 | | |
| Uranus | 112009-01-23 16:03 | G | 42631529.96 | 42631530.17 | 42631530.41 | 0.0137 | 0.0062 | | |
| Uranus | 112010-01-28 09:49 | G | 42631899.67 | 42631899.91 | 42631900.16 | 0.0137 | 0.0029 | | |
| Uranus | 112011-02-01 13:10 | G | 42632268.96 | 42632269.05 | 42632269.13 | 0.0136 | 0.0128 | | |
| Saturn | 112014-09-10 05:15 | G | 42633585.53 | 42633585.72 | 42633585.92 | 0.0288 | 0.0173 | | |
| Saturn | 112015-09-24 09:34 | G | 42633964.66 | 42633964.90 | 42633965.14 | 0.0285 | 0.0091 | | |
| Pluto | 112027-09-05 22:18 | G | 42638329.16 | 42638329.43 | 42638329.70 | 0.0079 | 0.0011 | | |
| Saturn | 112030-03-12 12:42 | G | 42639247.84 | 42639248.03 | 42639248.22 | 0.0273 | 0.0173 | | |
| Saturn | 112031-03-24 13:10 | G | 42639624.81 | 42639625.05 | 42639625.29 | 0.0275 | 0.0036 | | |
| Saturn | 112032-04-05 01:10 | G | 42640002.49 | 42640002.55 | 42640002.63 | 0.0278 | 0.0266 | | |
| Neptune | 112033-07-11 20:22 | G | 42640465.22 | 42640465.35 | 42640465.52 | 0.0088 | 0.0071 | | |
| Neptune | 112034-07-14 01:25 | G | 42640832.37 | 42640832.56 | 42640832.76 | 0.0088 | 0.0056 | | |
| Neptune | 112035-07-16 17:30 | G | 42641199.99 | 42641200.23 | 42641200.50 | 0.0088 | 0.0028 | | |
| Neptune | 112036-07-18 02:08 | G | 42641567.35 | 42641567.59 | 42641567.84 | 0.0088 | 0.0012 | | |
| Neptune | 112037-07-20 14:08 | G | 42641934.83 | 42641935.09 | 42641935.36 | 0.0088 | 0.0017 | | |
| Neptune | 112038-07-23 03:34 | G | 42642302.42 | 42642302.65 | 42642302.89 | 0.0088 | 0.0032 | | |
| Neptune | 112039-07-25 09:49 | G | 42642669.74 | 42642669.91 | 42642670.13 | 0.0088 | 0.0060 | | |
| Neptune | 112040-07-27 03:34 | G | 42643037.54 | 42643037.65 | 42643037.81 | 0.0088 | 0.0075 | | |
| Saturn | 112043-09-04 04:46 | G | 42644171.65 | 42644171.70 | 42644171.78 | 0.0289 | 0.0279 | | |
| Saturn | 112044-09-17 14:22 | G | 42644550.86 | 42644551.10 | 42644551.34 | 0.0286 | 0.0017 | | |
| Saturn | 112045-10-01 18:27 | G | 42644930.14 | 42644930.27 | 42644930.41 | 0.0283 | 0.0233 | | |
| Jupiter | 112047-02-01 15:06 | G | 42645417.98 | 42645418.13 | 42645418.29 | 0.0519 | 0.0391 | | |
| Uranus | 112052-07-23 18:13 | G | 42647417.03 | 42647417.26 | 42647417.51 | 0.0141 | 0.0037 | | |
| Uranus | 112053-07-28 19:10 | G | 42647787.10 | 42647787.30 | 42647787.53 | 0.0141 | 0.0082 | | |
| Jupiter | 112059-02-06 15:06 | G | 42649805.91 | 42649806.13 | 42649806.35 | 0.0521 | 0.0058 | | |

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| Saturn | 112059-03-07 15:20 G | 42649835.11 | 42649835.14 | 42649835.19 | 0.0271 | 0.0266 |
| Saturn | 112060-03-18 18:13 G | 42650212.03 | 42650212.26 | 42650212.51 | 0.0273 | 0.0059 |
| Saturn | 112061-03-30 20:37 G | 42650589.17 | 42650589.36 | 42650589.57 | 0.0276 | 0.0170 |
| Jupiter | 112064-08-03 06:42 G | 42651810.56 | 42651810.78 | 42651811.00 | 0.0507 | 0.0164 |
| Jupiter | 112071-02-11 11:15 G | 42654193.79 | 42654193.97 | 42654194.16 | 0.0523 | 0.0331 |
| Saturn | 112073-09-11 05:58 G | 42655136.53 | 42655136.75 | 42655136.97 | 0.0288 | 0.0146 |
| Saturn | 112074-09-25 08:08 G | 42655515.61 | 42655515.84 | 42655516.07 | 0.0285 | 0.0108 |
| Jupiter | 112076-08-07 15:20 G | 42656197.92 | 42656198.14 | 42656198.37 | 0.0505 | 0.0193 |
| Saturn | 112089-03-13 12:42 G | 42660798.84 | 42660799.03 | 42660799.22 | 0.0273 | 0.0155 |
| Saturn | 112090-03-25 21:20 G | 42661176.17 | 42661176.39 | 42661176.62 | 0.0275 | 0.0074 |
| Uranus | 112093-01-24 06:27 G | 42662211.56 | 42662211.77 | 42662211.99 | 0.0137 | 0.0066 |
| Uranus | 112094-01-28 13:54 G | 42662580.83 | 42662581.08 | 42662581.33 | 0.0137 | 0.0039 |
| Uranus | 112095-02-02 03:34 G | 42662950.57 | 42662950.65 | 42662950.75 | 0.0136 | 0.0126 |
| Saturn | 112102-09-06 16:18 G | 42665723.10 | 42665723.18 | 42665723.29 | 0.0289 | 0.0265 |
| Saturn | 112103-09-20 22:32 G | 42666102.18 | 42666102.44 | 42666102.70 | 0.0286 | 0.0008 |
| Saturn | 112104-10-03 18:27 G | 42666481.14 | 42666481.27 | 42666481.42 | 0.0283 | 0.0233 |
| Neptune | 112117-01-15 16:03 G | 42670967.99 | 42670968.17 | 42670968.39 | 0.0089 | 0.0058 |
| Neptune | 112118-01-18 11:15 G | 42671335.75 | 42671335.97 | 42671336.19 | 0.0090 | 0.0044 |
| Saturn | 112118-03-09 15:34 G | 42671386.04 | 42671386.15 | 42671386.27 | 0.0271 | 0.0238 |
| Neptune | 112119-01-20 16:32 G | 42671702.94 | 42671703.19 | 42671703.45 | 0.0090 | 0.0011 |
| Saturn | 112119-03-21 13:25 G | 42671762.82 | 42671763.06 | 42671763.30 | 0.0273 | 0.0015 |
| Neptune | 112120-01-23 11:15 G | 42672070.71 | 42672070.97 | 42672071.23 | 0.0090 | 0.0002 |
| Saturn | 112120-04-01 22:46 G | 42672140.30 | 42672140.45 | 42672140.60 | 0.0276 | 0.0213 |
| Neptune | 112121-01-24 17:30 G | 42672438.02 | 42672438.23 | 42672438.48 | 0.0090 | 0.0035 |
| Neptune | 112122-01-27 09:20 G | 42672805.68 | 42672805.89 | 42672806.13 | 0.0090 | 0.0048 |
| Neptune | 112123-01-29 19:39 G | 42673173.25 | 42673173.32 | 42673173.46 | 0.0090 | 0.0081 |
| Jupiter | 112130-02-02 06:13 G | 42675733.60 | 42675733.76 | 42675733.93 | 0.0519 | 0.0373 |
| Saturn | 112132-09-13 11:15 G | 42676687.77 | 42676687.97 | 42676688.18 | 0.0288 | 0.0146 |
| Saturn | 112133-09-27 17:44 G | 42677067.02 | 42677067.24 | 42677067.47 | 0.0285 | 0.0110 |
| Uranus | 112135-07-21 05:15 G | 42677728.66 | 42677728.72 | 42677728.80 | 0.0141 | 0.0135 |

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| Jupiter | 112135-07-30 16:32 G | 42677738.16 | 42677738.19 | 42677738.21 | 0.0510 | 0.0506 |
| Uranus | 112136-07-25 09:06 G | 42678098.64 | 42678098.88 | 42678099.13 | 0.0141 | 0.0038 |
| Uranus | 112137-07-29 22:46 G | 42678468.27 | 42678468.45 | 42678468.66 | 0.0141 | 0.0089 |
| Jupiter | 112142-02-06 19:39 G | 42680121.09 | 42680121.32 | 42680121.54 | 0.0521 | 0.0056 |
| Jupiter | 112147-08-04 05:58 G | 42682125.54 | 42682125.75 | 42682125.96 | 0.0508 | 0.0217 |
| Saturn | 112148-03-15 17:58 G | 42682350.02 | 42682350.25 | 42682350.47 | 0.0273 | 0.0110 |
| Saturn | 112149-03-27 17:30 G | 42682727.01 | 42682727.23 | 42682727.47 | 0.0275 | 0.0112 |
| Jupiter | 112154-02-11 21:20 G | 42684509.19 | 42684509.39 | 42684509.59 | 0.0523 | 0.0261 |
| Mars | 112157-11-07 19:10 G | 42685874.12 | 42685874.30 | 42685874.48 | 0.1575 | 0.0268 |
| Jupiter | 112159-08-09 03:20 G | 42686513.41 | 42686513.64 | 42686513.88 | 0.0506 | 0.0112 |
| Saturn | 112161-09-07 10:32 G | 42687273.85 | 42687273.94 | 42687274.04 | 0.0289 | 0.0265 |
| Saturn | 112162-09-21 17:15 G | 42687652.98 | 42687653.22 | 42687653.47 | 0.0286 | 0.0005 |
| Saturn | 112163-10-05 20:51 G | 42688032.27 | 42688032.37 | 42688032.48 | 0.0283 | 0.0255 |
| Jupiter | 112171-08-13 17:58 G | 42690901.18 | 42690901.25 | 42690901.33 | 0.0504 | 0.0475 |
| Uranus | 112177-01-25 14:51 G | 42692892.91 | 42692893.12 | 42692893.36 | 0.0137 | 0.0069 |
| Saturn | 112177-03-10 16:03 G | 42692937.03 | 42692937.17 | 42692937.34 | 0.0271 | 0.0199 |
| Uranus | 112178-01-29 22:46 G | 42693262.23 | 42693262.45 | 42693262.69 | 0.0137 | 0.0045 |
| Saturn | 112178-03-22 21:49 G | 42693314.17 | 42693314.41 | 42693314.64 | 0.0273 | 0.0016 |
| Uranus | 112179-02-03 11:44 G | 42693631.93 | 42693631.99 | 42693632.10 | 0.0136 | 0.0130 |
| Saturn | 112179-04-04 02:37 G | 42693691.48 | 42693691.61 | 42693691.76 | 0.0276 | 0.0226 |
| Pluto | 112186-03-10 08:08 G | 42696223.58 | 42696223.84 | 42696224.10 | 0.0066 | 0.0004 |
| Saturn | 112191-09-15 11:58 G | 42698238.77 | 42698239.00 | 42698239.23 | 0.0288 | 0.0124 |
| Saturn | 112192-09-28 11:30 G | 42698617.77 | 42698617.98 | 42698618.20 | 0.0285 | 0.0145 |
| Neptune | 112197-07-12 04:03 G | 42700365.66 | 42700365.67 | 42700365.75 | 0.0088 | 0.0087 |
| Neptune | 112198-07-14 15:49 G | 42700732.98 | 42700733.16 | 42700733.37 | 0.0088 | 0.0056 |
| Neptune | 112199-07-16 23:44 G | 42701100.27 | 42701100.49 | 42701100.74 | 0.0088 | 0.0043 |
| Neptune | 112200-07-19 16:18 G | 42701467.93 | 42701468.18 | 42701468.43 | 0.0088 | 0.0012 |
| Neptune | 112201-07-21 20:51 G | 42701835.12 | 42701835.37 | 42701835.64 | 0.0088 | 0.0002 |
| Neptune | 112202-07-24 14:51 G | 42702202.90 | 42702203.12 | 42702203.38 | 0.0088 | 0.0032 |
| Neptune | 112203-07-26 20:08 G | 42702570.12 | 42702570.34 | 42702570.56 | 0.0088 | 0.0044 |

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| Neptune | 112204-07-28 11:58 G | 42702937.90 | 42702938.00 | 42702938.17 | 0.0088 | 0.0076 |
| Saturn | 112207-03-18 11:01 G | 42703900.74 | 42703900.96 | 42703901.19 | 0.0273 | 0.0091 |
| Saturn | 112208-03-29 18:42 G | 42704278.08 | 42704278.28 | 42704278.50 | 0.0275 | 0.0116 |
| Jupiter | 112213-02-02 12:42 G | 42706048.91 | 42706049.03 | 42706049.15 | 0.0518 | 0.0434 |
| Uranus | 112219-07-22 20:51 G | 42708410.27 | 42708410.37 | 42708410.47 | 0.0141 | 0.0128 |
| Uranus | 112220-07-26 11:58 G | 42708779.75 | 42708780.00 | 42708780.26 | 0.0141 | 0.0033 |
| Saturn | 112220-09-09 14:22 G | 42708824.96 | 42708825.10 | 42708825.25 | 0.0288 | 0.0231 |
| Uranus | 112221-07-31 14:22 G | 42709149.90 | 42709150.10 | 42709150.29 | 0.0141 | 0.0088 |
| Saturn | 112221-09-23 22:46 G | 42709204.21 | 42709204.45 | 42709204.70 | 0.0286 | 0.0041 |
| Jupiter | 112225-02-06 23:01 G | 42710436.23 | 42710436.46 | 42710436.70 | 0.0520 | 0.0080 |
| Jupiter | 112230-08-04 15:20 G | 42712440.92 | 42712441.14 | 42712441.37 | 0.0508 | 0.0185 |
| Saturn | 112236-03-12 19:39 G | 42714488.15 | 42714488.32 | 42714488.51 | 0.0271 | 0.0185 |
| Mars | 112236-11-10 22:32 G | 42714731.37 | 42714731.44 | 42714731.51 | 0.1576 | 0.1444 |
| Jupiter | 112237-02-11 20:51 G | 42714824.18 | 42714824.37 | 42714824.57 | 0.0522 | 0.0260 |
| Saturn | 112237-03-24 16:32 G | 42714864.94 | 42714865.19 | 42714865.43 | 0.0273 | 0.0015 |
| Saturn | 112238-04-05 22:18 G | 42715242.31 | 42715242.43 | 42715242.57 | 0.0276 | 0.0227 |
| Jupiter | 112242-08-09 16:32 G | 42716828.96 | 42716829.19 | 42716829.41 | 0.0506 | 0.0111 |
| Saturn | 112250-09-17 08:08 G | 42719789.61 | 42719789.84 | 42719790.07 | 0.0287 | 0.0081 |
| Saturn | 112251-10-01 15:20 G | 42720168.96 | 42720169.14 | 42720169.33 | 0.0285 | 0.0182 |
| Jupiter | 112254-08-14 02:51 G | 42721216.49 | 42721216.62 | 42721216.77 | 0.0504 | 0.0409 |
| Mars | 112260-05-08 22:32 G | 42723311.30 | 42723311.44 | 42723311.59 | 0.1967 | 0.1378 |
| Uranus | 112261-01-26 18:13 G | 42723574.04 | 42723574.26 | 42723574.48 | 0.0137 | 0.0064 |
| Uranus | 112262-01-31 11:58 G | 42723943.77 | 42723944.00 | 42723944.25 | 0.0137 | 0.0043 |
| Saturn | 112266-03-19 17:44 G | 42725452.02 | 42725452.24 | 42725452.47 | 0.0273 | 0.0094 |
| Saturn | 112267-03-31 19:10 G | 42725829.08 | 42725829.30 | 42725829.53 | 0.0275 | 0.0122 |
| Pluto | 112273-09-08 20:51 G | 42728182.13 | 42728182.37 | 42728182.64 | 0.0079 | 0.0020 |
| Saturn | 112279-09-11 09:20 G | 42730375.70 | 42730375.89 | 42730376.09 | 0.0288 | 0.0193 |
| Neptune | 112280-01-14 20:37 G | 42730501.36 | 42730501.36 | 42730501.37 | 0.0089 | 0.0089 |
| Saturn | 112280-09-24 13:10 G | 42730754.81 | 42730755.05 | 42730755.30 | 0.0286 | 0.0068 |
| Neptune | 112281-01-16 02:37 G | 42730868.49 | 42730868.61 | 42730868.76 | 0.0089 | 0.0075 |

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| Neptune | 112282-01-18 19:25 G | 42731236.10 | 42731236.31 | 42731236.56 | 0.0090 | 0.0045 |
| Neptune | 112283-01-21 05:01 G | 42731603.49 | 42731603.71 | 42731603.96 | 0.0090 | 0.0030 |
| Neptune | 112284-01-23 17:01 G | 42731970.95 | 42731971.21 | 42731971.48 | 0.0090 | 0.0002 |
| Neptune | 112285-01-25 07:25 G | 42732338.58 | 42732338.81 | 42732339.06 | 0.0090 | 0.0018 |
| Neptune | 112286-01-27 14:22 G | 42732705.91 | 42732706.10 | 42732706.34 | 0.0090 | 0.0049 |
| Neptune | 112287-01-30 08:51 G | 42733073.71 | 42733073.87 | 42733074.07 | 0.0090 | 0.0064 |
| Saturn | 112295-03-14 14:37 G | 42736038.94 | 42736039.11 | 42736039.28 | 0.0271 | 0.0187 |
| Saturn | 112296-03-25 20:08 G | 42736416.11 | 42736416.34 | 42736416.58 | 0.0273 | 0.0030 |
| Saturn | 112297-04-07 05:15 G | 42736793.65 | 42736793.72 | 42736793.80 | 0.0276 | 0.0261 |
| Uranus | 112303-07-24 04:32 G | 42739091.59 | 42739091.69 | 42739091.81 | 0.0141 | 0.0128 |
| Uranus | 112304-07-28 00:42 G | 42739461.29 | 42739461.53 | 42739461.78 | 0.0141 | 0.0020 |
| Uranus | 112305-08-01 23:01 G | 42739831.26 | 42739831.46 | 42739831.69 | 0.0141 | 0.0085 |
| Jupiter | 112308-02-08 14:51 G | 42740751.90 | 42740752.12 | 42740752.34 | 0.0520 | 0.0149 |
| Saturn | 112309-09-19 11:44 G | 42741340.74 | 42741340.99 | 42741341.24 | 0.0287 | 0.0065 |
| Saturn | 112310-10-03 11:01 G | 42741719.78 | 42741719.96 | 42741720.17 | 0.0285 | 0.0184 |
| Jupiter | 112313-08-05 06:42 G | 42742756.56 | 42742756.78 | 42742757.00 | 0.0509 | 0.0214 |
| Jupiter | 112320-02-13 04:03 G | 42745139.47 | 42745139.67 | 42745139.88 | 0.0522 | 0.0239 |
| Saturn | 112325-03-21 11:01 G | 42747002.72 | 42747002.96 | 42747003.20 | 0.0273 | 0.0069 |
| Jupiter | 112325-08-09 17:30 G | 42747144.01 | 42747144.23 | 42747144.45 | 0.0507 | 0.0119 |
| Saturn | 112326-04-02 16:03 G | 42747379.99 | 42747380.17 | 42747380.37 | 0.0275 | 0.0162 |
| Jupiter | 112337-08-14 16:46 G | 42751532.07 | 42751532.20 | 42751532.34 | 0.0505 | 0.0417 |
| Saturn | 112338-09-13 08:37 G | 42751926.69 | 42751926.86 | 42751927.04 | 0.0288 | 0.0191 |
| Saturn | 112339-09-27 18:27 G | 42752306.03 | 42752306.27 | 42752306.51 | 0.0286 | 0.0064 |
| Uranus | 112345-01-28 09:49 G | 42754255.69 | 42754255.91 | 42754256.14 | 0.0137 | 0.0054 |
| Uranus | 112346-02-01 15:06 G | 42754624.88 | 42754625.13 | 42754625.38 | 0.0137 | 0.0039 |
| Saturn | 112354-03-16 22:46 G | 42757590.25 | 42757590.45 | 42757590.65 | 0.0271 | 0.0156 |
| Saturn | 112355-03-28 21:06 G | 42757967.13 | 42757967.38 | 42757967.62 | 0.0274 | 0.0072 |
| Neptune | 112361-07-13 10:03 G | 42760265.89 | 42760265.92 | 42760265.99 | 0.0088 | 0.0086 |
| Neptune | 112362-07-16 04:03 G | 42760633.55 | 42760633.67 | 42760633.84 | 0.0088 | 0.0073 |
| Mars | 112362-11-09 07:25 G | 42760749.65 | 42760749.81 | 42760749.97 | 0.1574 | 0.0915 |

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| Neptune | 112363-07-18 08:51 G | 42761000.66 | 42761000.87 | 42761001.10 | 0.0088 | 0.0043 |
| Neptune | 112364-07-20 02:22 G | 42761368.36 | 42761368.60 | 42761368.86 | 0.0088 | 0.0029 |
| Neptune | 112365-07-22 09:34 G | 42761735.65 | 42761735.90 | 42761736.15 | 0.0088 | 0.0001 |
| Neptune | 112366-07-24 22:32 G | 42762103.19 | 42762103.44 | 42762103.72 | 0.0088 | 0.0016 |
| Neptune | 112367-07-27 10:32 G | 42762470.72 | 42762470.94 | 42762471.16 | 0.0088 | 0.0045 |
| Neptune | 112368-07-28 17:58 G | 42762838.07 | 42762838.25 | 42762838.47 | 0.0088 | 0.0059 |
| Saturn | 112368-09-20 05:15 G | 42762891.49 | 42762891.72 | 42762891.96 | 0.0287 | 0.0068 |
| Saturn | 112369-10-04 10:18 G | 42763270.76 | 42763270.93 | 42763271.11 | 0.0284 | 0.0190 |
| Jupiter | 112379-02-03 00:27 G | 42766679.46 | 42766679.52 | 42766679.58 | 0.0517 | 0.0497 |
| Saturn | 112383-03-11 12:42 G | 42768176.93 | 42768177.03 | 42768177.13 | 0.0271 | 0.0245 |
| Saturn | 112384-03-22 17:15 G | 42768553.98 | 42768554.22 | 42768554.45 | 0.0273 | 0.0026 |
| Saturn | 112385-04-03 22:46 G | 42768931.28 | 42768931.45 | 42768931.63 | 0.0275 | 0.0194 |
| Uranus | 112387-07-24 10:18 G | 42769772.87 | 42769772.93 | 42769773.04 | 0.0141 | 0.0132 |
| Uranus | 112388-07-28 13:39 G | 42770142.81 | 42770143.07 | 42770143.33 | 0.0141 | 0.0010 |
| Uranus | 112389-08-02 03:49 G | 42770512.47 | 42770512.66 | 42770512.87 | 0.0141 | 0.0087 |
| Jupiter | 112391-02-07 20:08 G | 42771067.13 | 42771067.34 | 42771067.55 | 0.0519 | 0.0195 |
| Jupiter | 112396-08-04 13:39 G | 42773071.89 | 42773072.07 | 42773072.26 | 0.0509 | 0.0301 |
| Saturn | 112397-09-14 10:18 G | 42773477.74 | 42773477.93 | 42773478.14 | 0.0288 | 0.0183 |
| Saturn | 112398-09-28 12:42 G | 42773856.78 | 42773857.03 | 42773857.27 | 0.0285 | 0.0083 |
| Jupiter | 112403-02-12 09:34 G | 42775454.67 | 42775454.90 | 42775455.14 | 0.0521 | 0.0137 |
| Jupiter | 112408-08-09 02:51 G | 42777459.38 | 42777459.62 | 42777459.86 | 0.0508 | 0.0062 |
| Saturn | 112413-03-17 17:44 G | 42779141.01 | 42779141.24 | 42779141.46 | 0.0272 | 0.0114 |
| Saturn | 112414-03-29 21:34 G | 42779518.19 | 42779518.40 | 42779518.63 | 0.0274 | 0.0097 |
| Jupiter | 112415-02-17 04:18 G | 42779842.67 | 42779842.68 | 42779842.69 | 0.0523 | 0.0522 |
| Jupiter | 112420-08-14 01:10 G | 42781847.44 | 42781847.55 | 42781847.69 | 0.0505 | 0.0421 |
| Saturn | 112427-09-22 15:20 G | 42784442.89 | 42784443.14 | 42784443.39 | 0.0287 | 0.0032 |
| Saturn | 112428-10-05 15:49 G | 42784822.02 | 42784822.16 | 42784822.32 | 0.0284 | 0.0229 |
| Uranus | 112429-01-28 16:32 G | 42784936.95 | 42784937.19 | 42784937.45 | 0.0137 | 0.0045 |
| Uranus | 112430-02-02 02:37 G | 42785306.38 | 42785306.61 | 42785306.85 | 0.0137 | 0.0040 |
| Pluto | 112432-03-13 13:25 G | 42786076.82 | 42786077.06 | 42786077.31 | 0.0066 | 0.0005 |

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| Mars | 112441-11-11 05:01 G | 42789606.52 | 42789606.71 | 42789606.90 | 0.1575 | 0.0492 |
| Saturn | 112442-03-12 21:06 G | 42789728.24 | 42789728.38 | 42789728.55 | 0.0271 | 0.0211 |
| Saturn | 112443-03-24 17:30 G | 42790104.98 | 42790105.23 | 42790105.48 | 0.0273 | 0.0010 |
| Saturn | 112444-04-04 19:39 G | 42790482.16 | 42790482.32 | 42790482.50 | 0.0276 | 0.0194 |
| Neptune | 112445-01-16 15:49 G | 42790769.08 | 42790769.16 | 42790769.30 | 0.0089 | 0.0080 |
| Neptune | 112446-01-19 00:42 G | 42791136.34 | 42791136.53 | 42791136.74 | 0.0090 | 0.0059 |
| Neptune | 112447-01-21 18:27 G | 42791504.05 | 42791504.27 | 42791504.52 | 0.0090 | 0.0033 |
| Neptune | 112448-01-24 00:13 G | 42791871.25 | 42791871.51 | 42791871.77 | 0.0090 | 0.0012 |
| Neptune | 112449-01-25 19:10 G | 42792239.05 | 42792239.30 | 42792239.56 | 0.0090 | 0.0014 |
| Neptune | 112450-01-28 01:25 G | 42792606.33 | 42792606.56 | 42792606.79 | 0.0090 | 0.0034 |
| Neptune | 112451-01-30 17:44 G | 42792974.06 | 42792974.24 | 42792974.45 | 0.0090 | 0.0059 |
| Neptune | 112452-02-02 03:20 G | 42793341.54 | 42793341.64 | 42793341.76 | 0.0090 | 0.0080 |
| Saturn | 112456-09-15 09:06 G | 42795028.68 | 42795028.88 | 42795029.10 | 0.0288 | 0.0139 |
| Saturn | 112457-09-29 17:44 G | 42795408.03 | 42795408.24 | 42795408.46 | 0.0285 | 0.0129 |
| Uranus | 112471-07-25 02:08 G | 42800454.51 | 42800454.59 | 42800454.70 | 0.0141 | 0.0131 |
| Saturn | 112472-03-19 03:34 G | 42800692.43 | 42800692.65 | 42800692.86 | 0.0272 | 0.0106 |
| Uranus | 112472-07-28 16:32 G | 42800823.93 | 42800824.19 | 42800824.45 | 0.0141 | 0.0006 |
| Saturn | 112473-03-31 06:27 G | 42801069.55 | 42801069.77 | 42801070.01 | 0.0274 | 0.0100 |
| Uranus | 112473-08-02 19:25 G | 42801194.14 | 42801194.31 | 42801194.50 | 0.0142 | 0.0097 |
| Jupiter | 112474-02-06 17:15 G | 42801382.01 | 42801382.22 | 42801382.43 | 0.0518 | 0.0192 |
| Jupiter | 112479-08-04 15:34 G | 42803386.97 | 42803387.15 | 42803387.34 | 0.0510 | 0.0305 |
| Saturn | 112485-09-09 09:06 G | 42805614.77 | 42805614.88 | 42805615.01 | 0.0289 | 0.0255 |
| Jupiter | 112486-02-11 20:08 G | 42805770.11 | 42805770.34 | 42805770.56 | 0.0521 | 0.0117 |
| Saturn | 112486-09-23 13:39 G | 42805993.81 | 42805994.07 | 42805994.32 | 0.0287 | 0.0014 |
| Saturn | 112487-10-07 14:22 G | 42806373.04 | 42806373.10 | 42806373.19 | 0.0284 | 0.0268 |
| Jupiter | 112491-08-09 15:34 G | 42807774.91 | 42807775.15 | 42807775.39 | 0.0508 | 0.0001 |
| Jupiter | 112498-02-16 09:20 G | 42810157.77 | 42810157.89 | 42810158.01 | 0.0523 | 0.0446 |
| Saturn | 112501-03-14 18:13 G | 42811279.11 | 42811279.26 | 42811279.42 | 0.0271 | 0.0210 |
| Saturn | 112502-03-26 22:03 G | 42811656.19 | 42811656.42 | 42811656.66 | 0.0273 | 0.0008 |
| Saturn | 112503-04-08 07:54 G | 42812033.69 | 42812033.83 | 42812033.99 | 0.0276 | 0.0214 |

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| Jupiter | 112503-08-14 23:58 G | 42812162.33 | 42812162.50 | 42812162.68 | 0.0506 | 0.0328 |
| Uranus | 112513-01-30 00:27 G | 42815618.28 | 42815618.52 | 42815618.76 | 0.0137 | 0.0040 |
| Uranus | 112514-02-03 16:46 G | 42815987.97 | 42815988.20 | 42815988.45 | 0.0137 | 0.0051 |
| Saturn | 112515-09-18 22:03 G | 42816580.19 | 42816580.42 | 42816580.66 | 0.0288 | 0.0103 |
| Saturn | 112516-10-02 00:13 G | 42816959.30 | 42816959.51 | 42816959.73 | 0.0285 | 0.0154 |
| Pluto | 112519-09-13 07:10 G | 42818035.55 | 42818035.80 | 42818036.05 | 0.0079 | 0.0013 |
| Neptune | 112526-07-16 11:58 G | 42820533.89 | 42820534.00 | 42820534.16 | 0.0088 | 0.0076 |
| Neptune | 112527-07-18 22:03 G | 42820901.25 | 42820901.42 | 42820901.63 | 0.0088 | 0.0057 |
| Neptune | 112528-07-20 07:25 G | 42821268.57 | 42821268.81 | 42821269.08 | 0.0088 | 0.0031 |
| Neptune | 112529-07-22 22:46 G | 42821636.21 | 42821636.45 | 42821636.71 | 0.0088 | 0.0013 |
| Neptune | 112530-07-25 04:18 G | 42822003.43 | 42822003.68 | 42822003.95 | 0.0088 | 0.0013 |
| Saturn | 112531-03-22 05:30 G | 42822243.50 | 42822243.73 | 42822243.97 | 0.0273 | 0.0100 |
| Neptune | 112531-07-27 22:32 G | 42822371.21 | 42822371.44 | 42822371.70 | 0.0088 | 0.0031 |
| Saturn | 112532-04-02 07:10 G | 42822620.59 | 42822620.80 | 42822621.02 | 0.0275 | 0.0124 |
| Neptune | 112532-07-29 02:51 G | 42822738.43 | 42822738.62 | 42822738.83 | 0.0088 | 0.0056 |
| Neptune | 112533-07-31 20:22 G | 42823106.22 | 42823106.35 | 42823106.49 | 0.0088 | 0.0075 |
| Mars | 112544-05-10 08:51 G | 42827041.68 | 42827041.87 | 42827042.05 | 0.1968 | 0.0203 |
| Saturn | 112544-09-11 18:13 G | 42827166.12 | 42827166.26 | 42827166.40 | 0.0289 | 0.0233 |
| Saturn | 112545-09-26 04:03 G | 42827545.43 | 42827545.67 | 42827545.91 | 0.0286 | 0.0026 |
| Saturn | 112546-10-10 06:27 G | 42827924.71 | 42827924.77 | 42827924.83 | 0.0284 | 0.0274 |
| Uranus | 112555-07-26 05:58 G | 42831135.63 | 42831135.75 | 42831135.90 | 0.0141 | 0.0122 |
| Uranus | 112556-07-30 04:32 G | 42831505.44 | 42831505.69 | 42831505.94 | 0.0141 | 0.0010 |
| Jupiter | 112557-02-07 03:06 G | 42831697.42 | 42831697.63 | 42831697.84 | 0.0518 | 0.0237 |
| Uranus | 112557-08-04 00:27 G | 42831875.37 | 42831875.52 | 42831875.72 | 0.0142 | 0.0107 |
| Saturn | 112560-03-16 07:10 G | 42832830.65 | 42832830.80 | 42832830.97 | 0.0271 | 0.0199 |
| Saturn | 112561-03-28 08:08 G | 42833207.59 | 42833207.84 | 42833208.09 | 0.0274 | 0.0027 |
| Saturn | 112562-04-09 09:20 G | 42833584.83 | 42833584.89 | 42833584.98 | 0.0276 | 0.0263 |
| Jupiter | 112562-08-04 16:46 G | 42833702.02 | 42833702.20 | 42833702.40 | 0.0510 | 0.0315 |
| Mars | 112567-11-09 05:58 G | 42835624.67 | 42835624.75 | 42835624.83 | 0.1574 | 0.1434 |
| Jupiter | 112569-02-11 21:06 G | 42836085.16 | 42836085.38 | 42836085.60 | 0.0520 | 0.0121 |

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| Jupiter | 112574-08-09 16:32 G | 42838089.96 | 42838090.19 | 42838090.42 | 0.0509 | 0.0003 |
| Saturn | 112574-09-19 23:58 G | 42838131.27 | 42838131.50 | 42838131.74 | 0.0287 | 0.0101 |
| Saturn | 112575-10-04 05:01 G | 42838510.52 | 42838510.71 | 42838510.92 | 0.0285 | 0.0157 |
| Jupiter | 112581-02-16 13:54 G | 42840472.96 | 42840473.08 | 42840473.22 | 0.0521 | 0.0434 |
| Jupiter | 112586-08-14 04:03 G | 42842477.48 | 42842477.67 | 42842477.88 | 0.0507 | 0.0284 |
| Saturn | 112590-03-23 13:54 G | 42843794.85 | 42843795.08 | 42843795.30 | 0.0273 | 0.0063 |
| Saturn | 112591-04-04 22:18 G | 42844172.24 | 42844172.43 | 42844172.62 | 0.0275 | 0.0171 |
| Uranus | 112597-01-30 16:32 G | 42846299.96 | 42846300.19 | 42846300.43 | 0.0137 | 0.0042 |
| Uranus | 112598-02-03 20:08 G | 42846669.12 | 42846669.34 | 42846669.58 | 0.0137 | 0.0062 |
| Saturn | 112603-09-15 11:44 G | 42848717.84 | 42848717.99 | 42848718.15 | 0.0288 | 0.0225 |
| Saturn | 112604-09-28 14:37 G | 42849096.86 | 42849097.11 | 42849097.37 | 0.0286 | 0.0036 |
| Neptune | 112609-01-18 04:18 G | 42850669.63 | 42850669.68 | 42850669.75 | 0.0089 | 0.0087 |
| Neptune | 112610-01-20 09:34 G | 42851036.76 | 42851036.90 | 42851037.09 | 0.0089 | 0.0068 |
| Neptune | 112611-01-23 03:06 G | 42851404.41 | 42851404.63 | 42851404.88 | 0.0090 | 0.0041 |
| Neptune | 112612-01-25 11:58 G | 42851771.76 | 42851772.00 | 42851772.24 | 0.0090 | 0.0022 |
| Neptune | 112613-01-27 00:42 G | 42852139.27 | 42852139.53 | 42852139.80 | 0.0090 | 0.0004 |
| Neptune | 112614-01-29 14:08 G | 42852506.86 | 42852507.09 | 42852507.34 | 0.0090 | 0.0025 |
| Neptune | 112615-01-31 22:18 G | 42852874.23 | 42852874.43 | 42852874.66 | 0.0090 | 0.0051 |
| Neptune | 112616-02-03 16:46 G | 42853242.05 | 42853242.20 | 42853242.35 | 0.0090 | 0.0071 |
| Saturn | 112619-03-19 10:18 G | 42854381.73 | 42854381.93 | 42854382.15 | 0.0272 | 0.0153 |
| Saturn | 112620-03-30 11:58 G | 42854758.77 | 42854759.00 | 42854759.23 | 0.0274 | 0.0072 |
| Saturn | 112633-09-22 19:53 G | 42859683.09 | 42859683.33 | 42859683.56 | 0.0287 | 0.0079 |
| Saturn | 112634-10-06 23:29 G | 42860062.30 | 42860062.48 | 42860062.68 | 0.0284 | 0.0183 |
| Uranus | 112639-07-27 14:08 G | 42861816.95 | 42861817.09 | 42861817.25 | 0.0141 | 0.0111 |
| Jupiter | 112640-02-08 07:39 G | 42862012.65 | 42862012.82 | 42862013.00 | 0.0516 | 0.0332 |
| Uranus | 112640-07-31 15:20 G | 42862186.88 | 42862187.14 | 42862187.40 | 0.0141 | 0.0012 |
| Uranus | 112641-08-05 07:25 G | 42862556.67 | 42862556.81 | 42862556.96 | 0.0142 | 0.0114 |
| Jupiter | 112645-08-04 20:51 G | 42864017.24 | 42864017.37 | 42864017.52 | 0.0512 | 0.0413 |
| Mars | 112646-11-12 02:37 G | 42864481.42 | 42864481.61 | 42864481.81 | 0.1574 | 0.0128 |
| Saturn | 112648-03-14 01:25 G | 42864969.45 | 42864969.56 | 42864969.67 | 0.0271 | 0.0241 |

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| Saturn | 112649-03-26 00:41 G | 42865346.28 | 42865346.53 | 42865346.78 | 0.0273 | 0.0023 |
| Saturn | 112650-04-07 00:56 G | 42865723.37 | 42865723.54 | 42865723.73 | 0.0276 | 0.0192 |
| Jupiter | 112652-02-12 16:17 G | 42866399.95 | 42866400.18 | 42866400.41 | 0.0519 | 0.0024 |
| Jupiter | 112657-08-09 12:13 G | 42868404.78 | 42868405.01 | 42868405.24 | 0.0509 | 0.0045 |
| Saturn | 112662-09-16 20:37 G | 42870269.18 | 42870269.36 | 42870269.55 | 0.0288 | 0.0189 |
| Saturn | 112663-10-01 03:49 G | 42870648.43 | 42870648.66 | 42870648.89 | 0.0286 | 0.0078 |
| Jupiter | 112664-02-17 16:46 G | 42870788.06 | 42870788.20 | 42870788.35 | 0.0521 | 0.0400 |
| Jupiter | 112669-08-14 12:41 G | 42872792.84 | 42872793.03 | 42872793.23 | 0.0507 | 0.0290 |
| Pluto | 112678-03-17 21:20 G | 42875930.15 | 42875930.39 | 42875930.65 | 0.0066 | 0.0007 |
| Saturn | 112678-03-20 22:03 G | 42875933.22 | 42875933.42 | 42875933.63 | 0.0272 | 0.0120 |
| Saturn | 112679-04-02 04:03 G | 42876310.45 | 42876310.67 | 42876310.91 | 0.0274 | 0.0086 |
| Uranus | 112680-01-28 13:25 G | 42876612.02 | 42876612.06 | 42876612.15 | 0.0137 | 0.0132 |
| Uranus | 112681-01-31 22:32 G | 42876981.19 | 42876981.44 | 42876981.69 | 0.0137 | 0.0043 |
| Uranus | 112682-02-05 10:46 G | 42877350.74 | 42877350.95 | 42877351.16 | 0.0137 | 0.0069 |
| Neptune | 112690-07-16 17:01 G | 42880434.16 | 42880434.21 | 42880434.30 | 0.0088 | 0.0084 |
| Neptune | 112691-07-19 11:15 G | 42880801.81 | 42880801.97 | 42880802.16 | 0.0088 | 0.0064 |
| Neptune | 112692-07-20 15:49 G | 42881168.93 | 42881169.16 | 42881169.39 | 0.0088 | 0.0040 |
| Saturn | 112692-09-24 05:58 G | 42881234.49 | 42881234.75 | 42881235.01 | 0.0287 | 0.0026 |
| Neptune | 112693-07-23 09:34 G | 42881536.65 | 42881536.90 | 42881537.16 | 0.0088 | 0.0021 |
| Saturn | 112693-10-08 06:13 G | 42881613.64 | 42881613.76 | 42881613.91 | 0.0284 | 0.0236 |
| Neptune | 112694-07-25 16:17 G | 42881903.93 | 42881904.18 | 42881904.43 | 0.0088 | 0.0003 |
| Neptune | 112695-07-28 05:29 G | 42882271.49 | 42882271.73 | 42882272.01 | 0.0088 | 0.0024 |
| Neptune | 112696-07-29 16:46 G | 42882638.99 | 42882639.20 | 42882639.41 | 0.0088 | 0.0048 |
| Neptune | 112697-08-01 01:10 G | 42883006.39 | 42883006.55 | 42883006.73 | 0.0088 | 0.0068 |
| Saturn | 112707-03-17 04:17 G | 42886520.53 | 42886520.68 | 42886520.84 | 0.0272 | 0.0213 |
| Saturn | 112708-03-28 05:44 G | 42886897.51 | 42886897.74 | 42886897.98 | 0.0274 | 0.0013 |
| Saturn | 112709-04-09 16:17 G | 42887275.03 | 42887275.18 | 42887275.35 | 0.0276 | 0.0197 |
| Saturn | 112721-09-19 21:20 G | 42891821.17 | 42891821.39 | 42891821.61 | 0.0288 | 0.0132 |
| Saturn | 112722-10-04 01:25 G | 42892200.34 | 42892200.56 | 42892200.79 | 0.0285 | 0.0131 |
| Jupiter | 112723-02-08 03:49 G | 42892327.50 | 42892327.66 | 42892327.83 | 0.0516 | 0.0352 |

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| Uranus | 112723-07-29 04:32 G | 42892498.53 | 42892498.69 | 42892498.87 | 0.0141 | 0.0104 |
| Uranus | 112724-08-01 17:58 G | 42892868.00 | 42892868.25 | 42892868.51 | 0.0141 | 0.0009 |
| Uranus | 112725-08-06 22:32 G | 42893238.29 | 42893238.44 | 42893238.59 | 0.0142 | 0.0114 |
| Mars | 112725-11-15 03:20 G | 42893338.52 | 42893338.64 | 42893338.76 | 0.1575 | 0.1200 |
| Jupiter | 112728-08-05 02:08 G | 42894332.49 | 42894332.59 | 42894332.69 | 0.0512 | 0.0461 |
| Jupiter | 112735-02-12 21:05 G | 42896715.14 | 42896715.38 | 42896715.62 | 0.0519 | 0.0050 |
| Saturn | 112737-03-23 07:53 G | 42897484.62 | 42897484.83 | 42897485.07 | 0.0272 | 0.0114 |
| Saturn | 112738-04-04 07:10 G | 42897861.58 | 42897861.80 | 42897862.04 | 0.0274 | 0.0094 |
| Jupiter | 112740-08-09 12:13 G | 42898719.78 | 42898720.01 | 42898720.24 | 0.0510 | 0.0147 |
| Jupiter | 112747-02-17 15:20 G | 42901102.96 | 42901103.14 | 42901103.33 | 0.0521 | 0.0297 |
| Saturn | 112750-09-13 12:27 G | 42902406.90 | 42902407.02 | 42902407.14 | 0.0289 | 0.0248 |
| Saturn | 112751-09-27 22:46 G | 42902786.21 | 42902786.45 | 42902786.69 | 0.0286 | 0.0015 |
| Jupiter | 112752-08-14 10:46 G | 42903107.75 | 42903107.95 | 42903108.16 | 0.0508 | 0.0207 |
| Saturn | 112752-10-11 03:49 G | 42903165.58 | 42903165.66 | 42903165.75 | 0.0284 | 0.0266 |
| Uranus | 112764-01-29 23:15 G | 42907293.37 | 42907293.47 | 42907293.58 | 0.0137 | 0.0124 |
| Uranus | 112765-02-02 06:27 G | 42907662.54 | 42907662.77 | 42907663.01 | 0.0137 | 0.0039 |
| Pluto | 112765-09-16 16:03 G | 42907888.91 | 42907889.17 | 42907889.44 | 0.0079 | 0.0005 |
| Uranus | 112766-02-06 20:22 G | 42908032.15 | 42908032.35 | 42908032.59 | 0.0137 | 0.0070 |
| Saturn | 112766-03-18 16:32 G | 42908072.04 | 42908072.19 | 42908072.34 | 0.0272 | 0.0210 |
| Saturn | 112767-03-30 20:51 G | 42908449.12 | 42908449.37 | 42908449.61 | 0.0274 | 0.0001 |
| Saturn | 112768-04-10 23:15 G | 42908826.35 | 42908826.47 | 42908826.63 | 0.0276 | 0.0228 |
| Neptune | 112774-01-20 23:01 G | 42910937.32 | 42910937.46 | 42910937.62 | 0.0089 | 0.0072 |
| Neptune | 112775-01-23 07:25 G | 42911304.62 | 42911304.81 | 42911305.03 | 0.0090 | 0.0056 |
| Neptune | 112776-01-26 01:39 G | 42911672.33 | 42911672.57 | 42911672.81 | 0.0090 | 0.0026 |
| Neptune | 112777-01-27 06:41 G | 42912039.53 | 42912039.78 | 42912040.04 | 0.0090 | 0.0010 |
| Neptune | 112778-01-30 01:39 G | 42912407.33 | 42912407.57 | 42912407.83 | 0.0090 | 0.0022 |
| Neptune | 112779-02-01 07:39 G | 42912774.60 | 42912774.82 | 42912775.05 | 0.0090 | 0.0037 |
| Neptune | 112780-02-03 23:58 G | 42913142.34 | 42913142.50 | 42913142.68 | 0.0090 | 0.0067 |
| Saturn | 112780-09-21 07:39 G | 42913372.58 | 42913372.82 | 42913373.06 | 0.0287 | 0.0101 |
| Neptune | 112781-02-05 09:05 G | 42913509.81 | 42913509.88 | 42913510.00 | 0.0090 | 0.0083 |

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| Saturn | 112781-10-05 10:46 G | 42913751.74 | 42913751.95 | 42913752.16 | 0.0285 | 0.0153 |
| Saturn | 112796-03-24 14:51 G | 42919035.91 | 42919036.12 | 42919036.35 | 0.0272 | 0.0093 |
| Saturn | 112797-04-05 23:29 G | 42919413.28 | 42919413.48 | 42919413.69 | 0.0275 | 0.0137 |
| Jupiter | 112806-02-07 03:20 G | 42922642.49 | 42922642.64 | 42922642.79 | 0.0516 | 0.0380 |
| Uranus | 112807-07-29 07:53 G | 42923179.66 | 42923179.83 | 42923180.02 | 0.0141 | 0.0102 |
| Uranus | 112808-08-02 09:49 G | 42923549.66 | 42923549.91 | 42923550.16 | 0.0141 | 0.0002 |
| Uranus | 112809-08-07 02:51 G | 42923919.46 | 42923919.62 | 42923919.79 | 0.0142 | 0.0111 |
| Saturn | 112809-09-15 10:46 G | 42923958.81 | 42923958.95 | 42923959.11 | 0.0289 | 0.0233 |
| Saturn | 112810-09-29 16:17 G | 42924337.92 | 42924338.18 | 42924338.43 | 0.0286 | 0.0027 |
| Jupiter | 112811-08-04 20:22 G | 42924647.27 | 42924647.35 | 42924647.45 | 0.0512 | 0.0467 |
| Saturn | 112811-10-13 13:10 G | 42924716.99 | 42924717.05 | 42924717.13 | 0.0284 | 0.0271 |
| Jupiter | 112818-02-12 03:05 G | 42927030.40 | 42927030.63 | 42927030.87 | 0.0518 | 0.0046 |
| Jupiter | 112823-08-09 14:37 G | 42929034.89 | 42929035.11 | 42929035.34 | 0.0511 | 0.0170 |
| Saturn | 112825-03-19 23:01 G | 42929623.29 | 42929623.46 | 42929623.66 | 0.0272 | 0.0184 |
| Saturn | 112826-03-31 22:03 G | 42930000.18 | 42930000.42 | 42930000.66 | 0.0274 | 0.0046 |
| Saturn | 112827-04-13 07:53 G | 42930377.82 | 42930377.83 | 42930377.84 | 0.0277 | 0.0276 |
| Mars | 112828-05-10 09:20 G | 42930770.86 | 42930770.89 | 42930770.92 | 0.1968 | 0.1936 |
| Jupiter | 112830-02-16 11:58 G | 42931417.80 | 42931418.00 | 42931418.20 | 0.0520 | 0.0250 |
| Jupiter | 112835-08-14 05:29 G | 42933422.51 | 42933422.73 | 42933422.96 | 0.0509 | 0.0126 |
| Saturn | 112839-09-24 02:08 G | 42934924.37 | 42934924.59 | 42934924.83 | 0.0287 | 0.0092 |
| Saturn | 112840-10-07 08:37 G | 42935303.66 | 42935303.86 | 42935304.06 | 0.0285 | 0.0164 |
| Jupiter | 112847-08-19 06:13 G | 42937810.67 | 42937810.76 | 42937810.87 | 0.0506 | 0.0462 |
| Uranus | 112848-01-30 04:03 G | 42937974.58 | 42937974.67 | 42937974.79 | 0.0137 | 0.0124 |
| Uranus | 112849-02-02 22:17 G | 42938344.18 | 42938344.43 | 42938344.68 | 0.0137 | 0.0029 |
| Uranus | 112850-02-07 01:39 G | 42938713.35 | 42938713.57 | 42938713.79 | 0.0136 | 0.0067 |
| Mars | 112851-11-12 16:17 G | 42939357.02 | 42939357.18 | 42939357.35 | 0.1574 | 0.0659 |
| Saturn | 112854-03-15 03:05 G | 42940210.62 | 42940210.63 | 42940210.66 | 0.0270 | 0.0269 |
| Saturn | 112855-03-27 04:17 G | 42940587.43 | 42940587.68 | 42940587.92 | 0.0272 | 0.0045 |
| Neptune | 112855-07-19 17:29 G | 42940702.08 | 42940702.23 | 42940702.41 | 0.0088 | 0.0069 |
| Saturn | 112856-04-07 03:20 G | 42940964.47 | 42940964.64 | 42940964.84 | 0.0275 | 0.0180 |

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| Neptune | 112856-07-21 03:49 G | 42941069.49 | 42941069.66 | 42941069.88 | 0.0088 | 0.0054 |
| Neptune | 112857-07-23 12:56 G | 42941436.80 | 42941437.04 | 42941437.31 | 0.0088 | 0.0026 |
| Neptune | 112858-07-26 05:15 G | 42941804.48 | 42941804.72 | 42941804.98 | 0.0088 | 0.0009 |
| Neptune | 112859-07-28 10:17 G | 42942171.69 | 42942171.93 | 42942172.20 | 0.0088 | 0.0020 |
| Neptune | 112860-07-30 05:01 G | 42942539.47 | 42942539.71 | 42942539.95 | 0.0088 | 0.0035 |
| Neptune | 112861-08-01 09:34 G | 42942906.73 | 42942906.90 | 42942907.08 | 0.0088 | 0.0063 |
| Neptune | 112862-08-04 02:08 G | 42943274.50 | 42943274.59 | 42943274.74 | 0.0088 | 0.0079 |
| Saturn | 112868-09-16 16:17 G | 42945510.04 | 42945510.18 | 42945510.36 | 0.0289 | 0.0221 |
| Saturn | 112869-09-30 23:44 G | 42945889.26 | 42945889.49 | 42945889.74 | 0.0286 | 0.0046 |
| Saturn | 112884-03-21 04:17 G | 42951174.49 | 42951174.68 | 42951174.89 | 0.0272 | 0.0139 |
| Saturn | 112885-04-02 11:29 G | 42951551.76 | 42951551.98 | 42951552.21 | 0.0274 | 0.0081 |
| Jupiter | 112889-02-06 06:27 G | 42952957.69 | 42952957.77 | 42952957.86 | 0.0515 | 0.0480 |
| Uranus | 112891-07-29 20:22 G | 42953861.20 | 42953861.35 | 42953861.53 | 0.0141 | 0.0105 |
| Uranus | 112892-08-02 18:13 G | 42954230.99 | 42954231.26 | 42954231.52 | 0.0141 | 0.0013 |
| Uranus | 112893-08-07 13:39 G | 42954600.94 | 42954601.07 | 42954601.24 | 0.0142 | 0.0113 |
| Saturn | 112898-09-25 14:37 G | 42956475.86 | 42956476.11 | 42956476.36 | 0.0287 | 0.0059 |
| Saturn | 112899-10-09 14:08 G | 42956854.93 | 42956855.09 | 42956855.28 | 0.0285 | 0.0207 |
| Jupiter | 112901-02-11 22:17 G | 42957345.22 | 42957345.43 | 42957345.65 | 0.0517 | 0.0132 |
| Jupiter | 112906-08-09 22:32 G | 42959350.22 | 42959350.44 | 42959350.66 | 0.0511 | 0.0179 |
| Jupiter | 112913-02-16 15:34 G | 42961732.94 | 42961733.15 | 42961733.37 | 0.0520 | 0.0232 |
| Saturn | 112913-03-17 07:10 G | 42961761.67 | 42961761.80 | 42961761.95 | 0.0270 | 0.0225 |
| Saturn | 112914-03-29 04:32 G | 42962138.45 | 42962138.69 | 42962138.93 | 0.0272 | 0.0019 |
| Saturn | 112915-04-10 12:13 G | 42962515.84 | 42962516.01 | 42962516.18 | 0.0275 | 0.0189 |
| Jupiter | 112918-08-14 09:34 G | 42963737.67 | 42963737.90 | 42963738.14 | 0.0509 | 0.0140 |
| Pluto | 112923-03-20 09:05 G | 42965416.88 | 42965416.88 | 42965416.93 | 0.0066 | 0.0065 |
| Pluto | 112924-03-21 03:05 G | 42965783.39 | 42965783.63 | 42965783.91 | 0.0066 | 0.0016 |
| Saturn | 112927-09-20 09:20 G | 42967061.71 | 42967061.89 | 42967062.09 | 0.0288 | 0.0175 |
| Saturn | 112928-10-03 17:01 G | 42967440.98 | 42967441.21 | 42967441.45 | 0.0286 | 0.0096 |
| Jupiter | 112930-08-19 08:08 G | 42968125.72 | 42968125.84 | 42968125.97 | 0.0507 | 0.0422 |
| Mars | 112930-11-15 20:08 G | 42968214.19 | 42968214.34 | 42968214.49 | 0.1574 | 0.0859 |

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| Uranus | 112932-01-31 20:08 G | 42968656.27 | 42968656.34 | 42968656.45 | 0.0137 | 0.0127 |
| Uranus | 112933-02-04 01:53 G | 42969025.33 | 42969025.58 | 42969025.84 | 0.0137 | 0.0019 |
| Uranus | 112934-02-08 17:29 G | 42969395.03 | 42969395.23 | 42969395.46 | 0.0136 | 0.0068 |
| Neptune | 112939-01-23 16:03 G | 42971204.98 | 42971205.17 | 42971205.37 | 0.0089 | 0.0057 |
| Neptune | 112940-01-26 08:37 G | 42971572.64 | 42971572.86 | 42971573.10 | 0.0090 | 0.0043 |
| Neptune | 112941-01-27 17:58 G | 42971940.01 | 42971940.25 | 42971940.50 | 0.0090 | 0.0011 |
| Neptune | 112942-01-30 05:58 G | 42972307.49 | 42972307.75 | 42972308.02 | 0.0090 | 0.0004 |
| Neptune | 112943-02-01 20:37 G | 42972675.14 | 42972675.36 | 42972675.60 | 0.0090 | 0.0036 |
| Saturn | 112943-03-24 12:41 G | 42972725.81 | 42972726.03 | 42972726.26 | 0.0272 | 0.0119 |
| Neptune | 112944-02-04 04:17 G | 42973042.47 | 42973042.68 | 42973042.90 | 0.0090 | 0.0049 |
| Saturn | 112944-04-04 10:17 G | 42973102.70 | 42973102.93 | 42973103.17 | 0.0274 | 0.0082 |
| Neptune | 112945-02-05 22:03 G | 42973410.34 | 42973410.42 | 42973410.54 | 0.0090 | 0.0082 |
| Saturn | 112956-09-13 09:34 G | 42977647.83 | 42977647.90 | 42977647.98 | 0.0289 | 0.0275 |
| Saturn | 112957-09-27 20:22 G | 42978027.11 | 42978027.35 | 42978027.59 | 0.0287 | 0.0009 |
| Saturn | 112958-10-12 03:20 G | 42978406.54 | 42978406.64 | 42978406.76 | 0.0284 | 0.0252 |
| Saturn | 112972-03-18 12:56 G | 42983312.90 | 42983313.04 | 42983313.18 | 0.0270 | 0.0214 |
| Saturn | 112973-03-30 16:32 G | 42983689.95 | 42983690.19 | 42983690.43 | 0.0272 | 0.0018 |
| Saturn | 112974-04-11 18:13 G | 42984067.10 | 42984067.26 | 42984067.45 | 0.0275 | 0.0197 |
| Uranus | 112975-07-31 08:51 G | 42984542.72 | 42984542.87 | 42984543.07 | 0.0141 | 0.0106 |
| Uranus | 112976-08-04 00:41 G | 42984912.28 | 42984912.53 | 42984912.78 | 0.0141 | 0.0020 |
| Uranus | 112977-08-09 04:46 G | 42985282.57 | 42985282.70 | 42985282.85 | 0.0142 | 0.0119 |
| Jupiter | 112984-02-12 00:41 G | 42987660.33 | 42987660.53 | 42987660.74 | 0.0517 | 0.0205 |
| Saturn | 112986-09-21 12:41 G | 42988612.81 | 42988613.03 | 42988613.27 | 0.0288 | 0.0131 |
| Saturn | 112987-10-05 16:32 G | 42988991.98 | 42988992.19 | 42988992.43 | 0.0286 | 0.0130 |
| Jupiter | 112989-08-08 21:34 G | 42989665.21 | 42989665.40 | 42989665.59 | 0.0511 | 0.0273 |
| Jupiter | 112996-02-17 02:51 G | 42992048.40 | 42992048.62 | 42992048.85 | 0.0519 | 0.0156 |

114TH MILLENNIUM CE

This is a list of transits of Moon in the 114th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|--------------------|---|-------------|-------------|-------------|--------|--------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Jupiter | 113001-08-14 16:46 | G | 42994052.96 | 42994053.20 | 42994053.44 | 0.0509 | 0.0084 | |
| Saturn | 113002-03-26 10:03 | G | 42994276.71 | 42994276.92 | 42994277.14 | 0.0272 | 0.0119 | |
| Saturn | 113003-04-07 16:46 | G | 42994653.98 | 42994654.20 | 42994654.42 | 0.0274 | 0.0099 | |
| Pluto | 113011-09-20 21:05 | G | 42997742.12 | 42997742.38 | 42997742.66 | 0.0078 | 0.0015 | |
| Jupiter | 113013-08-19 07:10 | G | 42998440.67 | 42998440.80 | 42998440.92 | 0.0507 | 0.0423 | |
| Saturn | 113015-09-16 22:17 | G | 42999199.31 | 42999199.43 | 42999199.57 | 0.0289 | 0.0245 | |
| Uranus | 113016-02-02 05:15 | G | 42999337.64 | 42999337.72 | 42999337.85 | 0.0137 | 0.0124 | |
| Saturn | 113016-09-30 06:56 | G | 42999578.54 | 42999578.79 | 42999579.05 | 0.0287 | 0.0016 | |
| Uranus | 113017-02-05 16:46 | G | 42999706.96 | 42999707.20 | 42999707.45 | 0.0137 | 0.0011 | |
| Saturn | 113017-10-14 06:13 | G | 42999957.67 | 42999957.76 | 42999957.87 | 0.0284 | 0.0259 | |
| Uranus | 113018-02-10 03:05 | G | 43000076.42 | 43000076.63 | 43000076.86 | 0.0136 | 0.0075 | |
| Neptune | 113019-07-20 22:46 | G | 43000602.41 | 43000602.45 | 43000602.53 | 0.0088 | 0.0085 | |
| Neptune | 113020-07-22 17:01 | G | 43000970.02 | 43000970.21 | 43000970.42 | 0.0088 | 0.0054 | |
| Neptune | 113021-07-24 21:20 | G | 43001337.18 | 43001337.39 | 43001337.63 | 0.0088 | 0.0041 | |
| Neptune | 113022-07-27 14:37 | G | 43001704.84 | 43001705.11 | 43001705.37 | 0.0088 | 0.0010 | |
| Neptune | 113023-07-29 21:34 | G | 43002072.16 | 43002072.40 | 43002072.66 | 0.0088 | 0.0004 | |
| Neptune | 113024-07-31 09:34 | G | 43002439.67 | 43002439.90 | 43002440.17 | 0.0088 | 0.0034 | |
| Neptune | 113025-08-02 22:17 | G | 43002807.24 | 43002807.43 | 43002807.66 | 0.0088 | 0.0048 | |
| Neptune | 113026-08-05 05:44 | G | 43003174.64 | 43003174.74 | 43003174.88 | 0.0088 | 0.0078 | |
| Saturn | 113031-03-21 17:29 | G | 43004864.08 | 43004864.23 | 43004864.40 | 0.0270 | 0.0207 | |
| Saturn | 113032-04-01 12:41 | G | 43005240.79 | 43005241.03 | 43005241.28 | 0.0272 | 0.0010 | |
| Saturn | 113033-04-13 17:44 | G | 43005618.14 | 43005618.24 | 43005618.36 | 0.0275 | 0.0239 | |

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| Saturn | 113045-09-23 18:13 G | 43010164.05 | 43010164.26 | 43010164.48 | 0.0288 | 0.0126 |
| Saturn | 113046-10-08 03:20 G | 43010543.43 | 43010543.64 | 43010543.87 | 0.0286 | 0.0129 |
| Jupiter | 113055-02-07 20:51 G | 43013588.32 | 43013588.37 | 43013588.42 | 0.0514 | 0.0497 |
| Uranus | 113059-08-01 13:10 G | 43015223.87 | 43015224.05 | 43015224.23 | 0.0141 | 0.0100 |
| Uranus | 113060-08-05 17:15 G | 43015593.97 | 43015594.22 | 43015594.47 | 0.0141 | 0.0021 |
| Saturn | 113061-03-27 18:13 G | 43015828.03 | 43015828.26 | 43015828.50 | 0.0272 | 0.0083 |
| Uranus | 113061-08-10 07:39 G | 43015963.74 | 43015963.82 | 43015963.94 | 0.0142 | 0.0130 |
| Saturn | 113062-04-08 16:46 G | 43016205.00 | 43016205.20 | 43016205.42 | 0.0274 | 0.0144 |
| Jupiter | 113067-02-12 09:20 G | 43017975.67 | 43017975.89 | 43017976.11 | 0.0516 | 0.0190 |
| Jupiter | 113072-08-08 23:44 G | 43019980.30 | 43019980.49 | 43019980.68 | 0.0512 | 0.0311 |
| Saturn | 113074-09-17 17:44 G | 43020750.13 | 43020750.24 | 43020750.38 | 0.0289 | 0.0248 |
| Saturn | 113075-10-02 02:37 G | 43021129.36 | 43021129.61 | 43021129.85 | 0.0287 | 0.0014 |
| Saturn | 113076-10-15 08:37 G | 43021508.80 | 43021508.86 | 43021508.95 | 0.0284 | 0.0270 |
| Jupiter | 113079-02-17 00:56 G | 43022363.32 | 43022363.54 | 43022363.76 | 0.0518 | 0.0095 |
| Jupiter | 113084-08-14 04:46 G | 43024368.46 | 43024368.70 | 43024368.93 | 0.0510 | 0.0015 |
| Saturn | 113090-03-22 16:03 G | 43026414.98 | 43026415.17 | 43026415.35 | 0.0270 | 0.0167 |
| Jupiter | 113091-02-21 18:41 G | 43026751.14 | 43026751.28 | 43026751.42 | 0.0521 | 0.0423 |
| Saturn | 113091-04-03 19:53 G | 43026792.11 | 43026792.33 | 43026792.57 | 0.0272 | 0.0056 |
| Saturn | 113092-04-15 00:27 G | 43027169.49 | 43027169.52 | 43027169.57 | 0.0275 | 0.0271 |
| Jupiter | 113096-08-18 16:32 G | 43028756.02 | 43028756.19 | 43028756.36 | 0.0508 | 0.0356 |
| Uranus | 113100-02-02 14:51 G | 43030019.01 | 43030019.12 | 43030019.27 | 0.0137 | 0.0116 |
| Uranus | 113101-02-07 07:10 G | 43030388.54 | 43030388.80 | 43030389.06 | 0.0137 | 0.0009 |
| Neptune | 113102-01-22 12:41 G | 43030738.03 | 43030738.03 | 43030738.06 | 0.0089 | 0.0089 |
| Uranus | 113102-02-11 12:13 G | 43030757.83 | 43030758.01 | 43030758.20 | 0.0136 | 0.0088 |
| Neptune | 113103-01-25 04:32 G | 43031105.56 | 43031105.69 | 43031105.83 | 0.0089 | 0.0076 |
| Neptune | 113104-01-27 11:29 G | 43031472.77 | 43031472.98 | 43031473.22 | 0.0089 | 0.0044 |
| Saturn | 113104-09-25 20:37 G | 43031715.13 | 43031715.36 | 43031715.60 | 0.0288 | 0.0113 |
| Neptune | 113105-01-29 06:27 G | 43031840.53 | 43031840.77 | 43031841.01 | 0.0090 | 0.0030 |
| Saturn | 113105-10-09 22:46 G | 43032094.24 | 43032094.45 | 43032094.67 | 0.0286 | 0.0155 |
| Neptune | 113106-01-31 11:29 G | 43032207.73 | 43032207.98 | 43032208.24 | 0.0090 | 0.0004 |

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| Neptune | 113107-02-03 06:13 G | 43032575.51 | 43032575.76 | 43032576.02 | 0.0090 | 0.0017 |
| Neptune | 113108-02-05 12:27 G | 43032942.83 | 43032943.02 | 43032943.24 | 0.0090 | 0.0050 |
| Neptune | 113109-02-07 03:34 G | 43033310.47 | 43033310.65 | 43033310.84 | 0.0090 | 0.0063 |
| Saturn | 113119-03-18 16:17 G | 43037002.11 | 43037002.18 | 43037002.26 | 0.0270 | 0.0257 |
| Saturn | 113120-03-29 11:01 G | 43037378.72 | 43037378.96 | 43037379.20 | 0.0272 | 0.0044 |
| Saturn | 113121-04-10 16:03 G | 43037755.99 | 43037756.17 | 43037756.36 | 0.0274 | 0.0165 |
| Saturn | 113133-09-19 22:46 G | 43042301.30 | 43042301.45 | 43042301.61 | 0.0289 | 0.0222 |
| Saturn | 113134-10-04 09:05 G | 43042680.64 | 43042680.88 | 43042681.13 | 0.0287 | 0.0051 |
| Mars | 113135-11-17 04:03 G | 43043089.47 | 43043089.67 | 43043089.87 | 0.1575 | 0.0019 |
| Uranus | 113143-08-03 03:49 G | 43045905.48 | 43045905.66 | 43045905.86 | 0.0141 | 0.0090 |
| Uranus | 113144-08-06 21:34 G | 43046275.14 | 43046275.40 | 43046275.67 | 0.0141 | 0.0019 |
| Uranus | 113145-08-11 21:34 G | 43046645.39 | 43046645.40 | 43046645.45 | 0.0142 | 0.0141 |
| Saturn | 113149-03-24 22:17 G | 43047966.22 | 43047966.43 | 43047966.64 | 0.0271 | 0.0135 |
| Jupiter | 113150-02-12 17:58 G | 43048291.04 | 43048291.25 | 43048291.46 | 0.0515 | 0.0222 |
| Saturn | 113150-04-05 17:29 G | 43048342.99 | 43048343.23 | 43048343.47 | 0.0273 | 0.0067 |
| Saturn | 113151-04-17 19:39 G | 43048720.27 | 43048720.32 | 43048720.36 | 0.0275 | 0.0269 |
| Jupiter | 113155-08-10 15:34 G | 43050295.95 | 43050296.15 | 43050296.36 | 0.0513 | 0.0281 |
| Jupiter | 113162-02-17 05:58 G | 43052678.53 | 43052678.75 | 43052678.98 | 0.0518 | 0.0119 |
| Saturn | 113163-09-27 17:44 G | 43053266.01 | 43053266.24 | 43053266.48 | 0.0288 | 0.0070 |
| Saturn | 113164-10-11 03:05 G | 43053645.47 | 43053645.63 | 43053645.81 | 0.0286 | 0.0199 |
| Jupiter | 113167-08-15 07:53 G | 43054683.61 | 43054683.83 | 43054684.06 | 0.0510 | 0.0020 |
| Pluto | 113169-03-23 18:13 G | 43055270.22 | 43055270.26 | 43055270.37 | 0.0066 | 0.0063 |
| Pluto | 113170-03-25 02:51 G | 43055636.38 | 43055636.62 | 43055636.87 | 0.0066 | 0.0021 |
| Jupiter | 113174-02-22 09:49 G | 43057066.79 | 43057066.91 | 43057067.05 | 0.0520 | 0.0428 |
| Saturn | 113178-03-19 15:05 G | 43058553.02 | 43058553.13 | 43058553.24 | 0.0270 | 0.0237 |
| Saturn | 113179-03-31 17:44 G | 43058930.00 | 43058930.24 | 43058930.47 | 0.0272 | 0.0041 |
| Jupiter | 113179-08-20 04:32 G | 43059071.49 | 43059071.69 | 43059071.88 | 0.0508 | 0.0302 |
| Saturn | 113180-04-11 18:27 G | 43059307.08 | 43059307.27 | 43059307.48 | 0.0274 | 0.0164 |
| Neptune | 113183-07-21 09:05 G | 43060502.84 | 43060502.88 | 43060502.97 | 0.0088 | 0.0085 |
| Uranus | 113184-02-04 09:34 G | 43060700.75 | 43060700.90 | 43060701.08 | 0.0137 | 0.0102 |

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| Neptune | 113184-07-22 21:20 G | 43060870.26 | 43060870.39 | 43060870.57 | 0.0088 | 0.0072 |
| Uranus | 113185-02-07 13:53 G | 43061069.82 | 43061070.08 | 43061070.33 | 0.0137 | 0.0009 |
| Neptune | 113185-07-25 10:17 G | 43061237.71 | 43061237.93 | 43061238.15 | 0.0088 | 0.0041 |
| Uranus | 113186-02-12 06:56 G | 43061439.64 | 43061439.79 | 43061439.97 | 0.0136 | 0.0101 |
| Neptune | 113186-07-27 17:15 G | 43061604.99 | 43061605.22 | 43061605.49 | 0.0088 | 0.0029 |
| Neptune | 113187-07-30 10:46 G | 43061972.69 | 43061972.95 | 43061973.20 | 0.0088 | 0.0003 |
| Neptune | 113188-07-31 15:05 G | 43062339.88 | 43062340.13 | 43062340.39 | 0.0088 | 0.0016 |
| Neptune | 113189-08-03 09:05 G | 43062707.68 | 43062707.88 | 43062708.12 | 0.0088 | 0.0048 |
| Neptune | 113190-08-05 14:51 G | 43063074.94 | 43063075.12 | 43063075.30 | 0.0088 | 0.0060 |
| Saturn | 113192-09-20 18:13 G | 43063852.07 | 43063852.26 | 43063852.47 | 0.0289 | 0.0179 |
| Saturn | 113193-10-05 00:27 G | 43064231.28 | 43064231.52 | 43064231.76 | 0.0287 | 0.0088 |
| Saturn | 113208-03-25 15:34 G | 43069516.95 | 43069517.15 | 43069517.36 | 0.0271 | 0.0139 |
| Saturn | 113209-04-06 19:10 G | 43069894.08 | 43069894.30 | 43069894.53 | 0.0273 | 0.0068 |
| Mars | 113214-11-18 23:01 G | 43071946.43 | 43071946.46 | 43071946.49 | 0.1575 | 0.1550 |
| Saturn | 113222-09-28 21:49 G | 43074817.16 | 43074817.41 | 43074817.67 | 0.0288 | 0.0046 |
| Saturn | 113223-10-12 23:58 G | 43075196.33 | 43075196.50 | 43075196.68 | 0.0286 | 0.0209 |
| Uranus | 113227-08-03 12:56 G | 43076586.84 | 43076587.04 | 43076587.28 | 0.0141 | 0.0078 |
| Uranus | 113228-08-07 07:39 G | 43076956.58 | 43076956.82 | 43076957.07 | 0.0141 | 0.0020 |
| Jupiter | 113233-02-12 03:20 G | 43078606.45 | 43078606.64 | 43078606.82 | 0.0515 | 0.0297 |
| Saturn | 113237-03-20 18:27 G | 43080104.17 | 43080104.27 | 43080104.39 | 0.0270 | 0.0240 |
| Saturn | 113238-04-01 12:13 G | 43080480.77 | 43080481.01 | 43080481.26 | 0.0272 | 0.0035 |
| Jupiter | 113238-08-10 00:13 G | 43080611.34 | 43080611.51 | 43080611.68 | 0.0513 | 0.0347 |
| Saturn | 113239-04-13 14:08 G | 43080857.93 | 43080858.09 | 43080858.26 | 0.0274 | 0.0191 |
| Jupiter | 113245-02-16 18:13 G | 43082994.02 | 43082994.26 | 43082994.50 | 0.0517 | 0.0065 |
| Jupiter | 113250-08-14 12:56 G | 43084998.80 | 43084999.04 | 43084999.28 | 0.0511 | 0.0013 |
| Saturn | 113251-09-22 18:27 G | 43085403.09 | 43085403.27 | 43085403.47 | 0.0289 | 0.0173 |
| Saturn | 113252-10-06 05:44 G | 43085782.51 | 43085782.74 | 43085782.98 | 0.0287 | 0.0087 |
| Jupiter | 113257-02-21 08:51 G | 43087381.75 | 43087381.87 | 43087382.01 | 0.0519 | 0.0414 |
| Pluto | 113257-09-23 00:41 G | 43087595.30 | 43087595.53 | 43087595.80 | 0.0078 | 0.0027 |
| Jupiter | 113262-08-19 15:20 G | 43089386.98 | 43089387.14 | 43089387.32 | 0.0509 | 0.0336 |

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| Neptune | 113267-01-24 11:58 G | 43091005.90 | 43091006.00 | 43091006.15 | 0.0089 | 0.0079 |
| Saturn | 113267-03-27 23:44 G | 43091068.28 | 43091068.49 | 43091068.71 | 0.0271 | 0.0125 |
| Neptune | 113268-01-26 19:10 G | 43091373.14 | 43091373.30 | 43091373.49 | 0.0089 | 0.0063 |
| Uranus | 113268-02-04 15:05 G | 43091381.95 | 43091382.13 | 43091382.34 | 0.0137 | 0.0091 |
| Saturn | 113268-04-07 21:20 G | 43091445.16 | 43091445.39 | 43091445.62 | 0.0273 | 0.0102 |
| Neptune | 113269-01-28 10:17 G | 43091740.70 | 43091740.93 | 43091741.20 | 0.0089 | 0.0032 |
| Uranus | 113269-02-08 06:41 G | 43091751.53 | 43091751.78 | 43091752.02 | 0.0137 | 0.0006 |
| Neptune | 113270-01-30 22:17 G | 43092108.19 | 43092108.43 | 43092108.68 | 0.0090 | 0.0016 |
| Uranus | 113270-02-12 12:56 G | 43092120.90 | 43092121.04 | 43092121.22 | 0.0136 | 0.0106 |
| Neptune | 113271-02-02 08:37 G | 43092475.61 | 43092475.86 | 43092476.13 | 0.0090 | 0.0015 |
| Neptune | 113272-02-05 00:56 G | 43092843.32 | 43092843.54 | 43092843.79 | 0.0090 | 0.0031 |
| Neptune | 113273-02-06 06:41 G | 43093210.62 | 43093210.78 | 43093210.99 | 0.0090 | 0.0062 |
| Neptune | 113274-02-09 01:53 G | 43093578.46 | 43093578.58 | 43093578.72 | 0.0090 | 0.0077 |
| Saturn | 113281-09-29 16:03 G | 43096367.93 | 43096368.17 | 43096368.41 | 0.0288 | 0.0052 |
| Saturn | 113282-10-13 23:58 G | 43096747.34 | 43096747.50 | 43096747.67 | 0.0286 | 0.0208 |
| Saturn | 113296-03-21 13:39 G | 43101654.93 | 43101655.07 | 43101655.22 | 0.0270 | 0.0214 |
| Saturn | 113297-04-02 17:15 G | 43102031.98 | 43102032.22 | 43102032.45 | 0.0272 | 0.0009 |
| Saturn | 113298-04-14 20:51 G | 43102409.25 | 43102409.37 | 43102409.50 | 0.0274 | 0.0232 |
| Saturn | 113310-09-24 18:13 G | 43106954.06 | 43106954.26 | 43106954.48 | 0.0289 | 0.0169 |
| Uranus | 113311-08-04 18:56 G | 43107268.08 | 43107268.29 | 43107268.51 | 0.0141 | 0.0072 |
| Saturn | 113311-10-08 23:01 G | 43107333.23 | 43107333.46 | 43107333.71 | 0.0286 | 0.0098 |
| Uranus | 113312-08-08 22:03 G | 43107638.17 | 43107638.42 | 43107638.68 | 0.0141 | 0.0025 |
| Jupiter | 113316-02-13 02:37 G | 43108921.44 | 43108921.61 | 43108921.79 | 0.0514 | 0.0314 |
| Jupiter | 113321-08-10 05:01 G | 43110926.58 | 43110926.71 | 43110926.86 | 0.0514 | 0.0398 |
| Saturn | 113326-03-29 18:41 G | 43112619.05 | 43112619.28 | 43112619.51 | 0.0271 | 0.0077 |
| Saturn | 113327-04-10 21:34 G | 43112996.20 | 43112996.40 | 43112996.61 | 0.0273 | 0.0138 |
| Jupiter | 113328-02-18 01:25 G | 43113309.33 | 43113309.56 | 43113309.80 | 0.0516 | 0.0020 |
| Jupiter | 113333-08-15 01:53 G | 43115314.34 | 43115314.58 | 43115314.83 | 0.0512 | 0.0062 |
| Saturn | 113339-09-18 14:51 G | 43117540.11 | 43117540.12 | 43117540.16 | 0.0290 | 0.0288 |
| Jupiter | 113340-02-22 13:10 G | 43117696.88 | 43117697.05 | 43117697.23 | 0.0519 | 0.0325 |

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| Saturn | 113340-10-02 01:10 G | 43117919.30 | 43117919.55 | 43117919.80 | 0.0288 | 0.0018 |
| Mars | 113340-11-16 02:51 G | 43117964.48 | 43117964.62 | 43117964.76 | 0.1576 | 0.1076 |
| Saturn | 113341-10-16 02:51 G | 43118298.51 | 43118298.62 | 43118298.76 | 0.0285 | 0.0247 |
| Jupiter | 113345-08-19 19:39 G | 43119702.14 | 43119702.32 | 43119702.50 | 0.0509 | 0.0296 |
| Neptune | 113348-07-23 03:05 G | 43120770.50 | 43120770.63 | 43120770.79 | 0.0088 | 0.0072 |
| Neptune | 113349-07-25 20:22 G | 43121138.18 | 43121138.35 | 43121138.57 | 0.0088 | 0.0059 |
| Neptune | 113350-07-28 02:51 G | 43121505.39 | 43121505.62 | 43121505.87 | 0.0088 | 0.0028 |
| Neptune | 113351-07-30 16:03 G | 43121872.92 | 43121873.17 | 43121873.45 | 0.0088 | 0.0015 |
| Uranus | 113352-02-06 05:44 G | 43122063.57 | 43122063.74 | 43122063.95 | 0.0137 | 0.0085 |
| Neptune | 113352-08-01 03:05 G | 43122240.39 | 43122240.63 | 43122240.88 | 0.0088 | 0.0016 |
| Uranus | 113353-02-09 17:01 G | 43122432.95 | 43122433.21 | 43122433.47 | 0.0137 | 0.0002 |
| Neptune | 113353-08-03 11:15 G | 43122607.73 | 43122607.97 | 43122608.24 | 0.0088 | 0.0029 |
| Uranus | 113354-02-14 03:05 G | 43122802.50 | 43122802.63 | 43122802.79 | 0.0136 | 0.0109 |
| Neptune | 113354-08-06 03:20 G | 43122975.48 | 43122975.64 | 43122975.85 | 0.0088 | 0.0061 |
| Saturn | 113355-03-24 21:49 G | 43123206.23 | 43123206.41 | 43123206.61 | 0.0270 | 0.0172 |
| Neptune | 113355-08-08 08:37 G | 43123342.73 | 43123342.86 | 43123343.01 | 0.0088 | 0.0073 |
| Saturn | 113356-04-04 16:03 G | 43123582.92 | 43123583.17 | 43123583.42 | 0.0272 | 0.0031 |
| Saturn | 113357-04-16 17:44 G | 43123960.11 | 43123960.24 | 43123960.36 | 0.0275 | 0.0233 |
| Saturn | 113369-09-25 19:39 G | 43128505.11 | 43128505.32 | 43128505.54 | 0.0288 | 0.0123 |
| Saturn | 113370-10-10 06:13 G | 43128884.56 | 43128884.76 | 43128884.98 | 0.0286 | 0.0147 |
| Saturn | 113384-03-19 01:53 G | 43133793.54 | 43133793.58 | 43133793.64 | 0.0270 | 0.0263 |
| Saturn | 113385-03-31 04:17 G | 43134170.45 | 43134170.68 | 43134170.92 | 0.0272 | 0.0066 |
| Saturn | 113386-04-12 03:34 G | 43134547.44 | 43134547.65 | 43134547.87 | 0.0273 | 0.0135 |
| Uranus | 113395-08-05 13:10 G | 43137949.83 | 43137950.05 | 43137950.28 | 0.0141 | 0.0067 |
| Uranus | 113396-08-09 02:37 G | 43138319.37 | 43138319.61 | 43138319.87 | 0.0141 | 0.0035 |
| Saturn | 113398-09-19 14:08 G | 43139090.96 | 43139091.09 | 43139091.25 | 0.0289 | 0.0239 |
| Jupiter | 113399-02-12 08:37 G | 43139236.68 | 43139236.86 | 43139237.05 | 0.0514 | 0.0320 |
| Saturn | 113399-10-03 22:32 G | 43139470.20 | 43139470.44 | 43139470.69 | 0.0287 | 0.0028 |
| Saturn | 113400-10-18 04:32 G | 43139849.67 | 43139849.69 | 43139849.74 | 0.0285 | 0.0282 |
| Jupiter | 113404-08-10 08:37 G | 43141241.70 | 43141241.86 | 43141242.02 | 0.0514 | 0.0370 |

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| Jupiter | 113411-02-18 09:34 G | 43143624.67 | 43143624.90 | 43143625.13 | 0.0516 | 0.0013 |
| Saturn | 113414-03-26 18:41 G | 43144757.10 | 43144757.28 | 43144757.47 | 0.0271 | 0.0170 |
| Pluto | 113415-03-28 01:39 G | 43145123.45 | 43145123.57 | 43145123.76 | 0.0066 | 0.0054 |
| Saturn | 113415-04-07 23:01 G | 43145134.23 | 43145134.46 | 43145134.70 | 0.0273 | 0.0032 |
| Pluto | 113416-03-28 13:53 G | 43145489.89 | 43145490.08 | 43145490.31 | 0.0066 | 0.0035 |
| Saturn | 113416-04-19 04:46 G | 43145511.61 | 43145511.70 | 43145511.81 | 0.0275 | 0.0249 |
| Jupiter | 113416-08-15 09:34 G | 43145629.66 | 43145629.90 | 43145630.13 | 0.0512 | 0.0074 |
| Mars | 113419-11-20 06:41 G | 43146821.61 | 43146821.78 | 43146821.95 | 0.1575 | 0.0488 |
| Jupiter | 113423-02-22 21:49 G | 43148012.23 | 43148012.41 | 43148012.60 | 0.0518 | 0.0309 |
| Jupiter | 113428-08-19 20:51 G | 43150017.16 | 43150017.37 | 43150017.58 | 0.0510 | 0.0215 |
| Saturn | 113428-09-28 03:20 G | 43150056.40 | 43150056.64 | 43150056.89 | 0.0288 | 0.0095 |
| Saturn | 113429-10-12 06:56 G | 43150435.58 | 43150435.79 | 43150436.00 | 0.0286 | 0.0161 |
| Neptune | 113432-01-28 06:56 G | 43151273.64 | 43151273.79 | 43151273.99 | 0.0089 | 0.0065 |
| Neptune | 113433-01-29 12:56 G | 43151640.83 | 43151641.04 | 43151641.25 | 0.0089 | 0.0050 |
| Neptune | 113434-02-01 07:10 G | 43152008.56 | 43152008.80 | 43152009.07 | 0.0089 | 0.0019 |
| Neptune | 113435-02-03 15:05 G | 43152375.88 | 43152376.13 | 43152376.38 | 0.0090 | 0.0004 |
| Neptune | 113436-02-06 05:15 G | 43152743.47 | 43152743.72 | 43152743.97 | 0.0090 | 0.0028 |
| Uranus | 113436-02-07 18:56 G | 43152745.10 | 43152745.29 | 43152745.52 | 0.0137 | 0.0081 |
| Neptune | 113437-02-07 17:15 G | 43153111.01 | 43153111.22 | 43153111.45 | 0.0090 | 0.0044 |
| Uranus | 113437-02-11 02:37 G | 43153114.37 | 43153114.61 | 43153114.86 | 0.0137 | 0.0012 |
| Neptune | 113438-02-10 02:37 G | 43153478.48 | 43153478.61 | 43153478.76 | 0.0090 | 0.0075 |
| Uranus | 113438-02-15 16:32 G | 43153484.05 | 43153484.19 | 43153484.35 | 0.0136 | 0.0110 |
| Neptune | 113439-02-12 19:39 G | 43153846.32 | 43153846.32 | 43153846.33 | 0.0090 | 0.0090 |
| Saturn | 113443-03-22 09:20 G | 43155344.85 | 43155344.89 | 43155344.94 | 0.0270 | 0.0265 |
| Saturn | 113444-04-02 02:51 G | 43155721.38 | 43155721.62 | 43155721.86 | 0.0272 | 0.0062 |
| Saturn | 113445-04-14 05:58 G | 43156098.57 | 43156098.75 | 43156098.95 | 0.0274 | 0.0164 |
| Saturn | 113457-09-22 04:03 G | 43160642.53 | 43160642.67 | 43160642.82 | 0.0289 | 0.0230 |
| Saturn | 113458-10-06 14:08 G | 43161021.84 | 43161022.09 | 43161022.34 | 0.0287 | 0.0032 |
| Saturn | 113459-10-20 15:05 G | 43161401.11 | 43161401.13 | 43161401.19 | 0.0285 | 0.0281 |
| Saturn | 113473-03-28 07:10 G | 43166308.60 | 43166308.80 | 43166308.99 | 0.0271 | 0.0156 |

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| Saturn | 113474-04-09 02:37 G | 43166685.37 | 43166685.61 | 43166685.85 | 0.0273 | 0.0072 |
| Mars | 113475-05-17 23:15 G | 43167089.31 | 43167089.47 | 43167089.62 | 0.1966 | 0.1139 |
| Uranus | 113479-08-06 16:32 G | 43168630.97 | 43168631.19 | 43168631.43 | 0.0141 | 0.0066 |
| Uranus | 113480-08-10 19:53 G | 43169001.09 | 43169001.33 | 43169001.57 | 0.0141 | 0.0045 |
| Jupiter | 113482-02-12 19:10 G | 43169552.16 | 43169552.30 | 43169552.45 | 0.0513 | 0.0404 |
| Jupiter | 113487-08-10 10:03 G | 43171556.82 | 43171556.92 | 43171557.03 | 0.0515 | 0.0462 |
| Saturn | 113487-09-30 08:08 G | 43171607.61 | 43171607.84 | 43171608.07 | 0.0288 | 0.0095 |
| Saturn | 113488-10-13 17:58 G | 43171987.07 | 43171987.25 | 43171987.45 | 0.0286 | 0.0168 |
| Jupiter | 113494-02-17 08:37 G | 43173939.64 | 43173939.86 | 43173940.08 | 0.0515 | 0.0062 |
| Jupiter | 113499-08-15 10:03 G | 43175944.70 | 43175944.92 | 43175945.15 | 0.0513 | 0.0100 |
| Saturn | 113502-03-24 10:32 G | 43176895.86 | 43176895.94 | 43176896.06 | 0.0271 | 0.0244 |
| Saturn | 113503-04-05 15:05 G | 43177272.90 | 43177273.13 | 43177273.37 | 0.0272 | 0.0016 |
| Pluto | 113503-09-28 17:44 G | 43177449.05 | 43177449.24 | 43177449.47 | 0.0078 | 0.0044 |
| Saturn | 113504-04-16 17:29 G | 43177650.07 | 43177650.23 | 43177650.39 | 0.0274 | 0.0209 |
| Jupiter | 113506-02-23 02:08 G | 43178327.40 | 43178327.59 | 43178327.79 | 0.0517 | 0.0292 |
| Jupiter | 113511-08-21 01:10 G | 43180332.34 | 43180332.55 | 43180332.77 | 0.0511 | 0.0235 |
| Neptune | 113513-07-26 21:34 G | 43181038.23 | 43181038.40 | 43181038.62 | 0.0088 | 0.0059 |
| Neptune | 113514-07-29 15:49 G | 43181405.96 | 43181406.16 | 43181406.40 | 0.0088 | 0.0047 |
| Neptune | 113515-07-31 20:22 G | 43181773.10 | 43181773.35 | 43181773.61 | 0.0088 | 0.0015 |
| Neptune | 113516-08-02 13:39 G | 43182140.81 | 43182141.07 | 43182141.34 | 0.0088 | 0.0002 |
| Saturn | 113516-09-24 12:56 G | 43182193.87 | 43182194.04 | 43182194.21 | 0.0289 | 0.0215 |
| Neptune | 113517-08-04 20:37 G | 43182508.13 | 43182508.36 | 43182508.60 | 0.0088 | 0.0029 |
| Saturn | 113517-10-08 18:27 G | 43182573.03 | 43182573.27 | 43182573.52 | 0.0287 | 0.0052 |
| Neptune | 113518-08-07 08:51 G | 43182875.66 | 43182875.87 | 43182876.13 | 0.0088 | 0.0043 |
| Neptune | 113519-08-09 20:51 G | 43183243.26 | 43183243.37 | 43183243.52 | 0.0088 | 0.0074 |
| Uranus | 113520-02-09 03:20 G | 43183426.44 | 43183426.64 | 43183426.85 | 0.0137 | 0.0078 |
| Neptune | 113520-08-11 04:17 G | 43183610.65 | 43183610.68 | 43183610.74 | 0.0088 | 0.0086 |
| Uranus | 113521-02-12 20:37 G | 43183796.11 | 43183796.36 | 43183796.62 | 0.0137 | 0.0023 |
| Uranus | 113522-02-17 00:27 G | 43184165.39 | 43184165.52 | 43184165.67 | 0.0136 | 0.0113 |
| Saturn | 113532-03-30 07:10 G | 43187859.59 | 43187859.80 | 43187860.03 | 0.0271 | 0.0107 |

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| Saturn | 113533-04-11 11:58 G | 43188236.78 | 43188237.00 | 43188237.21 | 0.0273 | 0.0109 |
| Mars | 113545-11-17 23:15 G | 43192840.36 | 43192840.47 | 43192840.58 | 0.1577 | 0.1262 |
| Saturn | 113546-10-03 00:27 G | 43193159.27 | 43193159.52 | 43193159.78 | 0.0288 | 0.0057 |
| Saturn | 113547-10-17 02:08 G | 43193538.43 | 43193538.59 | 43193538.77 | 0.0286 | 0.0215 |
| Saturn | 113561-03-25 22:32 G | 43198447.28 | 43198447.44 | 43198447.62 | 0.0271 | 0.0197 |
| Saturn | 113562-04-06 17:15 G | 43198823.97 | 43198824.22 | 43198824.46 | 0.0273 | 0.0010 |
| Saturn | 113563-04-18 20:22 G | 43199201.22 | 43199201.35 | 43199201.50 | 0.0275 | 0.0218 |
| Uranus | 113563-08-08 09:34 G | 43199312.69 | 43199312.90 | 43199313.13 | 0.0141 | 0.0064 |
| Uranus | 113564-08-12 02:37 G | 43199682.37 | 43199682.61 | 43199682.86 | 0.0142 | 0.0055 |
| Jupiter | 113565-02-12 23:44 G | 43199867.36 | 43199867.49 | 43199867.64 | 0.0512 | 0.0406 |
| Jupiter | 113570-08-10 14:08 G | 43201872.09 | 43201872.09 | 43201872.11 | 0.0516 | 0.0516 |
| Saturn | 113575-09-27 05:29 G | 43203745.53 | 43203745.73 | 43203745.93 | 0.0288 | 0.0161 |
| Saturn | 113576-10-10 15:05 G | 43204124.91 | 43204125.13 | 43204125.37 | 0.0286 | 0.0111 |
| Jupiter | 113577-02-17 06:27 G | 43204254.55 | 43204254.77 | 43204254.99 | 0.0514 | 0.0129 |
| Jupiter | 113582-08-15 09:20 G | 43206259.69 | 43206259.89 | 43206260.11 | 0.0514 | 0.0197 |
| Jupiter | 113589-02-22 07:25 G | 43208642.59 | 43208642.81 | 43208643.02 | 0.0517 | 0.0188 |
| Saturn | 113591-04-01 22:17 G | 43209411.21 | 43209411.43 | 43209411.67 | 0.0271 | 0.0093 |
| Saturn | 113592-04-12 20:22 G | 43209788.13 | 43209788.35 | 43209788.58 | 0.0273 | 0.0110 |
| Jupiter | 113594-08-20 07:10 G | 43210647.57 | 43210647.80 | 43210648.03 | 0.0511 | 0.0147 |
| Neptune | 113596-01-28 06:56 G | 43211173.73 | 43211173.79 | 43211173.91 | 0.0089 | 0.0085 |
| Neptune | 113597-01-30 00:41 G | 43211541.33 | 43211541.53 | 43211541.73 | 0.0089 | 0.0052 |
| Neptune | 113598-02-01 06:41 G | 43211908.55 | 43211908.78 | 43211909.02 | 0.0089 | 0.0038 |
| Neptune | 113599-02-04 01:53 G | 43212276.32 | 43212276.58 | 43212276.84 | 0.0090 | 0.0005 |
| Neptune | 113600-02-06 07:25 G | 43212643.57 | 43212643.81 | 43212644.07 | 0.0090 | 0.0010 |
| Neptune | 113601-02-08 00:56 G | 43213011.33 | 43213011.54 | 43213011.79 | 0.0090 | 0.0042 |
| Neptune | 113602-02-10 09:49 G | 43213378.73 | 43213378.91 | 43213379.12 | 0.0090 | 0.0056 |
| Neptune | 113603-02-12 22:03 G | 43213746.40 | 43213746.42 | 43213746.51 | 0.0090 | 0.0088 |
| Uranus | 113604-02-09 23:01 G | 43214108.26 | 43214108.46 | 43214108.68 | 0.0137 | 0.0075 |
| Saturn | 113604-09-19 22:32 G | 43214331.37 | 43214331.44 | 43214331.54 | 0.0289 | 0.0271 |
| Uranus | 113605-02-13 02:37 G | 43214477.38 | 43214477.61 | 43214477.86 | 0.0137 | 0.0034 |

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| Saturn | 113605-10-04 09:20 G | 43214710.65 | 43214710.89 | 43214711.14 | 0.0288 | 0.0007 |
| Uranus | 113606-02-17 19:53 G | 43214847.22 | 43214847.33 | 43214847.46 | 0.0136 | 0.0118 |
| Jupiter | 113606-08-24 20:22 G | 43215035.30 | 43215035.35 | 43215035.40 | 0.0509 | 0.0496 |
| Saturn | 113606-10-18 17:44 G | 43215090.14 | 43215090.24 | 43215090.37 | 0.0285 | 0.0251 |
| Saturn | 113620-03-27 01:39 G | 43219998.42 | 43219998.57 | 43219998.75 | 0.0271 | 0.0193 |
| Saturn | 113621-04-08 06:56 G | 43220375.56 | 43220375.79 | 43220376.03 | 0.0273 | 0.0011 |
| Saturn | 113622-04-20 11:44 G | 43220752.86 | 43220752.99 | 43220753.13 | 0.0275 | 0.0229 |
| Mars | 113624-11-19 22:32 G | 43221697.24 | 43221697.44 | 43221697.64 | 0.1577 | 0.0202 |
| Saturn | 113634-09-28 21:05 G | 43225297.15 | 43225297.38 | 43225297.62 | 0.0288 | 0.0125 |
| Saturn | 113635-10-13 00:13 G | 43225676.29 | 43225676.51 | 43225676.74 | 0.0286 | 0.0129 |
| Uranus | 113647-08-08 16:46 G | 43229993.97 | 43229994.20 | 43229994.44 | 0.0141 | 0.0061 |
| Jupiter | 113648-02-13 00:27 G | 43230182.43 | 43230182.52 | 43230182.62 | 0.0512 | 0.0457 |
| Uranus | 113648-08-12 14:37 G | 43230363.90 | 43230364.11 | 43230364.34 | 0.0142 | 0.0062 |
| Saturn | 113650-04-03 00:27 G | 43230962.29 | 43230962.52 | 43230962.75 | 0.0272 | 0.0084 |
| Saturn | 113651-04-15 05:29 G | 43231339.53 | 43231339.73 | 43231339.93 | 0.0274 | 0.0140 |
| Jupiter | 113653-08-09 18:13 G | 43232187.23 | 43232187.26 | 43232187.28 | 0.0516 | 0.0513 |
| Jupiter | 113660-02-17 11:15 G | 43234569.74 | 43234569.97 | 43234570.20 | 0.0514 | 0.0117 |
| Pluto | 113661-03-30 04:03 G | 43234976.50 | 43234976.67 | 43234976.85 | 0.0066 | 0.0046 |
| Pluto | 113662-03-31 20:37 G | 43235343.16 | 43235343.36 | 43235343.55 | 0.0066 | 0.0044 |
| Saturn | 113663-09-22 21:05 G | 43235883.28 | 43235883.38 | 43235883.50 | 0.0289 | 0.0257 |
| Saturn | 113664-10-06 05:58 G | 43236262.50 | 43236262.75 | 43236263.01 | 0.0287 | 0.0005 |
| Jupiter | 113665-08-14 05:58 G | 43236574.53 | 43236574.75 | 43236574.96 | 0.0514 | 0.0199 |
| Saturn | 113665-10-20 06:56 G | 43236641.68 | 43236641.79 | 43236641.91 | 0.0285 | 0.0253 |
| Jupiter | 113672-02-22 08:37 G | 43238957.65 | 43238957.86 | 43238958.07 | 0.0516 | 0.0193 |
| Neptune | 113677-07-26 09:49 G | 43240938.81 | 43240938.91 | 43240939.04 | 0.0088 | 0.0078 |
| Jupiter | 113677-08-19 06:13 G | 43240962.53 | 43240962.76 | 43240962.99 | 0.0513 | 0.0085 |
| Neptune | 113678-07-28 16:32 G | 43241305.99 | 43241306.19 | 43241306.44 | 0.0088 | 0.0048 |
| Saturn | 113679-03-29 14:37 G | 43241549.93 | 43241550.11 | 43241550.31 | 0.0272 | 0.0174 |
| Neptune | 113679-07-31 09:49 G | 43241673.69 | 43241673.91 | 43241674.16 | 0.0088 | 0.0034 |
| Saturn | 113680-04-09 10:46 G | 43241926.71 | 43241926.95 | 43241927.20 | 0.0273 | 0.0053 |

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| Neptune | 113680-08-01 14:08 G | 43242040.84 | 43242041.09 | 43242041.35 | 0.0088 | 0.0003 |
| Neptune | 113681-08-04 08:08 G | 43242408.58 | 43242408.84 | 43242409.11 | 0.0088 | 0.0011 |
| Neptune | 113682-08-06 13:10 G | 43242775.84 | 43242776.05 | 43242776.29 | 0.0088 | 0.0042 |
| Neptune | 113683-08-09 04:32 G | 43243143.49 | 43243143.69 | 43243143.91 | 0.0088 | 0.0055 |
| Jupiter | 113684-02-26 18:41 G | 43243345.20 | 43243345.28 | 43243345.38 | 0.0518 | 0.0478 |
| Neptune | 113684-08-10 13:39 G | 43243511.05 | 43243511.07 | 43243511.16 | 0.0088 | 0.0086 |
| Uranus | 113688-02-10 05:58 G | 43244789.54 | 43244789.75 | 43244789.98 | 0.0137 | 0.0069 |
| Uranus | 113689-02-13 23:44 G | 43245159.26 | 43245159.49 | 43245159.73 | 0.0137 | 0.0044 |
| Jupiter | 113689-08-23 17:15 G | 43245350.07 | 43245350.22 | 43245350.38 | 0.0510 | 0.0386 |
| Uranus | 113690-02-18 02:37 G | 43245528.54 | 43245528.61 | 43245528.73 | 0.0136 | 0.0127 |
| Saturn | 113693-09-30 14:22 G | 43246848.88 | 43246849.10 | 43246849.32 | 0.0288 | 0.0115 |
| Saturn | 113694-10-14 23:29 G | 43247228.28 | 43247228.48 | 43247228.70 | 0.0286 | 0.0146 |
| Mars | 113703-11-23 15:20 G | 43250554.10 | 43250554.14 | 43250554.17 | 0.1576 | 0.1550 |
| Saturn | 113708-03-24 14:51 G | 43252137.06 | 43252137.12 | 43252137.21 | 0.0270 | 0.0255 |
| Saturn | 113709-04-05 17:15 G | 43252513.98 | 43252514.22 | 43252514.46 | 0.0272 | 0.0033 |
| Saturn | 113710-04-17 16:17 G | 43252891.01 | 43252891.18 | 43252891.37 | 0.0274 | 0.0187 |
| Saturn | 113722-09-25 06:41 G | 43257434.64 | 43257434.78 | 43257434.93 | 0.0289 | 0.0236 |
| Saturn | 113723-10-09 15:34 G | 43257813.90 | 43257814.15 | 43257814.39 | 0.0287 | 0.0034 |
| Uranus | 113731-08-10 04:17 G | 43260675.47 | 43260675.68 | 43260675.92 | 0.0141 | 0.0058 |
| Uranus | 113732-08-14 02:37 G | 43261045.39 | 43261045.61 | 43261045.86 | 0.0142 | 0.0068 |
| Saturn | 113738-03-31 17:44 G | 43263101.03 | 43263101.24 | 43263101.45 | 0.0272 | 0.0122 |
| Saturn | 113739-04-12 23:15 G | 43263478.25 | 43263478.47 | 43263478.69 | 0.0274 | 0.0092 |
| Jupiter | 113743-02-17 16:03 G | 43264884.96 | 43264885.17 | 43264885.39 | 0.0513 | 0.0223 |
| Jupiter | 113748-08-14 04:46 G | 43266889.50 | 43266889.70 | 43266889.91 | 0.0515 | 0.0279 |
| Pluto | 113749-09-30 19:39 G | 43267302.15 | 43267302.32 | 43267302.51 | 0.0078 | 0.0059 |
| Saturn | 113752-10-03 05:58 G | 43268400.51 | 43268400.75 | 43268401.01 | 0.0288 | 0.0067 |
| Saturn | 113753-10-17 08:22 G | 43268779.68 | 43268779.85 | 43268780.04 | 0.0286 | 0.0202 |
| Jupiter | 113755-02-22 01:53 G | 43269272.37 | 43269272.58 | 43269272.80 | 0.0515 | 0.0116 |
| Neptune | 113760-01-28 14:08 G | 43271074.05 | 43271074.09 | 43271074.18 | 0.0089 | 0.0087 |
| Jupiter | 113760-08-19 07:25 G | 43271277.59 | 43271277.81 | 43271278.04 | 0.0513 | 0.0090 |

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| Neptune | 113761-01-30 02:22 G | 43271441.47 | 43271441.60 | 43271441.78 | 0.0089 | 0.0072 |
| Neptune | 113762-02-01 17:01 G | 43271809.00 | 43271809.21 | 43271809.44 | 0.0089 | 0.0040 |
| Neptune | 113763-02-04 00:13 G | 43272176.28 | 43272176.51 | 43272176.78 | 0.0089 | 0.0026 |
| Neptune | 113764-02-06 18:56 G | 43272544.04 | 43272544.29 | 43272544.55 | 0.0089 | 0.0008 |
| Neptune | 113765-02-08 00:13 G | 43272911.27 | 43272911.51 | 43272911.76 | 0.0090 | 0.0021 |
| Neptune | 113766-02-10 18:56 G | 43273279.09 | 43273279.29 | 43273279.51 | 0.0090 | 0.0054 |
| Neptune | 113767-02-13 01:39 G | 43273646.42 | 43273646.57 | 43273646.74 | 0.0090 | 0.0068 |
| Jupiter | 113767-02-26 22:32 G | 43273660.35 | 43273660.44 | 43273660.55 | 0.0518 | 0.0467 |
| Saturn | 113767-03-26 23:44 G | 43273688.34 | 43273688.49 | 43273688.65 | 0.0270 | 0.0209 |
| Saturn | 113768-04-06 18:41 G | 43274065.03 | 43274065.28 | 43274065.52 | 0.0272 | 0.0007 |
| Saturn | 113769-04-18 23:01 G | 43274442.31 | 43274442.46 | 43274442.63 | 0.0274 | 0.0197 |
| Uranus | 113772-02-12 00:41 G | 43275471.32 | 43275471.53 | 43275471.76 | 0.0137 | 0.0062 |
| Jupiter | 113772-08-23 23:15 G | 43275665.33 | 43275665.47 | 43275665.63 | 0.0510 | 0.0398 |
| Uranus | 113773-02-15 06:41 G | 43275840.55 | 43275840.78 | 43275841.03 | 0.0137 | 0.0051 |
| Saturn | 113781-09-27 02:51 G | 43278986.44 | 43278986.62 | 43278986.82 | 0.0289 | 0.0180 |
| Saturn | 113782-10-11 12:13 G | 43279365.77 | 43279366.01 | 43279366.25 | 0.0287 | 0.0090 |
| Saturn | 113797-04-02 06:41 G | 43284652.56 | 43284652.78 | 43284653.01 | 0.0272 | 0.0106 |
| Saturn | 113798-04-14 03:20 G | 43285029.41 | 43285029.64 | 43285029.88 | 0.0274 | 0.0094 |
| Saturn | 113810-09-22 05:15 G | 43289572.69 | 43289572.72 | 43289572.78 | 0.0289 | 0.0285 |
| Saturn | 113811-10-06 17:44 G | 43289952.00 | 43289952.24 | 43289952.48 | 0.0288 | 0.0020 |
| Saturn | 113812-10-20 02:22 G | 43290331.48 | 43290331.60 | 43290331.74 | 0.0286 | 0.0240 |
| Uranus | 113815-08-11 17:29 G | 43291356.99 | 43291357.23 | 43291357.48 | 0.0141 | 0.0051 |
| Uranus | 113816-08-15 08:37 G | 43291726.65 | 43291726.86 | 43291727.09 | 0.0141 | 0.0069 |
| Jupiter | 113826-02-17 18:41 G | 43295200.08 | 43295200.28 | 43295200.48 | 0.0513 | 0.0262 |
| Saturn | 113826-03-29 05:15 G | 43295239.58 | 43295239.72 | 43295239.88 | 0.0270 | 0.0204 |
| Saturn | 113827-04-10 08:37 G | 43295616.63 | 43295616.86 | 43295617.10 | 0.0272 | 0.0006 |
| Saturn | 113828-04-21 09:49 G | 43295993.77 | 43295993.91 | 43295994.08 | 0.0274 | 0.0212 |
| Mars | 113829-11-20 20:08 G | 43296572.19 | 43296572.34 | 43296572.49 | 0.1579 | 0.0931 |
| Jupiter | 113831-08-15 14:08 G | 43297204.91 | 43297205.09 | 43297205.27 | 0.0516 | 0.0340 |
| Jupiter | 113838-02-22 04:46 G | 43299587.47 | 43299587.70 | 43299587.94 | 0.0515 | 0.0035 |

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| Saturn | 113840-09-29 09:34 G | 43300537.70 | 43300537.90 | 43300538.13 | 0.0289 | 0.0153 |
| Neptune | 113841-07-27 17:01 G | 43300839.12 | 43300839.21 | 43300839.35 | 0.0088 | 0.0079 |
| Saturn | 113841-10-13 16:03 G | 43300916.94 | 43300917.17 | 43300917.40 | 0.0287 | 0.0108 |
| Neptune | 113842-07-30 01:10 G | 43301206.40 | 43301206.55 | 43301206.73 | 0.0088 | 0.0065 |
| Neptune | 113843-08-01 13:25 G | 43301573.83 | 43301574.06 | 43301574.32 | 0.0088 | 0.0035 |
| Jupiter | 113843-08-20 05:01 G | 43301592.48 | 43301592.71 | 43301592.93 | 0.0513 | 0.0014 |
| Neptune | 113844-08-03 02:37 G | 43301941.37 | 43301941.61 | 43301941.86 | 0.0088 | 0.0021 |
| Neptune | 113845-08-05 09:20 G | 43302308.64 | 43302308.89 | 43302309.17 | 0.0088 | 0.0010 |
| Neptune | 113846-08-08 02:08 G | 43302676.36 | 43302676.59 | 43302676.86 | 0.0088 | 0.0024 |
| Neptune | 113847-08-10 06:27 G | 43303043.58 | 43303043.77 | 43303043.99 | 0.0088 | 0.0054 |
| Neptune | 113848-08-12 00:27 G | 43303411.37 | 43303411.52 | 43303411.70 | 0.0088 | 0.0068 |
| Jupiter | 113850-02-27 06:13 G | 43303975.61 | 43303975.76 | 43303975.92 | 0.0517 | 0.0377 |
| Jupiter | 113855-08-25 02:51 G | 43305980.45 | 43305980.62 | 43305980.81 | 0.0511 | 0.0340 |
| Uranus | 113856-02-13 11:29 G | 43306152.74 | 43306152.98 | 43306153.22 | 0.0137 | 0.0052 |
| Saturn | 113856-04-04 05:01 G | 43306203.50 | 43306203.71 | 43306203.94 | 0.0272 | 0.0103 |
| Uranus | 113857-02-16 22:17 G | 43306522.21 | 43306522.43 | 43306522.66 | 0.0137 | 0.0053 |
| Saturn | 113857-04-16 10:03 G | 43306580.72 | 43306580.92 | 43306581.14 | 0.0274 | 0.0120 |
| Saturn | 113869-09-23 22:46 G | 43311124.37 | 43311124.45 | 43311124.54 | 0.0289 | 0.0271 |
| Saturn | 113870-10-08 07:39 G | 43311503.57 | 43311503.82 | 43311504.08 | 0.0288 | 0.0011 |
| Saturn | 113871-10-22 10:03 G | 43311882.79 | 43311882.92 | 43311883.06 | 0.0285 | 0.0242 |
| Saturn | 113885-03-30 15:05 G | 43316790.97 | 43316791.13 | 43316791.32 | 0.0270 | 0.0191 |
| Saturn | 113886-04-11 09:05 G | 43317167.64 | 43317167.88 | 43317168.13 | 0.0272 | 0.0032 |
| Saturn | 113887-04-23 11:29 G | 43317544.92 | 43317544.98 | 43317545.05 | 0.0274 | 0.0261 |
| Uranus | 113899-08-11 23:58 G | 43322038.26 | 43322038.50 | 43322038.75 | 0.0141 | 0.0040 |
| Saturn | 113899-10-01 21:49 G | 43322089.20 | 43322089.41 | 43322089.62 | 0.0289 | 0.0148 |
| Uranus | 113900-08-17 03:34 G | 43322408.44 | 43322408.65 | 43322408.89 | 0.0141 | 0.0070 |
| Saturn | 113900-10-16 08:08 G | 43322468.62 | 43322468.84 | 43322469.07 | 0.0287 | 0.0115 |
| Pluto | 113907-04-04 19:25 G | 43324830.10 | 43324830.31 | 43324830.56 | 0.0066 | 0.0026 |
| Pluto | 113908-04-05 02:08 G | 43325196.49 | 43325196.59 | 43325196.70 | 0.0066 | 0.0060 |
| Mars | 113908-11-24 01:10 G | 43325429.40 | 43325429.55 | 43325429.71 | 0.1578 | 0.0787 |

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| Jupiter | 113909-02-17 23:44 G | 43325515.30 | 43325515.49 | 43325515.68 | 0.0512 | 0.0259 |
| Jupiter | 113914-08-15 16:17 G | 43327520.00 | 43327520.18 | 43327520.35 | 0.0516 | 0.0335 |
| Saturn | 113915-04-07 16:17 G | 43327754.95 | 43327755.18 | 43327755.42 | 0.0272 | 0.0062 |
| Saturn | 113916-04-18 13:53 G | 43328131.89 | 43328132.08 | 43328132.29 | 0.0274 | 0.0165 |
| Jupiter | 113921-02-22 13:25 G | 43329902.82 | 43329903.06 | 43329903.30 | 0.0514 | 0.0048 |
| Neptune | 113925-01-31 04:32 G | 43331341.57 | 43331341.69 | 43331341.85 | 0.0089 | 0.0074 |
| Neptune | 113926-02-02 22:46 G | 43331709.26 | 43331709.45 | 43331709.65 | 0.0089 | 0.0060 |
| Jupiter | 113926-08-20 05:44 G | 43331907.50 | 43331907.74 | 43331907.98 | 0.0514 | 0.0039 |
| Neptune | 113927-02-05 07:10 G | 43332076.57 | 43332076.80 | 43332077.04 | 0.0089 | 0.0028 |
| Neptune | 113928-02-07 21:05 G | 43332444.12 | 43332444.38 | 43332444.65 | 0.0089 | 0.0013 |
| Saturn | 113928-09-25 22:17 G | 43332675.33 | 43332675.43 | 43332675.54 | 0.0289 | 0.0260 |
| Neptune | 113929-02-09 10:03 G | 43332811.69 | 43332811.92 | 43332812.17 | 0.0090 | 0.0020 |
| Saturn | 113929-10-10 08:22 G | 43333054.61 | 43333054.85 | 43333055.10 | 0.0288 | 0.0008 |
| Neptune | 113930-02-11 18:27 G | 43333179.03 | 43333179.27 | 43333179.52 | 0.0090 | 0.0034 |
| Saturn | 113930-10-24 16:32 G | 43333434.13 | 43333434.19 | 43333434.28 | 0.0285 | 0.0270 |
| Neptune | 113931-02-14 11:29 G | 43333546.84 | 43333546.98 | 43333547.17 | 0.0090 | 0.0067 |
| Neptune | 113932-02-16 17:01 G | 43333914.12 | 43333914.21 | 43333914.35 | 0.0090 | 0.0080 |
| Jupiter | 113933-02-27 00:56 G | 43334290.37 | 43334290.54 | 43334290.72 | 0.0516 | 0.0323 |
| Jupiter | 113938-08-25 10:03 G | 43336295.73 | 43336295.92 | 43336296.12 | 0.0512 | 0.0266 |
| Uranus | 113940-02-14 21:34 G | 43336834.17 | 43336834.40 | 43336834.64 | 0.0137 | 0.0041 |
| Uranus | 113941-02-18 13:10 G | 43337203.83 | 43337204.05 | 43337204.30 | 0.0137 | 0.0053 |
| Saturn | 113944-04-01 13:53 G | 43338341.89 | 43338342.08 | 43338342.29 | 0.0270 | 0.0145 |
| Saturn | 113945-04-13 17:29 G | 43338719.01 | 43338719.23 | 43338719.46 | 0.0272 | 0.0074 |
| Saturn | 113958-10-04 01:53 G | 43343640.35 | 43343640.58 | 43343640.83 | 0.0289 | 0.0112 |
| Saturn | 113959-10-18 06:41 G | 43344019.58 | 43344019.78 | 43344020.00 | 0.0287 | 0.0158 |
| Saturn | 113973-03-27 18:41 G | 43348929.15 | 43348929.28 | 43348929.41 | 0.0270 | 0.0232 |
| Saturn | 113974-04-08 11:58 G | 43349305.76 | 43349306.00 | 43349306.25 | 0.0272 | 0.0025 |
| Saturn | 113975-04-20 15:05 G | 43349682.95 | 43349683.13 | 43349683.31 | 0.0274 | 0.0177 |
| Uranus | 113982-08-08 15:34 G | 43352350.13 | 43352350.15 | 43352350.18 | 0.0141 | 0.0140 |
| Uranus | 113983-08-13 17:29 G | 43352719.99 | 43352720.23 | 43352720.48 | 0.0141 | 0.0028 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 113984-08-17 09:05 G | 43353089.67 | 43353089.88 | 43353090.12 | 0.0141 | 0.0071 |
| Saturn | 113987-09-28 08:08 G | 43354226.68 | 43354226.84 | 43354227.00 | 0.0289 | 0.0213 |
| Saturn | 113988-10-11 18:56 G | 43354606.05 | 43354606.29 | 43354606.54 | 0.0287 | 0.0057 |
| Jupiter | 113992-02-17 20:22 G | 43355830.20 | 43355830.35 | 43355830.51 | 0.0511 | 0.0361 |
| Pluto | 113994-10-03 10:17 G | 43356788.73 | 43356788.93 | 43356789.15 | 0.0079 | 0.0049 |
| Jupiter | 113997-08-14 20:08 G | 43357835.20 | 43357835.34 | 43357835.49 | 0.0517 | 0.0391 |

115TH MILLENNIUM CE

This is a list of transits of Moon in the 115th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|-------------|-------------|-------------|--------|--------|-------|---|
| Saturn | 114003-04-03 23:15 G | 43359893.26 | 43359893.47 | 43359893.70 | 0.0270 | 0.0116 | | |
| Jupiter | 114004-02-22 19:25 G | 43360218.07 | 43360218.31 | 43360218.54 | 0.0514 | 0.0006 | | |
| Saturn | 114004-04-14 17:15 G | 43360269.98 | 43360270.22 | 43360270.46 | 0.0272 | 0.0078 | | |
| Neptune | 114006-07-30 11:29 G | 43361106.84 | 43361106.98 | 43361107.17 | 0.0088 | 0.0067 | | |
| Neptune | 114007-08-01 15:49 G | 43361473.98 | 43361474.16 | 43361474.38 | 0.0088 | 0.0054 | | |
| Neptune | 114008-08-03 09:20 G | 43361841.65 | 43361841.89 | 43361842.16 | 0.0088 | 0.0023 | | |
| Neptune | 114009-08-05 16:03 G | 43362208.92 | 43362209.17 | 43362209.43 | 0.0088 | 0.0009 | | |
| Jupiter | 114009-08-19 20:08 G | 43362223.09 | 43362223.34 | 43362223.58 | 0.0515 | 0.0027 | | |
| Neptune | 114010-08-08 05:58 G | 43362576.49 | 43362576.75 | 43362577.01 | 0.0088 | 0.0022 | | |
| Neptune | 114011-08-10 17:29 G | 43362944.01 | 43362944.23 | 43362944.46 | 0.0088 | 0.0036 | | |
| Neptune | 114012-08-12 01:39 G | 43363311.42 | 43363311.57 | 43363311.76 | 0.0088 | 0.0067 | | |
| Neptune | 114013-08-14 17:58 G | 43363679.16 | 43363679.25 | 43363679.37 | 0.0088 | 0.0080 | | |
| Jupiter | 114016-02-27 06:27 G | 43364605.60 | 43364605.77 | 43364605.95 | 0.0516 | 0.0341 | | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 114017-10-05 03:34 G | 43365191.42 | 43365191.65 | 43365191.89 | 0.0289 | 0.0066 |
| Saturn | 114018-10-19 14:22 G | 43365570.93 | 43365571.10 | 43365571.28 | 0.0287 | 0.0197 |
| Jupiter | 114021-08-24 12:56 G | 43366610.85 | 43366611.04 | 43366611.23 | 0.0512 | 0.0281 |
| Uranus | 114024-02-15 16:03 G | 43367515.92 | 43367516.17 | 43367516.42 | 0.0137 | 0.0028 |
| Uranus | 114025-02-18 19:53 G | 43367885.12 | 43367885.33 | 43367885.58 | 0.0137 | 0.0057 |
| Saturn | 114032-03-28 16:32 G | 43370480.06 | 43370480.19 | 43370480.33 | 0.0270 | 0.0219 |
| Saturn | 114033-04-09 19:10 G | 43370857.07 | 43370857.30 | 43370857.54 | 0.0272 | 0.0027 |
| Saturn | 114034-04-21 18:56 G | 43371234.12 | 43371234.29 | 43371234.49 | 0.0274 | 0.0180 |
| Saturn | 114046-09-29 03:20 G | 43375777.46 | 43375777.64 | 43375777.85 | 0.0289 | 0.0183 |
| Saturn | 114047-10-13 11:58 G | 43376156.76 | 43376157.00 | 43376157.24 | 0.0287 | 0.0080 |
| Saturn | 114062-04-04 17:58 G | 43381444.04 | 43381444.25 | 43381444.47 | 0.0270 | 0.0121 |
| Saturn | 114063-04-16 20:37 G | 43381821.15 | 43381821.36 | 43381821.59 | 0.0272 | 0.0092 |
| Uranus | 114066-08-09 09:05 G | 43383031.85 | 43383031.88 | 43383031.94 | 0.0141 | 0.0138 |
| Uranus | 114067-08-14 04:03 G | 43383401.41 | 43383401.67 | 43383401.94 | 0.0141 | 0.0016 |
| Uranus | 114068-08-18 00:56 G | 43383771.35 | 43383771.54 | 43383771.76 | 0.0141 | 0.0080 |
| Jupiter | 114075-02-17 06:13 G | 43386145.60 | 43386145.76 | 43386145.93 | 0.0511 | 0.0363 |
| Saturn | 114076-10-06 07:53 G | 43386742.58 | 43386742.83 | 43386743.09 | 0.0289 | 0.0061 |
| Saturn | 114077-10-20 11:15 G | 43387121.79 | 43387121.97 | 43387122.17 | 0.0287 | 0.0194 |
| Jupiter | 114080-08-14 01:10 G | 43388150.44 | 43388150.55 | 43388150.66 | 0.0517 | 0.0453 |
| Jupiter | 114087-02-22 05:01 G | 43390533.49 | 43390533.71 | 43390533.94 | 0.0513 | 0.0070 |
| Neptune | 114090-02-01 22:17 G | 43391609.25 | 43391609.43 | 43391609.63 | 0.0089 | 0.0062 |
| Neptune | 114091-02-04 17:01 G | 43391977.01 | 43391977.21 | 43391977.44 | 0.0089 | 0.0048 |
| Saturn | 114091-03-30 20:51 G | 43392031.24 | 43392031.37 | 43392031.53 | 0.0270 | 0.0219 |
| Neptune | 114092-02-06 22:17 G | 43392344.19 | 43392344.43 | 43392344.69 | 0.0089 | 0.0015 |
| Saturn | 114092-04-10 13:25 G | 43392407.81 | 43392408.06 | 43392408.31 | 0.0272 | 0.0003 |
| Jupiter | 114092-08-19 03:49 G | 43392538.43 | 43392538.66 | 43392538.89 | 0.0515 | 0.0120 |
| Neptune | 114093-02-08 16:46 G | 43392711.94 | 43392712.20 | 43392712.46 | 0.0089 | 0.0001 |
| Saturn | 114093-04-22 14:37 G | 43392784.98 | 43392785.11 | 43392785.25 | 0.0273 | 0.0223 |
| Neptune | 114094-02-10 23:44 G | 43393079.27 | 43393079.49 | 43393079.73 | 0.0090 | 0.0032 |
| Neptune | 114095-02-13 14:37 G | 43393446.90 | 43393447.11 | 43393447.35 | 0.0090 | 0.0046 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 114096-02-16 02:51 G | 43393814.50 | 43393814.62 | 43393814.74 | 0.0090 | 0.0078 |
| Jupiter | 114099-02-26 17:44 G | 43394921.04 | 43394921.24 | 43394921.45 | 0.0515 | 0.0261 |
| Jupiter | 114104-08-24 16:17 G | 43396925.98 | 43396926.18 | 43396926.40 | 0.0513 | 0.0236 |
| Saturn | 114105-10-01 06:56 G | 43397328.62 | 43397328.79 | 43397328.98 | 0.0289 | 0.0190 |
| Saturn | 114106-10-15 18:41 G | 43397708.05 | 43397708.28 | 43397708.52 | 0.0287 | 0.0075 |
| Uranus | 114107-02-12 17:01 G | 43397828.17 | 43397828.21 | 43397828.28 | 0.0137 | 0.0134 |
| Uranus | 114108-02-16 22:46 G | 43398197.20 | 43398197.45 | 43398197.71 | 0.0137 | 0.0019 |
| Uranus | 114109-02-20 15:34 G | 43398566.95 | 43398567.15 | 43398567.38 | 0.0137 | 0.0066 |
| Mars | 114113-11-24 15:20 G | 43400304.95 | 43400305.14 | 43400305.34 | 0.1580 | 0.0130 |
| Saturn | 114121-04-07 01:39 G | 43402995.35 | 43402995.57 | 43402995.80 | 0.0271 | 0.0089 |
| Saturn | 114122-04-18 20:51 G | 43403372.16 | 43403372.37 | 43403372.59 | 0.0272 | 0.0137 |
| Mars | 114122-05-25 06:41 G | 43403408.67 | 43403408.78 | 43403408.88 | 0.1963 | 0.1685 |
| Saturn | 114135-10-09 03:20 G | 43408293.41 | 43408293.64 | 43408293.88 | 0.0289 | 0.0054 |
| Saturn | 114136-10-22 14:22 G | 43408672.95 | 43408673.10 | 43408673.26 | 0.0287 | 0.0217 |
| Saturn | 114150-04-01 16:46 G | 43413582.02 | 43413582.20 | 43413582.37 | 0.0270 | 0.0179 |
| Uranus | 114150-08-10 20:22 G | 43413713.27 | 43413713.35 | 43413713.45 | 0.0141 | 0.0132 |
| Saturn | 114151-04-13 19:39 G | 43413959.08 | 43413959.32 | 43413959.55 | 0.0272 | 0.0040 |
| Uranus | 114151-08-15 14:37 G | 43414082.87 | 43414083.11 | 43414083.36 | 0.0141 | 0.0011 |
| Saturn | 114152-04-24 20:22 G | 43414336.26 | 43414336.35 | 43414336.45 | 0.0273 | 0.0250 |
| Uranus | 114152-08-19 14:37 G | 43414452.90 | 43414453.11 | 43414453.31 | 0.0141 | 0.0089 |
| Pluto | 114153-04-06 22:46 G | 43414683.19 | 43414683.45 | 43414683.71 | 0.0066 | 0.0008 |
| Jupiter | 114158-02-17 21:05 G | 43416461.21 | 43416461.38 | 43416461.56 | 0.0510 | 0.0347 |
| Jupiter | 114163-08-15 08:08 G | 43418465.71 | 43418465.84 | 43418465.98 | 0.0518 | 0.0428 |
| Saturn | 114164-10-02 02:37 G | 43418879.40 | 43418879.61 | 43418879.83 | 0.0289 | 0.0159 |
| Saturn | 114165-10-16 10:03 G | 43419258.70 | 43419258.92 | 43419259.16 | 0.0287 | 0.0115 |
| Jupiter | 114170-02-22 05:15 G | 43420848.49 | 43420848.72 | 43420848.94 | 0.0512 | 0.0052 |
| Neptune | 114170-07-30 12:56 G | 43421007.01 | 43421007.04 | 43421007.13 | 0.0088 | 0.0086 |
| Neptune | 114171-08-02 04:46 G | 43421374.51 | 43421374.70 | 43421374.90 | 0.0088 | 0.0055 |
| Neptune | 114172-08-03 09:34 G | 43421741.68 | 43421741.90 | 43421742.14 | 0.0088 | 0.0041 |
| Neptune | 114173-08-06 03:49 G | 43422109.41 | 43422109.66 | 43422109.92 | 0.0088 | 0.0010 |

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| Neptune | 114174-08-08 08:08 G | 43422476.59 | 43422476.84 | 43422477.10 | 0.0088 | 0.0004 |
| Neptune | 114175-08-11 00:56 G | 43422844.31 | 43422844.54 | 43422844.80 | 0.0088 | 0.0034 |
| Jupiter | 114175-08-20 09:20 G | 43422853.67 | 43422853.89 | 43422854.11 | 0.0516 | 0.0126 |
| Neptune | 114176-08-12 08:08 G | 43423211.64 | 43423211.84 | 43423212.06 | 0.0088 | 0.0048 |
| Neptune | 114177-08-14 20:37 G | 43423579.25 | 43423579.36 | 43423579.49 | 0.0088 | 0.0078 |
| Saturn | 114179-03-28 01:53 G | 43424169.54 | 43424169.58 | 43424169.65 | 0.0270 | 0.0263 |
| Saturn | 114180-04-07 19:25 G | 43424546.07 | 43424546.31 | 43424546.54 | 0.0271 | 0.0054 |
| Saturn | 114181-04-19 21:34 G | 43424923.22 | 43424923.40 | 43424923.61 | 0.0272 | 0.0151 |
| Jupiter | 114182-02-27 00:56 G | 43425236.33 | 43425236.54 | 43425236.76 | 0.0514 | 0.0231 |
| Jupiter | 114187-08-25 05:44 G | 43427241.51 | 43427241.74 | 43427241.97 | 0.0514 | 0.0178 |
| Uranus | 114191-02-13 01:39 G | 43428509.46 | 43428509.57 | 43428509.67 | 0.0137 | 0.0125 |
| Uranus | 114192-02-17 17:29 G | 43428878.99 | 43428879.23 | 43428879.48 | 0.0137 | 0.0013 |
| Mars | 114192-11-26 09:49 G | 43429161.80 | 43429161.91 | 43429162.02 | 0.1579 | 0.1322 |
| Uranus | 114193-02-21 00:56 G | 43429248.34 | 43429248.54 | 43429248.77 | 0.0137 | 0.0077 |
| Saturn | 114193-09-25 23:01 G | 43429465.40 | 43429465.46 | 43429465.55 | 0.0290 | 0.0276 |
| Saturn | 114194-10-10 08:08 G | 43429844.58 | 43429844.84 | 43429845.10 | 0.0288 | 0.0005 |
| Saturn | 114195-10-24 11:01 G | 43430223.86 | 43430223.96 | 43430224.07 | 0.0286 | 0.0259 |
| Jupiter | 114199-08-30 03:05 G | 43431629.62 | 43431629.63 | 43431629.65 | 0.0511 | 0.0510 |
| Saturn | 114209-04-03 21:05 G | 43435133.18 | 43435133.38 | 43435133.59 | 0.0270 | 0.0157 |
| Saturn | 114210-04-15 14:22 G | 43435509.85 | 43435510.10 | 43435510.34 | 0.0272 | 0.0038 |
| Saturn | 114211-04-27 15:20 G | 43435887.05 | 43435887.14 | 43435887.26 | 0.0274 | 0.0245 |
| Saturn | 114223-10-05 05:44 G | 43440430.53 | 43440430.74 | 43440430.97 | 0.0289 | 0.0122 |
| Saturn | 114224-10-18 17:01 G | 43440810.00 | 43440810.21 | 43440810.43 | 0.0287 | 0.0142 |
| Uranus | 114234-08-12 06:27 G | 43444394.68 | 43444394.77 | 43444394.91 | 0.0141 | 0.0125 |
| Uranus | 114235-08-17 07:39 G | 43444764.56 | 43444764.82 | 43444765.08 | 0.0141 | 0.0006 |
| Uranus | 114236-08-20 22:32 G | 43445134.28 | 43445134.44 | 43445134.63 | 0.0141 | 0.0100 |
| Saturn | 114238-03-30 03:34 G | 43445720.59 | 43445720.65 | 43445720.73 | 0.0270 | 0.0255 |
| Saturn | 114239-04-11 04:03 G | 43446097.43 | 43446097.67 | 43446097.91 | 0.0271 | 0.0060 |
| Saturn | 114240-04-21 23:58 G | 43446474.30 | 43446474.50 | 43446474.72 | 0.0273 | 0.0151 |
| Pluto | 114240-10-06 15:49 G | 43446641.94 | 43446642.16 | 43446642.42 | 0.0079 | 0.0028 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 114241-02-18 03:34 G | 43446776.55 | 43446776.65 | 43446776.77 | 0.0509 | 0.0442 |
| Jupiter | 114246-08-15 19:53 G | 43448781.26 | 43448781.33 | 43448781.42 | 0.0519 | 0.0485 |
| Saturn | 114252-09-27 18:13 G | 43451016.15 | 43451016.26 | 43451016.37 | 0.0290 | 0.0257 |
| Jupiter | 114253-02-22 11:15 G | 43451163.75 | 43451163.97 | 43451164.20 | 0.0512 | 0.0109 |
| Saturn | 114253-10-12 06:27 G | 43451395.53 | 43451395.77 | 43451396.01 | 0.0288 | 0.0003 |
| Neptune | 114254-02-03 07:25 G | 43451509.73 | 43451509.81 | 43451509.94 | 0.0089 | 0.0082 |
| Saturn | 114254-10-26 16:03 G | 43451775.08 | 43451775.17 | 43451775.29 | 0.0286 | 0.0257 |
| Neptune | 114255-02-05 16:32 G | 43451876.98 | 43451877.19 | 43451877.42 | 0.0089 | 0.0050 |
| Neptune | 114256-02-08 10:03 G | 43452244.70 | 43452244.92 | 43452245.16 | 0.0089 | 0.0035 |
| Neptune | 114257-02-09 15:49 G | 43452611.90 | 43452612.16 | 43452612.41 | 0.0089 | 0.0004 |
| Neptune | 114258-02-12 10:32 G | 43452979.69 | 43452979.94 | 43452980.21 | 0.0089 | 0.0012 |
| Jupiter | 114258-08-20 14:37 G | 43453168.89 | 43453169.11 | 43453169.34 | 0.0516 | 0.0121 |
| Neptune | 114259-02-14 16:17 G | 43453346.97 | 43453347.18 | 43453347.41 | 0.0089 | 0.0044 |
| Neptune | 114260-02-17 08:08 G | 43453714.67 | 43453714.84 | 43453715.07 | 0.0090 | 0.0059 |
| Jupiter | 114265-02-27 13:10 G | 43455551.85 | 43455552.05 | 43455552.25 | 0.0514 | 0.0244 |
| Saturn | 114268-04-04 18:41 G | 43456684.10 | 43456684.28 | 43456684.47 | 0.0270 | 0.0162 |
| Saturn | 114269-04-16 21:34 G | 43457061.17 | 43457061.40 | 43457061.63 | 0.0272 | 0.0055 |
| Jupiter | 114270-08-25 14:51 G | 43457556.91 | 43457557.12 | 43457557.35 | 0.0514 | 0.0205 |
| Uranus | 114275-02-14 18:41 G | 43459191.17 | 43459191.28 | 43459191.43 | 0.0137 | 0.0117 |
| Uranus | 114276-02-19 04:32 G | 43459560.43 | 43459560.69 | 43459560.96 | 0.0137 | 0.0007 |
| Uranus | 114277-02-22 17:58 G | 43459930.06 | 43459930.25 | 43459930.43 | 0.0137 | 0.0088 |
| Jupiter | 114282-08-30 04:32 G | 43461944.64 | 43461944.69 | 43461944.75 | 0.0512 | 0.0496 |
| Saturn | 114282-10-06 03:20 G | 43461981.41 | 43461981.64 | 43461981.87 | 0.0289 | 0.0129 |
| Saturn | 114283-10-20 11:01 G | 43462360.75 | 43462360.96 | 43462361.19 | 0.0287 | 0.0134 |
| Saturn | 114297-03-31 03:20 G | 43467271.55 | 43467271.64 | 43467271.75 | 0.0270 | 0.0247 |
| Saturn | 114298-04-11 23:01 G | 43467648.22 | 43467648.46 | 43467648.70 | 0.0271 | 0.0028 |
| Saturn | 114299-04-24 03:05 G | 43468025.48 | 43468025.63 | 43468025.80 | 0.0273 | 0.0199 |
| Saturn | 114311-10-01 05:44 G | 43472567.63 | 43472567.74 | 43472567.87 | 0.0289 | 0.0254 |
| Saturn | 114312-10-14 12:56 G | 43472946.79 | 43472947.04 | 43472947.30 | 0.0288 | 0.0016 |
| Saturn | 114313-10-28 15:20 G | 43473326.10 | 43473326.14 | 43473326.20 | 0.0286 | 0.0279 |

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| Uranus | 114318-08-13 22:03 G | 43475076.29 | 43475076.42 | 43475076.58 | 0.0141 | 0.0117 |
| Mars | 114318-11-25 11:29 G | 43475179.81 | 43475179.98 | 43475180.14 | 0.1583 | 0.0677 |
| Uranus | 114319-08-18 13:25 G | 43475445.81 | 43475446.06 | 43475446.31 | 0.0141 | 0.0001 |
| Uranus | 114320-08-22 15:05 G | 43475815.98 | 43475816.13 | 43475816.31 | 0.0141 | 0.0107 |
| Jupiter | 114324-02-19 11:44 G | 43477091.87 | 43477091.99 | 43477092.13 | 0.0509 | 0.0417 |
| Saturn | 114327-04-08 00:13 G | 43478235.29 | 43478235.51 | 43478235.74 | 0.0271 | 0.0115 |
| Saturn | 114328-04-18 18:56 G | 43478612.06 | 43478612.29 | 43478612.51 | 0.0272 | 0.0102 |
| Jupiter | 114329-08-16 02:08 G | 43479096.57 | 43479096.59 | 43479096.63 | 0.0519 | 0.0515 |
| Neptune | 114335-08-03 04:46 G | 43481274.57 | 43481274.70 | 43481274.90 | 0.0088 | 0.0070 |
| Jupiter | 114336-02-23 21:20 G | 43481479.16 | 43481479.39 | 43481479.62 | 0.0511 | 0.0141 |
| Neptune | 114336-08-04 21:20 G | 43481642.19 | 43481642.39 | 43481642.62 | 0.0088 | 0.0047 |
| Neptune | 114337-08-07 02:08 G | 43482009.35 | 43482009.59 | 43482009.85 | 0.0088 | 0.0026 |
| Neptune | 114338-08-09 20:37 G | 43482377.10 | 43482377.36 | 43482377.62 | 0.0088 | 0.0003 |
| Neptune | 114339-08-12 01:25 G | 43482744.32 | 43482744.56 | 43482744.81 | 0.0088 | 0.0019 |
| Neptune | 114340-08-13 17:44 G | 43483112.02 | 43483112.24 | 43483112.49 | 0.0088 | 0.0043 |
| Neptune | 114341-08-16 01:53 G | 43483479.44 | 43483479.58 | 43483479.78 | 0.0088 | 0.0065 |
| Jupiter | 114341-08-20 16:46 G | 43483483.99 | 43483484.20 | 43483484.41 | 0.0517 | 0.0217 |
| Saturn | 114341-10-08 13:24 G | 43483532.83 | 43483533.06 | 43483533.30 | 0.0289 | 0.0087 |
| Neptune | 114342-08-18 13:10 G | 43483847.04 | 43483847.05 | 43483847.12 | 0.0088 | 0.0087 |
| Saturn | 114342-10-22 22:17 G | 43483912.25 | 43483912.43 | 43483912.63 | 0.0287 | 0.0182 |
| Jupiter | 114348-02-28 15:48 G | 43485866.95 | 43485867.16 | 43485867.38 | 0.0513 | 0.0145 |
| Jupiter | 114353-08-25 19:10 G | 43487872.07 | 43487872.30 | 43487872.54 | 0.0515 | 0.0118 |
| Saturn | 114356-04-02 10:17 G | 43488822.79 | 43488822.93 | 43488823.10 | 0.0270 | 0.0202 |
| Saturn | 114357-04-14 09:34 G | 43489199.66 | 43489199.90 | 43489200.15 | 0.0272 | 0.0008 |
| Saturn | 114358-04-26 04:32 G | 43489576.54 | 43489576.69 | 43489576.87 | 0.0273 | 0.0205 |
| Uranus | 114359-02-16 04:17 G | 43489872.54 | 43489872.68 | 43489872.86 | 0.0137 | 0.0109 |
| Uranus | 114360-02-20 19:39 G | 43490242.07 | 43490242.32 | 43490242.56 | 0.0137 | 0.0001 |
| Jupiter | 114360-03-04 01:10 G | 43490254.46 | 43490254.55 | 43490254.66 | 0.0515 | 0.0463 |
| Uranus | 114361-02-24 04:32 G | 43490611.52 | 43490611.69 | 43490611.89 | 0.0137 | 0.0096 |
| Jupiter | 114365-08-30 09:05 G | 43492259.79 | 43492259.88 | 43492259.97 | 0.0513 | 0.0472 |

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| Saturn | 114370-10-02 07:24 G | 43494118.64 | 43494118.81 | 43494118.99 | 0.0289 | 0.0198 |
| Saturn | 114371-10-16 19:39 G | 43494498.09 | 43494498.32 | 43494498.55 | 0.0288 | 0.0070 |
| Saturn | 114386-04-09 03:34 G | 43499786.43 | 43499786.65 | 43499786.87 | 0.0271 | 0.0101 |
| Saturn | 114387-04-21 06:27 G | 43500163.55 | 43500163.77 | 43500164.00 | 0.0272 | 0.0098 |
| Mars | 114397-11-27 21:05 G | 43504037.24 | 43504037.38 | 43504037.52 | 0.1581 | 0.0990 |
| Pluto | 114399-04-11 14:36 G | 43504536.87 | 43504537.11 | 43504537.38 | 0.0066 | 0.0009 |
| Saturn | 114400-10-09 14:08 G | 43505083.84 | 43505084.09 | 43505084.34 | 0.0288 | 0.0055 |
| Saturn | 114401-10-23 22:32 G | 43505463.28 | 43505463.44 | 43505463.62 | 0.0287 | 0.0205 |
| Uranus | 114402-08-14 06:41 G | 43505757.65 | 43505757.78 | 43505757.95 | 0.0141 | 0.0111 |
| Uranus | 114403-08-19 07:24 G | 43506127.55 | 43506127.81 | 43506128.07 | 0.0141 | 0.0007 |
| Uranus | 114404-08-22 22:03 G | 43506497.29 | 43506497.42 | 43506497.59 | 0.0141 | 0.0115 |
| Mars | 114406-05-26 01:53 G | 43507138.40 | 43507138.58 | 43507138.76 | 0.1960 | 0.0650 |
| Jupiter | 114407-02-18 15:34 G | 43507407.10 | 43507407.15 | 43507407.21 | 0.0508 | 0.0489 |
| Saturn | 114415-04-04 10:03 G | 43510373.77 | 43510373.92 | 43510374.09 | 0.0271 | 0.0203 |
| Saturn | 114416-04-15 09:48 G | 43510750.67 | 43510750.91 | 43510751.14 | 0.0272 | 0.0003 |
| Saturn | 114417-04-27 16:03 G | 43511128.04 | 43511128.17 | 43511128.31 | 0.0274 | 0.0224 |
| Neptune | 114419-02-06 02:36 G | 43511777.45 | 43511777.61 | 43511777.80 | 0.0089 | 0.0065 |
| Jupiter | 114419-02-23 00:56 G | 43511794.31 | 43511794.54 | 43511794.77 | 0.0510 | 0.0159 |
| Neptune | 114420-02-08 08:51 G | 43512144.66 | 43512144.87 | 43512145.11 | 0.0089 | 0.0044 |
| Neptune | 114421-02-10 04:03 G | 43512512.43 | 43512512.67 | 43512512.94 | 0.0089 | 0.0018 |
| Neptune | 114422-02-12 09:48 G | 43512879.65 | 43512879.91 | 43512880.16 | 0.0089 | 0.0004 |
| Neptune | 114423-02-15 03:05 G | 43513247.39 | 43513247.63 | 43513247.89 | 0.0089 | 0.0030 |
| Neptune | 114424-02-17 11:44 G | 43513614.80 | 43513614.99 | 43513615.21 | 0.0089 | 0.0051 |
| Jupiter | 114424-08-19 17:58 G | 43513799.04 | 43513799.25 | 43513799.47 | 0.0518 | 0.0195 |
| Neptune | 114425-02-19 00:27 G | 43513982.40 | 43513982.52 | 43513982.68 | 0.0090 | 0.0076 |
| Saturn | 114429-10-03 23:58 G | 43515670.31 | 43515670.50 | 43515670.69 | 0.0289 | 0.0188 |
| Saturn | 114430-10-18 05:00 G | 43516049.47 | 43516049.71 | 43516049.97 | 0.0287 | 0.0072 |
| Jupiter | 114431-02-27 17:58 G | 43516182.04 | 43516182.25 | 43516182.46 | 0.0513 | 0.0163 |
| Jupiter | 114436-08-25 00:56 G | 43518187.31 | 43518187.54 | 43518187.76 | 0.0516 | 0.0127 |
| Uranus | 114443-02-16 20:36 G | 43520554.21 | 43520554.36 | 43520554.54 | 0.0137 | 0.0103 |

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| Jupiter | 114443-03-04 08:22 G | 43520569.76 | 43520569.85 | 43520569.96 | 0.0515 | 0.0463 |
| Uranus | 114444-02-21 05:29 G | 43520923.47 | 43520923.73 | 43520923.99 | 0.0137 | 0.0008 |
| Uranus | 114445-02-24 20:08 G | 43521293.18 | 43521293.34 | 43521293.50 | 0.0137 | 0.0102 |
| Saturn | 114445-04-10 08:36 G | 43521337.62 | 43521337.86 | 43521338.10 | 0.0271 | 0.0089 |
| Saturn | 114446-04-22 06:27 G | 43521714.57 | 43521714.77 | 43521714.98 | 0.0272 | 0.0138 |
| Jupiter | 114448-08-29 12:12 G | 43522574.87 | 43522575.01 | 43522575.15 | 0.0513 | 0.0409 |
| Saturn | 114459-10-12 07:53 G | 43526635.59 | 43526635.83 | 43526636.08 | 0.0288 | 0.0055 |
| Saturn | 114460-10-25 13:10 G | 43527014.89 | 43527015.05 | 43527015.23 | 0.0286 | 0.0212 |
| Saturn | 114474-04-05 22:46 G | 43531925.27 | 43531925.45 | 43531925.63 | 0.0271 | 0.0175 |
| Saturn | 114475-04-17 19:10 G | 43532302.05 | 43532302.30 | 43532302.54 | 0.0272 | 0.0053 |
| Saturn | 114476-04-28 16:46 G | 43532679.19 | 43532679.20 | 43532679.24 | 0.0274 | 0.0272 |
| Uranus | 114486-08-14 21:34 G | 43536439.24 | 43536439.40 | 43536439.60 | 0.0140 | 0.0104 |
| Pluto | 114486-10-10 09:48 G | 43536495.66 | 43536495.91 | 43536496.19 | 0.0078 | 0.0018 |
| Uranus | 114487-08-19 14:36 G | 43536808.87 | 43536809.11 | 43536809.36 | 0.0141 | 0.0015 |
| Uranus | 114488-08-23 14:08 G | 43537178.96 | 43537179.09 | 43537179.24 | 0.0141 | 0.0119 |
| Saturn | 114488-10-05 09:48 G | 43537221.71 | 43537221.91 | 43537222.11 | 0.0289 | 0.0162 |
| Saturn | 114489-10-19 21:34 G | 43537601.18 | 43537601.40 | 43537601.63 | 0.0287 | 0.0113 |
| Neptune | 114499-08-02 16:32 G | 43541175.15 | 43541175.19 | 43541175.28 | 0.0088 | 0.0085 |
| Neptune | 114500-08-04 21:05 G | 43541542.19 | 43541542.38 | 43541542.60 | 0.0088 | 0.0053 |
| Neptune | 114501-08-07 15:20 G | 43541909.92 | 43541910.14 | 43541910.38 | 0.0088 | 0.0040 |
| Jupiter | 114502-02-23 05:44 G | 43542109.53 | 43542109.74 | 43542109.95 | 0.0510 | 0.0233 |
| Neptune | 114502-08-09 20:08 G | 43542277.09 | 43542277.34 | 43542277.60 | 0.0088 | 0.0008 |
| Saturn | 114503-04-01 17:00 G | 43542512.15 | 43542512.21 | 43542512.30 | 0.0270 | 0.0255 |
| Neptune | 114503-08-12 11:58 G | 43542644.73 | 43542645.00 | 43542645.27 | 0.0088 | 0.0005 |
| Saturn | 114504-04-12 20:22 G | 43542889.12 | 43542889.35 | 43542889.59 | 0.0271 | 0.0041 |
| Neptune | 114504-08-13 20:22 G | 43543012.12 | 43543012.35 | 43543012.58 | 0.0088 | 0.0036 |
| Saturn | 114505-04-24 20:36 G | 43543266.17 | 43543266.36 | 43543266.56 | 0.0273 | 0.0168 |
| Neptune | 114505-08-16 07:24 G | 43543379.59 | 43543379.81 | 43543380.03 | 0.0088 | 0.0049 |
| Neptune | 114506-08-18 21:34 G | 43543747.32 | 43543747.40 | 43543747.51 | 0.0088 | 0.0081 |
| Jupiter | 114507-08-20 20:51 G | 43544114.19 | 43544114.37 | 43544114.57 | 0.0518 | 0.0307 |

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| Jupiter | 114514-02-27 22:32 G | 43546497.22 | 43546497.44 | 43546497.66 | 0.0512 | 0.0065 |
| Saturn | 114517-09-30 04:17 G | 43547807.59 | 43547807.68 | 43547807.79 | 0.0289 | 0.0265 |
| Saturn | 114518-10-14 14:22 G | 43548186.86 | 43548187.10 | 43548187.35 | 0.0288 | 0.0008 |
| Jupiter | 114519-08-25 23:29 G | 43548502.26 | 43548502.48 | 43548502.71 | 0.0516 | 0.0038 |
| Saturn | 114519-10-29 00:12 G | 43548566.44 | 43548566.51 | 43548566.59 | 0.0286 | 0.0270 |
| Mars | 114523-11-25 17:29 G | 43550055.19 | 43550055.23 | 43550055.26 | 0.1586 | 0.1552 |
| Jupiter | 114526-03-04 11:58 G | 43550884.86 | 43550885.00 | 43550885.17 | 0.0514 | 0.0391 |
| Uranus | 114527-02-18 03:05 G | 43551235.46 | 43551235.63 | 43551235.82 | 0.0138 | 0.0098 |
| Uranus | 114528-02-22 20:51 G | 43551605.13 | 43551605.37 | 43551605.62 | 0.0137 | 0.0015 |
| Uranus | 114529-02-26 03:20 G | 43551974.49 | 43551974.64 | 43551974.81 | 0.0137 | 0.0106 |
| Jupiter | 114531-08-30 10:03 G | 43552889.76 | 43552889.92 | 43552890.09 | 0.0514 | 0.0378 |
| Saturn | 114533-04-07 23:15 G | 43553476.28 | 43553476.47 | 43553476.69 | 0.0271 | 0.0139 |
| Saturn | 114534-04-20 03:05 G | 43553853.41 | 43553853.63 | 43553853.86 | 0.0273 | 0.0063 |
| Saturn | 114535-05-02 08:22 G | 43554230.81 | 43554230.85 | 43554230.91 | 0.0274 | 0.0268 |
| Saturn | 114547-10-09 02:08 G | 43558773.36 | 43558773.59 | 43558773.84 | 0.0288 | 0.0106 |
| Saturn | 114548-10-22 06:27 G | 43559152.57 | 43559152.77 | 43559152.99 | 0.0287 | 0.0153 |
| Saturn | 114562-04-03 04:46 G | 43564063.59 | 43564063.70 | 43564063.83 | 0.0270 | 0.0237 |
| Saturn | 114563-04-14 22:46 G | 43564440.21 | 43564440.45 | 43564440.69 | 0.0271 | 0.0043 |
| Saturn | 114564-04-26 01:39 G | 43564817.39 | 43564817.57 | 43564817.75 | 0.0273 | 0.0171 |
| Uranus | 114570-08-16 09:48 G | 43567120.74 | 43567120.91 | 43567121.09 | 0.0140 | 0.0097 |
| Uranus | 114571-08-21 06:12 G | 43567490.50 | 43567490.76 | 43567491.02 | 0.0141 | 0.0023 |
| Uranus | 114572-08-25 00:12 G | 43567860.41 | 43567860.51 | 43567860.64 | 0.0141 | 0.0125 |
| Saturn | 114576-10-02 02:08 G | 43569359.46 | 43569359.59 | 43569359.73 | 0.0289 | 0.0240 |
| Saturn | 114577-10-16 10:46 G | 43569738.69 | 43569738.95 | 43569739.20 | 0.0288 | 0.0019 |
| Saturn | 114578-10-30 13:24 G | 43570117.98 | 43570118.06 | 43570118.14 | 0.0286 | 0.0271 |
| Neptune | 114583-02-06 02:08 G | 43571677.50 | 43571677.59 | 43571677.72 | 0.0089 | 0.0081 |
| Neptune | 114584-02-08 21:20 G | 43572045.20 | 43572045.39 | 43572045.63 | 0.0089 | 0.0049 |
| Neptune | 114585-02-10 04:03 G | 43572412.45 | 43572412.67 | 43572412.92 | 0.0089 | 0.0034 |
| Jupiter | 114585-02-22 11:29 G | 43572424.77 | 43572424.98 | 43572425.20 | 0.0509 | 0.0227 |
| Neptune | 114586-02-12 20:22 G | 43572780.09 | 43572780.35 | 43572780.62 | 0.0089 | 0.0003 |

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| Neptune | 114587-02-15 06:41 G | 43573147.54 | 43573147.78 | 43573148.03 | 0.0089 | 0.0013 |
| Neptune | 114588-02-17 17:15 G | 43573515.00 | 43573515.22 | 43573515.46 | 0.0089 | 0.0045 |
| Neptune | 114589-02-19 08:51 G | 43573882.71 | 43573882.87 | 43573883.07 | 0.0089 | 0.0061 |
| Jupiter | 114590-08-19 16:32 G | 43574429.00 | 43574429.19 | 43574429.39 | 0.0520 | 0.0305 |
| Saturn | 114592-04-09 13:10 G | 43575027.84 | 43575028.05 | 43575028.27 | 0.0272 | 0.0138 |
| Saturn | 114593-04-21 08:22 G | 43575404.62 | 43575404.85 | 43575405.09 | 0.0273 | 0.0084 |
| Jupiter | 114597-02-26 22:03 G | 43576812.20 | 43576812.42 | 43576812.64 | 0.0511 | 0.0080 |
| Jupiter | 114602-08-25 20:08 G | 43578817.11 | 43578817.34 | 43578817.56 | 0.0517 | 0.0013 |
| Mars | 114602-11-28 17:44 G | 43578912.06 | 43578912.24 | 43578912.43 | 0.1584 | 0.0044 |
| Saturn | 114606-10-11 20:51 G | 43580325.15 | 43580325.37 | 43580325.60 | 0.0288 | 0.0102 |
| Saturn | 114607-10-26 06:12 G | 43580704.56 | 43580704.76 | 43580704.97 | 0.0286 | 0.0159 |
| Jupiter | 114609-03-04 11:44 G | 43581199.83 | 43581199.99 | 43581200.17 | 0.0513 | 0.0360 |
| Uranus | 114611-02-19 21:34 G | 43581917.23 | 43581917.40 | 43581917.60 | 0.0138 | 0.0092 |
| Uranus | 114612-02-24 03:20 G | 43582286.40 | 43582286.64 | 43582286.90 | 0.0137 | 0.0023 |
| Uranus | 114613-02-27 20:36 G | 43582656.24 | 43582656.36 | 43582656.53 | 0.0137 | 0.0112 |
| Jupiter | 114614-08-30 14:51 G | 43583204.92 | 43583205.12 | 43583205.31 | 0.0515 | 0.0303 |
| Saturn | 114621-04-05 14:08 G | 43585614.96 | 43585615.09 | 43585615.22 | 0.0270 | 0.0220 |
| Saturn | 114622-04-17 15:20 G | 43585991.90 | 43585992.14 | 43585992.38 | 0.0271 | 0.0002 |
| Saturn | 114623-04-29 12:12 G | 43586368.88 | 43586369.01 | 43586369.16 | 0.0273 | 0.0225 |
| Saturn | 114635-10-05 10:17 G | 43590910.78 | 43590910.93 | 43590911.10 | 0.0289 | 0.0221 |
| Saturn | 114636-10-18 21:48 G | 43591290.18 | 43591290.41 | 43591290.65 | 0.0288 | 0.0050 |
| Pluto | 114644-04-13 06:27 G | 43594023.74 | 43594023.77 | 43594023.86 | 0.0066 | 0.0064 |
| Pluto | 114645-04-14 18:27 G | 43594390.06 | 43594390.27 | 43594390.52 | 0.0066 | 0.0023 |
| Saturn | 114651-04-12 16:46 G | 43596578.98 | 43596579.20 | 43596579.43 | 0.0272 | 0.0083 |
| Saturn | 114652-04-23 21:48 G | 43596956.20 | 43596956.41 | 43596956.61 | 0.0273 | 0.0132 |
| Uranus | 114654-08-17 20:51 G | 43597802.18 | 43597802.37 | 43597802.59 | 0.0140 | 0.0089 |
| Uranus | 114655-08-22 17:44 G | 43598172.00 | 43598172.24 | 43598172.48 | 0.0141 | 0.0031 |
| Uranus | 114656-08-26 13:10 G | 43598541.96 | 43598542.05 | 43598542.16 | 0.0141 | 0.0130 |
| Neptune | 114664-08-05 09:48 G | 43601442.76 | 43601442.91 | 43601443.10 | 0.0088 | 0.0067 |
| Neptune | 114665-08-07 15:20 G | 43601809.95 | 43601810.14 | 43601810.38 | 0.0088 | 0.0046 |

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| Saturn | 114665-10-13 07:39 G | 43601876.57 | 43601876.82 | 43601877.07 | 0.0288 | 0.0043 |
| Neptune | 114666-08-10 06:27 G | 43602177.53 | 43602177.77 | 43602178.04 | 0.0088 | 0.0023 |
| Saturn | 114666-10-27 13:39 G | 43602255.93 | 43602256.07 | 43602256.24 | 0.0286 | 0.0222 |
| Neptune | 114667-08-12 17:00 G | 43602544.97 | 43602545.21 | 43602545.47 | 0.0088 | 0.0003 |
| Jupiter | 114668-02-23 10:03 G | 43602739.74 | 43602739.92 | 43602740.10 | 0.0508 | 0.0328 |
| Neptune | 114668-08-14 02:08 G | 43602912.34 | 43602912.59 | 43602912.86 | 0.0088 | 0.0022 |
| Neptune | 114669-08-16 17:29 G | 43603280.01 | 43603280.23 | 43603280.45 | 0.0088 | 0.0043 |
| Neptune | 114670-08-18 22:17 G | 43603647.28 | 43603647.43 | 43603647.61 | 0.0088 | 0.0068 |
| Jupiter | 114673-08-19 20:36 G | 43604744.22 | 43604744.36 | 43604744.52 | 0.0520 | 0.0411 |
| Jupiter | 114680-02-27 20:51 G | 43607127.15 | 43607127.37 | 43607127.60 | 0.0511 | 0.0036 |
| Saturn | 114680-04-06 19:53 G | 43607166.14 | 43607166.33 | 43607166.53 | 0.0270 | 0.0168 |
| Saturn | 114681-04-18 17:00 G | 43607542.98 | 43607543.21 | 43607543.45 | 0.0272 | 0.0033 |
| Saturn | 114682-04-30 23:00 G | 43607920.35 | 43607920.46 | 43607920.59 | 0.0273 | 0.0230 |
| Jupiter | 114685-08-24 22:32 G | 43609132.21 | 43609132.44 | 43609132.66 | 0.0517 | 0.0064 |
| Jupiter | 114692-03-03 18:12 G | 43611515.07 | 43611515.26 | 43611515.45 | 0.0513 | 0.0305 |
| Saturn | 114694-10-07 08:08 G | 43612462.64 | 43612462.84 | 43612463.06 | 0.0289 | 0.0159 |
| Uranus | 114695-02-20 01:53 G | 43612598.40 | 43612598.58 | 43612598.80 | 0.0138 | 0.0086 |
| Saturn | 114695-10-21 14:08 G | 43612841.86 | 43612842.09 | 43612842.34 | 0.0287 | 0.0105 |
| Uranus | 114696-02-24 21:34 G | 43612968.15 | 43612968.40 | 43612968.65 | 0.0137 | 0.0029 |
| Uranus | 114697-02-28 01:39 G | 43613337.46 | 43613337.57 | 43613337.72 | 0.0137 | 0.0116 |
| Jupiter | 114697-08-29 15:34 G | 43613519.95 | 43613520.15 | 43613520.35 | 0.0515 | 0.0288 |
| Saturn | 114709-04-03 06:56 G | 43617753.76 | 43617753.79 | 43617753.85 | 0.0271 | 0.0266 |
| Saturn | 114710-04-15 01:53 G | 43618130.35 | 43618130.58 | 43618130.83 | 0.0272 | 0.0073 |
| Saturn | 114711-04-26 22:32 G | 43618507.23 | 43618507.44 | 43618507.65 | 0.0273 | 0.0128 |
| Saturn | 114723-10-02 14:51 G | 43623049.05 | 43623049.12 | 43623049.19 | 0.0289 | 0.0274 |
| Saturn | 114724-10-16 03:34 G | 43623428.40 | 43623428.65 | 43623428.89 | 0.0288 | 0.0012 |
| Saturn | 114725-10-30 10:17 G | 43623807.81 | 43623807.93 | 43623808.07 | 0.0286 | 0.0242 |
| Pluto | 114732-10-15 00:12 G | 43626349.28 | 43626349.51 | 43626349.75 | 0.0078 | 0.0035 |
| Uranus | 114738-08-19 11:58 G | 43628483.81 | 43628484.00 | 43628484.21 | 0.0140 | 0.0083 |
| Saturn | 114739-04-10 08:22 G | 43628717.68 | 43628717.85 | 43628718.04 | 0.0270 | 0.0172 |

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| Uranus | 114739-08-24 04:17 G | 43628853.44 | 43628853.68 | 43628853.95 | 0.0141 | 0.0039 |
| Saturn | 114740-04-21 06:12 G | 43629094.52 | 43629094.76 | 43629095.01 | 0.0272 | 0.0039 |
| Uranus | 114740-08-28 02:22 G | 43629223.56 | 43629223.60 | 43629223.66 | 0.0141 | 0.0137 |
| Saturn | 114741-05-03 02:08 G | 43629471.54 | 43629471.59 | 43629471.67 | 0.0273 | 0.0264 |
| Neptune | 114747-02-07 15:20 G | 43631578.14 | 43631578.14 | 43631578.18 | 0.0089 | 0.0089 |
| Neptune | 114748-02-09 22:46 G | 43631945.27 | 43631945.45 | 43631945.63 | 0.0089 | 0.0061 |
| Neptune | 114749-02-11 13:24 G | 43632312.85 | 43632313.06 | 43632313.31 | 0.0089 | 0.0043 |
| Neptune | 114750-02-14 01:39 G | 43632680.33 | 43632680.57 | 43632680.82 | 0.0089 | 0.0014 |
| Neptune | 114751-02-16 11:44 G | 43633047.73 | 43633047.99 | 43633048.26 | 0.0089 | 0.0005 |
| Jupiter | 114751-02-23 16:46 G | 43633055.02 | 43633055.20 | 43633055.39 | 0.0508 | 0.0315 |
| Neptune | 114752-02-19 04:32 G | 43633415.46 | 43633415.69 | 43633415.93 | 0.0089 | 0.0034 |
| Neptune | 114753-02-20 09:48 G | 43633782.72 | 43633782.91 | 43633783.14 | 0.0089 | 0.0051 |
| Saturn | 114753-10-09 14:51 G | 43634013.92 | 43634014.12 | 43634014.32 | 0.0289 | 0.0156 |
| Neptune | 114754-02-23 04:46 G | 43634150.61 | 43634150.70 | 43634150.84 | 0.0089 | 0.0080 |
| Saturn | 114754-10-24 02:51 G | 43634393.40 | 43634393.62 | 43634393.85 | 0.0287 | 0.0107 |
| Jupiter | 114756-08-19 23:58 G | 43635059.34 | 43635059.50 | 43635059.66 | 0.0520 | 0.0391 |
| Jupiter | 114763-02-28 02:08 G | 43637442.36 | 43637442.59 | 43637442.82 | 0.0510 | 0.0009 |
| Saturn | 114768-04-04 05:44 G | 43639304.72 | 43639304.74 | 43639304.79 | 0.0270 | 0.0268 |
| Jupiter | 114768-08-24 17:58 G | 43639447.03 | 43639447.25 | 43639447.48 | 0.0518 | 0.0096 |
| Saturn | 114769-04-16 08:51 G | 43639681.64 | 43639681.87 | 43639682.10 | 0.0272 | 0.0048 |
| Saturn | 114770-04-28 11:15 G | 43640058.79 | 43640058.97 | 43640059.16 | 0.0273 | 0.0179 |
| Jupiter | 114775-03-04 22:03 G | 43641830.22 | 43641830.42 | 43641830.62 | 0.0512 | 0.0269 |
| Uranus | 114779-02-21 22:32 G | 43643280.23 | 43643280.44 | 43643280.65 | 0.0138 | 0.0078 |
| Uranus | 114780-02-26 03:20 G | 43643649.40 | 43643649.64 | 43643649.89 | 0.0137 | 0.0036 |
| Jupiter | 114780-08-29 15:34 G | 43643834.92 | 43643835.15 | 43643835.38 | 0.0516 | 0.0197 |
| Uranus | 114781-03-01 21:20 G | 43644019.30 | 43644019.39 | 43644019.52 | 0.0137 | 0.0124 |
| Saturn | 114782-10-03 23:29 G | 43644600.40 | 43644600.48 | 43644600.58 | 0.0289 | 0.0270 |
| Saturn | 114783-10-18 07:53 G | 43644979.58 | 43644979.83 | 43644980.08 | 0.0288 | 0.0003 |
| Saturn | 114784-10-31 16:17 G | 43645359.10 | 43645359.18 | 43645359.29 | 0.0286 | 0.0263 |
| Saturn | 114798-04-11 09:05 G | 43650268.66 | 43650268.88 | 43650269.09 | 0.0270 | 0.0127 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 114799-04-23 10:03 G | 43650645.71 | 43650645.92 | 43650646.15 | 0.0272 | 0.0094 |
| Mars | 114807-11-28 22:03 G | 43653787.28 | 43653787.42 | 43653787.56 | 0.1588 | 0.1120 |
| Saturn | 114812-10-11 04:32 G | 43655565.46 | 43655565.69 | 43655565.93 | 0.0289 | 0.0117 |
| Saturn | 114813-10-25 09:05 G | 43655944.67 | 43655944.88 | 43655945.10 | 0.0287 | 0.0157 |
| Uranus | 114822-08-19 18:56 G | 43659165.09 | 43659165.29 | 43659165.53 | 0.0140 | 0.0076 |
| Uranus | 114823-08-24 18:27 G | 43659535.05 | 43659535.27 | 43659535.52 | 0.0141 | 0.0047 |
| Saturn | 114827-04-06 16:46 G | 43660856.06 | 43660856.20 | 43660856.36 | 0.0270 | 0.0215 |
| Saturn | 114828-04-17 09:34 G | 43661232.65 | 43661232.90 | 43661233.14 | 0.0272 | 0.0008 |
| Neptune | 114828-08-05 11:15 G | 43661342.91 | 43661342.97 | 43661343.08 | 0.0088 | 0.0083 |
| Saturn | 114829-04-29 09:34 G | 43661609.75 | 43661609.90 | 43661610.07 | 0.0273 | 0.0197 |
| Neptune | 114829-08-08 01:24 G | 43661710.35 | 43661710.56 | 43661710.78 | 0.0088 | 0.0051 |
| Neptune | 114830-08-10 11:58 G | 43662077.79 | 43662078.00 | 43662078.24 | 0.0088 | 0.0038 |
| Neptune | 114831-08-12 20:22 G | 43662445.09 | 43662445.35 | 43662445.63 | 0.0088 | 0.0007 |
| Neptune | 114832-08-14 12:56 G | 43662812.79 | 43662813.04 | 43662813.29 | 0.0088 | 0.0007 |
| Neptune | 114833-08-16 17:29 G | 43663180.01 | 43663180.23 | 43663180.48 | 0.0088 | 0.0039 |
| Jupiter | 114834-02-22 23:00 G | 43663370.33 | 43663370.46 | 43663370.60 | 0.0507 | 0.0410 |
| Neptune | 114834-08-19 11:29 G | 43663547.79 | 43663547.98 | 43663548.21 | 0.0088 | 0.0052 |
| Neptune | 114835-08-21 16:17 G | 43663915.12 | 43663915.18 | 43663915.28 | 0.0088 | 0.0083 |
| Jupiter | 114839-08-19 23:58 G | 43665374.45 | 43665374.50 | 43665374.56 | 0.0521 | 0.0505 |
| Saturn | 114841-10-05 11:29 G | 43666151.83 | 43666151.98 | 43666152.15 | 0.0289 | 0.0214 |
| Saturn | 114842-10-19 22:32 G | 43666531.19 | 43666531.44 | 43666531.69 | 0.0288 | 0.0056 |
| Jupiter | 114846-02-27 00:27 G | 43667757.30 | 43667757.52 | 43667757.75 | 0.0509 | 0.0121 |
| Jupiter | 114851-08-24 22:32 G | 43669762.22 | 43669762.44 | 43669762.66 | 0.0519 | 0.0142 |
| Saturn | 114857-04-12 20:51 G | 43671820.15 | 43671820.37 | 43671820.60 | 0.0270 | 0.0105 |
| Jupiter | 114858-03-03 23:29 G | 43672145.28 | 43672145.48 | 43672145.70 | 0.0512 | 0.0214 |
| Saturn | 114858-04-24 15:05 G | 43672196.90 | 43672197.13 | 43672197.37 | 0.0272 | 0.0093 |
| Uranus | 114863-02-22 01:53 G | 43673961.38 | 43673961.58 | 43673961.81 | 0.0138 | 0.0073 |
| Jupiter | 114863-08-30 01:10 G | 43674150.34 | 43674150.55 | 43674150.77 | 0.0517 | 0.0220 |
| Uranus | 114864-02-26 21:05 G | 43674331.15 | 43674331.38 | 43674331.63 | 0.0137 | 0.0043 |
| Uranus | 114865-03-02 01:24 G | 43674700.49 | 43674700.56 | 43674700.67 | 0.0137 | 0.0128 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 114871-10-13 10:32 G | 43677116.71 | 43677116.94 | 43677117.17 | 0.0289 | 0.0080 |
| Saturn | 114872-10-26 22:03 G | 43677496.23 | 43677496.42 | 43677496.61 | 0.0287 | 0.0179 |
| Saturn | 114886-04-07 16:46 G | 43682407.06 | 43682407.20 | 43682407.35 | 0.0270 | 0.0212 |
| Mars | 114886-12-01 00:56 G | 43682644.37 | 43682644.54 | 43682644.72 | 0.1586 | 0.0480 |
| Saturn | 114887-04-19 18:56 G | 43682784.05 | 43682784.29 | 43682784.53 | 0.0272 | 0.0012 |
| Saturn | 114888-04-30 17:00 G | 43683161.06 | 43683161.21 | 43683161.39 | 0.0273 | 0.0205 |
| Pluto | 114890-04-16 17:00 G | 43683877.05 | 43683877.21 | 43683877.40 | 0.0066 | 0.0047 |
| Pluto | 114891-04-17 23:15 G | 43684243.27 | 43684243.47 | 43684243.70 | 0.0066 | 0.0035 |
| Saturn | 114900-10-07 10:03 G | 43687702.76 | 43687702.92 | 43687703.11 | 0.0289 | 0.0208 |
| Saturn | 114901-10-21 21:20 G | 43688082.15 | 43688082.39 | 43688082.63 | 0.0288 | 0.0054 |
| Uranus | 114906-08-21 11:58 G | 43689846.79 | 43689847.00 | 43689847.23 | 0.0140 | 0.0070 |
| Uranus | 114907-08-26 01:24 G | 43690216.33 | 43690216.56 | 43690216.82 | 0.0141 | 0.0053 |
| Neptune | 114912-02-10 08:22 G | 43691845.75 | 43691845.85 | 43691846.01 | 0.0089 | 0.0077 |
| Neptune | 114913-02-11 20:51 G | 43692213.18 | 43692213.37 | 43692213.60 | 0.0089 | 0.0048 |
| Neptune | 114914-02-14 05:58 G | 43692580.51 | 43692580.75 | 43692581.01 | 0.0089 | 0.0030 |
| Neptune | 114915-02-16 23:29 G | 43692948.23 | 43692948.48 | 43692948.73 | 0.0089 | 0.0001 |
| Neptune | 114916-02-19 05:00 G | 43693315.46 | 43693315.71 | 43693315.97 | 0.0089 | 0.0017 |
| Saturn | 114916-04-14 18:12 G | 43693371.04 | 43693371.26 | 43693371.48 | 0.0270 | 0.0100 |
| Neptune | 114917-02-20 23:58 G | 43693683.29 | 43693683.50 | 43693683.73 | 0.0089 | 0.0047 |
| Jupiter | 114917-02-23 01:10 G | 43693685.41 | 43693685.55 | 43693685.70 | 0.0506 | 0.0389 |
| Saturn | 114917-04-26 21:05 G | 43693748.17 | 43693748.38 | 43693748.59 | 0.0272 | 0.0124 |
| Neptune | 114918-02-23 05:29 G | 43694050.58 | 43694050.73 | 43694050.93 | 0.0089 | 0.0064 |
| Jupiter | 114922-08-20 10:03 G | 43695689.82 | 43695689.92 | 43695690.03 | 0.0522 | 0.0467 |
| Jupiter | 114929-02-27 09:05 G | 43698072.66 | 43698072.88 | 43698073.12 | 0.0509 | 0.0095 |
| Saturn | 114930-10-15 11:44 G | 43698667.75 | 43698667.99 | 43698668.24 | 0.0289 | 0.0080 |
| Saturn | 114931-10-29 18:27 G | 43699047.09 | 43699047.27 | 43699047.47 | 0.0287 | 0.0185 |
| Jupiter | 114934-08-25 04:17 G | 43700077.47 | 43700077.68 | 43700077.90 | 0.0519 | 0.0167 |
| Jupiter | 114941-03-04 09:05 G | 43702460.67 | 43702460.88 | 43702461.09 | 0.0511 | 0.0181 |
| Saturn | 114945-04-09 18:56 G | 43703958.11 | 43703958.29 | 43703958.48 | 0.0270 | 0.0184 |
| Saturn | 114946-04-21 13:39 G | 43704334.83 | 43704335.07 | 43704335.31 | 0.0271 | 0.0036 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 114946-08-30 04:46 G | 43704465.47 | 43704465.70 | 43704465.93 | 0.0517 | 0.0120 |
| Uranus | 114947-02-23 20:08 G | 43704643.13 | 43704643.34 | 43704643.58 | 0.0138 | 0.0067 |
| Saturn | 114947-05-03 17:29 G | 43704712.15 | 43704712.23 | 43704712.32 | 0.0273 | 0.0252 |
| Uranus | 114948-02-28 02:08 G | 43705012.37 | 43705012.59 | 43705012.84 | 0.0137 | 0.0049 |
| Uranus | 114949-03-03 20:08 G | 43705382.30 | 43705382.34 | 43705382.41 | 0.0137 | 0.0133 |
| Jupiter | 114953-03-08 16:46 G | 43706848.11 | 43706848.20 | 43706848.31 | 0.0513 | 0.0463 |
| Jupiter | 114958-09-03 19:39 G | 43708853.21 | 43708853.32 | 43708853.44 | 0.0515 | 0.0442 |
| Saturn | 114959-10-09 19:24 G | 43709254.12 | 43709254.31 | 43709254.51 | 0.0289 | 0.0184 |
| Saturn | 114960-10-23 03:34 G | 43709633.41 | 43709633.65 | 43709633.90 | 0.0288 | 0.0088 |
| Saturn | 114974-04-05 06:27 G | 43714545.72 | 43714545.77 | 43714545.82 | 0.0270 | 0.0262 |
| Saturn | 114975-04-17 01:24 G | 43714922.32 | 43714922.56 | 43714922.81 | 0.0270 | 0.0049 |
| Saturn | 114976-04-27 18:12 G | 43715299.07 | 43715299.26 | 43715299.47 | 0.0272 | 0.0156 |
| Pluto | 114978-10-18 10:32 G | 43716202.88 | 43716202.94 | 43716203.05 | 0.0078 | 0.0073 |
| Saturn | 114989-10-16 18:56 G | 43720219.05 | 43720219.29 | 43720219.53 | 0.0289 | 0.0026 |
| Uranus | 114990-08-21 17:15 G | 43720527.99 | 43720528.22 | 43720528.45 | 0.0140 | 0.0063 |
| Saturn | 114990-10-31 04:03 G | 43720598.53 | 43720598.67 | 43720598.81 | 0.0287 | 0.0239 |
| Uranus | 114991-08-26 18:41 G | 43720898.05 | 43720898.28 | 43720898.51 | 0.0141 | 0.0059 |
| Neptune | 114993-08-08 08:36 G | 43721610.71 | 43721610.86 | 43721611.04 | 0.0088 | 0.0064 |
| Neptune | 114994-08-10 16:17 G | 43721977.98 | 43721978.18 | 43721978.44 | 0.0088 | 0.0045 |
| Neptune | 114995-08-13 09:20 G | 43722345.65 | 43722345.89 | 43722346.15 | 0.0088 | 0.0019 |
| Neptune | 114996-08-14 13:53 G | 43722712.82 | 43722713.08 | 43722713.34 | 0.0088 | 0.0001 |
| Neptune | 114997-08-17 08:08 G | 43723080.59 | 43723080.84 | 43723081.09 | 0.0088 | 0.0025 |
| Neptune | 114998-08-19 12:27 G | 43723447.83 | 43723448.02 | 43723448.26 | 0.0088 | 0.0045 |
| Neptune | 114999-08-22 03:48 G | 43723815.53 | 43723815.66 | 43723815.85 | 0.0088 | 0.0071 |
| Jupiter | 115000-02-23 11:29 G | 43724000.90 | 43724000.98 | 43724001.06 | 0.0506 | 0.0471 |

116TH MILLENNIUM CE

This is a list of transits of Moon in the 116th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 115004-04-11 22:03 | G | 43725509.23 | 43725509.42 | 43725509.62 | 0.0270 | 0.0149 | |
| Saturn | 115005-04-23 21:20 | G | 43725886.15 | 43725886.39 | 43725886.64 | 0.0271 | 0.0049 | |
| Saturn | 115006-05-05 16:17 | G | 43726263.08 | 43726263.18 | 43726263.30 | 0.0273 | 0.0244 | |
| Jupiter | 115012-02-28 19:10 | G | 43728388.08 | 43728388.30 | 43728388.53 | 0.0508 | 0.0166 | |
| Jupiter | 115017-08-25 06:41 | G | 43730392.57 | 43730392.78 | 43730392.99 | 0.0520 | 0.0205 | |
| Saturn | 115018-10-11 12:27 | G | 43730804.82 | 43730805.02 | 43730805.25 | 0.0289 | 0.0142 | |
| Saturn | 115019-10-26 01:39 | G | 43731184.36 | 43731184.57 | 43731184.79 | 0.0288 | 0.0121 | |
| Jupiter | 115024-03-04 11:44 | G | 43732775.77 | 43732775.99 | 43732776.20 | 0.0510 | 0.0160 | |
| Jupiter | 115029-08-30 13:39 | G | 43734780.85 | 43734781.07 | 43734781.30 | 0.0518 | 0.0158 | |
| Uranus | 115031-02-24 23:29 | G | 43735324.27 | 43735324.48 | 43735324.71 | 0.0138 | 0.0063 | |
| Uranus | 115032-02-29 17:15 | G | 43735693.99 | 43735694.22 | 43735694.47 | 0.0138 | 0.0052 | |
| Uranus | 115033-03-04 23:29 | G | 43736063.47 | 43736063.48 | 43736063.51 | 0.0137 | 0.0137 | |
| Saturn | 115033-04-07 00:12 | G | 43736096.43 | 43736096.51 | 43736096.62 | 0.0270 | 0.0247 | |
| Saturn | 115034-04-19 00:27 | G | 43736473.29 | 43736473.52 | 43736473.75 | 0.0271 | 0.0053 | |
| Saturn | 115035-05-01 02:36 | G | 43736850.42 | 43736850.61 | 43736850.81 | 0.0272 | 0.0153 | |
| Jupiter | 115036-03-08 21:20 | G | 43737163.33 | 43737163.39 | 43737163.47 | 0.0512 | 0.0485 | |
| Jupiter | 115041-09-04 05:15 | G | 43739168.64 | 43739168.72 | 43739168.82 | 0.0516 | 0.0475 | |
| Saturn | 115047-10-05 04:32 | G | 43741390.65 | 43741390.69 | 43741390.74 | 0.0290 | 0.0285 | |
| Saturn | 115048-10-18 12:56 | G | 43741769.79 | 43741770.04 | 43741770.29 | 0.0289 | 0.0026 | |
| Saturn | 115049-11-01 22:03 | G | 43742149.29 | 43742149.42 | 43742149.57 | 0.0287 | 0.0233 | |
| Mars | 115053-06-01 02:22 | G | 43743456.39 | 43743456.60 | 43743456.81 | 0.1953 | 0.0305 | |
| Saturn | 115063-04-13 18:12 | G | 43747060.06 | 43747060.26 | 43747060.47 | 0.0270 | 0.0156 | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 115064-04-24 16:46 G | 43747436.98 | 43747437.20 | 43747437.43 | 0.0271 | 0.0061 |
| Uranus | 115074-08-23 11:15 G | 43751209.76 | 43751209.97 | 43751210.22 | 0.0140 | 0.0058 |
| Uranus | 115075-08-27 23:44 G | 43751579.27 | 43751579.49 | 43751579.73 | 0.0140 | 0.0065 |
| Neptune | 115076-02-10 16:32 G | 43751746.15 | 43751746.19 | 43751746.26 | 0.0089 | 0.0087 |
| Neptune | 115077-02-12 01:39 G | 43752113.38 | 43752113.57 | 43752113.79 | 0.0089 | 0.0057 |
| Saturn | 115077-10-12 17:44 G | 43752356.02 | 43752356.24 | 43752356.46 | 0.0289 | 0.0151 |
| Neptune | 115078-02-14 18:56 G | 43752481.09 | 43752481.29 | 43752481.54 | 0.0089 | 0.0042 |
| Saturn | 115078-10-26 23:44 G | 43752735.26 | 43752735.49 | 43752735.73 | 0.0288 | 0.0115 |
| Neptune | 115079-02-17 00:56 G | 43752848.29 | 43752848.54 | 43752848.80 | 0.0089 | 0.0010 |
| Neptune | 115080-02-19 20:08 G | 43753216.08 | 43753216.34 | 43753216.60 | 0.0089 | 0.0007 |
| Neptune | 115081-02-21 01:24 G | 43753583.35 | 43753583.56 | 43753583.81 | 0.0089 | 0.0038 |
| Neptune | 115082-02-23 18:27 G | 43753951.07 | 43753951.27 | 43753951.49 | 0.0089 | 0.0054 |
| Jupiter | 115083-02-23 15:05 G | 43754316.02 | 43754316.13 | 43754316.24 | 0.0505 | 0.0436 |
| Neptune | 115083-02-26 03:34 G | 43754318.58 | 43754318.65 | 43754318.75 | 0.0089 | 0.0084 |
| Mars | 115091-12-02 04:32 G | 43757519.49 | 43757519.69 | 43757519.88 | 0.1590 | 0.0273 |
| Saturn | 115092-04-08 08:08 G | 43757647.75 | 43757647.84 | 43757647.95 | 0.0270 | 0.0246 |
| Saturn | 115093-04-20 00:27 G | 43758024.27 | 43758024.52 | 43758024.77 | 0.0271 | 0.0022 |
| Saturn | 115094-05-01 20:22 G | 43758401.21 | 43758401.35 | 43758401.52 | 0.0272 | 0.0203 |
| Jupiter | 115095-02-28 01:53 G | 43758703.36 | 43758703.58 | 43758703.81 | 0.0507 | 0.0162 |
| Jupiter | 115100-08-25 15:48 G | 43760707.96 | 43760708.16 | 43760708.37 | 0.0521 | 0.0248 |
| Saturn | 115106-10-07 08:51 G | 43762941.81 | 43762941.87 | 43762941.95 | 0.0289 | 0.0277 |
| Jupiter | 115107-03-05 19:24 G | 43763091.10 | 43763091.31 | 43763091.53 | 0.0510 | 0.0109 |
| Saturn | 115107-10-21 21:05 G | 43763321.13 | 43763321.38 | 43763321.63 | 0.0288 | 0.0005 |
| Saturn | 115108-11-04 02:36 G | 43763700.52 | 43763700.61 | 43763700.71 | 0.0287 | 0.0265 |
| Jupiter | 115112-08-30 23:00 G | 43765096.23 | 43765096.46 | 43765096.69 | 0.0518 | 0.0068 |
| Uranus | 115115-02-26 15:34 G | 43766005.91 | 43766006.15 | 43766006.38 | 0.0138 | 0.0058 |
| Uranus | 115116-03-01 23:00 G | 43766375.24 | 43766375.46 | 43766375.69 | 0.0138 | 0.0056 |
| Jupiter | 115119-03-10 10:03 G | 43767478.78 | 43767478.92 | 43767479.08 | 0.0512 | 0.0403 |
| Saturn | 115122-04-16 00:56 G | 43768611.32 | 43768611.54 | 43768611.76 | 0.0270 | 0.0110 |
| Saturn | 115123-04-27 20:36 G | 43768988.13 | 43768988.36 | 43768988.59 | 0.0271 | 0.0104 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 115124-09-04 11:15 G | 43769483.82 | 43769483.97 | 43769484.12 | 0.0516 | 0.0398 |
| Pluto | 115136-04-20 18:56 G | 43773730.11 | 43773730.29 | 43773730.48 | 0.0066 | 0.0042 |
| Saturn | 115136-10-14 13:39 G | 43773906.85 | 43773907.07 | 43773907.30 | 0.0289 | 0.0109 |
| Pluto | 115137-04-22 07:53 G | 43774096.67 | 43774096.83 | 43774097.03 | 0.0066 | 0.0048 |
| Saturn | 115137-10-29 02:51 G | 43774286.44 | 43774286.62 | 43774286.83 | 0.0287 | 0.0166 |
| Saturn | 115151-04-11 02:36 G | 43779198.46 | 43779198.61 | 43779198.78 | 0.0270 | 0.0199 |
| Saturn | 115152-04-22 05:00 G | 43779575.47 | 43779575.71 | 43779575.95 | 0.0271 | 0.0006 |
| Saturn | 115153-05-04 05:15 G | 43779952.57 | 43779952.72 | 43779952.88 | 0.0272 | 0.0208 |
| Neptune | 115157-08-09 12:56 G | 43781510.93 | 43781511.04 | 43781511.16 | 0.0088 | 0.0080 |
| Neptune | 115158-08-12 04:46 G | 43781878.49 | 43781878.70 | 43781878.91 | 0.0088 | 0.0049 |
| Uranus | 115158-08-24 16:17 G | 43781890.95 | 43781891.18 | 43781891.43 | 0.0140 | 0.0051 |
| Neptune | 115159-08-14 09:48 G | 43782245.68 | 43782245.91 | 43782246.15 | 0.0088 | 0.0035 |
| Uranus | 115159-08-29 18:12 G | 43782261.06 | 43782261.26 | 43782261.49 | 0.0140 | 0.0072 |
| Neptune | 115160-08-16 04:17 G | 43782613.42 | 43782613.68 | 43782613.94 | 0.0088 | 0.0003 |
| Neptune | 115161-08-18 08:51 G | 43782980.62 | 43782980.87 | 43782981.13 | 0.0088 | 0.0010 |
| Neptune | 115162-08-21 01:24 G | 43783348.34 | 43783348.56 | 43783348.81 | 0.0088 | 0.0042 |
| Neptune | 115163-08-23 09:20 G | 43783715.72 | 43783715.89 | 43783716.11 | 0.0088 | 0.0056 |
| Neptune | 115164-08-24 21:20 G | 43784083.36 | 43784083.39 | 43784083.46 | 0.0088 | 0.0086 |
| Saturn | 115165-10-08 05:44 G | 43784492.60 | 43784492.74 | 43784492.91 | 0.0289 | 0.0226 |
| Saturn | 115166-10-22 15:48 G | 43784871.92 | 43784872.16 | 43784872.40 | 0.0288 | 0.0039 |
| Mars | 115170-12-05 06:27 G | 43786376.68 | 43786376.77 | 43786376.87 | 0.1589 | 0.1348 |
| Jupiter | 115178-02-28 15:20 G | 43789018.92 | 43789019.14 | 43789019.36 | 0.0507 | 0.0189 |
| Saturn | 115181-04-16 18:41 G | 43790162.07 | 43790162.28 | 43790162.51 | 0.0270 | 0.0104 |
| Saturn | 115182-04-28 20:22 G | 43790539.13 | 43790539.35 | 43790539.57 | 0.0272 | 0.0098 |
| Jupiter | 115183-08-25 22:32 G | 43791023.23 | 43791023.44 | 43791023.66 | 0.0521 | 0.0241 |
| Jupiter | 115190-03-05 02:51 G | 43793406.40 | 43793406.62 | 43793406.83 | 0.0509 | 0.0134 |
| Jupiter | 115195-08-31 00:56 G | 43795411.32 | 43795411.54 | 43795411.77 | 0.0519 | 0.0092 |
| Saturn | 115195-10-16 15:48 G | 43795457.92 | 43795458.16 | 43795458.41 | 0.0289 | 0.0093 |
| Saturn | 115196-10-29 22:03 G | 43795837.23 | 43795837.42 | 43795837.64 | 0.0287 | 0.0167 |
| Uranus | 115199-02-26 19:24 G | 43796687.09 | 43796687.31 | 43796687.54 | 0.0138 | 0.0055 |

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| Uranus | 115200-03-02 12:41 G | 43797056.80 | 43797057.03 | 43797057.27 | 0.0138 | 0.0060 |
| Jupiter | 115202-03-09 17:44 G | 43797794.12 | 43797794.24 | 43797794.38 | 0.0511 | 0.0428 |
| Jupiter | 115207-09-04 18:56 G | 43799799.13 | 43799799.29 | 43799799.46 | 0.0517 | 0.0383 |
| Saturn | 115210-04-12 09:05 G | 43800749.72 | 43800749.88 | 43800750.05 | 0.0270 | 0.0202 |
| Saturn | 115211-04-24 01:53 G | 43801126.34 | 43801126.58 | 43801126.83 | 0.0271 | 0.0004 |
| Saturn | 115212-05-05 01:24 G | 43801503.43 | 43801503.56 | 43801503.70 | 0.0272 | 0.0220 |
| Pluto | 115223-10-20 15:34 G | 43805688.99 | 43805689.15 | 43805689.31 | 0.0079 | 0.0062 |
| Saturn | 115224-10-09 16:32 G | 43806044.04 | 43806044.19 | 43806044.34 | 0.0289 | 0.0231 |
| Saturn | 115225-10-24 01:24 G | 43806423.31 | 43806423.56 | 43806423.82 | 0.0288 | 0.0032 |
| Neptune | 115240-02-10 23:29 G | 43811646.48 | 43811646.48 | 43811646.50 | 0.0089 | 0.0089 |
| Saturn | 115240-04-18 04:32 G | 43811713.46 | 43811713.69 | 43811713.92 | 0.0271 | 0.0094 |
| Neptune | 115241-02-12 14:51 G | 43812014.00 | 43812014.12 | 43812014.27 | 0.0089 | 0.0075 |
| Saturn | 115241-04-29 23:00 G | 43812090.24 | 43812090.46 | 43812090.68 | 0.0272 | 0.0131 |
| Uranus | 115241-08-20 09:20 G | 43812202.86 | 43812202.89 | 43812202.95 | 0.0140 | 0.0137 |
| Neptune | 115242-02-14 21:34 G | 43812381.17 | 43812381.40 | 43812381.63 | 0.0089 | 0.0043 |
| Uranus | 115242-08-25 11:15 G | 43812572.73 | 43812572.97 | 43812573.21 | 0.0140 | 0.0045 |
| Neptune | 115243-02-17 16:17 G | 43812748.94 | 43812749.18 | 43812749.43 | 0.0089 | 0.0028 |
| Uranus | 115243-08-29 23:44 G | 43812942.27 | 43812942.49 | 43812942.70 | 0.0140 | 0.0077 |
| Neptune | 115244-02-19 21:34 G | 43813116.14 | 43813116.40 | 43813116.65 | 0.0089 | 0.0005 |
| Neptune | 115245-02-21 15:34 G | 43813483.90 | 43813484.15 | 43813484.41 | 0.0089 | 0.0019 |
| Neptune | 115246-02-23 23:00 G | 43813851.28 | 43813851.46 | 43813851.68 | 0.0089 | 0.0051 |
| Neptune | 115247-02-26 13:24 G | 43814218.90 | 43814219.06 | 43814219.25 | 0.0089 | 0.0066 |
| Jupiter | 115249-02-23 05:44 G | 43814946.70 | 43814946.74 | 43814946.79 | 0.0504 | 0.0493 |
| Saturn | 115254-10-17 20:51 G | 43817009.14 | 43817009.37 | 43817009.60 | 0.0289 | 0.0086 |
| Saturn | 115255-11-01 08:22 G | 43817388.66 | 43817388.85 | 43817389.04 | 0.0287 | 0.0182 |
| Jupiter | 115261-02-27 23:00 G | 43819334.25 | 43819334.46 | 43819334.67 | 0.0506 | 0.0237 |
| Jupiter | 115266-08-25 02:22 G | 43821338.41 | 43821338.60 | 43821338.79 | 0.0523 | 0.0333 |
| Saturn | 115269-04-13 07:53 G | 43822300.66 | 43822300.83 | 43822301.02 | 0.0271 | 0.0178 |
| Saturn | 115270-04-25 10:32 G | 43822677.71 | 43822677.94 | 43822678.18 | 0.0272 | 0.0047 |
| Saturn | 115271-05-07 08:51 G | 43823054.83 | 43823054.87 | 43823054.95 | 0.0273 | 0.0265 |

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| Jupiter | 115273-03-04 05:29 G | 43823721.50 | 43823721.73 | 43823721.96 | 0.0508 | 0.0037 |
| Jupiter | 115278-08-30 03:20 G | 43825726.42 | 43825726.64 | 43825726.87 | 0.0520 | 0.0013 |
| Uranus | 115282-02-22 17:44 G | 43826999.22 | 43826999.24 | 43826999.26 | 0.0138 | 0.0137 |
| Uranus | 115283-02-27 11:15 G | 43827368.74 | 43827368.97 | 43827369.22 | 0.0138 | 0.0050 |
| Saturn | 115283-10-11 16:17 G | 43827594.99 | 43827595.18 | 43827595.36 | 0.0289 | 0.0193 |
| Uranus | 115284-03-02 19:24 G | 43827738.10 | 43827738.31 | 43827738.53 | 0.0138 | 0.0065 |
| Saturn | 115284-10-25 02:36 G | 43827974.38 | 43827974.61 | 43827974.85 | 0.0288 | 0.0077 |
| Jupiter | 115285-03-09 01:53 G | 43828109.41 | 43828109.58 | 43828109.75 | 0.0511 | 0.0352 |
| Jupiter | 115290-09-04 04:32 G | 43830114.52 | 43830114.69 | 43830114.86 | 0.0518 | 0.0369 |
| Mars | 115296-12-01 20:51 G | 43832395.20 | 43832395.37 | 43832395.54 | 0.1595 | 0.0686 |
| Saturn | 115298-04-08 04:17 G | 43832887.62 | 43832887.68 | 43832887.76 | 0.0270 | 0.0257 |
| Saturn | 115299-04-20 01:10 G | 43833264.32 | 43833264.55 | 43833264.79 | 0.0271 | 0.0044 |
| Saturn | 115300-05-02 05:15 G | 43833641.53 | 43833641.72 | 43833641.90 | 0.0272 | 0.0162 |
| Saturn | 115313-10-20 00:12 G | 43838560.25 | 43838560.51 | 43838560.76 | 0.0288 | 0.0031 |
| Saturn | 115314-11-03 06:41 G | 43838939.65 | 43838939.78 | 43838939.94 | 0.0287 | 0.0234 |
| Neptune | 115321-08-10 01:10 G | 43841411.51 | 43841411.55 | 43841411.64 | 0.0088 | 0.0085 |
| Neptune | 115322-08-12 07:24 G | 43841778.64 | 43841778.81 | 43841779.01 | 0.0088 | 0.0063 |
| Neptune | 115323-08-15 01:10 G | 43842146.33 | 43842146.55 | 43842146.78 | 0.0088 | 0.0039 |
| Neptune | 115324-08-16 05:29 G | 43842513.48 | 43842513.73 | 43842513.98 | 0.0088 | 0.0017 |
| Neptune | 115325-08-18 23:15 G | 43842881.21 | 43842881.47 | 43842881.73 | 0.0088 | 0.0006 |
| Uranus | 115325-08-22 03:48 G | 43842884.58 | 43842884.66 | 43842884.76 | 0.0140 | 0.0130 |
| Neptune | 115326-08-21 05:15 G | 43843248.48 | 43843248.72 | 43843248.96 | 0.0088 | 0.0027 |
| Uranus | 115326-08-26 15:20 G | 43843253.89 | 43843254.14 | 43843254.39 | 0.0140 | 0.0039 |
| Neptune | 115327-08-23 18:56 G | 43843616.08 | 43843616.29 | 43843616.52 | 0.0088 | 0.0050 |
| Uranus | 115327-08-31 17:00 G | 43843624.03 | 43843624.21 | 43843624.43 | 0.0140 | 0.0084 |
| Saturn | 115328-04-15 14:22 G | 43843851.88 | 43843852.10 | 43843852.31 | 0.0271 | 0.0138 |
| Neptune | 115328-08-25 06:12 G | 43843983.62 | 43843983.76 | 43843983.90 | 0.0088 | 0.0072 |
| Saturn | 115329-04-27 08:51 G | 43844228.63 | 43844228.87 | 43844229.11 | 0.0272 | 0.0061 |
| Saturn | 115330-05-09 11:58 G | 43844605.94 | 43844606.00 | 43844606.07 | 0.0273 | 0.0262 |
| Mars | 115337-06-02 05:29 G | 43847186.52 | 43847186.73 | 43847186.93 | 0.1948 | 0.0594 |

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| Saturn | 115342-10-14 09:34 G | 43849146.69 | 43849146.90 | 43849147.12 | 0.0288 | 0.0149 |
| Saturn | 115343-10-28 16:17 G | 43849525.95 | 43849526.18 | 43849526.43 | 0.0287 | 0.0112 |
| Jupiter | 115344-02-29 04:03 G | 43849649.47 | 43849649.67 | 43849649.88 | 0.0506 | 0.0238 |
| Jupiter | 115349-08-25 11:00 G | 43851653.77 | 43851653.96 | 43851654.16 | 0.0523 | 0.0302 |
| Jupiter | 115356-03-04 10:46 G | 43854036.72 | 43854036.95 | 43854037.18 | 0.0508 | 0.0065 |
| Saturn | 115357-04-10 14:22 G | 43854438.99 | 43854439.10 | 43854439.21 | 0.0270 | 0.0238 |
| Saturn | 115358-04-22 12:27 G | 43854815.77 | 43854816.02 | 43854816.26 | 0.0271 | 0.0043 |
| Saturn | 115359-05-04 06:27 G | 43855192.57 | 43855192.77 | 43855192.97 | 0.0272 | 0.0161 |
| Jupiter | 115361-08-30 04:46 G | 43856041.47 | 43856041.70 | 43856041.92 | 0.0520 | 0.0008 |
| Uranus | 115366-02-24 07:24 G | 43857680.76 | 43857680.81 | 43857680.91 | 0.0138 | 0.0132 |
| Uranus | 115367-02-28 16:32 G | 43858049.97 | 43858050.19 | 43858050.43 | 0.0138 | 0.0045 |
| Uranus | 115368-03-04 09:20 G | 43858419.69 | 43858419.89 | 43858420.14 | 0.0138 | 0.0070 |
| Jupiter | 115368-03-09 09:05 G | 43858424.72 | 43858424.88 | 43858425.06 | 0.0510 | 0.0341 |
| Saturn | 115371-10-08 00:41 G | 43859732.50 | 43859732.53 | 43859732.57 | 0.0289 | 0.0285 |
| Saturn | 115372-10-21 14:08 G | 43860111.85 | 43860112.09 | 43860112.33 | 0.0288 | 0.0024 |
| Jupiter | 115373-09-04 06:56 G | 43860429.59 | 43860429.79 | 43860429.99 | 0.0518 | 0.0289 |
| Saturn | 115373-11-04 23:15 G | 43860491.34 | 43860491.47 | 43860491.63 | 0.0287 | 0.0233 |
| Mars | 115375-12-05 14:51 G | 43861251.94 | 43861252.12 | 43861252.30 | 0.1593 | 0.0799 |
| Pluto | 115382-04-23 23:58 G | 43863583.29 | 43863583.50 | 43863583.76 | 0.0066 | 0.0030 |
| Pluto | 115383-04-25 18:27 G | 43863950.15 | 43863950.27 | 43863950.44 | 0.0066 | 0.0054 |
| Saturn | 115387-04-17 18:27 G | 43865403.08 | 43865403.27 | 43865403.48 | 0.0271 | 0.0144 |
| Saturn | 115388-04-28 21:20 G | 43865780.16 | 43865780.39 | 43865780.62 | 0.0272 | 0.0071 |
| Saturn | 115401-10-16 14:51 G | 43870697.92 | 43870698.12 | 43870698.33 | 0.0288 | 0.0150 |
| Saturn | 115402-10-31 01:53 G | 43871077.37 | 43871077.58 | 43871077.80 | 0.0287 | 0.0115 |
| Neptune | 115405-02-13 18:12 G | 43871914.18 | 43871914.26 | 43871914.41 | 0.0089 | 0.0081 |
| Neptune | 115406-02-16 12:41 G | 43872281.85 | 43872282.03 | 43872282.25 | 0.0089 | 0.0056 |
| Neptune | 115407-02-18 18:12 G | 43872649.03 | 43872649.26 | 43872649.50 | 0.0089 | 0.0034 |
| Neptune | 115408-02-21 13:24 G | 43873016.80 | 43873017.06 | 43873017.32 | 0.0089 | 0.0009 |
| Neptune | 115409-02-22 19:39 G | 43873384.07 | 43873384.32 | 43873384.57 | 0.0089 | 0.0013 |
| Uranus | 115409-08-23 07:10 G | 43873565.70 | 43873565.80 | 43873565.93 | 0.0140 | 0.0125 |

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| Neptune | 115410-02-25 11:15 G | 43873751.74 | 43873751.97 | 43873752.22 | 0.0089 | 0.0038 |
| Uranus | 115410-08-28 09:05 G | 43873935.64 | 43873935.88 | 43873936.13 | 0.0140 | 0.0034 |
| Neptune | 115411-02-27 21:05 G | 43874119.22 | 43874119.38 | 43874119.58 | 0.0089 | 0.0061 |
| Uranus | 115411-09-01 20:51 G | 43874305.19 | 43874305.37 | 43874305.59 | 0.0140 | 0.0089 |
| Neptune | 115412-03-01 07:39 G | 43874486.77 | 43874486.82 | 43874486.93 | 0.0089 | 0.0086 |
| Saturn | 115416-04-12 15:20 G | 43875990.03 | 43875990.14 | 43875990.27 | 0.0270 | 0.0236 |
| Saturn | 115417-04-24 15:20 G | 43876366.90 | 43876367.14 | 43876367.37 | 0.0271 | 0.0015 |
| Saturn | 115418-05-06 19:24 G | 43876744.18 | 43876744.31 | 43876744.47 | 0.0272 | 0.0213 |
| Jupiter | 115427-03-01 09:34 G | 43879964.73 | 43879964.90 | 43879965.08 | 0.0505 | 0.0324 |
| Saturn | 115430-10-10 14:51 G | 43881284.03 | 43881284.12 | 43881284.21 | 0.0289 | 0.0269 |
| Saturn | 115431-10-24 21:05 G | 43881663.12 | 43881663.38 | 43881663.63 | 0.0288 | 0.0003 |
| Jupiter | 115432-08-25 11:44 G | 43881968.85 | 43881968.99 | 43881969.14 | 0.0523 | 0.0415 |
| Saturn | 115432-11-07 04:03 G | 43882042.61 | 43882042.67 | 43882042.76 | 0.0287 | 0.0271 |
| Jupiter | 115439-03-05 16:17 G | 43884351.95 | 43884352.18 | 43884352.42 | 0.0507 | 0.0030 |
| Jupiter | 115444-08-29 23:29 G | 43886356.25 | 43886356.48 | 43886356.71 | 0.0522 | 0.0071 |
| Saturn | 115446-04-19 23:44 G | 43886954.26 | 43886954.49 | 43886954.73 | 0.0272 | 0.0099 |
| Saturn | 115447-05-01 21:20 G | 43887331.18 | 43887331.39 | 43887331.61 | 0.0273 | 0.0124 |
| Uranus | 115450-02-25 14:22 G | 43888362.02 | 43888362.10 | 43888362.20 | 0.0138 | 0.0127 |
| Uranus | 115451-03-02 08:08 G | 43888731.59 | 43888731.84 | 43888732.09 | 0.0138 | 0.0040 |
| Jupiter | 115451-03-10 10:46 G | 43888739.77 | 43888739.95 | 43888740.14 | 0.0509 | 0.0292 |
| Uranus | 115452-03-05 16:17 G | 43889100.99 | 43889101.18 | 43889101.40 | 0.0138 | 0.0075 |
| Jupiter | 115456-09-04 06:27 G | 43890744.58 | 43890744.77 | 43890744.97 | 0.0519 | 0.0290 |
| Saturn | 115460-10-18 12:41 G | 43892249.79 | 43892250.03 | 43892250.27 | 0.0288 | 0.0099 |
| Saturn | 115461-11-01 17:29 G | 43892629.02 | 43892629.23 | 43892629.44 | 0.0287 | 0.0172 |
| Pluto | 115469-10-23 18:41 G | 43895542.09 | 43895542.28 | 43895542.50 | 0.0078 | 0.0047 |
| Saturn | 115475-04-15 05:29 G | 43897541.57 | 43897541.73 | 43897541.92 | 0.0270 | 0.0184 |
| Saturn | 115476-04-26 01:53 G | 43897918.33 | 43897918.58 | 43897918.83 | 0.0271 | 0.0027 |
| Saturn | 115477-05-07 21:20 G | 43898295.27 | 43898295.39 | 43898295.53 | 0.0273 | 0.0230 |
| Neptune | 115486-08-12 21:34 G | 43901679.31 | 43901679.40 | 43901679.56 | 0.0088 | 0.0077 |
| Neptune | 115487-08-15 02:22 G | 43902046.40 | 43902046.60 | 43902046.85 | 0.0088 | 0.0045 |

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| Neptune | 115488-08-16 20:51 G | 43902414.13 | 43902414.37 | 43902414.62 | 0.0088 | 0.0031 |
| Neptune | 115489-08-19 01:53 G | 43902781.33 | 43902781.58 | 43902781.84 | 0.0088 | 0.0001 |
| Saturn | 115489-10-12 05:15 G | 43902835.57 | 43902835.72 | 43902835.89 | 0.0289 | 0.0211 |
| Neptune | 115490-08-21 17:58 G | 43903148.99 | 43903149.25 | 43903149.52 | 0.0088 | 0.0014 |
| Saturn | 115490-10-26 17:44 G | 43903215.00 | 43903215.24 | 43903215.49 | 0.0288 | 0.0058 |
| Neptune | 115491-08-24 03:05 G | 43903516.42 | 43903516.63 | 43903516.85 | 0.0088 | 0.0045 |
| Neptune | 115492-08-25 13:24 G | 43903883.89 | 43903884.06 | 43903884.28 | 0.0088 | 0.0060 |
| Uranus | 115493-08-24 00:56 G | 43904247.43 | 43904247.54 | 43904247.69 | 0.0140 | 0.0119 |
| Uranus | 115494-08-28 12:27 G | 43904616.77 | 43904617.02 | 43904617.27 | 0.0140 | 0.0028 |
| Uranus | 115495-09-02 14:22 G | 43904986.91 | 43904987.10 | 43904987.29 | 0.0140 | 0.0093 |
| Saturn | 115505-04-22 11:00 G | 43908505.74 | 43908505.96 | 43908506.19 | 0.0272 | 0.0074 |
| Saturn | 115506-05-04 11:44 G | 43908882.79 | 43908882.99 | 43908883.22 | 0.0273 | 0.0128 |
| Jupiter | 115510-03-01 10:32 G | 43910279.77 | 43910279.94 | 43910280.12 | 0.0504 | 0.0302 |
| Jupiter | 115515-08-26 07:39 G | 43912283.69 | 43912283.82 | 43912283.97 | 0.0525 | 0.0419 |
| Saturn | 115519-10-21 22:32 G | 43913801.20 | 43913801.44 | 43913801.68 | 0.0288 | 0.0059 |
| Saturn | 115520-11-04 09:20 G | 43914180.72 | 43914180.89 | 43914181.07 | 0.0287 | 0.0198 |
| Jupiter | 115522-03-05 17:58 G | 43914667.01 | 43914667.25 | 43914667.49 | 0.0506 | 0.0037 |
| Jupiter | 115527-08-31 02:36 G | 43916671.38 | 43916671.61 | 43916671.84 | 0.0522 | 0.0116 |
| Uranus | 115534-02-27 03:05 G | 43919043.52 | 43919043.63 | 43919043.75 | 0.0138 | 0.0123 |
| Jupiter | 115534-03-10 09:20 G | 43919054.70 | 43919054.89 | 43919055.10 | 0.0509 | 0.0227 |
| Saturn | 115534-04-17 07:39 G | 43919092.64 | 43919092.82 | 43919093.01 | 0.0271 | 0.0175 |
| Uranus | 115535-03-03 12:41 G | 43919412.80 | 43919413.03 | 43919413.27 | 0.0138 | 0.0037 |
| Saturn | 115535-04-29 09:48 G | 43919469.67 | 43919469.91 | 43919470.14 | 0.0271 | 0.0027 |
| Uranus | 115536-03-07 05:15 G | 43919782.51 | 43919782.72 | 43919782.95 | 0.0138 | 0.0077 |
| Saturn | 115536-05-10 13:24 G | 43919846.96 | 43919847.06 | 43919847.19 | 0.0273 | 0.0239 |
| Jupiter | 115539-09-05 08:22 G | 43921059.63 | 43921059.85 | 43921060.06 | 0.0520 | 0.0183 |
| Jupiter | 115546-03-14 23:00 G | 43923442.45 | 43923442.46 | 43923442.49 | 0.0511 | 0.0508 |
| Saturn | 115548-10-14 18:56 G | 43924387.11 | 43924387.29 | 43924387.48 | 0.0289 | 0.0198 |
| Saturn | 115549-10-29 01:39 G | 43924766.32 | 43924766.57 | 43924766.81 | 0.0288 | 0.0061 |
| Jupiter | 115551-09-09 22:17 G | 43925447.39 | 43925447.43 | 43925447.48 | 0.0517 | 0.0507 |

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| Saturn | 115563-04-12 19:53 G | 43929680.33 | 43929680.33 | 43929680.33 | 0.0271 | 0.0271 |
| Saturn | 115564-04-23 13:39 G | 43930056.83 | 43930057.07 | 43930057.31 | 0.0272 | 0.0069 |
| Saturn | 115565-05-05 13:53 G | 43930433.89 | 43930434.08 | 43930434.28 | 0.0273 | 0.0152 |
| Neptune | 115569-02-14 09:05 G | 43931814.81 | 43931814.88 | 43931814.96 | 0.0089 | 0.0085 |
| Neptune | 115570-02-16 14:36 G | 43932181.98 | 43932182.11 | 43932182.29 | 0.0089 | 0.0071 |
| Neptune | 115571-02-19 10:03 G | 43932549.71 | 43932549.92 | 43932550.17 | 0.0089 | 0.0038 |
| Neptune | 115572-02-21 16:03 G | 43932916.92 | 43932917.17 | 43932917.41 | 0.0089 | 0.0024 |
| Neptune | 115573-02-23 09:34 G | 43933284.64 | 43933284.90 | 43933285.16 | 0.0089 | 0.0009 |
| Neptune | 115574-02-25 18:12 G | 43933652.02 | 43933652.26 | 43933652.50 | 0.0089 | 0.0024 |
| Neptune | 115575-02-28 07:24 G | 43934019.61 | 43934019.81 | 43934020.02 | 0.0089 | 0.0056 |
| Neptune | 115576-03-01 20:22 G | 43934387.23 | 43934387.35 | 43934387.53 | 0.0089 | 0.0071 |
| Uranus | 115577-08-25 03:48 G | 43934928.54 | 43934928.66 | 43934928.82 | 0.0140 | 0.0115 |
| Uranus | 115578-08-30 05:44 G | 43935298.49 | 43935298.74 | 43935299.00 | 0.0140 | 0.0024 |
| Saturn | 115578-10-23 19:24 G | 43935353.06 | 43935353.31 | 43935353.56 | 0.0288 | 0.0050 |
| Uranus | 115579-09-03 17:00 G | 43935668.05 | 43935668.21 | 43935668.42 | 0.0140 | 0.0098 |
| Saturn | 115579-11-06 23:29 G | 43935732.31 | 43935732.48 | 43935732.66 | 0.0287 | 0.0212 |
| Mars | 115580-12-06 02:51 G | 43936127.44 | 43936127.62 | 43936127.81 | 0.1597 | 0.0322 |
| Jupiter | 115593-02-28 09:05 G | 43940594.76 | 43940594.88 | 43940595.02 | 0.0504 | 0.0410 |
| Saturn | 115593-04-18 23:58 G | 43940644.30 | 43940644.50 | 43940644.70 | 0.0271 | 0.0152 |
| Saturn | 115594-04-30 18:27 G | 43941021.04 | 43941021.27 | 43941021.52 | 0.0272 | 0.0072 |
| Jupiter | 115598-08-25 10:03 G | 43942598.87 | 43942598.92 | 43942598.98 | 0.0525 | 0.0509 |
| Jupiter | 115605-03-05 00:56 G | 43944982.30 | 43944982.54 | 43944982.78 | 0.0506 | 0.0094 |
| Saturn | 115607-10-17 13:24 G | 43945938.87 | 43945939.06 | 43945939.26 | 0.0289 | 0.0167 |
| Saturn | 115608-10-30 23:58 G | 43946318.27 | 43946318.50 | 43946318.73 | 0.0288 | 0.0103 |
| Jupiter | 115610-08-30 02:51 G | 43946986.40 | 43946986.62 | 43946986.86 | 0.0522 | 0.0150 |
| Jupiter | 115617-03-09 12:12 G | 43949369.82 | 43949370.01 | 43949370.21 | 0.0508 | 0.0230 |
| Uranus | 115618-02-27 08:36 G | 43949724.76 | 43949724.86 | 43949725.00 | 0.0138 | 0.0121 |
| Uranus | 115619-03-04 01:53 G | 43950094.34 | 43950094.58 | 43950094.84 | 0.0138 | 0.0034 |
| Uranus | 115620-03-07 11:00 G | 43950463.77 | 43950463.96 | 43950464.17 | 0.0138 | 0.0081 |
| Saturn | 115622-04-13 23:58 G | 43951231.40 | 43951231.50 | 43951231.63 | 0.0271 | 0.0235 |

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| Jupiter | 115622-09-04 02:51 G | 43951374.41 | 43951374.62 | 43951374.83 | 0.0520 | 0.0185 |
| Saturn | 115623-04-26 03:20 G | 43951608.40 | 43951608.64 | 43951608.88 | 0.0272 | 0.0014 |
| Saturn | 115624-05-07 02:08 G | 43951985.43 | 43951985.59 | 43951985.76 | 0.0273 | 0.0200 |
| Pluto | 115628-04-27 10:03 G | 43953436.70 | 43953436.92 | 43953437.17 | 0.0066 | 0.0026 |
| Pluto | 115629-04-28 17:29 G | 43953803.14 | 43953803.23 | 43953803.34 | 0.0066 | 0.0061 |
| Jupiter | 115634-09-08 20:36 G | 43955762.28 | 43955762.36 | 43955762.46 | 0.0518 | 0.0483 |
| Saturn | 115636-10-10 17:44 G | 43956525.14 | 43956525.24 | 43956525.35 | 0.0289 | 0.0258 |
| Saturn | 115637-10-25 05:00 G | 43956904.47 | 43956904.71 | 43956904.96 | 0.0288 | 0.0011 |
| Saturn | 115638-11-08 15:34 G | 43957284.10 | 43957284.15 | 43957284.23 | 0.0287 | 0.0275 |
| Neptune | 115650-08-13 01:39 G | 43961579.46 | 43961579.57 | 43961579.70 | 0.0088 | 0.0078 |
| Neptune | 115651-08-15 18:56 G | 43961947.13 | 43961947.29 | 43961947.50 | 0.0088 | 0.0063 |
| Saturn | 115652-04-20 01:24 G | 43962195.35 | 43962195.56 | 43962195.79 | 0.0271 | 0.0100 |
| Neptune | 115652-08-16 23:29 G | 43962314.25 | 43962314.48 | 43962314.73 | 0.0088 | 0.0033 |
| Saturn | 115653-05-02 04:32 G | 43962572.48 | 43962572.69 | 43962572.91 | 0.0272 | 0.0104 |
| Neptune | 115653-08-19 16:17 G | 43962681.94 | 43962682.18 | 43962682.46 | 0.0088 | 0.0017 |
| Neptune | 115654-08-21 23:15 G | 43963049.23 | 43963049.47 | 43963049.72 | 0.0088 | 0.0013 |
| Neptune | 115655-08-24 11:58 G | 43963416.75 | 43963417.00 | 43963417.26 | 0.0088 | 0.0029 |
| Neptune | 115656-08-26 00:27 G | 43963784.33 | 43963784.52 | 43963784.71 | 0.0088 | 0.0057 |
| Neptune | 115657-08-28 07:53 G | 43964151.71 | 43964151.83 | 43964152.00 | 0.0088 | 0.0074 |
| Mars | 115659-12-09 01:10 G | 43964984.42 | 43964984.55 | 43964984.68 | 0.1595 | 0.1222 |
| Uranus | 115661-08-25 21:48 G | 43965610.27 | 43965610.41 | 43965610.58 | 0.0140 | 0.0109 |
| Uranus | 115662-08-30 08:51 G | 43965979.62 | 43965979.87 | 43965980.13 | 0.0140 | 0.0019 |
| Uranus | 115663-09-04 10:32 G | 43966349.78 | 43966349.94 | 43966350.13 | 0.0140 | 0.0101 |
| Saturn | 115666-10-18 22:03 G | 43967490.19 | 43967490.42 | 43967490.66 | 0.0289 | 0.0109 |
| Saturn | 115667-11-02 05:29 G | 43967869.52 | 43967869.73 | 43967869.94 | 0.0287 | 0.0155 |
| Jupiter | 115676-02-28 13:24 G | 43970909.92 | 43970910.06 | 43970910.21 | 0.0503 | 0.0383 |
| Saturn | 115681-04-15 08:36 G | 43972782.70 | 43972782.86 | 43972783.05 | 0.0271 | 0.0196 |
| Saturn | 115682-04-27 03:34 G | 43973159.40 | 43973159.65 | 43973159.89 | 0.0272 | 0.0004 |
| Saturn | 115683-05-09 06:12 G | 43973536.61 | 43973536.76 | 43973536.93 | 0.0273 | 0.0200 |
| Jupiter | 115688-03-04 06:56 G | 43975297.56 | 43975297.79 | 43975298.02 | 0.0505 | 0.0127 |

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| Jupiter | 115693-08-29 01:53 G | 43977301.37 | 43977301.58 | 43977301.80 | 0.0523 | 0.0245 |
| Saturn | 115695-10-13 13:10 G | 43978076.90 | 43978077.05 | 43978077.22 | 0.0289 | 0.0222 |
| Saturn | 115696-10-26 20:36 G | 43978456.11 | 43978456.36 | 43978456.62 | 0.0288 | 0.0038 |
| Jupiter | 115700-03-09 09:34 G | 43979684.69 | 43979684.90 | 43979685.13 | 0.0507 | 0.0125 |
| Uranus | 115702-02-28 20:22 G | 43980406.22 | 43980406.35 | 43980406.50 | 0.0138 | 0.0118 |
| Uranus | 115703-03-05 06:41 G | 43980775.54 | 43980775.78 | 43980776.02 | 0.0138 | 0.0031 |
| Uranus | 115704-03-08 22:03 G | 43981145.23 | 43981145.42 | 43981145.65 | 0.0138 | 0.0083 |
| Jupiter | 115705-09-04 04:46 G | 43981689.48 | 43981689.70 | 43981689.92 | 0.0521 | 0.0084 |
| Saturn | 115711-04-23 15:20 G | 43983746.92 | 43983747.14 | 43983747.38 | 0.0271 | 0.0097 |
| Jupiter | 115712-03-14 05:44 G | 43984072.62 | 43984072.74 | 43984072.88 | 0.0510 | 0.0423 |
| Saturn | 115712-05-04 08:22 G | 43984123.63 | 43984123.85 | 43984124.08 | 0.0272 | 0.0108 |
| Pluto | 115715-10-27 23:44 G | 43985395.27 | 43985395.49 | 43985395.75 | 0.0078 | 0.0037 |
| Jupiter | 115717-09-09 04:03 G | 43986077.54 | 43986077.67 | 43986077.81 | 0.0519 | 0.0434 |
| Saturn | 115725-10-21 13:53 G | 43989041.86 | 43989042.08 | 43989042.31 | 0.0289 | 0.0107 |
| Saturn | 115726-11-04 23:15 G | 43989421.26 | 43989421.47 | 43989421.68 | 0.0287 | 0.0154 |
| Neptune | 115734-02-17 07:10 G | 43992082.67 | 43992082.80 | 43992082.96 | 0.0089 | 0.0074 |
| Neptune | 115735-02-19 12:27 G | 43992449.84 | 43992450.02 | 43992450.24 | 0.0089 | 0.0054 |
| Neptune | 115736-02-22 07:39 G | 43992817.58 | 43992817.82 | 43992818.08 | 0.0089 | 0.0026 |
| Neptune | 115737-02-23 14:51 G | 43993184.88 | 43993185.12 | 43993185.37 | 0.0089 | 0.0007 |
| Neptune | 115738-02-26 05:44 G | 43993552.48 | 43993552.74 | 43993553.00 | 0.0089 | 0.0021 |
| Neptune | 115739-02-28 17:15 G | 43993920.00 | 43993920.22 | 43993920.45 | 0.0089 | 0.0040 |
| Neptune | 115740-03-02 02:36 G | 43994287.46 | 43994287.61 | 43994287.81 | 0.0089 | 0.0068 |
| Saturn | 115740-04-17 13:53 G | 43994333.94 | 43994334.08 | 43994334.25 | 0.0271 | 0.0199 |
| Neptune | 115741-03-04 19:10 G | 43994655.28 | 43994655.30 | 43994655.38 | 0.0089 | 0.0088 |
| Saturn | 115741-04-29 15:48 G | 43994710.92 | 43994711.16 | 43994711.41 | 0.0272 | 0.0016 |
| Saturn | 115742-05-11 12:12 G | 43995087.90 | 43995088.01 | 43995088.13 | 0.0273 | 0.0240 |
| Uranus | 115745-08-27 00:56 G | 43996291.38 | 43996291.54 | 43996291.72 | 0.0140 | 0.0104 |
| Uranus | 115746-09-01 02:36 G | 43996661.36 | 43996661.61 | 43996661.87 | 0.0140 | 0.0014 |
| Uranus | 115747-09-05 14:08 G | 43997030.93 | 43997031.09 | 43997031.26 | 0.0140 | 0.0106 |
| Saturn | 115754-10-15 14:51 G | 43999627.97 | 43999628.12 | 43999628.28 | 0.0289 | 0.0222 |

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| Saturn | 115755-10-30 03:20 G | 44000007.40 | 44000007.64 | 44000007.88 | 0.0288 | 0.0047 |
| Jupiter | 115759-02-28 12:56 G | 44001224.96 | 44001225.04 | 44001225.12 | 0.0502 | 0.0470 |
| Saturn | 115770-04-24 16:17 G | 44005297.95 | 44005298.18 | 44005298.41 | 0.0271 | 0.0066 |
| Jupiter | 115771-03-05 09:05 G | 44005612.66 | 44005612.88 | 44005613.11 | 0.0504 | 0.0153 |
| Saturn | 115771-05-06 19:39 G | 44005675.14 | 44005675.32 | 44005675.52 | 0.0272 | 0.0161 |
| Jupiter | 115776-08-29 11:00 G | 44007616.74 | 44007616.96 | 44007617.18 | 0.0524 | 0.0217 |
| Jupiter | 115783-03-09 15:20 G | 44009999.92 | 44010000.14 | 44010000.36 | 0.0507 | 0.0154 |
| Saturn | 115784-10-22 16:17 G | 44010592.93 | 44010593.18 | 44010593.42 | 0.0289 | 0.0069 |
| Saturn | 115785-11-06 00:56 G | 44010972.38 | 44010972.54 | 44010972.72 | 0.0287 | 0.0203 |
| Mars | 115785-12-05 17:58 G | 44011002.12 | 44011002.25 | 44011002.38 | 0.1603 | 0.1161 |
| Uranus | 115786-03-01 02:51 G | 44011087.50 | 44011087.62 | 44011087.77 | 0.0138 | 0.0114 |
| Uranus | 115787-03-05 19:10 G | 44011457.05 | 44011457.30 | 44011457.56 | 0.0138 | 0.0028 |
| Uranus | 115788-03-09 04:46 G | 44011826.52 | 44011826.70 | 44011826.90 | 0.0138 | 0.0086 |
| Jupiter | 115788-09-03 06:27 G | 44012004.55 | 44012004.77 | 44012005.00 | 0.0521 | 0.0101 |
| Jupiter | 115795-03-14 14:36 G | 44014388.00 | 44014388.11 | 44014388.23 | 0.0509 | 0.0440 |
| Saturn | 115799-04-19 17:00 G | 44015885.01 | 44015885.21 | 44015885.42 | 0.0271 | 0.0151 |
| Saturn | 115800-05-01 13:10 G | 44016261.82 | 44016262.05 | 44016262.28 | 0.0272 | 0.0066 |
| Jupiter | 115800-09-09 06:27 G | 44016392.62 | 44016392.77 | 44016392.95 | 0.0519 | 0.0379 |
| Saturn | 115801-05-13 17:00 G | 44016639.20 | 44016639.21 | 44016639.24 | 0.0273 | 0.0271 |
| Saturn | 115813-10-18 02:36 G | 44021179.42 | 44021179.61 | 44021179.83 | 0.0289 | 0.0170 |
| Neptune | 115814-08-14 17:44 G | 44021480.23 | 44021480.24 | 44021480.28 | 0.0088 | 0.0088 |
| Saturn | 115814-11-01 08:36 G | 44021558.62 | 44021558.86 | 44021559.11 | 0.0288 | 0.0101 |
| Neptune | 115815-08-16 21:48 G | 44021847.27 | 44021847.41 | 44021847.59 | 0.0088 | 0.0070 |
| Neptune | 115816-08-18 15:34 G | 44022214.94 | 44022215.15 | 44022215.40 | 0.0088 | 0.0042 |
| Neptune | 115817-08-20 21:20 G | 44022582.16 | 44022582.39 | 44022582.65 | 0.0088 | 0.0024 |
| Neptune | 115818-08-23 12:27 G | 44022949.76 | 44022950.02 | 44022950.29 | 0.0088 | 0.0003 |
| Neptune | 115819-08-25 22:32 G | 44023317.19 | 44023317.44 | 44023317.68 | 0.0088 | 0.0020 |
| Neptune | 115820-08-27 07:24 G | 44023684.60 | 44023684.81 | 44023685.05 | 0.0088 | 0.0048 |
| Neptune | 115821-08-29 22:32 G | 44024052.29 | 44024052.44 | 44024052.62 | 0.0088 | 0.0066 |
| Saturn | 115828-04-15 04:32 G | 44026472.59 | 44026472.69 | 44026472.83 | 0.0270 | 0.0234 |

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| Saturn | 115829-04-26 23:44 G | 44026849.24 | 44026849.49 | 44026849.74 | 0.0271 | 0.0029 |
| Uranus | 115829-08-28 18:12 G | 44026973.10 | 44026973.26 | 44026973.46 | 0.0140 | 0.0099 |
| Saturn | 115830-05-08 17:29 G | 44027226.05 | 44027226.23 | 44027226.43 | 0.0272 | 0.0169 |
| Uranus | 115830-09-02 05:15 G | 44027342.47 | 44027342.72 | 44027342.98 | 0.0140 | 0.0010 |
| Uranus | 115831-09-07 06:41 G | 44027712.65 | 44027712.78 | 44027712.96 | 0.0140 | 0.0111 |
| Jupiter | 115842-02-28 21:20 G | 44031540.31 | 44031540.39 | 44031540.47 | 0.0502 | 0.0469 |
| Saturn | 115843-10-26 04:03 G | 44032144.43 | 44032144.67 | 44032144.92 | 0.0289 | 0.0029 |
| Saturn | 115844-11-08 11:00 G | 44032523.82 | 44032523.96 | 44032524.13 | 0.0287 | 0.0230 |
| Jupiter | 115854-03-05 17:15 G | 44035928.02 | 44035928.22 | 44035928.43 | 0.0504 | 0.0219 |
| Saturn | 115858-04-21 23:15 G | 44037436.27 | 44037436.47 | 44037436.68 | 0.0271 | 0.0135 |
| Saturn | 115859-05-03 22:03 G | 44037813.18 | 44037813.42 | 44037813.66 | 0.0271 | 0.0062 |
| Jupiter | 115859-08-30 13:53 G | 44037931.89 | 44037932.08 | 44037932.26 | 0.0524 | 0.0325 |
| Saturn | 115860-05-14 16:46 G | 44038190.16 | 44038190.20 | 44038190.26 | 0.0273 | 0.0267 |
| Mars | 115864-12-09 06:27 G | 44039859.60 | 44039859.77 | 44039859.94 | 0.1600 | 0.0621 |
| Jupiter | 115866-03-10 00:41 G | 44040315.29 | 44040315.53 | 44040315.76 | 0.0506 | 0.0063 |
| Uranus | 115870-03-02 14:08 G | 44041768.96 | 44041769.09 | 44041769.27 | 0.0138 | 0.0111 |
| Uranus | 115871-03-07 01:24 G | 44042138.32 | 44042138.56 | 44042138.80 | 0.0138 | 0.0024 |
| Jupiter | 115871-09-04 06:41 G | 44042319.55 | 44042319.78 | 44042320.02 | 0.0522 | 0.0021 |
| Uranus | 115872-03-10 16:03 G | 44042507.99 | 44042508.17 | 44042508.38 | 0.0138 | 0.0089 |
| Saturn | 115872-10-19 01:24 G | 44042730.36 | 44042730.56 | 44042730.77 | 0.0289 | 0.0155 |
| Saturn | 115873-11-02 14:36 G | 44043109.89 | 44043110.11 | 44043110.34 | 0.0288 | 0.0104 |
| Pluto | 115874-05-01 09:48 G | 44043289.70 | 44043289.91 | 44043290.16 | 0.0066 | 0.0024 |
| Pluto | 115875-05-02 21:34 G | 44043656.37 | 44043656.40 | 44043656.49 | 0.0066 | 0.0065 |
| Jupiter | 115878-03-14 15:48 G | 44044703.01 | 44044703.16 | 44044703.32 | 0.0508 | 0.0369 |
| Jupiter | 115883-09-09 14:36 G | 44046707.96 | 44046708.11 | 44046708.27 | 0.0520 | 0.0388 |
| Saturn | 115887-04-17 01:10 G | 44048023.43 | 44048023.55 | 44048023.67 | 0.0270 | 0.0234 |
| Saturn | 115888-04-28 01:39 G | 44048400.34 | 44048400.57 | 44048400.81 | 0.0271 | 0.0034 |
| Saturn | 115889-05-10 03:34 G | 44048777.47 | 44048777.65 | 44048777.83 | 0.0272 | 0.0180 |
| Neptune | 115898-02-17 08:51 G | 44051982.80 | 44051982.87 | 44051983.01 | 0.0089 | 0.0082 |
| Neptune | 115899-02-20 04:46 G | 44052350.53 | 44052350.70 | 44052350.89 | 0.0089 | 0.0065 |

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| Neptune | 115900-02-22 10:32 G | 44052717.73 | 44052717.94 | 44052718.19 | 0.0089 | 0.0036 |
| Neptune | 115901-02-25 03:34 G | 44053085.41 | 44053085.65 | 44053085.93 | 0.0089 | 0.0019 |
| Neptune | 115902-02-27 14:08 G | 44053452.84 | 44053453.09 | 44053453.34 | 0.0089 | 0.0012 |
| Saturn | 115902-10-27 23:44 G | 44053695.24 | 44053695.49 | 44053695.73 | 0.0288 | 0.0036 |
| Neptune | 115903-03-02 02:08 G | 44053820.34 | 44053820.59 | 44053820.85 | 0.0089 | 0.0030 |
| Saturn | 115903-11-11 10:03 G | 44054074.78 | 44054074.92 | 44054075.07 | 0.0287 | 0.0228 |
| Neptune | 115904-03-03 16:32 G | 44054188.02 | 44054188.19 | 44054188.39 | 0.0089 | 0.0060 |
| Neptune | 115905-03-05 23:29 G | 44054555.36 | 44054555.48 | 44054555.63 | 0.0089 | 0.0076 |
| Uranus | 115913-08-29 20:51 G | 44057654.19 | 44057654.37 | 44057654.56 | 0.0140 | 0.0094 |
| Uranus | 115914-09-03 22:17 G | 44058024.17 | 44058024.43 | 44058024.68 | 0.0140 | 0.0005 |
| Uranus | 115915-09-08 09:48 G | 44058393.77 | 44058393.91 | 44058394.06 | 0.0140 | 0.0115 |
| Saturn | 115917-04-23 19:10 G | 44058987.09 | 44058987.30 | 44058987.52 | 0.0271 | 0.0128 |
| Saturn | 115918-05-05 18:27 G | 44059364.05 | 44059364.27 | 44059364.49 | 0.0271 | 0.0093 |
| Jupiter | 115925-03-01 08:36 G | 44061855.83 | 44061855.86 | 44061855.89 | 0.0502 | 0.0496 |
| Saturn | 115931-10-22 04:17 G | 44064281.46 | 44064281.68 | 44064281.91 | 0.0289 | 0.0144 |
| Saturn | 115932-11-04 10:46 G | 44064660.72 | 44064660.95 | 44064661.18 | 0.0288 | 0.0126 |
| Jupiter | 115937-03-05 20:36 G | 44066243.16 | 44066243.36 | 44066243.57 | 0.0503 | 0.0198 |
| Jupiter | 115942-08-30 20:22 G | 44068247.16 | 44068247.35 | 44068247.55 | 0.0526 | 0.0287 |
| Saturn | 115946-04-19 09:20 G | 44069574.75 | 44069574.89 | 44069575.05 | 0.0270 | 0.0211 |
| Saturn | 115947-05-01 02:36 G | 44069951.36 | 44069951.61 | 44069951.86 | 0.0271 | 0.0011 |
| Saturn | 115948-05-11 22:17 G | 44070328.31 | 44070328.43 | 44070328.56 | 0.0272 | 0.0229 |
| Jupiter | 115949-03-10 06:41 G | 44070630.54 | 44070630.78 | 44070631.02 | 0.0505 | 0.0084 |
| Uranus | 115954-03-03 22:03 G | 44072450.29 | 44072450.42 | 44072450.60 | 0.0138 | 0.0106 |
| Jupiter | 115954-09-04 15:05 G | 44072634.89 | 44072635.13 | 44072635.36 | 0.0523 | 0.0023 |
| Uranus | 115955-03-08 13:53 G | 44072819.82 | 44072820.08 | 44072820.34 | 0.0138 | 0.0019 |
| Uranus | 115956-03-11 23:44 G | 44073189.33 | 44073189.49 | 44073189.69 | 0.0138 | 0.0094 |
| Saturn | 115960-10-14 22:32 G | 44074867.34 | 44074867.44 | 44074867.56 | 0.0289 | 0.0256 |
| Jupiter | 115961-03-14 22:32 G | 44075018.28 | 44075018.44 | 44075018.61 | 0.0508 | 0.0346 |
| Saturn | 115961-10-29 08:36 G | 44075246.60 | 44075246.86 | 44075247.11 | 0.0288 | 0.0014 |
| Pluto | 115961-10-31 11:29 G | 44075248.75 | 44075248.98 | 44075249.24 | 0.0078 | 0.0027 |

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| Saturn | 115962-11-12 13:53 G | 44075626.02 | 44075626.08 | 44075626.15 | 0.0287 | 0.0278 |
| Jupiter | 115966-09-09 23:00 G | 44077023.28 | 44077023.46 | 44077023.65 | 0.0521 | 0.0313 |
| Saturn | 115976-04-25 02:51 G | 44080538.39 | 44080538.62 | 44080538.85 | 0.0271 | 0.0080 |
| Saturn | 115977-05-06 22:46 G | 44080915.23 | 44080915.45 | 44080915.67 | 0.0271 | 0.0126 |
| Neptune | 115979-08-17 14:36 G | 44081747.99 | 44081748.11 | 44081748.29 | 0.0088 | 0.0072 |
| Neptune | 115980-08-18 19:24 G | 44082115.14 | 44082115.31 | 44082115.52 | 0.0088 | 0.0058 |
| Neptune | 115981-08-21 11:58 G | 44082482.75 | 44082483.00 | 44082483.26 | 0.0088 | 0.0026 |
| Neptune | 115982-08-23 19:39 G | 44082850.08 | 44082850.32 | 44082850.57 | 0.0088 | 0.0013 |
| Neptune | 115983-08-26 06:56 G | 44083217.54 | 44083217.79 | 44083218.06 | 0.0088 | 0.0019 |
| Mars | 115984-06-09 00:56 G | 44083505.35 | 44083505.54 | 44083505.72 | 0.1940 | 0.0568 |
| Neptune | 115984-08-27 20:36 G | 44083585.14 | 44083585.36 | 44083585.61 | 0.0088 | 0.0033 |
| Neptune | 115985-08-30 03:05 G | 44083952.47 | 44083952.63 | 44083952.83 | 0.0088 | 0.0064 |
| Neptune | 115986-09-01 20:08 G | 44084320.26 | 44084320.34 | 44084320.50 | 0.0088 | 0.0078 |
| Saturn | 115990-10-23 03:48 G | 44085832.44 | 44085832.66 | 44085832.89 | 0.0289 | 0.0096 |
| Saturn | 115991-11-06 16:17 G | 44086211.99 | 44086212.18 | 44086212.38 | 0.0288 | 0.0170 |
| Uranus | 115997-08-30 13:10 G | 44088335.87 | 44088336.05 | 44088336.26 | 0.0140 | 0.0090 |
| Uranus | 115998-09-04 00:27 G | 44088705.26 | 44088705.52 | 44088705.77 | 0.0140 | 0.0002 |
| Uranus | 115999-09-09 01:53 G | 44089075.46 | 44089075.58 | 44089075.74 | 0.0140 | 0.0119 |

117TH MILLENNIUM CE

This is a list of transits of Moon in the 117th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|------|---|-------|-----|-----|--------|-------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |

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|--------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 116005-04-20 04:03 G | 44091125.49 | 44091125.67 | 44091125.86 | 0.0271 | 0.0173 |
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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 116006-05-02 06:27 G | 44091502.53 | 44091502.77 | 44091503.00 | 0.0271 | 0.0027 |
| Saturn | 116007-05-14 05:58 G | 44091879.62 | 44091879.75 | 44091879.90 | 0.0272 | 0.0223 |
| Saturn | 116019-10-16 16:32 G | 44096418.05 | 44096418.19 | 44096418.35 | 0.0289 | 0.0230 |
| Jupiter | 116020-03-05 03:34 G | 44096558.47 | 44096558.65 | 44096558.84 | 0.0503 | 0.0279 |
| Saturn | 116020-10-30 02:51 G | 44096797.38 | 44096797.62 | 44096797.86 | 0.0288 | 0.0031 |
| Saturn | 116021-11-13 14:08 G | 44097177.07 | 44097177.09 | 44097177.13 | 0.0287 | 0.0284 |
| Jupiter | 116025-08-30 04:17 G | 44098562.52 | 44098562.68 | 44098562.85 | 0.0526 | 0.0369 |
| Jupiter | 116032-03-09 19:39 G | 44100946.08 | 44100946.32 | 44100946.56 | 0.0505 | 0.0024 |
| Saturn | 116035-04-26 20:08 G | 44102089.11 | 44102089.34 | 44102089.57 | 0.0271 | 0.0083 |
| Saturn | 116036-05-07 21:48 G | 44102466.21 | 44102466.41 | 44102466.63 | 0.0271 | 0.0122 |
| Jupiter | 116037-09-03 21:48 G | 44102950.17 | 44102950.41 | 44102950.65 | 0.0523 | 0.0015 |
| Uranus | 116038-03-04 09:20 G | 44103131.72 | 44103131.89 | 44103132.07 | 0.0138 | 0.0102 |
| Uranus | 116039-03-08 20:51 G | 44103501.13 | 44103501.37 | 44103501.61 | 0.0138 | 0.0016 |
| Uranus | 116040-03-12 10:46 G | 44103870.77 | 44103870.95 | 44103871.15 | 0.0138 | 0.0096 |
| Jupiter | 116044-03-14 07:24 G | 44105333.65 | 44105333.81 | 44105333.97 | 0.0507 | 0.0346 |
| Jupiter | 116049-09-09 01:53 G | 44107338.41 | 44107338.58 | 44107338.76 | 0.0521 | 0.0335 |
| Saturn | 116049-10-24 02:08 G | 44107383.35 | 44107383.59 | 44107383.83 | 0.0288 | 0.0103 |
| Saturn | 116050-11-07 09:20 G | 44107762.69 | 44107762.89 | 44107763.10 | 0.0288 | 0.0158 |
| Neptune | 116063-02-20 07:53 G | 44112250.69 | 44112250.83 | 44112251.02 | 0.0089 | 0.0067 |
| Neptune | 116064-02-23 02:22 G | 44112618.40 | 44112618.60 | 44112618.83 | 0.0089 | 0.0052 |
| Saturn | 116064-04-21 10:03 G | 44112676.74 | 44112676.92 | 44112677.11 | 0.0271 | 0.0181 |
| Neptune | 116065-02-24 10:32 G | 44112985.70 | 44112985.94 | 44112986.19 | 0.0089 | 0.0020 |
| Saturn | 116065-05-03 02:36 G | 44113053.37 | 44113053.61 | 44113053.86 | 0.0271 | 0.0031 |
| Neptune | 116066-02-27 00:12 G | 44113353.25 | 44113353.51 | 44113353.78 | 0.0089 | 0.0004 |
| Saturn | 116066-05-15 02:22 G | 44113430.52 | 44113430.60 | 44113430.68 | 0.0272 | 0.0255 |
| Neptune | 116067-03-01 13:24 G | 44113720.82 | 44113721.06 | 44113721.30 | 0.0089 | 0.0028 |
| Neptune | 116068-03-02 22:17 G | 44114088.20 | 44114088.43 | 44114088.67 | 0.0089 | 0.0043 |
| Neptune | 116069-03-05 15:34 G | 44114456.04 | 44114456.15 | 44114456.31 | 0.0089 | 0.0075 |
| Mars | 116069-12-08 21:34 G | 44114734.22 | 44114734.40 | 44114734.59 | 0.1606 | 0.0366 |
| Saturn | 116078-10-18 02:08 G | 44117969.46 | 44117969.59 | 44117969.74 | 0.0289 | 0.0235 |

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| Saturn | 116079-11-01 09:34 G | 44118348.65 | 44118348.90 | 44118349.16 | 0.0288 | 0.0034 |
| Uranus | 116081-08-30 14:51 G | 44119016.94 | 44119017.12 | 44119017.34 | 0.0140 | 0.0087 |
| Uranus | 116082-09-04 16:32 G | 44119386.93 | 44119387.19 | 44119387.45 | 0.0140 | 0.0004 |
| Uranus | 116083-09-09 04:03 G | 44119756.57 | 44119756.67 | 44119756.82 | 0.0140 | 0.0123 |
| Saturn | 116094-04-28 04:03 G | 44123640.43 | 44123640.67 | 44123640.91 | 0.0271 | 0.0061 |
| Saturn | 116095-05-09 21:34 G | 44124017.22 | 44124017.40 | 44124017.61 | 0.0272 | 0.0167 |
| Jupiter | 116103-03-06 12:12 G | 44126873.81 | 44126874.01 | 44126874.21 | 0.0502 | 0.0236 |
| Jupiter | 116108-08-30 05:58 G | 44128877.59 | 44128877.75 | 44128877.91 | 0.0526 | 0.0368 |
| Saturn | 116108-10-26 06:12 G | 44128934.53 | 44128934.76 | 44128935.00 | 0.0288 | 0.0073 |
| Saturn | 116109-11-09 17:00 G | 44129314.03 | 44129314.21 | 44129314.39 | 0.0287 | 0.0200 |
| Jupiter | 116115-03-11 05:15 G | 44131261.48 | 44131261.72 | 44131261.95 | 0.0504 | 0.0020 |
| Pluto | 116120-05-04 09:05 G | 44133142.65 | 44133142.88 | 44133143.14 | 0.0066 | 0.0024 |
| Jupiter | 116120-09-04 03:34 G | 44133265.41 | 44133265.65 | 44133265.89 | 0.0525 | 0.0075 |
| Pluto | 116121-05-06 04:32 G | 44133509.61 | 44133509.69 | 44133509.82 | 0.0066 | 0.0061 |
| Uranus | 116122-03-05 16:46 G | 44133813.04 | 44133813.20 | 44133813.38 | 0.0138 | 0.0099 |
| Uranus | 116123-03-10 07:24 G | 44134182.55 | 44134182.81 | 44134183.07 | 0.0138 | 0.0013 |
| Saturn | 116123-04-24 07:24 G | 44134227.62 | 44134227.81 | 44134228.01 | 0.0271 | 0.0145 |
| Uranus | 116124-03-13 18:27 G | 44134552.12 | 44134552.27 | 44134552.45 | 0.0138 | 0.0100 |
| Saturn | 116124-05-05 10:32 G | 44134604.71 | 44134604.94 | 44134605.17 | 0.0271 | 0.0078 |
| Jupiter | 116127-03-15 11:15 G | 44135648.78 | 44135648.97 | 44135649.16 | 0.0506 | 0.0275 |
| Jupiter | 116132-09-09 05:15 G | 44137653.52 | 44137653.72 | 44137653.92 | 0.0522 | 0.0243 |
| Saturn | 116137-10-19 22:17 G | 44139520.25 | 44139520.43 | 44139520.63 | 0.0288 | 0.0183 |
| Saturn | 116138-11-03 10:03 G | 44139899.69 | 44139899.92 | 44139900.15 | 0.0288 | 0.0086 |
| Neptune | 116143-08-17 18:12 G | 44141648.21 | 44141648.26 | 44141648.32 | 0.0088 | 0.0086 |
| Neptune | 116144-08-19 11:29 G | 44142015.81 | 44142015.98 | 44142016.19 | 0.0088 | 0.0062 |
| Neptune | 116145-08-21 17:58 G | 44142383.04 | 44142383.25 | 44142383.49 | 0.0088 | 0.0040 |
| Neptune | 116146-08-24 07:53 G | 44142750.57 | 44142750.83 | 44142751.10 | 0.0088 | 0.0016 |
| Neptune | 116147-08-26 19:10 G | 44143118.05 | 44143118.30 | 44143118.55 | 0.0088 | 0.0006 |
| Neptune | 116148-08-28 02:51 G | 44143485.38 | 44143485.62 | 44143485.88 | 0.0088 | 0.0028 |
| Mars | 116148-12-12 07:24 G | 44143591.73 | 44143591.81 | 44143591.90 | 0.1603 | 0.1394 |

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| Neptune | 116149-08-30 18:41 G | 44143853.10 | 44143853.28 | 44143853.51 | 0.0088 | 0.0051 |
| Neptune | 116150-09-01 23:15 G | 44144220.35 | 44144220.47 | 44144220.63 | 0.0088 | 0.0073 |
| Saturn | 116152-04-18 01:53 G | 44144814.46 | 44144814.58 | 44144814.72 | 0.0270 | 0.0230 |
| Saturn | 116153-04-29 23:58 G | 44145191.26 | 44145191.50 | 44145191.74 | 0.0271 | 0.0023 |
| Saturn | 116154-05-12 03:20 G | 44145568.46 | 44145568.64 | 44145568.82 | 0.0272 | 0.0177 |
| Uranus | 116165-09-01 07:24 G | 44149698.61 | 44149698.81 | 44149699.03 | 0.0140 | 0.0083 |
| Uranus | 116166-09-05 18:56 G | 44150068.04 | 44150068.29 | 44150068.55 | 0.0140 | 0.0007 |
| Uranus | 116167-09-10 20:36 G | 44150438.26 | 44150438.36 | 44150438.49 | 0.0140 | 0.0125 |
| Saturn | 116167-10-28 03:48 G | 44150485.41 | 44150485.66 | 44150485.91 | 0.0288 | 0.0040 |
| Saturn | 116168-11-10 12:41 G | 44150864.88 | 44150865.03 | 44150865.19 | 0.0287 | 0.0221 |
| Saturn | 116182-04-25 10:17 G | 44155778.72 | 44155778.93 | 44155779.16 | 0.0271 | 0.0124 |
| Saturn | 116183-05-07 05:29 G | 44156155.50 | 44156155.73 | 44156155.97 | 0.0272 | 0.0073 |
| Jupiter | 116186-03-05 18:12 G | 44157189.08 | 44157189.26 | 44157189.44 | 0.0501 | 0.0312 |
| Jupiter | 116191-08-30 06:56 G | 44159192.67 | 44159192.79 | 44159192.92 | 0.0528 | 0.0432 |
| Saturn | 116196-10-21 10:46 G | 44161071.75 | 44161071.95 | 44161072.16 | 0.0288 | 0.0170 |
| Saturn | 116197-11-04 15:48 G | 44161450.92 | 44161451.16 | 44161451.41 | 0.0288 | 0.0086 |
| Jupiter | 116198-03-10 12:12 G | 44161576.78 | 44161577.01 | 44161577.24 | 0.0504 | 0.0005 |
| Jupiter | 116203-09-05 12:56 G | 44163580.80 | 44163581.04 | 44163581.28 | 0.0525 | 0.0058 |
| Uranus | 116206-03-07 01:39 G | 44164494.40 | 44164494.57 | 44164494.78 | 0.0138 | 0.0097 |
| Uranus | 116207-03-11 14:36 G | 44164863.86 | 44164864.11 | 44164864.35 | 0.0138 | 0.0010 |
| Pluto | 116207-11-04 06:41 G | 44165101.57 | 44165101.78 | 44165102.04 | 0.0078 | 0.0034 |
| Uranus | 116208-03-15 03:34 G | 44165233.50 | 44165233.65 | 44165233.85 | 0.0138 | 0.0102 |
| Jupiter | 116210-03-15 18:12 G | 44165964.08 | 44165964.26 | 44165964.45 | 0.0506 | 0.0303 |
| Saturn | 116211-04-21 09:34 G | 44166365.79 | 44166365.90 | 44166366.04 | 0.0271 | 0.0230 |
| Saturn | 116212-05-02 07:39 G | 44166742.57 | 44166742.82 | 44166743.07 | 0.0271 | 0.0030 |
| Saturn | 116213-05-14 02:08 G | 44167119.41 | 44167119.59 | 44167119.77 | 0.0272 | 0.0184 |
| Jupiter | 116215-09-10 08:08 G | 44167968.65 | 44167968.84 | 44167969.04 | 0.0522 | 0.0266 |
| Saturn | 116226-10-30 16:03 G | 44172036.93 | 44172037.17 | 44172037.42 | 0.0288 | 0.0043 |
| Neptune | 116227-02-21 23:58 G | 44172151.39 | 44172151.50 | 44172151.64 | 0.0089 | 0.0079 |
| Saturn | 116227-11-13 23:58 G | 44172416.34 | 44172416.50 | 44172416.67 | 0.0287 | 0.0220 |

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| Neptune | 116228-02-24 06:27 G | 44172518.60 | 44172518.77 | 44172518.99 | 0.0089 | 0.0058 |
| Neptune | 116229-02-25 22:46 G | 44172886.21 | 44172886.45 | 44172886.71 | 0.0089 | 0.0032 |
| Neptune | 116230-02-28 10:17 G | 44173253.69 | 44173253.93 | 44173254.18 | 0.0089 | 0.0011 |
| Neptune | 116231-03-02 20:36 G | 44173621.11 | 44173621.36 | 44173621.64 | 0.0089 | 0.0016 |
| Neptune | 116232-03-04 12:56 G | 44173988.81 | 44173989.04 | 44173989.27 | 0.0089 | 0.0037 |
| Neptune | 116233-03-06 18:41 G | 44174356.12 | 44174356.28 | 44174356.49 | 0.0089 | 0.0064 |
| Neptune | 116234-03-09 13:39 G | 44174724.02 | 44174724.07 | 44174724.18 | 0.0089 | 0.0085 |
| Saturn | 116241-04-27 14:51 G | 44177329.92 | 44177330.12 | 44177330.33 | 0.0272 | 0.0122 |
| Saturn | 116242-05-09 16:32 G | 44177706.97 | 44177707.19 | 44177707.42 | 0.0272 | 0.0099 |
| Uranus | 116249-09-02 09:48 G | 44180379.72 | 44180379.91 | 44180380.13 | 0.0140 | 0.0079 |
| Uranus | 116250-09-07 11:29 G | 44180749.72 | 44180749.98 | 44180750.24 | 0.0140 | 0.0011 |
| Uranus | 116251-09-11 23:15 G | 44181119.40 | 44181119.47 | 44181119.59 | 0.0140 | 0.0130 |
| Saturn | 116255-10-24 14:22 G | 44182622.91 | 44182623.10 | 44182623.31 | 0.0288 | 0.0153 |
| Saturn | 116256-11-07 01:39 G | 44183002.36 | 44183002.57 | 44183002.80 | 0.0287 | 0.0116 |
| Mars | 116268-06-10 05:44 G | 44187235.54 | 44187235.74 | 44187235.93 | 0.1933 | 0.0306 |
| Jupiter | 116269-03-06 00:41 G | 44187504.34 | 44187504.53 | 44187504.72 | 0.0501 | 0.0303 |
| Saturn | 116270-04-22 07:39 G | 44187916.66 | 44187916.82 | 44187916.97 | 0.0271 | 0.0206 |
| Saturn | 116271-05-04 08:36 G | 44188293.62 | 44188293.86 | 44188294.09 | 0.0271 | 0.0015 |
| Saturn | 116272-05-15 12:27 G | 44188670.91 | 44188671.02 | 44188671.15 | 0.0272 | 0.0236 |
| Jupiter | 116274-08-30 08:36 G | 44189507.77 | 44189507.86 | 44189507.98 | 0.0528 | 0.0464 |
| Mars | 116274-12-10 08:51 G | 44189609.82 | 44189609.87 | 44189609.92 | 0.1612 | 0.1547 |
| Jupiter | 116281-03-10 19:39 G | 44191892.10 | 44191892.32 | 44191892.55 | 0.0503 | 0.0056 |
| Saturn | 116284-10-17 09:48 G | 44193208.81 | 44193208.91 | 44193209.04 | 0.0288 | 0.0257 |
| Saturn | 116285-10-31 17:00 G | 44193587.97 | 44193588.21 | 44193588.46 | 0.0288 | 0.0013 |
| Jupiter | 116286-09-04 15:34 G | 44193895.92 | 44193896.15 | 44193896.38 | 0.0526 | 0.0162 |
| Saturn | 116286-11-15 02:36 G | 44193967.55 | 44193967.61 | 44193967.68 | 0.0287 | 0.0276 |
| Uranus | 116290-03-07 10:17 G | 44195175.76 | 44195175.93 | 44195176.12 | 0.0138 | 0.0094 |
| Uranus | 116291-03-12 00:12 G | 44195545.25 | 44195545.51 | 44195545.77 | 0.0138 | 0.0007 |
| Uranus | 116292-03-15 12:12 G | 44195914.87 | 44195915.01 | 44195915.18 | 0.0138 | 0.0105 |
| Jupiter | 116293-03-15 01:53 G | 44196279.36 | 44196279.58 | 44196279.80 | 0.0505 | 0.0210 |

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| Jupiter | 116298-09-09 05:00 G | 44198283.49 | 44198283.71 | 44198283.93 | 0.0524 | 0.0161 |
| Saturn | 116300-04-29 16:17 G | 44198880.94 | 44198881.18 | 44198881.42 | 0.0272 | 0.0070 |
| Saturn | 116301-05-11 14:36 G | 44199257.91 | 44199258.11 | 44199258.32 | 0.0272 | 0.0143 |
| Neptune | 116308-08-20 16:03 G | 44201916.02 | 44201916.17 | 44201916.34 | 0.0088 | 0.0067 |
| Neptune | 116309-08-23 07:24 G | 44202283.60 | 44202283.81 | 44202284.03 | 0.0088 | 0.0052 |
| Neptune | 116310-08-25 16:32 G | 44202650.96 | 44202651.19 | 44202651.44 | 0.0088 | 0.0022 |
| Neptune | 116311-08-28 03:05 G | 44203018.37 | 44203018.63 | 44203018.90 | 0.0088 | 0.0008 |
| Neptune | 116312-08-29 17:44 G | 44203386.01 | 44203386.24 | 44203386.50 | 0.0088 | 0.0024 |
| Neptune | 116313-08-31 23:15 G | 44203753.25 | 44203753.47 | 44203753.73 | 0.0088 | 0.0038 |
| Neptune | 116314-09-03 17:00 G | 44204121.08 | 44204121.21 | 44204121.39 | 0.0088 | 0.0070 |
| Saturn | 116314-10-27 05:44 G | 44204174.51 | 44204174.74 | 44204174.99 | 0.0288 | 0.0095 |
| Neptune | 116315-09-05 21:20 G | 44204488.33 | 44204488.39 | 44204488.50 | 0.0088 | 0.0083 |
| Saturn | 116315-11-10 10:03 G | 44204553.72 | 44204553.92 | 44204554.14 | 0.0287 | 0.0167 |
| Saturn | 116329-04-24 20:51 G | 44209468.19 | 44209468.37 | 44209468.58 | 0.0271 | 0.0161 |
| Saturn | 116330-05-06 17:15 G | 44209844.97 | 44209845.22 | 44209845.47 | 0.0271 | 0.0040 |
| Saturn | 116331-05-18 12:27 G | 44210221.91 | 44210222.02 | 44210222.16 | 0.0272 | 0.0234 |
| Uranus | 116333-09-04 02:51 G | 44211061.40 | 44211061.62 | 44211061.84 | 0.0140 | 0.0074 |
| Uranus | 116334-09-08 14:36 G | 44211430.86 | 44211431.11 | 44211431.36 | 0.0140 | 0.0015 |
| Uranus | 116335-09-13 16:03 G | 44211801.11 | 44211801.17 | 44211801.27 | 0.0140 | 0.0133 |
| Saturn | 116343-10-21 02:08 G | 44214760.45 | 44214760.59 | 44214760.75 | 0.0288 | 0.0223 |
| Saturn | 116344-11-03 11:58 G | 44215139.75 | 44215140.00 | 44215140.25 | 0.0288 | 0.0039 |
| Jupiter | 116352-03-06 09:34 G | 44217819.73 | 44217819.90 | 44217820.07 | 0.0500 | 0.0348 |
| Mars | 116353-12-13 02:08 G | 44218466.39 | 44218466.59 | 44218466.79 | 0.1610 | 0.0011 |
| Jupiter | 116357-08-30 03:20 G | 44219822.57 | 44219822.64 | 44219822.71 | 0.0529 | 0.0503 |
| Saturn | 116358-04-19 21:34 G | 44220055.34 | 44220055.40 | 44220055.47 | 0.0272 | 0.0261 |
| Saturn | 116359-05-02 02:08 G | 44220432.36 | 44220432.59 | 44220432.82 | 0.0272 | 0.0063 |
| Saturn | 116360-05-13 02:22 G | 44220809.40 | 44220809.60 | 44220809.82 | 0.0273 | 0.0139 |
| Jupiter | 116364-03-10 22:32 G | 44222207.21 | 44222207.44 | 44222207.66 | 0.0502 | 0.0050 |
| Pluto | 116366-05-08 14:51 G | 44222995.93 | 44222996.12 | 44222996.36 | 0.0066 | 0.0036 |
| Pluto | 116367-05-10 00:27 G | 44223362.40 | 44223362.52 | 44223362.66 | 0.0066 | 0.0056 |

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| Jupiter | 116369-09-04 12:41 G | 44224210.81 | 44224211.03 | 44224211.26 | 0.0527 | 0.0150 |
| Saturn | 116373-10-28 16:32 G | 44225725.96 | 44225726.19 | 44225726.42 | 0.0288 | 0.0087 |
| Uranus | 116374-03-08 19:24 G | 44225857.12 | 44225857.31 | 44225857.52 | 0.0138 | 0.0089 |
| Saturn | 116374-11-12 03:34 G | 44226105.46 | 44226105.65 | 44226105.85 | 0.0287 | 0.0171 |
| Uranus | 116375-03-13 08:51 G | 44226226.63 | 44226226.87 | 44226227.12 | 0.0138 | 0.0004 |
| Jupiter | 116376-03-15 04:17 G | 44226594.47 | 44226594.68 | 44226594.90 | 0.0504 | 0.0225 |
| Uranus | 116376-03-16 21:34 G | 44226596.25 | 44226596.40 | 44226596.57 | 0.0138 | 0.0107 |
| Jupiter | 116381-09-09 07:53 G | 44228598.61 | 44228598.83 | 44228599.06 | 0.0524 | 0.0163 |
| Jupiter | 116388-03-19 19:53 G | 44230982.28 | 44230982.33 | 44230982.40 | 0.0507 | 0.0486 |
| Saturn | 116388-04-25 20:51 G | 44231019.19 | 44231019.37 | 44231019.57 | 0.0271 | 0.0164 |
| Saturn | 116389-05-08 00:27 G | 44231396.29 | 44231396.52 | 44231396.75 | 0.0272 | 0.0046 |
| Saturn | 116390-05-20 03:20 G | 44231773.61 | 44231773.64 | 44231773.71 | 0.0272 | 0.0267 |
| Neptune | 116392-02-24 21:34 G | 44232419.23 | 44232419.40 | 44232419.61 | 0.0089 | 0.0062 |
| Neptune | 116393-02-26 06:27 G | 44232786.58 | 44232786.77 | 44232787.00 | 0.0089 | 0.0048 |
| Jupiter | 116393-09-14 15:34 G | 44232987.04 | 44232987.15 | 44232987.27 | 0.0522 | 0.0449 |
| Neptune | 116394-02-28 19:10 G | 44233154.05 | 44233154.30 | 44233154.58 | 0.0089 | 0.0015 |
| Neptune | 116395-03-03 09:48 G | 44233521.66 | 44233521.91 | 44233522.16 | 0.0089 | 0.0001 |
| Neptune | 116396-03-04 17:15 G | 44233888.99 | 44233889.22 | 44233889.48 | 0.0089 | 0.0034 |
| Neptune | 116397-03-07 11:44 G | 44234256.79 | 44234256.99 | 44234257.22 | 0.0089 | 0.0048 |
| Neptune | 116398-03-09 16:46 G | 44234624.11 | 44234624.20 | 44234624.33 | 0.0089 | 0.0081 |
| Saturn | 116402-10-22 10:32 G | 44236311.78 | 44236311.94 | 44236312.11 | 0.0288 | 0.0218 |
| Saturn | 116403-11-05 18:12 G | 44236691.01 | 44236691.26 | 44236691.50 | 0.0288 | 0.0047 |
| Saturn | 116417-04-21 08:36 G | 44241606.80 | 44241606.86 | 44241606.94 | 0.0272 | 0.0259 |
| Uranus | 116417-09-04 05:29 G | 44241742.52 | 44241742.73 | 44241742.95 | 0.0140 | 0.0070 |
| Saturn | 116418-05-03 03:48 G | 44241983.42 | 44241983.66 | 44241983.91 | 0.0272 | 0.0043 |
| Uranus | 116418-09-09 06:27 G | 44242112.52 | 44242112.77 | 44242113.03 | 0.0140 | 0.0021 |
| Saturn | 116419-05-15 05:29 G | 44242360.57 | 44242360.73 | 44242360.91 | 0.0273 | 0.0185 |
| Uranus | 116419-09-13 18:56 G | 44242482.24 | 44242482.29 | 44242482.35 | 0.0140 | 0.0137 |
| Saturn | 116432-10-30 09:34 G | 44247277.64 | 44247277.90 | 44247278.15 | 0.0287 | 0.0052 |
| Saturn | 116433-11-13 12:56 G | 44247656.89 | 44247657.04 | 44247657.21 | 0.0287 | 0.0219 |

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| Jupiter | 116435-03-06 12:12 G | 44248134.88 | 44248135.01 | 44248135.16 | 0.0500 | 0.0403 |
| Jupiter | 116447-03-10 21:05 G | 44252522.17 | 44252522.38 | 44252522.60 | 0.0502 | 0.0152 |
| Saturn | 116447-04-28 12:12 G | 44252570.80 | 44252571.01 | 44252571.23 | 0.0271 | 0.0127 |
| Saturn | 116448-05-09 06:41 G | 44252947.55 | 44252947.78 | 44252948.02 | 0.0272 | 0.0099 |
| Jupiter | 116452-09-03 14:22 G | 44254525.91 | 44254526.10 | 44254526.31 | 0.0527 | 0.0256 |
| Pluto | 116453-11-06 04:32 G | 44254954.48 | 44254954.69 | 44254954.95 | 0.0078 | 0.0039 |
| Uranus | 116458-03-09 05:44 G | 44256538.56 | 44256538.74 | 44256538.94 | 0.0138 | 0.0085 |
| Uranus | 116459-03-13 18:56 G | 44256908.03 | 44256908.29 | 44256908.55 | 0.0138 | 0.0001 |
| Jupiter | 116459-03-15 12:12 G | 44256909.79 | 44256910.01 | 44256910.25 | 0.0504 | 0.0139 |
| Uranus | 116460-03-17 07:39 G | 44257277.69 | 44257277.82 | 44257277.97 | 0.0138 | 0.0112 |
| Saturn | 116461-10-24 07:24 G | 44257863.62 | 44257863.81 | 44257864.02 | 0.0288 | 0.0161 |
| Saturn | 116462-11-07 15:34 G | 44258242.92 | 44258243.15 | 44258243.39 | 0.0287 | 0.0109 |
| Jupiter | 116464-09-08 08:36 G | 44258913.63 | 44258913.86 | 44258914.10 | 0.0525 | 0.0096 |
| Jupiter | 116471-03-19 23:15 G | 44261297.37 | 44261297.47 | 44261297.57 | 0.0506 | 0.0452 |
| Neptune | 116472-08-20 07:10 G | 44261816.74 | 44261816.80 | 44261816.91 | 0.0088 | 0.0083 |
| Neptune | 116473-08-22 14:36 G | 44262183.94 | 44262184.11 | 44262184.33 | 0.0088 | 0.0055 |
| Neptune | 116474-08-25 03:20 G | 44262551.40 | 44262551.64 | 44262551.89 | 0.0088 | 0.0038 |
| Neptune | 116475-08-27 15:48 G | 44262918.91 | 44262919.16 | 44262919.41 | 0.0088 | 0.0009 |
| Saturn | 116476-04-22 13:10 G | 44263157.91 | 44263158.05 | 44263158.20 | 0.0272 | 0.0210 |
| Neptune | 116476-08-28 22:32 G | 44263286.18 | 44263286.44 | 44263286.71 | 0.0088 | 0.0009 |
| Jupiter | 116476-09-13 08:36 G | 44263301.74 | 44263301.86 | 44263301.99 | 0.0523 | 0.0438 |
| Saturn | 116477-05-04 17:44 G | 44263535.00 | 44263535.24 | 44263535.48 | 0.0272 | 0.0008 |
| Neptune | 116477-08-31 15:20 G | 44263653.93 | 44263654.14 | 44263654.39 | 0.0088 | 0.0037 |
| Saturn | 116478-05-16 16:03 G | 44263912.01 | 44263912.17 | 44263912.32 | 0.0273 | 0.0211 |
| Neptune | 116478-09-02 20:08 G | 44264021.14 | 44264021.34 | 44264021.55 | 0.0088 | 0.0053 |
| Neptune | 116479-09-05 13:39 G | 44264388.99 | 44264389.07 | 44264389.19 | 0.0088 | 0.0081 |
| Saturn | 116490-10-18 13:10 G | 44268449.95 | 44268450.05 | 44268450.17 | 0.0288 | 0.0257 |
| Saturn | 116491-11-02 00:27 G | 44268829.29 | 44268829.52 | 44268829.76 | 0.0287 | 0.0006 |
| Saturn | 116492-11-15 10:46 G | 44269208.86 | 44269208.95 | 44269209.05 | 0.0287 | 0.0261 |
| Uranus | 116501-09-05 21:20 G | 44272424.17 | 44272424.39 | 44272424.63 | 0.0140 | 0.0066 |

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| Uranus | 116502-09-10 09:34 G | 44272793.65 | 44272793.90 | 44272794.15 | 0.0140 | 0.0024 |
| Uranus | 116503-09-15 11:00 G | 44273163.94 | 44273163.96 | 44273163.98 | 0.0141 | 0.0140 |
| Saturn | 116506-04-30 15:20 G | 44274121.92 | 44274122.14 | 44274122.37 | 0.0271 | 0.0088 |
| Saturn | 116507-05-12 19:24 G | 44274499.11 | 44274499.31 | 44274499.54 | 0.0272 | 0.0111 |
| Jupiter | 116518-03-06 18:56 G | 44278450.16 | 44278450.29 | 44278450.43 | 0.0499 | 0.0404 |
| Saturn | 116520-10-26 15:34 G | 44279414.94 | 44279415.15 | 44279415.38 | 0.0288 | 0.0132 |
| Saturn | 116521-11-10 00:12 G | 44279794.30 | 44279794.51 | 44279794.74 | 0.0287 | 0.0126 |
| Jupiter | 116530-03-11 01:24 G | 44282837.34 | 44282837.56 | 44282837.78 | 0.0501 | 0.0121 |
| Saturn | 116535-04-25 21:48 G | 44284709.24 | 44284709.41 | 44284709.60 | 0.0272 | 0.0189 |
| Jupiter | 116535-09-04 07:39 G | 44284840.62 | 44284840.82 | 44284841.01 | 0.0528 | 0.0263 |
| Saturn | 116536-05-06 18:12 G | 44285086.02 | 44285086.26 | 44285086.51 | 0.0272 | 0.0007 |
| Saturn | 116537-05-18 21:20 G | 44285463.26 | 44285463.39 | 44285463.55 | 0.0273 | 0.0216 |
| Uranus | 116542-03-10 15:20 G | 44287219.94 | 44287220.14 | 44287220.36 | 0.0138 | 0.0080 |
| Jupiter | 116542-03-15 18:27 G | 44287225.04 | 44287225.27 | 44287225.50 | 0.0503 | 0.0131 |
| Uranus | 116543-03-15 05:00 G | 44287589.47 | 44287589.71 | 44287589.96 | 0.0138 | 0.0006 |
| Uranus | 116544-03-18 17:15 G | 44287959.09 | 44287959.22 | 44287959.38 | 0.0137 | 0.0115 |
| Jupiter | 116547-09-09 05:15 G | 44289228.48 | 44289228.72 | 44289228.96 | 0.0526 | 0.0030 |
| Saturn | 116549-10-21 09:20 G | 44290001.77 | 44290001.89 | 44290002.04 | 0.0288 | 0.0245 |
| Saturn | 116550-11-04 13:53 G | 44290380.82 | 44290381.08 | 44290381.34 | 0.0287 | 0.0009 |
| Saturn | 116551-11-18 18:12 G | 44290760.17 | 44290760.26 | 44290760.37 | 0.0287 | 0.0264 |
| Mars | 116552-06-11 12:12 G | 44290965.87 | 44290966.01 | 44290966.15 | 0.1925 | 0.1348 |
| Jupiter | 116554-03-19 19:24 G | 44291612.16 | 44291612.31 | 44291612.46 | 0.0505 | 0.0373 |
| Neptune | 116556-02-25 03:05 G | 44292319.52 | 44292319.63 | 44292319.76 | 0.0089 | 0.0078 |
| Neptune | 116557-02-26 18:12 G | 44292687.06 | 44292687.26 | 44292687.51 | 0.0089 | 0.0050 |
| Neptune | 116558-03-01 06:41 G | 44293054.55 | 44293054.78 | 44293055.02 | 0.0089 | 0.0030 |
| Mars | 116558-12-13 13:53 G | 44293341.89 | 44293342.08 | 44293342.26 | 0.1616 | 0.0472 |
| Neptune | 116559-03-03 16:32 G | 44293421.92 | 44293422.19 | 44293422.45 | 0.0089 | 0.0003 |
| Jupiter | 116559-09-14 08:51 G | 44293616.70 | 44293616.87 | 44293617.04 | 0.0523 | 0.0336 |
| Neptune | 116560-03-05 09:05 G | 44293789.64 | 44293789.88 | 44293790.13 | 0.0089 | 0.0017 |
| Neptune | 116561-03-07 14:36 G | 44294156.90 | 44294157.11 | 44294157.35 | 0.0089 | 0.0044 |

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| Neptune | 116562-03-10 09:48 G | 44294524.74 | 44294524.91 | 44294525.10 | 0.0089 | 0.0064 |
| Saturn | 116565-05-02 05:00 G | 44295673.47 | 44295673.71 | 44295673.95 | 0.0271 | 0.0086 |
| Saturn | 116566-05-13 23:29 G | 44296050.26 | 44296050.48 | 44296050.70 | 0.0272 | 0.0129 |
| Saturn | 116579-10-29 12:41 G | 44300966.81 | 44300967.03 | 44300967.26 | 0.0288 | 0.0119 |
| Saturn | 116580-11-11 19:24 G | 44301346.09 | 44301346.31 | 44301346.53 | 0.0287 | 0.0146 |
| Uranus | 116585-09-05 23:15 G | 44303105.27 | 44303105.47 | 44303105.71 | 0.0140 | 0.0063 |
| Uranus | 116586-09-11 00:12 G | 44303475.27 | 44303475.51 | 44303475.78 | 0.0140 | 0.0030 |
| Saturn | 116594-04-27 06:27 G | 44306260.59 | 44306260.77 | 44306260.95 | 0.0272 | 0.0177 |
| Saturn | 116595-05-09 09:05 G | 44306637.64 | 44306637.88 | 44306638.12 | 0.0272 | 0.0044 |
| Saturn | 116596-05-20 05:29 G | 44307014.68 | 44307014.73 | 44307014.79 | 0.0273 | 0.0266 |
| Jupiter | 116601-03-07 01:10 G | 44308765.50 | 44308765.55 | 44308765.61 | 0.0499 | 0.0484 |
| Saturn | 116608-10-23 17:00 G | 44311553.06 | 44311553.21 | 44311553.38 | 0.0288 | 0.0216 |
| Saturn | 116609-11-07 04:32 G | 44311932.46 | 44311932.69 | 44311932.93 | 0.0287 | 0.0053 |
| Pluto | 116612-05-11 09:34 G | 44312848.74 | 44312848.90 | 44312849.10 | 0.0066 | 0.0046 |
| Jupiter | 116613-03-11 00:12 G | 44313152.30 | 44313152.51 | 44313152.72 | 0.0500 | 0.0226 |
| Pluto | 116613-05-12 19:10 G | 44313215.09 | 44313215.30 | 44313215.53 | 0.0066 | 0.0035 |
| Jupiter | 116618-09-04 06:56 G | 44315155.62 | 44315155.79 | 44315155.96 | 0.0529 | 0.0351 |
| Saturn | 116623-04-23 08:22 G | 44316847.79 | 44316847.85 | 44316847.94 | 0.0271 | 0.0257 |
| Saturn | 116624-05-04 09:05 G | 44317224.65 | 44317224.88 | 44317225.12 | 0.0271 | 0.0036 |
| Jupiter | 116625-03-15 18:56 G | 44317540.06 | 44317540.29 | 44317540.52 | 0.0503 | 0.0079 |
| Saturn | 116625-05-16 12:27 G | 44317601.86 | 44317602.02 | 44317602.20 | 0.0272 | 0.0183 |
| Uranus | 116626-03-12 01:53 G | 44317901.37 | 44317901.58 | 44317901.78 | 0.0138 | 0.0076 |
| Uranus | 116627-03-16 14:51 G | 44318270.87 | 44318271.12 | 44318271.39 | 0.0138 | 0.0011 |
| Uranus | 116628-03-20 03:20 G | 44318640.53 | 44318640.64 | 44318640.78 | 0.0137 | 0.0119 |
| Jupiter | 116630-09-09 12:27 G | 44319543.78 | 44319544.02 | 44319544.26 | 0.0526 | 0.0022 |
| Jupiter | 116637-03-20 00:41 G | 44321927.38 | 44321927.53 | 44321927.68 | 0.0505 | 0.0387 |
| Neptune | 116637-08-24 03:05 G | 44322084.48 | 44322084.63 | 44322084.84 | 0.0088 | 0.0065 |
| Mars | 116637-12-16 08:22 G | 44322198.70 | 44322198.85 | 44322199.00 | 0.1613 | 0.1072 |
| Neptune | 116638-08-26 12:56 G | 44322451.84 | 44322452.04 | 44322452.27 | 0.0088 | 0.0046 |
| Saturn | 116638-10-31 16:46 G | 44322517.96 | 44322518.20 | 44322518.45 | 0.0288 | 0.0058 |

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| Neptune | 116639-08-28 23:00 G | 44322819.20 | 44322819.46 | 44322819.73 | 0.0088 | 0.0018 |
| Saturn | 116639-11-15 02:08 G | 44322897.43 | 44322897.59 | 44322897.76 | 0.0287 | 0.0206 |
| Neptune | 116640-08-30 14:08 G | 44323186.84 | 44323187.09 | 44323187.35 | 0.0088 | 0.0001 |
| Neptune | 116641-09-01 19:24 G | 44323554.07 | 44323554.31 | 44323554.57 | 0.0088 | 0.0027 |
| Neptune | 116642-09-04 13:24 G | 44323921.85 | 44323922.06 | 44323922.30 | 0.0088 | 0.0045 |
| Jupiter | 116642-09-14 09:20 G | 44323931.73 | 44323931.89 | 44323932.06 | 0.0524 | 0.0356 |
| Neptune | 116643-09-06 17:44 G | 44324289.12 | 44324289.24 | 44324289.40 | 0.0088 | 0.0073 |
| Saturn | 116653-04-29 10:03 G | 44327811.71 | 44327811.92 | 44327812.15 | 0.0271 | 0.0123 |
| Saturn | 116654-05-11 07:53 G | 44328188.60 | 44328188.83 | 44328189.06 | 0.0272 | 0.0086 |
| Saturn | 116667-10-26 06:27 G | 44333104.56 | 44333104.77 | 44333104.99 | 0.0288 | 0.0162 |
| Saturn | 116668-11-08 11:15 G | 44333483.74 | 44333483.97 | 44333484.22 | 0.0287 | 0.0099 |
| Uranus | 116669-09-07 15:05 G | 44333786.90 | 44333787.13 | 44333787.37 | 0.0140 | 0.0059 |
| Uranus | 116670-09-12 02:51 G | 44334156.39 | 44334156.62 | 44334156.88 | 0.0140 | 0.0033 |
| Saturn | 116682-04-24 22:32 G | 44338399.30 | 44338399.44 | 44338399.59 | 0.0271 | 0.0212 |
| Saturn | 116683-05-06 19:10 G | 44338776.05 | 44338776.30 | 44338776.55 | 0.0271 | 0.0012 |
| Jupiter | 116684-03-06 01:53 G | 44339080.51 | 44339080.58 | 44339080.67 | 0.0498 | 0.0461 |
| Saturn | 116684-05-17 13:24 G | 44339152.88 | 44339153.06 | 44339153.24 | 0.0272 | 0.0183 |
| Jupiter | 116696-03-10 07:10 G | 44343467.58 | 44343467.80 | 44343468.02 | 0.0500 | 0.0203 |
| Saturn | 116697-11-02 09:34 G | 44344069.66 | 44344069.90 | 44344070.15 | 0.0288 | 0.0041 |
| Saturn | 116698-11-16 14:51 G | 44344448.96 | 44344449.12 | 44344449.30 | 0.0287 | 0.0215 |
| Pluto | 116699-11-10 03:48 G | 44344807.57 | 44344807.66 | 44344807.77 | 0.0078 | 0.0073 |
| Jupiter | 116701-09-04 08:36 G | 44345470.70 | 44345470.86 | 44345471.03 | 0.0529 | 0.0368 |
| Jupiter | 116708-03-16 02:22 G | 44347855.37 | 44347855.60 | 44347855.83 | 0.0502 | 0.0044 |
| Uranus | 116710-03-13 10:46 G | 44348582.74 | 44348582.95 | 44348583.19 | 0.0138 | 0.0073 |
| Uranus | 116711-03-18 00:27 G | 44348952.28 | 44348952.52 | 44348952.76 | 0.0138 | 0.0014 |
| Uranus | 116712-03-21 12:27 G | 44349321.92 | 44349322.02 | 44349322.16 | 0.0137 | 0.0121 |
| Saturn | 116712-05-01 19:10 G | 44349363.09 | 44349363.30 | 44349363.51 | 0.0271 | 0.0118 |
| Saturn | 116713-05-13 19:10 G | 44349740.07 | 44349740.30 | 44349740.54 | 0.0272 | 0.0083 |
| Jupiter | 116713-09-09 13:24 G | 44349858.83 | 44349859.06 | 44349859.30 | 0.0527 | 0.0081 |
| Neptune | 116720-02-26 17:15 G | 44352220.16 | 44352220.22 | 44352220.28 | 0.0089 | 0.0087 |

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| Jupiter | 116720-03-20 08:08 G | 44352242.65 | 44352242.84 | 44352243.04 | 0.0504 | 0.0298 |
| Neptune | 116721-02-28 01:53 G | 44352587.40 | 44352587.58 | 44352587.78 | 0.0089 | 0.0059 |
| Neptune | 116722-03-02 14:51 G | 44352954.88 | 44352955.12 | 44352955.36 | 0.0089 | 0.0041 |
| Neptune | 116723-03-05 05:15 G | 44353322.48 | 44353322.72 | 44353322.98 | 0.0089 | 0.0012 |
| Neptune | 116724-03-06 13:24 G | 44353689.80 | 44353690.06 | 44353690.32 | 0.0089 | 0.0007 |
| Neptune | 116725-03-09 07:24 G | 44354057.59 | 44354057.81 | 44354058.06 | 0.0089 | 0.0037 |
| Jupiter | 116725-09-14 06:12 G | 44354246.55 | 44354246.76 | 44354246.96 | 0.0524 | 0.0241 |
| Neptune | 116726-03-11 12:27 G | 44354424.84 | 44354425.02 | 44354425.24 | 0.0089 | 0.0054 |
| Saturn | 116726-10-28 10:17 G | 44354655.74 | 44354655.93 | 44354656.14 | 0.0288 | 0.0165 |
| Neptune | 116727-03-14 07:10 G | 44354792.74 | 44354792.80 | 44354792.93 | 0.0089 | 0.0084 |
| Saturn | 116727-11-11 22:03 G | 44355035.20 | 44355035.42 | 44355035.65 | 0.0287 | 0.0096 |
| Saturn | 116741-04-26 20:51 G | 44359950.23 | 44359950.37 | 44359950.52 | 0.0271 | 0.0217 |
| Saturn | 116742-05-08 22:46 G | 44360327.21 | 44360327.45 | 44360327.68 | 0.0271 | 0.0009 |
| Saturn | 116743-05-21 01:24 G | 44360704.42 | 44360704.56 | 44360704.71 | 0.0272 | 0.0214 |
| Uranus | 116753-09-08 17:15 G | 44364468.00 | 44364468.22 | 44364468.45 | 0.0140 | 0.0056 |
| Uranus | 116754-09-13 17:44 G | 44364838.00 | 44364838.24 | 44364838.50 | 0.0140 | 0.0037 |
| Saturn | 116756-11-04 08:36 G | 44365620.62 | 44365620.86 | 44365621.11 | 0.0288 | 0.0031 |
| Saturn | 116757-11-18 19:10 G | 44366000.18 | 44366000.30 | 44366000.45 | 0.0287 | 0.0239 |
| Saturn | 116771-05-03 17:58 G | 44370914.03 | 44370914.25 | 44370914.49 | 0.0271 | 0.0099 |
| Saturn | 116772-05-14 17:29 G | 44371291.03 | 44371291.23 | 44371291.45 | 0.0272 | 0.0127 |
| Jupiter | 116779-03-11 18:12 G | 44373783.06 | 44373783.26 | 44373783.47 | 0.0500 | 0.0252 |
| Jupiter | 116784-09-03 07:39 G | 44375785.68 | 44375785.82 | 44375785.97 | 0.0530 | 0.0414 |
| Saturn | 116785-10-29 15:48 G | 44376206.94 | 44376207.16 | 44376207.40 | 0.0288 | 0.0130 |
| Saturn | 116786-11-12 20:51 G | 44376586.15 | 44376586.37 | 44376586.59 | 0.0287 | 0.0143 |
| Jupiter | 116791-03-16 03:05 G | 44378170.41 | 44378170.63 | 44378170.86 | 0.0501 | 0.0043 |
| Uranus | 116794-03-13 20:22 G | 44379264.16 | 44379264.35 | 44379264.58 | 0.0138 | 0.0070 |
| Uranus | 116795-03-18 09:48 G | 44379633.65 | 44379633.91 | 44379634.17 | 0.0138 | 0.0018 |
| Uranus | 116796-03-21 22:03 G | 44380003.33 | 44380003.42 | 44380003.53 | 0.0137 | 0.0124 |
| Jupiter | 116796-09-08 17:29 G | 44380174.00 | 44380174.23 | 44380174.47 | 0.0528 | 0.0048 |
| Saturn | 116800-04-28 08:22 G | 44381501.67 | 44381501.85 | 44381502.02 | 0.0271 | 0.0182 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 116801-05-10 02:22 G | 44381878.35 | 44381878.60 | 44381878.84 | 0.0271 | 0.0042 |
| Neptune | 116801-08-24 11:29 G | 44381984.88 | 44381984.98 | 44381985.09 | 0.0088 | 0.0080 |
| Saturn | 116802-05-21 22:03 G | 44382255.34 | 44382255.42 | 44382255.51 | 0.0272 | 0.0253 |
| Neptune | 116802-08-26 23:29 G | 44382352.27 | 44382352.48 | 44382352.72 | 0.0088 | 0.0048 |
| Jupiter | 116803-03-20 13:24 G | 44382557.88 | 44382558.06 | 44382558.25 | 0.0503 | 0.0323 |
| Neptune | 116803-08-29 11:44 G | 44382719.76 | 44382719.99 | 44382720.22 | 0.0088 | 0.0035 |
| Neptune | 116804-08-30 18:41 G | 44383087.02 | 44383087.28 | 44383087.54 | 0.0088 | 0.0003 |
| Neptune | 116805-09-02 11:29 G | 44383454.73 | 44383454.98 | 44383455.23 | 0.0088 | 0.0011 |
| Neptune | 116806-09-04 15:34 G | 44383821.94 | 44383822.15 | 44383822.39 | 0.0088 | 0.0043 |
| Neptune | 116807-09-07 09:48 G | 44384189.71 | 44384189.91 | 44384190.11 | 0.0088 | 0.0056 |
| Jupiter | 116808-09-13 13:39 G | 44384561.86 | 44384562.07 | 44384562.27 | 0.0525 | 0.0266 |
| Saturn | 116814-10-23 11:00 G | 44386792.83 | 44386792.96 | 44386793.10 | 0.0288 | 0.0241 |
| Saturn | 116815-11-06 18:41 G | 44387172.02 | 44387172.28 | 44387172.53 | 0.0288 | 0.0024 |
| Saturn | 116816-11-19 22:17 G | 44387551.41 | 44387551.43 | 44387551.49 | 0.0287 | 0.0284 |
| Saturn | 116829-04-22 22:17 G | 44392088.41 | 44392088.43 | 44392088.48 | 0.0271 | 0.0267 |
| Saturn | 116830-05-05 02:22 G | 44392465.37 | 44392465.60 | 44392465.84 | 0.0271 | 0.0054 |
| Saturn | 116831-05-16 23:29 G | 44392842.28 | 44392842.48 | 44392842.70 | 0.0272 | 0.0147 |
| Uranus | 116837-09-09 09:05 G | 44395149.65 | 44395149.88 | 44395150.13 | 0.0140 | 0.0053 |
| Uranus | 116838-09-13 21:05 G | 44395519.15 | 44395519.38 | 44395519.63 | 0.0140 | 0.0040 |
| Mars | 116842-12-16 15:34 G | 44397073.96 | 44397074.15 | 44397074.34 | 0.1620 | 0.0020 |
| Saturn | 116844-10-30 17:58 G | 44397758.03 | 44397758.25 | 44397758.48 | 0.0288 | 0.0095 |
| Saturn | 116845-11-14 05:00 G | 44398137.52 | 44398137.71 | 44398137.93 | 0.0287 | 0.0165 |
| Saturn | 116859-04-30 03:34 G | 44403052.46 | 44403052.65 | 44403052.85 | 0.0271 | 0.0149 |
| Pluto | 116859-05-15 19:39 G | 44403068.09 | 44403068.32 | 44403068.58 | 0.0066 | 0.0020 |
| Saturn | 116860-05-11 06:56 G | 44403429.56 | 44403429.79 | 44403430.02 | 0.0271 | 0.0046 |
| Saturn | 116861-05-23 07:24 G | 44403806.72 | 44403806.81 | 44403806.93 | 0.0272 | 0.0246 |
| Jupiter | 116862-03-11 02:08 G | 44404098.39 | 44404098.59 | 44404098.79 | 0.0499 | 0.0284 |
| Jupiter | 116867-09-03 15:05 G | 44406101.01 | 44406101.13 | 44406101.24 | 0.0531 | 0.0459 |
| Saturn | 116873-10-24 06:56 G | 44408343.64 | 44408343.79 | 44408343.93 | 0.0288 | 0.0232 |
| Jupiter | 116874-03-15 09:05 G | 44408485.66 | 44408485.88 | 44408486.11 | 0.0501 | 0.0036 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 116874-11-07 16:03 G | 44408722.93 | 44408723.17 | 44408723.41 | 0.0288 | 0.0023 |
| Saturn | 116875-11-22 02:36 G | 44409102.57 | 44409102.61 | 44409102.68 | 0.0287 | 0.0278 |
| Uranus | 116878-03-14 06:12 G | 44409945.54 | 44409945.76 | 44409946.00 | 0.0138 | 0.0066 |
| Uranus | 116879-03-18 19:10 G | 44410315.06 | 44410315.30 | 44410315.54 | 0.0138 | 0.0023 |
| Jupiter | 116879-09-09 00:41 G | 44410489.32 | 44410489.53 | 44410489.75 | 0.0528 | 0.0137 |
| Uranus | 116880-03-22 07:24 G | 44410684.73 | 44410684.81 | 44410684.94 | 0.0137 | 0.0126 |
| Neptune | 116885-02-27 13:24 G | 44412487.94 | 44412488.06 | 44412488.22 | 0.0089 | 0.0075 |
| Neptune | 116886-03-02 00:41 G | 44412855.33 | 44412855.53 | 44412855.77 | 0.0089 | 0.0044 |
| Jupiter | 116886-03-20 03:20 G | 44412873.44 | 44412873.64 | 44412873.85 | 0.0503 | 0.0254 |
| Neptune | 116887-03-04 11:58 G | 44413222.74 | 44413223.00 | 44413223.25 | 0.0089 | 0.0028 |
| Neptune | 116888-03-06 04:03 G | 44413590.42 | 44413590.67 | 44413590.92 | 0.0089 | 0.0005 |
| Saturn | 116888-04-24 02:22 G | 44413639.51 | 44413639.60 | 44413639.69 | 0.0271 | 0.0252 |
| Neptune | 116889-03-08 10:03 G | 44413957.68 | 44413957.92 | 44413958.19 | 0.0089 | 0.0020 |
| Saturn | 116889-05-05 21:05 G | 44414016.14 | 44414016.38 | 44414016.62 | 0.0271 | 0.0061 |
| Neptune | 116890-03-11 05:00 G | 44414325.52 | 44414325.71 | 44414325.94 | 0.0089 | 0.0053 |
| Saturn | 116890-05-17 22:32 G | 44414393.24 | 44414393.44 | 44414393.64 | 0.0272 | 0.0148 |
| Neptune | 116891-03-13 10:17 G | 44414692.78 | 44414692.93 | 44414693.12 | 0.0089 | 0.0066 |
| Jupiter | 116891-09-13 19:39 G | 44414877.10 | 44414877.32 | 44414877.55 | 0.0526 | 0.0210 |
| Saturn | 116903-11-02 15:20 G | 44419308.90 | 44419309.14 | 44419309.38 | 0.0288 | 0.0101 |
| Saturn | 116904-11-15 21:48 G | 44419688.21 | 44419688.41 | 44419688.62 | 0.0287 | 0.0161 |
| Mars | 116915-06-18 10:03 G | 44423554.79 | 44423554.92 | 44423555.05 | 0.1923 | 0.1369 |
| Saturn | 116918-05-02 11:00 G | 44424603.76 | 44424603.96 | 44424604.17 | 0.0271 | 0.0155 |
| Saturn | 116919-05-14 04:46 G | 44424980.46 | 44424980.70 | 44424980.94 | 0.0271 | 0.0060 |
| Uranus | 116921-09-10 11:15 G | 44425830.75 | 44425830.97 | 44425831.22 | 0.0140 | 0.0050 |
| Uranus | 116922-09-15 12:12 G | 44426200.78 | 44426201.01 | 44426201.27 | 0.0140 | 0.0047 |
| Saturn | 116932-10-26 15:05 G | 44429894.99 | 44429895.13 | 44429895.30 | 0.0288 | 0.0222 |
| Saturn | 116933-11-09 21:05 G | 44430274.13 | 44430274.38 | 44430274.64 | 0.0288 | 0.0046 |
| Jupiter | 116945-03-11 14:08 G | 44434413.90 | 44434414.09 | 44434414.30 | 0.0499 | 0.0270 |
| Pluto | 116946-11-14 19:24 G | 44435027.08 | 44435027.31 | 44435027.54 | 0.0078 | 0.0041 |
| Saturn | 116947-04-27 02:08 G | 44435190.51 | 44435190.59 | 44435190.68 | 0.0271 | 0.0249 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 116948-05-08 05:00 G | 44435567.47 | 44435567.71 | 44435567.95 | 0.0271 | 0.0028 |
| Saturn | 116949-05-20 00:56 G | 44435944.37 | 44435944.54 | 44435944.72 | 0.0272 | 0.0193 |
| Jupiter | 116950-09-03 23:29 G | 44436416.35 | 44436416.48 | 44436416.62 | 0.0531 | 0.0438 |
| Jupiter | 116957-03-15 18:56 G | 44438801.06 | 44438801.29 | 44438801.52 | 0.0501 | 0.0011 |
| Uranus | 116962-03-15 15:34 G | 44440626.94 | 44440627.15 | 44440627.38 | 0.0138 | 0.0063 |
| Jupiter | 116962-09-09 01:10 G | 44440804.33 | 44440804.55 | 44440804.77 | 0.0529 | 0.0121 |
| Saturn | 116962-11-03 19:39 G | 44440860.08 | 44440860.32 | 44440860.56 | 0.0288 | 0.0056 |
| Uranus | 116963-03-20 05:58 G | 44440996.50 | 44440996.75 | 44440997.01 | 0.0138 | 0.0029 |
| Saturn | 116963-11-18 05:44 G | 44441239.57 | 44441239.74 | 44441239.91 | 0.0287 | 0.0211 |
| Uranus | 116964-03-23 16:46 G | 44441366.13 | 44441366.20 | 44441366.30 | 0.0137 | 0.0129 |
| Neptune | 116965-08-25 00:27 G | 44441885.44 | 44441885.52 | 44441885.64 | 0.0088 | 0.0082 |
| Neptune | 116966-08-27 08:22 G | 44442252.70 | 44442252.85 | 44442253.04 | 0.0088 | 0.0064 |
| Neptune | 116967-08-29 19:53 G | 44442620.10 | 44442620.33 | 44442620.58 | 0.0088 | 0.0036 |
| Neptune | 116968-08-31 09:20 G | 44442987.66 | 44442987.89 | 44442988.15 | 0.0088 | 0.0018 |
| Jupiter | 116969-03-20 11:29 G | 44443188.78 | 44443188.98 | 44443189.18 | 0.0502 | 0.0252 |
| Neptune | 116969-09-02 15:48 G | 44443354.90 | 44443355.16 | 44443355.42 | 0.0088 | 0.0009 |
| Neptune | 116970-09-05 08:36 G | 44443722.63 | 44443722.86 | 44443723.12 | 0.0088 | 0.0027 |
| Neptune | 116971-09-07 12:27 G | 44444089.84 | 44444090.02 | 44444090.25 | 0.0088 | 0.0054 |
| Neptune | 116972-09-09 06:12 G | 44444457.64 | 44444457.76 | 44444457.93 | 0.0088 | 0.0072 |
| Jupiter | 116974-09-14 02:08 G | 44445192.36 | 44445192.59 | 44445192.82 | 0.0527 | 0.0169 |
| Saturn | 116977-05-03 06:27 G | 44446154.56 | 44446154.77 | 44446154.99 | 0.0271 | 0.0113 |
| Saturn | 116978-05-15 10:03 G | 44446531.71 | 44446531.92 | 44446532.14 | 0.0272 | 0.0107 |
| Jupiter | 116981-03-24 15:48 G | 44447576.12 | 44447576.16 | 44447576.20 | 0.0504 | 0.0494 |
| Jupiter | 116986-09-19 03:05 G | 44449580.53 | 44449580.63 | 44449580.72 | 0.0525 | 0.0477 |
| Saturn | 116991-10-28 09:48 G | 44451445.72 | 44451445.91 | 44451446.11 | 0.0288 | 0.0171 |
| Saturn | 116992-11-10 19:24 G | 44451825.09 | 44451825.31 | 44451825.55 | 0.0287 | 0.0092 |

118TH MILLENNIUM CE

This is a list of transits of Moon in the 118th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Uranus | 117005-09-12 04:17 | G | 44456512.43 | 44456512.68 | 44456512.92 | 0.0140 | 0.0047 | |
| Saturn | 117006-04-29 01:24 | G | 44456741.41 | 44456741.56 | 44456741.74 | 0.0271 | 0.0203 | |
| Uranus | 117006-09-16 15:20 | G | 44456881.92 | 44456882.14 | 44456882.39 | 0.0140 | 0.0052 | |
| Saturn | 117007-05-10 22:32 | G | 44457118.20 | 44457118.44 | 44457118.68 | 0.0271 | 0.0006 | |
| Saturn | 117008-05-22 01:24 | G | 44457495.42 | 44457495.56 | 44457495.72 | 0.0272 | 0.0204 | |
| Saturn | 117021-11-05 14:36 | G | 44462410.86 | 44462411.11 | 44462411.36 | 0.0288 | 0.0038 | |
| Saturn | 117022-11-19 22:03 | G | 44462790.27 | 44462790.42 | 44462790.59 | 0.0287 | 0.0220 | |
| Jupiter | 117028-03-11 22:46 | G | 44464729.29 | 44464729.45 | 44464729.62 | 0.0498 | 0.0343 | |
| Saturn | 117036-05-05 11:15 | G | 44467705.74 | 44467705.97 | 44467706.21 | 0.0272 | 0.0096 | |
| Saturn | 117037-05-17 05:58 | G | 44468082.52 | 44468082.75 | 44468082.98 | 0.0272 | 0.0101 | |
| Jupiter | 117040-03-16 02:08 | G | 44469116.36 | 44469116.59 | 44469116.83 | 0.0499 | 0.0073 | |
| Jupiter | 117045-09-09 02:36 | G | 44471119.40 | 44471119.61 | 44471119.83 | 0.0530 | 0.0185 | |
| Uranus | 117046-03-17 04:17 | G | 44471308.45 | 44471308.68 | 44471308.92 | 0.0138 | 0.0058 | |
| Uranus | 117047-03-21 15:34 | G | 44471677.91 | 44471678.15 | 44471678.39 | 0.0138 | 0.0035 | |
| Mars | 117047-12-17 00:56 | G | 44471948.44 | 44471948.54 | 44471948.64 | 0.1628 | 0.1386 | |
| Uranus | 117048-03-25 05:29 | G | 44472047.67 | 44472047.73 | 44472047.81 | 0.0137 | 0.0132 | |
| Neptune | 117049-02-28 18:12 | G | 44472388.17 | 44472388.26 | 44472388.41 | 0.0089 | 0.0079 | |
| Neptune | 117050-03-03 08:51 | G | 44472755.69 | 44472755.87 | 44472756.10 | 0.0089 | 0.0059 | |
| Saturn | 117050-10-30 20:22 | G | 44472997.16 | 44472997.35 | 44472997.56 | 0.0287 | 0.0172 | |
| Neptune | 117051-03-05 22:17 | G | 44473123.21 | 44473123.43 | 44473123.67 | 0.0089 | 0.0032 | |
| Saturn | 117051-11-14 00:41 | G | 44473376.29 | 44473376.53 | 44473376.78 | 0.0287 | 0.0086 | |
| Neptune | 117052-03-07 08:08 | G | 44473490.57 | 44473490.84 | 44473491.10 | 0.0089 | 0.0012 | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 117052-03-20 19:10 G | 44473504.10 | 44473504.30 | 44473504.50 | 0.0502 | 0.0228 |
| Neptune | 117053-03-10 01:39 G | 44473858.32 | 44473858.57 | 44473858.82 | 0.0089 | 0.0015 |
| Neptune | 117054-03-12 07:10 G | 44474225.58 | 44474225.80 | 44474226.05 | 0.0089 | 0.0036 |
| Neptune | 117055-03-15 02:22 G | 44474593.44 | 44474593.60 | 44474593.80 | 0.0089 | 0.0064 |
| Neptune | 117056-03-16 08:08 G | 44474960.77 | 44474960.84 | 44474960.94 | 0.0089 | 0.0084 |
| Jupiter | 117057-09-14 13:39 G | 44475507.85 | 44475508.07 | 44475508.29 | 0.0527 | 0.0187 |
| Saturn | 117065-04-30 05:29 G | 44478292.58 | 44478292.73 | 44478292.89 | 0.0271 | 0.0205 |
| Saturn | 117066-05-12 06:56 G | 44478669.55 | 44478669.79 | 44478670.04 | 0.0271 | 0.0003 |
| Saturn | 117067-05-24 01:10 G | 44479046.41 | 44479046.55 | 44479046.72 | 0.0272 | 0.0213 |
| Jupiter | 117069-09-19 06:56 G | 44479895.74 | 44479895.79 | 44479895.85 | 0.0525 | 0.0507 |
| Saturn | 117080-11-06 22:46 G | 44483962.21 | 44483962.45 | 44483962.70 | 0.0288 | 0.0040 |
| Saturn | 117081-11-21 06:41 G | 44484341.64 | 44484341.78 | 44484341.95 | 0.0287 | 0.0226 |
| Uranus | 117089-09-12 05:44 G | 44487193.50 | 44487193.74 | 44487193.98 | 0.0140 | 0.0043 |
| Uranus | 117090-09-17 07:10 G | 44487563.57 | 44487563.80 | 44487564.04 | 0.0140 | 0.0057 |
| Saturn | 117095-05-07 09:20 G | 44489256.68 | 44489256.89 | 44489257.12 | 0.0272 | 0.0097 |
| Saturn | 117096-05-18 13:53 G | 44489633.87 | 44489634.08 | 44489634.29 | 0.0272 | 0.0127 |
| Pluto | 117105-05-19 08:22 G | 44492920.61 | 44492920.85 | 44492921.10 | 0.0066 | 0.0012 |
| Saturn | 117109-11-01 18:27 G | 44494548.07 | 44494548.27 | 44494548.49 | 0.0287 | 0.0149 |
| Saturn | 117110-11-16 04:46 G | 44494927.49 | 44494927.70 | 44494927.93 | 0.0287 | 0.0122 |
| Jupiter | 117111-03-13 03:34 G | 44495044.48 | 44495044.65 | 44495044.83 | 0.0497 | 0.0309 |
| Jupiter | 117116-09-04 12:12 G | 44497046.95 | 44497047.01 | 44497047.08 | 0.0532 | 0.0510 |
| Jupiter | 117123-03-17 13:10 G | 44499431.81 | 44499432.05 | 44499432.29 | 0.0499 | 0.0063 |
| Saturn | 117124-05-02 03:48 G | 44499843.48 | 44499843.66 | 44499843.84 | 0.0271 | 0.0186 |
| Saturn | 117125-05-14 03:05 G | 44500220.40 | 44500220.63 | 44500220.87 | 0.0272 | 0.0039 |
| Saturn | 117126-05-26 07:53 G | 44500597.77 | 44500597.83 | 44500597.90 | 0.0272 | 0.0259 |
| Mars | 117126-12-20 13:24 G | 44500805.89 | 44500806.06 | 44500806.23 | 0.1624 | 0.0568 |
| Jupiter | 117128-09-09 07:39 G | 44501434.61 | 44501434.82 | 44501435.03 | 0.0530 | 0.0216 |
| Uranus | 117130-03-18 13:10 G | 44501989.83 | 44501990.05 | 44501990.28 | 0.0138 | 0.0054 |
| Neptune | 117130-08-28 20:08 G | 44502153.22 | 44502153.34 | 44502153.52 | 0.0088 | 0.0073 |
| Uranus | 117131-03-23 04:17 G | 44502359.44 | 44502359.68 | 44502359.94 | 0.0138 | 0.0042 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 117131-08-31 06:12 G | 44502520.56 | 44502520.76 | 44502520.98 | 0.0088 | 0.0046 |
| Uranus | 117132-03-26 14:22 G | 44502729.09 | 44502729.10 | 44502729.13 | 0.0137 | 0.0137 |
| Neptune | 117132-09-01 15:05 G | 44502887.90 | 44502888.13 | 44502888.40 | 0.0088 | 0.0028 |
| Neptune | 117133-09-04 06:27 G | 44503255.52 | 44503255.77 | 44503256.02 | 0.0088 | 0.0000 |
| Neptune | 117134-09-06 11:29 G | 44503622.73 | 44503622.98 | 44503623.24 | 0.0088 | 0.0018 |
| Jupiter | 117135-03-22 02:51 G | 44503819.41 | 44503819.62 | 44503819.83 | 0.0501 | 0.0181 |
| Neptune | 117135-09-09 05:15 G | 44503990.52 | 44503990.72 | 44503990.96 | 0.0088 | 0.0046 |
| Neptune | 117136-09-10 09:34 G | 44504357.74 | 44504357.90 | 44504358.09 | 0.0088 | 0.0063 |
| Saturn | 117138-10-26 16:32 G | 44505134.09 | 44505134.19 | 44505134.33 | 0.0288 | 0.0253 |
| Saturn | 117139-11-09 21:20 G | 44505513.14 | 44505513.39 | 44505513.64 | 0.0287 | 0.0015 |
| Jupiter | 117140-09-14 16:17 G | 44505822.95 | 44505823.18 | 44505823.41 | 0.0528 | 0.0083 |
| Saturn | 117140-11-23 05:44 G | 44505892.69 | 44505892.74 | 44505892.80 | 0.0287 | 0.0278 |
| Jupiter | 117147-03-26 11:44 G | 44508206.89 | 44508206.99 | 44508207.12 | 0.0503 | 0.0442 |
| Jupiter | 117152-09-19 05:58 G | 44510210.61 | 44510210.75 | 44510210.91 | 0.0526 | 0.0407 |
| Saturn | 117153-04-27 16:03 G | 44510431.14 | 44510431.17 | 44510431.19 | 0.0272 | 0.0271 |
| Saturn | 117154-05-09 13:24 G | 44510807.82 | 44510808.06 | 44510808.31 | 0.0272 | 0.0049 |
| Saturn | 117155-05-21 09:34 G | 44511184.72 | 44511184.90 | 44511185.10 | 0.0273 | 0.0165 |
| Saturn | 117168-11-03 08:22 G | 44516099.61 | 44516099.85 | 44516100.09 | 0.0287 | 0.0097 |
| Saturn | 117169-11-17 10:46 G | 44516478.74 | 44516478.95 | 44516479.17 | 0.0287 | 0.0158 |
| Uranus | 117173-09-13 22:32 G | 44517875.20 | 44517875.44 | 44517875.69 | 0.0140 | 0.0041 |
| Uranus | 117174-09-18 09:48 G | 44518244.69 | 44518244.91 | 44518245.15 | 0.0140 | 0.0062 |
| Saturn | 117183-05-04 12:12 G | 44521394.81 | 44521395.01 | 44521395.21 | 0.0272 | 0.0141 |
| Saturn | 117184-05-15 12:12 G | 44521771.77 | 44521772.01 | 44521772.25 | 0.0272 | 0.0062 |
| Saturn | 117185-05-27 07:10 G | 44522148.73 | 44522148.80 | 44522148.89 | 0.0272 | 0.0257 |
| Pluto | 117192-11-17 10:03 G | 44524879.66 | 44524879.92 | 44524880.18 | 0.0078 | 0.0002 |
| Jupiter | 117194-03-12 10:17 G | 44525359.79 | 44525359.93 | 44525360.07 | 0.0497 | 0.0379 |
| Saturn | 117197-10-28 02:36 G | 44526685.48 | 44526685.61 | 44526685.76 | 0.0287 | 0.0228 |
| Saturn | 117198-11-11 11:44 G | 44527064.75 | 44527064.99 | 44527065.24 | 0.0287 | 0.0025 |
| Mars | 117199-06-19 18:27 G | 44527285.10 | 44527285.27 | 44527285.45 | 0.1915 | 0.0767 |
| Saturn | 117199-11-25 17:15 G | 44527444.17 | 44527444.22 | 44527444.29 | 0.0287 | 0.0278 |

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| Jupiter | 117206-03-17 00:27 G | 44529747.28 | 44529747.52 | 44529747.76 | 0.0498 | 0.0081 |
| Jupiter | 117211-09-09 04:32 G | 44531749.48 | 44531749.69 | 44531749.90 | 0.0531 | 0.0252 |
| Saturn | 117212-04-28 11:58 G | 44531981.89 | 44531982.00 | 44531982.12 | 0.0272 | 0.0237 |
| Neptune | 117213-03-01 07:39 G | 44532288.78 | 44532288.82 | 44532288.87 | 0.0089 | 0.0088 |
| Saturn | 117213-05-10 17:29 G | 44532359.00 | 44532359.23 | 44532359.47 | 0.0272 | 0.0042 |
| Neptune | 117214-03-03 17:15 G | 44532656.07 | 44532656.22 | 44532656.37 | 0.0089 | 0.0071 |
| Uranus | 117214-03-19 02:51 G | 44532671.38 | 44532671.62 | 44532671.87 | 0.0138 | 0.0050 |
| Saturn | 117214-05-22 21:05 G | 44532736.19 | 44532736.38 | 44532736.59 | 0.0273 | 0.0160 |
| Neptune | 117215-03-06 05:29 G | 44533023.49 | 44533023.73 | 44533023.97 | 0.0089 | 0.0041 |
| Uranus | 117215-03-23 13:10 G | 44533040.83 | 44533041.05 | 44533041.29 | 0.0138 | 0.0048 |
| Neptune | 117216-03-07 19:53 G | 44533391.10 | 44533391.33 | 44533391.58 | 0.0089 | 0.0023 |
| Neptune | 117217-03-10 03:48 G | 44533758.40 | 44533758.66 | 44533758.92 | 0.0089 | 0.0008 |
| Neptune | 117218-03-12 22:32 G | 44534126.20 | 44534126.44 | 44534126.69 | 0.0089 | 0.0025 |
| Jupiter | 117218-03-21 05:58 G | 44534134.54 | 44534134.75 | 44534134.96 | 0.0500 | 0.0203 |
| Neptune | 117219-03-15 03:34 G | 44534493.47 | 44534493.65 | 44534493.87 | 0.0089 | 0.0055 |
| Neptune | 117220-03-16 22:32 G | 44534861.30 | 44534861.44 | 44534861.62 | 0.0089 | 0.0072 |
| Jupiter | 117223-09-14 13:39 G | 44536137.85 | 44536138.07 | 44536138.30 | 0.0529 | 0.0098 |
| Saturn | 117227-11-05 14:22 G | 44537650.87 | 44537651.10 | 44537651.32 | 0.0287 | 0.0096 |
| Saturn | 117228-11-18 23:58 G | 44538030.31 | 44538030.50 | 44538030.71 | 0.0287 | 0.0161 |
| Jupiter | 117230-03-25 18:41 G | 44538522.19 | 44538522.28 | 44538522.39 | 0.0502 | 0.0459 |
| Jupiter | 117235-09-19 13:10 G | 44540525.90 | 44540526.05 | 44540526.21 | 0.0526 | 0.0399 |
| Saturn | 117242-05-05 11:44 G | 44542945.79 | 44542945.99 | 44542946.21 | 0.0272 | 0.0144 |
| Saturn | 117243-05-17 13:53 G | 44543322.85 | 44543323.08 | 44543323.31 | 0.0272 | 0.0065 |
| Saturn | 117256-10-29 09:34 G | 44548236.75 | 44548236.90 | 44548237.07 | 0.0287 | 0.0220 |
| Uranus | 117257-09-13 23:44 G | 44548556.26 | 44548556.49 | 44548556.75 | 0.0140 | 0.0039 |
| Saturn | 117257-11-12 14:36 G | 44548615.87 | 44548616.11 | 44548616.36 | 0.0287 | 0.0043 |
| Uranus | 117258-09-19 01:39 G | 44548926.35 | 44548926.57 | 44548926.80 | 0.0140 | 0.0067 |
| Saturn | 117271-04-30 23:29 G | 44553533.38 | 44553533.48 | 44553533.61 | 0.0273 | 0.0240 |
| Saturn | 117272-05-11 20:36 G | 44553910.11 | 44553910.36 | 44553910.61 | 0.0273 | 0.0023 |
| Saturn | 117273-05-23 19:24 G | 44554287.16 | 44554287.31 | 44554287.48 | 0.0273 | 0.0201 |

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| Jupiter | 117277-03-11 14:36 G | 44555674.97 | 44555675.11 | 44555675.27 | 0.0496 | 0.0373 |
| Saturn | 117286-11-07 06:12 G | 44559202.51 | 44559202.76 | 44559203.02 | 0.0287 | 0.0054 |
| Saturn | 117287-11-21 08:51 G | 44559581.71 | 44559581.87 | 44559582.05 | 0.0286 | 0.0212 |
| Jupiter | 117289-03-16 04:17 G | 44560062.45 | 44560062.68 | 44560062.91 | 0.0498 | 0.0151 |
| Neptune | 117294-08-28 02:51 G | 44562053.50 | 44562053.62 | 44562053.75 | 0.0088 | 0.0076 |
| Jupiter | 117294-09-08 10:03 G | 44562064.74 | 44562064.92 | 44562065.11 | 0.0532 | 0.0332 |
| Neptune | 117295-08-30 15:34 G | 44562420.99 | 44562421.15 | 44562421.36 | 0.0088 | 0.0062 |
| Neptune | 117296-09-01 03:34 G | 44562788.43 | 44562788.65 | 44562788.90 | 0.0088 | 0.0030 |
| Neptune | 117297-09-03 11:15 G | 44563155.71 | 44563155.97 | 44563156.24 | 0.0088 | 0.0016 |
| Uranus | 117298-03-19 10:46 G | 44563352.72 | 44563352.95 | 44563353.18 | 0.0138 | 0.0046 |
| Neptune | 117298-09-06 03:20 G | 44563523.40 | 44563523.64 | 44563523.90 | 0.0088 | 0.0016 |
| Uranus | 117299-03-24 02:36 G | 44563722.39 | 44563722.61 | 44563722.87 | 0.0138 | 0.0055 |
| Neptune | 117299-09-08 07:24 G | 44563890.58 | 44563890.81 | 44563891.07 | 0.0088 | 0.0030 |
| Neptune | 117300-09-11 01:10 G | 44564258.38 | 44564258.55 | 44564258.76 | 0.0088 | 0.0061 |
| Jupiter | 117301-03-21 07:53 G | 44564449.61 | 44564449.83 | 44564450.06 | 0.0500 | 0.0104 |
| Saturn | 117301-05-08 01:24 G | 44564497.35 | 44564497.56 | 44564497.79 | 0.0272 | 0.0106 |
| Neptune | 117301-09-13 05:58 G | 44564625.63 | 44564625.75 | 44564625.89 | 0.0088 | 0.0074 |
| Saturn | 117302-05-19 23:58 G | 44564874.29 | 44564874.50 | 44564874.74 | 0.0272 | 0.0117 |
| Jupiter | 117306-09-14 15:05 G | 44566452.91 | 44566453.13 | 44566453.36 | 0.0529 | 0.0007 |
| Jupiter | 117313-03-26 03:05 G | 44568837.50 | 44568837.63 | 44568837.77 | 0.0502 | 0.0400 |
| Saturn | 117315-11-02 03:20 G | 44569788.45 | 44569788.64 | 44569788.84 | 0.0287 | 0.0162 |
| Saturn | 117316-11-15 10:46 G | 44570167.72 | 44570167.95 | 44570168.19 | 0.0287 | 0.0103 |
| Jupiter | 117318-09-19 15:20 G | 44570840.97 | 44570841.14 | 44570841.32 | 0.0527 | 0.0355 |
| Saturn | 117330-05-02 23:58 G | 44575084.34 | 44575084.50 | 44575084.67 | 0.0273 | 0.0192 |
| Saturn | 117331-05-15 06:12 G | 44575461.53 | 44575461.76 | 44575462.00 | 0.0273 | 0.0028 |
| Mars | 117331-12-20 03:20 G | 44575680.45 | 44575680.64 | 44575680.84 | 0.1632 | 0.0362 |
| Saturn | 117332-05-26 09:05 G | 44575838.77 | 44575838.88 | 44575839.01 | 0.0273 | 0.0237 |
| Uranus | 117341-09-15 17:58 G | 44579238.00 | 44579238.25 | 44579238.49 | 0.0140 | 0.0035 |
| Uranus | 117342-09-20 05:00 G | 44579607.51 | 44579607.71 | 44579607.94 | 0.0140 | 0.0073 |
| Saturn | 117344-10-26 10:03 G | 44580374.82 | 44580374.92 | 44580375.03 | 0.0287 | 0.0259 |

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| Saturn | 117345-11-09 17:44 G | 44580754.00 | 44580754.24 | 44580754.48 | 0.0287 | 0.0004 |
| Saturn | 117346-11-24 02:51 G | 44581133.52 | 44581133.62 | 44581133.75 | 0.0286 | 0.0253 |
| Pluto | 117351-05-21 23:00 G | 44582773.25 | 44582773.46 | 44582773.68 | 0.0066 | 0.0037 |
| Pluto | 117352-05-22 16:17 G | 44583140.02 | 44583140.18 | 44583140.40 | 0.0066 | 0.0045 |
| Jupiter | 117360-03-11 16:32 G | 44585990.07 | 44585990.19 | 44585990.32 | 0.0496 | 0.0419 |
| Saturn | 117360-05-09 02:22 G | 44586048.37 | 44586048.60 | 44586048.84 | 0.0272 | 0.0066 |
| Saturn | 117361-05-21 05:29 G | 44586425.53 | 44586425.73 | 44586425.94 | 0.0272 | 0.0137 |
| Jupiter | 117372-03-16 10:17 G | 44590377.71 | 44590377.93 | 44590378.15 | 0.0498 | 0.0132 |
| Saturn | 117374-11-03 12:41 G | 44591339.81 | 44591340.03 | 44591340.26 | 0.0287 | 0.0137 |
| Saturn | 117375-11-17 17:44 G | 44591719.01 | 44591719.24 | 44591719.46 | 0.0287 | 0.0118 |
| Jupiter | 117377-09-08 13:10 G | 44592379.86 | 44592380.05 | 44592380.24 | 0.0532 | 0.0316 |
| Neptune | 117378-03-04 02:08 G | 44592556.45 | 44592556.59 | 44592556.76 | 0.0089 | 0.0073 |
| Neptune | 117379-03-06 13:10 G | 44592923.88 | 44592924.05 | 44592924.25 | 0.0089 | 0.0058 |
| Neptune | 117380-03-08 00:41 G | 44593291.28 | 44593291.53 | 44593291.80 | 0.0089 | 0.0026 |
| Neptune | 117381-03-10 16:46 G | 44593658.96 | 44593659.20 | 44593659.46 | 0.0089 | 0.0012 |
| Neptune | 117382-03-12 23:29 G | 44594026.23 | 44594026.48 | 44594026.74 | 0.0089 | 0.0022 |
| Uranus | 117382-03-21 01:39 G | 44594034.33 | 44594034.57 | 44594034.83 | 0.0138 | 0.0043 |
| Neptune | 117383-03-15 18:41 G | 44594394.04 | 44594394.28 | 44594394.51 | 0.0089 | 0.0036 |
| Uranus | 117383-03-25 10:46 G | 44594403.74 | 44594403.95 | 44594404.18 | 0.0138 | 0.0061 |
| Neptune | 117384-03-16 23:44 G | 44594761.35 | 44594761.49 | 44594761.67 | 0.0089 | 0.0069 |
| Jupiter | 117384-03-20 14:22 G | 44594764.87 | 44594765.10 | 44594765.33 | 0.0499 | 0.0131 |
| Neptune | 117385-03-19 17:58 G | 44595129.19 | 44595129.25 | 44595129.37 | 0.0089 | 0.0084 |
| Saturn | 117389-05-04 12:56 G | 44596635.85 | 44596636.04 | 44596636.24 | 0.0273 | 0.0165 |
| Jupiter | 117389-09-13 05:44 G | 44596767.52 | 44596767.74 | 44596767.97 | 0.0530 | 0.0022 |
| Saturn | 117390-05-16 10:03 G | 44597012.67 | 44597012.92 | 44597013.17 | 0.0273 | 0.0033 |
| Saturn | 117391-05-28 10:03 G | 44597389.81 | 44597389.92 | 44597390.05 | 0.0273 | 0.0236 |
| Jupiter | 117396-03-25 06:56 G | 44599152.64 | 44599152.79 | 44599152.94 | 0.0501 | 0.0366 |
| Jupiter | 117401-09-19 12:12 G | 44601155.81 | 44601156.01 | 44601156.22 | 0.0528 | 0.0264 |
| Saturn | 117403-10-30 08:08 G | 44601926.73 | 44601926.84 | 44601926.96 | 0.0287 | 0.0251 |
| Saturn | 117404-11-12 11:29 G | 44602305.73 | 44602305.98 | 44602306.24 | 0.0287 | 0.0006 |

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| Saturn | 117405-11-26 13:39 G | 44602684.97 | 44602685.07 | 44602685.20 | 0.0286 | 0.0257 |
| Mars | 117410-12-23 10:17 G | 44604537.84 | 44604537.93 | 44604538.01 | 0.1629 | 0.1440 |
| Saturn | 117418-04-30 14:08 G | 44607223.05 | 44607223.09 | 44607223.15 | 0.0272 | 0.0265 |
| Saturn | 117419-05-12 19:10 G | 44607600.06 | 44607600.30 | 44607600.53 | 0.0272 | 0.0065 |
| Saturn | 117420-05-23 16:32 G | 44607976.99 | 44607977.19 | 44607977.41 | 0.0272 | 0.0147 |
| Uranus | 117424-09-12 08:51 G | 44609549.84 | 44609549.87 | 44609549.94 | 0.0140 | 0.0137 |
| Uranus | 117425-09-16 19:39 G | 44609919.08 | 44609919.32 | 44609919.58 | 0.0140 | 0.0033 |
| Uranus | 117426-09-21 21:20 G | 44610289.20 | 44610289.39 | 44610289.62 | 0.0140 | 0.0079 |
| Saturn | 117433-11-06 08:22 G | 44612891.64 | 44612891.85 | 44612892.08 | 0.0287 | 0.0125 |
| Saturn | 117434-11-20 15:48 G | 44613270.94 | 44613271.16 | 44613271.38 | 0.0287 | 0.0138 |
| Pluto | 117438-11-20 13:24 G | 44614731.91 | 44614732.06 | 44614732.24 | 0.0078 | 0.0061 |
| Jupiter | 117443-03-13 01:10 G | 44616305.49 | 44616305.55 | 44616305.63 | 0.0495 | 0.0471 |
| Saturn | 117448-05-06 15:34 G | 44618186.96 | 44618187.15 | 44618187.34 | 0.0273 | 0.0162 |
| Saturn | 117449-05-18 21:48 G | 44618564.18 | 44618564.41 | 44618564.64 | 0.0273 | 0.0059 |
| Jupiter | 117455-03-17 12:41 G | 44620692.83 | 44620693.03 | 44620693.23 | 0.0497 | 0.0226 |
| Neptune | 117459-08-31 22:46 G | 44622321.30 | 44622321.45 | 44622321.64 | 0.0088 | 0.0064 |
| Neptune | 117460-09-02 10:17 G | 44622688.72 | 44622688.93 | 44622689.18 | 0.0088 | 0.0046 |
| Jupiter | 117460-09-08 07:53 G | 44622694.70 | 44622694.83 | 44622694.96 | 0.0533 | 0.0446 |
| Neptune | 117461-09-04 23:29 G | 44623056.25 | 44623056.48 | 44623056.73 | 0.0088 | 0.0019 |
| Neptune | 117462-09-07 06:27 G | 44623423.51 | 44623423.77 | 44623424.04 | 0.0088 | 0.0002 |
| Saturn | 117462-10-31 15:05 G | 44623477.98 | 44623478.13 | 44623478.29 | 0.0287 | 0.0220 |
| Neptune | 117463-09-09 23:44 G | 44623791.25 | 44623791.49 | 44623791.74 | 0.0088 | 0.0026 |
| Saturn | 117463-11-14 23:29 G | 44623857.24 | 44623857.48 | 44623857.72 | 0.0287 | 0.0045 |
| Neptune | 117464-09-11 03:34 G | 44624158.44 | 44624158.65 | 44624158.88 | 0.0088 | 0.0044 |
| Uranus | 117465-03-17 23:00 G | 44624346.43 | 44624346.46 | 44624346.54 | 0.0138 | 0.0136 |
| Neptune | 117465-09-13 21:34 G | 44624526.26 | 44624526.40 | 44624526.55 | 0.0088 | 0.0072 |
| Uranus | 117466-03-22 08:36 G | 44624715.63 | 44624715.86 | 44624716.11 | 0.0138 | 0.0039 |
| Jupiter | 117467-03-21 15:48 G | 44625079.92 | 44625080.16 | 44625080.40 | 0.0499 | 0.0044 |
| Uranus | 117467-03-27 02:36 G | 44625085.39 | 44625085.61 | 44625085.84 | 0.0138 | 0.0068 |
| Jupiter | 117472-09-13 05:29 G | 44627082.50 | 44627082.73 | 44627082.96 | 0.0531 | 0.0078 |

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| Saturn | 117477-05-01 22:32 G | 44628774.34 | 44628774.44 | 44628774.56 | 0.0272 | 0.0245 |
| Saturn | 117478-05-13 20:51 G | 44629151.13 | 44629151.37 | 44629151.61 | 0.0272 | 0.0024 |
| Jupiter | 117479-03-26 05:29 G | 44629467.57 | 44629467.73 | 44629467.90 | 0.0501 | 0.0341 |
| Saturn | 117479-05-26 00:56 G | 44629528.39 | 44629528.54 | 44629528.70 | 0.0272 | 0.0201 |
| Mars | 117483-06-21 09:05 G | 44631015.68 | 44631015.88 | 44631016.09 | 0.1907 | 0.0104 |
| Jupiter | 117484-09-18 17:00 G | 44631471.02 | 44631471.21 | 44631471.41 | 0.0528 | 0.0286 |
| Saturn | 117492-11-07 17:00 G | 44634442.96 | 44634443.21 | 44634443.46 | 0.0287 | 0.0063 |
| Saturn | 117493-11-21 22:32 G | 44634822.27 | 44634822.44 | 44634822.62 | 0.0287 | 0.0200 |
| Saturn | 117507-05-10 04:17 G | 44639738.46 | 44639738.68 | 44639738.92 | 0.0272 | 0.0110 |
| Saturn | 117508-05-21 00:27 G | 44640115.30 | 44640115.52 | 44640115.75 | 0.0273 | 0.0108 |
| Uranus | 117508-09-13 13:10 G | 44640230.97 | 44640231.05 | 44640231.16 | 0.0140 | 0.0130 |
| Uranus | 117509-09-18 14:22 G | 44640600.86 | 44640601.10 | 44640601.36 | 0.0140 | 0.0029 |
| Uranus | 117510-09-23 01:53 G | 44640970.39 | 44640970.58 | 44640970.80 | 0.0140 | 0.0085 |
| Saturn | 117521-11-03 11:15 G | 44645029.76 | 44645029.97 | 44645030.17 | 0.0287 | 0.0161 |
| Saturn | 117522-11-17 14:08 G | 44645408.85 | 44645409.09 | 44645409.34 | 0.0287 | 0.0094 |
| Jupiter | 117526-03-13 04:17 G | 44646620.60 | 44646620.68 | 44646620.77 | 0.0494 | 0.0461 |
| Saturn | 117536-05-04 08:51 G | 44650325.71 | 44650325.87 | 44650326.04 | 0.0272 | 0.0193 |
| Saturn | 117537-05-16 12:27 G | 44650702.77 | 44650703.02 | 44650703.26 | 0.0272 | 0.0017 |
| Jupiter | 117538-03-17 11:15 G | 44651007.77 | 44651007.97 | 44651008.17 | 0.0496 | 0.0212 |
| Saturn | 117538-05-28 08:08 G | 44651079.69 | 44651079.84 | 44651080.00 | 0.0272 | 0.0211 |
| Neptune | 117543-03-07 21:05 G | 44652824.21 | 44652824.38 | 44652824.59 | 0.0089 | 0.0063 |
| Jupiter | 117543-09-09 11:58 G | 44653009.86 | 44653010.00 | 44653010.14 | 0.0533 | 0.0423 |
| Neptune | 117544-03-09 09:20 G | 44653191.69 | 44653191.89 | 44653192.12 | 0.0089 | 0.0043 |
| Neptune | 117545-03-11 18:56 G | 44653559.04 | 44653559.29 | 44653559.57 | 0.0089 | 0.0017 |
| Neptune | 117546-03-14 12:27 G | 44653926.77 | 44653927.02 | 44653927.28 | 0.0089 | 0.0005 |
| Neptune | 117547-03-16 18:12 G | 44654294.03 | 44654294.26 | 44654294.52 | 0.0089 | 0.0033 |
| Neptune | 117548-03-18 13:24 G | 44654661.88 | 44654662.06 | 44654662.30 | 0.0089 | 0.0053 |
| Uranus | 117549-03-19 06:56 G | 44655027.72 | 44655027.79 | 44655027.91 | 0.0138 | 0.0129 |
| Neptune | 117549-03-20 19:10 G | 44655029.21 | 44655029.30 | 44655029.44 | 0.0089 | 0.0080 |
| Jupiter | 117550-03-22 00:27 G | 44655395.28 | 44655395.52 | 44655395.77 | 0.0498 | 0.0024 |

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| Uranus | 117550-03-24 02:08 G | 44655397.35 | 44655397.59 | 44655397.85 | 0.0138 | 0.0034 |
| Uranus | 117551-03-28 10:03 G | 44655766.73 | 44655766.92 | 44655767.14 | 0.0138 | 0.0076 |
| Saturn | 117551-11-11 11:29 G | 44655994.74 | 44655994.98 | 44655995.22 | 0.0287 | 0.0040 |
| Saturn | 117552-11-24 17:29 G | 44656374.07 | 44656374.23 | 44656374.41 | 0.0287 | 0.0211 |
| Jupiter | 117555-09-14 07:39 G | 44657397.60 | 44657397.82 | 44657398.05 | 0.0531 | 0.0132 |
| Jupiter | 117562-03-26 09:05 G | 44659782.70 | 44659782.88 | 44659783.08 | 0.0500 | 0.0267 |
| Saturn | 117566-05-11 07:24 G | 44661289.59 | 44661289.81 | 44661290.03 | 0.0272 | 0.0088 |
| Saturn | 117567-05-23 13:10 G | 44661666.84 | 44661667.05 | 44661667.27 | 0.0273 | 0.0109 |
| Jupiter | 117567-09-19 12:12 G | 44661785.79 | 44661786.01 | 44661786.23 | 0.0529 | 0.0161 |
| Jupiter | 117579-09-24 07:10 G | 44666173.73 | 44666173.80 | 44666173.89 | 0.0527 | 0.0495 |
| Saturn | 117580-11-04 14:36 G | 44666580.91 | 44666581.11 | 44666581.32 | 0.0287 | 0.0158 |
| Saturn | 117581-11-19 00:12 G | 44666960.29 | 44666960.51 | 44666960.74 | 0.0287 | 0.0097 |
| Uranus | 117592-09-14 05:44 G | 44670912.65 | 44670912.74 | 44670912.88 | 0.0140 | 0.0124 |
| Uranus | 117593-09-18 16:46 G | 44671281.96 | 44671282.20 | 44671282.46 | 0.0140 | 0.0025 |
| Uranus | 117594-09-23 18:27 G | 44671652.08 | 44671652.27 | 44671652.47 | 0.0140 | 0.0090 |
| Saturn | 117595-05-06 14:36 G | 44671876.94 | 44671877.11 | 44671877.31 | 0.0272 | 0.0187 |
| Saturn | 117596-05-17 13:39 G | 44672253.83 | 44672254.07 | 44672254.31 | 0.0272 | 0.0015 |
| Saturn | 117597-05-29 17:44 G | 44672631.12 | 44672631.24 | 44672631.37 | 0.0272 | 0.0229 |
| Pluto | 117598-05-25 23:58 G | 44672992.27 | 44672992.50 | 44672992.76 | 0.0066 | 0.0013 |
| Saturn | 117609-10-29 11:58 G | 44677166.99 | 44677167.00 | 44677167.04 | 0.0287 | 0.0285 |
| Saturn | 117610-11-12 14:36 G | 44677545.86 | 44677546.11 | 44677546.36 | 0.0287 | 0.0027 |
| Saturn | 117611-11-26 21:20 G | 44677925.26 | 44677925.39 | 44677925.53 | 0.0287 | 0.0235 |
| Mars | 117615-12-23 11:00 G | 44679412.75 | 44679412.96 | 44679413.17 | 0.1637 | 0.0041 |
| Jupiter | 117621-03-16 17:00 G | 44681323.02 | 44681323.21 | 44681323.40 | 0.0496 | 0.0276 |
| Neptune | 117623-09-01 09:48 G | 44682221.79 | 44682221.91 | 44682222.07 | 0.0088 | 0.0075 |
| Neptune | 117624-09-02 19:10 G | 44682589.13 | 44682589.30 | 44682589.51 | 0.0088 | 0.0057 |
| Saturn | 117625-05-12 15:34 G | 44682840.91 | 44682841.15 | 44682841.39 | 0.0272 | 0.0079 |
| Neptune | 117625-09-05 05:00 G | 44682956.47 | 44682956.71 | 44682956.97 | 0.0088 | 0.0029 |
| Saturn | 117626-05-24 11:44 G | 44683217.79 | 44683217.99 | 44683218.20 | 0.0272 | 0.0144 |
| Neptune | 117626-09-07 19:53 G | 44683324.08 | 44683324.33 | 44683324.58 | 0.0088 | 0.0010 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 117626-09-08 08:36 G | 44683324.81 | 44683324.86 | 44683324.92 | 0.0533 | 0.0514 |
| Neptune | 117627-09-10 00:56 G | 44683691.28 | 44683691.54 | 44683691.80 | 0.0088 | 0.0018 |
| Neptune | 117628-09-11 18:41 G | 44684059.05 | 44684059.28 | 44684059.52 | 0.0088 | 0.0035 |
| Neptune | 117629-09-13 22:46 G | 44684426.28 | 44684426.45 | 44684426.63 | 0.0088 | 0.0062 |
| Neptune | 117630-09-16 15:05 G | 44684794.05 | 44684794.13 | 44684794.27 | 0.0088 | 0.0080 |
| Uranus | 117633-03-20 00:56 G | 44685709.43 | 44685709.54 | 44685709.69 | 0.0138 | 0.0119 |
| Jupiter | 117633-03-21 09:20 G | 44685710.65 | 44685710.89 | 44685711.13 | 0.0498 | 0.0020 |
| Uranus | 117634-03-24 09:48 G | 44686078.67 | 44686078.91 | 44686079.15 | 0.0138 | 0.0027 |
| Uranus | 117635-03-29 04:17 G | 44686448.48 | 44686448.68 | 44686448.89 | 0.0138 | 0.0083 |
| Jupiter | 117638-09-13 06:12 G | 44687712.53 | 44687712.76 | 44687712.99 | 0.0532 | 0.0154 |
| Saturn | 117639-11-07 04:03 G | 44688132.45 | 44688132.67 | 44688132.91 | 0.0287 | 0.0126 |
| Saturn | 117640-11-20 07:10 G | 44688511.58 | 44688511.80 | 44688512.03 | 0.0287 | 0.0142 |
| Jupiter | 117645-03-25 09:05 G | 44690097.70 | 44690097.88 | 44690098.07 | 0.0499 | 0.0289 |
| Jupiter | 117650-09-18 12:56 G | 44692100.83 | 44692101.04 | 44692101.26 | 0.0530 | 0.0187 |
| Saturn | 117654-05-08 00:27 G | 44693428.34 | 44693428.52 | 44693428.71 | 0.0272 | 0.0164 |
| Saturn | 117655-05-20 01:39 G | 44693805.33 | 44693805.57 | 44693805.81 | 0.0272 | 0.0062 |
| Jupiter | 117662-09-23 15:34 G | 44696489.05 | 44696489.15 | 44696489.25 | 0.0527 | 0.0479 |
| Saturn | 117668-10-30 21:20 G | 44698718.26 | 44698718.39 | 44698718.53 | 0.0287 | 0.0234 |
| Saturn | 117669-11-14 05:15 G | 44699097.48 | 44699097.72 | 44699097.97 | 0.0287 | 0.0030 |
| Uranus | 117676-09-14 10:17 G | 44701593.81 | 44701593.93 | 44701594.09 | 0.0140 | 0.0117 |
| Uranus | 117677-09-19 11:29 G | 44701963.74 | 44701963.98 | 44701964.24 | 0.0140 | 0.0020 |
| Uranus | 117678-09-23 23:00 G | 44702333.28 | 44702333.46 | 44702333.65 | 0.0140 | 0.0096 |
| Saturn | 117683-05-02 14:36 G | 44704015.03 | 44704015.11 | 44704015.22 | 0.0272 | 0.0250 |
| Saturn | 117684-05-13 19:53 G | 44704392.10 | 44704392.33 | 44704392.57 | 0.0272 | 0.0029 |
| Saturn | 117685-05-25 23:44 G | 44704769.31 | 44704769.49 | 44704769.67 | 0.0272 | 0.0184 |
| Pluto | 117685-11-24 03:34 G | 44704951.42 | 44704951.65 | 44704951.91 | 0.0078 | 0.0024 |
| Saturn | 117698-11-08 04:03 G | 44709683.45 | 44709683.67 | 44709683.91 | 0.0287 | 0.0083 |
| Saturn | 117699-11-22 13:53 G | 44710062.90 | 44710063.08 | 44710063.28 | 0.0287 | 0.0176 |
| Jupiter | 117704-03-16 20:22 G | 44711638.16 | 44711638.35 | 44711638.54 | 0.0495 | 0.0281 |
| Neptune | 117707-03-08 02:22 G | 44712724.46 | 44712724.60 | 44712724.74 | 0.0089 | 0.0073 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 117708-03-09 15:05 G | 44713091.93 | 44713092.13 | 44713092.36 | 0.0089 | 0.0054 |
| Neptune | 117709-03-12 05:29 G | 44713459.51 | 44713459.73 | 44713459.99 | 0.0089 | 0.0026 |
| Neptune | 117710-03-14 13:24 G | 44713826.80 | 44713827.06 | 44713827.33 | 0.0089 | 0.0008 |
| Neptune | 117711-03-17 07:39 G | 44714194.59 | 44714194.82 | 44714195.08 | 0.0089 | 0.0023 |
| Neptune | 117712-03-18 12:56 G | 44714561.83 | 44714562.04 | 44714562.29 | 0.0089 | 0.0040 |
| Neptune | 117713-03-21 07:39 G | 44714929.68 | 44714929.82 | 44714930.01 | 0.0089 | 0.0070 |
| Saturn | 117713-05-10 00:12 G | 44714979.29 | 44714979.51 | 44714979.73 | 0.0272 | 0.0120 |
| Neptune | 117714-03-23 14:22 G | 44715297.07 | 44715297.10 | 44715297.17 | 0.0089 | 0.0088 |
| Saturn | 117714-05-22 00:41 G | 44715356.31 | 44715356.53 | 44715356.76 | 0.0272 | 0.0085 |
| Jupiter | 117716-03-21 13:53 G | 44716025.85 | 44716026.08 | 44716026.31 | 0.0497 | 0.0053 |
| Uranus | 117717-03-21 08:36 G | 44716390.73 | 44716390.86 | 44716391.02 | 0.0138 | 0.0111 |
| Uranus | 117718-03-26 04:32 G | 44716760.44 | 44716760.69 | 44716760.95 | 0.0138 | 0.0021 |
| Uranus | 117719-03-30 11:29 G | 44717129.82 | 44717129.98 | 44717130.19 | 0.0138 | 0.0091 |
| Jupiter | 117721-09-13 14:51 G | 44718027.91 | 44718028.12 | 44718028.35 | 0.0533 | 0.0236 |
| Saturn | 117727-11-02 22:03 G | 44720269.27 | 44720269.42 | 44720269.59 | 0.0287 | 0.0219 |
| Jupiter | 117728-03-25 16:46 G | 44720412.98 | 44720413.20 | 44720413.41 | 0.0499 | 0.0202 |
| Saturn | 117728-11-16 02:22 G | 44720648.36 | 44720648.60 | 44720648.85 | 0.0287 | 0.0035 |
| Jupiter | 117733-09-18 17:00 G | 44722415.99 | 44722416.21 | 44722416.43 | 0.0530 | 0.0104 |
| Jupiter | 117740-03-30 12:12 G | 44724801.01 | 44724801.01 | 44724801.03 | 0.0501 | 0.0500 |
| Saturn | 117742-05-05 00:41 G | 44725566.40 | 44725566.53 | 44725566.68 | 0.0272 | 0.0222 |
| Saturn | 117743-05-16 21:48 G | 44725943.17 | 44725943.41 | 44725943.66 | 0.0272 | 0.0026 |
| Saturn | 117744-05-27 19:10 G | 44726320.13 | 44726320.30 | 44726320.49 | 0.0272 | 0.0176 |
| Jupiter | 117745-09-23 20:08 G | 44726804.22 | 44726804.34 | 44726804.46 | 0.0528 | 0.0454 |
| Saturn | 117757-11-10 10:03 G | 44731234.68 | 44731234.92 | 44731235.17 | 0.0287 | 0.0090 |
| Saturn | 117758-11-24 13:10 G | 44731613.85 | 44731614.05 | 44731614.27 | 0.0287 | 0.0169 |
| Uranus | 117760-09-16 02:36 G | 44732275.48 | 44732275.61 | 44732275.79 | 0.0140 | 0.0112 |
| Uranus | 117761-09-20 13:53 G | 44732644.82 | 44732645.08 | 44732645.33 | 0.0140 | 0.0017 |
| Uranus | 117762-09-25 14:36 G | 44733014.95 | 44733015.11 | 44733015.30 | 0.0140 | 0.0101 |
| Mars | 117767-06-23 03:48 G | 44734746.49 | 44734746.66 | 44734746.83 | 0.1898 | 0.1138 |
| Saturn | 117772-05-11 09:34 G | 44736530.70 | 44736530.90 | 44736531.12 | 0.0272 | 0.0127 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 117773-05-23 08:22 G | 44736907.62 | 44736907.85 | 44736908.09 | 0.0272 | 0.0084 |
| Saturn | 117786-11-04 06:27 G | 44741820.61 | 44741820.77 | 44741820.93 | 0.0287 | 0.0213 |
| Jupiter | 117787-03-17 06:27 G | 44741953.58 | 44741953.77 | 44741953.97 | 0.0495 | 0.0294 |
| Saturn | 117787-11-18 12:55 G | 44742199.79 | 44742200.04 | 44742200.29 | 0.0287 | 0.0050 |
| Neptune | 117788-09-03 02:51 G | 44742489.44 | 44742489.62 | 44742489.84 | 0.0088 | 0.0059 |
| Neptune | 117789-09-05 15:19 G | 44742856.93 | 44742857.14 | 44742857.36 | 0.0088 | 0.0045 |
| Neptune | 117790-09-07 22:46 G | 44743224.19 | 44743224.45 | 44743224.71 | 0.0088 | 0.0013 |
| Neptune | 117791-09-10 15:34 G | 44743591.89 | 44743592.15 | 44743592.40 | 0.0088 | 0.0001 |
| Neptune | 117792-09-11 19:24 G | 44743959.08 | 44743959.31 | 44743959.57 | 0.0088 | 0.0032 |
| Neptune | 117793-09-14 13:24 G | 44744326.85 | 44744327.06 | 44744327.30 | 0.0088 | 0.0045 |
| Neptune | 117794-09-16 18:41 G | 44744694.17 | 44744694.28 | 44744694.41 | 0.0088 | 0.0077 |
| Jupiter | 117799-03-21 22:31 G | 44746341.21 | 44746341.44 | 44746341.66 | 0.0497 | 0.0017 |
| Uranus | 117801-03-23 02:36 G | 44747072.46 | 44747072.61 | 44747072.81 | 0.0138 | 0.0104 |
| Saturn | 117801-05-06 20:36 G | 44747117.24 | 44747117.36 | 44747117.50 | 0.0272 | 0.0227 |
| Uranus | 117802-03-27 11:15 G | 44747441.73 | 44747441.97 | 44747442.22 | 0.0138 | 0.0015 |
| Saturn | 117802-05-19 02:22 G | 44747494.36 | 44747494.60 | 44747494.83 | 0.0272 | 0.0008 |
| Uranus | 117803-04-01 05:58 G | 44747811.58 | 44747811.75 | 44747811.94 | 0.0138 | 0.0097 |
| Saturn | 117803-05-31 04:03 G | 44747871.53 | 44747871.67 | 44747871.82 | 0.0272 | 0.0216 |
| Jupiter | 117804-09-13 21:05 G | 44748343.16 | 44748343.38 | 44748343.60 | 0.0533 | 0.0204 |
| Jupiter | 117811-03-27 04:03 G | 44750728.46 | 44750728.67 | 44750728.88 | 0.0499 | 0.0238 |
| Jupiter | 117816-09-18 16:31 G | 44752730.97 | 44752731.19 | 44752731.42 | 0.0531 | 0.0094 |
| Saturn | 117816-11-12 08:36 G | 44752785.62 | 44752785.86 | 44752786.10 | 0.0287 | 0.0051 |
| Saturn | 117817-11-26 18:41 G | 44753165.13 | 44753165.28 | 44753165.45 | 0.0287 | 0.0218 |
| Mars | 117820-12-23 11:15 G | 44754287.81 | 44754287.97 | 44754288.12 | 0.1645 | 0.0846 |
| Jupiter | 117823-03-31 17:43 G | 44755116.17 | 44755116.24 | 44755116.31 | 0.0500 | 0.0470 |
| Jupiter | 117828-09-24 01:24 G | 44757119.40 | 44757119.56 | 44757119.72 | 0.0529 | 0.0381 |
| Saturn | 117831-05-14 04:17 G | 44758081.46 | 44758081.68 | 44758081.92 | 0.0272 | 0.0092 |
| Saturn | 117832-05-25 07:24 G | 44758458.61 | 44758458.81 | 44758459.01 | 0.0272 | 0.0132 |
| Pluto | 117844-05-28 13:24 G | 44762844.85 | 44762845.06 | 44762845.28 | 0.0066 | 0.0037 |
| Uranus | 117844-09-17 07:53 G | 44762956.66 | 44762956.83 | 44762957.00 | 0.0140 | 0.0105 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Pluto | 117845-05-30 03:19 G | 44763211.52 | 44763211.64 | 44763211.82 | 0.0066 | 0.0053 |
| Uranus | 117845-09-22 08:22 G | 44763326.61 | 44763326.85 | 44763327.11 | 0.0140 | 0.0013 |
| Saturn | 117845-11-06 02:36 G | 44763371.40 | 44763371.61 | 44763371.82 | 0.0287 | 0.0159 |
| Uranus | 117846-09-26 19:39 G | 44763696.16 | 44763696.32 | 44763696.50 | 0.0140 | 0.0106 |
| Saturn | 117846-11-20 08:07 G | 44763750.61 | 44763750.84 | 44763751.07 | 0.0287 | 0.0099 |
| Saturn | 117860-05-08 03:05 G | 44768668.46 | 44768668.63 | 44768668.83 | 0.0272 | 0.0179 |
| Saturn | 117861-05-19 23:29 G | 44769045.24 | 44769045.48 | 44769045.73 | 0.0272 | 0.0036 |
| Saturn | 117862-05-31 23:43 G | 44769422.39 | 44769422.49 | 44769422.62 | 0.0272 | 0.0236 |
| Jupiter | 117870-03-17 19:53 G | 44772269.16 | 44772269.33 | 44772269.51 | 0.0495 | 0.0342 |
| Neptune | 117872-03-09 21:34 G | 44772992.22 | 44772992.40 | 44772992.60 | 0.0089 | 0.0059 |
| Neptune | 117873-03-12 07:10 G | 44773359.58 | 44773359.80 | 44773360.04 | 0.0089 | 0.0043 |
| Neptune | 117874-03-15 00:55 G | 44773727.29 | 44773727.54 | 44773727.79 | 0.0089 | 0.0011 |
| Saturn | 117874-10-31 06:55 G | 44773957.72 | 44773957.79 | 44773957.86 | 0.0287 | 0.0275 |
| Neptune | 117875-03-17 06:55 G | 44774094.53 | 44774094.79 | 44774095.05 | 0.0089 | 0.0003 |
| Saturn | 117875-11-14 08:36 G | 44774336.60 | 44774336.86 | 44774337.12 | 0.0287 | 0.0027 |
| Neptune | 117876-03-19 01:53 G | 44774462.36 | 44774462.58 | 44774462.83 | 0.0089 | 0.0037 |
| Saturn | 117876-11-27 12:27 G | 44774715.87 | 44774716.02 | 44774716.18 | 0.0287 | 0.0224 |
| Neptune | 117877-03-21 07:39 G | 44774829.63 | 44774829.82 | 44774830.04 | 0.0089 | 0.0051 |
| Neptune | 117878-03-24 00:55 G | 44775197.47 | 44775197.54 | 44775197.66 | 0.0089 | 0.0084 |
| Jupiter | 117882-03-22 04:17 G | 44776656.46 | 44776656.68 | 44776656.90 | 0.0496 | 0.0095 |
| Uranus | 117885-03-23 10:17 G | 44777753.75 | 44777753.93 | 44777754.11 | 0.0138 | 0.0097 |
| Uranus | 117886-03-28 05:43 G | 44778123.49 | 44778123.74 | 44778124.00 | 0.0138 | 0.0010 |
| Uranus | 117887-04-01 13:10 G | 44778492.89 | 44778493.05 | 44778493.22 | 0.0138 | 0.0103 |
| Jupiter | 117887-09-13 23:15 G | 44778658.28 | 44778658.47 | 44778658.66 | 0.0534 | 0.0309 |
| Saturn | 117889-05-03 07:24 G | 44779255.79 | 44779255.81 | 44779255.86 | 0.0273 | 0.0269 |
| Saturn | 117890-05-15 12:41 G | 44779632.79 | 44779633.03 | 44779633.26 | 0.0272 | 0.0061 |
| Saturn | 117891-05-27 08:51 G | 44780009.66 | 44780009.87 | 44780010.09 | 0.0272 | 0.0135 |
| Jupiter | 117894-03-26 14:22 G | 44781043.87 | 44781044.10 | 44781044.32 | 0.0497 | 0.0183 |
| Jupiter | 117899-09-18 21:19 G | 44783046.16 | 44783046.39 | 44783046.62 | 0.0532 | 0.0056 |
| Mars | 117899-12-26 16:03 G | 44783145.01 | 44783145.17 | 44783145.32 | 0.1641 | 0.1062 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 117904-11-08 11:00 G | 44784922.76 | 44784922.96 | 44784923.17 | 0.0287 | 0.0160 |
| Saturn | 117905-11-22 14:51 G | 44785301.87 | 44785302.12 | 44785302.36 | 0.0287 | 0.0092 |
| Jupiter | 117906-03-31 23:58 G | 44785431.43 | 44785431.50 | 44785431.57 | 0.0500 | 0.0472 |
| Jupiter | 117911-09-25 10:03 G | 44787434.78 | 44787434.92 | 44787435.06 | 0.0529 | 0.0421 |
| Saturn | 117919-05-10 23:58 G | 44790219.33 | 44790219.50 | 44790219.70 | 0.0272 | 0.0171 |
| Saturn | 117920-05-22 06:12 G | 44790596.52 | 44790596.76 | 44790597.00 | 0.0272 | 0.0028 |
| Saturn | 117921-06-03 05:15 G | 44790973.60 | 44790973.72 | 44790973.84 | 0.0272 | 0.0236 |
| Uranus | 117928-09-19 00:55 G | 44793638.37 | 44793638.54 | 44793638.72 | 0.0140 | 0.0100 |
| Uranus | 117929-09-23 11:15 G | 44794007.71 | 44794007.97 | 44794008.22 | 0.0140 | 0.0007 |
| Uranus | 117930-09-28 11:43 G | 44794377.86 | 44794377.99 | 44794378.17 | 0.0140 | 0.0111 |
| Pluto | 117931-11-28 00:27 G | 44794803.34 | 44794803.52 | 44794803.75 | 0.0078 | 0.0048 |
| Saturn | 117933-11-02 02:36 G | 44795508.60 | 44795508.61 | 44795508.64 | 0.0287 | 0.0286 |
| Saturn | 117934-11-16 11:43 G | 44795887.75 | 44795887.99 | 44795888.23 | 0.0287 | 0.0027 |
| Saturn | 117935-11-30 20:07 G | 44796267.20 | 44796267.34 | 44796267.49 | 0.0287 | 0.0234 |
| Saturn | 117949-05-17 06:27 G | 44801183.54 | 44801183.77 | 44801184.00 | 0.0273 | 0.0068 |
| Saturn | 117950-05-29 11:58 G | 44801560.81 | 44801561.00 | 44801561.20 | 0.0273 | 0.0153 |
| Neptune | 117952-09-04 11:15 G | 44802389.84 | 44802389.97 | 44802390.10 | 0.0088 | 0.0075 |
| Jupiter | 117953-03-18 06:55 G | 44802584.61 | 44802584.79 | 44802584.98 | 0.0493 | 0.0310 |
| Neptune | 117953-09-06 19:39 G | 44802757.12 | 44802757.32 | 44802757.55 | 0.0088 | 0.0051 |
| Neptune | 117954-09-09 10:31 G | 44803124.72 | 44803124.94 | 44803125.19 | 0.0088 | 0.0030 |
| Neptune | 117955-09-11 15:34 G | 44803491.89 | 44803492.15 | 44803492.41 | 0.0088 | 0.0006 |
| Neptune | 117956-09-13 09:19 G | 44803859.65 | 44803859.89 | 44803860.15 | 0.0088 | 0.0016 |
| Neptune | 117957-09-15 13:24 G | 44804226.85 | 44804227.06 | 44804227.30 | 0.0088 | 0.0041 |
| Neptune | 117958-09-18 05:43 G | 44804594.58 | 44804594.74 | 44804594.95 | 0.0088 | 0.0062 |
| Neptune | 117959-09-20 13:39 G | 44804962.04 | 44804962.07 | 44804962.14 | 0.0088 | 0.0086 |
| Saturn | 117963-11-10 06:55 G | 44806473.57 | 44806473.79 | 44806474.01 | 0.0286 | 0.0134 |
| Saturn | 117964-11-23 14:07 G | 44806852.88 | 44806853.09 | 44806853.31 | 0.0286 | 0.0131 |
| Jupiter | 117965-03-22 11:00 G | 44806971.74 | 44806971.96 | 44806972.19 | 0.0495 | 0.0066 |
| Uranus | 117969-03-25 03:48 G | 44808435.47 | 44808435.66 | 44808435.87 | 0.0138 | 0.0089 |
| Uranus | 117970-03-29 12:27 G | 44808804.77 | 44808805.02 | 44808805.27 | 0.0138 | 0.0003 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 117970-09-14 07:24 G | 44808973.62 | 44808973.81 | 44808974.01 | 0.0534 | 0.0275 |
| Uranus | 117971-04-03 06:55 G | 44809174.64 | 44809174.79 | 44809174.95 | 0.0138 | 0.0109 |
| Jupiter | 117977-03-27 02:07 G | 44811359.36 | 44811359.59 | 44811359.82 | 0.0497 | 0.0164 |
| Saturn | 117978-05-12 02:51 G | 44811770.43 | 44811770.62 | 44811770.83 | 0.0272 | 0.0160 |
| Saturn | 117979-05-24 00:27 G | 44812147.29 | 44812147.52 | 44812147.76 | 0.0272 | 0.0068 |
| Jupiter | 117982-09-19 04:03 G | 44813361.44 | 44813361.67 | 44813361.91 | 0.0532 | 0.0022 |
| Jupiter | 117989-03-31 08:22 G | 44815746.72 | 44815746.85 | 44815746.98 | 0.0499 | 0.0405 |
| Saturn | 117992-11-03 06:41 G | 44817059.65 | 44817059.78 | 44817059.93 | 0.0286 | 0.0239 |
| Saturn | 117993-11-17 08:07 G | 44817438.58 | 44817438.84 | 44817439.09 | 0.0287 | 0.0025 |
| Jupiter | 117994-09-24 12:12 G | 44817749.83 | 44817750.01 | 44817750.19 | 0.0530 | 0.0318 |
| Saturn | 117994-12-01 13:39 G | 44817818.05 | 44817818.07 | 44817818.10 | 0.0286 | 0.0284 |

119TH MILLENNIUM CE

This is a list of transits of Moon in the 119th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|--------|-------------------------|-------------|-------------|-------------|--------|--------|-------|---|
| Saturn | 118007-05-07 10:03 G | 44822357.83 | 44822357.92 | 44822358.03 | 0.0273 | 0.0246 | | |
| Saturn | 118008-05-18 12:41 G | 44822734.79 | 44822735.03 | 44822735.28 | 0.0273 | 0.0020 | | |
| Saturn | 118009-05-30 09:19 G | 44823111.72 | 44823111.89 | 44823112.07 | 0.0273 | 0.0195 | | |
| Uranus | 118012-09-19 06:12 G | 44824319.57 | 44824319.76 | 44824319.95 | 0.0140 | 0.0093 | | |
| Uranus | 118013-09-24 06:55 G | 44824689.54 | 44824689.79 | 44824690.04 | 0.0140 | 0.0001 | | |
| Uranus | 118014-09-28 17:43 G | 44825059.11 | 44825059.24 | 44825059.39 | 0.0140 | 0.0116 | | |
| Saturn | 118022-11-11 17:58 G | 44828025.02 | 44828025.25 | 44828025.50 | 0.0286 | 0.0091 | | |
| Saturn | 118023-11-25 19:53 G | 44828404.12 | 44828404.33 | 44828404.55 | 0.0286 | 0.0163 | | |

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| Neptune | 118036-03-10 01:10 G | 44832892.41 | 44832892.55 | 44832892.71 | 0.0089 | 0.0073 |
| Jupiter | 118036-03-17 17:29 G | 44832900.09 | 44832900.23 | 44832900.37 | 0.0493 | 0.0393 |
| Neptune | 118037-03-12 17:15 G | 44833260.03 | 44833260.22 | 44833260.44 | 0.0089 | 0.0052 |
| Saturn | 118037-05-13 05:29 G | 44833321.53 | 44833321.73 | 44833321.95 | 0.0272 | 0.0116 |
| Neptune | 118038-03-15 00:12 G | 44833627.26 | 44833627.51 | 44833627.76 | 0.0089 | 0.0025 |
| Saturn | 118038-05-25 09:48 G | 44833698.68 | 44833698.91 | 44833699.14 | 0.0272 | 0.0092 |
| Neptune | 118039-03-17 19:39 G | 44833995.06 | 44833995.32 | 44833995.57 | 0.0089 | 0.0004 |
| Neptune | 118040-03-19 00:41 G | 44834362.29 | 44834362.53 | 44834362.78 | 0.0089 | 0.0022 |
| Neptune | 118041-03-21 18:41 G | 44834730.06 | 44834730.28 | 44834730.53 | 0.0089 | 0.0043 |
| Neptune | 118042-03-24 02:22 G | 44835097.47 | 44835097.60 | 44835097.79 | 0.0089 | 0.0069 |
| Jupiter | 118048-03-21 19:53 G | 44837287.11 | 44837287.33 | 44837287.55 | 0.0495 | 0.0128 |
| Mars | 118051-06-24 20:36 G | 44838477.21 | 44838477.36 | 44838477.51 | 0.1890 | 0.1337 |
| Saturn | 118051-11-05 11:58 G | 44838610.86 | 44838611.00 | 44838611.15 | 0.0286 | 0.0225 |
| Saturn | 118052-11-18 18:55 G | 44838990.04 | 44838990.29 | 44838990.53 | 0.0287 | 0.0028 |
| Uranus | 118053-03-25 11:43 G | 44839116.80 | 44839116.99 | 44839117.19 | 0.0138 | 0.0083 |
| Jupiter | 118053-09-13 08:07 G | 44839288.68 | 44839288.84 | 44839289.01 | 0.0535 | 0.0354 |
| Saturn | 118053-12-03 00:27 G | 44839369.47 | 44839369.52 | 44839369.58 | 0.0286 | 0.0279 |
| Uranus | 118054-03-30 06:55 G | 44839486.53 | 44839486.79 | 44839487.05 | 0.0138 | 0.0004 |
| Uranus | 118055-04-03 14:36 G | 44839855.99 | 44839856.11 | 44839856.25 | 0.0138 | 0.0116 |
| Jupiter | 118060-03-26 12:41 G | 44841674.80 | 44841675.03 | 44841675.25 | 0.0497 | 0.0163 |
| Jupiter | 118065-09-18 04:03 G | 44843676.43 | 44843676.67 | 44843676.92 | 0.0533 | 0.0008 |
| Saturn | 118066-05-08 05:15 G | 44843908.58 | 44843908.72 | 44843908.88 | 0.0273 | 0.0215 |
| Saturn | 118067-05-20 10:31 G | 44844285.71 | 44844285.94 | 44844286.18 | 0.0273 | 0.0014 |
| Saturn | 118068-05-31 16:46 G | 44844663.03 | 44844663.20 | 44844663.37 | 0.0273 | 0.0189 |
| Jupiter | 118072-03-30 14:51 G | 44846062.03 | 44846062.12 | 44846062.24 | 0.0498 | 0.0439 |
| Jupiter | 118077-09-23 11:00 G | 44848064.79 | 44848064.96 | 44848065.13 | 0.0531 | 0.0340 |
| Saturn | 118081-11-12 18:27 G | 44849576.05 | 44849576.27 | 44849576.51 | 0.0286 | 0.0096 |
| Saturn | 118082-11-27 02:22 G | 44849955.40 | 44849955.60 | 44849955.80 | 0.0286 | 0.0162 |
| Pluto | 118091-06-01 05:58 G | 44853063.51 | 44853063.75 | 44853064.01 | 0.0066 | 0.0006 |
| Saturn | 118096-05-14 05:00 G | 44854872.50 | 44854872.71 | 44854872.94 | 0.0273 | 0.0121 |

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| Uranus | 118096-09-20 00:12 G | 44855001.32 | 44855001.51 | 44855001.72 | 0.0140 | 0.0087 |
| Saturn | 118097-05-26 06:12 G | 44855249.54 | 44855249.76 | 44855249.99 | 0.0272 | 0.0091 |
| Uranus | 118097-09-24 10:17 G | 44855370.68 | 44855370.93 | 44855371.19 | 0.0140 | 0.0005 |
| Uranus | 118098-09-29 11:00 G | 44855740.86 | 44855740.96 | 44855741.11 | 0.0140 | 0.0123 |
| Mars | 118104-12-26 07:53 G | 44858019.65 | 44858019.83 | 44858020.01 | 0.1651 | 0.0325 |
| Saturn | 118110-11-07 15:48 G | 44860162.00 | 44860162.16 | 44860162.34 | 0.0286 | 0.0213 |
| Saturn | 118111-11-21 17:58 G | 44860541.01 | 44860541.25 | 44860541.50 | 0.0286 | 0.0050 |
| Neptune | 118117-09-07 06:41 G | 44862657.59 | 44862657.78 | 44862657.97 | 0.0088 | 0.0058 |
| Neptune | 118118-09-09 11:58 G | 44863024.78 | 44863025.00 | 44863025.24 | 0.0088 | 0.0043 |
| Jupiter | 118119-03-19 02:36 G | 44863215.46 | 44863215.61 | 44863215.78 | 0.0493 | 0.0350 |
| Neptune | 118119-09-12 05:43 G | 44863392.49 | 44863392.74 | 44863393.00 | 0.0088 | 0.0011 |
| Neptune | 118120-09-13 09:48 G | 44863759.65 | 44863759.91 | 44863760.16 | 0.0088 | 0.0002 |
| Neptune | 118121-09-16 02:36 G | 44864127.37 | 44864127.61 | 44864127.86 | 0.0088 | 0.0034 |
| Neptune | 118122-09-18 09:05 G | 44864494.67 | 44864494.88 | 44864495.09 | 0.0088 | 0.0047 |
| Neptune | 118123-09-20 21:05 G | 44864862.30 | 44864862.38 | 44864862.54 | 0.0088 | 0.0079 |
| Saturn | 118125-05-10 15:05 G | 44865459.99 | 44865460.13 | 44865460.28 | 0.0274 | 0.0218 |
| Saturn | 118126-05-22 15:34 G | 44865836.90 | 44865837.15 | 44865837.40 | 0.0273 | 0.0001 |
| Saturn | 118127-06-03 13:39 G | 44866213.94 | 44866214.07 | 44866214.20 | 0.0273 | 0.0229 |
| Jupiter | 118131-03-23 03:34 G | 44867602.42 | 44867602.65 | 44867602.88 | 0.0494 | 0.0123 |
| Jupiter | 118136-09-13 03:48 G | 44869603.51 | 44869603.66 | 44869603.82 | 0.0536 | 0.0385 |
| Uranus | 118137-03-27 05:29 G | 44869798.52 | 44869798.73 | 44869798.95 | 0.0138 | 0.0075 |
| Uranus | 118138-03-31 14:51 G | 44870167.87 | 44870168.12 | 44870168.37 | 0.0138 | 0.0011 |
| Uranus | 118139-04-05 08:22 G | 44870537.75 | 44870537.85 | 44870537.98 | 0.0138 | 0.0123 |
| Saturn | 118140-11-15 09:05 G | 44871127.63 | 44871127.88 | 44871128.14 | 0.0286 | 0.0047 |
| Saturn | 118141-11-29 09:05 G | 44871506.73 | 44871506.88 | 44871507.06 | 0.0286 | 0.0217 |
| Jupiter | 118143-03-27 17:58 G | 44871990.02 | 44871990.25 | 44871990.48 | 0.0496 | 0.0098 |
| Jupiter | 118148-09-18 11:29 G | 44873991.74 | 44873991.98 | 44873992.22 | 0.0534 | 0.0083 |
| Jupiter | 118155-03-31 20:07 G | 44876377.17 | 44876377.34 | 44876377.51 | 0.0498 | 0.0342 |
| Saturn | 118155-05-17 14:36 G | 44876423.89 | 44876424.11 | 44876424.34 | 0.0273 | 0.0083 |
| Saturn | 118156-05-28 16:46 G | 44876800.99 | 44876801.20 | 44876801.41 | 0.0273 | 0.0141 |

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| Jupiter | 118160-09-23 13:24 G | 44878379.86 | 44878380.06 | 44878380.26 | 0.0531 | 0.0245 |
| Saturn | 118169-11-09 05:15 G | 44881713.52 | 44881713.72 | 44881713.93 | 0.0286 | 0.0155 |
| Saturn | 118170-11-23 10:31 G | 44882092.71 | 44882092.94 | 44882093.18 | 0.0286 | 0.0102 |
| Pluto | 118178-12-01 06:55 G | 44885022.54 | 44885022.79 | 44885023.05 | 0.0078 | 0.0006 |
| Uranus | 118180-09-21 05:29 G | 44885682.53 | 44885682.73 | 44885682.95 | 0.0140 | 0.0080 |
| Uranus | 118181-09-26 06:12 G | 44886052.51 | 44886052.76 | 44886053.02 | 0.0140 | 0.0012 |
| Uranus | 118182-09-30 17:00 G | 44886422.13 | 44886422.21 | 44886422.33 | 0.0140 | 0.0130 |
| Mars | 118183-12-29 16:31 G | 44886877.16 | 44886877.19 | 44886877.23 | 0.1647 | 0.1617 |
| Saturn | 118184-05-11 11:58 G | 44887010.82 | 44887011.00 | 44887011.20 | 0.0274 | 0.0167 |
| Saturn | 118185-05-23 19:53 G | 44887388.10 | 44887388.33 | 44887388.56 | 0.0273 | 0.0050 |
| Saturn | 118186-06-05 01:24 G | 44887765.47 | 44887765.56 | 44887765.65 | 0.0274 | 0.0254 |
| Saturn | 118198-11-03 12:12 G | 44892299.91 | 44892300.01 | 44892300.12 | 0.0285 | 0.0257 |
| Saturn | 118199-11-17 17:15 G | 44892678.98 | 44892679.22 | 44892679.46 | 0.0286 | 0.0012 |
| Saturn | 118200-12-02 00:55 G | 44893058.42 | 44893058.54 | 44893058.69 | 0.0286 | 0.0235 |
| Neptune | 118201-03-13 16:03 G | 44893159.99 | 44893160.17 | 44893160.39 | 0.0089 | 0.0057 |
| Neptune | 118202-03-16 11:29 G | 44893527.77 | 44893527.98 | 44893528.22 | 0.0089 | 0.0043 |
| Jupiter | 118202-03-19 05:43 G | 44893530.64 | 44893530.74 | 44893530.85 | 0.0492 | 0.0436 |
| Neptune | 118203-03-18 17:00 G | 44893894.96 | 44893895.21 | 44893895.47 | 0.0089 | 0.0011 |
| Neptune | 118204-03-20 12:12 G | 44894262.75 | 44894263.01 | 44894263.28 | 0.0089 | 0.0004 |
| Neptune | 118205-03-22 19:24 G | 44894630.10 | 44894630.31 | 44894630.55 | 0.0089 | 0.0038 |
| Neptune | 118206-03-25 10:46 G | 44894997.74 | 44894997.95 | 44894998.17 | 0.0089 | 0.0052 |
| Neptune | 118207-03-27 22:17 G | 44895365.37 | 44895365.43 | 44895365.52 | 0.0089 | 0.0085 |
| Saturn | 118213-05-07 15:19 G | 44897598.06 | 44897598.14 | 44897598.24 | 0.0273 | 0.0254 |
| Jupiter | 118214-03-23 09:05 G | 44897917.65 | 44897917.88 | 44897918.10 | 0.0494 | 0.0161 |
| Saturn | 118214-05-19 14:51 G | 44897974.88 | 44897975.12 | 44897975.37 | 0.0273 | 0.0048 |
| Saturn | 118215-05-31 19:10 G | 44898352.11 | 44898352.30 | 44898352.50 | 0.0273 | 0.0151 |
| Jupiter | 118219-09-14 06:12 G | 44899918.63 | 44899918.76 | 44899918.89 | 0.0536 | 0.0430 |
| Uranus | 118221-03-28 14:36 G | 44900479.90 | 44900480.11 | 44900480.33 | 0.0138 | 0.0067 |
| Uranus | 118222-04-02 09:05 G | 44900849.63 | 44900849.88 | 44900850.15 | 0.0138 | 0.0019 |
| Uranus | 118223-04-06 17:43 G | 44901219.18 | 44901219.24 | 44901219.32 | 0.0138 | 0.0131 |

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| Jupiter | 118226-03-27 23:29 G | 44902305.26 | 44902305.48 | 44902305.70 | 0.0496 | 0.0122 |
| Saturn | 118228-11-11 12:12 G | 44903264.80 | 44903265.01 | 44903265.24 | 0.0286 | 0.0148 |
| Saturn | 118229-11-25 15:34 G | 44903643.93 | 44903644.15 | 44903644.39 | 0.0286 | 0.0103 |
| Jupiter | 118231-09-19 13:24 G | 44904306.82 | 44904307.06 | 44904307.30 | 0.0534 | 0.0069 |
| Jupiter | 118238-04-01 05:00 G | 44906692.56 | 44906692.71 | 44906692.87 | 0.0497 | 0.0377 |
| Saturn | 118243-05-15 00:27 G | 44908562.32 | 44908562.52 | 44908562.73 | 0.0274 | 0.0149 |
| Jupiter | 118243-09-24 06:12 G | 44908694.56 | 44908694.76 | 44908694.96 | 0.0532 | 0.0231 |
| Saturn | 118244-05-25 23:15 G | 44908939.22 | 44908939.47 | 44908939.72 | 0.0274 | 0.0049 |
| Saturn | 118245-06-07 00:12 G | 44909316.44 | 44909316.51 | 44909316.60 | 0.0274 | 0.0257 |
| Jupiter | 118255-09-29 14:51 G | 44913083.07 | 44913083.12 | 44913083.19 | 0.0530 | 0.0510 |
| Saturn | 118257-11-06 08:36 G | 44913851.75 | 44913851.86 | 44913851.98 | 0.0285 | 0.0254 |
| Saturn | 118258-11-20 07:53 G | 44914230.57 | 44914230.83 | 44914231.09 | 0.0286 | 0.0002 |
| Saturn | 118259-12-04 08:22 G | 44914609.75 | 44914609.85 | 44914609.98 | 0.0286 | 0.0254 |
| Uranus | 118264-09-23 00:12 G | 44916364.30 | 44916364.51 | 44916364.73 | 0.0140 | 0.0073 |
| Uranus | 118265-09-27 10:03 G | 44916733.68 | 44916733.92 | 44916734.18 | 0.0140 | 0.0018 |
| Uranus | 118266-10-02 11:15 G | 44917103.92 | 44917103.97 | 44917104.05 | 0.0140 | 0.0135 |
| Saturn | 118272-05-08 21:48 G | 44919149.33 | 44919149.41 | 44919149.50 | 0.0273 | 0.0252 |
| Saturn | 118273-05-21 05:29 G | 44919526.49 | 44919526.73 | 44919526.97 | 0.0273 | 0.0046 |
| Saturn | 118274-06-02 04:46 G | 44919903.52 | 44919903.70 | 44919903.90 | 0.0273 | 0.0172 |
| Neptune | 118281-09-07 07:24 G | 44922557.69 | 44922557.81 | 44922557.97 | 0.0088 | 0.0075 |
| Neptune | 118282-09-10 00:55 G | 44922925.33 | 44922925.54 | 44922925.75 | 0.0088 | 0.0047 |
| Neptune | 118283-09-12 04:46 G | 44923292.47 | 44923292.70 | 44923292.95 | 0.0088 | 0.0029 |
| Neptune | 118284-09-13 22:17 G | 44923660.17 | 44923660.43 | 44923660.69 | 0.0088 | 0.0002 |
| Jupiter | 118285-03-18 10:03 G | 44923845.81 | 44923845.92 | 44923846.04 | 0.0492 | 0.0419 |
| Neptune | 118285-09-16 03:34 G | 44924027.42 | 44924027.65 | 44924027.91 | 0.0088 | 0.0017 |
| Neptune | 118286-09-18 17:43 G | 44924395.02 | 44924395.24 | 44924395.48 | 0.0088 | 0.0043 |
| Neptune | 118287-09-21 04:17 G | 44924762.53 | 44924762.68 | 44924762.88 | 0.0088 | 0.0063 |
| Saturn | 118287-11-14 08:07 G | 44924816.62 | 44924816.84 | 44924817.08 | 0.0286 | 0.0112 |
| Saturn | 118288-11-27 11:15 G | 44925195.76 | 44925195.97 | 44925196.19 | 0.0286 | 0.0150 |
| Jupiter | 118297-03-22 16:31 G | 44928232.97 | 44928233.19 | 44928233.42 | 0.0494 | 0.0189 |

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| Saturn | 118302-05-17 03:05 G | 44930113.43 | 44930113.63 | 44930113.84 | 0.0274 | 0.0134 |
| Jupiter | 118302-09-13 22:17 G | 44930233.35 | 44930233.43 | 44930233.52 | 0.0536 | 0.0494 |
| Saturn | 118303-05-29 11:29 G | 44930490.76 | 44930490.98 | 44930491.21 | 0.0274 | 0.0096 |
| Uranus | 118305-03-30 06:12 G | 44931161.53 | 44931161.76 | 44931162.00 | 0.0138 | 0.0062 |
| Uranus | 118306-04-03 18:55 G | 44931531.05 | 44931531.29 | 44931531.53 | 0.0138 | 0.0027 |
| Uranus | 118307-04-08 09:34 G | 44931900.90 | 44931900.90 | 44931900.93 | 0.0138 | 0.0138 |
| Jupiter | 118309-03-28 05:15 G | 44932620.50 | 44932620.72 | 44932620.95 | 0.0495 | 0.0042 |
| Jupiter | 118314-09-19 06:41 G | 44934621.56 | 44934621.78 | 44934622.00 | 0.0535 | 0.0194 |
| Saturn | 118316-11-08 18:27 G | 44935403.10 | 44935403.27 | 44935403.45 | 0.0285 | 0.0195 |
| Saturn | 118317-11-23 00:41 G | 44935782.30 | 44935782.53 | 44935782.77 | 0.0286 | 0.0064 |
| Jupiter | 118321-04-01 05:29 G | 44937007.53 | 44937007.73 | 44937007.93 | 0.0497 | 0.0278 |
| Jupiter | 118326-09-24 08:07 G | 44939009.62 | 44939009.84 | 44939010.06 | 0.0533 | 0.0133 |
| Saturn | 118331-05-12 03:48 G | 44940700.51 | 44940700.66 | 44940700.83 | 0.0273 | 0.0206 |
| Saturn | 118332-05-23 09:19 G | 44941077.65 | 44941077.89 | 44941078.12 | 0.0273 | 0.0013 |
| Saturn | 118333-06-04 15:34 G | 44941455.03 | 44941455.15 | 44941455.30 | 0.0273 | 0.0219 |
| Pluto | 118338-06-06 03:19 G | 44943282.40 | 44943282.64 | 44943282.91 | 0.0066 | 0.0012 |
| Jupiter | 118338-09-29 16:17 G | 44943398.09 | 44943398.18 | 44943398.29 | 0.0530 | 0.0479 |
| Saturn | 118346-11-16 17:00 G | 44946367.98 | 44946368.21 | 44946368.44 | 0.0286 | 0.0072 |
| Saturn | 118347-11-30 23:58 G | 44946747.32 | 44946747.50 | 44946747.69 | 0.0286 | 0.0178 |
| Uranus | 118348-09-24 08:22 G | 44947045.65 | 44947045.85 | 44947046.06 | 0.0140 | 0.0075 |
| Uranus | 118349-09-29 03:34 G | 44947415.40 | 44947415.65 | 44947415.91 | 0.0140 | 0.0031 |
| Uranus | 118350-10-03 19:39 G | 44947785.29 | 44947785.32 | 44947785.38 | 0.0140 | 0.0137 |
| Saturn | 118361-05-18 09:05 G | 44951664.66 | 44951664.88 | 44951665.12 | 0.0274 | 0.0095 |
| Saturn | 118362-05-30 13:24 G | 44952041.84 | 44952042.06 | 44952042.27 | 0.0274 | 0.0108 |
| Neptune | 118365-03-14 02:51 G | 44953060.46 | 44953060.62 | 44953060.79 | 0.0089 | 0.0069 |
| Neptune | 118366-03-16 12:41 G | 44953427.85 | 44953428.03 | 44953428.24 | 0.0089 | 0.0055 |
| Neptune | 118367-03-19 00:12 G | 44953795.26 | 44953795.51 | 44953795.78 | 0.0089 | 0.0022 |
| Neptune | 118368-03-20 16:17 G | 44954162.93 | 44954163.18 | 44954163.43 | 0.0089 | 0.0007 |
| Neptune | 118369-03-22 23:00 G | 44954530.22 | 44954530.46 | 44954530.72 | 0.0089 | 0.0026 |
| Neptune | 118370-03-25 18:12 G | 44954898.04 | 44954898.26 | 44954898.50 | 0.0089 | 0.0040 |

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| Neptune | 118371-03-27 23:58 G | 44955265.35 | 44955265.50 | 44955265.64 | 0.0089 | 0.0073 |
| Neptune | 118372-03-29 17:58 G | 44955633.20 | 44955633.25 | 44955633.32 | 0.0089 | 0.0087 |
| Saturn | 118375-11-11 06:12 G | 44956954.58 | 44956954.76 | 44956954.95 | 0.0285 | 0.0191 |
| Saturn | 118376-11-24 09:05 G | 44957333.64 | 44957333.88 | 44957334.12 | 0.0286 | 0.0063 |
| Jupiter | 118380-03-22 15:48 G | 44958547.96 | 44958548.16 | 44958548.36 | 0.0493 | 0.0251 |
| Mars | 118388-12-29 07:53 G | 44961751.64 | 44961751.83 | 44961752.03 | 0.1656 | 0.0207 |
| Uranus | 118389-03-30 22:03 G | 44961843.21 | 44961843.42 | 44961843.66 | 0.0138 | 0.0066 |
| Uranus | 118390-04-04 05:15 G | 44962212.49 | 44962212.72 | 44962212.98 | 0.0138 | 0.0044 |
| Saturn | 118390-05-13 19:10 G | 44962252.15 | 44962252.30 | 44962252.48 | 0.0273 | 0.0201 |
| Uranus | 118391-04-09 01:53 G | 44962582.57 | 44962582.58 | 44962582.61 | 0.0138 | 0.0137 |
| Saturn | 118391-05-25 17:58 G | 44962629.00 | 44962629.25 | 44962629.50 | 0.0273 | 0.0009 |
| Jupiter | 118392-03-27 07:53 G | 44962935.60 | 44962935.83 | 44962936.07 | 0.0494 | 0.0021 |
| Saturn | 118392-06-05 19:39 G | 44963006.21 | 44963006.32 | 44963006.46 | 0.0273 | 0.0231 |
| Jupiter | 118397-09-18 05:29 G | 44964936.52 | 44964936.73 | 44964936.96 | 0.0535 | 0.0215 |
| Jupiter | 118404-03-31 09:19 G | 44967322.71 | 44967322.89 | 44967323.08 | 0.0497 | 0.0295 |
| Saturn | 118405-11-18 07:10 G | 44967919.55 | 44967919.80 | 44967920.05 | 0.0286 | 0.0042 |
| Saturn | 118406-12-02 09:19 G | 44968298.74 | 44968298.89 | 44968299.05 | 0.0286 | 0.0222 |
| Jupiter | 118409-09-23 11:58 G | 44969324.78 | 44969325.00 | 44969325.21 | 0.0533 | 0.0144 |
| Saturn | 118420-05-19 23:43 G | 44973216.25 | 44973216.49 | 44973216.73 | 0.0273 | 0.0074 |
| Saturn | 118421-05-31 21:34 G | 44973593.19 | 44973593.40 | 44973593.60 | 0.0273 | 0.0155 |
| Jupiter | 118421-09-28 07:24 G | 44973712.70 | 44973712.81 | 44973712.94 | 0.0531 | 0.0462 |
| Pluto | 118425-12-04 20:07 G | 44975241.13 | 44975241.34 | 44975241.59 | 0.0078 | 0.0036 |
| Uranus | 118432-09-24 17:15 G | 44977727.01 | 44977727.22 | 44977727.45 | 0.0139 | 0.0072 |
| Uranus | 118433-09-29 17:15 G | 44978097.00 | 44978097.22 | 44978097.47 | 0.0140 | 0.0045 |
| Uranus | 118434-10-04 04:31 G | 44978466.62 | 44978466.69 | 44978466.78 | 0.0140 | 0.0132 |
| Saturn | 118434-11-13 01:10 G | 44978506.33 | 44978506.55 | 44978506.79 | 0.0286 | 0.0129 |
| Saturn | 118435-11-27 00:41 G | 44978885.30 | 44978885.53 | 44978885.77 | 0.0286 | 0.0126 |
| Neptune | 118445-09-07 13:24 G | 44982457.99 | 44982458.06 | 44982458.19 | 0.0088 | 0.0082 |
| Neptune | 118446-09-10 06:55 G | 44982825.62 | 44982825.79 | 44982825.97 | 0.0088 | 0.0064 |
| Neptune | 118447-09-12 10:46 G | 44983192.73 | 44983192.95 | 44983193.20 | 0.0088 | 0.0036 |

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| Neptune | 118448-09-14 04:31 G | 44983560.44 | 44983560.69 | 44983560.95 | 0.0088 | 0.0018 |
| Saturn | 118449-05-15 04:03 G | 44983803.48 | 44983803.67 | 44983803.87 | 0.0273 | 0.0149 |
| Neptune | 118449-09-16 10:03 G | 44983927.67 | 44983927.92 | 44983928.17 | 0.0088 | 0.0011 |
| Saturn | 118450-05-27 08:22 G | 44984180.61 | 44984180.85 | 44984181.09 | 0.0273 | 0.0066 |
| Neptune | 118450-09-18 23:43 G | 44984295.25 | 44984295.49 | 44984295.76 | 0.0088 | 0.0028 |
| Jupiter | 118451-03-18 20:07 G | 44984476.33 | 44984476.34 | 44984476.35 | 0.0491 | 0.0490 |
| Saturn | 118451-06-08 05:29 G | 44984557.67 | 44984557.73 | 44984557.79 | 0.0273 | 0.0263 |
| Neptune | 118451-09-21 09:48 G | 44984662.73 | 44984662.91 | 44984663.12 | 0.0088 | 0.0056 |
| Neptune | 118452-09-22 17:58 G | 44985030.12 | 44985030.25 | 44985030.42 | 0.0088 | 0.0073 |
| Jupiter | 118463-03-22 21:48 G | 44988863.21 | 44988863.41 | 44988863.62 | 0.0493 | 0.0231 |
| Saturn | 118463-11-06 22:03 G | 44989092.33 | 44989092.42 | 44989092.54 | 0.0286 | 0.0258 |
| Saturn | 118464-11-20 01:24 G | 44989471.31 | 44989471.56 | 44989471.81 | 0.0286 | 0.0013 |
| Saturn | 118465-12-04 02:36 G | 44989850.47 | 44989850.61 | 44989850.76 | 0.0286 | 0.0234 |
| Uranus | 118473-03-31 05:43 G | 44992524.53 | 44992524.74 | 44992524.98 | 0.0139 | 0.0058 |
| Uranus | 118474-04-04 21:48 G | 44992894.18 | 44992894.41 | 44992894.66 | 0.0138 | 0.0053 |
| Jupiter | 118475-03-27 12:41 G | 44993250.79 | 44993251.03 | 44993251.27 | 0.0494 | 0.0027 |
| Uranus | 118475-04-09 09:19 G | 44993263.88 | 44993263.89 | 44993263.93 | 0.0138 | 0.0137 |
| Saturn | 118478-05-09 20:36 G | 44994390.27 | 44994390.36 | 44994390.48 | 0.0273 | 0.0243 |
| Saturn | 118479-05-22 06:12 G | 44994767.53 | 44994767.76 | 44994767.99 | 0.0273 | 0.0046 |
| Saturn | 118480-06-02 10:46 G | 44995144.76 | 44995144.95 | 44995145.16 | 0.0273 | 0.0155 |
| Jupiter | 118480-09-16 23:00 G | 44995251.25 | 44995251.46 | 44995251.68 | 0.0535 | 0.0223 |
| Jupiter | 118487-03-31 17:43 G | 44997638.05 | 44997638.24 | 44997638.43 | 0.0496 | 0.0264 |
| Jupiter | 118492-09-22 09:05 G | 44999639.66 | 44999639.88 | 44999640.11 | 0.0534 | 0.0085 |
| Saturn | 118493-11-14 10:17 G | 45000057.73 | 45000057.93 | 45000058.15 | 0.0286 | 0.0131 |
| Saturn | 118494-11-28 16:31 G | 45000436.97 | 45000437.19 | 45000437.41 | 0.0286 | 0.0125 |
| Jupiter | 118499-04-05 02:22 G | 45002025.55 | 45002025.60 | 45002025.65 | 0.0497 | 0.0487 |
| Jupiter | 118504-09-28 05:29 G | 45004027.58 | 45004027.73 | 45004027.90 | 0.0532 | 0.0380 |
| Saturn | 118508-05-17 07:53 G | 45005354.64 | 45005354.83 | 45005355.04 | 0.0273 | 0.0150 |
| Saturn | 118509-05-29 14:36 G | 45005731.89 | 45005732.11 | 45005732.34 | 0.0273 | 0.0066 |
| Uranus | 118516-09-26 10:46 G | 45008408.71 | 45008408.95 | 45008409.19 | 0.0139 | 0.0056 |

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| Uranus | 118517-10-01 01:53 G | 45008778.36 | 45008778.58 | 45008778.83 | 0.0140 | 0.0046 |
| Saturn | 118522-11-09 02:36 G | 45010643.49 | 45010643.61 | 45010643.76 | 0.0286 | 0.0236 |
| Saturn | 118523-11-23 08:22 G | 45011022.61 | 45011022.85 | 45011023.09 | 0.0286 | 0.0024 |
| Saturn | 118524-12-06 15:48 G | 45011402.14 | 45011402.16 | 45011402.18 | 0.0286 | 0.0284 |
| Neptune | 118529-03-14 07:53 G | 45012960.72 | 45012960.83 | 45012960.93 | 0.0089 | 0.0081 |
| Neptune | 118530-03-16 17:29 G | 45013328.08 | 45013328.23 | 45013328.43 | 0.0089 | 0.0065 |
| Neptune | 118531-03-19 06:12 G | 45013695.51 | 45013695.76 | 45013696.01 | 0.0089 | 0.0034 |
| Neptune | 118532-03-20 21:34 G | 45014063.16 | 45014063.40 | 45014063.65 | 0.0089 | 0.0017 |
| Neptune | 118533-03-23 04:31 G | 45014430.44 | 45014430.69 | 45014430.96 | 0.0089 | 0.0012 |
| Neptune | 118534-03-25 23:29 G | 45014798.24 | 45014798.48 | 45014798.73 | 0.0089 | 0.0029 |
| Neptune | 118535-03-28 04:46 G | 45015165.53 | 45015165.70 | 45015165.90 | 0.0089 | 0.0060 |
| Neptune | 118536-03-29 23:00 G | 45015533.36 | 45015533.46 | 45015533.62 | 0.0089 | 0.0078 |
| Saturn | 118537-05-12 05:43 G | 45015941.63 | 45015941.74 | 45015941.87 | 0.0273 | 0.0237 |
| Saturn | 118538-05-24 07:24 G | 45016318.57 | 45016318.81 | 45016319.05 | 0.0273 | 0.0013 |
| Saturn | 118539-06-05 13:39 G | 45016695.93 | 45016696.07 | 45016696.23 | 0.0273 | 0.0208 |
| Jupiter | 118546-03-23 07:10 G | 45019178.62 | 45019178.80 | 45019178.99 | 0.0492 | 0.0278 |
| Saturn | 118552-11-16 13:24 G | 45021608.82 | 45021609.06 | 45021609.31 | 0.0286 | 0.0069 |
| Saturn | 118553-11-30 19:39 G | 45021988.14 | 45021988.32 | 45021988.51 | 0.0286 | 0.0184 |
| Uranus | 118557-04-01 16:17 G | 45023205.94 | 45023206.18 | 45023206.43 | 0.0139 | 0.0041 |
| Jupiter | 118558-03-27 12:41 G | 45023565.79 | 45023566.03 | 45023566.28 | 0.0493 | 0.0054 |
| Uranus | 118558-04-06 13:24 G | 45023575.84 | 45023576.06 | 45023576.30 | 0.0138 | 0.0051 |
| Jupiter | 118563-09-17 23:43 G | 45025566.31 | 45025566.49 | 45025566.67 | 0.0537 | 0.0315 |
| Saturn | 118567-05-19 18:27 G | 45026906.04 | 45026906.27 | 45026906.51 | 0.0273 | 0.0094 |
| Saturn | 118568-05-30 17:29 G | 45027283.01 | 45027283.23 | 45027283.45 | 0.0273 | 0.0115 |
| Jupiter | 118570-03-31 23:29 G | 45027953.27 | 45027953.48 | 45027953.69 | 0.0495 | 0.0185 |
| Jupiter | 118575-09-23 12:27 G | 45029954.78 | 45029955.02 | 45029955.26 | 0.0535 | 0.0005 |
| Saturn | 118581-11-10 12:55 G | 45032194.88 | 45032195.04 | 45032195.23 | 0.0286 | 0.0205 |
| Jupiter | 118582-04-05 05:00 G | 45032340.61 | 45032340.71 | 45032340.83 | 0.0497 | 0.0439 |
| Saturn | 118582-11-24 12:55 G | 45032573.79 | 45032574.04 | 45032574.29 | 0.0286 | 0.0039 |
| Pluto | 118584-06-06 19:39 G | 45033134.24 | 45033134.32 | 45033134.45 | 0.0066 | 0.0060 |

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| Pluto | 118585-06-08 15:05 G | 45033500.91 | 45033501.13 | 45033501.39 | 0.0066 | 0.0028 |
| Jupiter | 118587-09-28 11:00 G | 45034342.79 | 45034342.96 | 45034343.14 | 0.0532 | 0.0339 |
| Mars | 118593-12-28 10:46 G | 45036625.81 | 45036625.95 | 45036626.09 | 0.1667 | 0.1207 |
| Saturn | 118596-05-13 16:46 G | 45037493.04 | 45037493.20 | 45037493.37 | 0.0273 | 0.0197 |
| Saturn | 118597-05-25 17:29 G | 45037869.97 | 45037870.23 | 45037870.48 | 0.0273 | 0.0005 |
| Saturn | 118598-06-06 15:19 G | 45038246.99 | 45038247.14 | 45038247.31 | 0.0273 | 0.0202 |
| Uranus | 118600-09-28 01:39 G | 45039090.34 | 45039090.57 | 45039090.82 | 0.0139 | 0.0044 |
| Uranus | 118601-10-02 11:58 G | 45039459.76 | 45039460.00 | 45039460.25 | 0.0140 | 0.0043 |
| Neptune | 118610-09-11 11:58 G | 45042725.89 | 45042726.00 | 45042726.14 | 0.0088 | 0.0077 |
| Neptune | 118611-09-13 16:17 G | 45043092.97 | 45043093.18 | 45043093.42 | 0.0088 | 0.0044 |
| Saturn | 118611-11-19 23:15 G | 45043160.22 | 45043160.47 | 45043160.72 | 0.0286 | 0.0075 |
| Neptune | 118612-09-15 10:03 G | 45043460.69 | 45043460.92 | 45043461.18 | 0.0088 | 0.0031 |
| Saturn | 118612-12-02 23:58 G | 45043539.31 | 45043539.50 | 45043539.69 | 0.0286 | 0.0184 |
| Neptune | 118613-09-17 15:34 G | 45043827.90 | 45043828.15 | 45043828.40 | 0.0088 | 0.0002 |
| Neptune | 118614-09-20 06:27 G | 45044195.52 | 45044195.77 | 45044196.04 | 0.0088 | 0.0015 |
| Neptune | 118615-09-22 16:03 G | 45044562.98 | 45044563.17 | 45044563.40 | 0.0088 | 0.0047 |
| Neptune | 118616-09-24 00:55 G | 45044930.38 | 45044930.54 | 45044930.76 | 0.0088 | 0.0061 |
| Saturn | 118626-05-22 03:05 G | 45048457.42 | 45048457.63 | 45048457.86 | 0.0273 | 0.0101 |
| Saturn | 118627-06-03 02:51 G | 45048834.40 | 45048834.62 | 45048834.85 | 0.0273 | 0.0121 |
| Jupiter | 118629-03-23 15:48 G | 45049494.00 | 45049494.16 | 45049494.33 | 0.0491 | 0.0333 |
| Saturn | 118640-11-12 23:15 G | 45053746.28 | 45053746.47 | 45053746.67 | 0.0286 | 0.0177 |
| Jupiter | 118641-03-27 17:00 G | 45053880.98 | 45053881.21 | 45053881.45 | 0.0493 | 0.0078 |
| Uranus | 118641-04-03 08:51 G | 45053887.61 | 45053887.87 | 45053888.13 | 0.0139 | 0.0033 |
| Saturn | 118641-11-27 00:12 G | 45054125.27 | 45054125.51 | 45054125.76 | 0.0286 | 0.0084 |
| Uranus | 118642-04-07 20:36 G | 45054257.15 | 45054257.36 | 45054257.60 | 0.0138 | 0.0052 |
| Jupiter | 118646-09-18 08:07 G | 45055881.68 | 45055881.84 | 45055882.01 | 0.0537 | 0.0350 |
| Jupiter | 118653-04-01 10:31 G | 45058268.73 | 45058268.94 | 45058269.15 | 0.0495 | 0.0203 |
| Saturn | 118655-05-16 16:03 G | 45059044.01 | 45059044.17 | 45059044.35 | 0.0273 | 0.0187 |
| Saturn | 118656-05-28 00:12 G | 45059421.28 | 45059421.51 | 45059421.75 | 0.0273 | 0.0043 |
| Saturn | 118657-06-08 23:58 G | 45059798.43 | 45059798.50 | 45059798.60 | 0.0273 | 0.0256 |

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| Jupiter | 118658-09-23 11:43 G | 45060269.74 | 45060269.99 | 45060270.23 | 0.0535 | 0.0011 |
| Jupiter | 118665-04-05 12:55 G | 45062655.98 | 45062656.04 | 45062656.11 | 0.0497 | 0.0474 |
| Saturn | 118669-11-06 23:43 G | 45064332.44 | 45064332.49 | 45064332.56 | 0.0286 | 0.0276 |
| Jupiter | 118670-09-28 14:07 G | 45064657.93 | 45064658.09 | 45064658.27 | 0.0533 | 0.0346 |
| Saturn | 118670-11-21 05:15 G | 45064711.47 | 45064711.72 | 45064711.96 | 0.0286 | 0.0024 |
| Saturn | 118671-12-05 09:05 G | 45065090.75 | 45065090.88 | 45065091.05 | 0.0286 | 0.0229 |
| Pluto | 118672-12-08 09:19 G | 45065459.73 | 45065459.89 | 45065460.07 | 0.0078 | 0.0058 |
| Mars | 118673-01-01 01:10 G | 45065483.38 | 45065483.55 | 45065483.71 | 0.1662 | 0.0720 |
| Saturn | 118684-05-10 20:07 G | 45069631.28 | 45069631.34 | 45069631.42 | 0.0274 | 0.0263 |
| Uranus | 118684-09-28 10:17 G | 45069771.69 | 45069771.93 | 45069772.16 | 0.0139 | 0.0043 |
| Saturn | 118685-05-23 02:22 G | 45070008.38 | 45070008.60 | 45070008.84 | 0.0273 | 0.0050 |
| Uranus | 118685-10-03 05:43 G | 45070141.51 | 45070141.74 | 45070142.00 | 0.0140 | 0.0054 |
| Saturn | 118686-06-04 08:51 G | 45070385.69 | 45070385.87 | 45070386.08 | 0.0273 | 0.0157 |
| Neptune | 118694-03-16 23:15 G | 45073228.33 | 45073228.47 | 45073228.63 | 0.0089 | 0.0071 |
| Neptune | 118695-03-19 11:29 G | 45073595.78 | 45073595.98 | 45073596.21 | 0.0089 | 0.0051 |
| Neptune | 118696-03-21 02:36 G | 45073963.38 | 45073963.61 | 45073963.86 | 0.0089 | 0.0024 |
| Neptune | 118697-03-23 10:17 G | 45074330.67 | 45074330.93 | 45074331.19 | 0.0089 | 0.0004 |
| Neptune | 118698-03-26 05:00 G | 45074698.47 | 45074698.71 | 45074698.96 | 0.0089 | 0.0024 |
| Mars | 118698-07-02 08:22 G | 45074796.69 | 45074796.85 | 45074797.02 | 0.1878 | 0.0749 |
| Neptune | 118699-03-28 10:03 G | 45075065.72 | 45075065.92 | 45075066.16 | 0.0089 | 0.0044 |
| Saturn | 118699-11-14 22:17 G | 45075297.24 | 45075297.43 | 45075297.63 | 0.0286 | 0.0165 |
| Neptune | 118700-03-31 05:15 G | 45075433.57 | 45075433.72 | 45075433.89 | 0.0089 | 0.0071 |
| Saturn | 118700-11-29 04:17 G | 45075676.46 | 45075676.68 | 45075676.92 | 0.0286 | 0.0085 |
| Jupiter | 118712-03-24 01:53 G | 45079809.39 | 45079809.58 | 45079809.77 | 0.0491 | 0.0295 |
| Saturn | 118714-05-18 16:31 G | 45080595.00 | 45080595.19 | 45080595.39 | 0.0273 | 0.0164 |
| Saturn | 118715-05-30 21:19 G | 45080972.15 | 45080972.39 | 45080972.62 | 0.0273 | 0.0040 |
| Saturn | 118716-06-11 03:48 G | 45081349.57 | 45081349.66 | 45081349.76 | 0.0273 | 0.0248 |
| Jupiter | 118724-03-28 03:05 G | 45084196.40 | 45084196.63 | 45084196.87 | 0.0493 | 0.0044 |
| Uranus | 118724-03-31 02:07 G | 45084199.48 | 45084199.59 | 45084199.70 | 0.0139 | 0.0125 |
| Uranus | 118725-04-05 00:12 G | 45084569.28 | 45084569.51 | 45084569.76 | 0.0139 | 0.0036 |

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| Uranus | 118726-04-09 08:22 G | 45084938.63 | 45084938.85 | 45084939.08 | 0.0138 | 0.0066 |
| Jupiter | 118729-09-18 12:55 G | 45086196.87 | 45086197.04 | 45086197.21 | 0.0537 | 0.0339 |
| Saturn | 118729-11-23 00:55 G | 45086262.30 | 45086262.54 | 45086262.78 | 0.0286 | 0.0030 |
| Saturn | 118730-12-07 09:19 G | 45086641.76 | 45086641.89 | 45086642.03 | 0.0286 | 0.0235 |
| Jupiter | 118736-04-01 17:58 G | 45088584.03 | 45088584.25 | 45088584.47 | 0.0494 | 0.0193 |
| Jupiter | 118741-09-23 09:05 G | 45090584.64 | 45090584.88 | 45090585.12 | 0.0536 | 0.0021 |
| Saturn | 118743-05-14 03:19 G | 45091182.61 | 45091182.64 | 45091182.69 | 0.0274 | 0.0270 |
| Saturn | 118744-05-25 03:19 G | 45091559.40 | 45091559.64 | 45091559.88 | 0.0273 | 0.0056 |
| Saturn | 118745-06-06 05:43 G | 45091936.57 | 45091936.74 | 45091936.94 | 0.0273 | 0.0170 |
| Jupiter | 118748-04-05 20:36 G | 45092971.24 | 45092971.36 | 45092971.48 | 0.0496 | 0.0422 |
| Jupiter | 118753-09-28 21:19 G | 45094973.20 | 45094973.39 | 45094973.59 | 0.0534 | 0.0278 |
| Saturn | 118758-11-16 22:17 G | 45096848.21 | 45096848.43 | 45096848.67 | 0.0285 | 0.0126 |
| Saturn | 118759-12-01 01:24 G | 45097227.35 | 45097227.56 | 45097227.78 | 0.0286 | 0.0134 |
| Uranus | 118767-09-26 11:15 G | 45100083.88 | 45100083.97 | 45100084.07 | 0.0139 | 0.0128 |
| Uranus | 118768-09-29 20:36 G | 45100453.12 | 45100453.36 | 45100453.61 | 0.0139 | 0.0044 |
| Uranus | 118769-10-04 19:39 G | 45100823.12 | 45100823.32 | 45100823.55 | 0.0140 | 0.0071 |
| Saturn | 118773-05-20 00:12 G | 45102146.30 | 45102146.51 | 45102146.73 | 0.0273 | 0.0139 |
| Saturn | 118774-05-31 22:17 G | 45102523.20 | 45102523.43 | 45102523.67 | 0.0273 | 0.0087 |
| Neptune | 118774-09-11 17:58 G | 45102626.19 | 45102626.25 | 45102626.33 | 0.0088 | 0.0085 |
| Neptune | 118775-09-13 22:03 G | 45102993.24 | 45102993.42 | 45102993.63 | 0.0088 | 0.0059 |
| Neptune | 118776-09-15 15:48 G | 45103360.95 | 45103361.16 | 45103361.42 | 0.0088 | 0.0041 |
| Neptune | 118777-09-17 21:19 G | 45103728.14 | 45103728.39 | 45103728.64 | 0.0088 | 0.0013 |
| Neptune | 118778-09-20 12:12 G | 45104095.75 | 45104096.01 | 45104096.28 | 0.0088 | 0.0007 |
| Neptune | 118779-09-22 21:05 G | 45104463.16 | 45104463.38 | 45104463.62 | 0.0088 | 0.0033 |
| Neptune | 118780-09-24 06:55 G | 45104830.59 | 45104830.79 | 45104831.02 | 0.0088 | 0.0054 |
| Neptune | 118781-09-26 21:34 G | 45105198.31 | 45105198.40 | 45105198.55 | 0.0088 | 0.0078 |
| Saturn | 118787-11-11 02:22 G | 45107434.46 | 45107434.60 | 45107434.74 | 0.0285 | 0.0236 |
| Saturn | 118788-11-24 00:27 G | 45107813.27 | 45107813.52 | 45107813.78 | 0.0286 | 0.0009 |
| Saturn | 118789-12-08 03:48 G | 45108192.56 | 45108192.66 | 45108192.77 | 0.0286 | 0.0258 |
| Jupiter | 118795-03-24 09:48 G | 45110124.73 | 45110124.91 | 45110125.09 | 0.0491 | 0.0326 |

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| Saturn | 118802-05-15 04:31 G | 45112733.56 | 45112733.69 | 45112733.83 | 0.0274 | 0.0221 |
| Saturn | 118803-05-27 09:48 G | 45113110.67 | 45113110.91 | 45113111.16 | 0.0274 | 0.0012 |
| Saturn | 118804-06-07 07:10 G | 45113487.62 | 45113487.80 | 45113487.98 | 0.0273 | 0.0186 |
| Jupiter | 118807-03-28 14:36 G | 45114511.89 | 45114512.11 | 45114512.33 | 0.0492 | 0.0106 |
| Uranus | 118808-03-31 18:41 G | 45114881.16 | 45114881.28 | 45114881.43 | 0.0139 | 0.0119 |
| Uranus | 118809-04-05 07:24 G | 45115250.58 | 45115250.81 | 45115251.06 | 0.0139 | 0.0033 |
| Uranus | 118810-04-10 00:55 G | 45115620.33 | 45115620.54 | 45115620.76 | 0.0138 | 0.0080 |
| Jupiter | 118812-09-17 16:31 G | 45116512.05 | 45116512.19 | 45116512.34 | 0.0538 | 0.0419 |
| Saturn | 118817-11-18 05:58 G | 45118399.52 | 45118399.75 | 45118399.98 | 0.0285 | 0.0126 |
| Saturn | 118818-12-02 04:31 G | 45118778.47 | 45118778.69 | 45118778.93 | 0.0286 | 0.0124 |
| Jupiter | 118819-04-01 23:58 G | 45118899.27 | 45118899.50 | 45118899.74 | 0.0494 | 0.0124 |
| Jupiter | 118824-09-22 16:46 G | 45120899.97 | 45120900.20 | 45120900.43 | 0.0536 | 0.0106 |
| Jupiter | 118831-04-06 09:19 G | 45123286.75 | 45123286.89 | 45123287.04 | 0.0496 | 0.0381 |
| Pluto | 118831-06-11 03:19 G | 45123352.62 | 45123352.64 | 45123352.68 | 0.0066 | 0.0065 |
| Saturn | 118832-05-21 00:41 G | 45123697.33 | 45123697.53 | 45123697.75 | 0.0273 | 0.0131 |
| Pluto | 118832-06-11 22:17 G | 45123719.20 | 45123719.43 | 45123719.67 | 0.0066 | 0.0030 |
| Saturn | 118833-06-02 05:00 G | 45124074.48 | 45124074.71 | 45124074.95 | 0.0273 | 0.0076 |
| Jupiter | 118836-09-28 05:00 G | 45125288.50 | 45125288.71 | 45125288.93 | 0.0534 | 0.0225 |
| Saturn | 118846-11-12 05:00 G | 45128985.59 | 45128985.71 | 45128985.85 | 0.0285 | 0.0240 |
| Saturn | 118847-11-26 07:10 G | 45129364.55 | 45129364.80 | 45129365.05 | 0.0286 | 0.0018 |
| Saturn | 118848-12-09 07:53 G | 45129743.79 | 45129743.83 | 45129743.90 | 0.0286 | 0.0279 |
| Uranus | 118851-09-26 18:12 G | 45130765.20 | 45130765.26 | 45130765.37 | 0.0139 | 0.0130 |
| Uranus | 118852-09-30 13:39 G | 45131134.83 | 45131135.07 | 45131135.34 | 0.0139 | 0.0033 |
| Uranus | 118853-10-05 03:34 G | 45131504.44 | 45131504.65 | 45131504.85 | 0.0140 | 0.0077 |
| Neptune | 118858-03-17 05:00 G | 45133128.63 | 45133128.71 | 45133128.85 | 0.0089 | 0.0080 |
| Neptune | 118859-03-19 19:10 G | 45133496.12 | 45133496.30 | 45133496.49 | 0.0089 | 0.0064 |
| Neptune | 118860-03-21 09:05 G | 45133863.66 | 45133863.88 | 45133864.12 | 0.0089 | 0.0032 |
| Neptune | 118861-03-23 16:46 G | 45134230.95 | 45134231.20 | 45134231.47 | 0.0089 | 0.0018 |
| Saturn | 118861-05-15 23:29 G | 45134284.37 | 45134284.48 | 45134284.62 | 0.0274 | 0.0233 |
| Neptune | 118862-03-26 11:15 G | 45134598.73 | 45134598.97 | 45134599.23 | 0.0089 | 0.0015 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 118862-05-28 09:19 G | 45134661.66 | 45134661.89 | 45134662.13 | 0.0274 | 0.0011 |
| Neptune | 118863-03-28 16:31 G | 45134965.96 | 45134966.19 | 45134966.44 | 0.0089 | 0.0029 |
| Saturn | 118863-06-09 13:53 G | 45135038.94 | 45135039.08 | 45135039.24 | 0.0273 | 0.0215 |
| Neptune | 118864-03-30 11:15 G | 45135333.80 | 45135333.97 | 45135334.18 | 0.0089 | 0.0063 |
| Neptune | 118865-04-01 17:43 G | 45135701.15 | 45135701.24 | 45135701.40 | 0.0089 | 0.0077 |
| Saturn | 118876-11-19 08:22 G | 45139950.62 | 45139950.85 | 45139951.08 | 0.0285 | 0.0076 |
| Saturn | 118877-12-03 11:43 G | 45140329.81 | 45140329.99 | 45140330.20 | 0.0285 | 0.0180 |
| Mars | 118877-12-31 17:29 G | 45140358.07 | 45140358.23 | 45140358.39 | 0.1673 | 0.0942 |
| Jupiter | 118878-03-23 16:03 G | 45140440.02 | 45140440.17 | 45140440.32 | 0.0490 | 0.0381 |
| Jupiter | 118890-03-28 02:36 G | 45144827.39 | 45144827.61 | 45144827.83 | 0.0492 | 0.0124 |
| Saturn | 118891-05-22 20:22 G | 45145248.12 | 45145248.35 | 45145248.57 | 0.0273 | 0.0089 |
| Uranus | 118892-04-01 08:51 G | 45145562.78 | 45145562.87 | 45145563.01 | 0.0139 | 0.0123 |
| Saturn | 118892-06-03 04:03 G | 45145625.47 | 45145625.67 | 45145625.88 | 0.0273 | 0.0128 |
| Uranus | 118893-04-05 18:27 G | 45145932.01 | 45145932.27 | 45145932.53 | 0.0139 | 0.0019 |
| Uranus | 118894-04-10 15:19 G | 45146301.95 | 45146302.14 | 45146302.35 | 0.0138 | 0.0082 |
| Jupiter | 118895-09-17 21:48 G | 45146827.28 | 45146827.41 | 45146827.53 | 0.0538 | 0.0457 |
| Jupiter | 118902-04-02 08:22 G | 45149214.63 | 45149214.85 | 45149215.09 | 0.0494 | 0.0147 |
| Saturn | 118905-11-14 00:27 G | 45150536.36 | 45150536.52 | 45150536.71 | 0.0285 | 0.0199 |
| Saturn | 118906-11-28 05:58 G | 45150915.52 | 45150915.75 | 45150915.99 | 0.0286 | 0.0046 |
| Jupiter | 118907-09-23 22:03 G | 45151215.20 | 45151215.42 | 45151215.65 | 0.0536 | 0.0106 |
| Jupiter | 118914-04-06 22:17 G | 45153602.31 | 45153602.43 | 45153602.55 | 0.0495 | 0.0416 |
| Jupiter | 118919-09-29 02:07 G | 45155603.38 | 45155603.59 | 45155603.81 | 0.0535 | 0.0237 |
| Pluto | 118919-12-12 16:31 G | 45155678.05 | 45155678.19 | 45155678.40 | 0.0078 | 0.0057 |
| Saturn | 118920-05-18 01:39 G | 45155835.38 | 45155835.57 | 45155835.76 | 0.0274 | 0.0181 |
| Saturn | 118921-05-30 04:46 G | 45156212.46 | 45156212.70 | 45156212.94 | 0.0274 | 0.0024 |
| Saturn | 118922-06-11 12:27 G | 45156589.88 | 45156590.02 | 45156590.15 | 0.0274 | 0.0221 |
| Uranus | 118935-09-28 05:00 G | 45161446.64 | 45161446.71 | 45161446.82 | 0.0139 | 0.0130 |
| Saturn | 118935-11-22 07:10 G | 45161501.56 | 45161501.80 | 45161502.03 | 0.0285 | 0.0082 |
| Uranus | 118936-10-02 03:48 G | 45161816.41 | 45161816.66 | 45161816.90 | 0.0139 | 0.0017 |
| Saturn | 118936-12-05 11:58 G | 45161880.82 | 45161881.00 | 45161881.20 | 0.0285 | 0.0173 |

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| Uranus | 118937-10-06 13:39 G | 45162185.86 | 45162186.07 | 45162186.30 | 0.0140 | 0.0073 |
| Neptune | 118939-09-14 03:48 G | 45162893.55 | 45162893.66 | 45162893.83 | 0.0088 | 0.0075 |
| Neptune | 118940-09-15 22:03 G | 45163261.22 | 45163261.42 | 45163261.66 | 0.0088 | 0.0045 |
| Neptune | 118941-09-18 02:36 G | 45163628.39 | 45163628.61 | 45163628.87 | 0.0088 | 0.0029 |
| Neptune | 118942-09-20 19:10 G | 45163996.03 | 45163996.30 | 45163996.56 | 0.0088 | 0.0002 |
| Neptune | 118943-09-23 03:34 G | 45164363.42 | 45164363.65 | 45164363.91 | 0.0088 | 0.0018 |
| Neptune | 118944-09-24 14:07 G | 45164730.87 | 45164731.09 | 45164731.33 | 0.0088 | 0.0046 |
| Neptune | 118945-09-27 03:48 G | 45165098.51 | 45165098.66 | 45165098.86 | 0.0088 | 0.0063 |
| Saturn | 118950-05-25 00:27 G | 45166799.28 | 45166799.52 | 45166799.76 | 0.0274 | 0.0091 |
| Saturn | 118951-06-06 01:24 G | 45167176.35 | 45167176.56 | 45167176.78 | 0.0273 | 0.0121 |
| Mars | 118957-01-03 13:10 G | 45169214.91 | 45169215.05 | 45169215.19 | 0.1669 | 0.1100 |
| Jupiter | 118961-03-23 23:29 G | 45170755.32 | 45170755.48 | 45170755.65 | 0.0490 | 0.0350 |
| Saturn | 118964-11-15 05:00 G | 45172087.52 | 45172087.71 | 45172087.90 | 0.0285 | 0.0186 |
| Saturn | 118965-11-29 04:31 G | 45172466.45 | 45172466.69 | 45172466.93 | 0.0285 | 0.0074 |
| Jupiter | 118973-03-28 15:34 G | 45175142.93 | 45175143.15 | 45175143.38 | 0.0491 | 0.0095 |
| Uranus | 118976-04-02 15:05 G | 45176244.03 | 45176244.13 | 45176244.27 | 0.0139 | 0.0121 |
| Uranus | 118977-04-07 10:03 G | 45176613.65 | 45176613.92 | 45176614.18 | 0.0139 | 0.0008 |
| Uranus | 118978-04-11 20:51 G | 45176983.17 | 45176983.37 | 45176983.58 | 0.0139 | 0.0078 |
| Jupiter | 118978-09-17 15:48 G | 45177142.03 | 45177142.16 | 45177142.28 | 0.0539 | 0.0454 |
| Saturn | 118979-05-20 07:24 G | 45177386.63 | 45177386.81 | 45177386.99 | 0.0275 | 0.0188 |
| Saturn | 118980-05-31 08:51 G | 45177763.63 | 45177763.87 | 45177764.13 | 0.0274 | 0.0043 |
| Saturn | 118981-06-12 09:19 G | 45178140.84 | 45178140.89 | 45178140.96 | 0.0274 | 0.0265 |
| Mars | 118982-07-04 04:31 G | 45178527.50 | 45178527.69 | 45178527.89 | 0.1869 | 0.0493 |
| Jupiter | 118985-04-01 16:17 G | 45179529.95 | 45179530.18 | 45179530.40 | 0.0493 | 0.0143 |
| Jupiter | 118990-09-22 23:58 G | 45181530.28 | 45181530.50 | 45181530.72 | 0.0538 | 0.0126 |
| Saturn | 118993-11-09 19:39 G | 45182674.25 | 45182674.32 | 45182674.39 | 0.0284 | 0.0271 |
| Saturn | 118994-11-23 15:05 G | 45183052.87 | 45183053.13 | 45183053.38 | 0.0285 | 0.0024 |
| Saturn | 118995-12-07 14:07 G | 45183431.94 | 45183432.09 | 45183432.25 | 0.0285 | 0.0226 |
| Jupiter | 118997-04-06 05:58 G | 45183917.60 | 45183917.75 | 45183917.92 | 0.0494 | 0.0362 |

120TH MILLENNIUM CE

This is a list of transits of Moon in the 120th millennium CE.

| FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|--------------------|---|-------------|-------------|-------------|--------|--------|---|
| TRANSIT | | | | | | | | |
| TIME | | | | | | | | |
| Jupiter | 119002-09-29 05:15 | G | 45185918.49 | 45185918.72 | 45185918.95 | 0.0536 | 0.0183 | |
| Saturn | 119008-05-14 21:05 | G | 45187973.34 | 45187973.38 | 45187973.43 | 0.0274 | 0.0268 | |
| Saturn | 119009-05-27 07:24 | G | 45188350.57 | 45188350.81 | 45188351.05 | 0.0274 | 0.0041 | |
| Saturn | 119010-06-08 08:22 | G | 45188727.66 | 45188727.85 | 45188728.05 | 0.0273 | 0.0170 | |
| Jupiter | 119014-10-04 13:10 | G | 45190306.96 | 45190307.05 | 45190307.15 | 0.0533 | 0.0478 | |
| Uranus | 119019-09-29 22:03 | G | 45192128.29 | 45192128.42 | 45192128.56 | 0.0139 | 0.0118 | |
| Uranus | 119020-10-03 10:03 | G | 45192497.68 | 45192497.92 | 45192498.17 | 0.0139 | 0.0012 | |
| Uranus | 119021-10-08 06:55 | G | 45192867.58 | 45192867.79 | 45192868.02 | 0.0140 | 0.0076 | |
| Neptune | 119023-03-21 01:10 | G | 45193396.43 | 45193396.55 | 45193396.73 | 0.0089 | 0.0074 | |
| Saturn | 119023-11-18 16:46 | G | 45193639.00 | 45193639.20 | 45193639.42 | 0.0285 | 0.0156 | |
| Neptune | 119024-03-22 14:51 | G | 45193763.91 | 45193764.12 | 45193764.34 | 0.0089 | 0.0044 | |
| Saturn | 119024-12-01 15:19 | G | 45194017.90 | 45194018.14 | 45194018.39 | 0.0285 | 0.0090 | |
| Neptune | 119025-03-24 23:58 | G | 45194131.26 | 45194131.50 | 45194131.76 | 0.0089 | 0.0027 | |
| Neptune | 119026-03-27 17:58 | G | 45194499.00 | 45194499.25 | 45194499.51 | 0.0089 | 0.0003 | |
| Neptune | 119027-03-29 23:29 | G | 45194866.24 | 45194866.48 | 45194866.74 | 0.0089 | 0.0020 | |
| Neptune | 119028-03-31 18:41 | G | 45195234.07 | 45195234.28 | 45195234.50 | 0.0089 | 0.0050 | |
| Neptune | 119029-04-03 00:41 | G | 45195601.39 | 45195601.53 | 45195601.71 | 0.0089 | 0.0068 | |
| Saturn | 119038-05-22 05:15 | G | 45198937.53 | 45198937.72 | 45198937.93 | 0.0275 | 0.0143 | |
| Saturn | 119039-06-03 15:05 | G | 45199314.90 | 45199315.13 | 45199315.37 | 0.0274 | 0.0063 | |
| Saturn | 119040-06-14 17:15 | G | 45199692.16 | 45199692.22 | 45199692.30 | 0.0274 | 0.0262 | |

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| Jupiter | 119044-03-24 08:51 G | 45201070.74 | 45201070.87 | 45201071.02 | 0.0489 | 0.0387 |
| Saturn | 119052-11-12 01:39 G | 45204225.52 | 45204225.57 | 45204225.64 | 0.0284 | 0.0274 |
| Saturn | 119053-11-26 03:34 G | 45204604.41 | 45204604.65 | 45204604.90 | 0.0285 | 0.0029 |
| Saturn | 119054-12-10 04:31 G | 45204983.55 | 45204983.69 | 45204983.86 | 0.0285 | 0.0224 |
| Jupiter | 119056-03-28 21:48 G | 45205458.19 | 45205458.41 | 45205458.63 | 0.0491 | 0.0177 |
| Uranus | 119060-04-04 01:24 G | 45206925.40 | 45206925.56 | 45206925.73 | 0.0139 | 0.0109 |
| Uranus | 119061-04-08 22:17 G | 45207295.18 | 45207295.43 | 45207295.68 | 0.0139 | 0.0006 |
| Jupiter | 119061-09-17 18:12 G | 45207457.20 | 45207457.26 | 45207457.32 | 0.0540 | 0.0520 |
| Uranus | 119062-04-13 08:07 G | 45207664.64 | 45207664.84 | 45207665.06 | 0.0139 | 0.0083 |
| Saturn | 119067-05-16 21:34 G | 45209524.31 | 45209524.40 | 45209524.50 | 0.0275 | 0.0254 |
| Jupiter | 119068-04-01 22:31 G | 45209845.21 | 45209845.44 | 45209845.67 | 0.0492 | 0.0057 |
| Saturn | 119068-05-28 05:43 G | 45209901.51 | 45209901.74 | 45209901.97 | 0.0274 | 0.0047 |
| Saturn | 119069-06-09 14:36 G | 45210278.93 | 45210279.11 | 45210279.31 | 0.0274 | 0.0168 |
| Jupiter | 119073-09-23 07:24 G | 45211845.61 | 45211845.81 | 45211846.02 | 0.0538 | 0.0215 |
| Pluto | 119079-06-16 04:03 G | 45213937.43 | 45213937.67 | 45213937.93 | 0.0066 | 0.0018 |
| Jupiter | 119080-04-06 14:36 G | 45214232.94 | 45214233.11 | 45214233.30 | 0.0494 | 0.0318 |
| Saturn | 119082-11-19 19:39 G | 45215190.12 | 45215190.32 | 45215190.54 | 0.0285 | 0.0138 |
| Saturn | 119083-12-04 00:27 G | 45215569.31 | 45215569.52 | 45215569.74 | 0.0285 | 0.0124 |
| Jupiter | 119085-09-28 05:58 G | 45216233.52 | 45216233.75 | 45216233.98 | 0.0536 | 0.0114 |
| Saturn | 119097-05-23 07:10 G | 45220488.59 | 45220488.80 | 45220489.02 | 0.0275 | 0.0141 |
| Jupiter | 119097-10-03 09:34 G | 45220621.79 | 45220621.90 | 45220622.02 | 0.0534 | 0.0457 |
| Saturn | 119098-06-04 12:41 G | 45220865.81 | 45220866.03 | 45220866.26 | 0.0274 | 0.0085 |
| Neptune | 119103-09-15 12:12 G | 45222793.97 | 45222794.01 | 45222794.10 | 0.0088 | 0.0086 |
| Uranus | 119103-10-01 10:03 G | 45222809.79 | 45222809.92 | 45222810.10 | 0.0139 | 0.0106 |
| Neptune | 119104-09-17 04:31 G | 45223161.51 | 45223161.69 | 45223161.90 | 0.0088 | 0.0055 |
| Uranus | 119104-10-04 23:00 G | 45223179.20 | 45223179.46 | 45223179.72 | 0.0139 | 0.0013 |
| Neptune | 119105-09-19 08:22 G | 45223528.65 | 45223528.85 | 45223529.10 | 0.0088 | 0.0042 |
| Uranus | 119105-10-09 18:12 G | 45223549.07 | 45223549.26 | 45223549.45 | 0.0139 | 0.0087 |
| Neptune | 119106-09-22 02:36 G | 45223896.36 | 45223896.61 | 45223896.87 | 0.0088 | 0.0009 |
| Neptune | 119107-09-24 07:39 G | 45224263.57 | 45224263.82 | 45224264.07 | 0.0088 | 0.0005 |

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| Neptune | 119108-09-25 22:31 G | 45224631.21 | 45224631.44 | 45224631.70 | 0.0088 | 0.0037 |
| Neptune | 119109-09-28 08:22 G | 45224998.66 | 45224998.85 | 45224999.06 | 0.0088 | 0.0052 |
| Neptune | 119110-09-30 18:27 G | 45225366.19 | 45225366.27 | 45225366.37 | 0.0088 | 0.0083 |
| Saturn | 119111-11-15 08:36 G | 45225776.71 | 45225776.86 | 45225777.03 | 0.0284 | 0.0218 |
| Saturn | 119112-11-28 07:39 G | 45226155.58 | 45226155.82 | 45226156.07 | 0.0284 | 0.0034 |
| Saturn | 119113-12-12 12:27 G | 45226535.02 | 45226535.02 | 45226535.06 | 0.0285 | 0.0284 |
| Saturn | 119126-05-19 10:17 G | 45231075.79 | 45231075.93 | 45231076.07 | 0.0275 | 0.0222 |
| Jupiter | 119127-03-25 14:22 G | 45231386.01 | 45231386.10 | 45231386.20 | 0.0489 | 0.0440 |
| Saturn | 119127-05-31 12:12 G | 45231452.76 | 45231453.01 | 45231453.26 | 0.0274 | 0.0005 |
| Saturn | 119128-06-11 14:22 G | 45231829.97 | 45231830.10 | 45231830.25 | 0.0274 | 0.0220 |
| Jupiter | 119139-03-30 04:31 G | 45235773.47 | 45235773.69 | 45235773.92 | 0.0491 | 0.0172 |
| Saturn | 119141-11-22 06:41 G | 45236741.54 | 45236741.78 | 45236742.03 | 0.0285 | 0.0094 |
| Saturn | 119142-12-06 05:29 G | 45237120.52 | 45237120.73 | 45237120.95 | 0.0285 | 0.0149 |
| Uranus | 119144-04-05 17:29 G | 45237607.06 | 45237607.23 | 45237607.42 | 0.0139 | 0.0099 |
| Uranus | 119145-04-10 02:07 G | 45237976.34 | 45237976.59 | 45237976.84 | 0.0139 | 0.0009 |
| Uranus | 119146-04-14 23:29 G | 45238346.31 | 45238346.48 | 45238346.69 | 0.0139 | 0.0092 |
| Jupiter | 119151-04-03 07:53 G | 45240160.61 | 45240160.83 | 45240161.05 | 0.0492 | 0.0093 |
| Saturn | 119156-05-25 18:12 G | 45242040.03 | 45242040.26 | 45242040.49 | 0.0275 | 0.0087 |
| Jupiter | 119156-09-23 02:22 G | 45242160.39 | 45242160.60 | 45242160.81 | 0.0538 | 0.0224 |
| Saturn | 119157-06-06 20:22 G | 45242417.13 | 45242417.35 | 45242417.59 | 0.0275 | 0.0115 |
| Mars | 119162-01-04 02:36 G | 45244089.43 | 45244089.61 | 45244089.79 | 0.1679 | 0.0313 |
| Jupiter | 119163-04-07 21:05 G | 45244548.21 | 45244548.38 | 45244548.56 | 0.0493 | 0.0338 |
| Pluto | 119166-12-15 17:15 G | 45245896.00 | 45245896.22 | 45245896.48 | 0.0078 | 0.0032 |
| Jupiter | 119168-09-27 22:31 G | 45246548.21 | 45246548.44 | 45246548.67 | 0.0537 | 0.0112 |
| Saturn | 119170-11-17 03:05 G | 45247328.47 | 45247328.63 | 45247328.82 | 0.0284 | 0.0207 |
| Saturn | 119171-11-30 23:29 G | 45247707.22 | 45247707.48 | 45247707.73 | 0.0284 | 0.0035 |
| Saturn | 119172-12-13 21:19 G | 45248086.37 | 45248086.39 | 45248086.45 | 0.0285 | 0.0281 |
| Jupiter | 119180-10-03 12:55 G | 45250936.91 | 45250937.04 | 45250937.19 | 0.0535 | 0.0425 |
| Saturn | 119185-05-20 13:53 G | 45252626.91 | 45252627.08 | 45252627.24 | 0.0275 | 0.0194 |
| Saturn | 119186-06-02 00:27 G | 45253004.28 | 45253004.52 | 45253004.76 | 0.0274 | 0.0007 |

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| Neptune | 119187-03-21 12:12 G | 45253296.96 | 45253297.01 | 45253297.11 | 0.0089 | 0.0085 |
| Saturn | 119187-06-14 02:36 G | 45253381.46 | 45253381.61 | 45253381.77 | 0.0274 | 0.0215 |
| Uranus | 119187-10-01 16:31 G | 45253491.02 | 45253491.19 | 45253491.39 | 0.0139 | 0.0096 |
| Neptune | 119188-03-22 19:10 G | 45253664.11 | 45253664.30 | 45253664.50 | 0.0089 | 0.0055 |
| Uranus | 119188-10-05 15:48 G | 45253860.91 | 45253861.16 | 45253861.41 | 0.0139 | 0.0012 |
| Neptune | 119189-03-25 11:43 G | 45254031.75 | 45254031.99 | 45254032.24 | 0.0089 | 0.0037 |
| Uranus | 119189-10-10 00:41 G | 45254230.38 | 45254230.53 | 45254230.73 | 0.0139 | 0.0100 |
| Neptune | 119190-03-27 22:03 G | 45254399.18 | 45254399.42 | 45254399.68 | 0.0089 | 0.0008 |
| Neptune | 119191-03-30 09:05 G | 45254766.62 | 45254766.88 | 45254767.15 | 0.0089 | 0.0011 |
| Neptune | 119192-04-01 00:55 G | 45255134.33 | 45255134.54 | 45255134.78 | 0.0089 | 0.0039 |
| Neptune | 119193-04-03 07:24 G | 45255501.63 | 45255501.81 | 45255502.04 | 0.0089 | 0.0057 |
| Neptune | 119194-04-06 02:22 G | 45255869.56 | 45255869.60 | 45255869.69 | 0.0089 | 0.0086 |
| Saturn | 119200-11-24 01:10 G | 45258293.32 | 45258293.55 | 45258293.79 | 0.0285 | 0.0080 |
| Saturn | 119201-12-08 00:41 G | 45258672.34 | 45258672.53 | 45258672.74 | 0.0285 | 0.0175 |
| Jupiter | 119210-03-24 22:03 G | 45261701.30 | 45261701.42 | 45261701.55 | 0.0489 | 0.0411 |
| Saturn | 119215-05-27 19:39 G | 45263591.11 | 45263591.32 | 45263591.55 | 0.0275 | 0.0090 |
| Saturn | 119216-06-08 06:12 G | 45263968.56 | 45263968.76 | 45263968.97 | 0.0275 | 0.0133 |
| Jupiter | 119222-03-29 11:00 G | 45266088.74 | 45266088.96 | 45266089.19 | 0.0490 | 0.0190 |
| Uranus | 119228-04-05 23:43 G | 45268288.32 | 45268288.49 | 45268288.69 | 0.0139 | 0.0092 |
| Uranus | 119229-04-10 18:12 G | 45268658.00 | 45268658.26 | 45268658.53 | 0.0139 | 0.0007 |
| Saturn | 119229-11-18 12:27 G | 45268879.82 | 45268880.02 | 45268880.22 | 0.0284 | 0.0160 |
| Uranus | 119230-04-15 06:12 G | 45269027.61 | 45269027.76 | 45269027.93 | 0.0139 | 0.0104 |
| Saturn | 119230-12-02 15:05 G | 45269258.91 | 45269259.13 | 45269259.37 | 0.0284 | 0.0096 |
| Jupiter | 119234-04-02 11:00 G | 45270475.73 | 45270475.96 | 45270476.18 | 0.0491 | 0.0023 |
| Jupiter | 119239-09-23 02:22 G | 45272475.40 | 45272475.60 | 45272475.79 | 0.0539 | 0.0291 |
| Saturn | 119244-05-21 20:22 G | 45274178.16 | 45274178.35 | 45274178.55 | 0.0275 | 0.0170 |
| Saturn | 119245-06-03 02:22 G | 45274555.37 | 45274555.60 | 45274555.84 | 0.0274 | 0.0057 |
| Jupiter | 119246-04-06 22:03 G | 45274863.21 | 45274863.42 | 45274863.63 | 0.0493 | 0.0246 |
| Jupiter | 119251-09-28 01:53 G | 45276863.35 | 45276863.58 | 45276863.81 | 0.0537 | 0.0010 |
| Saturn | 119258-11-12 09:34 G | 45279465.82 | 45279465.90 | 45279466.00 | 0.0284 | 0.0264 |

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| Saturn | 119259-11-26 08:07 G | 45279844.60 | 45279844.84 | 45279845.08 | 0.0285 | 0.0021 |
| Saturn | 119260-12-09 12:27 G | 45280223.87 | 45280224.02 | 45280224.17 | 0.0285 | 0.0222 |
| Jupiter | 119263-10-03 13:53 G | 45281251.91 | 45281252.08 | 45281252.27 | 0.0535 | 0.0335 |
| Mars | 119266-07-06 18:27 G | 45282259.09 | 45282259.27 | 45282259.45 | 0.1861 | 0.0152 |
| Neptune | 119268-09-16 08:36 G | 45283061.72 | 45283061.86 | 45283062.05 | 0.0088 | 0.0066 |
| Neptune | 119269-09-18 18:41 G | 45283429.07 | 45283429.28 | 45283429.51 | 0.0088 | 0.0051 |
| Neptune | 119270-09-21 09:05 G | 45283796.65 | 45283796.88 | 45283797.14 | 0.0088 | 0.0020 |
| Neptune | 119271-09-23 14:22 G | 45284163.85 | 45284164.10 | 45284164.37 | 0.0088 | 0.0006 |
| Uranus | 119271-10-02 11:00 G | 45284172.78 | 45284172.96 | 45284173.17 | 0.0139 | 0.0091 |
| Neptune | 119272-09-25 08:07 G | 45284531.59 | 45284531.84 | 45284532.08 | 0.0088 | 0.0027 |
| Uranus | 119272-10-05 22:17 G | 45284542.18 | 45284542.43 | 45284542.68 | 0.0139 | 0.0005 |
| Saturn | 119273-05-17 00:12 G | 45284765.42 | 45284765.51 | 45284765.61 | 0.0275 | 0.0250 |
| Neptune | 119273-09-27 11:58 G | 45284898.79 | 45284899.00 | 45284899.24 | 0.0088 | 0.0040 |
| Uranus | 119273-10-10 19:39 G | 45284912.16 | 45284912.32 | 45284912.48 | 0.0139 | 0.0109 |
| Saturn | 119274-05-29 03:48 G | 45285142.42 | 45285142.66 | 45285142.91 | 0.0275 | 0.0032 |
| Neptune | 119274-09-30 04:17 G | 45285266.56 | 45285266.68 | 45285266.86 | 0.0088 | 0.0073 |
| Saturn | 119275-06-10 07:24 G | 45285519.64 | 45285519.81 | 45285520.01 | 0.0275 | 0.0177 |
| Neptune | 119275-10-02 11:43 G | 45285633.96 | 45285633.99 | 45285634.06 | 0.0088 | 0.0087 |
| Saturn | 119288-11-20 01:10 G | 45290431.33 | 45290431.55 | 45290431.79 | 0.0284 | 0.0135 |
| Saturn | 119289-12-03 23:00 G | 45290810.24 | 45290810.46 | 45290810.70 | 0.0284 | 0.0107 |
| Saturn | 119303-05-25 12:41 G | 45295729.82 | 45295730.03 | 45295730.25 | 0.0275 | 0.0132 |
| Saturn | 119304-06-05 15:05 G | 45296106.89 | 45296107.13 | 45296107.38 | 0.0274 | 0.0070 |
| Jupiter | 119305-03-29 11:29 G | 45296403.78 | 45296403.98 | 45296404.19 | 0.0489 | 0.0257 |
| Saturn | 119305-06-17 15:19 G | 45296484.10 | 45296484.14 | 45296484.18 | 0.0274 | 0.0269 |
| Uranus | 119312-04-07 09:05 G | 45298969.69 | 45298969.88 | 45298970.08 | 0.0139 | 0.0091 |
| Uranus | 119313-04-12 05:00 G | 45299339.47 | 45299339.71 | 45299339.96 | 0.0139 | 0.0003 |
| Uranus | 119314-04-16 15:19 G | 45299709.00 | 45299709.14 | 45299709.31 | 0.0139 | 0.0110 |
| Jupiter | 119317-04-02 17:00 G | 45300790.99 | 45300791.21 | 45300791.44 | 0.0491 | 0.0002 |
| Saturn | 119317-11-15 06:12 G | 45301017.69 | 45301017.76 | 45301017.87 | 0.0284 | 0.0266 |
| Saturn | 119318-11-29 01:39 G | 45301396.31 | 45301396.57 | 45301396.82 | 0.0285 | 0.0018 |

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| Saturn | 119319-12-12 22:46 G | 45301775.32 | 45301775.45 | 45301775.60 | 0.0285 | 0.0237 |
| Jupiter | 119322-09-23 03:05 G | 45302790.46 | 45302790.63 | 45302790.81 | 0.0539 | 0.0353 |
| Pluto | 119326-06-19 04:03 G | 45304155.42 | 45304155.67 | 45304155.92 | 0.0066 | 0.0002 |
| Jupiter | 119329-04-07 03:34 G | 45305178.45 | 45305178.65 | 45305178.86 | 0.0493 | 0.0269 |
| Saturn | 119332-05-19 05:15 G | 45306316.62 | 45306316.72 | 45306316.83 | 0.0275 | 0.0245 |
| Saturn | 119333-05-31 16:46 G | 45306693.97 | 45306694.20 | 45306694.44 | 0.0275 | 0.0036 |
| Saturn | 119334-06-12 19:53 G | 45307071.15 | 45307071.33 | 45307071.52 | 0.0274 | 0.0183 |
| Jupiter | 119334-09-27 20:36 G | 45307178.14 | 45307178.36 | 45307178.59 | 0.0537 | 0.0013 |
| Jupiter | 119346-10-03 06:12 G | 45311566.58 | 45311566.76 | 45311566.95 | 0.0535 | 0.0333 |
| Saturn | 119347-11-23 19:24 G | 45311983.08 | 45311983.31 | 45311983.54 | 0.0284 | 0.0106 |
| Saturn | 119348-12-06 18:12 G | 45312362.05 | 45312362.26 | 45312362.48 | 0.0285 | 0.0153 |
| Neptune | 119352-03-23 01:10 G | 45313564.39 | 45313564.55 | 45313564.75 | 0.0089 | 0.0065 |
| Neptune | 119353-03-25 20:36 G | 45313932.17 | 45313932.36 | 45313932.60 | 0.0089 | 0.0048 |
| Neptune | 119354-03-28 02:51 G | 45314299.37 | 45314299.62 | 45314299.87 | 0.0089 | 0.0018 |
| Neptune | 119355-03-30 21:19 G | 45314667.13 | 45314667.39 | 45314667.66 | 0.0089 | 0.0001 |
| Uranus | 119355-10-03 20:51 G | 45314854.20 | 45314854.37 | 45314854.57 | 0.0139 | 0.0092 |
| Neptune | 119356-04-01 05:15 G | 45315034.50 | 45315034.72 | 45315034.98 | 0.0089 | 0.0029 |
| Uranus | 119356-10-07 10:46 G | 45315223.69 | 45315223.95 | 45315224.22 | 0.0139 | 0.0006 |
| Neptune | 119357-04-03 18:55 G | 45315402.08 | 45315402.29 | 45315402.53 | 0.0089 | 0.0047 |
| Uranus | 119357-10-12 04:46 G | 45315593.58 | 45315593.70 | 45315593.87 | 0.0139 | 0.0114 |
| Neptune | 119358-04-06 07:53 G | 45315769.73 | 45315769.83 | 45315769.98 | 0.0089 | 0.0077 |
| Saturn | 119362-05-26 16:46 G | 45317280.99 | 45317281.20 | 45317281.41 | 0.0274 | 0.0124 |
| Saturn | 119363-06-08 03:19 G | 45317658.42 | 45317658.64 | 45317658.86 | 0.0274 | 0.0108 |
| Jupiter | 119376-03-24 07:39 G | 45322331.78 | 45322331.82 | 45322331.86 | 0.0488 | 0.0477 |
| Saturn | 119376-11-16 14:36 G | 45322568.95 | 45322569.11 | 45322569.28 | 0.0284 | 0.0206 |
| Saturn | 119377-11-30 17:15 G | 45322947.98 | 45322948.22 | 45322948.46 | 0.0285 | 0.0045 |
| Jupiter | 119388-03-28 16:17 G | 45326718.97 | 45326719.18 | 45326719.40 | 0.0489 | 0.0228 |
| Saturn | 119391-05-21 12:12 G | 45327867.85 | 45327868.01 | 45327868.19 | 0.0275 | 0.0203 |
| Saturn | 119392-06-01 19:24 G | 45328245.07 | 45328245.31 | 45328245.54 | 0.0274 | 0.0022 |
| Saturn | 119393-06-14 04:46 G | 45328622.59 | 45328622.70 | 45328622.83 | 0.0274 | 0.0233 |

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| Uranus | 119396-04-08 01:53 G | 45329651.40 | 45329651.58 | 45329651.78 | 0.0139 | 0.0092 |
| Uranus | 119397-04-12 10:46 G | 45330020.69 | 45330020.95 | 45330021.20 | 0.0139 | 0.0009 |
| Uranus | 119398-04-17 08:51 G | 45330390.73 | 45330390.87 | 45330391.02 | 0.0139 | 0.0112 |
| Jupiter | 119400-04-03 00:55 G | 45331106.31 | 45331106.54 | 45331106.76 | 0.0491 | 0.0005 |
| Jupiter | 119405-09-22 19:53 G | 45333105.15 | 45333105.33 | 45333105.51 | 0.0539 | 0.0360 |
| Saturn | 119406-11-26 00:12 G | 45333534.28 | 45333534.51 | 45333534.75 | 0.0284 | 0.0070 |
| Saturn | 119407-12-10 04:17 G | 45333913.50 | 45333913.68 | 45333913.88 | 0.0285 | 0.0176 |
| Jupiter | 119412-04-07 03:19 G | 45335493.43 | 45335493.64 | 45335493.86 | 0.0492 | 0.0218 |
| Pluto | 119413-12-18 17:15 G | 45336113.95 | 45336114.22 | 45336114.49 | 0.0078 | 0.0004 |
| Jupiter | 119417-09-27 19:39 G | 45337493.09 | 45337493.32 | 45337493.54 | 0.0538 | 0.0059 |
| Saturn | 119421-05-29 02:36 G | 45338832.38 | 45338832.61 | 45338832.86 | 0.0274 | 0.0076 |
| Saturn | 119422-06-10 05:43 G | 45339209.53 | 45339209.74 | 45339209.95 | 0.0274 | 0.0128 |
| Jupiter | 119424-04-11 14:36 G | 45339881.02 | 45339881.11 | 45339881.22 | 0.0493 | 0.0438 |
| Jupiter | 119429-10-03 08:36 G | 45341881.65 | 45341881.86 | 45341882.08 | 0.0536 | 0.0238 |
| Neptune | 119432-09-17 13:39 G | 45342961.96 | 45342962.07 | 45342962.22 | 0.0088 | 0.0075 |
| Neptune | 119433-09-20 06:12 G | 45343329.59 | 45343329.76 | 45343329.97 | 0.0088 | 0.0061 |
| Neptune | 119434-09-22 13:10 G | 45343696.83 | 45343697.05 | 45343697.30 | 0.0088 | 0.0030 |
| Neptune | 119435-09-25 01:24 G | 45344064.30 | 45344064.56 | 45344064.83 | 0.0088 | 0.0015 |
| Saturn | 119435-11-19 23:29 G | 45344120.31 | 45344120.48 | 45344120.67 | 0.0284 | 0.0204 |
| Neptune | 119436-09-26 13:53 G | 45344431.84 | 45344432.08 | 45344432.33 | 0.0088 | 0.0017 |
| Saturn | 119436-12-02 21:34 G | 45344499.16 | 45344499.40 | 45344499.65 | 0.0285 | 0.0041 |
| Neptune | 119437-09-28 20:51 G | 45344799.13 | 45344799.37 | 45344799.63 | 0.0088 | 0.0030 |
| Neptune | 119438-10-01 13:53 G | 45345166.91 | 45345167.08 | 45345167.26 | 0.0088 | 0.0063 |
| Neptune | 119439-10-03 17:29 G | 45345534.13 | 45345534.23 | 45345534.39 | 0.0088 | 0.0076 |
| Uranus | 119439-10-05 04:03 G | 45345535.50 | 45345535.67 | 45345535.88 | 0.0139 | 0.0092 |
| Uranus | 119440-10-09 02:51 G | 45345905.38 | 45345905.62 | 45345905.88 | 0.0139 | 0.0018 |
| Uranus | 119441-10-13 12:41 G | 45346274.89 | 45346275.03 | 45346275.19 | 0.0139 | 0.0112 |
| Mars | 119446-01-07 07:53 G | 45347821.64 | 45347821.83 | 45347822.02 | 0.1685 | 0.0546 |
| Saturn | 119450-05-24 02:07 G | 45349419.42 | 45349419.59 | 45349419.77 | 0.0275 | 0.0186 |
| Saturn | 119451-06-05 05:29 G | 45349796.48 | 45349796.73 | 45349796.98 | 0.0274 | 0.0019 |

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| Saturn | 119452-06-16 06:41 G | 45350173.66 | 45350173.78 | 45350173.92 | 0.0274 | 0.0229 |
| Saturn | 119465-11-27 11:29 G | 45355085.73 | 45355085.98 | 45355086.24 | 0.0285 | 0.0056 |
| Saturn | 119466-12-11 09:34 G | 45355464.73 | 45355464.90 | 45355465.08 | 0.0285 | 0.0203 |
| Jupiter | 119471-03-29 18:55 G | 45357034.10 | 45357034.29 | 45357034.48 | 0.0489 | 0.0307 |
| Uranus | 119480-04-09 06:26 G | 45360332.60 | 45360332.77 | 45360332.97 | 0.0139 | 0.0093 |
| Saturn | 119480-05-30 15:48 G | 45360383.94 | 45360384.16 | 45360384.40 | 0.0274 | 0.0074 |
| Uranus | 119481-04-14 01:53 G | 45360702.32 | 45360702.58 | 45360702.84 | 0.0139 | 0.0018 |
| Saturn | 119481-06-11 18:55 G | 45360761.09 | 45360761.29 | 45360761.51 | 0.0274 | 0.0150 |
| Uranus | 119482-04-18 12:26 G | 45361071.89 | 45361072.02 | 45361072.19 | 0.0139 | 0.0110 |
| Jupiter | 119483-04-03 05:14 G | 45361421.49 | 45361421.72 | 45361421.94 | 0.0490 | 0.0077 |
| Jupiter | 119488-09-21 20:07 G | 45363420.22 | 45363420.34 | 45363420.47 | 0.0540 | 0.0457 |
| Saturn | 119494-11-21 14:36 G | 45365671.91 | 45365672.11 | 45365672.32 | 0.0284 | 0.0153 |
| Jupiter | 119495-04-07 08:50 G | 45365808.65 | 45365808.87 | 45365809.10 | 0.0492 | 0.0174 |
| Saturn | 119495-12-05 12:12 G | 45366050.77 | 45366051.01 | 45366051.25 | 0.0285 | 0.0100 |
| Jupiter | 119500-09-28 01:24 G | 45367808.35 | 45367808.56 | 45367808.78 | 0.0538 | 0.0124 |
| Jupiter | 119507-04-12 23:00 G | 45370196.37 | 45370196.46 | 45370196.56 | 0.0493 | 0.0446 |
| Saturn | 119509-05-26 03:34 G | 45370970.47 | 45370970.65 | 45370970.85 | 0.0274 | 0.0158 |
| Saturn | 119510-06-07 14:36 G | 45371347.88 | 45371348.11 | 45371348.34 | 0.0274 | 0.0070 |
| Jupiter | 119512-10-03 06:41 G | 45372196.57 | 45372196.78 | 45372197.00 | 0.0536 | 0.0228 |
| Neptune | 119516-03-24 13:10 G | 45373464.91 | 45373465.05 | 45373465.19 | 0.0089 | 0.0075 |
| Neptune | 119517-03-27 02:22 G | 45373832.43 | 45373832.60 | 45373832.80 | 0.0089 | 0.0058 |
| Neptune | 119518-03-29 11:00 G | 45374199.72 | 45374199.96 | 45374200.22 | 0.0089 | 0.0029 |
| Neptune | 119519-04-01 05:29 G | 45374567.48 | 45374567.73 | 45374567.99 | 0.0089 | 0.0011 |
| Neptune | 119520-04-02 11:14 G | 45374934.72 | 45374934.97 | 45374935.23 | 0.0089 | 0.0019 |
| Neptune | 119521-04-05 06:26 G | 45375302.55 | 45375302.77 | 45375303.02 | 0.0089 | 0.0037 |
| Neptune | 119522-04-07 12:41 G | 45375669.88 | 45375670.03 | 45375670.22 | 0.0089 | 0.0066 |
| Neptune | 119523-04-10 05:14 G | 45376037.65 | 45376037.72 | 45376037.83 | 0.0089 | 0.0083 |
| Uranus | 119523-10-06 20:50 G | 45376217.18 | 45376217.37 | 45376217.58 | 0.0139 | 0.0087 |
| Saturn | 119523-11-16 17:58 G | 45376258.15 | 45376258.25 | 45376258.37 | 0.0284 | 0.0253 |
| Uranus | 119524-10-10 07:24 G | 45376586.57 | 45376586.81 | 45376587.06 | 0.0139 | 0.0026 |

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| Saturn | 119524-11-29 20:36 G | 45376637.12 | 45376637.36 | 45376637.60 | 0.0285 | 0.0010 |
| Uranus | 119525-10-15 05:58 G | 45376956.60 | 45376956.75 | 45376956.91 | 0.0139 | 0.0112 |
| Saturn | 119525-12-13 22:31 G | 45377016.30 | 45377016.44 | 45377016.59 | 0.0285 | 0.0233 |
| Saturn | 119538-05-21 08:50 G | 45381557.75 | 45381557.87 | 45381558.00 | 0.0275 | 0.0235 |
| Saturn | 119539-06-02 15:34 G | 45381934.92 | 45381935.15 | 45381935.39 | 0.0274 | 0.0020 |
| Saturn | 119540-06-14 01:10 G | 45382312.38 | 45382312.55 | 45382312.73 | 0.0274 | 0.0183 |
| Mars | 119550-07-09 07:24 G | 45385989.61 | 45385989.81 | 45385990.01 | 0.1851 | 0.0372 |
| Saturn | 119553-11-23 14:50 G | 45387222.92 | 45387223.12 | 45387223.34 | 0.0284 | 0.0144 |
| Jupiter | 119554-03-30 00:41 G | 45387349.34 | 45387349.53 | 45387349.72 | 0.0488 | 0.0300 |
| Saturn | 119554-12-07 18:41 G | 45387602.05 | 45387602.28 | 45387602.50 | 0.0285 | 0.0098 |
| Uranus | 119564-04-10 16:02 G | 45391013.98 | 45391014.17 | 45391014.39 | 0.0139 | 0.0087 |
| Uranus | 119565-04-15 11:43 G | 45391383.75 | 45391383.99 | 45391384.23 | 0.0139 | 0.0025 |
| Jupiter | 119566-04-03 14:36 G | 45391736.89 | 45391737.11 | 45391737.34 | 0.0490 | 0.0044 |
| Uranus | 119566-04-19 23:43 G | 45391753.35 | 45391753.49 | 45391753.67 | 0.0139 | 0.0109 |
| Saturn | 119568-05-27 09:48 G | 45392521.69 | 45392521.91 | 45392522.13 | 0.0274 | 0.0129 |
| Saturn | 119569-06-08 13:38 G | 45392898.84 | 45392899.07 | 45392899.30 | 0.0274 | 0.0071 |
| Jupiter | 119571-09-22 21:34 G | 45393735.27 | 45393735.40 | 45393735.54 | 0.0540 | 0.0441 |
| Pluto | 119573-06-21 22:17 G | 45394373.22 | 45394373.43 | 45394373.65 | 0.0066 | 0.0031 |
| Pluto | 119574-06-23 12:12 G | 45394739.93 | 45394740.01 | 45394740.18 | 0.0066 | 0.0059 |
| Jupiter | 119578-04-07 16:46 G | 45396123.98 | 45396124.20 | 45396124.42 | 0.0491 | 0.0198 |
| Saturn | 119582-11-17 19:24 G | 45397809.23 | 45397809.31 | 45397809.43 | 0.0284 | 0.0260 |
| Jupiter | 119583-09-28 01:24 G | 45398123.34 | 45398123.56 | 45398123.78 | 0.0539 | 0.0109 |
| Saturn | 119583-12-01 17:58 G | 45398188.01 | 45398188.25 | 45398188.50 | 0.0285 | 0.0010 |
| Saturn | 119584-12-14 22:31 G | 45398567.33 | 45398567.44 | 45398567.56 | 0.0285 | 0.0247 |
| Jupiter | 119590-04-12 05:29 G | 45400511.61 | 45400511.73 | 45400511.85 | 0.0492 | 0.0415 |
| Jupiter | 119595-10-03 04:31 G | 45402511.47 | 45402511.69 | 45402511.92 | 0.0538 | 0.0194 |
| Neptune | 119596-09-17 23:14 G | 45402862.41 | 45402862.47 | 45402862.56 | 0.0088 | 0.0085 |
| Saturn | 119597-05-22 19:53 G | 45403109.22 | 45403109.33 | 45403109.46 | 0.0275 | 0.0237 |
| Neptune | 119597-09-20 15:34 G | 45403230.02 | 45403230.15 | 45403230.32 | 0.0088 | 0.0071 |
| Saturn | 119598-06-03 23:43 G | 45403486.24 | 45403486.49 | 45403486.74 | 0.0274 | 0.0026 |

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| Neptune | 119598-09-22 19:38 G | 45403597.11 | 45403597.32 | 45403597.57 | 0.0088 | 0.0040 |
| Saturn | 119599-06-16 00:12 G | 45403863.36 | 45403863.51 | 45403863.69 | 0.0274 | 0.0195 |
| Neptune | 119599-09-25 13:24 G | 45403964.83 | 45403965.06 | 45403965.33 | 0.0088 | 0.0026 |
| Neptune | 119600-09-26 18:26 G | 45404332.03 | 45404332.27 | 45404332.53 | 0.0088 | 0.0008 |
| Neptune | 119601-09-29 08:50 G | 45404699.63 | 45404699.87 | 45404700.14 | 0.0088 | 0.0021 |
| Neptune | 119602-10-01 18:12 G | 45405067.08 | 45405067.26 | 45405067.47 | 0.0088 | 0.0053 |
| Neptune | 119603-10-04 03:48 G | 45405434.48 | 45405434.66 | 45405434.84 | 0.0088 | 0.0066 |
| Uranus | 119607-10-07 06:41 G | 45406898.58 | 45406898.78 | 45406898.99 | 0.0139 | 0.0077 |
| Jupiter | 119607-10-08 11:29 G | 45406899.90 | 45406899.98 | 45406900.08 | 0.0536 | 0.0487 |
| Uranus | 119608-10-10 21:34 G | 45407268.15 | 45407268.40 | 45407268.67 | 0.0139 | 0.0029 |
| Uranus | 119609-10-15 13:53 G | 45407637.97 | 45407638.08 | 45407638.24 | 0.0139 | 0.0117 |
| Saturn | 119612-11-24 20:07 G | 45408774.11 | 45408774.34 | 45408774.59 | 0.0284 | 0.0106 |
| Saturn | 119613-12-08 17:14 G | 45409153.02 | 45409153.22 | 45409153.44 | 0.0285 | 0.0150 |
| Saturn | 119627-05-29 17:43 G | 45414073.03 | 45414073.24 | 45414073.46 | 0.0274 | 0.0116 |
| Saturn | 119628-06-09 21:19 G | 45414450.17 | 45414450.39 | 45414450.63 | 0.0274 | 0.0113 |
| Jupiter | 119637-03-29 10:02 G | 45417664.75 | 45417664.92 | 45417665.11 | 0.0488 | 0.0321 |
| Saturn | 119641-11-19 04:02 G | 45419360.50 | 45419360.67 | 45419360.85 | 0.0284 | 0.0206 |
| Saturn | 119642-12-03 00:41 G | 45419739.27 | 45419739.53 | 45419739.78 | 0.0285 | 0.0039 |
| Saturn | 119643-12-16 22:31 G | 45420118.42 | 45420118.44 | 45420118.48 | 0.0285 | 0.0283 |
| Uranus | 119648-04-11 06:55 G | 45421695.59 | 45421695.79 | 45421696.00 | 0.0139 | 0.0080 |
| Jupiter | 119649-04-02 23:14 G | 45422052.24 | 45422052.47 | 45422052.69 | 0.0489 | 0.0110 |
| Uranus | 119649-04-15 15:34 G | 45422064.91 | 45422065.15 | 45422065.41 | 0.0139 | 0.0024 |
| Uranus | 119650-04-20 13:24 G | 45422434.93 | 45422435.06 | 45422435.23 | 0.0139 | 0.0112 |
| Mars | 119651-01-06 11:43 G | 45422695.85 | 45422695.99 | 45422696.13 | 0.1698 | 0.1253 |
| Jupiter | 119654-09-21 17:58 G | 45424050.17 | 45424050.25 | 45424050.34 | 0.0541 | 0.0505 |
| Saturn | 119656-05-23 17:14 G | 45424660.06 | 45424660.22 | 45424660.38 | 0.0275 | 0.0198 |
| Saturn | 119657-06-05 05:29 G | 45425037.49 | 45425037.73 | 45425037.96 | 0.0275 | 0.0027 |
| Saturn | 119658-06-17 09:48 G | 45425414.80 | 45425414.91 | 45425415.05 | 0.0274 | 0.0235 |
| Pluto | 119660-12-20 12:26 G | 45426331.85 | 45426332.02 | 45426332.22 | 0.0078 | 0.0056 |
| Jupiter | 119661-04-06 23:58 G | 45426439.27 | 45426439.50 | 45426439.73 | 0.0490 | 0.0117 |

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| Jupiter | 119666-09-27 05:14 G | 45428438.51 | 45428438.72 | 45428438.92 | 0.0540 | 0.0207 |
| Saturn | 119671-11-27 03:48 G | 45430325.43 | 45430325.66 | 45430325.90 | 0.0284 | 0.0093 |
| Saturn | 119672-12-10 02:50 G | 45430704.41 | 45430704.62 | 45430704.84 | 0.0285 | 0.0151 |
| Jupiter | 119673-04-11 14:50 G | 45430826.97 | 45430827.12 | 45430827.27 | 0.0492 | 0.0366 |
| Jupiter | 119678-10-02 11:43 G | 45432826.76 | 45432826.99 | 45432827.23 | 0.0538 | 0.0127 |
| Neptune | 119680-03-24 00:26 G | 45433365.46 | 45433365.52 | 45433365.61 | 0.0089 | 0.0085 |
| Neptune | 119681-03-26 07:10 G | 45433732.65 | 45433732.80 | 45433732.97 | 0.0089 | 0.0068 |
| Neptune | 119682-03-28 23:58 G | 45434100.27 | 45434100.50 | 45434100.76 | 0.0089 | 0.0038 |
| Neptune | 119683-03-31 10:46 G | 45434467.72 | 45434467.95 | 45434468.21 | 0.0089 | 0.0021 |
| Neptune | 119684-04-01 22:17 G | 45434835.17 | 45434835.43 | 45434835.70 | 0.0089 | 0.0009 |
| Neptune | 119685-04-04 13:53 G | 45435202.85 | 45435203.08 | 45435203.33 | 0.0089 | 0.0026 |
| Neptune | 119686-04-06 20:50 G | 45435570.17 | 45435570.37 | 45435570.58 | 0.0089 | 0.0055 |
| Saturn | 119686-05-30 14:22 G | 45435623.87 | 45435624.10 | 45435624.32 | 0.0274 | 0.0083 |
| Neptune | 119687-04-09 16:02 G | 45435938.04 | 45435938.17 | 45435938.33 | 0.0089 | 0.0074 |
| Saturn | 119687-06-12 00:26 G | 45436001.32 | 45436001.52 | 45436001.74 | 0.0274 | 0.0121 |
| Jupiter | 119690-10-07 17:29 G | 45437215.14 | 45437215.23 | 45437215.33 | 0.0536 | 0.0480 |
| Uranus | 119691-10-07 12:55 G | 45437579.83 | 45437580.04 | 45437580.29 | 0.0139 | 0.0066 |
| Uranus | 119692-10-11 11:29 G | 45437949.74 | 45437949.98 | 45437950.23 | 0.0139 | 0.0028 |
| Uranus | 119693-10-15 21:34 G | 45438319.31 | 45438319.40 | 45438319.54 | 0.0139 | 0.0125 |
| Saturn | 119700-11-20 23:29 G | 45440911.33 | 45440911.48 | 45440911.63 | 0.0284 | 0.0220 |
| Saturn | 119701-12-05 02:07 G | 45441290.35 | 45441290.59 | 45441290.83 | 0.0285 | 0.0030 |
| Saturn | 119702-12-19 05:00 G | 45441669.70 | 45441669.71 | 45441669.74 | 0.0285 | 0.0284 |
| Saturn | 119715-05-26 18:26 G | 45446211.10 | 45446211.27 | 45446211.45 | 0.0275 | 0.0193 |
| Saturn | 119716-06-07 00:12 G | 45446588.27 | 45446588.51 | 45446588.75 | 0.0275 | 0.0016 |
| Saturn | 119717-06-19 09:19 G | 45446965.77 | 45446965.89 | 45446966.01 | 0.0274 | 0.0234 |
| Jupiter | 119720-03-29 19:24 G | 45447980.15 | 45447980.31 | 45447980.47 | 0.0488 | 0.0360 |
| Mars | 119730-01-09 11:14 G | 45451552.80 | 45451552.97 | 45451553.15 | 0.1693 | 0.0726 |
| Saturn | 119730-11-28 23:43 G | 45451876.25 | 45451876.49 | 45451876.73 | 0.0284 | 0.0069 |
| Saturn | 119731-12-13 02:22 G | 45452255.44 | 45452255.60 | 45452255.79 | 0.0284 | 0.0191 |
| Jupiter | 119732-04-03 08:50 G | 45452367.64 | 45452367.87 | 45452368.10 | 0.0489 | 0.0100 |

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| Uranus | 119732-04-12 11:00 G | 45452376.74 | 45452376.96 | 45452377.17 | 0.0139 | 0.0070 |
| Uranus | 119733-04-17 07:24 G | 45452746.56 | 45452746.81 | 45452747.07 | 0.0139 | 0.0022 |
| Uranus | 119734-04-21 17:29 G | 45453116.13 | 45453116.23 | 45453116.37 | 0.0139 | 0.0121 |
| Jupiter | 119744-04-07 09:48 G | 45456754.69 | 45456754.91 | 45456755.14 | 0.0490 | 0.0159 |
| Saturn | 119745-06-01 17:58 G | 45457175.01 | 45457175.25 | 45457175.50 | 0.0275 | 0.0079 |
| Saturn | 119746-06-13 20:50 G | 45457552.17 | 45457552.37 | 45457552.57 | 0.0274 | 0.0150 |
| Jupiter | 119749-09-27 13:10 G | 45458753.84 | 45458754.05 | 45458754.26 | 0.0540 | 0.0187 |
| Jupiter | 119756-04-12 01:53 G | 45461142.45 | 45461142.58 | 45461142.72 | 0.0492 | 0.0402 |
| Saturn | 119759-11-22 23:58 G | 45462462.30 | 45462462.50 | 45462462.71 | 0.0284 | 0.0168 |
| Saturn | 119760-12-05 20:50 G | 45462841.13 | 45462841.37 | 45462841.60 | 0.0284 | 0.0081 |
| Neptune | 119761-09-20 20:36 G | 45463130.28 | 45463130.36 | 45463130.49 | 0.0088 | 0.0081 |
| Jupiter | 119761-10-02 12:55 G | 45463141.82 | 45463142.04 | 45463142.28 | 0.0538 | 0.0151 |
| Neptune | 119762-09-23 07:10 G | 45463497.59 | 45463497.80 | 45463498.03 | 0.0088 | 0.0049 |
| Neptune | 119763-09-25 21:34 G | 45463865.18 | 45463865.40 | 45463865.64 | 0.0088 | 0.0035 |
| Neptune | 119764-09-27 03:19 G | 45464232.38 | 45464232.64 | 45464232.90 | 0.0088 | 0.0003 |
| Neptune | 119765-09-29 20:50 G | 45464600.12 | 45464600.37 | 45464600.63 | 0.0088 | 0.0011 |
| Neptune | 119766-10-02 00:55 G | 45464967.32 | 45464967.54 | 45464967.76 | 0.0088 | 0.0043 |
| Neptune | 119767-10-04 17:00 G | 45465335.04 | 45465335.21 | 45465335.44 | 0.0088 | 0.0058 |
| Jupiter | 119773-10-07 18:41 G | 45467530.16 | 45467530.28 | 45467530.40 | 0.0537 | 0.0448 |
| Saturn | 119774-05-28 00:12 G | 45467762.32 | 45467762.51 | 45467762.70 | 0.0276 | 0.0161 |
| Saturn | 119775-06-09 05:58 G | 45468139.50 | 45468139.75 | 45468139.99 | 0.0275 | 0.0065 |
| Uranus | 119775-10-09 06:55 G | 45468261.57 | 45468261.79 | 45468262.04 | 0.0139 | 0.0057 |
| Uranus | 119776-10-12 16:17 G | 45468630.94 | 45468631.18 | 45468631.43 | 0.0139 | 0.0028 |
| Uranus | 119777-10-17 15:05 G | 45469001.08 | 45469001.13 | 45469001.20 | 0.0139 | 0.0135 |
| Saturn | 119788-11-16 12:41 G | 45473048.98 | 45473049.03 | 45473049.10 | 0.0283 | 0.0274 |
| Saturn | 119789-11-30 04:46 G | 45473427.45 | 45473427.70 | 45473427.96 | 0.0284 | 0.0045 |
| Saturn | 119790-12-14 00:26 G | 45473806.35 | 45473806.52 | 45473806.71 | 0.0284 | 0.0195 |
| Jupiter | 119803-03-31 04:46 G | 45478295.53 | 45478295.70 | 45478295.88 | 0.0487 | 0.0324 |
| Saturn | 119803-05-23 08:07 G | 45478348.75 | 45478348.84 | 45478348.95 | 0.0276 | 0.0249 |
| Saturn | 119804-06-03 22:02 G | 45478726.19 | 45478726.42 | 45478726.66 | 0.0275 | 0.0039 |

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| Saturn | 119805-06-16 02:36 G | 45479103.42 | 45479103.61 | 45479103.82 | 0.0274 | 0.0162 |
| Jupiter | 119815-04-04 20:22 G | 45482683.12 | 45482683.35 | 45482683.58 | 0.0489 | 0.0104 |
| Uranus | 119816-04-13 20:22 G | 45483058.13 | 45483058.35 | 45483058.60 | 0.0139 | 0.0064 |
| Uranus | 119817-04-18 16:02 G | 45483427.93 | 45483428.17 | 45483428.42 | 0.0139 | 0.0021 |
| Uranus | 119818-04-23 03:19 G | 45483797.58 | 45483797.64 | 45483797.74 | 0.0139 | 0.0132 |
| Saturn | 119818-11-25 07:10 G | 45484013.61 | 45484013.80 | 45484014.00 | 0.0284 | 0.0177 |
| Saturn | 119819-12-09 02:50 G | 45484392.37 | 45484392.62 | 45484392.87 | 0.0284 | 0.0071 |
| Jupiter | 119820-09-22 04:02 G | 45484680.64 | 45484680.67 | 45484680.71 | 0.0542 | 0.0533 |
| Pluto | 119821-06-26 09:34 G | 45484957.66 | 45484957.90 | 45484958.16 | 0.0066 | 0.0017 |
| Jupiter | 119827-04-08 21:05 G | 45487070.16 | 45487070.38 | 45487070.61 | 0.0490 | 0.0115 |
| Jupiter | 119832-09-27 12:12 G | 45489068.81 | 45489069.01 | 45489069.22 | 0.0541 | 0.0239 |
| Saturn | 119833-05-29 19:24 G | 45489313.12 | 45489313.31 | 45489313.51 | 0.0276 | 0.0154 |
| Saturn | 119834-06-11 08:07 G | 45489690.61 | 45489690.84 | 45489691.08 | 0.0275 | 0.0057 |
| Mars | 119834-07-11 21:34 G | 45489721.22 | 45489721.40 | 45489721.58 | 0.1842 | 0.0152 |
| Saturn | 119835-06-23 12:26 G | 45490067.99 | 45490068.02 | 45490068.06 | 0.0275 | 0.0272 |
| Jupiter | 119839-04-13 10:46 G | 45491457.78 | 45491457.95 | 45491458.13 | 0.0491 | 0.0331 |
| Jupiter | 119844-10-02 11:43 G | 45493456.76 | 45493456.99 | 45493457.22 | 0.0539 | 0.0056 |
| Neptune | 119845-03-27 14:36 G | 45493632.99 | 45493633.11 | 45493633.26 | 0.0089 | 0.0075 |
| Neptune | 119846-03-30 10:02 G | 45494000.71 | 45494000.92 | 45494001.14 | 0.0089 | 0.0050 |
| Neptune | 119847-04-01 17:00 G | 45494367.99 | 45494368.21 | 45494368.46 | 0.0089 | 0.0029 |
| Saturn | 119847-11-19 14:36 G | 45494600.04 | 45494600.11 | 45494600.20 | 0.0283 | 0.0265 |
| Neptune | 119848-04-03 08:50 G | 45494735.60 | 45494735.87 | 45494736.14 | 0.0089 | 0.0004 |
| Saturn | 119848-12-02 12:26 G | 45494978.77 | 45494979.02 | 45494979.27 | 0.0283 | 0.0016 |
| Neptune | 119849-04-05 21:19 G | 45495103.14 | 45495103.39 | 45495103.63 | 0.0089 | 0.0019 |
| Saturn | 119849-12-16 09:05 G | 45495357.75 | 45495357.88 | 45495358.03 | 0.0284 | 0.0236 |
| Neptune | 119850-04-08 07:24 G | 45495470.58 | 45495470.81 | 45495471.04 | 0.0089 | 0.0044 |
| Neptune | 119851-04-10 23:58 G | 45495838.36 | 45495838.50 | 45495838.69 | 0.0089 | 0.0067 |
| Jupiter | 119856-10-08 04:17 G | 45497845.51 | 45497845.68 | 45497845.85 | 0.0537 | 0.0367 |
| Uranus | 119859-10-10 16:17 G | 45498942.96 | 45498943.18 | 45498943.41 | 0.0139 | 0.0058 |
| Uranus | 119860-10-14 03:34 G | 45499312.40 | 45499312.65 | 45499312.91 | 0.0139 | 0.0035 |

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| Saturn | 119862-05-24 06:55 G | 45499899.71 | 45499899.79 | 45499899.89 | 0.0276 | 0.0255 |
| Saturn | 119863-06-05 19:10 G | 45500277.07 | 45500277.30 | 45500277.54 | 0.0275 | 0.0028 |
| Saturn | 119864-06-17 05:43 G | 45500654.58 | 45500654.74 | 45500654.91 | 0.0274 | 0.0198 |
| Saturn | 119877-11-26 07:10 G | 45505564.59 | 45505564.80 | 45505565.02 | 0.0284 | 0.0123 |
| Saturn | 119878-12-10 07:38 G | 45505943.60 | 45505943.82 | 45505944.05 | 0.0284 | 0.0120 |
| Jupiter | 119886-03-30 18:41 G | 45508611.15 | 45508611.28 | 45508611.43 | 0.0487 | 0.0377 |
| Saturn | 119892-05-30 17:14 G | 45510863.99 | 45510864.22 | 45510864.44 | 0.0276 | 0.0106 |
| Saturn | 119893-06-12 04:02 G | 45511241.45 | 45511241.67 | 45511241.88 | 0.0275 | 0.0107 |
| Jupiter | 119898-04-04 02:50 G | 45512998.40 | 45512998.62 | 45512998.86 | 0.0488 | 0.0158 |
| Uranus | 119900-04-15 10:31 G | 45513739.71 | 45513739.94 | 45513740.16 | 0.0139 | 0.0071 |
| Uranus | 119901-04-19 22:17 G | 45514109.19 | 45514109.43 | 45514109.67 | 0.0139 | 0.0033 |
| Uranus | 119902-04-24 17:29 G | 45514479.17 | 45514479.23 | 45514479.32 | 0.0139 | 0.0132 |
| Saturn | 119906-11-21 14:50 G | 45516151.00 | 45516151.12 | 45516151.25 | 0.0282 | 0.0241 |
| Saturn | 119907-12-05 14:07 G | 45516529.85 | 45516530.09 | 45516530.33 | 0.0283 | 0.0007 |
| Saturn | 119908-12-18 15:48 G | 45516909.03 | 45516909.16 | 45516909.31 | 0.0284 | 0.0234 |
| Pluto | 119908-12-25 22:17 G | 45516916.21 | 45516916.43 | 45516916.68 | 0.0078 | 0.0030 |
| Jupiter | 119910-04-09 09:19 G | 45517385.67 | 45517385.89 | 45517386.11 | 0.0489 | 0.0070 |
| Jupiter | 119915-09-28 16:31 G | 45519383.99 | 45519384.19 | 45519384.38 | 0.0541 | 0.0314 |
| Saturn | 119921-05-26 12:55 G | 45521450.89 | 45521451.04 | 45521451.21 | 0.0276 | 0.0213 |
| Jupiter | 119922-04-13 14:22 G | 45521772.92 | 45521773.10 | 45521773.29 | 0.0491 | 0.0315 |
| Saturn | 119922-06-07 18:55 G | 45521828.04 | 45521828.29 | 45521828.53 | 0.0275 | 0.0011 |
| Saturn | 119923-06-20 03:48 G | 45522205.51 | 45522205.66 | 45522205.84 | 0.0275 | 0.0196 |
| Neptune | 119925-09-22 07:38 G | 45523030.81 | 45523030.82 | 45523030.88 | 0.0088 | 0.0088 |
| Neptune | 119926-09-24 15:19 G | 45523397.96 | 45523398.14 | 45523398.34 | 0.0088 | 0.0061 |
| Neptune | 119927-09-27 07:24 G | 45523765.61 | 45523765.81 | 45523766.05 | 0.0088 | 0.0043 |
| Jupiter | 119927-10-03 21:19 G | 45523772.17 | 45523772.39 | 45523772.62 | 0.0539 | 0.0016 |
| Neptune | 119928-09-28 12:12 G | 45524132.75 | 45524133.01 | 45524133.26 | 0.0088 | 0.0016 |
| Neptune | 119929-10-01 05:43 G | 45524500.48 | 45524500.74 | 45524501.00 | 0.0088 | 0.0004 |
| Neptune | 119930-10-03 10:46 G | 45524867.71 | 45524867.95 | 45524868.18 | 0.0088 | 0.0031 |
| Neptune | 119931-10-06 01:10 G | 45525235.34 | 45525235.55 | 45525235.78 | 0.0088 | 0.0051 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 119932-10-07 11:14 G | 45525602.85 | 45525602.97 | 45525603.10 | 0.0088 | 0.0076 |
| Mars | 119935-01-10 03:34 G | 45526427.54 | 45526427.65 | 45526427.76 | 0.1705 | 0.1347 |
| Saturn | 119936-11-28 08:36 G | 45527115.64 | 45527115.86 | 45527116.08 | 0.0283 | 0.0121 |
| Saturn | 119937-12-12 08:50 G | 45527494.66 | 45527494.87 | 45527495.09 | 0.0284 | 0.0134 |
| Jupiter | 119939-10-09 04:02 G | 45528160.49 | 45528160.67 | 45528160.85 | 0.0537 | 0.0356 |
| Uranus | 119943-10-11 23:14 G | 45529624.26 | 45529624.47 | 45529624.70 | 0.0139 | 0.0062 |
| Uranus | 119944-10-15 18:26 G | 45529994.03 | 45529994.27 | 45529994.52 | 0.0139 | 0.0050 |
| Uranus | 119945-10-20 06:12 G | 45530363.74 | 45530363.76 | 45530363.83 | 0.0139 | 0.0138 |
| Saturn | 119951-06-02 23:00 G | 45532415.23 | 45532415.46 | 45532415.69 | 0.0276 | 0.0114 |
| Saturn | 119952-06-14 03:19 G | 45532792.43 | 45532792.64 | 45532792.87 | 0.0276 | 0.0113 |
| Saturn | 119965-11-22 23:00 G | 45537702.29 | 45537702.46 | 45537702.65 | 0.0282 | 0.0197 |
| Saturn | 119966-12-06 16:46 G | 45538080.96 | 45538081.20 | 45538081.45 | 0.0283 | 0.0050 |
| Jupiter | 119969-03-31 05:43 G | 45538926.63 | 45538926.74 | 45538926.86 | 0.0487 | 0.0415 |
| Saturn | 119980-05-27 19:24 G | 45543002.14 | 45543002.31 | 45543002.48 | 0.0276 | 0.0196 |
| Jupiter | 119981-04-04 06:26 G | 45543313.55 | 45543313.77 | 45543313.99 | 0.0488 | 0.0169 |
| Saturn | 119981-06-09 01:53 G | 45543379.33 | 45543379.58 | 45543379.83 | 0.0275 | 0.0033 |
| Saturn | 119982-06-21 04:31 G | 45543756.61 | 45543756.69 | 45543756.81 | 0.0275 | 0.0249 |
| Uranus | 119984-04-15 21:34 G | 45544421.18 | 45544421.40 | 45544421.62 | 0.0139 | 0.0068 |
| Uranus | 119985-04-20 05:58 G | 45544790.52 | 45544790.75 | 45544791.00 | 0.0139 | 0.0042 |
| Uranus | 119986-04-25 03:34 G | 45545160.57 | 45545160.65 | 45545160.78 | 0.0139 | 0.0126 |
| Jupiter | 119993-04-08 21:19 G | 45547701.16 | 45547701.39 | 45547701.62 | 0.0489 | 0.0090 |
| Saturn | 119995-11-30 17:58 G | 45548667.01 | 45548667.25 | 45548667.50 | 0.0283 | 0.0082 |
| Saturn | 119996-12-13 12:55 G | 45549045.83 | 45549046.04 | 45549046.25 | 0.0284 | 0.0155 |
| Jupiter | 119998-09-27 14:22 G | 45549698.91 | 45549699.10 | 45549699.28 | 0.0541 | 0.0342 |

121ST MILLENNIUM CE

This is a list of transits of Moon in the 121st millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 120005-04-12 22:02 | G | 45552088.26 | 45552088.42 | 45552088.59 | 0.0491 | 0.0342 | |
| Neptune | 120009-03-28 01:24 | G | 45553533.48 | 45553533.56 | 45553533.69 | 0.0089 | 0.0080 | |
| Neptune | 120010-03-30 17:43 | G | 45553901.07 | 45553901.24 | 45553901.43 | 0.0089 | 0.0065 | |
| Saturn | 120010-06-04 05:00 | G | 45553966.48 | 45553966.71 | 45553966.95 | 0.0276 | 0.0065 | |
| Jupiter | 120010-10-02 20:36 | G | 45554087.14 | 45554087.36 | 45554087.59 | 0.0540 | 0.0007 | |
| Neptune | 120011-04-02 05:14 | G | 45554268.50 | 45554268.72 | 45554268.97 | 0.0089 | 0.0033 | |
| Saturn | 120011-06-16 11:00 | G | 45554343.75 | 45554343.96 | 45554344.18 | 0.0276 | 0.0140 | |
| Neptune | 120012-04-03 15:19 | G | 45554635.89 | 45554636.14 | 45554636.41 | 0.0089 | 0.0018 | |
| Neptune | 120013-04-06 08:07 | G | 45555003.60 | 45555003.84 | 45555004.10 | 0.0089 | 0.0015 | |
| Mars | 120014-01-12 04:31 | G | 45555284.52 | 45555284.69 | 45555284.86 | 0.1700 | 0.0926 | |
| Neptune | 120014-04-08 14:22 | G | 45555370.87 | 45555371.10 | 45555371.36 | 0.0089 | 0.0029 | |
| Neptune | 120015-04-11 10:02 | G | 45555738.74 | 45555738.92 | 45555739.12 | 0.0089 | 0.0061 | |
| Neptune | 120016-04-12 15:19 | G | 45556106.04 | 45556106.14 | 45556106.30 | 0.0089 | 0.0076 | |
| Jupiter | 120022-10-07 19:10 | G | 45558475.12 | 45558475.30 | 45558475.48 | 0.0538 | 0.0341 | |
| Saturn | 120024-11-24 14:22 | G | 45559253.93 | 45559254.10 | 45559254.29 | 0.0282 | 0.0197 | |
| Saturn | 120025-12-08 05:58 | G | 45559632.50 | 45559632.75 | 45559633.01 | 0.0283 | 0.0047 | |
| Uranus | 120027-10-12 06:26 | G | 45560305.55 | 45560305.77 | 45560306.03 | 0.0139 | 0.0047 | |
| Uranus | 120028-10-16 05:29 | G | 45560675.49 | 45560675.73 | 45560675.97 | 0.0139 | 0.0047 | |
| Saturn | 120039-05-29 21:19 | G | 45564553.22 | 45564553.39 | 45564553.57 | 0.0276 | 0.0183 | |
| Saturn | 120040-06-10 10:17 | G | 45564930.69 | 45564930.93 | 45564931.17 | 0.0275 | 0.0029 | |
| Saturn | 120041-06-22 13:53 | G | 45565307.99 | 45565308.08 | 45565308.20 | 0.0275 | 0.0248 | |
| Jupiter | 120052-03-30 13:38 | G | 45569241.93 | 45569242.07 | 45569242.21 | 0.0487 | 0.0393 | |
| Saturn | 120054-12-02 08:36 | G | 45570218.61 | 45570218.86 | 45570219.11 | 0.0283 | 0.0051 | |
| Saturn | 120055-12-16 02:22 | G | 45570597.42 | 45570597.60 | 45570597.78 | 0.0284 | 0.0202 | |
| Jupiter | 120064-04-03 16:46 | G | 45573628.98 | 45573629.20 | 45573629.42 | 0.0488 | 0.0150 | |

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| Uranus | 120068-04-16 03:48 G | 45575102.45 | 45575102.66 | 45575102.90 | 0.0139 | 0.0053 |
| Pluto | 120068-06-27 18:55 G | 45575175.08 | 45575175.29 | 45575175.54 | 0.0066 | 0.0032 |
| Uranus | 120069-04-20 18:12 G | 45575472.00 | 45575472.26 | 45575472.51 | 0.0139 | 0.0033 |
| Saturn | 120069-06-05 05:43 G | 45575517.51 | 45575517.74 | 45575517.97 | 0.0276 | 0.0056 |
| Pluto | 120069-06-29 12:26 G | 45575541.92 | 45575542.02 | 45575542.20 | 0.0066 | 0.0056 |
| Saturn | 120070-06-17 18:12 G | 45575895.08 | 45575895.26 | 45575895.45 | 0.0276 | 0.0176 |
| Jupiter | 120076-04-08 02:36 G | 45578016.37 | 45578016.61 | 45578016.85 | 0.0489 | 0.0084 |
| Jupiter | 120081-09-26 07:53 G | 45580013.66 | 45580013.83 | 45580014.00 | 0.0542 | 0.0353 |
| Saturn | 120083-11-26 23:58 G | 45580805.29 | 45580805.50 | 45580805.71 | 0.0282 | 0.0137 |
| Saturn | 120084-12-09 21:19 G | 45581184.16 | 45581184.39 | 45581184.62 | 0.0283 | 0.0103 |
| Jupiter | 120088-04-12 05:58 G | 45582403.58 | 45582403.75 | 45582403.93 | 0.0490 | 0.0302 |
| Neptune | 120090-09-23 23:58 G | 45583298.39 | 45583298.50 | 45583298.64 | 0.0088 | 0.0077 |
| Neptune | 120091-09-26 17:29 G | 45583666.03 | 45583666.23 | 45583666.47 | 0.0088 | 0.0045 |
| Neptune | 120092-09-27 22:31 G | 45584033.21 | 45584033.44 | 45584033.68 | 0.0088 | 0.0031 |
| Neptune | 120093-09-30 14:22 G | 45584400.83 | 45584401.10 | 45584401.36 | 0.0088 | 0.0002 |
| Jupiter | 120093-10-01 22:02 G | 45584402.18 | 45584402.42 | 45584402.65 | 0.0541 | 0.0020 |
| Neptune | 120094-10-02 23:00 G | 45584768.22 | 45584768.46 | 45584768.71 | 0.0088 | 0.0015 |
| Neptune | 120095-10-05 08:36 G | 45585135.65 | 45585135.86 | 45585136.10 | 0.0088 | 0.0047 |
| Neptune | 120096-10-06 23:00 G | 45585503.29 | 45585503.46 | 45585503.65 | 0.0088 | 0.0061 |
| Saturn | 120098-05-31 00:55 G | 45586104.33 | 45586104.54 | 45586104.75 | 0.0276 | 0.0132 |
| Saturn | 120099-06-12 13:53 G | 45586481.86 | 45586482.08 | 45586482.30 | 0.0275 | 0.0084 |
| Jupiter | 120105-10-08 00:12 G | 45588790.32 | 45588790.51 | 45588790.70 | 0.0539 | 0.0289 |
| Uranus | 120111-10-13 18:41 G | 45590987.04 | 45590987.28 | 45590987.55 | 0.0139 | 0.0042 |
| Uranus | 120112-10-17 12:41 G | 45591356.81 | 45591357.03 | 45591357.28 | 0.0139 | 0.0045 |
| Saturn | 120112-11-20 21:05 G | 45591391.31 | 45591391.38 | 45591391.46 | 0.0282 | 0.0268 |
| Saturn | 120113-12-04 18:55 G | 45591770.05 | 45591770.29 | 45591770.53 | 0.0283 | 0.0037 |
| Saturn | 120114-12-18 18:26 G | 45592149.10 | 45592149.27 | 45592149.44 | 0.0284 | 0.0204 |
| Mars | 120118-07-13 23:29 G | 45593452.30 | 45593452.48 | 45593452.65 | 0.1833 | 0.0547 |
| Saturn | 120127-05-26 23:43 G | 45596691.36 | 45596691.49 | 45596691.63 | 0.0277 | 0.0233 |
| Saturn | 120128-06-07 08:36 G | 45597068.63 | 45597068.86 | 45597069.10 | 0.0276 | 0.0031 |

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| Saturn | 120129-06-19 20:36 G | 45597446.19 | 45597446.36 | 45597446.55 | 0.0276 | 0.0178 |
| Jupiter | 120135-03-31 16:31 G | 45599557.06 | 45599557.19 | 45599557.32 | 0.0486 | 0.0404 |
| Saturn | 120142-11-29 07:10 G | 45602356.60 | 45602356.80 | 45602357.03 | 0.0282 | 0.0134 |
| Saturn | 120143-12-13 06:41 G | 45602735.56 | 45602735.78 | 45602736.00 | 0.0283 | 0.0117 |
| Jupiter | 120147-04-05 00:12 G | 45603944.30 | 45603944.51 | 45603944.72 | 0.0487 | 0.0195 |
| Uranus | 120152-04-17 09:19 G | 45605783.67 | 45605783.89 | 45605784.13 | 0.0139 | 0.0058 |
| Uranus | 120153-04-22 06:41 G | 45606153.54 | 45606153.78 | 45606154.04 | 0.0139 | 0.0037 |
| Pluto | 120155-12-28 07:38 G | 45607133.67 | 45607133.82 | 45607134.00 | 0.0078 | 0.0059 |
| Saturn | 120157-06-02 12:26 G | 45607655.80 | 45607656.02 | 45607656.24 | 0.0276 | 0.0133 |
| Saturn | 120158-06-14 18:12 G | 45608033.04 | 45608033.26 | 45608033.50 | 0.0275 | 0.0089 |
| Jupiter | 120159-04-09 01:53 G | 45608331.34 | 45608331.58 | 45608331.82 | 0.0488 | 0.0013 |
| Jupiter | 120164-09-26 15:34 G | 45610329.01 | 45610329.15 | 45610329.31 | 0.0542 | 0.0397 |
| Jupiter | 120171-04-13 15:05 G | 45612718.93 | 45612719.13 | 45612719.34 | 0.0490 | 0.0229 |
| Saturn | 120171-11-23 09:19 G | 45612942.74 | 45612942.89 | 45612943.05 | 0.0283 | 0.0222 |
| Saturn | 120172-12-06 02:36 G | 45613321.37 | 45613321.61 | 45613321.86 | 0.0283 | 0.0023 |
| Saturn | 120173-12-20 03:19 G | 45613700.57 | 45613700.64 | 45613700.73 | 0.0284 | 0.0267 |
| Neptune | 120174-03-30 23:43 G | 45613801.34 | 45613801.49 | 45613801.68 | 0.0089 | 0.0068 |
| Neptune | 120175-04-02 16:31 G | 45614168.99 | 45614169.19 | 45614169.41 | 0.0089 | 0.0049 |
| Neptune | 120176-04-03 23:00 G | 45614536.22 | 45614536.46 | 45614536.73 | 0.0089 | 0.0022 |
| Jupiter | 120176-10-01 17:58 G | 45614717.01 | 45614717.25 | 45614717.48 | 0.0540 | 0.0100 |
| Neptune | 120177-04-06 18:55 G | 45614904.03 | 45614904.29 | 45614904.55 | 0.0089 | 0.0002 |
| Neptune | 120178-04-09 00:26 G | 45615271.28 | 45615271.52 | 45615271.77 | 0.0089 | 0.0026 |
| Neptune | 120179-04-11 18:55 G | 45615639.06 | 45615639.29 | 45615639.51 | 0.0089 | 0.0046 |
| Neptune | 120180-04-13 03:05 G | 45616006.50 | 45616006.63 | 45616006.78 | 0.0089 | 0.0074 |
| Jupiter | 120183-04-17 16:31 G | 45617106.11 | 45617106.19 | 45617106.27 | 0.0491 | 0.0461 |
| Saturn | 120186-05-28 12:26 G | 45618242.87 | 45618243.02 | 45618243.18 | 0.0277 | 0.0216 |
| Saturn | 120187-06-09 20:22 G | 45618620.10 | 45618620.35 | 45618620.60 | 0.0276 | 0.0013 |
| Saturn | 120188-06-21 01:10 G | 45618997.43 | 45618997.55 | 45618997.68 | 0.0276 | 0.0234 |
| Jupiter | 120188-10-06 22:31 G | 45619105.23 | 45619105.44 | 45619105.65 | 0.0539 | 0.0187 |
| Uranus | 120194-10-09 11:29 G | 45621298.93 | 45621298.98 | 45621299.07 | 0.0139 | 0.0133 |

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| Uranus | 120195-10-14 08:07 G | 45621668.60 | 45621668.84 | 45621669.09 | 0.0139 | 0.0049 |
| Uranus | 120196-10-17 17:29 G | 45622038.02 | 45622038.23 | 45622038.47 | 0.0139 | 0.0058 |
| Jupiter | 120200-10-12 21:34 G | 45623493.33 | 45623493.40 | 45623493.49 | 0.0537 | 0.0502 |
| Saturn | 120201-12-01 22:17 G | 45623908.19 | 45623908.43 | 45623908.68 | 0.0283 | 0.0079 |
| Saturn | 120202-12-15 16:17 G | 45624286.98 | 45624287.18 | 45624287.39 | 0.0283 | 0.0155 |
| Saturn | 120216-06-05 02:22 G | 45629207.37 | 45629207.60 | 45629207.84 | 0.0276 | 0.0074 |
| Saturn | 120217-06-17 08:07 G | 45629584.62 | 45629584.84 | 45629585.06 | 0.0275 | 0.0132 |
| Jupiter | 120218-03-31 17:00 G | 45629872.18 | 45629872.21 | 45629872.25 | 0.0486 | 0.0479 |
| Mars | 120219-01-12 15:19 G | 45630158.97 | 45630159.14 | 45630159.30 | 0.1712 | 0.0663 |
| Jupiter | 120230-04-05 06:55 G | 45634259.60 | 45634259.79 | 45634259.99 | 0.0487 | 0.0263 |
| Saturn | 120230-11-26 04:31 G | 45634494.53 | 45634494.69 | 45634494.86 | 0.0283 | 0.0211 |
| Saturn | 120231-12-09 19:10 G | 45634873.04 | 45634873.30 | 45634873.56 | 0.0283 | 0.0025 |
| Saturn | 120232-12-22 13:38 G | 45635252.01 | 45635252.07 | 45635252.17 | 0.0284 | 0.0268 |
| Uranus | 120236-04-18 17:43 G | 45636465.02 | 45636465.24 | 45636465.48 | 0.0139 | 0.0062 |
| Uranus | 120237-04-23 15:19 G | 45636834.92 | 45636835.14 | 45636835.38 | 0.0139 | 0.0051 |
| Uranus | 120238-04-28 00:41 G | 45637204.50 | 45637204.53 | 45637204.60 | 0.0139 | 0.0136 |
| Jupiter | 120242-04-09 07:38 G | 45638646.59 | 45638646.82 | 45638647.05 | 0.0488 | 0.0029 |
| Saturn | 120245-05-30 17:29 G | 45639794.07 | 45639794.23 | 45639794.41 | 0.0276 | 0.0187 |
| Saturn | 120246-06-12 08:07 G | 45640171.60 | 45640171.84 | 45640172.08 | 0.0276 | 0.0019 |
| Saturn | 120247-06-24 13:24 G | 45640548.93 | 45640549.06 | 45640549.20 | 0.0276 | 0.0230 |
| Jupiter | 120247-09-27 12:26 G | 45640643.94 | 45640644.02 | 45640644.10 | 0.0542 | 0.0503 |
| Jupiter | 120254-04-13 20:36 G | 45643034.15 | 45643034.36 | 45643034.57 | 0.0490 | 0.0225 |
| Neptune | 120254-09-25 10:17 G | 45643198.86 | 45643198.93 | 45643199.05 | 0.0089 | 0.0082 |
| Neptune | 120255-09-28 03:05 G | 45643566.46 | 45643566.63 | 45643566.85 | 0.0088 | 0.0058 |
| Neptune | 120256-09-29 09:34 G | 45643933.69 | 45643933.90 | 45643934.14 | 0.0088 | 0.0036 |
| Neptune | 120257-10-01 21:48 G | 45644301.16 | 45644301.41 | 45644301.68 | 0.0088 | 0.0014 |
| Neptune | 120258-10-04 10:17 G | 45644668.69 | 45644668.93 | 45644669.18 | 0.0088 | 0.0010 |
| Jupiter | 120259-10-02 08:50 G | 45645031.65 | 45645031.87 | 45645032.08 | 0.0541 | 0.0185 |
| Neptune | 120259-10-06 17:43 G | 45645036.00 | 45645036.24 | 45645036.48 | 0.0088 | 0.0033 |
| Neptune | 120260-10-08 10:02 G | 45645403.75 | 45645403.92 | 45645404.14 | 0.0088 | 0.0057 |

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| Saturn | 120260-12-03 15:19 G | 45645459.90 | 45645460.14 | 45645460.39 | 0.0283 | 0.0061 |
| Neptune | 120261-10-10 14:07 G | 45645771.00 | 45645771.09 | 45645771.23 | 0.0088 | 0.0078 |
| Saturn | 120261-12-17 09:34 G | 45645838.72 | 45645838.90 | 45645839.10 | 0.0283 | 0.0190 |
| Jupiter | 120266-04-17 20:22 G | 45647421.30 | 45647421.35 | 45647421.41 | 0.0490 | 0.0475 |
| Jupiter | 120271-10-07 22:31 G | 45649420.22 | 45649420.44 | 45649420.66 | 0.0540 | 0.0172 |
| Saturn | 120275-06-07 08:50 G | 45650758.65 | 45650758.87 | 45650759.10 | 0.0276 | 0.0072 |
| Saturn | 120276-06-18 21:05 G | 45651136.19 | 45651136.38 | 45651136.59 | 0.0275 | 0.0157 |
| Uranus | 120278-10-10 20:50 G | 45651980.34 | 45651980.37 | 45651980.45 | 0.0139 | 0.0136 |
| Uranus | 120279-10-15 17:43 G | 45652350.01 | 45652350.24 | 45652350.48 | 0.0139 | 0.0043 |
| Uranus | 120280-10-19 03:34 G | 45652719.43 | 45652719.65 | 45652719.89 | 0.0139 | 0.0064 |
| Jupiter | 120283-10-12 22:17 G | 45653808.38 | 45653808.43 | 45653808.49 | 0.0538 | 0.0521 |
| Saturn | 120289-11-27 15:48 G | 45656045.96 | 45656046.16 | 45656046.36 | 0.0283 | 0.0155 |
| Saturn | 120290-12-11 12:55 G | 45656424.81 | 45656425.04 | 45656425.28 | 0.0283 | 0.0089 |
| Mars | 120298-01-14 23:00 G | 45659016.32 | 45659016.46 | 45659016.59 | 0.1707 | 0.1289 |
| Saturn | 120304-06-01 23:14 G | 45661345.28 | 45661345.47 | 45661345.69 | 0.0276 | 0.0150 |
| Saturn | 120305-06-14 12:26 G | 45661722.80 | 45661723.02 | 45661723.25 | 0.0276 | 0.0075 |
| Jupiter | 120313-04-05 10:02 G | 45664574.72 | 45664574.92 | 45664575.14 | 0.0487 | 0.0250 |
| Pluto | 120316-07-02 22:02 G | 45665759.16 | 45665759.42 | 45665759.68 | 0.0066 | 0.0008 |
| Saturn | 120318-11-23 01:38 G | 45666632.50 | 45666632.57 | 45666632.68 | 0.0282 | 0.0261 |
| Saturn | 120319-12-06 23:29 G | 45667011.24 | 45667011.48 | 45667011.72 | 0.0283 | 0.0027 |
| Uranus | 120320-04-20 07:24 G | 45667146.58 | 45667146.81 | 45667147.07 | 0.0139 | 0.0050 |
| Saturn | 120320-12-19 23:58 G | 45667390.34 | 45667390.50 | 45667390.67 | 0.0283 | 0.0210 |
| Uranus | 120321-04-24 19:53 G | 45667516.10 | 45667516.33 | 45667516.57 | 0.0139 | 0.0049 |
| Uranus | 120322-04-29 14:07 G | 45667886.09 | 45667886.09 | 45667886.13 | 0.0139 | 0.0138 |
| Jupiter | 120325-04-09 13:24 G | 45668961.84 | 45668962.06 | 45668962.29 | 0.0488 | 0.0012 |
| Jupiter | 120330-09-27 06:41 G | 45670958.73 | 45670958.78 | 45670958.84 | 0.0543 | 0.0525 |
| Saturn | 120333-05-28 08:50 G | 45671932.75 | 45671932.87 | 45671933.00 | 0.0277 | 0.0236 |
| Saturn | 120334-06-09 15:34 G | 45672309.90 | 45672310.15 | 45672310.39 | 0.0276 | 0.0024 |
| Saturn | 120335-06-22 00:41 G | 45672687.37 | 45672687.53 | 45672687.72 | 0.0275 | 0.0182 |
| Jupiter | 120337-04-13 20:36 G | 45673349.15 | 45673349.36 | 45673349.58 | 0.0489 | 0.0232 |

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| Neptune | 120338-04-01 08:50 G | 45673701.76 | 45673701.87 | 45673702.04 | 0.0089 | 0.0076 |
| Neptune | 120339-04-04 01:53 G | 45674069.42 | 45674069.58 | 45674069.79 | 0.0089 | 0.0062 |
| Neptune | 120340-04-05 08:50 G | 45674436.62 | 45674436.87 | 45674437.12 | 0.0089 | 0.0028 |
| Neptune | 120341-04-08 04:17 G | 45674804.43 | 45674804.68 | 45674804.94 | 0.0089 | 0.0014 |
| Neptune | 120342-04-10 09:48 G | 45675171.67 | 45675171.91 | 45675172.17 | 0.0089 | 0.0019 |
| Jupiter | 120342-10-02 11:58 G | 45675346.79 | 45675347.00 | 45675347.22 | 0.0542 | 0.0167 |
| Neptune | 120343-04-13 03:48 G | 45675539.42 | 45675539.66 | 45675539.92 | 0.0089 | 0.0033 |
| Neptune | 120344-04-14 12:26 G | 45675906.88 | 45675907.02 | 45675907.21 | 0.0089 | 0.0066 |
| Neptune | 120345-04-17 01:53 G | 45676274.50 | 45676274.58 | 45676274.73 | 0.0089 | 0.0080 |
| Saturn | 120348-11-29 21:05 G | 45677597.18 | 45677597.38 | 45677597.59 | 0.0283 | 0.0157 |
| Jupiter | 120349-04-18 03:48 G | 45677736.58 | 45677736.66 | 45677736.75 | 0.0490 | 0.0449 |
| Saturn | 120349-12-13 18:41 G | 45677976.05 | 45677976.28 | 45677976.51 | 0.0283 | 0.0087 |
| Jupiter | 120354-10-07 23:14 G | 45679735.25 | 45679735.47 | 45679735.70 | 0.0540 | 0.0163 |
| Uranus | 120362-10-12 11:58 G | 45682661.99 | 45682662.00 | 45682662.05 | 0.0139 | 0.0138 |
| Saturn | 120363-06-04 14:22 G | 45682896.89 | 45682897.10 | 45682897.33 | 0.0276 | 0.0136 |
| Uranus | 120363-10-16 21:05 G | 45683031.14 | 45683031.38 | 45683031.63 | 0.0139 | 0.0031 |
| Saturn | 120364-06-15 19:38 G | 45683274.09 | 45683274.32 | 45683274.57 | 0.0275 | 0.0072 |
| Uranus | 120364-10-20 18:41 G | 45683401.06 | 45683401.28 | 45683401.52 | 0.0139 | 0.0061 |
| Jupiter | 120366-10-12 20:50 G | 45684123.25 | 45684123.37 | 45684123.50 | 0.0538 | 0.0442 |
| Saturn | 120377-11-24 14:50 G | 45688184.01 | 45688184.12 | 45688184.23 | 0.0283 | 0.0254 |
| Saturn | 120378-12-08 05:29 G | 45688562.48 | 45688562.73 | 45688562.99 | 0.0283 | 0.0006 |
| Saturn | 120379-12-22 02:50 G | 45688941.52 | 45688941.62 | 45688941.75 | 0.0284 | 0.0250 |
| Jupiter | 120384-03-31 05:58 G | 45690502.72 | 45690502.75 | 45690502.79 | 0.0485 | 0.0477 |
| Saturn | 120392-05-29 18:55 G | 45693484.18 | 45693484.29 | 45693484.41 | 0.0277 | 0.0241 |
| Saturn | 120393-06-11 07:24 G | 45693861.57 | 45693861.81 | 45693862.06 | 0.0276 | 0.0023 |
| Saturn | 120394-06-23 10:31 G | 45694238.79 | 45694238.94 | 45694239.12 | 0.0275 | 0.0205 |
| Jupiter | 120396-04-04 13:53 G | 45694889.87 | 45694890.08 | 45694890.28 | 0.0486 | 0.0266 |
| Mars | 120402-07-15 16:31 G | 45697183.02 | 45697183.19 | 45697183.37 | 0.1823 | 0.0475 |
| Pluto | 120404-01-01 03:19 G | 45697717.39 | 45697717.64 | 45697717.90 | 0.0078 | 0.0009 |
| Uranus | 120404-04-20 16:02 G | 45697827.93 | 45697828.17 | 45697828.40 | 0.0139 | 0.0042 |

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| Uranus | 120405-04-25 05:29 G | 45698197.50 | 45698197.73 | 45698197.99 | 0.0139 | 0.0048 |
| Saturn | 120407-12-02 13:10 G | 45699148.82 | 45699149.05 | 45699149.29 | 0.0283 | 0.0104 |
| Jupiter | 120408-04-08 20:07 G | 45699277.11 | 45699277.34 | 45699277.56 | 0.0487 | 0.0066 |
| Saturn | 120408-12-15 05:00 G | 45699527.49 | 45699527.71 | 45699527.93 | 0.0283 | 0.0145 |
| Jupiter | 120413-09-26 10:31 G | 45701273.93 | 45701273.94 | 45701273.96 | 0.0543 | 0.0540 |
| Neptune | 120419-09-28 14:50 G | 45703466.97 | 45703467.12 | 45703467.29 | 0.0089 | 0.0069 |
| Jupiter | 120420-04-13 02:36 G | 45703664.39 | 45703664.61 | 45703664.85 | 0.0489 | 0.0152 |
| Neptune | 120420-09-29 18:26 G | 45703834.06 | 45703834.27 | 45703834.50 | 0.0088 | 0.0044 |
| Neptune | 120421-10-02 11:29 G | 45704201.74 | 45704201.98 | 45704202.25 | 0.0088 | 0.0023 |
| Saturn | 120422-06-05 19:10 G | 45704448.09 | 45704448.30 | 45704448.52 | 0.0276 | 0.0109 |
| Neptune | 120422-10-04 17:43 G | 45704568.99 | 45704569.24 | 45704569.49 | 0.0088 | 0.0003 |
| Saturn | 120423-06-18 08:22 G | 45704825.64 | 45704825.85 | 45704826.07 | 0.0275 | 0.0122 |
| Neptune | 120423-10-07 06:26 G | 45704936.52 | 45704936.77 | 45704937.03 | 0.0088 | 0.0023 |
| Neptune | 120424-10-08 17:00 G | 45705304.03 | 45705304.21 | 45705304.44 | 0.0088 | 0.0049 |
| Jupiter | 120425-10-01 11:29 G | 45705661.79 | 45705661.98 | 45705662.18 | 0.0541 | 0.0257 |
| Neptune | 120425-10-11 00:41 G | 45705671.39 | 45705671.53 | 45705671.73 | 0.0088 | 0.0068 |
| Jupiter | 120432-04-17 11:43 G | 45708051.85 | 45708051.99 | 45708052.12 | 0.0490 | 0.0393 |
| Saturn | 120436-11-25 21:34 G | 45709735.23 | 45709735.40 | 45709735.56 | 0.0283 | 0.0203 |
| Jupiter | 120437-10-06 19:38 G | 45710050.08 | 45710050.32 | 45710050.56 | 0.0540 | 0.0047 |
| Saturn | 120437-12-09 18:41 G | 45710114.04 | 45710114.28 | 45710114.53 | 0.0283 | 0.0035 |
| Saturn | 120438-12-23 15:05 G | 45710493.06 | 45710493.13 | 45710493.20 | 0.0284 | 0.0272 |
| Uranus | 120446-10-12 17:58 G | 45713343.22 | 45713343.25 | 45713343.33 | 0.0139 | 0.0135 |
| Uranus | 120447-10-17 11:14 G | 45713712.71 | 45713712.97 | 45713713.23 | 0.0139 | 0.0024 |
| Uranus | 120448-10-21 00:26 G | 45714082.31 | 45714082.52 | 45714082.76 | 0.0139 | 0.0061 |
| Jupiter | 120449-10-11 19:24 G | 45714438.15 | 45714438.31 | 45714438.47 | 0.0539 | 0.0385 |
| Saturn | 120451-05-31 21:19 G | 45715035.22 | 45715035.39 | 45715035.58 | 0.0277 | 0.0189 |
| Saturn | 120452-06-12 09:19 G | 45715412.66 | 45715412.89 | 45715413.13 | 0.0276 | 0.0033 |
| Saturn | 120453-06-24 21:34 G | 45715790.29 | 45715790.40 | 45715790.52 | 0.0275 | 0.0240 |
| Saturn | 120466-12-03 17:00 G | 45720699.99 | 45720700.21 | 45720700.44 | 0.0283 | 0.0095 |
| Saturn | 120467-12-17 16:17 G | 45721078.98 | 45721079.18 | 45721079.40 | 0.0283 | 0.0142 |

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| Jupiter | 120479-04-04 21:34 G | 45725205.22 | 45725205.40 | 45725205.59 | 0.0486 | 0.0313 |
| Saturn | 120481-06-06 23:14 G | 45725999.24 | 45725999.47 | 45725999.72 | 0.0276 | 0.0076 |
| Saturn | 120482-06-19 07:53 G | 45726376.62 | 45726376.83 | 45726377.04 | 0.0275 | 0.0127 |
| Uranus | 120488-04-20 21:19 G | 45728509.15 | 45728509.39 | 45728509.65 | 0.0139 | 0.0036 |
| Uranus | 120489-04-25 19:10 G | 45728879.06 | 45728879.30 | 45728879.53 | 0.0139 | 0.0048 |
| Jupiter | 120491-04-09 03:48 G | 45729592.43 | 45729592.66 | 45729592.88 | 0.0487 | 0.0060 |
| Saturn | 120495-11-27 20:22 G | 45731286.20 | 45731286.35 | 45731286.53 | 0.0283 | 0.0211 |
| Saturn | 120496-12-10 17:00 G | 45731664.97 | 45731665.21 | 45731665.45 | 0.0283 | 0.0034 |
| Saturn | 120497-12-24 18:55 G | 45732044.29 | 45732044.29 | 45732044.30 | 0.0284 | 0.0284 |
| Neptune | 120502-04-01 23:00 G | 45733602.41 | 45733602.46 | 45733602.56 | 0.0089 | 0.0085 |
| Mars | 120503-01-14 23:14 G | 45733890.28 | 45733890.47 | 45733890.66 | 0.1720 | 0.0741 |
| Neptune | 120503-04-04 05:58 G | 45733969.61 | 45733969.75 | 45733969.92 | 0.0089 | 0.0070 |
| Jupiter | 120503-04-14 09:19 G | 45733979.67 | 45733979.89 | 45733980.12 | 0.0488 | 0.0187 |
| Neptune | 120504-04-05 23:29 G | 45734337.25 | 45734337.48 | 45734337.73 | 0.0089 | 0.0038 |
| Neptune | 120505-04-08 10:31 G | 45734704.70 | 45734704.94 | 45734705.18 | 0.0089 | 0.0023 |
| Neptune | 120506-04-10 22:02 G | 45735072.16 | 45735072.42 | 45735072.69 | 0.0089 | 0.0009 |
| Neptune | 120507-04-13 13:38 G | 45735439.83 | 45735440.07 | 45735440.32 | 0.0089 | 0.0024 |
| Neptune | 120508-04-14 20:36 G | 45735807.16 | 45735807.36 | 45735807.57 | 0.0089 | 0.0056 |
| Jupiter | 120508-10-01 09:34 G | 45735976.71 | 45735976.90 | 45735977.09 | 0.0542 | 0.0279 |
| Neptune | 120509-04-17 15:19 G | 45736175.01 | 45736175.14 | 45736175.32 | 0.0089 | 0.0072 |
| Saturn | 120510-06-03 09:34 G | 45736586.72 | 45736586.90 | 45736587.08 | 0.0277 | 0.0181 |
| Saturn | 120511-06-15 15:34 G | 45736963.91 | 45736964.15 | 45736964.40 | 0.0276 | 0.0027 |
| Saturn | 120512-06-26 20:22 G | 45737341.23 | 45737341.35 | 45737341.46 | 0.0275 | 0.0241 |
| Jupiter | 120515-04-18 18:12 G | 45738367.16 | 45738367.26 | 45738367.38 | 0.0489 | 0.0419 |
| Jupiter | 120520-10-06 20:36 G | 45740365.13 | 45740365.36 | 45740365.60 | 0.0541 | 0.0078 |
| Saturn | 120525-12-05 20:07 G | 45742251.10 | 45742251.34 | 45742251.60 | 0.0283 | 0.0062 |
| Saturn | 120526-12-19 14:50 G | 45742629.93 | 45742630.12 | 45742630.30 | 0.0283 | 0.0188 |
| Uranus | 120530-10-14 01:38 G | 45744024.49 | 45744024.57 | 45744024.69 | 0.0139 | 0.0128 |
| Uranus | 120531-10-18 20:36 G | 45744394.12 | 45744394.36 | 45744394.60 | 0.0139 | 0.0020 |
| Jupiter | 120532-10-12 01:10 G | 45744753.40 | 45744753.55 | 45744753.71 | 0.0540 | 0.0389 |

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| Uranus | 120532-10-22 09:19 G | 45744763.66 | 45744763.89 | 45744764.13 | 0.0139 | 0.0063 |
| Saturn | 120540-06-09 10:02 G | 45747550.68 | 45747550.92 | 45747551.15 | 0.0276 | 0.0069 |
| Saturn | 120541-06-21 16:02 G | 45747927.98 | 45747928.17 | 45747928.39 | 0.0275 | 0.0158 |
| Saturn | 120554-11-30 06:12 G | 45752837.56 | 45752837.76 | 45752837.97 | 0.0283 | 0.0157 |
| Saturn | 120555-12-13 22:17 G | 45753216.19 | 45753216.43 | 45753216.68 | 0.0283 | 0.0086 |
| Jupiter | 120562-04-05 05:14 G | 45755520.53 | 45755520.72 | 45755520.92 | 0.0486 | 0.0291 |
| Pluto | 120564-07-05 11:00 G | 45756342.72 | 45756342.96 | 45756343.23 | 0.0066 | 0.0009 |
| Saturn | 120569-06-04 08:07 G | 45758137.65 | 45758137.84 | 45758138.04 | 0.0277 | 0.0152 |
| Saturn | 120570-06-16 23:00 G | 45758515.24 | 45758515.46 | 45758515.69 | 0.0276 | 0.0078 |
| Uranus | 120572-04-22 13:10 G | 45759190.81 | 45759191.05 | 45759191.31 | 0.0139 | 0.0033 |
| Uranus | 120573-04-26 22:02 G | 45759560.19 | 45759560.42 | 45759560.66 | 0.0139 | 0.0050 |
| Jupiter | 120574-04-09 12:55 G | 45759907.82 | 45759908.04 | 45759908.26 | 0.0486 | 0.0087 |
| Mars | 120582-01-17 10:46 G | 45762747.88 | 45762747.95 | 45762748.02 | 0.1714 | 0.1584 |
| Neptune | 120583-09-28 20:36 G | 45763367.24 | 45763367.36 | 45763367.50 | 0.0089 | 0.0075 |
| Saturn | 120583-11-24 10:02 G | 45763423.85 | 45763423.92 | 45763424.01 | 0.0282 | 0.0264 |
| Neptune | 120584-09-30 08:07 G | 45763734.64 | 45763734.84 | 45763735.06 | 0.0088 | 0.0055 |
| Saturn | 120584-12-07 05:14 G | 45763802.48 | 45763802.72 | 45763802.97 | 0.0282 | 0.0033 |
| Neptune | 120585-10-02 20:36 G | 45764102.14 | 45764102.36 | 45764102.61 | 0.0088 | 0.0030 |
| Saturn | 120585-12-21 00:12 G | 45764181.33 | 45764181.51 | 45764181.69 | 0.0283 | 0.0199 |
| Jupiter | 120586-04-13 17:58 G | 45764295.01 | 45764295.25 | 45764295.49 | 0.0488 | 0.0116 |
| Neptune | 120586-10-05 03:34 G | 45764469.39 | 45764469.65 | 45764469.91 | 0.0088 | 0.0010 |
| Neptune | 120587-10-07 20:22 G | 45764837.10 | 45764837.35 | 45764837.60 | 0.0088 | 0.0016 |
| Neptune | 120588-10-08 23:43 G | 45765204.28 | 45765204.49 | 45765204.74 | 0.0088 | 0.0037 |
| Neptune | 120589-10-11 17:14 G | 45765572.06 | 45765572.22 | 45765572.43 | 0.0088 | 0.0063 |
| Neptune | 120590-10-13 23:14 G | 45765939.39 | 45765939.47 | 45765939.56 | 0.0088 | 0.0083 |
| Jupiter | 120591-10-01 16:31 G | 45766292.01 | 45766292.19 | 45766292.38 | 0.0543 | 0.0308 |
| Jupiter | 120598-04-18 03:05 G | 45768682.47 | 45768682.63 | 45768682.79 | 0.0489 | 0.0343 |
| Saturn | 120598-05-29 17:58 G | 45768724.13 | 45768724.25 | 45768724.38 | 0.0277 | 0.0238 |
| Saturn | 120599-06-11 06:26 G | 45769101.53 | 45769101.77 | 45769102.00 | 0.0276 | 0.0021 |
| Saturn | 120600-06-23 19:38 G | 45769479.15 | 45769479.32 | 45769479.50 | 0.0275 | 0.0185 |

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| Jupiter | 120603-10-08 01:53 G | 45770680.34 | 45770680.58 | 45770680.82 | 0.0541 | 0.0016 |
| Saturn | 120613-12-02 02:22 G | 45774388.41 | 45774388.60 | 45774388.80 | 0.0282 | 0.0162 |
| Uranus | 120614-10-15 16:31 G | 45774706.08 | 45774706.19 | 45774706.33 | 0.0139 | 0.0121 |
| Saturn | 120614-12-16 01:38 G | 45774767.34 | 45774767.57 | 45774767.80 | 0.0283 | 0.0076 |
| Jupiter | 120615-10-13 03:48 G | 45775068.48 | 45775068.66 | 45775068.85 | 0.0540 | 0.0306 |
| Uranus | 120615-10-20 01:10 G | 45775075.30 | 45775075.55 | 45775075.81 | 0.0139 | 0.0020 |
| Uranus | 120616-10-23 23:29 G | 45775445.27 | 45775445.48 | 45775445.71 | 0.0139 | 0.0067 |
| Saturn | 120628-06-06 10:17 G | 45779688.71 | 45779688.93 | 45779689.16 | 0.0277 | 0.0128 |
| Saturn | 120629-06-18 18:26 G | 45780066.05 | 45780066.27 | 45780066.51 | 0.0276 | 0.0079 |
| Saturn | 120642-11-26 09:05 G | 45784974.82 | 45784974.88 | 45784974.97 | 0.0281 | 0.0268 |
| Saturn | 120643-12-10 01:24 G | 45785353.32 | 45785353.56 | 45785353.80 | 0.0282 | 0.0026 |
| Saturn | 120644-12-23 00:41 G | 45785732.40 | 45785732.53 | 45785732.68 | 0.0283 | 0.0225 |
| Jupiter | 120645-04-05 15:05 G | 45785835.97 | 45785836.13 | 45785836.30 | 0.0485 | 0.0358 |
| Pluto | 120652-01-05 04:17 G | 45788301.43 | 45788301.68 | 45788301.93 | 0.0078 | 0.0013 |
| Uranus | 120655-04-20 04:46 G | 45789502.64 | 45789502.70 | 45789502.78 | 0.0139 | 0.0134 |
| Uranus | 120656-04-23 17:14 G | 45789871.99 | 45789872.22 | 45789872.47 | 0.0139 | 0.0034 |
| Jupiter | 120657-04-09 22:31 G | 45790223.23 | 45790223.44 | 45790223.67 | 0.0486 | 0.0114 |
| Uranus | 120657-04-28 13:24 G | 45790241.84 | 45790242.06 | 45790242.32 | 0.0139 | 0.0055 |
| Saturn | 120657-06-01 02:22 G | 45790275.49 | 45790275.60 | 45790275.72 | 0.0277 | 0.0244 |
| Saturn | 120658-06-13 11:58 G | 45790652.75 | 45790653.00 | 45790653.25 | 0.0276 | 0.0029 |
| Saturn | 120659-06-25 16:31 G | 45791030.02 | 45791030.19 | 45791030.37 | 0.0275 | 0.0193 |
| Neptune | 120667-04-04 15:34 G | 45793870.06 | 45793870.15 | 45793870.31 | 0.0089 | 0.0079 |
| Neptune | 120668-04-06 09:19 G | 45794237.70 | 45794237.89 | 45794238.12 | 0.0089 | 0.0050 |
| Neptune | 120669-04-08 15:48 G | 45794604.93 | 45794605.16 | 45794605.42 | 0.0089 | 0.0032 |
| Jupiter | 120669-04-14 04:17 G | 45794610.44 | 45794610.68 | 45794610.91 | 0.0488 | 0.0141 |
| Neptune | 120670-04-11 11:58 G | 45794972.74 | 45794973.00 | 45794973.26 | 0.0089 | 0.0002 |
| Neptune | 120671-04-13 17:43 G | 45795340.00 | 45795340.24 | 45795340.50 | 0.0089 | 0.0017 |
| Neptune | 120672-04-15 11:43 G | 45795707.78 | 45795707.99 | 45795708.24 | 0.0089 | 0.0045 |
| Saturn | 120672-12-03 03:19 G | 45795939.41 | 45795939.64 | 45795939.88 | 0.0282 | 0.0121 |
| Neptune | 120673-04-17 21:05 G | 45796075.22 | 45796075.38 | 45796075.57 | 0.0089 | 0.0063 |

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| Saturn | 120673-12-16 19:53 G | 45796318.11 | 45796318.33 | 45796318.56 | 0.0283 | 0.0128 |
| Jupiter | 120674-10-01 19:53 G | 45796607.17 | 45796607.33 | 45796607.50 | 0.0543 | 0.0354 |
| Jupiter | 120681-04-18 13:53 G | 45798997.95 | 45798998.08 | 45798998.23 | 0.0489 | 0.0386 |
| Mars | 120686-07-18 11:14 G | 45800914.79 | 45800914.97 | 45800915.15 | 0.1815 | 0.0215 |
| Jupiter | 120686-10-06 23:43 G | 45800995.25 | 45800995.49 | 45800995.73 | 0.0542 | 0.0009 |
| Saturn | 120687-06-08 14:50 G | 45801239.91 | 45801240.12 | 45801240.34 | 0.0277 | 0.0120 |
| Saturn | 120688-06-20 00:55 G | 45801617.32 | 45801617.54 | 45801617.78 | 0.0276 | 0.0112 |
| Jupiter | 120698-10-12 04:17 G | 45805383.51 | 45805383.68 | 45805383.86 | 0.0541 | 0.0326 |
| Uranus | 120698-10-15 18:26 G | 45805387.15 | 45805387.27 | 45805387.43 | 0.0139 | 0.0114 |
| Uranus | 120699-10-20 16:31 G | 45805756.94 | 45805757.19 | 45805757.45 | 0.0139 | 0.0021 |
| Uranus | 120700-10-25 01:24 G | 45806126.36 | 45806126.56 | 45806126.79 | 0.0139 | 0.0073 |
| Saturn | 120701-11-28 18:12 G | 45806526.11 | 45806526.26 | 45806526.43 | 0.0281 | 0.0214 |
| Saturn | 120702-12-12 07:24 G | 45806904.56 | 45806904.81 | 45806905.07 | 0.0282 | 0.0020 |
| Saturn | 120703-12-25 23:14 G | 45807283.38 | 45807283.47 | 45807283.60 | 0.0283 | 0.0254 |
| Saturn | 120716-06-02 20:50 G | 45811826.22 | 45811826.37 | 45811826.53 | 0.0277 | 0.0206 |
| Saturn | 120717-06-15 14:22 G | 45812203.87 | 45812204.10 | 45812204.34 | 0.0276 | 0.0023 |
| Saturn | 120718-06-28 00:26 G | 45812581.40 | 45812581.52 | 45812581.66 | 0.0275 | 0.0235 |
| Jupiter | 120728-04-06 01:38 G | 45816151.39 | 45816151.57 | 45816151.76 | 0.0485 | 0.0316 |
| Saturn | 120731-12-06 10:02 G | 45817490.70 | 45817490.92 | 45817491.15 | 0.0282 | 0.0113 |
| Saturn | 120732-12-19 04:02 G | 45817869.44 | 45817869.67 | 45817869.90 | 0.0283 | 0.0123 |
| Uranus | 120739-04-21 12:26 G | 45820183.93 | 45820184.02 | 45820184.13 | 0.0139 | 0.0127 |
| Jupiter | 120740-04-10 09:19 G | 45820538.68 | 45820538.89 | 45820539.12 | 0.0486 | 0.0105 |
| Uranus | 120740-04-25 04:02 G | 45820553.42 | 45820553.67 | 45820553.93 | 0.0139 | 0.0035 |
| Uranus | 120741-04-29 20:22 G | 45820923.15 | 45820923.35 | 45820923.58 | 0.0139 | 0.0063 |
| Saturn | 120746-06-10 08:50 G | 45822790.65 | 45822790.87 | 45822791.10 | 0.0277 | 0.0079 |
| Saturn | 120747-06-22 23:58 G | 45823168.31 | 45823168.50 | 45823168.72 | 0.0277 | 0.0129 |
| Neptune | 120747-09-30 05:29 G | 45823267.65 | 45823267.73 | 45823267.84 | 0.0089 | 0.0082 |
| Neptune | 120748-10-01 23:00 G | 45823635.30 | 45823635.46 | 45823635.63 | 0.0088 | 0.0067 |
| Neptune | 120749-10-04 02:50 G | 45824002.40 | 45824002.62 | 45824002.86 | 0.0088 | 0.0037 |
| Neptune | 120750-10-06 19:10 G | 45824370.06 | 45824370.30 | 45824370.57 | 0.0088 | 0.0022 |

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| Neptune | 120751-10-09 01:38 G | 45824737.33 | 45824737.57 | 45824737.83 | 0.0088 | 0.0010 |
| Jupiter | 120752-04-14 16:02 G | 45824925.93 | 45824926.17 | 45824926.41 | 0.0487 | 0.0100 |
| Neptune | 120752-10-10 13:38 G | 45825104.82 | 45825105.07 | 45825105.33 | 0.0088 | 0.0026 |
| Neptune | 120753-10-13 01:38 G | 45825472.39 | 45825472.57 | 45825472.78 | 0.0088 | 0.0054 |
| Neptune | 120754-10-15 08:22 G | 45825839.71 | 45825839.85 | 45825840.03 | 0.0088 | 0.0071 |
| Jupiter | 120757-10-01 19:38 G | 45826922.16 | 45826922.32 | 45826922.49 | 0.0544 | 0.0366 |
| Saturn | 120760-11-29 15:48 G | 45828077.03 | 45828077.16 | 45828077.31 | 0.0281 | 0.0223 |
| Saturn | 120761-12-13 11:14 G | 45828455.73 | 45828455.97 | 45828456.22 | 0.0282 | 0.0015 |
| Saturn | 120762-12-27 08:22 G | 45828834.77 | 45828834.85 | 45828834.97 | 0.0283 | 0.0258 |
| Jupiter | 120764-04-18 23:00 G | 45829313.29 | 45829313.46 | 45829313.64 | 0.0488 | 0.0308 |
| Jupiter | 120769-10-07 06:41 G | 45831310.54 | 45831310.78 | 45831311.02 | 0.0542 | 0.0073 |
| Saturn | 120775-06-05 00:55 G | 45833377.37 | 45833377.54 | 45833377.73 | 0.0277 | 0.0190 |
| Saturn | 120776-06-16 09:48 G | 45833754.67 | 45833754.91 | 45833755.16 | 0.0276 | 0.0016 |
| Saturn | 120777-06-28 20:50 G | 45834132.24 | 45834132.37 | 45834132.50 | 0.0276 | 0.0228 |
| Jupiter | 120781-10-12 11:14 G | 45835698.77 | 45835698.97 | 45835699.18 | 0.0541 | 0.0238 |
| Uranus | 120782-10-17 09:19 G | 45836068.75 | 45836068.89 | 45836069.07 | 0.0139 | 0.0109 |
| Uranus | 120783-10-21 19:53 G | 45836438.10 | 45836438.33 | 45836438.59 | 0.0139 | 0.0021 |
| Uranus | 120784-10-25 17:00 G | 45836808.01 | 45836808.21 | 45836808.44 | 0.0139 | 0.0077 |
| Mars | 120787-01-17 07:10 G | 45837621.62 | 45837621.80 | 45837621.98 | 0.1728 | 0.0556 |
| Saturn | 120790-12-07 05:14 G | 45839041.48 | 45839041.72 | 45839041.95 | 0.0282 | 0.0093 |
| Saturn | 120791-12-21 01:24 G | 45839420.36 | 45839420.56 | 45839420.76 | 0.0283 | 0.0156 |
| Saturn | 120805-06-11 15:05 G | 45844341.90 | 45844342.13 | 45844342.37 | 0.0277 | 0.0084 |
| Saturn | 120806-06-23 22:31 G | 45844719.23 | 45844719.44 | 45844719.66 | 0.0277 | 0.0137 |
| Jupiter | 120811-04-06 15:19 G | 45846467.00 | 45846467.14 | 45846467.30 | 0.0485 | 0.0381 |
| Pluto | 120812-07-09 02:36 G | 45846926.37 | 45846926.61 | 45846926.86 | 0.0066 | 0.0015 |
| Saturn | 120819-12-02 00:55 G | 45849628.35 | 45849628.54 | 45849628.75 | 0.0281 | 0.0179 |
| Saturn | 120820-12-14 12:41 G | 45850006.78 | 45850007.03 | 45850007.28 | 0.0282 | 0.0066 |
| Jupiter | 120823-04-10 16:17 G | 45850853.96 | 45850854.18 | 45850854.40 | 0.0486 | 0.0135 |
| Uranus | 120823-04-21 21:05 G | 45850865.28 | 45850865.38 | 45850865.52 | 0.0139 | 0.0123 |
| Uranus | 120824-04-25 14:50 G | 45851234.88 | 45851235.12 | 45851235.36 | 0.0139 | 0.0030 |

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| Uranus | 120825-04-30 06:26 G | 45851604.54 | 45851604.77 | 45851605.01 | 0.0139 | 0.0064 |
| Neptune | 120831-04-05 06:55 G | 45853770.71 | 45853770.79 | 45853770.90 | 0.0089 | 0.0082 |
| Neptune | 120832-04-06 12:55 G | 45854137.88 | 45854138.04 | 45854138.23 | 0.0089 | 0.0065 |
| Neptune | 120833-04-09 08:36 G | 45854505.63 | 45854505.86 | 45854506.11 | 0.0089 | 0.0034 |
| Neptune | 120834-04-11 15:19 G | 45854872.90 | 45854873.14 | 45854873.40 | 0.0089 | 0.0018 |
| Saturn | 120834-06-06 02:07 G | 45854928.42 | 45854928.59 | 45854928.77 | 0.0277 | 0.0180 |
| Neptune | 120835-04-14 08:22 G | 45855240.60 | 45855240.85 | 45855241.13 | 0.0089 | 0.0013 |
| Jupiter | 120835-04-15 03:48 G | 45855241.43 | 45855241.66 | 45855241.90 | 0.0487 | 0.0120 |
| Saturn | 120835-06-18 18:41 G | 45855306.05 | 45855306.28 | 45855306.52 | 0.0277 | 0.0047 |
| Neptune | 120836-04-15 18:26 G | 45855608.05 | 45855608.27 | 45855608.52 | 0.0089 | 0.0029 |
| Saturn | 120836-06-30 02:22 G | 45855683.56 | 45855683.60 | 45855683.64 | 0.0276 | 0.0271 |
| Neptune | 120837-04-18 06:26 G | 45855975.59 | 45855975.77 | 45855975.99 | 0.0089 | 0.0059 |
| Neptune | 120838-04-20 22:17 G | 45856343.31 | 45856343.43 | 45856343.57 | 0.0089 | 0.0077 |
| Jupiter | 120840-09-30 23:58 G | 45857237.36 | 45857237.50 | 45857237.65 | 0.0544 | 0.0417 |
| Jupiter | 120847-04-19 05:14 G | 45859628.57 | 45859628.72 | 45859628.89 | 0.0488 | 0.0347 |
| Saturn | 120848-11-25 01:10 G | 45860214.53 | 45860214.55 | 45860214.59 | 0.0281 | 0.0278 |
| Saturn | 120849-12-08 17:14 G | 45860592.97 | 45860593.22 | 45860593.46 | 0.0282 | 0.0043 |
| Saturn | 120850-12-22 08:22 G | 45860971.67 | 45860971.85 | 45860972.05 | 0.0283 | 0.0193 |
| Jupiter | 120852-10-06 13:24 G | 45861625.83 | 45861626.06 | 45861626.29 | 0.0542 | 0.0058 |
| Saturn | 120863-05-31 18:41 G | 45865515.21 | 45865515.28 | 45865515.35 | 0.0278 | 0.0267 |
| Saturn | 120864-06-12 10:02 G | 45865892.69 | 45865892.92 | 45865893.16 | 0.0278 | 0.0039 |
| Jupiter | 120864-10-11 06:12 G | 45866013.56 | 45866013.76 | 45866013.97 | 0.0541 | 0.0240 |
| Saturn | 120865-06-25 02:22 G | 45866270.43 | 45866270.60 | 45866270.77 | 0.0277 | 0.0187 |
| Uranus | 120866-10-17 13:10 G | 45866749.90 | 45866750.05 | 45866750.21 | 0.0139 | 0.0107 |
| Uranus | 120867-10-22 10:17 G | 45867119.67 | 45867119.93 | 45867120.19 | 0.0139 | 0.0014 |
| Uranus | 120868-10-25 19:24 G | 45867489.12 | 45867489.31 | 45867489.53 | 0.0139 | 0.0079 |
| Jupiter | 120876-10-16 19:38 G | 45870402.26 | 45870402.32 | 45870402.40 | 0.0540 | 0.0513 |
| Saturn | 120878-12-03 02:50 G | 45871179.41 | 45871179.62 | 45871179.83 | 0.0281 | 0.0142 |
| Saturn | 120879-12-16 22:31 G | 45871558.21 | 45871558.44 | 45871558.67 | 0.0282 | 0.0086 |
| Saturn | 120893-06-07 04:46 G | 45876479.49 | 45876479.70 | 45876479.93 | 0.0277 | 0.0130 |

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| Jupiter | 120894-04-06 00:55 G | 45876782.40 | 45876782.54 | 45876782.71 | 0.0485 | 0.0364 |
| Saturn | 120894-06-19 14:36 G | 45876856.88 | 45876857.11 | 45876857.34 | 0.0277 | 0.0091 |
| Pluto | 120900-01-07 19:38 G | 45878885.07 | 45878885.32 | 45878885.58 | 0.0078 | 0.0015 |
| Jupiter | 120906-04-10 23:29 G | 45881169.26 | 45881169.48 | 45881169.70 | 0.0486 | 0.0168 |
| Uranus | 120907-04-23 07:10 G | 45881546.68 | 45881546.80 | 45881546.92 | 0.0139 | 0.0122 |
| Saturn | 120907-11-28 05:00 G | 45881765.63 | 45881765.71 | 45881765.81 | 0.0281 | 0.0263 |
| Uranus | 120908-04-27 00:26 G | 45881916.27 | 45881916.52 | 45881916.79 | 0.0139 | 0.0024 |
| Saturn | 120908-12-10 17:00 G | 45882143.96 | 45882144.21 | 45882144.45 | 0.0282 | 0.0041 |
| Uranus | 120909-05-01 14:50 G | 45882285.90 | 45882286.12 | 45882286.34 | 0.0139 | 0.0066 |
| Saturn | 120909-12-24 13:10 G | 45882522.87 | 45882523.05 | 45882523.22 | 0.0282 | 0.0193 |
| Neptune | 120912-10-02 02:22 G | 45883535.47 | 45883535.60 | 45883535.78 | 0.0089 | 0.0072 |
| Neptune | 120913-10-04 20:07 G | 45883903.14 | 45883903.34 | 45883903.56 | 0.0088 | 0.0050 |
| Neptune | 120914-10-06 23:43 G | 45884270.26 | 45884270.49 | 45884270.75 | 0.0088 | 0.0026 |
| Neptune | 120915-10-09 17:00 G | 45884637.95 | 45884638.21 | 45884638.48 | 0.0088 | 0.0005 |
| Neptune | 120916-10-10 23:29 G | 45885005.24 | 45885005.48 | 45885005.72 | 0.0088 | 0.0020 |
| Neptune | 120917-10-13 11:43 G | 45885372.77 | 45885372.99 | 45885373.24 | 0.0088 | 0.0042 |
| Jupiter | 120918-04-15 15:05 G | 45885556.90 | 45885557.13 | 45885557.36 | 0.0487 | 0.0047 |
| Neptune | 120918-10-15 22:46 G | 45885740.30 | 45885740.45 | 45885740.63 | 0.0088 | 0.0065 |
| Neptune | 120919-10-18 06:12 G | 45886107.74 | 45886107.76 | 45886107.80 | 0.0088 | 0.0088 |
| Saturn | 120922-06-03 02:50 G | 45887066.49 | 45887066.62 | 45887066.76 | 0.0278 | 0.0225 |
| Saturn | 120923-06-15 18:26 G | 45887444.02 | 45887444.27 | 45887444.52 | 0.0278 | 0.0009 |
| Jupiter | 120923-10-01 18:55 G | 45887552.20 | 45887552.29 | 45887552.40 | 0.0544 | 0.0487 |
| Saturn | 120924-06-27 01:24 G | 45887821.38 | 45887821.56 | 45887821.74 | 0.0277 | 0.0191 |
| Jupiter | 120930-04-19 14:22 G | 45889943.92 | 45889944.10 | 45889944.29 | 0.0488 | 0.0291 |
| Jupiter | 120935-10-07 07:53 G | 45891940.62 | 45891940.83 | 45891941.04 | 0.0543 | 0.0185 |
| Saturn | 120937-12-05 15:05 G | 45892730.92 | 45892731.13 | 45892731.36 | 0.0281 | 0.0140 |
| Saturn | 120938-12-19 02:22 G | 45893109.36 | 45893109.60 | 45893109.85 | 0.0282 | 0.0096 |
| Jupiter | 120947-10-12 10:02 G | 45896328.69 | 45896328.92 | 45896329.15 | 0.0542 | 0.0168 |
| Uranus | 120950-10-19 05:00 G | 45897431.55 | 45897431.71 | 45897431.88 | 0.0139 | 0.0105 |
| Uranus | 120951-10-23 13:24 G | 45897800.81 | 45897801.06 | 45897801.31 | 0.0139 | 0.0008 |

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| Saturn | 120952-06-09 09:48 G | 45898030.71 | 45898030.91 | 45898031.13 | 0.0278 | 0.0119 |
| Uranus | 120952-10-27 11:58 G | 45898170.80 | 45898171.00 | 45898171.21 | 0.0139 | 0.0080 |
| Saturn | 120953-06-22 02:07 G | 45898408.37 | 45898408.59 | 45898408.82 | 0.0277 | 0.0089 |
| Jupiter | 120959-10-17 23:58 G | 45900717.46 | 45900717.50 | 45900717.53 | 0.0540 | 0.0532 |
| Saturn | 120966-11-29 16:46 G | 45903317.11 | 45903317.20 | 45903317.32 | 0.0281 | 0.0252 |
| Saturn | 120967-12-13 08:50 G | 45903695.62 | 45903695.87 | 45903696.12 | 0.0282 | 0.0012 |
| Saturn | 120968-12-25 23:29 G | 45904074.36 | 45904074.48 | 45904074.64 | 0.0282 | 0.0236 |
| Mars | 120970-07-20 17:29 G | 45904646.06 | 45904646.23 | 45904646.40 | 0.1806 | 0.0484 |
| Jupiter | 120977-04-06 07:38 G | 45907097.69 | 45907097.82 | 45907097.97 | 0.0485 | 0.0381 |
| Saturn | 120981-06-04 00:55 G | 45908617.40 | 45908617.54 | 45908617.68 | 0.0278 | 0.0227 |
| Saturn | 120982-06-16 16:46 G | 45908994.97 | 45908995.20 | 45908995.44 | 0.0278 | 0.0011 |
| Saturn | 120983-06-29 09:19 G | 45909372.75 | 45909372.89 | 45909373.05 | 0.0277 | 0.0212 |
| Jupiter | 120989-04-10 10:02 G | 45911484.69 | 45911484.92 | 45911485.15 | 0.0486 | 0.0138 |
| Uranus | 120991-04-23 18:55 G | 45912228.17 | 45912228.29 | 45912228.44 | 0.0139 | 0.0120 |
| Uranus | 120992-04-27 09:05 G | 45912597.64 | 45912597.88 | 45912598.13 | 0.0139 | 0.0017 |
| Uranus | 120993-05-02 03:48 G | 45912967.45 | 45912967.66 | 45912967.90 | 0.0139 | 0.0069 |
| Neptune | 120996-04-07 04:02 G | 45914038.54 | 45914038.67 | 45914038.84 | 0.0089 | 0.0071 |
| Saturn | 120996-12-06 22:02 G | 45914282.20 | 45914282.42 | 45914282.65 | 0.0281 | 0.0095 |
| Neptune | 120997-04-09 10:02 G | 45914405.73 | 45914405.92 | 45914406.16 | 0.0089 | 0.0049 |
| Saturn | 120997-12-20 17:58 G | 45914661.05 | 45914661.25 | 45914661.45 | 0.0282 | 0.0152 |
| Neptune | 120998-04-12 06:26 G | 45914773.52 | 45914773.77 | 45914774.03 | 0.0089 | 0.0024 |
| Neptune | 120999-04-14 12:41 G | 45915140.78 | 45915141.03 | 45915141.29 | 0.0089 | 0.0002 |
| Neptune | 121000-04-17 06:26 G | 45915508.52 | 45915508.77 | 45915509.04 | 0.0089 | 0.0024 |

122ND MILLENNIUM CE

This is a list of transits of Moon in the 122nd millennium CE.

| | FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|--------------|-------|---|-------------|-------------|-------------|--------|--------|---|
| | TRANSIT | | | | | | | | |
| | TIME | | | | | | | | |
| Jupiter | 121001-04-15 | 18:55 | G | 45915872.07 | 45915872.29 | 45915872.52 | 0.0486 | 0.0078 | |
| Neptune | 121001-04-19 | 16:17 | G | 45915875.98 | 45915876.18 | 45915876.40 | 0.0089 | 0.0046 | |
| Neptune | 121002-04-22 | 05:14 | G | 45916243.56 | 45916243.72 | 45916243.89 | 0.0089 | 0.0070 | |
| Jupiter | 121006-10-01 | 21:48 | G | 45917867.31 | 45917867.41 | 45917867.53 | 0.0544 | 0.0479 | |
| Saturn | 121011-06-12 | 16:02 | G | 45919581.94 | 45919582.17 | 45919582.41 | 0.0278 | 0.0106 | |
| Saturn | 121012-06-24 | 01:10 | G | 45919959.35 | 45919959.55 | 45919959.78 | 0.0277 | 0.0126 | |
| Jupiter | 121013-04-19 | 20:36 | G | 45920259.16 | 45920259.36 | 45920259.56 | 0.0487 | 0.0274 | |
| Jupiter | 121018-10-07 | 09:05 | G | 45922255.67 | 45922255.88 | 45922256.10 | 0.0543 | 0.0158 | |
| Jupiter | 121025-04-24 | 07:53 | G | 45924646.78 | 45924646.83 | 45924646.87 | 0.0489 | 0.0478 | |
| Saturn | 121025-12-01 | 23:58 | G | 45924868.33 | 45924868.50 | 45924868.69 | 0.0281 | 0.0195 | |
| Saturn | 121026-12-15 | 12:41 | G | 45925246.79 | 45925247.03 | 45925247.28 | 0.0282 | 0.0043 | |
| Saturn | 121027-12-29 | 08:36 | G | 45925625.84 | 45925625.86 | 45925625.90 | 0.0282 | 0.0280 | |
| Jupiter | 121030-10-12 | 15:48 | G | 45926643.93 | 45926644.16 | 45926644.40 | 0.0542 | 0.0123 | |
| Uranus | 121034-10-20 | 06:41 | G | 45928112.63 | 45928112.78 | 45928112.96 | 0.0139 | 0.0104 | |
| Uranus | 121035-10-25 | 05:14 | G | 45928482.46 | 45928482.72 | 45928482.97 | 0.0139 | 0.0003 | |
| Uranus | 121036-10-28 | 13:10 | G | 45928851.86 | 45928852.05 | 45928852.27 | 0.0139 | 0.0083 | |
| Saturn | 121040-06-06 | 12:55 | G | 45930168.89 | 45930169.04 | 45930169.22 | 0.0278 | 0.0198 | |
| Saturn | 121041-06-19 | 03:48 | G | 45930546.41 | 45930546.66 | 45930546.90 | 0.0278 | 0.0037 | |
| Saturn | 121042-07-01 | 10:17 | G | 45930923.86 | 45930923.93 | 45930924.02 | 0.0277 | 0.0262 | |
| Jupiter | 121042-10-17 | 15:05 | G | 45931031.98 | 45931032.13 | 45931032.27 | 0.0540 | 0.0410 | |
| Saturn | 121055-12-10 | 12:26 | G | 45935833.77 | 45935834.02 | 45935834.28 | 0.0281 | 0.0055 | |
| Saturn | 121056-12-23 | 00:41 | G | 45936212.34 | 45936212.53 | 45936212.74 | 0.0282 | 0.0176 | |
| Jupiter | 121060-04-06 | 09:19 | G | 45937412.80 | 45937412.89 | 45937412.99 | 0.0484 | 0.0440 | |
| Pluto | 121060-07-12 | 15:19 | G | 45937509.88 | 45937510.14 | 45937510.40 | 0.0066 | 0.0006 | |
| Saturn | 121070-06-14 | 01:10 | G | 45941133.33 | 45941133.55 | 45941133.79 | 0.0278 | 0.0054 | |
| Mars | 121071-01-19 | 21:05 | G | 45941353.17 | 45941353.38 | 45941353.60 | 0.1735 | 0.0068 | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 121071-06-26 16:31 G | 45941511.00 | 45941511.19 | 45941511.39 | 0.0277 | 0.0168 |
| Jupiter | 121072-04-10 17:58 G | 45941800.03 | 45941800.25 | 45941800.47 | 0.0485 | 0.0218 |
| Uranus | 121075-04-25 01:53 G | 45942909.46 | 45942909.58 | 45942909.72 | 0.0139 | 0.0118 |
| Uranus | 121076-04-28 22:31 G | 45943279.18 | 45943279.44 | 45943279.71 | 0.0139 | 0.0011 |
| Neptune | 121076-10-02 18:12 G | 45943436.16 | 45943436.26 | 45943436.39 | 0.0089 | 0.0079 |
| Uranus | 121077-05-03 09:05 G | 45943648.69 | 45943648.88 | 45943649.11 | 0.0139 | 0.0073 |
| Neptune | 121077-10-04 23:29 G | 45943803.32 | 45943803.48 | 45943803.69 | 0.0088 | 0.0062 |
| Neptune | 121078-10-07 17:00 G | 45944170.98 | 45944171.21 | 45944171.45 | 0.0088 | 0.0034 |
| Neptune | 121079-10-09 21:05 G | 45944538.13 | 45944538.38 | 45944538.63 | 0.0088 | 0.0016 |
| Neptune | 121080-10-11 14:07 G | 45944905.83 | 45944906.09 | 45944906.35 | 0.0088 | 0.0013 |
| Neptune | 121081-10-13 19:53 G | 45945273.10 | 45945273.33 | 45945273.56 | 0.0088 | 0.0031 |
| Neptune | 121082-10-16 08:50 G | 45945640.69 | 45945640.87 | 45945641.09 | 0.0088 | 0.0059 |
| Neptune | 121083-10-18 19:53 G | 45946008.22 | 45946008.33 | 45946008.47 | 0.0088 | 0.0076 |
| Jupiter | 121084-04-14 21:05 G | 45946187.15 | 45946187.38 | 45946187.61 | 0.0486 | 0.0026 |
| Saturn | 121084-12-03 16:31 G | 45946420.02 | 45946420.19 | 45946420.39 | 0.0281 | 0.0177 |
| Saturn | 121085-12-17 08:50 G | 45946798.62 | 45946798.87 | 45946799.11 | 0.0282 | 0.0051 |
| Saturn | 121086-12-31 00:12 G | 45947177.51 | 45947177.51 | 45947177.53 | 0.0282 | 0.0282 |
| Jupiter | 121096-04-19 07:24 G | 45950574.61 | 45950574.81 | 45950575.01 | 0.0487 | 0.0279 |
| Saturn | 121099-06-08 14:50 G | 45951719.92 | 45951720.12 | 45951720.34 | 0.0278 | 0.0147 |
| Saturn | 121100-06-21 06:55 G | 45952097.56 | 45952097.79 | 45952098.02 | 0.0277 | 0.0066 |
| Saturn | 121101-07-03 22:31 G | 45952475.39 | 45952475.44 | 45952475.50 | 0.0277 | 0.0269 |
| Jupiter | 121101-10-07 01:24 G | 45952570.36 | 45952570.56 | 45952570.76 | 0.0543 | 0.0244 |
| Jupiter | 121113-10-12 10:46 G | 45956958.72 | 45956958.95 | 45956959.18 | 0.0542 | 0.0110 |
| Saturn | 121113-11-29 06:26 G | 45957006.75 | 45957006.77 | 45957006.81 | 0.0281 | 0.0278 |
| Saturn | 121114-12-12 21:48 G | 45957385.18 | 45957385.41 | 45957385.65 | 0.0281 | 0.0052 |
| Saturn | 121115-12-26 18:12 G | 45957764.08 | 45957764.26 | 45957764.44 | 0.0282 | 0.0185 |
| Uranus | 121118-10-21 23:14 G | 45958794.32 | 45958794.47 | 45958794.66 | 0.0139 | 0.0103 |
| Uranus | 121119-10-26 07:38 G | 45959163.56 | 45959163.82 | 45959164.08 | 0.0139 | 0.0003 |
| Uranus | 121120-10-30 05:43 G | 45959533.56 | 45959533.74 | 45959533.96 | 0.0139 | 0.0086 |
| Jupiter | 121125-10-17 10:31 G | 45961346.81 | 45961346.94 | 45961347.09 | 0.0541 | 0.0426 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 121128-06-03 22:46 G | 45962307.33 | 45962307.45 | 45962307.57 | 0.0278 | 0.0244 |
| Saturn | 121129-06-16 09:34 G | 45962684.66 | 45962684.90 | 45962685.15 | 0.0277 | 0.0039 |
| Saturn | 121130-06-28 18:26 G | 45963062.09 | 45963062.27 | 45963062.47 | 0.0277 | 0.0168 |
| Jupiter | 121143-04-07 11:58 G | 45967727.89 | 45967728.00 | 45967728.13 | 0.0484 | 0.0412 |
| Saturn | 121143-12-07 00:55 G | 45967971.33 | 45967971.54 | 45967971.75 | 0.0281 | 0.0161 |
| Saturn | 121144-12-19 14:07 G | 45968349.85 | 45968350.09 | 45968350.33 | 0.0282 | 0.0077 |
| Pluto | 121148-01-12 01:38 G | 45969468.32 | 45969468.57 | 45969468.83 | 0.0078 | 0.0011 |
| Jupiter | 121155-04-12 01:53 G | 45972115.37 | 45972115.58 | 45972115.80 | 0.0485 | 0.0205 |
| Saturn | 121158-06-11 06:41 G | 45973271.58 | 45973271.78 | 45973271.98 | 0.0278 | 0.0145 |
| Uranus | 121159-04-26 16:46 G | 45973591.07 | 45973591.20 | 45973591.36 | 0.0139 | 0.0115 |
| Saturn | 121159-06-23 19:24 G | 45973649.07 | 45973649.31 | 45973649.55 | 0.0277 | 0.0069 |
| Neptune | 121160-04-08 09:05 G | 45973938.76 | 45973938.88 | 45973939.01 | 0.0089 | 0.0078 |
| Uranus | 121160-04-30 04:02 G | 45973960.43 | 45973960.67 | 45973960.92 | 0.0139 | 0.0006 |
| Neptune | 121161-04-11 02:22 G | 45974306.42 | 45974306.60 | 45974306.80 | 0.0089 | 0.0060 |
| Uranus | 121161-05-05 01:38 G | 45974330.36 | 45974330.57 | 45974330.79 | 0.0139 | 0.0076 |
| Neptune | 121162-04-13 08:22 G | 45974673.62 | 45974673.85 | 45974674.11 | 0.0089 | 0.0031 |
| Neptune | 121163-04-16 04:17 G | 45975041.43 | 45975041.68 | 45975041.94 | 0.0089 | 0.0013 |
| Neptune | 121164-04-17 10:02 G | 45975408.68 | 45975408.92 | 45975409.18 | 0.0089 | 0.0016 |
| Neptune | 121165-04-20 03:48 G | 45975776.43 | 45975776.66 | 45975776.92 | 0.0089 | 0.0034 |
| Neptune | 121166-04-22 13:10 G | 45976143.89 | 45976144.05 | 45976144.24 | 0.0089 | 0.0062 |
| Jupiter | 121167-04-16 01:10 G | 45976502.32 | 45976502.55 | 45976502.78 | 0.0486 | 0.0012 |
| Neptune | 121167-04-25 02:22 G | 45976511.52 | 45976511.60 | 45976511.74 | 0.0089 | 0.0081 |
| Saturn | 121172-12-01 01:10 G | 45978558.44 | 45978558.55 | 45978558.67 | 0.0281 | 0.0248 |
| Saturn | 121173-12-14 13:24 G | 45978936.80 | 45978937.06 | 45978937.31 | 0.0281 | 0.0008 |
| Saturn | 121174-12-28 02:50 G | 45979315.49 | 45979315.62 | 45979315.76 | 0.0282 | 0.0238 |
| Jupiter | 121179-04-20 12:41 G | 45980889.82 | 45980890.03 | 45980890.25 | 0.0487 | 0.0197 |
| Jupiter | 121184-10-05 20:07 G | 45982885.15 | 45982885.34 | 45982885.54 | 0.0544 | 0.0292 |
| Saturn | 121187-06-06 02:50 G | 45983858.52 | 45983858.62 | 45983858.75 | 0.0278 | 0.0244 |
| Saturn | 121188-06-17 22:17 G | 45984236.19 | 45984236.43 | 45984236.66 | 0.0277 | 0.0022 |
| Saturn | 121189-06-30 12:12 G | 45984613.85 | 45984614.01 | 45984614.18 | 0.0277 | 0.0203 |

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| Jupiter | 121191-04-24 11:29 G | 45985276.88 | 45985276.98 | 45985277.09 | 0.0488 | 0.0432 |
| Jupiter | 121196-10-11 12:26 G | 45987273.79 | 45987274.02 | 45987274.25 | 0.0543 | 0.0012 |
| Uranus | 121202-10-22 00:26 G | 45989475.37 | 45989475.52 | 45989475.71 | 0.0139 | 0.0102 |
| Saturn | 121202-12-08 17:43 G | 45989523.02 | 45989523.24 | 45989523.47 | 0.0281 | 0.0105 |
| Uranus | 121203-10-26 22:31 G | 45989845.19 | 45989845.44 | 45989845.69 | 0.0139 | 0.0006 |
| Saturn | 121203-12-22 10:31 G | 45989901.73 | 45989901.94 | 45989902.16 | 0.0282 | 0.0136 |
| Uranus | 121204-10-30 07:24 G | 45990214.62 | 45990214.81 | 45990215.02 | 0.0139 | 0.0088 |
| Jupiter | 121208-10-16 12:41 G | 45991661.85 | 45991662.03 | 45991662.21 | 0.0541 | 0.0349 |
| Saturn | 121217-06-12 09:33 G | 45994822.68 | 45994822.90 | 45994823.13 | 0.0278 | 0.0111 |
| Saturn | 121218-06-25 00:26 G | 45995200.31 | 45995200.52 | 45995200.74 | 0.0277 | 0.0119 |
| Saturn | 121231-12-03 04:02 G | 46000109.50 | 46000109.67 | 46000109.85 | 0.0281 | 0.0195 |
| Saturn | 121232-12-15 20:36 G | 46000488.12 | 46000488.36 | 46000488.60 | 0.0282 | 0.0038 |
| Saturn | 121233-12-29 18:41 G | 46000867.21 | 46000867.28 | 46000867.35 | 0.0282 | 0.0268 |
| Jupiter | 121238-04-11 05:43 G | 46002430.54 | 46002430.74 | 46002430.94 | 0.0485 | 0.0241 |
| Neptune | 121241-10-05 14:50 G | 46003703.96 | 46003704.12 | 46003704.30 | 0.0089 | 0.0064 |
| Neptune | 121242-10-07 20:50 G | 46004071.17 | 46004071.37 | 46004071.60 | 0.0088 | 0.0050 |
| Uranus | 121243-04-26 21:33 G | 46004272.26 | 46004272.40 | 46004272.55 | 0.0139 | 0.0113 |
| Neptune | 121243-10-10 13:53 G | 46004438.84 | 46004439.08 | 46004439.34 | 0.0088 | 0.0018 |
| Uranus | 121244-04-30 20:21 G | 46004642.09 | 46004642.35 | 46004642.61 | 0.0139 | 0.0001 |
| Neptune | 121244-10-11 17:57 G | 46004806.00 | 46004806.25 | 46004806.51 | 0.0088 | 0.0004 |
| Uranus | 121245-05-05 05:00 G | 46005011.51 | 46005011.71 | 46005011.92 | 0.0139 | 0.0081 |
| Neptune | 121245-10-14 11:14 G | 46005173.73 | 46005173.97 | 46005174.22 | 0.0088 | 0.0028 |
| Saturn | 121246-06-07 20:07 G | 46005410.18 | 46005410.34 | 46005410.53 | 0.0278 | 0.0198 |
| Neptune | 121246-10-16 16:31 G | 46005540.98 | 46005541.19 | 46005541.42 | 0.0088 | 0.0042 |
| Saturn | 121247-06-20 06:41 G | 46005787.53 | 46005787.78 | 46005788.03 | 0.0277 | 0.0033 |
| Neptune | 121247-10-19 05:29 G | 46005908.61 | 46005908.73 | 46005908.91 | 0.0088 | 0.0074 |
| Saturn | 121248-07-01 14:50 G | 46006165.04 | 46006165.12 | 46006165.23 | 0.0277 | 0.0252 |
| Neptune | 121248-10-20 15:48 G | 46006276.15 | 46006276.16 | 46006276.21 | 0.0088 | 0.0088 |
| Jupiter | 121250-04-15 04:45 G | 46006817.47 | 46006817.70 | 46006817.94 | 0.0485 | 0.0011 |
| Mars | 121254-07-22 19:53 G | 46008377.17 | 46008377.33 | 46008377.50 | 0.1797 | 0.0573 |

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| Saturn | 121261-12-10 00:55 G | 46011074.29 | 46011074.54 | 46011074.78 | 0.0281 | 0.0081 |
| Jupiter | 121262-04-19 17:14 G | 46011205.01 | 46011205.22 | 46011205.42 | 0.0486 | 0.0226 |
| Saturn | 121262-12-23 15:05 G | 46011452.92 | 46011453.13 | 46011453.34 | 0.0282 | 0.0146 |
| Jupiter | 121267-10-05 23:29 G | 46013200.29 | 46013200.48 | 46013200.69 | 0.0544 | 0.0291 |
| Jupiter | 121274-04-23 17:57 G | 46015592.15 | 46015592.25 | 46015592.38 | 0.0488 | 0.0423 |
| Saturn | 121276-06-14 02:21 G | 46016374.37 | 46016374.60 | 46016374.84 | 0.0277 | 0.0063 |
| Saturn | 121277-06-26 13:53 G | 46016751.87 | 46016752.08 | 46016752.29 | 0.0277 | 0.0150 |
| Jupiter | 121279-10-11 09:05 G | 46017588.66 | 46017588.88 | 46017589.11 | 0.0542 | 0.0030 |
| Uranus | 121286-10-22 16:45 G | 46020157.04 | 46020157.20 | 46020157.38 | 0.0139 | 0.0100 |
| Uranus | 121287-10-27 01:53 G | 46020526.33 | 46020526.58 | 46020526.84 | 0.0139 | 0.0010 |
| Uranus | 121288-10-30 23:00 G | 46020896.29 | 46020896.46 | 46020896.66 | 0.0139 | 0.0092 |
| Saturn | 121290-12-04 20:36 G | 46021661.19 | 46021661.36 | 46021661.55 | 0.0281 | 0.0191 |
| Jupiter | 121291-10-16 08:36 G | 46021976.67 | 46021976.86 | 46021977.06 | 0.0541 | 0.0303 |
| Saturn | 121291-12-18 09:33 G | 46022039.64 | 46022039.90 | 46022040.15 | 0.0282 | 0.0039 |
| Saturn | 121292-12-30 23:29 G | 46022418.42 | 46022418.48 | 46022418.56 | 0.0282 | 0.0272 |
| Saturn | 121305-06-09 23:57 G | 46026961.31 | 46026961.50 | 46026961.70 | 0.0278 | 0.0162 |
| Saturn | 121306-06-22 17:57 G | 46027339.02 | 46027339.25 | 46027339.48 | 0.0277 | 0.0049 |
| Saturn | 121307-07-05 07:09 G | 46027716.71 | 46027716.80 | 46027716.91 | 0.0277 | 0.0251 |
| Pluto | 121308-07-16 05:00 G | 46028093.46 | 46028093.71 | 46028093.98 | 0.0066 | 0.0006 |
| Jupiter | 121309-04-07 01:09 G | 46028358.52 | 46028358.55 | 46028358.61 | 0.0484 | 0.0475 |
| Saturn | 121320-12-12 14:36 G | 46032625.88 | 46032626.11 | 46032626.35 | 0.0281 | 0.0075 |
| Jupiter | 121321-04-11 08:36 G | 46032745.68 | 46032745.86 | 46032746.05 | 0.0484 | 0.0287 |
| Saturn | 121321-12-26 08:07 G | 46033004.65 | 46033004.84 | 46033005.05 | 0.0282 | 0.0167 |
| Neptune | 121325-04-11 05:14 G | 46034206.56 | 46034206.72 | 46034206.94 | 0.0089 | 0.0063 |
| Neptune | 121326-04-13 23:14 G | 46034574.27 | 46034574.47 | 46034574.70 | 0.0089 | 0.0049 |
| Neptune | 121327-04-16 05:43 G | 46034941.49 | 46034941.74 | 46034942.01 | 0.0089 | 0.0016 |
| Uranus | 121327-04-28 14:36 G | 46034953.95 | 46034954.11 | 46034954.27 | 0.0139 | 0.0109 |
| Neptune | 121328-04-18 01:38 G | 46035309.31 | 46035309.57 | 46035309.83 | 0.0089 | 0.0002 |
| Uranus | 121328-05-02 00:12 G | 46035323.26 | 46035323.51 | 46035323.76 | 0.0139 | 0.0003 |
| Neptune | 121329-04-20 07:24 G | 46035676.59 | 46035676.81 | 46035677.06 | 0.0089 | 0.0031 |

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| Uranus | 121329-05-06 22:31 G | 46035693.26 | 46035693.44 | 46035693.65 | 0.0139 | 0.0087 |
| Neptune | 121330-04-23 01:09 G | 46036044.35 | 46036044.55 | 46036044.80 | 0.0089 | 0.0046 |
| Neptune | 121331-04-25 10:17 G | 46036411.83 | 46036411.93 | 46036412.06 | 0.0089 | 0.0078 |
| Jupiter | 121333-04-15 13:24 G | 46037132.82 | 46037133.06 | 46037133.30 | 0.0485 | 0.0074 |
| Saturn | 121334-06-04 15:05 G | 46037548.09 | 46037548.13 | 46037548.20 | 0.0278 | 0.0270 |
| Saturn | 121335-06-17 03:48 G | 46037925.43 | 46037925.66 | 46037925.90 | 0.0277 | 0.0063 |
| Saturn | 121336-06-28 18:12 G | 46038303.07 | 46038303.26 | 46038303.46 | 0.0277 | 0.0152 |
| Jupiter | 121345-04-19 22:02 G | 46041520.21 | 46041520.42 | 46041520.63 | 0.0486 | 0.0168 |
| Saturn | 121349-12-06 19:53 G | 46043212.15 | 46043212.33 | 46043212.54 | 0.0281 | 0.0172 |
| Jupiter | 121350-10-05 23:14 G | 46043515.31 | 46043515.47 | 46043515.63 | 0.0544 | 0.0399 |
| Saturn | 121350-12-20 14:07 G | 46043590.86 | 46043591.09 | 46043591.32 | 0.0282 | 0.0076 |
| Mars | 121355-01-22 17:29 G | 46045085.02 | 46045085.23 | 46045085.43 | 0.1743 | 0.0203 |
| Jupiter | 121357-04-24 01:24 G | 46045907.44 | 46045907.56 | 46045907.69 | 0.0487 | 0.0416 |
| Jupiter | 121362-10-11 01:53 G | 46047903.36 | 46047903.58 | 46047903.80 | 0.0543 | 0.0073 |
| Saturn | 121364-06-11 14:50 G | 46048512.92 | 46048513.12 | 46048513.32 | 0.0278 | 0.0162 |
| Saturn | 121365-06-24 00:12 G | 46048890.27 | 46048890.51 | 46048890.76 | 0.0277 | 0.0059 |
| Uranus | 121370-10-23 18:55 G | 46050838.13 | 46050838.29 | 46050838.49 | 0.0139 | 0.0098 |
| Uranus | 121371-10-28 15:19 G | 46051207.90 | 46051208.14 | 46051208.39 | 0.0139 | 0.0012 |
| Uranus | 121372-11-01 01:53 G | 46051577.40 | 46051577.58 | 46051577.78 | 0.0139 | 0.0095 |
| Jupiter | 121374-10-16 12:12 G | 46052291.81 | 46052292.01 | 46052292.22 | 0.0543 | 0.0290 |
| Saturn | 121378-12-01 09:48 G | 46053798.83 | 46053798.91 | 46053799.00 | 0.0280 | 0.0262 |
| Saturn | 121379-12-14 17:43 G | 46054176.98 | 46054177.24 | 46054177.49 | 0.0281 | 0.0021 |
| Saturn | 121380-12-27 09:05 G | 46054555.74 | 46054555.88 | 46054556.04 | 0.0282 | 0.0221 |
| Saturn | 121393-06-05 22:45 G | 46059099.38 | 46059099.45 | 46059099.53 | 0.0278 | 0.0262 |
| Saturn | 121394-06-18 17:57 G | 46059477.01 | 46059477.25 | 46059477.49 | 0.0277 | 0.0035 |
| Saturn | 121395-07-01 03:48 G | 46059854.49 | 46059854.66 | 46059854.84 | 0.0277 | 0.0196 |
| Pluto | 121396-01-14 08:36 G | 46060051.61 | 46060051.86 | 46060052.13 | 0.0078 | 0.0010 |
| Jupiter | 121404-04-11 12:41 G | 46063060.84 | 46063061.03 | 46063061.22 | 0.0485 | 0.0255 |
| Neptune | 121405-10-06 22:17 G | 46063604.35 | 46063604.43 | 46063604.56 | 0.0089 | 0.0081 |
| Neptune | 121406-10-09 11:00 G | 46063971.78 | 46063971.96 | 46063972.19 | 0.0088 | 0.0051 |

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| Neptune | 121407-10-11 17:14 G | 46064338.99 | 46064339.22 | 46064339.47 | 0.0088 | 0.0036 |
| Neptune | 121408-10-13 10:17 G | 46064706.68 | 46064706.93 | 46064707.19 | 0.0088 | 0.0006 |
| Saturn | 121408-12-09 08:07 G | 46064763.63 | 46064763.84 | 46064764.08 | 0.0281 | 0.0123 |
| Neptune | 121409-10-15 14:21 G | 46065073.85 | 46065074.10 | 46065074.36 | 0.0088 | 0.0010 |
| Saturn | 121409-12-22 20:36 G | 46065142.13 | 46065142.36 | 46065142.61 | 0.0282 | 0.0113 |
| Neptune | 121410-10-18 07:53 G | 46065441.60 | 46065441.83 | 46065442.06 | 0.0088 | 0.0041 |
| Uranus | 121411-04-29 17:57 G | 46065635.10 | 46065635.25 | 46065635.43 | 0.0139 | 0.0105 |
| Neptune | 121411-10-20 12:55 G | 46065808.88 | 46065809.04 | 46065809.26 | 0.0088 | 0.0057 |
| Uranus | 121412-05-03 17:43 G | 46066004.99 | 46066005.24 | 46066005.49 | 0.0139 | 0.0006 |
| Neptune | 121412-10-22 02:36 G | 46066176.59 | 46066176.61 | 46066176.70 | 0.0088 | 0.0087 |
| Uranus | 121413-05-08 01:38 G | 46066374.40 | 46066374.57 | 46066374.78 | 0.0139 | 0.0093 |
| Jupiter | 121416-04-15 23:43 G | 46067448.25 | 46067448.49 | 46067448.74 | 0.0485 | 0.0042 |
| Saturn | 121423-06-14 14:50 G | 46070063.90 | 46070064.12 | 46070064.33 | 0.0278 | 0.0121 |
| Saturn | 121424-06-26 09:05 G | 46070441.67 | 46070441.88 | 46070442.10 | 0.0277 | 0.0111 |
| Jupiter | 121428-04-20 01:53 G | 46071835.36 | 46071835.58 | 46071835.80 | 0.0486 | 0.0154 |
| Jupiter | 121433-10-06 00:55 G | 46073830.37 | 46073830.54 | 46073830.71 | 0.0545 | 0.0381 |
| Saturn | 121437-12-03 12:12 G | 46075349.88 | 46075350.01 | 46075350.15 | 0.0280 | 0.0228 |
| Saturn | 121438-12-17 04:45 G | 46075728.46 | 46075728.70 | 46075728.94 | 0.0281 | 0.0006 |
| Saturn | 121439-12-30 21:48 G | 46076107.26 | 46076107.41 | 46076107.56 | 0.0282 | 0.0223 |
| Jupiter | 121440-04-24 11:43 G | 46076222.83 | 46076222.99 | 46076223.16 | 0.0487 | 0.0352 |
| Jupiter | 121445-10-11 04:45 G | 46078218.48 | 46078218.70 | 46078218.93 | 0.0544 | 0.0094 |
| Saturn | 121452-06-08 04:02 G | 46080650.52 | 46080650.67 | 46080650.84 | 0.0278 | 0.0210 |
| Saturn | 121453-06-20 16:45 G | 46081027.95 | 46081028.20 | 46081028.44 | 0.0277 | 0.0014 |
| Saturn | 121454-07-03 07:24 G | 46081405.68 | 46081405.81 | 46081405.96 | 0.0277 | 0.0221 |
| Uranus | 121454-10-25 10:02 G | 46081519.76 | 46081519.92 | 46081520.12 | 0.0139 | 0.0094 |
| Uranus | 121455-10-29 21:19 G | 46081889.13 | 46081889.39 | 46081889.65 | 0.0139 | 0.0015 |
| Uranus | 121456-11-02 16:31 G | 46082259.04 | 46082259.19 | 46082259.38 | 0.0139 | 0.0103 |
| Jupiter | 121457-10-16 18:26 G | 46082607.06 | 46082607.27 | 46082607.49 | 0.0542 | 0.0199 |
| Saturn | 121467-12-11 04:31 G | 46086314.48 | 46086314.69 | 46086314.91 | 0.0281 | 0.0125 |
| Saturn | 121468-12-23 23:14 G | 46086693.25 | 46086693.47 | 46086693.69 | 0.0282 | 0.0107 |

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| Jupiter | 121469-10-21 15:33 G | 46086995.09 | 46086995.15 | 46086995.21 | 0.0541 | 0.0522 |
| Saturn | 121482-06-16 00:26 G | 46091615.29 | 46091615.52 | 46091615.77 | 0.0278 | 0.0086 |
| Saturn | 121483-06-28 09:33 G | 46091992.67 | 46091992.90 | 46091993.12 | 0.0277 | 0.0118 |
| Jupiter | 121487-04-11 20:36 G | 46093376.19 | 46093376.36 | 46093376.54 | 0.0484 | 0.0327 |
| Neptune | 121489-04-11 16:02 G | 46094107.10 | 46094107.17 | 46094107.30 | 0.0089 | 0.0082 |
| Neptune | 121490-04-14 02:07 G | 46094474.39 | 46094474.59 | 46094474.83 | 0.0089 | 0.0051 |
| Neptune | 121491-04-16 19:38 G | 46094842.10 | 46094842.32 | 46094842.57 | 0.0089 | 0.0035 |
| Neptune | 121492-04-18 02:21 G | 46095209.34 | 46095209.60 | 46095209.87 | 0.0089 | 0.0003 |
| Neptune | 121493-04-20 21:48 G | 46095577.17 | 46095577.41 | 46095577.68 | 0.0089 | 0.0013 |
| Neptune | 121494-04-23 03:48 G | 46095944.45 | 46095944.66 | 46095944.89 | 0.0089 | 0.0044 |
| Neptune | 121495-04-25 21:48 G | 46096312.23 | 46096312.41 | 46096312.63 | 0.0089 | 0.0059 |
| Uranus | 121495-04-30 12:12 G | 46096316.84 | 46096317.01 | 46096317.20 | 0.0139 | 0.0098 |
| Uranus | 121496-05-03 21:48 G | 46096686.15 | 46096686.41 | 46096686.66 | 0.0139 | 0.0009 |
| Saturn | 121496-12-04 18:12 G | 46096901.12 | 46096901.26 | 46096901.41 | 0.0280 | 0.0229 |
| Uranus | 121497-05-08 20:07 G | 46097056.18 | 46097056.34 | 46097056.53 | 0.0139 | 0.0101 |
| Saturn | 121497-12-18 02:50 G | 46097279.36 | 46097279.62 | 46097279.87 | 0.0281 | 0.0003 |
| Saturn | 121498-12-31 19:09 G | 46097658.17 | 46097658.30 | 46097658.43 | 0.0282 | 0.0240 |
| Jupiter | 121499-04-16 09:33 G | 46097763.67 | 46097763.90 | 46097764.14 | 0.0485 | 0.0080 |
| Jupiter | 121511-04-21 08:50 G | 46102150.65 | 46102150.87 | 46102151.09 | 0.0485 | 0.0168 |
| Saturn | 121511-06-11 08:07 G | 46102201.69 | 46102201.84 | 46102202.01 | 0.0278 | 0.0200 |
| Saturn | 121512-06-23 03:05 G | 46102579.39 | 46102579.63 | 46102579.87 | 0.0277 | 0.0009 |
| Saturn | 121513-07-05 11:57 G | 46102956.86 | 46102957.00 | 46102957.16 | 0.0277 | 0.0219 |
| Jupiter | 121516-10-06 08:21 G | 46104145.73 | 46104145.85 | 46104145.98 | 0.0544 | 0.0458 |
| Jupiter | 121523-04-25 23:29 G | 46106538.35 | 46106538.48 | 46106538.61 | 0.0487 | 0.0397 |
| Saturn | 121526-12-13 12:55 G | 46107865.81 | 46107866.04 | 46107866.28 | 0.0281 | 0.0100 |
| Saturn | 121527-12-27 00:55 G | 46108244.32 | 46108244.54 | 46108244.76 | 0.0282 | 0.0144 |
| Jupiter | 121528-10-11 06:12 G | 46108533.54 | 46108533.76 | 46108533.99 | 0.0544 | 0.0105 |
| Mars | 121538-07-26 05:00 G | 46112108.52 | 46112108.71 | 46112108.90 | 0.1788 | 0.0274 |
| Uranus | 121538-10-26 15:19 G | 46112200.95 | 46112201.14 | 46112201.35 | 0.0139 | 0.0089 |
| Uranus | 121539-10-31 09:33 G | 46112570.66 | 46112570.90 | 46112571.15 | 0.0139 | 0.0017 |

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| Jupiter | 121540-10-16 14:50 G | 46112921.92 | 46112922.12 | 46112922.33 | 0.0543 | 0.0217 |
| Uranus | 121540-11-03 22:31 G | 46112940.28 | 46112940.44 | 46112940.61 | 0.0139 | 0.0107 |
| Saturn | 121541-06-17 22:17 G | 46113166.21 | 46113166.43 | 46113166.65 | 0.0278 | 0.0091 |
| Saturn | 121542-06-30 17:00 G | 46113544.01 | 46113544.21 | 46113544.42 | 0.0278 | 0.0132 |
| Jupiter | 121552-10-21 16:45 G | 46117310.11 | 46117310.20 | 46117310.29 | 0.0542 | 0.0500 |
| Saturn | 121555-12-07 20:21 G | 46118452.18 | 46118452.35 | 46118452.53 | 0.0280 | 0.0187 |
| Pluto | 121556-07-19 17:57 G | 46118676.99 | 46118677.25 | 46118677.51 | 0.0066 | 0.0012 |
| Saturn | 121556-12-20 11:57 G | 46118830.77 | 46118831.00 | 46118831.25 | 0.0281 | 0.0053 |
| Neptune | 121569-10-07 07:53 G | 46123504.80 | 46123504.83 | 46123504.92 | 0.0089 | 0.0086 |
| Jupiter | 121570-04-12 06:41 G | 46123691.59 | 46123691.78 | 46123691.97 | 0.0484 | 0.0295 |
| Saturn | 121570-06-12 08:21 G | 46123752.68 | 46123752.85 | 46123753.05 | 0.0278 | 0.0190 |
| Neptune | 121570-10-09 18:55 G | 46123872.13 | 46123872.29 | 46123872.49 | 0.0089 | 0.0066 |
| Saturn | 121571-06-24 22:17 G | 46124130.19 | 46124130.43 | 46124130.67 | 0.0278 | 0.0041 |
| Neptune | 121571-10-12 07:53 G | 46124239.62 | 46124239.83 | 46124240.06 | 0.0088 | 0.0041 |
| Saturn | 121572-07-06 13:24 G | 46124508.01 | 46124508.06 | 46124508.13 | 0.0277 | 0.0267 |
| Neptune | 121572-10-13 13:24 G | 46124606.82 | 46124607.06 | 46124607.33 | 0.0088 | 0.0020 |
| Neptune | 121573-10-16 06:26 G | 46124974.52 | 46124974.77 | 46124975.03 | 0.0088 | 0.0006 |
| Neptune | 121574-10-18 10:02 G | 46125341.68 | 46125341.92 | 46125342.17 | 0.0088 | 0.0027 |
| Neptune | 121575-10-21 02:50 G | 46125709.43 | 46125709.62 | 46125709.85 | 0.0088 | 0.0051 |
| Neptune | 121576-10-22 08:21 G | 46126076.73 | 46126076.85 | 46126077.02 | 0.0088 | 0.0072 |
| Uranus | 121579-05-01 16:31 G | 46126998.01 | 46126998.19 | 46126998.39 | 0.0139 | 0.0092 |
| Uranus | 121580-05-05 15:48 G | 46127367.91 | 46127368.16 | 46127368.41 | 0.0139 | 0.0013 |
| Uranus | 121581-05-10 00:26 G | 46127737.38 | 46127737.52 | 46127737.71 | 0.0139 | 0.0108 |
| Jupiter | 121582-04-16 18:26 G | 46128079.05 | 46128079.27 | 46128079.50 | 0.0485 | 0.0106 |
| Saturn | 121585-12-14 08:07 G | 46129416.60 | 46129416.84 | 46129417.08 | 0.0281 | 0.0055 |
| Saturn | 121586-12-28 02:21 G | 46129795.42 | 46129795.60 | 46129795.79 | 0.0282 | 0.0177 |
| Jupiter | 121594-04-20 20:50 G | 46132466.13 | 46132466.37 | 46132466.61 | 0.0485 | 0.0100 |
| Jupiter | 121599-10-06 04:02 G | 46134460.58 | 46134460.67 | 46134460.77 | 0.0545 | 0.0489 |
| Saturn | 121600-06-19 02:36 G | 46134717.36 | 46134717.61 | 46134717.85 | 0.0279 | 0.0047 |
| Saturn | 121601-07-01 12:12 G | 46135094.84 | 46135095.01 | 46135095.21 | 0.0278 | 0.0181 |

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| Jupiter | 121606-04-25 08:21 G | 46136853.69 | 46136853.85 | 46136854.02 | 0.0486 | 0.0338 |
| Jupiter | 121611-10-11 06:26 G | 46138848.55 | 46138848.77 | 46138848.99 | 0.0544 | 0.0201 |
| Saturn | 121614-12-08 23:00 G | 46140003.25 | 46140003.46 | 46140003.67 | 0.0280 | 0.0159 |
| Saturn | 121615-12-22 07:38 G | 46140381.58 | 46140381.82 | 46140382.07 | 0.0281 | 0.0064 |
| Uranus | 121622-10-27 05:00 G | 46142882.53 | 46142882.71 | 46142882.92 | 0.0139 | 0.0083 |
| Jupiter | 121623-10-16 20:07 G | 46143237.13 | 46143237.34 | 46143237.56 | 0.0544 | 0.0138 |
| Uranus | 121623-10-31 18:41 G | 46143252.02 | 46143252.28 | 46143252.54 | 0.0139 | 0.0020 |
| Uranus | 121624-11-04 11:57 G | 46143621.87 | 46143622.00 | 46143622.14 | 0.0139 | 0.0115 |
| Saturn | 121629-06-13 12:55 G | 46145303.84 | 46145304.04 | 46145304.25 | 0.0279 | 0.0142 |
| Saturn | 121630-06-26 06:41 G | 46145681.55 | 46145681.78 | 46145682.02 | 0.0278 | 0.0081 |
| Jupiter | 121635-10-22 03:05 G | 46147625.55 | 46147625.63 | 46147625.73 | 0.0542 | 0.0497 |
| Mars | 121639-01-25 02:07 G | 46148816.41 | 46148816.59 | 46148816.76 | 0.1751 | 0.0714 |
| Pluto | 121644-01-17 14:07 G | 46150634.87 | 46150635.09 | 46150635.37 | 0.0078 | 0.0030 |
| Saturn | 121644-12-15 15:33 G | 46150967.90 | 46150968.15 | 46150968.40 | 0.0281 | 0.0059 |
| Saturn | 121645-12-29 01:38 G | 46151346.38 | 46151346.57 | 46151346.79 | 0.0281 | 0.0171 |
| Jupiter | 121653-04-11 21:05 G | 46154007.20 | 46154007.38 | 46154007.57 | 0.0484 | 0.0321 |
| Neptune | 121653-04-11 22:45 G | 46154007.43 | 46154007.45 | 46154007.53 | 0.0089 | 0.0087 * |
| Neptune | 121654-04-14 12:26 G | 46154374.86 | 46154375.02 | 46154375.20 | 0.0089 | 0.0065 |
| Neptune | 121655-04-16 22:45 G | 46154742.22 | 46154742.45 | 46154742.70 | 0.0089 | 0.0040 |
| Neptune | 121656-04-18 16:17 G | 46155109.94 | 46155110.18 | 46155110.44 | 0.0089 | 0.0019 |
| Neptune | 121657-04-20 22:45 G | 46155477.19 | 46155477.45 | 46155477.71 | 0.0089 | 0.0006 |
| Neptune | 121658-04-23 17:57 G | 46155845.02 | 46155845.25 | 46155845.52 | 0.0089 | 0.0028 |
| Saturn | 121658-06-08 02:36 G | 46155890.50 | 46155890.61 | 46155890.74 | 0.0280 | 0.0239 |
| Neptune | 121659-04-25 23:43 G | 46156212.31 | 46156212.49 | 46156212.72 | 0.0089 | 0.0054 |
| Saturn | 121659-06-20 23:57 G | 46156268.26 | 46156268.50 | 46156268.73 | 0.0279 | 0.0025 |
| Neptune | 121660-04-27 17:43 G | 46156580.12 | 46156580.24 | 46156580.40 | 0.0089 | 0.0075 |
| Saturn | 121660-07-02 18:12 G | 46156646.10 | 46156646.26 | 46156646.45 | 0.0278 | 0.0184 |
| Uranus | 121663-05-02 10:45 G | 46157679.76 | 46157679.95 | 46157680.16 | 0.0139 | 0.0084 |
| Uranus | 121664-05-05 21:33 G | 46158049.14 | 46158049.40 | 46158049.66 | 0.0139 | 0.0016 |
| Jupiter | 121665-04-16 03:33 G | 46158394.43 | 46158394.65 | 46158394.88 | 0.0484 | 0.0079 |

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| Uranus | 121665-05-10 18:41 G | 46158419.16 | 46158419.28 | 46158419.43 | 0.0139 | 0.0116 |
| Saturn | 121673-12-10 02:07 G | 46161554.40 | 46161554.59 | 46161554.79 | 0.0279 | 0.0161 |
| Saturn | 121674-12-23 17:29 G | 46161932.99 | 46161933.23 | 46161933.46 | 0.0280 | 0.0072 |
| Jupiter | 121677-04-20 09:33 G | 46162781.67 | 46162781.90 | 46162782.14 | 0.0485 | 0.0137 |
| Jupiter | 121682-10-05 07:24 G | 46164775.72 | 46164775.81 | 46164775.90 | 0.0545 | 0.0494 |
| Saturn | 121688-06-14 09:19 G | 46166854.68 | 46166854.89 | 46166855.11 | 0.0279 | 0.0140 |
| Jupiter | 121689-04-24 15:05 G | 46167168.97 | 46167169.13 | 46167169.30 | 0.0486 | 0.0335 |
| Saturn | 121689-06-27 00:41 G | 46167232.30 | 46167232.53 | 46167232.76 | 0.0278 | 0.0073 |
| Jupiter | 121694-10-10 18:26 G | 46169164.04 | 46169164.27 | 46169164.50 | 0.0544 | 0.0154 |
| Saturn | 121702-12-05 00:55 G | 46172140.46 | 46172140.54 | 46172140.62 | 0.0280 | 0.0265 |
| Saturn | 121703-12-18 12:41 G | 46172518.79 | 46172519.03 | 46172519.27 | 0.0280 | 0.0028 |
| Saturn | 121704-12-31 07:24 G | 46172897.66 | 46172897.81 | 46172897.96 | 0.0281 | 0.0218 |
| Jupiter | 121706-10-16 22:17 G | 46173552.22 | 46173552.43 | 46173552.65 | 0.0543 | 0.0139 |
| Uranus | 121706-10-28 12:12 G | 46173563.81 | 46173564.01 | 46173564.24 | 0.0139 | 0.0079 |
| Uranus | 121707-11-02 05:14 G | 46173933.49 | 46173933.72 | 46173933.97 | 0.0139 | 0.0023 |
| Uranus | 121708-11-05 19:24 G | 46174303.19 | 46174303.31 | 46174303.46 | 0.0139 | 0.0118 |
| Saturn | 121717-06-10 09:19 G | 46177441.79 | 46177441.89 | 46177442.01 | 0.0280 | 0.0248 |
| Saturn | 121718-06-23 00:55 G | 46177819.29 | 46177819.54 | 46177819.79 | 0.0279 | 0.0026 |
| Jupiter | 121718-10-22 01:38 G | 46177940.42 | 46177940.57 | 46177940.74 | 0.0543 | 0.0403 |
| Saturn | 121719-07-05 12:12 G | 46178196.86 | 46178197.01 | 46178197.19 | 0.0278 | 0.0202 |
| Saturn | 121732-12-12 04:02 G | 46183105.43 | 46183105.67 | 46183105.90 | 0.0279 | 0.0109 |
| Saturn | 121733-12-25 14:21 G | 46183483.88 | 46183484.10 | 46183484.32 | 0.0280 | 0.0127 |
| Neptune | 121734-10-10 05:29 G | 46183772.61 | 46183772.73 | 46183772.85 | 0.0089 | 0.0077 |
| Neptune | 121735-10-12 13:09 G | 46184139.84 | 46184140.05 | 46184140.28 | 0.0089 | 0.0047 |
| Jupiter | 121736-04-12 09:05 G | 46184322.71 | 46184322.88 | 46184323.04 | 0.0484 | 0.0354 |
| Neptune | 121736-10-14 04:31 G | 46184507.48 | 46184507.69 | 46184507.94 | 0.0088 | 0.0033 |
| Neptune | 121737-10-16 09:05 G | 46184874.63 | 46184874.88 | 46184875.14 | 0.0088 | 0.0002 |
| Neptune | 121738-10-19 02:21 G | 46185242.36 | 46185242.60 | 46185242.87 | 0.0088 | 0.0014 |
| Neptune | 121739-10-21 06:26 G | 46185609.57 | 46185609.77 | 46185610.01 | 0.0088 | 0.0044 |
| Neptune | 121740-10-22 21:48 G | 46185977.24 | 46185977.41 | 46185977.63 | 0.0088 | 0.0060 |

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| Uranus | 121747-05-03 16:02 G | 46188360.97 | 46188361.17 | 46188361.39 | 0.0139 | 0.0080 |
| Saturn | 121747-06-17 16:45 G | 46188405.99 | 46188406.20 | 46188406.42 | 0.0279 | 0.0118 |
| Jupiter | 121748-04-16 10:45 G | 46188709.73 | 46188709.95 | 46188710.17 | 0.0484 | 0.0152 |
| Uranus | 121748-05-07 15:48 G | 46188730.91 | 46188731.16 | 46188731.40 | 0.0139 | 0.0022 |
| Saturn | 121748-06-29 07:38 G | 46188783.60 | 46188783.82 | 46188784.05 | 0.0278 | 0.0115 |
| Uranus | 121749-05-12 00:12 G | 46189100.41 | 46189100.51 | 46189100.66 | 0.0139 | 0.0120 |
| Jupiter | 121760-04-20 21:05 G | 46193097.14 | 46193097.38 | 46193097.62 | 0.0485 | 0.0075 |
| Saturn | 121761-12-06 11:57 G | 46193691.84 | 46193692.00 | 46193692.16 | 0.0279 | 0.0214 |
| Saturn | 121762-12-19 18:12 G | 46194070.00 | 46194070.26 | 46194070.51 | 0.0280 | 0.0007 |
| Saturn | 121764-01-02 04:45 G | 46194448.56 | 46194448.70 | 46194448.85 | 0.0281 | 0.0230 |
| Jupiter | 121772-04-25 01:24 G | 46197484.39 | 46197484.56 | 46197484.73 | 0.0486 | 0.0321 |
| Saturn | 121776-06-11 03:33 G | 46198992.49 | 46198992.65 | 46198992.82 | 0.0280 | 0.0202 |
| Saturn | 121777-06-24 03:19 G | 46199370.40 | 46199370.64 | 46199370.87 | 0.0279 | 0.0027 |
| Jupiter | 121777-10-10 15:19 G | 46199478.94 | 46199479.14 | 46199479.35 | 0.0544 | 0.0272 |
| Saturn | 121778-07-06 19:38 G | 46199748.21 | 46199748.32 | 46199748.45 | 0.0278 | 0.0242 |
| Jupiter | 121789-10-15 17:43 G | 46203867.02 | 46203867.24 | 46203867.46 | 0.0544 | 0.0068 |
| Uranus | 121790-10-29 02:36 G | 46204245.42 | 46204245.61 | 46204245.83 | 0.0139 | 0.0076 |
| Uranus | 121791-11-02 13:38 G | 46204614.82 | 46204615.07 | 46204615.33 | 0.0139 | 0.0029 |
| Saturn | 121791-12-14 14:50 G | 46204656.90 | 46204657.12 | 46204657.35 | 0.0279 | 0.0101 |
| Uranus | 121792-11-06 09:05 G | 46204984.79 | 46204984.88 | 46204985.03 | 0.0139 | 0.0122 |
| Saturn | 121792-12-27 01:53 G | 46205035.36 | 46205035.58 | 46205035.82 | 0.0280 | 0.0123 |
| Jupiter | 121801-10-22 08:07 G | 46208255.70 | 46208255.84 | 46208255.99 | 0.0543 | 0.0429 |
| Pluto | 121804-07-23 02:36 G | 46209260.37 | 46209260.61 | 46209260.86 | 0.0066 | 0.0022 |
| Saturn | 121806-06-19 12:26 G | 46209956.79 | 46209957.02 | 46209957.25 | 0.0279 | 0.0076 |
| Saturn | 121807-07-02 08:21 G | 46210334.65 | 46210334.85 | 46210335.06 | 0.0278 | 0.0132 |
| Neptune | 121818-04-15 14:36 G | 46214275.02 | 46214275.11 | 46214275.25 | 0.0089 | 0.0080 |
| Jupiter | 121819-04-13 18:12 G | 46214638.10 | 46214638.26 | 46214638.44 | 0.0484 | 0.0342 |
| Neptune | 121819-04-18 10:02 G | 46214642.71 | 46214642.92 | 46214643.14 | 0.0089 | 0.0047 |
| Neptune | 121820-04-19 15:33 G | 46215009.93 | 46215010.15 | 46215010.41 | 0.0089 | 0.0034 |
| Saturn | 121820-12-08 12:12 G | 46215242.87 | 46215243.01 | 46215243.17 | 0.0279 | 0.0219 |

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| Neptune | 121821-04-22 11:43 G | 46215377.73 | 46215377.99 | 46215378.26 | 0.0089 | 0.0001 |
| Saturn | 121821-12-22 02:07 G | 46215621.35 | 46215621.59 | 46215621.84 | 0.0280 | 0.0011 |
| Neptune | 121822-04-24 18:41 G | 46215745.04 | 46215745.28 | 46215745.54 | 0.0089 | 0.0014 |
| Mars | 121822-07-28 17:29 G | 46215840.05 | 46215840.23 | 46215840.42 | 0.1780 | 0.0530 |
| Saturn | 121823-01-04 17:43 G | 46216000.13 | 46216000.24 | 46216000.37 | 0.0281 | 0.0245 |
| Neptune | 121823-04-27 11:14 G | 46216112.77 | 46216112.97 | 46216113.22 | 0.0089 | 0.0047 |
| Neptune | 121824-04-28 22:31 G | 46216480.27 | 46216480.44 | 46216480.63 | 0.0089 | 0.0061 |
| Jupiter | 121831-04-17 20:07 G | 46219025.11 | 46219025.34 | 46219025.56 | 0.0484 | 0.0108 |
| Uranus | 121831-05-05 11:00 G | 46219042.76 | 46219042.96 | 46219043.19 | 0.0139 | 0.0076 |
| Uranus | 121832-05-08 20:50 G | 46219412.13 | 46219412.37 | 46219412.62 | 0.0139 | 0.0030 |
| Uranus | 121833-05-13 19:38 G | 46219782.23 | 46219782.32 | 46219782.46 | 0.0139 | 0.0124 |
| Saturn | 121835-06-14 09:05 G | 46220543.70 | 46220543.88 | 46220544.08 | 0.0280 | 0.0185 |
| Saturn | 121836-06-25 23:43 G | 46220921.25 | 46220921.49 | 46220921.74 | 0.0279 | 0.0024 |
| Saturn | 121837-07-08 16:17 G | 46221299.07 | 46221299.18 | 46221299.31 | 0.0278 | 0.0237 |
| Jupiter | 121843-04-22 08:50 G | 46223412.64 | 46223412.87 | 46223413.11 | 0.0485 | 0.0104 |
| Saturn | 121850-12-16 14:50 G | 46226207.88 | 46226208.12 | 46226208.36 | 0.0279 | 0.0072 |
| Saturn | 121851-12-30 05:00 G | 46226586.52 | 46226586.71 | 46226586.91 | 0.0280 | 0.0167 |
| Jupiter | 121855-04-26 07:09 G | 46227799.63 | 46227799.80 | 46227799.99 | 0.0485 | 0.0296 |
| Jupiter | 121860-10-10 18:55 G | 46229794.08 | 46229794.29 | 46229794.50 | 0.0545 | 0.0238 |
| Saturn | 121865-06-20 22:45 G | 46231508.21 | 46231508.45 | 46231508.69 | 0.0279 | 0.0079 |
| Saturn | 121866-07-03 10:31 G | 46231885.73 | 46231885.94 | 46231886.15 | 0.0278 | 0.0148 |
| Jupiter | 121872-10-15 23:29 G | 46234182.25 | 46234182.48 | 46234182.70 | 0.0544 | 0.0060 |
| Uranus | 121874-10-30 06:41 G | 46234926.57 | 46234926.78 | 46234927.01 | 0.0139 | 0.0073 |
| Uranus | 121875-11-04 03:48 G | 46235296.42 | 46235296.66 | 46235296.90 | 0.0139 | 0.0034 |
| Uranus | 121876-11-07 12:55 G | 46235665.94 | 46235666.04 | 46235666.19 | 0.0139 | 0.0122 |
| Saturn | 121879-12-10 23:00 G | 46236794.26 | 46236794.46 | 46236794.67 | 0.0279 | 0.0165 |
| Saturn | 121880-12-23 05:29 G | 46237172.48 | 46237172.73 | 46237172.97 | 0.0280 | 0.0069 |
| Jupiter | 121884-10-21 12:12 G | 46238570.83 | 46238571.01 | 46238571.20 | 0.0543 | 0.0337 |
| Pluto | 121892-01-20 19:38 G | 46241218.14 | 46241218.32 | 46241218.53 | 0.0078 | 0.0053 |
| Saturn | 121894-06-15 12:41 G | 46242094.86 | 46242095.03 | 46242095.23 | 0.0280 | 0.0169 |

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| Saturn | 121895-06-28 10:17 G | 46242472.70 | 46242472.93 | 46242473.17 | 0.0279 | 0.0066 |
| Neptune | 121898-10-10 10:45 G | 46243672.86 | 46243672.95 | 46243673.06 | 0.0089 | 0.0082 |
| Neptune | 121899-10-13 03:19 G | 46244040.48 | 46244040.64 | 46244040.84 | 0.0089 | 0.0063 |
| Neptune | 121900-10-15 07:09 G | 46244407.58 | 46244407.80 | 46244408.04 | 0.0089 | 0.0038 |
| Neptune | 121901-10-17 23:57 G | 46244775.26 | 46244775.50 | 46244775.77 | 0.0088 | 0.0018 |
| Jupiter | 121902-04-14 04:17 G | 46244953.55 | 46244953.68 | 46244953.83 | 0.0484 | 0.0386 |
| Neptune | 121902-10-20 05:29 G | 46245142.48 | 46245142.73 | 46245142.98 | 0.0088 | 0.0009 |
| Neptune | 121903-10-22 18:12 G | 46245510.02 | 46245510.26 | 46245510.52 | 0.0088 | 0.0030 |
| Neptune | 121904-10-24 05:00 G | 46245877.53 | 46245877.71 | 46245877.92 | 0.0088 | 0.0054 |
| Neptune | 121905-10-26 12:41 G | 46246244.91 | 46246245.03 | 46246245.19 | 0.0088 | 0.0074 |
| Saturn | 121908-12-05 22:31 G | 46247381.34 | 46247381.44 | 46247381.56 | 0.0279 | 0.0247 |
| Saturn | 121909-12-19 07:24 G | 46247759.56 | 46247759.81 | 46247760.06 | 0.0279 | 0.0024 |
| Saturn | 121911-01-01 15:19 G | 46248137.97 | 46248138.14 | 46248138.33 | 0.0280 | 0.0198 |
| Jupiter | 121914-04-18 01:53 G | 46249340.37 | 46249340.58 | 46249340.80 | 0.0484 | 0.0186 |
| Uranus | 121915-05-06 16:45 G | 46249724.00 | 46249724.20 | 46249724.43 | 0.0139 | 0.0071 |
| Uranus | 121916-05-10 16:02 G | 46250093.93 | 46250094.17 | 46250094.43 | 0.0139 | 0.0037 |
| Uranus | 121917-05-15 01:09 G | 46250463.46 | 46250463.55 | 46250463.66 | 0.0139 | 0.0127 |
| Mars | 121923-01-28 08:21 G | 46252547.66 | 46252547.85 | 46252548.04 | 0.1760 | 0.0507 |
| Saturn | 121923-06-11 02:50 G | 46252681.52 | 46252681.62 | 46252681.73 | 0.0280 | 0.0253 |
| Saturn | 121924-06-23 01:09 G | 46253059.32 | 46253059.55 | 46253059.79 | 0.0279 | 0.0023 |
| Saturn | 121925-07-05 21:05 G | 46253437.22 | 46253437.38 | 46253437.55 | 0.0278 | 0.0199 |
| Jupiter | 121926-04-22 14:50 G | 46253727.89 | 46253728.12 | 46253728.36 | 0.0484 | 0.0043 |
| Jupiter | 121938-04-26 14:07 G | 46258114.90 | 46258115.09 | 46258115.28 | 0.0485 | 0.0285 |
| Saturn | 121938-12-13 08:21 G | 46258345.66 | 46258345.85 | 46258346.07 | 0.0279 | 0.0148 |
| Saturn | 121939-12-26 21:48 G | 46258724.17 | 46258724.41 | 46258724.65 | 0.0280 | 0.0074 |
| Jupiter | 121943-10-11 23:29 G | 46260109.30 | 46260109.48 | 46260109.66 | 0.0545 | 0.0342 |
| Saturn | 121953-06-17 14:36 G | 46263645.89 | 46263646.11 | 46263646.34 | 0.0280 | 0.0121 |
| Saturn | 121954-06-30 08:50 G | 46264023.65 | 46264023.87 | 46264024.10 | 0.0279 | 0.0095 |
| Jupiter | 121955-10-16 17:43 G | 46264497.02 | 46264497.24 | 46264497.47 | 0.0544 | 0.0019 |
| Uranus | 121958-11-01 00:41 G | 46265608.32 | 46265608.53 | 46265608.76 | 0.0139 | 0.0068 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 121959-11-05 08:50 G | 46265977.63 | 46265977.87 | 46265978.12 | 0.0139 | 0.0040 |
| Uranus | 121960-11-09 06:55 G | 46266347.70 | 46266347.79 | 46266347.92 | 0.0139 | 0.0126 |
| Jupiter | 121967-10-22 05:29 G | 46268885.55 | 46268885.73 | 46268885.92 | 0.0543 | 0.0331 |
| Saturn | 121967-12-08 01:38 G | 46268932.47 | 46268932.57 | 46268932.70 | 0.0279 | 0.0248 |
| Saturn | 121968-12-20 12:12 G | 46269310.77 | 46269311.01 | 46269311.25 | 0.0280 | 0.0024 |
| Saturn | 121970-01-03 04:45 G | 46269689.56 | 46269689.70 | 46269689.87 | 0.0280 | 0.0211 |
| Neptune | 121982-04-16 03:19 G | 46274175.63 | 46274175.64 | 46274175.70 | 0.0089 | 0.0088 |
| Saturn | 121982-06-12 17:57 G | 46274233.12 | 46274233.25 | 46274233.41 | 0.0280 | 0.0228 |
| Neptune | 121983-04-18 09:33 G | 46274542.73 | 46274542.90 | 46274543.10 | 0.0089 | 0.0061 |
| Saturn | 121983-06-25 10:02 G | 46274610.67 | 46274610.92 | 46274611.17 | 0.0279 | 0.0016 |
| Neptune | 121984-04-20 04:31 G | 46274910.46 | 46274910.69 | 46274910.93 | 0.0089 | 0.0040 |
| Saturn | 121984-07-06 22:02 G | 46274988.26 | 46274988.42 | 46274988.60 | 0.0278 | 0.0195 |
| Jupiter | 121985-04-13 09:33 G | 46275268.75 | 46275268.90 | 46275269.05 | 0.0483 | 0.0370 |
| Neptune | 121985-04-22 13:09 G | 46275277.80 | 46275278.05 | 46275278.30 | 0.0089 | 0.0014 |
| Neptune | 121986-04-25 03:33 G | 46275645.38 | 46275645.65 | 46275645.92 | 0.0089 | 0.0006 |
| Neptune | 121987-04-27 16:31 G | 46276012.98 | 46276013.19 | 46276013.45 | 0.0089 | 0.0033 |
| Neptune | 121988-04-29 02:07 G | 46276380.39 | 46276380.59 | 46276380.82 | 0.0089 | 0.0052 |
| Neptune | 121989-05-01 20:07 G | 46276748.26 | 46276748.34 | 46276748.48 | 0.0089 | 0.0080 |
| Jupiter | 121997-04-17 07:09 G | 46279655.58 | 46279655.80 | 46279656.03 | 0.0484 | 0.0146 |
| Saturn | 121997-12-14 17:43 G | 46279897.01 | 46279897.24 | 46279897.47 | 0.0279 | 0.0127 |
| Saturn | 121998-12-28 02:50 G | 46280275.40 | 46280275.62 | 46280275.85 | 0.0280 | 0.0113 |
| Uranus | 121999-05-07 10:45 G | 46280405.73 | 46280405.95 | 46280406.20 | 0.0139 | 0.0065 |
| Uranus | 122000-05-10 22:31 G | 46280775.21 | 46280775.44 | 46280775.68 | 0.0139 | 0.0044 |

123RD MILLENNIUM CE

This is a list of transits of Moon in the 123rd millennium CE.

| | FROM | MAX- | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|--------------|-------|---|-------------|-------------|-------------|--------|--------|---|
| | TRANSIT | | | | | | | | |
| | TIME | | | | | | | | |
| Uranus | 122001-05-15 | 19:53 | G | 46281145.27 | 46281145.33 | 46281145.43 | 0.0139 | 0.0132 | |
| Jupiter | 122009-04-21 | 22:17 | G | 46284043.20 | 46284043.43 | 46284043.67 | 0.0484 | 0.0062 | |
| Saturn | 122012-06-19 | 04:31 | G | 46285197.48 | 46285197.69 | 46285197.90 | 0.0279 | 0.0124 | |
| Saturn | 122013-07-01 | 21:19 | G | 46285575.16 | 46285575.39 | 46285575.63 | 0.0279 | 0.0100 | |
| Jupiter | 122021-04-25 | 20:36 | G | 46288430.16 | 46288430.36 | 46288430.56 | 0.0485 | 0.0255 | |
| Jupiter | 122026-10-10 | 16:17 | G | 46290424.00 | 46290424.18 | 46290424.37 | 0.0544 | 0.0332 | |
| Saturn | 122026-12-09 | 19:53 | G | 46290484.17 | 46290484.33 | 46290484.50 | 0.0279 | 0.0208 | |
| Saturn | 122027-12-23 | 02:36 | G | 46290862.35 | 46290862.61 | 46290862.87 | 0.0280 | 0.0031 | |
| Saturn | 122029-01-04 | 11:14 | G | 46291240.91 | 46291240.97 | 46291241.06 | 0.0280 | 0.0268 | |
| Jupiter | 122033-04-30 | 08:07 | G | 46292817.76 | 46292817.84 | 46292817.94 | 0.0486 | 0.0448 | |
| Jupiter | 122038-10-15 | 15:05 | G | 46294811.90 | 46294812.13 | 46294812.35 | 0.0545 | 0.0047 | |
| Saturn | 122041-06-13 | 22:02 | G | 46295784.28 | 46295784.42 | 46295784.57 | 0.0280 | 0.0220 | |
| Saturn | 122042-06-26 | 21:19 | G | 46296162.15 | 46296162.39 | 46296162.62 | 0.0279 | 0.0013 | |
| Uranus | 122042-11-01 | 03:48 | G | 46296289.45 | 46296289.66 | 46296289.89 | 0.0139 | 0.0064 | |
| Saturn | 122043-07-09 | 14:21 | G | 46296539.99 | 46296540.10 | 46296540.22 | 0.0278 | 0.0245 | |
| Uranus | 122043-11-06 | 01:38 | G | 46296659.33 | 46296659.57 | 46296659.81 | 0.0139 | 0.0045 | |
| Uranus | 122044-11-09 | 09:33 | G | 46297028.81 | 46297028.90 | 46297029.01 | 0.0139 | 0.0128 | |
| Jupiter | 122050-10-21 | 07:38 | G | 46299200.61 | 46299200.82 | 46299201.03 | 0.0544 | 0.0238 | |
| Pluto | 122052-07-25 | 07:24 | G | 46299843.62 | 46299843.81 | 46299844.05 | 0.0066 | 0.0039 | |
| Pluto | 122053-07-26 | 21:19 | G | 46300210.21 | 46300210.39 | 46300210.58 | 0.0066 | 0.0044 | |
| Saturn | 122056-12-16 | 10:45 | G | 46301448.72 | 46301448.95 | 46301449.19 | 0.0279 | 0.0072 | |
| Saturn | 122057-12-29 | 21:33 | G | 46301827.20 | 46301827.40 | 46301827.62 | 0.0280 | 0.0155 | |
| Neptune | 122063-10-13 | 04:45 | G | 46303940.58 | 46303940.70 | 46303940.84 | 0.0089 | 0.0076 | |
| Neptune | 122064-10-14 | 21:05 | G | 46304308.17 | 46304308.38 | 46304308.62 | 0.0089 | 0.0044 | |
| Neptune | 122065-10-17 | 04:02 | G | 46304675.44 | 46304675.67 | 46304675.90 | 0.0089 | 0.0030 | |
| Neptune | 122066-10-19 | 16:02 | G | 46305042.91 | 46305043.17 | 46305043.44 | 0.0088 | 0.0002 | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 122067-10-22 03:33 G | 46305410.42 | 46305410.65 | 46305410.91 | 0.0088 | 0.0016 |
| Jupiter | 122068-04-12 14:36 G | 46305584.02 | 46305584.11 | 46305584.22 | 0.0484 | 0.0434 |
| Neptune | 122068-10-23 10:02 G | 46305777.70 | 46305777.92 | 46305778.15 | 0.0088 | 0.0047 |
| Neptune | 122069-10-26 01:53 G | 46306145.42 | 46306145.58 | 46306145.79 | 0.0088 | 0.0061 |
| Saturn | 122071-06-21 06:41 G | 46306748.55 | 46306748.78 | 46306749.02 | 0.0279 | 0.0074 |
| Saturn | 122072-07-03 03:19 G | 46307126.45 | 46307126.64 | 46307126.83 | 0.0279 | 0.0156 |
| Jupiter | 122080-04-16 13:38 G | 46309970.86 | 46309971.07 | 46309971.28 | 0.0484 | 0.0227 |
| Uranus | 122082-05-03 05:14 G | 46310717.72 | 46310717.72 | 46310717.75 | 0.0140 | 0.0140 |
| Uranus | 122083-05-07 19:24 G | 46311087.09 | 46311087.31 | 46311087.54 | 0.0139 | 0.0058 |
| Uranus | 122084-05-11 16:02 G | 46311456.93 | 46311457.17 | 46311457.42 | 0.0139 | 0.0051 |
| Uranus | 122085-05-16 02:50 G | 46311826.61 | 46311826.62 | 46311826.67 | 0.0139 | 0.0138 |
| Saturn | 122085-12-11 00:26 G | 46312035.33 | 46312035.52 | 46312035.71 | 0.0279 | 0.0171 |
| Saturn | 122086-12-24 14:21 G | 46312413.86 | 46312414.10 | 46312414.34 | 0.0280 | 0.0049 |
| Saturn | 122088-01-07 06:55 G | 46312792.74 | 46312792.79 | 46312792.85 | 0.0280 | 0.0273 |
| Jupiter | 122092-04-21 01:24 G | 46314358.33 | 46314358.56 | 46314358.79 | 0.0484 | 0.0007 |
| Saturn | 122100-06-16 13:53 G | 46317335.88 | 46317336.08 | 46317336.29 | 0.0280 | 0.0162 |
| Saturn | 122101-06-29 03:33 G | 46317713.41 | 46317713.65 | 46317713.89 | 0.0279 | 0.0058 |
| Saturn | 122102-07-11 18:12 G | 46318091.20 | 46318091.26 | 46318091.33 | 0.0278 | 0.0267 |
| Jupiter | 122104-04-26 00:12 G | 46318745.31 | 46318745.51 | 46318745.72 | 0.0485 | 0.0249 |
| Mars | 122106-07-31 05:14 G | 46319571.54 | 46319571.72 | 46319571.91 | 0.1771 | 0.0214 |
| Jupiter | 122109-10-10 16:45 G | 46320739.07 | 46320739.20 | 46320739.34 | 0.0545 | 0.0441 |
| Saturn | 122115-12-19 16:17 G | 46322999.94 | 46323000.18 | 46323000.42 | 0.0280 | 0.0072 |
| Jupiter | 122116-04-30 13:09 G | 46323133.04 | 46323133.05 | 46323133.08 | 0.0486 | 0.0483 |
| Saturn | 122117-01-01 04:45 G | 46323378.51 | 46323378.70 | 46323378.91 | 0.0280 | 0.0158 |
| Jupiter | 122121-10-15 17:00 G | 46325126.99 | 46325127.21 | 46325127.44 | 0.0545 | 0.0098 |
| Uranus | 122125-10-29 01:53 G | 46326601.56 | 46326601.58 | 46326601.64 | 0.0138 | 0.0136 |
| Uranus | 122126-11-02 22:31 G | 46326971.22 | 46326971.44 | 46326971.69 | 0.0139 | 0.0057 |
| Uranus | 122127-11-07 06:26 G | 46327340.55 | 46327340.77 | 46327341.02 | 0.0139 | 0.0052 |
| Uranus | 122128-11-11 04:31 G | 46327710.64 | 46327710.69 | 46327710.79 | 0.0139 | 0.0134 |
| Saturn | 122129-06-11 01:38 G | 46327922.50 | 46327922.57 | 46327922.66 | 0.0280 | 0.0262 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Saturn | 122130-06-23 23:43 G | 46328300.25 | 46328300.49 | 46328300.74 | 0.0279 | 0.0049 |
| Saturn | 122131-07-06 12:12 G | 46328677.81 | 46328678.01 | 46328678.23 | 0.0278 | 0.0158 |
| Jupiter | 122133-10-21 03:48 G | 46329515.46 | 46329515.66 | 46329515.86 | 0.0543 | 0.0252 |
| Pluto | 122141-01-25 06:26 G | 46332168.64 | 46332168.77 | 46332168.95 | 0.0078 | 0.0064 |
| Saturn | 122144-12-13 15:33 G | 46333586.96 | 46333587.15 | 46333587.37 | 0.0279 | 0.0168 |
| Saturn | 122145-12-26 22:31 G | 46333965.20 | 46333965.44 | 46333965.69 | 0.0280 | 0.0067 |
| Neptune | 122147-04-18 19:24 G | 46334443.21 | 46334443.31 | 46334443.46 | 0.0089 | 0.0078 |
| Neptune | 122148-04-20 05:29 G | 46334810.53 | 46334810.73 | 46334810.96 | 0.0089 | 0.0047 |
| Neptune | 122149-04-22 18:55 G | 46335178.06 | 46335178.29 | 46335178.56 | 0.0089 | 0.0032 |
| Neptune | 122150-04-25 10:17 G | 46335545.68 | 46335545.93 | 46335546.19 | 0.0089 | 0.0002 |
| Jupiter | 122151-04-13 17:43 G | 46335899.12 | 46335899.24 | 46335899.36 | 0.0483 | 0.0414 |
| Neptune | 122151-04-27 18:41 G | 46335913.02 | 46335913.28 | 46335913.55 | 0.0089 | 0.0016 |
| Neptune | 122152-04-29 13:09 G | 46336280.85 | 46336281.05 | 46336281.28 | 0.0089 | 0.0048 |
| Neptune | 122153-05-01 18:55 G | 46336648.13 | 46336648.29 | 46336648.49 | 0.0089 | 0.0063 |
| Saturn | 122159-06-18 22:45 G | 46338887.25 | 46338887.45 | 46338887.64 | 0.0280 | 0.0156 |
| Saturn | 122160-06-30 20:36 G | 46339265.13 | 46339265.36 | 46339265.60 | 0.0279 | 0.0059 |
| Saturn | 122161-07-13 09:33 G | 46339642.87 | 46339642.90 | 46339642.94 | 0.0278 | 0.0275 |
| Jupiter | 122163-04-17 18:12 G | 46340286.04 | 46340286.26 | 46340286.49 | 0.0483 | 0.0191 |
| Uranus | 122166-05-04 15:19 G | 46341399.08 | 46341399.14 | 46341399.22 | 0.0140 | 0.0134 |
| Uranus | 122167-05-09 10:31 G | 46341768.71 | 46341768.94 | 46341769.20 | 0.0139 | 0.0052 |
| Uranus | 122168-05-13 01:38 G | 46342138.35 | 46342138.57 | 46342138.79 | 0.0139 | 0.0059 |
| Saturn | 122173-12-08 01:38 G | 46344173.49 | 46344173.57 | 46344173.67 | 0.0279 | 0.0257 |
| Saturn | 122174-12-21 11:29 G | 46344551.73 | 46344551.98 | 46344552.23 | 0.0280 | 0.0024 |
| Jupiter | 122175-04-22 05:57 G | 46344673.52 | 46344673.75 | 46344673.98 | 0.0484 | 0.0011 |
| Saturn | 122176-01-03 20:07 G | 46344930.19 | 46344930.34 | 46344930.52 | 0.0280 | 0.0213 |
| Jupiter | 122187-04-26 05:57 G | 46349060.54 | 46349060.75 | 46349060.98 | 0.0485 | 0.0202 |
| Saturn | 122188-06-12 06:55 G | 46349473.72 | 46349473.79 | 46349473.88 | 0.0280 | 0.0263 |
| Saturn | 122189-06-25 05:00 G | 46349851.48 | 46349851.71 | 46349851.95 | 0.0279 | 0.0034 |
| Saturn | 122190-07-08 01:09 G | 46350229.40 | 46350229.55 | 46350229.73 | 0.0278 | 0.0197 |
| Jupiter | 122192-10-09 15:48 G | 46351054.01 | 46351054.16 | 46351054.31 | 0.0545 | 0.0409 |

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|---------|--------------------|---|-------------|-------------|-------------|--------|--------|
| Jupiter | 122199-04-30 18:55 | G | 46353448.16 | 46353448.29 | 46353448.42 | 0.0486 | 0.0400 |
| Saturn | 122203-12-16 23:14 | G | 46355138.25 | 46355138.47 | 46355138.69 | 0.0280 | 0.0110 |
| Jupiter | 122204-10-15 11:43 | G | 46355441.76 | 46355441.99 | 46355442.21 | 0.0544 | 0.0122 |
| Saturn | 122204-12-29 13:09 | G | 46355516.84 | 46355517.05 | 46355517.28 | 0.0280 | 0.0121 |
| Mars | 122207-01-30 08:21 | G | 46356278.64 | 46356278.85 | 46356279.06 | 0.1769 | 0.0263 |
| Uranus | 122209-10-30 17:43 | G | 46357283.21 | 46357283.24 | 46357283.33 | 0.0138 | 0.0135 |
| Uranus | 122210-11-04 05:00 | G | 46357652.49 | 46357652.71 | 46357652.95 | 0.0139 | 0.0049 |
| Uranus | 122211-11-08 22:17 | G | 46358022.21 | 46358022.43 | 46358022.69 | 0.0139 | 0.0056 |
| Uranus | 122212-11-12 09:48 | G | 46358391.88 | 46358391.91 | 46358391.97 | 0.0139 | 0.0136 |
| Jupiter | 122216-10-20 23:14 | G | 46359830.25 | 46359830.47 | 46359830.70 | 0.0544 | 0.0153 |
| Saturn | 122218-06-21 06:41 | G | 46360438.56 | 46360438.78 | 46360439.02 | 0.0280 | 0.0111 |
| Saturn | 122219-07-04 00:12 | G | 46360816.30 | 46360816.51 | 46360816.73 | 0.0279 | 0.0118 |
| Neptune | 122227-10-14 15:33 | G | 46363841.07 | 46363841.15 | 46363841.23 | 0.0089 | 0.0084 |
| Neptune | 122228-10-16 03:19 | G | 46364208.45 | 46364208.64 | 46364208.84 | 0.0089 | 0.0056 |
| Jupiter | 122228-10-25 23:57 | G | 46364218.37 | 46364218.50 | 46364218.63 | 0.0544 | 0.0449 |
| Neptune | 122229-10-18 09:19 | G | 46364575.68 | 46364575.89 | 46364576.14 | 0.0089 | 0.0041 |
| Neptune | 122230-10-21 02:21 | G | 46364943.36 | 46364943.60 | 46364943.86 | 0.0088 | 0.0011 |
| Neptune | 122231-10-23 06:12 | G | 46365310.51 | 46365310.76 | 46365311.02 | 0.0088 | 0.0006 |
| Neptune | 122232-10-24 23:14 | G | 46365678.24 | 46365678.47 | 46365678.72 | 0.0088 | 0.0036 |
| Saturn | 122232-12-10 05:14 | G | 46365724.57 | 46365724.72 | 46365724.88 | 0.0279 | 0.0218 |
| Neptune | 122233-10-27 04:31 | G | 46366045.50 | 46366045.69 | 46366045.90 | 0.0088 | 0.0051 |
| Saturn | 122233-12-23 16:17 | G | 46366102.94 | 46366103.18 | 46366103.42 | 0.0280 | 0.0002 |
| Jupiter | 122234-04-13 23:43 | G | 46366214.44 | 46366214.49 | 46366214.54 | 0.0483 | 0.0470 |
| Neptune | 122234-10-29 18:12 | G | 46366413.17 | 46366413.26 | 46366413.39 | 0.0088 | 0.0081 |
| Saturn | 122235-01-06 08:36 | G | 46366481.72 | 46366481.86 | 46366482.02 | 0.0280 | 0.0218 |
| Jupiter | 122246-04-17 23:14 | G | 46370601.28 | 46370601.47 | 46370601.67 | 0.0484 | 0.0274 |
| Saturn | 122247-06-15 22:45 | G | 46371025.30 | 46371025.45 | 46371025.64 | 0.0280 | 0.0204 |
| Saturn | 122248-06-27 14:36 | G | 46371402.86 | 46371403.11 | 46371403.36 | 0.0279 | 0.0014 |
| Saturn | 122249-07-10 04:31 | G | 46371780.55 | 46371780.69 | 46371780.84 | 0.0278 | 0.0220 |
| Uranus | 122250-05-06 01:24 | G | 46372080.52 | 46372080.56 | 46372080.65 | 0.0140 | 0.0135 |

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| Uranus | 122251-05-11 00:55 G | 46372450.31 | 46372450.54 | 46372450.79 | 0.0140 | 0.0041 |
| Uranus | 122252-05-14 12:12 G | 46372819.79 | 46372820.01 | 46372820.25 | 0.0139 | 0.0064 |
| Jupiter | 122258-04-22 12:55 G | 46374988.80 | 46374989.04 | 46374989.27 | 0.0484 | 0.0056 |
| Saturn | 122262-12-18 02:50 G | 46376689.40 | 46376689.62 | 46376689.86 | 0.0280 | 0.0117 |
| Saturn | 122263-12-31 15:19 G | 46377067.93 | 46377068.14 | 46377068.37 | 0.0280 | 0.0119 |
| Jupiter | 122270-04-26 10:31 G | 46379375.72 | 46379375.94 | 46379376.16 | 0.0484 | 0.0173 |
| Jupiter | 122275-10-10 09:05 G | 46381368.82 | 46381368.88 | 46381368.96 | 0.0545 | 0.0521 |
| Saturn | 122277-06-22 22:31 G | 46381990.22 | 46381990.44 | 46381990.68 | 0.0280 | 0.0097 |
| Saturn | 122278-07-05 11:57 G | 46382367.78 | 46382368.00 | 46382368.23 | 0.0279 | 0.0116 |
| Jupiter | 122282-05-01 00:55 G | 46383763.42 | 46383763.54 | 46383763.66 | 0.0485 | 0.0416 |
| Jupiter | 122287-10-15 10:45 G | 46385756.75 | 46385756.95 | 46385757.16 | 0.0545 | 0.0220 |
| Saturn | 122291-12-12 18:41 G | 46387276.13 | 46387276.28 | 46387276.46 | 0.0279 | 0.0208 |
| Saturn | 122292-12-24 22:45 G | 46387654.20 | 46387654.45 | 46387654.71 | 0.0280 | 0.0032 |
| Uranus | 122293-10-31 07:09 G | 46387964.77 | 46387964.80 | 46387964.85 | 0.0138 | 0.0137 |
| Saturn | 122294-01-07 10:31 G | 46388032.89 | 46388032.94 | 46388033.02 | 0.0280 | 0.0269 |
| Uranus | 122294-11-04 16:02 G | 46388333.93 | 46388334.17 | 46388334.43 | 0.0139 | 0.0036 |
| Uranus | 122295-11-09 11:29 G | 46388703.76 | 46388703.98 | 46388704.21 | 0.0139 | 0.0055 |
| Jupiter | 122299-10-21 02:50 G | 46390145.39 | 46390145.62 | 46390145.85 | 0.0545 | 0.0133 |
| Pluto | 122300-07-29 09:19 G | 46390426.83 | 46390426.89 | 46390427.02 | 0.0066 | 0.0061 |
| Pluto | 122301-07-31 03:48 G | 46390793.43 | 46390793.66 | 46390793.92 | 0.0066 | 0.0022 |
| Saturn | 122306-06-18 05:00 G | 46392576.57 | 46392576.71 | 46392576.88 | 0.0280 | 0.0211 |
| Saturn | 122307-07-01 03:48 G | 46392954.42 | 46392954.66 | 46392954.90 | 0.0279 | 0.0018 |
| Saturn | 122308-07-12 16:02 G | 46393332.07 | 46393332.17 | 46393332.29 | 0.0278 | 0.0247 |
| Jupiter | 122311-10-27 01:38 G | 46394533.47 | 46394533.57 | 46394533.68 | 0.0543 | 0.0476 |
| Neptune | 122312-04-21 08:36 G | 46394710.69 | 46394710.86 | 46394711.08 | 0.0089 | 0.0059 |
| Neptune | 122313-04-24 03:33 G | 46395078.42 | 46395078.65 | 46395078.89 | 0.0089 | 0.0042 |
| Neptune | 122314-04-26 11:57 G | 46395445.76 | 46395446.00 | 46395446.26 | 0.0089 | 0.0012 |
| Neptune | 122315-04-29 02:07 G | 46395813.33 | 46395813.59 | 46395813.86 | 0.0089 | 0.0006 |
| Neptune | 122316-04-30 16:02 G | 46396180.95 | 46396181.17 | 46396181.41 | 0.0089 | 0.0035 |
| Neptune | 122317-05-03 01:09 G | 46396548.35 | 46396548.55 | 46396548.79 | 0.0089 | 0.0052 |

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| Neptune | 122318-05-05 19:53 G | 46396916.24 | 46396916.33 | 46396916.44 | 0.0089 | 0.0081 |
| Saturn | 122321-12-20 14:36 G | 46398240.86 | 46398241.11 | 46398241.36 | 0.0280 | 0.0060 |
| Saturn | 122323-01-02 22:02 G | 46398619.22 | 46398619.42 | 46398619.63 | 0.0280 | 0.0169 |
| Jupiter | 122329-04-18 05:43 G | 46400916.55 | 46400916.74 | 46400916.94 | 0.0483 | 0.0258 |
| Uranus | 122334-05-07 20:21 G | 46402762.29 | 46402762.35 | 46402762.43 | 0.0140 | 0.0134 |
| Uranus | 122335-05-12 08:07 G | 46403131.60 | 46403131.84 | 46403132.09 | 0.0140 | 0.0027 |
| Uranus | 122336-05-16 07:38 G | 46403501.59 | 46403501.82 | 46403502.05 | 0.0139 | 0.0064 |
| Saturn | 122336-06-25 01:38 G | 46403541.35 | 46403541.57 | 46403541.80 | 0.0280 | 0.0062 |
| Saturn | 122337-07-07 23:00 G | 46403919.28 | 46403919.46 | 46403919.66 | 0.0279 | 0.0171 |
| Jupiter | 122341-04-22 19:53 G | 46405304.09 | 46405304.33 | 46405304.57 | 0.0484 | 0.0018 |
| Saturn | 122350-12-15 01:38 G | 46408827.38 | 46408827.57 | 46408827.76 | 0.0279 | 0.0169 |
| Saturn | 122351-12-28 11:43 G | 46409205.74 | 46409205.99 | 46409206.23 | 0.0279 | 0.0051 |
| Saturn | 122353-01-09 21:19 G | 46409584.33 | 46409584.39 | 46409584.46 | 0.0280 | 0.0271 |
| Jupiter | 122353-04-26 18:41 G | 46409691.07 | 46409691.28 | 46409691.49 | 0.0484 | 0.0195 |
| Jupiter | 122358-10-10 13:09 G | 46411683.99 | 46411684.05 | 46411684.11 | 0.0546 | 0.0526 |
| Jupiter | 122365-05-01 07:38 G | 46414078.68 | 46414078.82 | 46414078.97 | 0.0485 | 0.0390 |
| Saturn | 122365-06-19 07:53 G | 46414127.64 | 46414127.83 | 46414128.05 | 0.0280 | 0.0153 |
| Saturn | 122366-07-02 05:14 G | 46414505.50 | 46414505.72 | 46414505.95 | 0.0279 | 0.0065 |
| Saturn | 122367-07-15 00:41 G | 46414883.49 | 46414883.53 | 46414883.59 | 0.0278 | 0.0271 |
| Jupiter | 122370-10-15 16:31 G | 46416071.98 | 46416072.19 | 46416072.40 | 0.0545 | 0.0184 |
| Uranus | 122377-11-01 12:55 G | 46418645.98 | 46418646.04 | 46418646.12 | 0.0138 | 0.0133 |
| Uranus | 122378-11-06 09:05 G | 46419015.63 | 46419015.88 | 46419016.14 | 0.0138 | 0.0026 |
| Uranus | 122379-11-10 16:31 G | 46419384.97 | 46419385.19 | 46419385.43 | 0.0139 | 0.0053 |
| Saturn | 122380-12-21 16:17 G | 46419791.95 | 46419792.18 | 46419792.41 | 0.0280 | 0.0069 |
| Saturn | 122382-01-04 06:41 G | 46420170.58 | 46420170.78 | 46420170.98 | 0.0280 | 0.0162 |
| Jupiter | 122382-10-21 01:09 G | 46420460.32 | 46420460.55 | 46420460.79 | 0.0544 | 0.0129 |
| Pluto | 122389-01-28 04:31 G | 46422751.45 | 46422751.69 | 46422751.94 | 0.0078 | 0.0025 |
| Mars | 122390-08-03 09:48 G | 46423303.72 | 46423303.91 | 46423304.09 | 0.1764 | 0.0169 |
| Neptune | 122392-10-16 06:55 G | 46424108.66 | 46424108.79 | 46424108.98 | 0.0089 | 0.0067 |
| Neptune | 122393-10-18 18:41 G | 46424476.09 | 46424476.28 | 46424476.52 | 0.0089 | 0.0052 |

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| Saturn | 122394-06-14 11:00 G | 46424714.87 | 46424714.96 | 46424715.07 | 0.0281 | 0.0257 |
| Neptune | 122394-10-21 07:53 G | 46424843.58 | 46424843.83 | 46424844.07 | 0.0089 | 0.0020 |
| Jupiter | 122394-10-25 23:29 G | 46424848.34 | 46424848.48 | 46424848.64 | 0.0544 | 0.0404 |
| Saturn | 122395-06-27 04:17 G | 46425092.44 | 46425092.68 | 46425092.92 | 0.0280 | 0.0048 |
| Neptune | 122395-10-23 13:38 G | 46425210.81 | 46425211.07 | 46425211.33 | 0.0089 | 0.0006 |
| Saturn | 122396-07-08 21:48 G | 46425470.22 | 46425470.41 | 46425470.60 | 0.0279 | 0.0165 |
| Neptune | 122396-10-25 06:12 G | 46425578.52 | 46425578.76 | 46425579.01 | 0.0088 | 0.0026 |
| Neptune | 122397-10-27 10:02 G | 46425945.70 | 46425945.92 | 46425946.15 | 0.0088 | 0.0039 |
| Neptune | 122398-10-30 02:50 G | 46426313.48 | 46426313.62 | 46426313.79 | 0.0088 | 0.0071 |
| Neptune | 122399-11-01 08:07 G | 46426680.79 | 46426680.84 | 46426680.93 | 0.0088 | 0.0085 |
| Jupiter | 122400-04-13 15:33 G | 46426845.10 | 46426845.15 | 46426845.22 | 0.0483 | 0.0465 |
| Saturn | 122409-12-15 23:57 G | 46430378.31 | 46430378.50 | 46430378.71 | 0.0278 | 0.0160 |
| Saturn | 122410-12-29 11:29 G | 46430756.75 | 46430756.98 | 46430757.21 | 0.0279 | 0.0077 |
| Jupiter | 122412-04-17 14:50 G | 46431231.93 | 46431232.12 | 46431232.31 | 0.0483 | 0.0270 |
| Uranus | 122418-05-08 06:26 G | 46433443.69 | 46433443.77 | 46433443.89 | 0.0140 | 0.0128 |
| Uranus | 122419-05-12 23:29 G | 46433813.22 | 46433813.48 | 46433813.74 | 0.0140 | 0.0018 |
| Uranus | 122420-05-16 16:31 G | 46434182.98 | 46434183.19 | 46434183.42 | 0.0139 | 0.0064 |
| Jupiter | 122424-04-22 03:19 G | 46435619.40 | 46435619.64 | 46435619.88 | 0.0483 | 0.0077 |
| Saturn | 122424-06-20 18:12 G | 46435679.07 | 46435679.26 | 46435679.48 | 0.0280 | 0.0161 |
| Saturn | 122425-07-03 09:19 G | 46436056.65 | 46436056.89 | 46436057.14 | 0.0279 | 0.0066 |
| Jupiter | 122436-04-26 05:00 G | 46440006.49 | 46440006.71 | 46440006.94 | 0.0484 | 0.0125 |
| Saturn | 122438-12-10 10:45 G | 46440964.84 | 46440964.95 | 46440965.08 | 0.0279 | 0.0245 |
| Saturn | 122439-12-23 14:21 G | 46441342.86 | 46441343.10 | 46441343.36 | 0.0280 | 0.0017 |
| Saturn | 122441-01-05 03:19 G | 46441721.49 | 46441721.64 | 46441721.80 | 0.0280 | 0.0213 |
| Jupiter | 122441-10-09 13:09 G | 46441999.01 | 46441999.05 | 46441999.09 | 0.0545 | 0.0536 |
| Jupiter | 122448-04-30 14:36 G | 46444393.94 | 46444394.11 | 46444394.28 | 0.0485 | 0.0341 |
| Saturn | 122453-06-15 15:05 G | 46446266.02 | 46446266.13 | 46446266.24 | 0.0281 | 0.0248 |
| Jupiter | 122453-10-14 14:36 G | 46446386.92 | 46446387.11 | 46446387.30 | 0.0545 | 0.0272 |
| Saturn | 122454-06-28 14:07 G | 46446643.84 | 46446644.09 | 46446644.33 | 0.0280 | 0.0015 |
| Saturn | 122455-07-11 03:19 G | 46447021.49 | 46447021.64 | 46447021.81 | 0.0279 | 0.0214 |

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| Uranus | 122461-11-02 04:02 G | 46449327.55 | 46449327.67 | 46449327.80 | 0.0138 | 0.0120 |
| Uranus | 122462-11-06 17:43 G | 46449697.00 | 46449697.24 | 46449697.49 | 0.0138 | 0.0024 |
| Uranus | 122463-11-11 08:21 G | 46450066.63 | 46450066.85 | 46450067.10 | 0.0139 | 0.0059 |
| Jupiter | 122465-10-19 21:48 G | 46450775.17 | 46450775.41 | 46450775.65 | 0.0545 | 0.0020 |
| Saturn | 122468-12-17 08:36 G | 46451929.64 | 46451929.86 | 46451930.10 | 0.0278 | 0.0118 |
| Saturn | 122469-12-30 12:41 G | 46452307.80 | 46452308.03 | 46452308.27 | 0.0279 | 0.0096 |
| Neptune | 122476-04-20 13:24 G | 46454610.93 | 46454611.06 | 46454611.25 | 0.0089 | 0.0071 |
| Neptune | 122477-04-23 09:19 G | 46454978.70 | 46454978.89 | 46454979.12 | 0.0089 | 0.0052 |
| Jupiter | 122477-10-25 07:24 G | 46455163.64 | 46455163.81 | 46455163.98 | 0.0544 | 0.0348 |
| Neptune | 122478-04-25 15:19 G | 46455345.90 | 46455346.14 | 46455346.40 | 0.0089 | 0.0025 |
| Neptune | 122479-04-28 10:31 G | 46455713.67 | 46455713.94 | 46455714.20 | 0.0089 | 0.0006 |
| Neptune | 122480-04-29 18:55 G | 46456081.05 | 46456081.29 | 46456081.54 | 0.0089 | 0.0022 |
| Neptune | 122481-05-02 08:36 G | 46456448.64 | 46456448.86 | 46456449.11 | 0.0089 | 0.0042 |
| Neptune | 122482-05-04 22:17 G | 46456816.29 | 46456816.43 | 46456816.60 | 0.0089 | 0.0069 |
| Neptune | 122483-05-07 07:09 G | 46457183.80 | 46457183.80 | 46457183.84 | 0.0089 | 0.0089 |
| Saturn | 122483-06-22 19:24 G | 46457230.10 | 46457230.31 | 46457230.53 | 0.0280 | 0.0106 |
| Saturn | 122484-07-04 17:29 G | 46457608.01 | 46457608.23 | 46457608.46 | 0.0279 | 0.0114 |
| Mars | 122491-01-31 07:38 G | 46460009.65 | 46460009.82 | 46460010.00 | 0.1778 | 0.0544 |
| Jupiter | 122495-04-18 02:07 G | 46461547.42 | 46461547.59 | 46461547.76 | 0.0483 | 0.0320 |
| Saturn | 122497-12-11 16:02 G | 46462516.06 | 46462516.17 | 46462516.30 | 0.0279 | 0.0243 |
| Saturn | 122498-12-24 22:02 G | 46462894.17 | 46462894.42 | 46462894.68 | 0.0279 | 0.0024 |
| Saturn | 122500-01-07 05:14 G | 46463272.54 | 46463272.72 | 46463272.89 | 0.0280 | 0.0205 |
| Uranus | 122502-05-09 15:19 G | 46464124.99 | 46464125.14 | 46464125.29 | 0.0140 | 0.0114 |
| Uranus | 122503-05-14 16:17 G | 46464494.93 | 46464495.18 | 46464495.43 | 0.0140 | 0.0016 |
| Uranus | 122504-05-18 02:36 G | 46464864.39 | 46464864.61 | 46464864.84 | 0.0139 | 0.0070 |
| Jupiter | 122507-04-23 11:29 G | 46465934.74 | 46465934.98 | 46465935.23 | 0.0483 | 0.0083 |
| Saturn | 122512-06-17 10:02 G | 46467816.76 | 46467816.92 | 46467817.08 | 0.0281 | 0.0209 |
| Saturn | 122513-06-30 11:29 G | 46468194.74 | 46468194.98 | 46468195.21 | 0.0280 | 0.0005 |
| Saturn | 122514-07-13 09:05 G | 46468572.73 | 46468572.88 | 46468573.04 | 0.0279 | 0.0209 |
| Jupiter | 122519-04-27 17:43 G | 46470322.03 | 46470322.24 | 46470322.46 | 0.0484 | 0.0158 |

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| Saturn | 122527-12-20 12:26 G | 46473480.80 | 46473481.02 | 46473481.25 | 0.0278 | 0.0111 |
| Saturn | 122529-01-01 21:48 G | 46473859.19 | 46473859.41 | 46473859.64 | 0.0279 | 0.0123 |
| Jupiter | 122531-05-01 23:00 G | 46474709.32 | 46474709.46 | 46474709.61 | 0.0484 | 0.0382 |
| Jupiter | 122536-10-14 23:00 G | 46476702.28 | 46476702.46 | 46476702.64 | 0.0546 | 0.0313 |
| Saturn | 122542-06-24 17:00 G | 46478780.99 | 46478781.21 | 46478781.44 | 0.0280 | 0.0114 |
| Saturn | 122543-07-07 14:50 G | 46479158.92 | 46479159.12 | 46479159.34 | 0.0279 | 0.0113 |
| Uranus | 122545-11-03 19:24 G | 46480009.16 | 46480009.31 | 46480009.47 | 0.0138 | 0.0108 |
| Uranus | 122546-11-08 02:07 G | 46480378.35 | 46480378.59 | 46480378.85 | 0.0138 | 0.0026 |
| Uranus | 122547-11-12 22:45 G | 46480748.24 | 46480748.45 | 46480748.67 | 0.0139 | 0.0070 |
| Jupiter | 122548-10-20 03:33 G | 46481090.41 | 46481090.65 | 46481090.89 | 0.0545 | 0.0040 |
| Pluto | 122549-08-02 03:33 G | 46481376.40 | 46481376.65 | 46481376.90 | 0.0066 | 0.0006 |
| Neptune | 122556-10-16 11:57 G | 46484008.88 | 46484009.00 | 46484009.13 | 0.0089 | 0.0076 |
| Saturn | 122556-12-13 11:57 G | 46484066.83 | 46484067.00 | 46484067.17 | 0.0278 | 0.0199 |
| Neptune | 122557-10-19 03:33 G | 46484376.48 | 46484376.65 | 46484376.85 | 0.0089 | 0.0063 |
| Saturn | 122557-12-26 22:17 G | 46484445.19 | 46484445.43 | 46484445.67 | 0.0279 | 0.0030 |
| Neptune | 122558-10-21 10:31 G | 46484743.73 | 46484743.94 | 46484744.19 | 0.0089 | 0.0032 |
| Saturn | 122559-01-09 11:29 G | 46484823.89 | 46484823.98 | 46484824.08 | 0.0280 | 0.0257 |
| Neptune | 122559-10-23 22:17 G | 46485111.18 | 46485111.43 | 46485111.69 | 0.0089 | 0.0018 |
| Neptune | 122560-10-25 11:14 G | 46485478.73 | 46485478.97 | 46485479.22 | 0.0089 | 0.0014 |
| Jupiter | 122560-10-25 14:07 G | 46485478.93 | 46485479.09 | 46485479.26 | 0.0544 | 0.0373 * |
| Neptune | 122561-10-27 17:29 G | 46485845.99 | 46485846.23 | 46485846.49 | 0.0088 | 0.0028 |
| Neptune | 122562-10-30 10:02 G | 46486213.75 | 46486213.92 | 46486214.12 | 0.0088 | 0.0061 |
| Neptune | 122563-11-01 13:38 G | 46486580.95 | 46486581.07 | 46486581.23 | 0.0088 | 0.0074 |
| Saturn | 122571-06-19 14:21 G | 46489367.93 | 46489368.10 | 46489368.28 | 0.0281 | 0.0203 |
| Saturn | 122572-07-01 08:21 G | 46489745.60 | 46489745.85 | 46489746.09 | 0.0280 | 0.0034 |
| Saturn | 122573-07-14 03:05 G | 46490123.55 | 46490123.63 | 46490123.72 | 0.0279 | 0.0260 |
| Jupiter | 122578-04-18 15:33 G | 46491862.97 | 46491863.15 | 46491863.34 | 0.0483 | 0.0274 |
| Uranus | 122586-05-10 09:19 G | 46494806.72 | 46494806.89 | 46494807.08 | 0.0140 | 0.0102 |
| Saturn | 122586-12-21 09:05 G | 46495031.65 | 46495031.88 | 46495032.13 | 0.0278 | 0.0069 |
| Uranus | 122587-05-14 22:45 G | 46495176.21 | 46495176.45 | 46495176.70 | 0.0140 | 0.0017 |

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| Saturn | 122588-01-03 20:36 G | 46495410.16 | 46495410.36 | 46495410.56 | 0.0279 | 0.0147 |
| Uranus | 122588-05-18 20:36 G | 46495546.16 | 46495546.36 | 46495546.58 | 0.0139 | 0.0083 |
| Jupiter | 122590-04-22 19:38 G | 46496250.08 | 46496250.32 | 46496250.57 | 0.0483 | 0.0062 |
| Saturn | 122601-06-26 23:14 G | 46500332.23 | 46500332.47 | 46500332.72 | 0.0280 | 0.0059 |
| Jupiter | 122602-04-28 05:43 G | 46500637.52 | 46500637.74 | 46500637.96 | 0.0484 | 0.0134 |
| Saturn | 122602-07-09 14:50 G | 46500709.91 | 46500710.12 | 46500710.32 | 0.0279 | 0.0159 |
| Jupiter | 122614-05-02 07:09 G | 46505024.62 | 46505024.80 | 46505024.98 | 0.0484 | 0.0325 |
| Saturn | 122615-12-16 16:31 G | 46505618.01 | 46505618.19 | 46505618.38 | 0.0278 | 0.0194 |
| Saturn | 122616-12-28 19:38 G | 46505996.07 | 46505996.32 | 46505996.57 | 0.0279 | 0.0022 |
| Saturn | 122618-01-11 07:53 G | 46506374.74 | 46506374.83 | 46506374.95 | 0.0280 | 0.0251 |
| Jupiter | 122619-10-16 05:43 G | 46507017.55 | 46507017.74 | 46507017.93 | 0.0545 | 0.0287 |
| Uranus | 122629-11-05 01:53 G | 46510690.42 | 46510690.58 | 46510690.76 | 0.0138 | 0.0099 |
| Saturn | 122630-06-21 15:48 G | 46510918.97 | 46510919.16 | 46510919.35 | 0.0281 | 0.0167 |
| Uranus | 122630-11-09 21:05 G | 46511060.13 | 46511060.38 | 46511060.64 | 0.0138 | 0.0023 |
| Saturn | 122631-07-04 15:05 G | 46511296.89 | 46511297.13 | 46511297.37 | 0.0280 | 0.0049 |
| Jupiter | 122631-10-20 23:43 G | 46511405.25 | 46511405.49 | 46511405.72 | 0.0545 | 0.0015 |
| Uranus | 122631-11-14 05:29 G | 46511429.55 | 46511429.73 | 46511429.94 | 0.0139 | 0.0084 |
| Saturn | 122632-07-16 04:45 G | 46511674.61 | 46511674.70 | 46511674.81 | 0.0280 | 0.0255 |
| Pluto | 122637-01-31 05:57 G | 46513334.51 | 46513334.75 | 46513335.01 | 0.0078 | 0.0032 |
| Neptune | 122640-04-21 20:50 G | 46514511.30 | 46514511.37 | 46514511.48 | 0.0089 | 0.0084 |
| Neptune | 122641-04-24 12:55 G | 46514878.87 | 46514879.04 | 46514879.23 | 0.0089 | 0.0062 |
| Neptune | 122642-04-26 20:07 G | 46515246.12 | 46515246.34 | 46515246.60 | 0.0089 | 0.0038 |
| Neptune | 122643-04-29 16:02 G | 46515613.92 | 46515614.17 | 46515614.43 | 0.0089 | 0.0015 |
| Jupiter | 122643-10-26 12:41 G | 46515793.83 | 46515794.03 | 46515794.23 | 0.0545 | 0.0263 |
| Neptune | 122644-04-30 21:48 G | 46515981.15 | 46515981.41 | 46515981.67 | 0.0089 | 0.0010 |
| Neptune | 122645-05-03 16:31 G | 46516348.96 | 46516349.19 | 46516349.45 | 0.0089 | 0.0032 |
| Saturn | 122645-12-23 17:43 G | 46516583.00 | 46516583.24 | 46516583.50 | 0.0278 | 0.0065 |
| Neptune | 122646-05-06 00:26 G | 46516716.35 | 46516716.52 | 46516716.74 | 0.0089 | 0.0056 |
| Saturn | 122647-01-05 21:05 G | 46516961.19 | 46516961.38 | 46516961.59 | 0.0279 | 0.0173 |
| Neptune | 122647-05-08 15:19 G | 46517084.04 | 46517084.14 | 46517084.30 | 0.0089 | 0.0078 |

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| Saturn | 122660-06-27 23:14 G | 46521883.25 | 46521883.47 | 46521883.71 | 0.0280 | 0.0070 |
| Jupiter | 122661-04-19 02:21 G | 46522178.45 | 46522178.60 | 46522178.78 | 0.0483 | 0.0335 |
| Saturn | 122661-07-10 21:33 G | 46522261.20 | 46522261.40 | 46522261.61 | 0.0280 | 0.0155 |
| Uranus | 122670-05-11 21:05 G | 46525488.21 | 46525488.38 | 46525488.57 | 0.0140 | 0.0095 |
| Uranus | 122671-05-16 13:09 G | 46525857.79 | 46525858.05 | 46525858.31 | 0.0140 | 0.0013 |
| Uranus | 122672-05-20 08:21 G | 46526227.68 | 46526227.85 | 46526228.03 | 0.0139 | 0.0097 |
| Jupiter | 122673-04-23 04:45 G | 46526565.46 | 46526565.70 | 46526565.93 | 0.0483 | 0.0132 |
| Mars | 122674-08-05 12:26 G | 46527034.84 | 46527035.02 | 46527035.20 | 0.1755 | 0.0449 |
| Saturn | 122674-12-17 23:43 G | 46527169.29 | 46527169.49 | 46527169.70 | 0.0278 | 0.0154 |
| Saturn | 122675-12-31 05:00 G | 46527547.47 | 46527547.71 | 46527547.96 | 0.0279 | 0.0077 |
| Jupiter | 122685-04-27 17:00 G | 46530952.98 | 46530953.21 | 46530953.43 | 0.0484 | 0.0096 |
| Saturn | 122689-06-22 09:05 G | 46532469.69 | 46532469.88 | 46532470.08 | 0.0281 | 0.0164 |
| Saturn | 122690-07-05 11:29 G | 46532847.76 | 46532847.98 | 46532848.21 | 0.0280 | 0.0075 |
| Jupiter | 122697-05-01 18:26 G | 46535340.10 | 46535340.27 | 46535340.45 | 0.0484 | 0.0333 |
| Jupiter | 122702-10-16 03:05 G | 46537332.48 | 46537332.63 | 46537332.78 | 0.0545 | 0.0401 |
| Saturn | 122703-12-13 15:05 G | 46537756.01 | 46537756.13 | 46537756.27 | 0.0277 | 0.0234 |
| Saturn | 122704-12-25 23:43 G | 46538134.25 | 46538134.49 | 46538134.73 | 0.0278 | 0.0018 |
| Saturn | 122706-01-08 09:05 G | 46538512.71 | 46538512.88 | 46538513.05 | 0.0279 | 0.0200 |
| Uranus | 122713-11-06 17:43 G | 46541372.05 | 46541372.24 | 46541372.42 | 0.0138 | 0.0096 |
| Jupiter | 122714-10-21 03:33 G | 46541720.42 | 46541720.65 | 46541720.88 | 0.0545 | 0.0084 |
| Uranus | 122714-11-11 07:53 G | 46541741.58 | 46541741.83 | 46541742.07 | 0.0138 | 0.0014 |
| Uranus | 122715-11-15 20:50 G | 46542111.19 | 46542111.37 | 46542111.59 | 0.0139 | 0.0091 |
| Saturn | 122718-06-18 00:41 G | 46543056.43 | 46543056.53 | 46543056.67 | 0.0281 | 0.0248 |
| Saturn | 122719-06-30 21:19 G | 46543434.14 | 46543434.39 | 46543434.63 | 0.0280 | 0.0015 |
| Saturn | 122720-07-12 19:09 G | 46543812.15 | 46543812.30 | 46543812.46 | 0.0280 | 0.0206 |
| Neptune | 122720-10-17 18:26 G | 46543909.23 | 46543909.27 | 46543909.32 | 0.0089 | 0.0087 |
| Neptune | 122721-10-20 11:00 G | 46544276.85 | 46544276.96 | 46544277.12 | 0.0089 | 0.0075 |
| Neptune | 122722-10-22 14:36 G | 46544643.91 | 46544644.11 | 46544644.35 | 0.0089 | 0.0043 |
| Neptune | 122723-10-25 07:38 G | 46545011.58 | 46545011.82 | 46545012.07 | 0.0089 | 0.0029 |
| Neptune | 122724-10-26 13:38 G | 46545378.82 | 46545379.07 | 46545379.32 | 0.0089 | 0.0003 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Neptune | 122725-10-29 01:38 G | 46545746.32 | 46545746.57 | 46545746.84 | 0.0089 | 0.0018 |
| Jupiter | 122726-10-26 20:36 G | 46546109.17 | 46546109.36 | 46546109.56 | 0.0545 | 0.0275 |
| Neptune | 122726-10-31 12:55 G | 46546113.86 | 46546114.04 | 46546114.27 | 0.0088 | 0.0049 |
| Neptune | 122727-11-02 20:36 G | 46546481.18 | 46546481.36 | 46546481.56 | 0.0088 | 0.0062 |
| Saturn | 122733-12-19 22:31 G | 46548720.24 | 46548720.44 | 46548720.65 | 0.0278 | 0.0144 |
| Saturn | 122735-01-02 08:21 G | 46549098.62 | 46549098.85 | 46549099.08 | 0.0279 | 0.0074 |
| Jupiter | 122744-04-19 13:24 G | 46552493.90 | 46552494.06 | 46552494.24 | 0.0483 | 0.0327 |
| Saturn | 122748-06-24 15:19 G | 46554020.91 | 46554021.14 | 46554021.37 | 0.0281 | 0.0119 |
| Saturn | 122749-07-07 09:19 G | 46554398.67 | 46554398.89 | 46554399.13 | 0.0280 | 0.0093 |
| Uranus | 122754-05-13 04:02 G | 46556169.50 | 46556169.67 | 46556169.87 | 0.0140 | 0.0095 |
| Uranus | 122755-05-18 05:43 G | 46556539.49 | 46556539.74 | 46556539.99 | 0.0140 | 0.0005 |
| Jupiter | 122756-04-23 14:21 G | 46556880.86 | 46556881.10 | 46556881.33 | 0.0483 | 0.0092 |
| Uranus | 122756-05-21 15:48 G | 46556909.00 | 46556909.16 | 46556909.34 | 0.0139 | 0.0103 |
| Saturn | 122762-12-14 21:19 G | 46559307.28 | 46559307.39 | 46559307.54 | 0.0277 | 0.0239 |
| Saturn | 122763-12-27 23:43 G | 46559685.25 | 46559685.49 | 46559685.74 | 0.0278 | 0.0018 |
| Saturn | 122765-01-09 10:31 G | 46560063.79 | 46560063.94 | 46560064.09 | 0.0279 | 0.0216 |
| Jupiter | 122768-04-28 02:21 G | 46561268.38 | 46561268.60 | 46561268.83 | 0.0483 | 0.0129 |
| Mars | 122775-02-03 11:00 G | 46563740.75 | 46563740.96 | 46563741.17 | 0.1787 | 0.0434 |
| Saturn | 122777-06-19 07:38 G | 46564607.70 | 46564607.82 | 46564607.95 | 0.0281 | 0.0238 |
| Saturn | 122778-07-02 06:41 G | 46564985.53 | 46564985.78 | 46564986.03 | 0.0281 | 0.0021 |
| Saturn | 122779-07-14 21:48 G | 46565363.25 | 46565363.41 | 46565363.59 | 0.0280 | 0.0200 |
| Jupiter | 122780-05-02 01:24 G | 46565655.40 | 46565655.56 | 46565655.74 | 0.0484 | 0.0328 |
| Jupiter | 122785-10-15 09:19 G | 46567647.72 | 46567647.89 | 46567648.06 | 0.0546 | 0.0369 |
| Saturn | 122792-12-21 09:05 G | 46570271.65 | 46570271.88 | 46570272.12 | 0.0278 | 0.0106 |
| Saturn | 122794-01-03 11:29 G | 46570649.76 | 46570649.98 | 46570650.21 | 0.0279 | 0.0126 |
| Pluto | 122797-08-05 11:00 G | 46571959.76 | 46571959.96 | 46571960.21 | 0.0066 | 0.0034 |
| Jupiter | 122797-10-20 08:36 G | 46572035.63 | 46572035.86 | 46572036.09 | 0.0545 | 0.0045 |
| Uranus | 122797-11-07 10:17 G | 46572053.76 | 46572053.93 | 46572054.11 | 0.0138 | 0.0096 |
| Pluto | 122798-08-06 20:07 G | 46572326.22 | 46572326.34 | 46572326.50 | 0.0066 | 0.0055 |
| Uranus | 122798-11-11 17:29 G | 46572422.97 | 46572423.23 | 46572423.49 | 0.0138 | 0.0001 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 122799-11-16 14:07 G | 46572792.91 | 46572793.09 | 46572793.28 | 0.0139 | 0.0093 |
| Neptune | 122805-04-24 14:50 G | 46574779.01 | 46574779.12 | 46574779.30 | 0.0089 | 0.0073 |
| Neptune | 122806-04-27 05:14 G | 46575146.52 | 46575146.72 | 46575146.97 | 0.0089 | 0.0049 |
| Neptune | 122807-04-29 19:24 G | 46575514.08 | 46575514.31 | 46575514.56 | 0.0089 | 0.0026 |
| Saturn | 122807-06-26 19:38 G | 46575572.10 | 46575572.32 | 46575572.53 | 0.0281 | 0.0116 |
| Neptune | 122808-05-01 04:17 G | 46575881.41 | 46575881.68 | 46575881.94 | 0.0089 | 0.0003 |
| Saturn | 122808-07-08 19:09 G | 46575950.08 | 46575950.30 | 46575950.53 | 0.0280 | 0.0116 |
| Neptune | 122809-05-03 22:17 G | 46576249.20 | 46576249.43 | 46576249.69 | 0.0089 | 0.0021 |
| Jupiter | 122809-10-25 17:29 G | 46576424.02 | 46576424.23 | 46576424.44 | 0.0544 | 0.0236 |
| Neptune | 122810-05-06 04:02 G | 46576616.46 | 46576616.67 | 46576616.91 | 0.0089 | 0.0044 |
| Neptune | 122811-05-09 00:12 G | 46576984.34 | 46576984.51 | 46576984.68 | 0.0089 | 0.0067 |
| Jupiter | 122821-10-30 14:50 G | 46580812.04 | 46580812.12 | 46580812.20 | 0.0544 | 0.0507 |
| Saturn | 122821-12-16 10:02 G | 46580858.75 | 46580858.92 | 46580859.12 | 0.0277 | 0.0182 |
| Saturn | 122822-12-29 13:53 G | 46581236.82 | 46581237.08 | 46581237.33 | 0.0278 | 0.0039 |
| Saturn | 122824-01-11 17:14 G | 46581615.13 | 46581615.22 | 46581615.34 | 0.0279 | 0.0254 |
| Jupiter | 122827-04-19 21:05 G | 46582809.21 | 46582809.38 | 46582809.55 | 0.0483 | 0.0335 |
| Saturn | 122836-06-20 07:09 G | 46586158.64 | 46586158.80 | 46586158.97 | 0.0281 | 0.0200 |
| Saturn | 122837-07-03 10:17 G | 46586536.70 | 46586536.93 | 46586537.16 | 0.0281 | 0.0033 |
| Uranus | 122838-05-13 22:45 G | 46586851.27 | 46586851.45 | 46586851.66 | 0.0140 | 0.0094 |
| Saturn | 122838-07-16 08:36 G | 46586914.77 | 46586914.86 | 46586914.96 | 0.0280 | 0.0256 |
| Jupiter | 122839-04-23 20:50 G | 46587196.14 | 46587196.37 | 46587196.60 | 0.0483 | 0.0147 |
| Uranus | 122839-05-18 12:26 G | 46587220.78 | 46587221.02 | 46587221.27 | 0.0140 | 0.0009 |
| Uranus | 122840-05-22 11:29 G | 46587590.82 | 46587590.98 | 46587591.16 | 0.0139 | 0.0105 |
| Jupiter | 122851-04-28 10:02 G | 46591583.69 | 46591583.92 | 46591584.16 | 0.0483 | 0.0049 |
| Saturn | 122851-12-23 20:07 G | 46591823.11 | 46591823.34 | 46591823.57 | 0.0278 | 0.0082 |
| Saturn | 122853-01-05 03:05 G | 46592201.40 | 46592201.63 | 46592201.85 | 0.0279 | 0.0131 |
| Jupiter | 122863-05-02 09:19 G | 46595970.70 | 46595970.89 | 46595971.09 | 0.0484 | 0.0264 |
| Saturn | 122866-06-27 18:41 G | 46597123.05 | 46597123.28 | 46597123.52 | 0.0281 | 0.0065 |
| Saturn | 122867-07-10 19:38 G | 46597501.13 | 46597501.32 | 46597501.53 | 0.0280 | 0.0149 |
| Jupiter | 122868-10-14 05:14 G | 46597962.58 | 46597962.72 | 46597962.87 | 0.0545 | 0.0429 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Mars | 122879-08-04 20:50 G | 46601909.26 | 46601909.37 | 46601909.47 | 0.1742 | 0.1435 |
| Jupiter | 122880-10-19 04:02 G | 46602350.45 | 46602350.67 | 46602350.88 | 0.0545 | 0.0161 |
| Saturn | 122880-12-17 12:55 G | 46602409.86 | 46602410.04 | 46602410.22 | 0.0278 | 0.0183 |
| Uranus | 122881-11-07 17:43 G | 46602735.06 | 46602735.24 | 46602735.42 | 0.0138 | 0.0093 |
| Saturn | 122881-12-30 22:31 G | 46602788.20 | 46602788.44 | 46602788.68 | 0.0278 | 0.0039 |
| Uranus | 122882-11-12 12:41 G | 46603104.78 | 46603105.03 | 46603105.29 | 0.0138 | 0.0012 |
| Saturn | 122883-01-13 09:33 G | 46603166.84 | 46603166.90 | 46603166.99 | 0.0279 | 0.0266 |
| Uranus | 122883-11-16 20:21 G | 46603474.18 | 46603474.35 | 46603474.55 | 0.0138 | 0.0093 |
| Neptune | 122885-10-19 14:50 G | 46604177.07 | 46604177.12 | 46604177.20 | 0.0089 | 0.0085 |
| Neptune | 122886-10-21 22:02 G | 46604544.22 | 46604544.42 | 46604544.63 | 0.0089 | 0.0053 |
| Neptune | 122887-10-24 14:07 G | 46604911.88 | 46604912.09 | 46604912.33 | 0.0089 | 0.0040 |
| Neptune | 122888-10-25 17:57 G | 46605279.01 | 46605279.25 | 46605279.51 | 0.0089 | 0.0009 |
| Neptune | 122889-10-28 11:29 G | 46605646.72 | 46605646.98 | 46605647.24 | 0.0089 | 0.0005 |
| Neptune | 122890-10-30 16:17 G | 46606013.96 | 46606014.18 | 46606014.41 | 0.0089 | 0.0037 |
| Neptune | 122891-11-02 05:57 G | 46606381.56 | 46606381.75 | 46606381.99 | 0.0088 | 0.0052 |
| Jupiter | 122892-10-24 16:02 G | 46606738.95 | 46606739.17 | 46606739.40 | 0.0545 | 0.0148 |
| Neptune | 122892-11-03 15:33 G | 46606749.09 | 46606749.15 | 46606749.26 | 0.0088 | 0.0083 |
| Saturn | 122895-06-22 19:09 G | 46607710.12 | 46607710.30 | 46607710.50 | 0.0281 | 0.0178 |
| Saturn | 122896-07-04 14:07 G | 46608087.85 | 46608088.09 | 46608088.33 | 0.0281 | 0.0034 |
| Saturn | 122897-07-17 10:31 G | 46608465.84 | 46608465.94 | 46608466.05 | 0.0280 | 0.0251 |
| Jupiter | 122904-10-30 18:26 G | 46611127.18 | 46611127.27 | 46611127.37 | 0.0545 | 0.0493 |
| Jupiter | 122910-04-20 03:48 G | 46613124.53 | 46613124.66 | 46613124.80 | 0.0483 | 0.0395 |
| Saturn | 122910-12-26 00:26 G | 46613374.28 | 46613374.52 | 46613374.76 | 0.0278 | 0.0052 |
| Saturn | 122912-01-08 10:17 G | 46613752.75 | 46613752.93 | 46613753.12 | 0.0279 | 0.0180 |
| Jupiter | 122922-04-24 03:19 G | 46617511.42 | 46617511.64 | 46617511.86 | 0.0483 | 0.0165 |
| Uranus | 122922-05-15 09:33 G | 46617532.72 | 46617532.90 | 46617533.09 | 0.0140 | 0.0091 |
| Uranus | 122923-05-20 01:53 G | 46617902.32 | 46617902.58 | 46617902.85 | 0.0140 | 0.0019 |
| Uranus | 122924-05-23 20:36 G | 46618272.21 | 46618272.36 | 46618272.54 | 0.0139 | 0.0104 |
| Saturn | 122925-06-30 07:53 G | 46618674.59 | 46618674.83 | 46618675.08 | 0.0281 | 0.0066 |
| Saturn | 122926-07-13 00:41 G | 46619052.33 | 46619052.53 | 46619052.73 | 0.0280 | 0.0167 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 122934-04-28 16:45 G | 46621898.97 | 46621899.20 | 46621899.44 | 0.0484 | 0.0080 |
| Saturn | 122939-12-21 01:09 G | 46623961.32 | 46623961.55 | 46623961.78 | 0.0278 | 0.0128 |
| Saturn | 122941-01-02 03:33 G | 46624339.42 | 46624339.65 | 46624339.89 | 0.0278 | 0.0099 |
| Jupiter | 122946-05-02 14:50 G | 46626285.94 | 46626286.12 | 46626286.30 | 0.0484 | 0.0302 |
| Jupiter | 122951-10-15 01:24 G | 46628277.48 | 46628277.56 | 46628277.65 | 0.0545 | 0.0505 |
| Saturn | 122954-06-25 06:41 G | 46629261.59 | 46629261.78 | 46629261.99 | 0.0281 | 0.0150 |
| Saturn | 122955-07-08 05:43 G | 46629639.51 | 46629639.74 | 46629639.98 | 0.0280 | 0.0087 |
| Mars | 122958-08-08 19:38 G | 46630767.21 | 46630767.32 | 46630767.44 | 0.1749 | 0.1311 |
| Jupiter | 122963-10-20 05:57 G | 46632665.54 | 46632665.75 | 46632665.97 | 0.0546 | 0.0164 |
| Uranus | 122965-11-09 08:07 G | 46633416.65 | 46633416.84 | 46633417.06 | 0.0138 | 0.0084 |
| Uranus | 122966-11-13 22:17 G | 46633786.19 | 46633786.43 | 46633786.68 | 0.0138 | 0.0018 |
| Uranus | 122967-11-18 12:26 G | 46634155.83 | 46634156.02 | 46634156.21 | 0.0138 | 0.0095 |
| Saturn | 122968-12-14 15:19 G | 46634548.02 | 46634548.14 | 46634548.29 | 0.0277 | 0.0229 |
| Neptune | 122969-04-24 17:29 G | 46634679.16 | 46634679.23 | 46634679.35 | 0.0089 | 0.0083 |
| Saturn | 122969-12-27 17:00 G | 46634925.95 | 46634926.21 | 46634926.47 | 0.0278 | 0.0017 |
| Neptune | 122970-04-27 13:09 G | 46635046.88 | 46635047.05 | 46635047.27 | 0.0089 | 0.0061 |
| Saturn | 122971-01-09 19:53 G | 46635304.16 | 46635304.33 | 46635304.52 | 0.0279 | 0.0196 |
| Neptune | 122971-04-29 21:05 G | 46635414.16 | 46635414.38 | 46635414.62 | 0.0089 | 0.0037 |
| Neptune | 122972-05-01 13:24 G | 46635781.79 | 46635782.06 | 46635782.33 | 0.0089 | 0.0014 |
| Neptune | 122973-05-04 01:53 G | 46636149.33 | 46636149.58 | 46636149.83 | 0.0089 | 0.0011 |
| Neptune | 122974-05-06 11:43 G | 46636516.76 | 46636516.99 | 46636517.26 | 0.0089 | 0.0033 |
| Neptune | 122975-05-09 04:45 G | 46636884.53 | 46636884.70 | 46636884.92 | 0.0089 | 0.0057 |
| Jupiter | 122975-10-25 17:29 G | 46637054.00 | 46637054.23 | 46637054.45 | 0.0545 | 0.0176 |
| Neptune | 122976-05-10 10:45 G | 46637251.86 | 46637251.95 | 46637252.11 | 0.0089 | 0.0078 |
| Saturn | 122983-06-19 11:29 G | 46639847.86 | 46639847.98 | 46639848.11 | 0.0281 | 0.0236 |
| Saturn | 122984-07-01 16:31 G | 46640225.96 | 46640226.19 | 46640226.43 | 0.0281 | 0.0011 |
| Saturn | 122985-07-14 15:33 G | 46640604.00 | 46640604.15 | 46640604.32 | 0.0280 | 0.0208 |
| Jupiter | 122987-10-30 16:45 G | 46641442.09 | 46641442.20 | 46641442.31 | 0.0544 | 0.0471 |
| Jupiter | 122993-04-19 08:50 G | 46643439.72 | 46643439.87 | 46643440.04 | 0.0484 | 0.0355 |
| Saturn | 122998-12-22 14:50 G | 46645512.91 | 46645513.12 | 46645513.34 | 0.0278 | 0.0126 |

Saturn 123000-01-04 21:33 G 46645891.17 46645891.40 46645891.64 0.0278 0.0095

124TH MILLENNIUM CE

This is a list of transits of Moon in the 124th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|---------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Jupiter | 123005-04-24 07:24 | G | 46647826.59 | 46647826.81 | 46647827.03 | 0.0483 | 0.0153 | |
| Uranus | 123006-05-16 17:14 | G | 46648214.03 | 46648214.22 | 46648214.45 | 0.0140 | 0.0082 | |
| Uranus | 123007-05-21 19:09 | G | 46648584.06 | 46648584.30 | 46648584.55 | 0.0140 | 0.0025 | |
| Uranus | 123008-05-25 05:57 | G | 46648953.60 | 46648953.75 | 46648953.93 | 0.0140 | 0.0106 | |
| Saturn | 123013-06-27 11:43 | G | 46650812.78 | 46650812.99 | 46650813.21 | 0.0281 | 0.0120 | |
| Saturn | 123014-07-10 12:55 | G | 46651190.82 | 46651191.04 | 46651191.26 | 0.0280 | 0.0097 | |
| Jupiter | 123017-04-28 21:05 | G | 46652214.14 | 46652214.38 | 46652214.62 | 0.0483 | 0.0039 | |
| Saturn | 123027-12-17 20:07 | G | 46656099.22 | 46656099.34 | 46656099.49 | 0.0277 | 0.0230 | |
| Saturn | 123028-12-30 04:31 | G | 46656477.45 | 46656477.69 | 46656477.93 | 0.0278 | 0.0004 | |
| Jupiter | 123029-05-02 20:36 | G | 46656601.16 | 46656601.36 | 46656601.56 | 0.0484 | 0.0228 | |
| Saturn | 123030-01-12 14:21 | G | 46656855.96 | 46656856.10 | 46656856.23 | 0.0279 | 0.0234 | |
| Jupiter | 123034-10-15 01:38 | G | 46658592.47 | 46658592.57 | 46658592.69 | 0.0545 | 0.0484 | |
| Jupiter | 123041-05-07 07:38 | G | 46660988.72 | 46660988.82 | 46660988.94 | 0.0484 | 0.0429 | |
| Saturn | 123042-06-22 01:09 | G | 46661399.42 | 46661399.55 | 46661399.69 | 0.0281 | 0.0234 | |
| Saturn | 123043-07-04 22:02 | G | 46661777.18 | 46661777.42 | 46661777.67 | 0.0280 | 0.0013 | |
| Saturn | 123044-07-16 20:07 | G | 46662155.20 | 46662155.34 | 46662155.50 | 0.0280 | 0.0215 | |
| Pluto | 123046-08-09 23:43 | G | 46662909.24 | 46662909.49 | 46662909.75 | 0.0066 | 0.0013 | |
| Jupiter | 123046-10-20 05:57 | G | 46662980.55 | 46662980.75 | 46662980.96 | 0.0545 | 0.0200 | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Uranus | 123049-11-11 00:55 G | 46664098.34 | 46664098.54 | 46664098.76 | 0.0138 | 0.0072 |
| Neptune | 123050-10-23 07:38 G | 46664444.66 | 46664444.82 | 46664445.02 | 0.0089 | 0.0065 |
| Uranus | 123050-11-15 07:38 G | 46664467.57 | 46664467.82 | 46664468.08 | 0.0138 | 0.0018 |
| Neptune | 123051-10-25 17:43 G | 46664812.04 | 46664812.24 | 46664812.45 | 0.0089 | 0.0051 |
| Uranus | 123051-11-20 03:19 G | 46664837.49 | 46664837.64 | 46664837.82 | 0.0138 | 0.0104 |
| Neptune | 123052-10-27 01:53 G | 46665179.32 | 46665179.58 | 46665179.84 | 0.0089 | 0.0020 |
| Neptune | 123053-10-29 17:00 G | 46665546.96 | 46665547.21 | 46665547.46 | 0.0089 | 0.0005 |
| Neptune | 123054-10-31 21:19 G | 46665914.15 | 46665914.39 | 46665914.64 | 0.0089 | 0.0026 |
| Neptune | 123055-11-03 14:50 G | 46666281.90 | 46666282.12 | 46666282.35 | 0.0089 | 0.0040 |
| Neptune | 123056-11-04 18:41 G | 46666649.15 | 46666649.28 | 46666649.45 | 0.0088 | 0.0071 |
| Neptune | 123057-11-07 10:17 G | 46667016.88 | 46667016.93 | 46667017.03 | 0.0088 | 0.0085 |
| Saturn | 123057-12-24 18:26 G | 46667064.04 | 46667064.27 | 46667064.51 | 0.0278 | 0.0080 |
| Jupiter | 123058-10-25 10:02 G | 46667368.68 | 46667368.92 | 46667369.15 | 0.0545 | 0.0069 |
| Saturn | 123059-01-07 05:14 G | 46667442.53 | 46667442.72 | 46667442.92 | 0.0279 | 0.0153 |
| Mars | 123059-02-05 13:24 G | 46667471.88 | 46667472.06 | 46667472.25 | 0.1796 | 0.0082 |
| Jupiter | 123070-10-30 12:41 G | 46671756.87 | 46671757.03 | 46671757.21 | 0.0545 | 0.0359 |
| Saturn | 123072-06-29 05:00 G | 46672364.48 | 46672364.71 | 46672364.95 | 0.0281 | 0.0101 |
| Saturn | 123073-07-11 21:48 G | 46672742.20 | 46672742.41 | 46672742.64 | 0.0280 | 0.0137 |
| Jupiter | 123076-04-19 12:26 G | 46673754.92 | 46673755.02 | 46673755.15 | 0.0483 | 0.0429 |
| Saturn | 123086-12-19 09:48 G | 46677650.71 | 46677650.91 | 46677651.12 | 0.0277 | 0.0170 |
| Saturn | 123088-01-01 11:00 G | 46678028.72 | 46678028.96 | 46678029.21 | 0.0278 | 0.0044 |
| Jupiter | 123088-04-23 13:38 G | 46678141.87 | 46678142.07 | 46678142.27 | 0.0483 | 0.0227 |
| Saturn | 123089-01-13 20:50 G | 46678407.30 | 46678407.37 | 46678407.46 | 0.0279 | 0.0261 |
| Uranus | 123090-05-17 10:45 G | 46678895.74 | 46678895.95 | 46678896.19 | 0.0140 | 0.0071 |
| Uranus | 123091-05-22 00:26 G | 46679265.27 | 46679265.52 | 46679265.77 | 0.0140 | 0.0024 |
| Uranus | 123092-05-25 23:14 G | 46679635.33 | 46679635.47 | 46679635.63 | 0.0140 | 0.0113 |
| Jupiter | 123100-04-29 00:55 G | 46682529.29 | 46682529.54 | 46682529.78 | 0.0483 | 0.0004 |
| Saturn | 123101-06-24 15:05 G | 46682950.95 | 46682951.13 | 46682951.31 | 0.0281 | 0.0183 |
| Saturn | 123102-07-07 15:05 G | 46683328.89 | 46683329.13 | 46683329.38 | 0.0280 | 0.0047 |
| Saturn | 123103-07-20 05:57 G | 46683706.67 | 46683706.75 | 46683706.84 | 0.0280 | 0.0262 |

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| Jupiter | 123112-05-03 02:21 G | 46686916.41 | 46686916.60 | 46686916.80 | 0.0484 | 0.0237 |
| Saturn | 123115-12-15 07:24 G | 46688237.77 | 46688237.81 | 46688237.85 | 0.0278 | 0.0273 |
| Saturn | 123116-12-27 08:07 G | 46688615.60 | 46688615.84 | 46688616.10 | 0.0278 | 0.0068 |
| Saturn | 123118-01-09 11:29 G | 46688993.77 | 46688993.98 | 46688994.20 | 0.0279 | 0.0150 |
| Jupiter | 123124-05-07 11:00 G | 46691303.90 | 46691303.96 | 46691304.03 | 0.0484 | 0.0464 |
| Jupiter | 123129-10-20 01:38 G | 46693295.39 | 46693295.57 | 46693295.75 | 0.0545 | 0.0302 |
| Saturn | 123130-06-19 09:19 G | 46693537.85 | 46693537.89 | 46693537.97 | 0.0282 | 0.0272 |
| Saturn | 123131-07-02 15:19 G | 46693915.91 | 46693916.14 | 46693916.37 | 0.0281 | 0.0054 |
| Saturn | 123132-07-14 14:50 G | 46694293.93 | 46694294.12 | 46694294.33 | 0.0280 | 0.0159 |
| Uranus | 123133-11-12 06:41 G | 46694779.57 | 46694779.78 | 46694780.01 | 0.0138 | 0.0061 |
| Pluto | 123134-02-07 17:43 G | 46694866.98 | 46694867.24 | 46694867.50 | 0.0078 | 0.0006 |
| Neptune | 123134-04-28 19:09 G | 46694947.18 | 46694947.30 | 46694947.48 | 0.0089 | 0.0072 |
| Uranus | 123134-11-17 02:07 G | 46695149.34 | 46695149.59 | 46695149.85 | 0.0138 | 0.0019 |
| Neptune | 123135-05-01 01:24 G | 46695314.36 | 46695314.56 | 46695314.81 | 0.0089 | 0.0047 |
| Uranus | 123135-11-21 09:19 G | 46695518.76 | 46695518.89 | 46695519.04 | 0.0138 | 0.0115 |
| Neptune | 123136-05-02 21:48 G | 46695682.17 | 46695682.41 | 46695682.67 | 0.0089 | 0.0025 |
| Neptune | 123137-05-05 04:17 G | 46696049.42 | 46696049.68 | 46696049.93 | 0.0089 | 0.0001 |
| Neptune | 123138-05-07 22:02 G | 46696417.16 | 46696417.42 | 46696417.68 | 0.0089 | 0.0021 |
| Neptune | 123139-05-10 07:24 G | 46696784.61 | 46696784.81 | 46696785.04 | 0.0089 | 0.0046 |
| Neptune | 123140-05-11 20:21 G | 46697152.20 | 46697152.35 | 46697152.55 | 0.0089 | 0.0068 |
| Jupiter | 123141-10-25 05:57 G | 46697683.51 | 46697683.75 | 46697683.98 | 0.0545 | 0.0038 |
| Saturn | 123145-12-21 23:14 G | 46699202.29 | 46699202.47 | 46699202.66 | 0.0277 | 0.0174 |
| Saturn | 123147-01-04 04:02 G | 46699580.42 | 46699580.67 | 46699580.92 | 0.0278 | 0.0049 |
| Jupiter | 123153-10-30 17:00 G | 46702072.06 | 46702072.21 | 46702072.37 | 0.0545 | 0.0386 |
| Jupiter | 123159-04-20 17:43 G | 46704070.12 | 46704070.24 | 46704070.37 | 0.0483 | 0.0414 |
| Saturn | 123160-06-25 19:24 G | 46704502.13 | 46704502.31 | 46704502.51 | 0.0281 | 0.0171 |
| Saturn | 123161-07-08 22:17 G | 46704880.19 | 46704880.43 | 46704880.66 | 0.0280 | 0.0046 |
| Saturn | 123162-07-21 21:05 G | 46705258.30 | 46705258.38 | 46705258.46 | 0.0280 | 0.0262 |
| Mars | 123163-08-09 05:29 G | 46705641.56 | 46705641.73 | 46705641.90 | 0.1736 | 0.0637 |
| Jupiter | 123171-04-24 18:55 G | 46708457.08 | 46708457.29 | 46708457.50 | 0.0483 | 0.0191 |

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| Uranus | 123174-05-18 20:36 G | 46709577.15 | 46709577.36 | 46709577.59 | 0.0140 | 0.0061 |
| Saturn | 123174-12-16 09:05 G | 46709788.81 | 46709788.88 | 46709788.96 | 0.0278 | 0.0264 |
| Uranus | 123175-05-23 15:05 G | 46709946.87 | 46709947.13 | 46709947.39 | 0.0140 | 0.0026 |
| Saturn | 123175-12-29 17:00 G | 46710166.97 | 46710167.21 | 46710167.44 | 0.0278 | 0.0035 |
| Uranus | 123176-05-27 08:21 G | 46710316.76 | 46710316.85 | 46710316.97 | 0.0140 | 0.0125 |
| Saturn | 123177-01-11 02:36 G | 46710545.45 | 46710545.61 | 46710545.79 | 0.0279 | 0.0199 |
| Jupiter | 123183-04-29 04:45 G | 46712844.45 | 46712844.70 | 46712844.94 | 0.0483 | 0.0021 |
| Saturn | 123189-06-20 23:43 G | 46715089.44 | 46715089.49 | 46715089.55 | 0.0282 | 0.0273 |
| Saturn | 123190-07-03 20:36 G | 46715467.12 | 46715467.36 | 46715467.60 | 0.0281 | 0.0048 |
| Saturn | 123191-07-16 18:26 G | 46715845.09 | 46715845.27 | 46715845.45 | 0.0280 | 0.0182 |
| Jupiter | 123195-05-03 09:33 G | 46717231.70 | 46717231.90 | 46717232.11 | 0.0483 | 0.0213 |
| Saturn | 123204-12-23 00:41 G | 46720753.31 | 46720753.53 | 46720753.76 | 0.0277 | 0.0117 |
| Saturn | 123206-01-05 08:36 G | 46721131.64 | 46721131.86 | 46721132.09 | 0.0278 | 0.0106 |
| Jupiter | 123207-05-07 16:17 G | 46721619.04 | 46721619.18 | 46721619.31 | 0.0484 | 0.0396 |
| Jupiter | 123212-10-19 05:00 G | 46723610.52 | 46723610.71 | 46723610.91 | 0.0546 | 0.0269 |
| Neptune | 123214-10-23 17:14 G | 46724345.09 | 46724345.22 | 46724345.36 | 0.0089 | 0.0075 |
| Neptune | 123215-10-25 20:50 G | 46724712.20 | 46724712.37 | 46724712.56 | 0.0089 | 0.0062 |
| Neptune | 123216-10-27 13:24 G | 46725079.82 | 46725080.06 | 46725080.31 | 0.0089 | 0.0030 |
| Neptune | 123217-10-29 19:38 G | 46725447.08 | 46725447.32 | 46725447.57 | 0.0089 | 0.0017 |
| Uranus | 123217-11-13 00:12 G | 46725461.28 | 46725461.51 | 46725461.76 | 0.0138 | 0.0053 |
| Neptune | 123218-11-01 07:53 G | 46725814.58 | 46725814.83 | 46725815.10 | 0.0089 | 0.0015 |
| Uranus | 123218-11-17 10:31 G | 46725830.71 | 46725830.94 | 46725831.19 | 0.0138 | 0.0024 |
| Saturn | 123219-06-28 10:45 G | 46726053.73 | 46726053.95 | 46726054.17 | 0.0281 | 0.0136 |
| Neptune | 123219-11-03 18:41 G | 46726182.06 | 46726182.28 | 46726182.53 | 0.0089 | 0.0029 |
| Uranus | 123219-11-22 02:36 G | 46726200.52 | 46726200.61 | 46726200.74 | 0.0138 | 0.0125 |
| Saturn | 123220-07-10 05:29 G | 46726431.50 | 46726431.73 | 46726431.97 | 0.0280 | 0.0099 |
| Neptune | 123220-11-05 01:24 G | 46726549.38 | 46726549.56 | 46726549.77 | 0.0089 | 0.0060 |
| Neptune | 123221-11-07 17:43 G | 46726917.11 | 46726917.24 | 46726917.39 | 0.0089 | 0.0074 |
| Jupiter | 123224-10-24 08:36 G | 46727998.62 | 46727998.86 | 46727999.10 | 0.0545 | 0.0021 |
| Saturn | 123233-12-17 17:43 G | 46731340.10 | 46731340.24 | 46731340.41 | 0.0278 | 0.0217 |

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| Saturn | 123234-12-30 18:12 G | 46731718.01 | 46731718.26 | 46731718.51 | 0.0278 | 0.0005 |
| Saturn | 123236-01-13 02:36 G | 46732096.47 | 46732096.61 | 46732096.78 | 0.0279 | 0.0210 |
| Jupiter | 123236-10-29 15:33 G | 46732386.97 | 46732387.15 | 46732387.34 | 0.0545 | 0.0291 |
| Jupiter | 123242-04-19 22:31 G | 46734385.36 | 46734385.44 | 46734385.53 | 0.0483 | 0.0452 |
| Mars | 123242-08-11 04:31 G | 46734498.57 | 46734498.69 | 46734498.80 | 0.1741 | 0.1406 |
| Saturn | 123248-06-22 08:50 G | 46736640.73 | 46736640.87 | 46736641.02 | 0.0282 | 0.0220 |
| Saturn | 123249-07-05 11:57 G | 46737018.75 | 46737019.00 | 46737019.24 | 0.0281 | 0.0010 |
| Saturn | 123250-07-18 05:14 G | 46737396.58 | 46737396.72 | 46737396.88 | 0.0280 | 0.0223 |
| Jupiter | 123254-04-24 02:50 G | 46738772.43 | 46738772.62 | 46738772.81 | 0.0483 | 0.0261 |
| Uranus | 123258-05-19 04:17 G | 46740258.45 | 46740258.68 | 46740258.93 | 0.0140 | 0.0055 |
| Uranus | 123259-05-24 03:48 G | 46740628.42 | 46740628.66 | 46740628.91 | 0.0140 | 0.0027 |
| Uranus | 123260-05-27 16:31 G | 46740998.13 | 46740998.19 | 46740998.28 | 0.0140 | 0.0134 |
| Saturn | 123263-12-25 14:21 G | 46742304.87 | 46742305.10 | 46742305.33 | 0.0277 | 0.0113 |
| Saturn | 123265-01-06 14:21 G | 46742682.87 | 46742683.10 | 46742683.35 | 0.0278 | 0.0101 |
| Jupiter | 123266-04-28 12:12 G | 46743159.77 | 46743160.01 | 46743160.25 | 0.0483 | 0.0053 |
| Jupiter | 123278-05-02 16:17 G | 46747546.97 | 46747547.18 | 46747547.39 | 0.0483 | 0.0175 |
| Saturn | 123278-06-29 15:33 G | 46747604.94 | 46747605.15 | 46747605.38 | 0.0281 | 0.0106 |
| Saturn | 123279-07-12 17:57 G | 46747983.03 | 46747983.25 | 46747983.47 | 0.0280 | 0.0109 |
| Jupiter | 123290-05-06 23:14 G | 46751934.35 | 46751934.47 | 46751934.60 | 0.0484 | 0.0408 |
| Saturn | 123292-12-18 23:57 G | 46752891.37 | 46752891.50 | 46752891.65 | 0.0278 | 0.0224 |
| Saturn | 123294-01-01 05:29 G | 46753269.47 | 46753269.73 | 46753269.98 | 0.0278 | 0.0005 |
| Pluto | 123294-08-11 18:12 G | 46753492.05 | 46753492.26 | 46753492.51 | 0.0066 | 0.0026 |
| Saturn | 123295-01-14 09:05 G | 46753647.77 | 46753647.88 | 46753648.03 | 0.0279 | 0.0238 |
| Jupiter | 123295-10-19 06:55 G | 46753925.63 | 46753925.79 | 46753925.95 | 0.0545 | 0.0370 |
| Neptune | 123298-04-27 19:53 G | 46754847.25 | 46754847.33 | 46754847.47 | 0.0089 | 0.0080 |
| Neptune | 123299-04-30 12:41 G | 46755214.84 | 46755215.03 | 46755215.23 | 0.0089 | 0.0060 |
| Neptune | 123300-05-03 01:09 G | 46755582.32 | 46755582.55 | 46755582.78 | 0.0089 | 0.0034 |
| Neptune | 123301-05-05 11:57 G | 46755949.74 | 46755950.00 | 46755950.27 | 0.0089 | 0.0014 |
| Uranus | 123301-11-14 12:26 G | 46756142.79 | 46756143.02 | 46756143.25 | 0.0138 | 0.0048 |
| Neptune | 123302-05-08 05:00 G | 46756317.46 | 46756317.71 | 46756317.97 | 0.0089 | 0.0013 |

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| Uranus | 123302-11-18 22:45 G | 46756512.20 | 46756512.45 | 46756512.71 | 0.0138 | 0.0029 |
| Neptune | 123303-05-10 11:14 G | 46756684.74 | 46756684.97 | 46756685.23 | 0.0089 | 0.0034 |
| Uranus | 123303-11-23 14:36 G | 46756882.06 | 46756882.11 | 46756882.18 | 0.0138 | 0.0134 |
| Neptune | 123304-05-12 07:09 G | 46757052.62 | 46757052.80 | 46757053.01 | 0.0089 | 0.0060 |
| Neptune | 123305-05-14 12:55 G | 46757419.95 | 46757420.04 | 46757420.18 | 0.0089 | 0.0079 |
| Saturn | 123307-06-25 09:05 G | 46758191.73 | 46758191.88 | 46758192.04 | 0.0282 | 0.0218 |
| Jupiter | 123307-10-25 02:21 G | 46758313.36 | 46758313.60 | 46758313.83 | 0.0545 | 0.0073 |
| Saturn | 123308-07-07 11:57 G | 46758569.76 | 46758570.00 | 46758570.23 | 0.0281 | 0.0004 |
| Saturn | 123309-07-20 13:24 G | 46758947.93 | 46758948.06 | 46758948.21 | 0.0280 | 0.0227 |
| Jupiter | 123319-10-30 13:24 G | 46762701.87 | 46762702.06 | 46762702.25 | 0.0545 | 0.0276 |
| Saturn | 123322-12-27 17:14 G | 46763855.99 | 46763856.22 | 46763856.45 | 0.0277 | 0.0075 |
| Saturn | 123324-01-10 01:24 G | 46764234.36 | 46764234.56 | 46764234.77 | 0.0278 | 0.0156 |
| Jupiter | 123325-04-20 06:55 G | 46764700.74 | 46764700.79 | 46764700.84 | 0.0483 | 0.0471 |
| Jupiter | 123337-04-24 11:14 G | 46769087.78 | 46769087.97 | 46769088.18 | 0.0483 | 0.0239 |
| Saturn | 123337-07-01 18:55 G | 46769156.06 | 46769156.29 | 46769156.53 | 0.0281 | 0.0097 |
| Saturn | 123338-07-14 17:00 G | 46769534.02 | 46769534.21 | 46769534.43 | 0.0280 | 0.0140 |
| Uranus | 123342-05-20 22:17 G | 46770940.19 | 46770940.43 | 46770940.67 | 0.0140 | 0.0051 |
| Mars | 123343-02-07 18:26 G | 46771203.06 | 46771203.27 | 46771203.48 | 0.1804 | 0.0302 |
| Uranus | 123343-05-25 09:19 G | 46771309.65 | 46771309.89 | 46771310.15 | 0.0140 | 0.0032 |
| Jupiter | 123349-04-28 19:09 G | 46773475.05 | 46773475.30 | 46773475.55 | 0.0483 | 0.0014 |
| Saturn | 123351-12-21 21:48 G | 46774442.22 | 46774442.41 | 46774442.61 | 0.0277 | 0.0169 |
| Saturn | 123353-01-03 03:48 G | 46774820.42 | 46774820.66 | 46774820.89 | 0.0278 | 0.0049 |
| Saturn | 123354-01-16 15:19 G | 46775199.07 | 46775199.14 | 46775199.21 | 0.0279 | 0.0266 |
| Jupiter | 123361-05-03 01:09 G | 46777862.34 | 46777862.55 | 46777862.76 | 0.0483 | 0.0189 |
| Saturn | 123366-06-26 19:38 G | 46779743.14 | 46779743.32 | 46779743.51 | 0.0282 | 0.0182 |
| Saturn | 123367-07-09 17:00 G | 46780120.96 | 46780121.21 | 46780121.46 | 0.0281 | 0.0055 |
| Saturn | 123368-07-21 10:45 G | 46780498.94 | 46780498.95 | 46780498.99 | 0.0281 | 0.0279 |
| Jupiter | 123373-05-07 09:48 G | 46782249.76 | 46782249.91 | 46782250.06 | 0.0483 | 0.0375 |
| Jupiter | 123378-10-19 04:02 G | 46784240.50 | 46784240.67 | 46784240.84 | 0.0545 | 0.0359 |
| Neptune | 123378-10-23 19:24 G | 46784245.29 | 46784245.31 | 46784245.39 | 0.0089 | 0.0087 |

Neptune 123379-10-26 06:26 G 46784612.63 46784612.77 46784612.93 0.0089 0.0072
 Neptune 123380-10-27 19:09 G 46784980.10 46784980.30 46784980.54 0.0089 0.0042
 Saturn 123380-12-15 21:19 G 46785029.31 46785029.39 46785029.47 0.0276 0.0261
 Neptune 123381-10-30 01:09 G 46785347.32 46785347.55 46785347.81 0.0089 0.0028
 Saturn 123381-12-28 17:29 G 46785406.99 46785407.23 46785407.48 0.0277 0.0060
 Pluto 123382-02-09 16:17 G 46785450.02 46785450.18 46785450.36 0.0078 0.0058
 Neptune 123382-11-01 18:26 G 46785715.02 46785715.27 46785715.53 0.0089 0.0005
 Saturn 123383-01-10 21:48 G 46785785.22 46785785.41 46785785.62 0.0278 0.0155
 Neptune 123383-11-03 22:02 G 46786082.18 46786082.42 46786082.67 0.0089 0.0018
 Neptune 123384-11-05 14:36 G 46786449.91 46786450.11 46786450.34 0.0089 0.0050
 Uranus 123384-11-10 14:50 G 46786455.09 46786455.12 46786455.19 0.0138 0.0135
 Neptune 123385-11-07 20:21 G 46786817.20 46786817.35 46786817.55 0.0089 0.0064
 Uranus 123385-11-14 20:50 G 46786824.14 46786824.37 46786824.62 0.0138 0.0046
 Uranus 123386-11-19 15:48 G 46787193.93 46787194.16 46787194.41 0.0138 0.0037
 Jupiter 123390-10-24 07:53 G 46788628.59 46788628.83 46788629.07 0.0546 0.0040
 Saturn 123395-06-20 22:02 G 46790329.38 46790329.42 46790329.49 0.0282 0.0274
 Saturn 123396-07-03 04:17 G 46790707.45 46790707.68 46790707.93 0.0281 0.0050
 Saturn 123397-07-16 00:26 G 46791085.33 46791085.52 46791085.73 0.0281 0.0166
 Jupiter 123402-10-30 21:19 G 46793017.19 46793017.39 46793017.59 0.0545 0.0246
 Jupiter 123408-04-20 15:19 G 46795016.09 46795016.14 46795016.20 0.0483 0.0469
 Saturn 123410-12-24 06:26 G 46795993.59 46795993.77 46795993.98 0.0277 0.0176
 Saturn 123412-01-06 05:43 G 46796371.49 46796371.74 46796372.00 0.0278 0.0043
 Saturn 123413-01-18 11:00 G 46796749.90 46796749.96 46796750.01 0.0279 0.0270
 Jupiter 123414-11-04 23:00 G 46797405.39 46797405.46 46797405.54 0.0545 0.0517
 Jupiter 123420-04-24 19:53 G 46799403.15 46799403.33 46799403.52 0.0483 0.0283
 Saturn 123425-06-28 17:00 G 46801294.02 46801294.21 46801294.41 0.0282 0.0160
 Uranus 123426-05-22 02:07 G 46801621.35 46801621.59 46801621.82 0.0140 0.0052
 Saturn 123426-07-11 22:45 G 46801672.22 46801672.45 46801672.68 0.0281 0.0055
 Uranus 123427-05-27 02:07 G 46801991.34 46801991.59 46801991.84 0.0140 0.0037
 Saturn 123427-07-24 20:07 G 46802050.27 46802050.34 46802050.41 0.0281 0.0268

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| Jupiter | 123432-04-29 06:55 G | 46803790.55 | 46803790.79 | 46803791.03 | 0.0483 | 0.0083 |
| Saturn | 123439-12-19 00:12 G | 46806580.44 | 46806580.51 | 46806580.59 | 0.0276 | 0.0261 |
| Saturn | 123440-12-31 03:19 G | 46806958.40 | 46806958.64 | 46806958.89 | 0.0277 | 0.0040 |
| Saturn | 123442-01-13 05:14 G | 46807336.54 | 46807336.72 | 46807336.91 | 0.0278 | 0.0191 |
| Jupiter | 123444-05-03 11:14 G | 46808177.75 | 46808177.97 | 46808178.19 | 0.0483 | 0.0131 |
| Mars | 123447-08-11 17:14 G | 46809373.02 | 46809373.22 | 46809373.41 | 0.1728 | 0.0412 |
| Saturn | 123454-06-22 20:36 G | 46811880.34 | 46811880.36 | 46811880.39 | 0.0282 | 0.0280 |
| Saturn | 123455-07-06 00:26 G | 46812258.29 | 46812258.52 | 46812258.76 | 0.0281 | 0.0056 |
| Jupiter | 123456-05-07 18:12 G | 46812565.11 | 46812565.26 | 46812565.43 | 0.0483 | 0.0361 |
| Saturn | 123456-07-18 03:19 G | 46812636.46 | 46812636.64 | 46812636.83 | 0.0281 | 0.0175 |
| Jupiter | 123461-10-19 12:41 G | 46814555.90 | 46814556.03 | 46814556.17 | 0.0545 | 0.0422 |
| Neptune | 123462-04-29 02:50 G | 46814747.62 | 46814747.62 | 46814747.65 | 0.0089 | 0.0088 |
| Neptune | 123463-05-01 21:19 G | 46815115.27 | 46815115.39 | 46815115.56 | 0.0089 | 0.0073 |
| Neptune | 123464-05-03 03:33 G | 46815482.43 | 46815482.65 | 46815482.89 | 0.0089 | 0.0042 |
| Neptune | 123465-05-05 23:14 G | 46815850.23 | 46815850.47 | 46815850.73 | 0.0089 | 0.0026 |
| Neptune | 123466-05-08 06:12 G | 46816217.51 | 46816217.76 | 46816218.02 | 0.0089 | 0.0005 |
| Neptune | 123467-05-10 23:00 G | 46816585.21 | 46816585.46 | 46816585.74 | 0.0089 | 0.0021 |
| Neptune | 123468-05-12 10:45 G | 46816952.75 | 46816952.95 | 46816953.16 | 0.0089 | 0.0050 |
| Uranus | 123468-11-11 20:07 G | 46817136.24 | 46817136.34 | 46817136.45 | 0.0137 | 0.0125 |
| Neptune | 123469-05-14 21:48 G | 46817320.26 | 46817320.41 | 46817320.62 | 0.0089 | 0.0067 |
| Uranus | 123469-11-16 15:05 G | 46817505.89 | 46817506.13 | 46817506.38 | 0.0138 | 0.0045 |
| Saturn | 123469-12-25 04:45 G | 46817544.50 | 46817544.70 | 46817544.92 | 0.0277 | 0.0128 |
| Uranus | 123470-11-20 20:36 G | 46817875.14 | 46817875.36 | 46817875.61 | 0.0138 | 0.0046 |
| Saturn | 123471-01-07 11:43 G | 46817922.76 | 46817922.99 | 46817923.22 | 0.0278 | 0.0097 |
| Jupiter | 123473-10-24 13:24 G | 46818943.83 | 46818944.06 | 46818944.29 | 0.0545 | 0.0134 |
| Saturn | 123484-06-29 15:48 G | 46822844.96 | 46822845.16 | 46822845.39 | 0.0282 | 0.0142 |
| Saturn | 123485-07-12 16:02 G | 46823222.95 | 46823223.17 | 46823223.40 | 0.0282 | 0.0094 |
| Jupiter | 123485-10-29 17:57 G | 46823332.04 | 46823332.25 | 46823332.46 | 0.0545 | 0.0181 |
| Jupiter | 123497-11-03 20:07 G | 46827720.28 | 46827720.34 | 46827720.41 | 0.0545 | 0.0519 |
| Saturn | 123498-12-19 22:31 G | 46828131.28 | 46828131.44 | 46828131.61 | 0.0276 | 0.0207 |

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| Saturn | 123500-01-01 23:57 G | 46828509.26 | 46828509.50 | 46828509.74 | 0.0277 | 0.0003 |
| Saturn | 123501-01-15 08:50 G | 46828887.72 | 46828887.87 | 46828888.04 | 0.0277 | 0.0208 |
| Jupiter | 123503-04-26 07:09 G | 46829718.61 | 46829718.80 | 46829718.98 | 0.0483 | 0.0278 |
| Uranus | 123509-05-18 19:24 G | 46831933.29 | 46831933.31 | 46831933.37 | 0.0141 | 0.0139 |
| Uranus | 123510-05-23 15:33 G | 46832302.91 | 46832303.15 | 46832303.41 | 0.0140 | 0.0051 |
| Uranus | 123511-05-28 09:19 G | 46832672.67 | 46832672.89 | 46832673.13 | 0.0140 | 0.0047 |
| Saturn | 123513-06-25 04:31 G | 46833431.56 | 46833431.69 | 46833431.84 | 0.0282 | 0.0230 |
| Saturn | 123514-07-08 04:45 G | 46833809.45 | 46833809.70 | 46833809.95 | 0.0282 | 0.0003 |
| Jupiter | 123515-04-30 16:31 G | 46834105.94 | 46834106.19 | 46834106.44 | 0.0483 | 0.0042 |
| Saturn | 123515-07-20 23:57 G | 46834187.35 | 46834187.50 | 46834187.66 | 0.0281 | 0.0219 |
| Jupiter | 123527-05-04 20:50 G | 46838493.16 | 46838493.37 | 46838493.58 | 0.0483 | 0.0170 |
| Saturn | 123528-12-27 05:29 G | 46839095.50 | 46839095.73 | 46839095.96 | 0.0277 | 0.0122 |
| Saturn | 123530-01-09 07:09 G | 46839473.57 | 46839473.80 | 46839474.03 | 0.0278 | 0.0089 |
| Jupiter | 123539-05-09 05:29 G | 46842880.58 | 46842880.73 | 46842880.90 | 0.0483 | 0.0364 |
| Saturn | 123543-07-02 21:19 G | 46844396.17 | 46844396.39 | 46844396.61 | 0.0282 | 0.0104 |
| Pluto | 123543-08-17 04:45 G | 46844441.48 | 46844441.70 | 46844441.96 | 0.0066 | 0.0026 |
| Neptune | 123543-10-27 17:57 G | 46844513.18 | 46844513.25 | 46844513.37 | 0.0089 | 0.0082 |
| Saturn | 123544-07-14 21:48 G | 46844774.18 | 46844774.41 | 46844774.64 | 0.0282 | 0.0111 |
| Jupiter | 123544-10-19 11:14 G | 46844870.84 | 46844870.97 | 46844871.10 | 0.0545 | 0.0444 |
| Neptune | 123544-10-28 22:02 G | 46844880.24 | 46844880.42 | 46844880.64 | 0.0089 | 0.0053 |
| Neptune | 123545-10-31 14:07 G | 46845247.87 | 46845248.09 | 46845248.35 | 0.0089 | 0.0036 |
| Neptune | 123546-11-02 21:33 G | 46845615.16 | 46845615.40 | 46845615.65 | 0.0089 | 0.0008 |
| Neptune | 123547-11-05 08:07 G | 46845982.58 | 46845982.84 | 46845983.11 | 0.0089 | 0.0008 |
| Neptune | 123548-11-06 20:50 G | 46846350.15 | 46846350.37 | 46846350.60 | 0.0089 | 0.0038 |
| Neptune | 123549-11-09 02:50 G | 46846717.42 | 46846717.62 | 46846717.83 | 0.0089 | 0.0053 |
| Neptune | 123550-11-11 19:09 G | 46847085.25 | 46847085.30 | 46847085.41 | 0.0089 | 0.0084 |
| Uranus | 123552-11-13 13:09 G | 46847817.94 | 46847818.05 | 46847818.20 | 0.0137 | 0.0118 |
| Uranus | 123553-11-17 22:02 G | 46848187.19 | 46848187.42 | 46848187.65 | 0.0138 | 0.0043 |
| Uranus | 123554-11-22 14:36 G | 46848556.88 | 46848557.11 | 46848557.36 | 0.0138 | 0.0055 |
| Jupiter | 123556-10-24 09:33 G | 46849258.67 | 46849258.90 | 46849259.13 | 0.0545 | 0.0118 |

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| Saturn | 123557-12-22 08:07 G | 46849682.70 | 46849682.84 | 46849683.01 | 0.0276 | 0.0215 |
| Saturn | 123559-01-04 04:45 G | 46850060.44 | 46850060.70 | 46850060.96 | 0.0277 | 0.0004 |
| Saturn | 123560-01-17 05:57 G | 46850438.62 | 46850438.75 | 46850438.89 | 0.0277 | 0.0230 |
| Jupiter | 123568-10-29 23:57 G | 46853647.30 | 46853647.50 | 46853647.72 | 0.0546 | 0.0192 |
| Saturn | 123572-06-25 23:57 G | 46854982.37 | 46854982.50 | 46854982.65 | 0.0282 | 0.0227 |
| Saturn | 123573-07-09 07:38 G | 46855360.59 | 46855360.82 | 46855361.06 | 0.0282 | 0.0008 |
| Jupiter | 123574-04-21 12:26 G | 46855646.98 | 46855647.02 | 46855647.08 | 0.0483 | 0.0474 |
| Saturn | 123574-07-22 07:24 G | 46855738.66 | 46855738.81 | 46855738.97 | 0.0281 | 0.0214 |
| Jupiter | 123580-11-04 04:31 G | 46858035.57 | 46858035.69 | 46858035.81 | 0.0545 | 0.0466 |
| Jupiter | 123586-04-25 16:17 G | 46860034.00 | 46860034.18 | 46860034.37 | 0.0483 | 0.0286 |
| Saturn | 123587-12-29 14:36 G | 46860646.87 | 46860647.11 | 46860647.34 | 0.0277 | 0.0085 |
| Saturn | 123589-01-10 15:05 G | 46861024.91 | 46861025.13 | 46861025.35 | 0.0277 | 0.0141 |
| Uranus | 123593-05-19 03:05 G | 46862614.56 | 46862614.63 | 46862614.73 | 0.0141 | 0.0133 |
| Uranus | 123594-05-24 03:19 G | 46862984.42 | 46862984.64 | 46862984.88 | 0.0140 | 0.0052 |
| Uranus | 123595-05-28 17:43 G | 46863354.01 | 46863354.24 | 46863354.49 | 0.0140 | 0.0055 |
| Jupiter | 123598-04-30 01:53 G | 46864421.34 | 46864421.58 | 46864421.83 | 0.0483 | 0.0097 |
| Saturn | 123602-07-03 14:21 G | 46865946.89 | 46865947.10 | 46865947.33 | 0.0282 | 0.0105 |
| Saturn | 123603-07-16 20:50 G | 46866325.16 | 46866325.37 | 46866325.58 | 0.0282 | 0.0133 |
| Jupiter | 123610-05-04 09:19 G | 46868808.67 | 46868808.89 | 46868809.12 | 0.0483 | 0.0107 |
| Saturn | 123616-12-23 07:24 G | 46871233.63 | 46871233.81 | 46871234.01 | 0.0276 | 0.0162 |
| Saturn | 123618-01-05 12:12 G | 46871611.77 | 46871612.01 | 46871612.25 | 0.0277 | 0.0056 |
| Saturn | 123619-01-18 16:45 G | 46871990.16 | 46871990.20 | 46871990.28 | 0.0277 | 0.0269 |
| Jupiter | 123622-05-08 14:36 G | 46873195.93 | 46873196.11 | 46873196.29 | 0.0483 | 0.0323 |
| Mars | 123627-02-08 21:48 G | 46874933.26 | 46874933.41 | 46874933.57 | 0.1815 | 0.1154 |
| Neptune | 123627-05-02 00:12 G | 46875015.44 | 46875015.51 | 46875015.61 | 0.0089 | 0.0083 |
| Jupiter | 123627-10-19 14:50 G | 46875186.02 | 46875186.12 | 46875186.24 | 0.0545 | 0.0477 |
| Neptune | 123628-05-03 15:05 G | 46875382.92 | 46875383.13 | 46875383.36 | 0.0089 | 0.0051 |
| Neptune | 123629-05-06 04:31 G | 46875750.48 | 46875750.69 | 46875750.93 | 0.0089 | 0.0038 |
| Neptune | 123630-05-08 13:53 G | 46876117.81 | 46876118.08 | 46876118.35 | 0.0089 | 0.0005 |
| Pluto | 123631-02-14 06:41 G | 46876399.54 | 46876399.78 | 46876400.05 | 0.0078 | 0.0012 |

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| Neptune | 123631-05-11 08:07 G | 46876485.59 | 46876485.84 | 46876486.10 | 0.0089 | 0.0009 |
| Saturn | 123631-06-28 03:05 G | 46876533.45 | 46876533.63 | 46876533.81 | 0.0282 | 0.0193 |
| Neptune | 123632-05-12 13:53 G | 46876852.87 | 46876853.08 | 46876853.33 | 0.0089 | 0.0042 |
| Saturn | 123632-07-10 03:33 G | 46876911.42 | 46876911.65 | 46876911.89 | 0.0282 | 0.0046 |
| Neptune | 123633-05-15 10:02 G | 46877220.72 | 46877220.92 | 46877221.13 | 0.0089 | 0.0055 |
| Saturn | 123633-07-23 05:29 G | 46877289.67 | 46877289.73 | 46877289.80 | 0.0281 | 0.0269 |
| Neptune | 123634-05-17 16:02 G | 46877588.16 | 46877588.17 | 46877588.24 | 0.0089 | 0.0088 |
| Uranus | 123636-11-13 23:00 G | 46878499.34 | 46878499.46 | 46878499.61 | 0.0137 | 0.0114 |
| Uranus | 123637-11-18 09:48 G | 46878868.66 | 46878868.91 | 46878869.16 | 0.0138 | 0.0039 |
| Uranus | 123638-11-22 23:29 G | 46879238.28 | 46879238.48 | 46879238.71 | 0.0138 | 0.0064 |
| Jupiter | 123639-10-24 17:29 G | 46879574.02 | 46879574.23 | 46879574.45 | 0.0546 | 0.0201 |
| Saturn | 123645-12-17 13:09 G | 46881819.99 | 46881820.05 | 46881820.13 | 0.0276 | 0.0265 |
| Saturn | 123646-12-30 12:12 G | 46882197.77 | 46882198.01 | 46882198.25 | 0.0277 | 0.0062 |
| Saturn | 123648-01-12 18:41 G | 46882576.08 | 46882576.28 | 46882576.49 | 0.0277 | 0.0147 |
| Jupiter | 123651-10-30 06:26 G | 46883962.55 | 46883962.77 | 46883962.99 | 0.0545 | 0.0108 |
| Saturn | 123660-06-21 15:33 G | 46887120.13 | 46887120.15 | 46887120.18 | 0.0283 | 0.0281 |
| Saturn | 123661-07-04 18:26 G | 46887498.02 | 46887498.27 | 46887498.52 | 0.0282 | 0.0055 |
| Saturn | 123662-07-17 16:45 G | 46887876.00 | 46887876.20 | 46887876.40 | 0.0282 | 0.0164 |
| Jupiter | 123663-11-04 00:55 G | 46888350.39 | 46888350.54 | 46888350.69 | 0.0545 | 0.0423 |
| Jupiter | 123669-04-25 03:05 G | 46890349.46 | 46890349.63 | 46890349.81 | 0.0484 | 0.0316 |
| Saturn | 123675-12-25 12:12 G | 46892784.82 | 46892785.01 | 46892785.23 | 0.0276 | 0.0164 |
| Saturn | 123677-01-06 11:14 G | 46893162.73 | 46893162.97 | 46893163.22 | 0.0277 | 0.0051 |
| Uranus | 123677-05-19 19:38 G | 46893296.24 | 46893296.32 | 46893296.43 | 0.0141 | 0.0130 |
| Saturn | 123678-01-19 19:09 G | 46893541.27 | 46893541.30 | 46893541.34 | 0.0277 | 0.0274 |
| Uranus | 123678-05-24 08:07 G | 46893665.60 | 46893665.84 | 46893666.09 | 0.0140 | 0.0048 |
| Uranus | 123679-05-29 10:02 G | 46894035.71 | 46894035.92 | 46894036.16 | 0.0140 | 0.0063 |
| Jupiter | 123681-04-29 11:00 G | 46894736.71 | 46894736.96 | 46894737.20 | 0.0483 | 0.0080 |
| Saturn | 123690-06-29 10:45 G | 46898084.77 | 46898084.95 | 46898085.15 | 0.0283 | 0.0174 |
| Saturn | 123691-07-12 12:26 G | 46898462.78 | 46898463.02 | 46898463.27 | 0.0282 | 0.0046 |
| Saturn | 123692-07-24 06:55 G | 46898840.71 | 46898840.79 | 46898840.89 | 0.0281 | 0.0260 |

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| Jupiter | 123693-05-03 17:57 G | 46899124.03 | 46899124.25 | 46899124.47 | 0.0483 | 0.0148 |
| Saturn | 123704-12-20 02:07 G | 46903371.53 | 46903371.59 | 46903371.66 | 0.0276 | 0.0265 |
| Jupiter | 123705-05-08 22:02 G | 46903511.26 | 46903511.42 | 46903511.59 | 0.0483 | 0.0355 |
| Saturn | 123706-01-01 21:05 G | 46903749.13 | 46903749.38 | 46903749.64 | 0.0277 | 0.0044 |
| Saturn | 123707-01-14 20:07 G | 46904127.17 | 46904127.34 | 46904127.53 | 0.0277 | 0.0189 |
| Neptune | 123708-10-29 06:55 G | 46904780.64 | 46904780.79 | 46904781.00 | 0.0089 | 0.0064 |
| Neptune | 123709-10-31 23:14 G | 46905148.27 | 46905148.47 | 46905148.69 | 0.0089 | 0.0046 |
| Jupiter | 123710-10-19 22:17 G | 46905501.38 | 46905501.43 | 46905501.48 | 0.0545 | 0.0529 |
| Neptune | 123710-11-03 03:19 G | 46905515.39 | 46905515.64 | 46905515.89 | 0.0089 | 0.0019 |
| Neptune | 123711-11-05 21:05 G | 46905883.12 | 46905883.38 | 46905883.63 | 0.0089 | 0.0002 |
| Neptune | 123712-11-07 01:38 G | 46906250.33 | 46906250.57 | 46906250.81 | 0.0089 | 0.0027 |
| Neptune | 123713-11-09 16:02 G | 46906617.96 | 46906618.17 | 46906618.41 | 0.0089 | 0.0045 |
| Neptune | 123714-11-12 00:12 G | 46906985.40 | 46906985.51 | 46906985.68 | 0.0089 | 0.0073 |
| Neptune | 123715-11-14 09:33 G | 46907352.90 | 46907352.90 | 46907352.93 | 0.0089 | 0.0088 |
| Saturn | 123720-07-06 23:14 G | 46909049.24 | 46909049.47 | 46909049.71 | 0.0282 | 0.0062 |
| Uranus | 123720-11-15 06:41 G | 46909180.65 | 46909180.78 | 46909180.93 | 0.0137 | 0.0113 |
| Saturn | 123721-07-20 01:53 G | 46909427.38 | 46909427.58 | 46909427.78 | 0.0282 | 0.0170 |
| Uranus | 123721-11-20 01:38 G | 46909550.33 | 46909550.57 | 46909550.81 | 0.0138 | 0.0031 |
| Jupiter | 123722-10-24 15:05 G | 46909888.92 | 46909889.13 | 46909889.35 | 0.0545 | 0.0208 |
| Uranus | 123722-11-24 07:38 G | 46909919.60 | 46909919.82 | 46909920.05 | 0.0138 | 0.0068 |
| Mars | 123731-08-14 09:05 G | 46913104.70 | 46913104.88 | 46913105.06 | 0.1721 | 0.0102 |
| Jupiter | 123734-10-30 02:21 G | 46914277.38 | 46914277.60 | 46914277.83 | 0.0545 | 0.0123 |
| Saturn | 123734-12-27 23:43 G | 46914336.28 | 46914336.49 | 46914336.72 | 0.0276 | 0.0116 |
| Saturn | 123736-01-09 23:00 G | 46914714.23 | 46914714.46 | 46914714.71 | 0.0277 | 0.0108 |
| Jupiter | 123746-11-04 01:53 G | 46918665.44 | 46918665.58 | 46918665.73 | 0.0545 | 0.0417 |
| Saturn | 123749-07-01 09:19 G | 46919635.69 | 46919635.89 | 46919636.09 | 0.0283 | 0.0151 |
| Saturn | 123750-07-14 16:02 G | 46920013.96 | 46920014.17 | 46920014.40 | 0.0282 | 0.0089 |
| Jupiter | 123752-04-25 12:41 G | 46920664.85 | 46920665.03 | 46920665.22 | 0.0483 | 0.0289 |
| Uranus | 123761-05-21 00:12 G | 46923977.45 | 46923977.51 | 46923977.60 | 0.0141 | 0.0134 |
| Uranus | 123762-05-25 23:14 G | 46924347.23 | 46924347.47 | 46924347.73 | 0.0140 | 0.0040 |

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| Uranus | 123763-05-30 14:07 G | 46924716.88 | 46924717.09 | 46924717.32 | 0.0140 | 0.0064 |
| Saturn | 123763-12-22 05:00 G | 46924922.57 | 46924922.71 | 46924922.87 | 0.0276 | 0.0211 |
| Jupiter | 123764-04-29 16:02 G | 46925051.93 | 46925052.17 | 46925052.41 | 0.0483 | 0.0094 |
| Saturn | 123765-01-03 08:50 G | 46925300.63 | 46925300.87 | 46925301.11 | 0.0277 | 0.0006 |
| Saturn | 123766-01-16 11:14 G | 46925678.80 | 46925678.97 | 46925679.14 | 0.0277 | 0.0202 |
| Jupiter | 123776-05-04 03:33 G | 46929439.42 | 46929439.65 | 46929439.87 | 0.0483 | 0.0092 |
| Saturn | 123778-06-25 17:57 G | 46930222.12 | 46930222.25 | 46930222.40 | 0.0283 | 0.0234 |
| Saturn | 123779-07-08 21:48 G | 46930600.17 | 46930600.41 | 46930600.65 | 0.0282 | 0.0005 |
| Saturn | 123780-07-21 02:50 G | 46930978.48 | 46930978.62 | 46930978.78 | 0.0282 | 0.0213 |
| Jupiter | 123788-05-08 05:43 G | 46933826.55 | 46933826.74 | 46933826.94 | 0.0484 | 0.0285 |
| Pluto | 123791-08-19 08:36 G | 46935024.63 | 46935024.86 | 46935025.11 | 0.0066 | 0.0017 |
| Neptune | 123792-05-04 01:24 G | 46935283.37 | 46935283.56 | 46935283.75 | 0.0089 | 0.0061 |
| Neptune | 123793-05-06 07:53 G | 46935650.64 | 46935650.83 | 46935651.07 | 0.0089 | 0.0048 |
| Jupiter | 123793-10-18 17:43 G | 46935816.18 | 46935816.24 | 46935816.32 | 0.0544 | 0.0514 |
| Saturn | 123793-12-29 02:07 G | 46935887.37 | 46935887.59 | 46935887.82 | 0.0276 | 0.0110 |
| Neptune | 123794-05-09 01:09 G | 46936018.29 | 46936018.55 | 46936018.82 | 0.0089 | 0.0015 |
| Saturn | 123795-01-11 08:07 G | 46936265.62 | 46936265.84 | 46936266.07 | 0.0277 | 0.0104 |
| Neptune | 123795-05-11 12:55 G | 46936385.79 | 46936386.04 | 46936386.29 | 0.0089 | 0.0001 |
| Neptune | 123796-05-13 00:12 G | 46936753.27 | 46936753.51 | 46936753.77 | 0.0089 | 0.0031 |
| Neptune | 123797-05-15 16:45 G | 46937120.99 | 46937121.20 | 46937121.43 | 0.0089 | 0.0045 |
| Neptune | 123798-05-17 23:14 G | 46937488.36 | 46937488.47 | 46937488.62 | 0.0089 | 0.0077 |
| Uranus | 123804-11-16 23:43 G | 46939862.36 | 46939862.49 | 46939862.65 | 0.0137 | 0.0114 |
| Jupiter | 123805-10-24 14:21 G | 46940203.89 | 46940204.10 | 46940204.30 | 0.0545 | 0.0240 |
| Uranus | 123805-11-21 06:26 G | 46940231.53 | 46940231.77 | 46940232.02 | 0.0138 | 0.0020 |
| Uranus | 123806-11-26 00:41 G | 46940601.32 | 46940601.53 | 46940601.77 | 0.0138 | 0.0068 |
| Saturn | 123808-07-03 19:38 G | 46941187.09 | 46941187.32 | 46941187.55 | 0.0283 | 0.0117 |
| Saturn | 123809-07-16 18:26 G | 46941565.05 | 46941565.27 | 46941565.51 | 0.0282 | 0.0097 |
| Jupiter | 123817-10-30 05:57 G | 46944592.52 | 46944592.75 | 46944592.98 | 0.0546 | 0.0034 |
| Saturn | 123822-12-24 12:26 G | 46946473.87 | 46946474.02 | 46946474.19 | 0.0276 | 0.0211 |
| Saturn | 123824-01-06 11:29 G | 46946851.74 | 46946851.98 | 46946852.22 | 0.0277 | 0.0008 |

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| Saturn | 123825-01-18 17:57 G | 46947230.14 | 46947230.25 | 46947230.39 | 0.0277 | 0.0237 |
| Jupiter | 123829-11-04 05:43 G | 46948980.57 | 46948980.74 | 46948980.93 | 0.0545 | 0.0328 |
| Jupiter | 123835-04-26 19:24 G | 46950980.17 | 46950980.31 | 46950980.47 | 0.0484 | 0.0368 |
| Saturn | 123837-06-28 06:55 G | 46951773.67 | 46951773.79 | 46951773.93 | 0.0282 | 0.0235 |
| Saturn | 123838-07-11 09:05 G | 46952151.63 | 46952151.88 | 46952152.14 | 0.0282 | 0.0011 |
| Saturn | 123839-07-24 05:57 G | 46952529.60 | 46952529.75 | 46952529.91 | 0.0282 | 0.0217 |
| Uranus | 123845-05-22 09:33 G | 46954658.82 | 46954658.90 | 46954658.98 | 0.0141 | 0.0134 |
| Uranus | 123846-05-27 08:50 G | 46955028.64 | 46955028.87 | 46955029.12 | 0.0140 | 0.0028 |
| Jupiter | 123847-04-30 21:48 G | 46955367.18 | 46955367.41 | 46955367.65 | 0.0484 | 0.0151 |
| Uranus | 123847-06-01 00:55 G | 46955398.31 | 46955398.54 | 46955398.78 | 0.0140 | 0.0062 |
| Saturn | 123852-12-31 12:55 G | 46957438.80 | 46957439.04 | 46957439.29 | 0.0277 | 0.0065 |
| Saturn | 123854-01-13 12:12 G | 46957816.82 | 46957817.01 | 46957817.22 | 0.0277 | 0.0161 |
| Jupiter | 123859-05-05 09:33 G | 46959754.68 | 46959754.90 | 46959755.13 | 0.0483 | 0.0082 |
| Saturn | 123867-07-06 08:07 G | 46962738.62 | 46962738.84 | 46962739.07 | 0.0282 | 0.0099 |
| Saturn | 123868-07-18 10:02 G | 46963116.71 | 46963116.92 | 46963117.14 | 0.0282 | 0.0136 |
| Jupiter | 123871-05-09 10:02 G | 46964141.73 | 46964141.92 | 46964142.10 | 0.0483 | 0.0311 |
| Neptune | 123872-10-29 20:50 G | 46964681.23 | 46964681.37 | 46964681.51 | 0.0089 | 0.0074 |
| Neptune | 123873-11-01 04:45 G | 46965048.52 | 46965048.70 | 46965048.90 | 0.0089 | 0.0056 |
| Neptune | 123874-11-03 14:07 G | 46965415.84 | 46965416.09 | 46965416.34 | 0.0089 | 0.0028 |
| Neptune | 123875-11-06 04:02 G | 46965783.43 | 46965783.67 | 46965783.92 | 0.0089 | 0.0011 |
| Neptune | 123876-11-07 08:50 G | 46966150.63 | 46966150.87 | 46966151.14 | 0.0089 | 0.0018 |
| Neptune | 123877-11-10 02:21 G | 46966518.38 | 46966518.60 | 46966518.85 | 0.0089 | 0.0034 |
| Neptune | 123878-11-12 06:12 G | 46966885.59 | 46966885.76 | 46966885.95 | 0.0089 | 0.0062 |
| Pluto | 123879-02-16 17:29 G | 46966982.09 | 46966982.23 | 46966982.45 | 0.0078 | 0.0059 |
| Neptune | 123879-11-14 22:31 G | 46967253.34 | 46967253.44 | 46967253.58 | 0.0089 | 0.0079 |
| Saturn | 123881-12-26 05:14 G | 46968025.52 | 46968025.72 | 46968025.93 | 0.0276 | 0.0153 |
| Saturn | 123883-01-08 03:05 G | 46968403.38 | 46968403.63 | 46968403.89 | 0.0277 | 0.0058 |
| Saturn | 123884-01-21 01:53 G | 46968781.52 | 46968781.58 | 46968781.68 | 0.0277 | 0.0264 |
| Jupiter | 123888-10-23 18:55 G | 46970519.11 | 46970519.29 | 46970519.47 | 0.0545 | 0.0312 |
| Uranus | 123888-11-17 09:33 G | 46970543.76 | 46970543.90 | 46970544.05 | 0.0137 | 0.0111 |

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| Uranus | 123889-11-21 21:19 G | 46970913.12 | 46970913.39 | 46970913.65 | 0.0138 | 0.0010 |
| Uranus | 123890-11-26 10:02 G | 46971282.72 | 46971282.92 | 46971283.15 | 0.0138 | 0.0068 |
| Saturn | 123896-06-29 10:31 G | 46973324.78 | 46973324.94 | 46973325.14 | 0.0282 | 0.0185 |
| Saturn | 123897-07-12 18:55 G | 46973703.06 | 46973703.29 | 46973703.52 | 0.0282 | 0.0049 |
| Saturn | 123898-07-25 21:05 G | 46974081.32 | 46974081.38 | 46974081.45 | 0.0282 | 0.0271 |
| Jupiter | 123900-10-30 03:48 G | 46974907.43 | 46974907.66 | 46974907.90 | 0.0545 | 0.0027 |
| Saturn | 123910-12-21 22:31 G | 46978612.35 | 46978612.44 | 46978612.55 | 0.0277 | 0.0252 |
| Mars | 123911-02-12 07:24 G | 46978664.66 | 46978664.81 | 46978664.97 | 0.1824 | 0.1059 |
| Saturn | 123912-01-04 02:07 G | 46978990.35 | 46978990.59 | 46978990.83 | 0.0277 | 0.0047 |
| Jupiter | 123912-11-04 00:12 G | 46979295.34 | 46979295.51 | 46979295.69 | 0.0545 | 0.0345 |
| Saturn | 123913-01-16 05:00 G | 46979368.50 | 46979368.71 | 46979368.92 | 0.0277 | 0.0163 |
| Jupiter | 123918-04-27 00:41 G | 46981295.37 | 46981295.53 | 46981295.70 | 0.0484 | 0.0339 |
| Saturn | 123925-06-25 08:21 G | 46983911.80 | 46983911.85 | 46983911.91 | 0.0283 | 0.0275 |
| Saturn | 123926-07-08 12:26 G | 46984289.78 | 46984290.02 | 46984290.25 | 0.0282 | 0.0053 |
| Saturn | 123927-07-21 17:00 G | 46984668.03 | 46984668.21 | 46984668.41 | 0.0282 | 0.0164 |
| Uranus | 123929-05-24 00:12 G | 46985340.44 | 46985340.51 | 46985340.62 | 0.0141 | 0.0132 |
| Jupiter | 123930-05-01 02:07 G | 46985682.36 | 46985682.59 | 46985682.83 | 0.0483 | 0.0118 |
| Uranus | 123930-05-28 13:09 G | 46985709.80 | 46985710.05 | 46985710.31 | 0.0140 | 0.0021 |
| Uranus | 123931-06-02 15:05 G | 46986079.91 | 46986080.13 | 46986080.36 | 0.0140 | 0.0060 |
| Saturn | 123940-12-28 09:48 G | 46989576.71 | 46989576.91 | 46989577.11 | 0.0276 | 0.0156 |
| Saturn | 123942-01-10 15:05 G | 46989954.90 | 46989955.13 | 46989955.37 | 0.0277 | 0.0062 |
| Jupiter | 123942-05-05 14:50 G | 46990069.89 | 46990070.12 | 46990070.35 | 0.0483 | 0.0079 |
| Jupiter | 123954-05-09 14:50 G | 46994456.93 | 46994457.12 | 46994457.33 | 0.0483 | 0.0261 |
| Saturn | 123955-07-02 23:43 G | 46994876.30 | 46994876.49 | 46994876.70 | 0.0282 | 0.0172 |
| Neptune | 123956-05-05 08:36 G | 46995183.72 | 46995183.86 | 46995184.03 | 0.0089 | 0.0071 |
| Saturn | 123956-07-15 00:12 G | 46995254.27 | 46995254.51 | 46995254.75 | 0.0282 | 0.0047 |
| Neptune | 123957-05-07 15:33 G | 46995550.96 | 46995551.15 | 46995551.37 | 0.0089 | 0.0057 |
| Saturn | 123957-07-28 01:53 G | 46995632.53 | 46995632.58 | 46995632.66 | 0.0281 | 0.0269 |
| Neptune | 123958-05-10 11:29 G | 46995918.74 | 46995918.98 | 46995919.24 | 0.0089 | 0.0025 |
| Neptune | 123959-05-12 17:29 G | 46996285.98 | 46996286.23 | 46996286.49 | 0.0089 | 0.0011 |

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| Neptune | 123960-05-14 12:12 | G | 46996653.76 | 46996654.01 | 46996654.28 | 0.0089 | 0.0021 |
| Neptune | 123961-05-16 20:21 | G | 46997021.14 | 46997021.35 | 46997021.60 | 0.0089 | 0.0036 |
| Neptune | 123962-05-19 11:29 | G | 46997388.81 | 46997388.98 | 46997389.16 | 0.0089 | 0.0067 |
| Neptune | 123963-05-22 00:55 | G | 46997756.47 | 46997756.54 | 46997756.66 | 0.0089 | 0.0082 |
| Jupiter | 123966-05-14 04:02 | G | 46998844.59 | 46998844.67 | 46998844.76 | 0.0484 | 0.0449 |
| Saturn | 123969-12-23 07:09 | G | 47000163.69 | 47000163.80 | 47000163.93 | 0.0277 | 0.0245 |
| Saturn | 123971-01-05 05:43 | G | 47000541.50 | 47000541.74 | 47000541.99 | 0.0277 | 0.0019 |
| Jupiter | 123971-10-24 15:05 | G | 47000833.95 | 47000834.13 | 47000834.32 | 0.0544 | 0.0296 |
| Saturn | 123972-01-18 12:41 | G | 47000919.89 | 47000920.03 | 47000920.19 | 0.0277 | 0.0212 |
| Uranus | 123972-11-18 16:17 | G | 47001225.03 | 47001225.18 | 47001225.37 | 0.0137 | 0.0103 |
| Uranus | 123973-11-23 11:00 | G | 47001594.72 | 47001594.96 | 47001595.21 | 0.0138 | 0.0005 |
| Uranus | 123974-11-27 17:43 | G | 47001964.03 | 47001964.24 | 47001964.47 | 0.0138 | 0.0069 |
| Jupiter | 123983-10-29 21:05 | G | 47005222.15 | 47005222.38 | 47005222.62 | 0.0545 | 0.0018 |
| Saturn | 123984-06-27 02:07 | G | 47005463.57 | 47005463.59 | 47005463.64 | 0.0283 | 0.0279 |
| Saturn | 123985-07-10 05:43 | G | 47005841.49 | 47005841.74 | 47005841.98 | 0.0282 | 0.0049 |
| Saturn | 123986-07-23 01:38 | G | 47006219.40 | 47006219.57 | 47006219.77 | 0.0282 | 0.0189 |
| Jupiter | 123995-11-03 23:43 | G | 47009610.30 | 47009610.49 | 47009610.69 | 0.0545 | 0.0254 |
| Saturn | 123999-12-30 22:45 | G | 47011128.21 | 47011128.45 | 47011128.69 | 0.0276 | 0.0101 |

125TH MILLENNIUM CE

This is a list of transits of Moon in the 125th millennium CE.

| FROM | MAX- TRANSIT TIME | C | START | MAX | END | SUNRAD | DEPTH | S |
|--------|-------------------------|---|-------------|-------------|-------------|--------|--------|---|
| Saturn | 124001-01-11 20:36 | G | 47011506.13 | 47011506.36 | 47011506.58 | 0.0277 | 0.0119 | |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 124001-04-26 05:57 G | 47011610.62 | 47011610.75 | 47011610.89 | 0.0484 | 0.0391 |
| Jupiter | 124007-11-09 12:55 G | 47013999.02 | 47013999.04 | 47013999.07 | 0.0545 | 0.0542 |
| Jupiter | 124013-04-30 05:57 G | 47015997.53 | 47015997.75 | 47015997.97 | 0.0484 | 0.0199 |
| Uranus | 124013-05-24 04:17 G | 47016021.58 | 47016021.68 | 47016021.81 | 0.0141 | 0.0124 |
| Uranus | 124014-05-29 04:45 G | 47016391.45 | 47016391.70 | 47016391.97 | 0.0140 | 0.0020 |
| Saturn | 124014-07-04 14:36 G | 47016427.90 | 47016428.11 | 47016428.31 | 0.0282 | 0.0136 |
| Uranus | 124015-06-02 18:41 G | 47016761.07 | 47016761.28 | 47016761.52 | 0.0140 | 0.0062 |
| Saturn | 124015-07-17 17:29 G | 47016806.00 | 47016806.23 | 47016806.47 | 0.0282 | 0.0102 |
| Mars | 124015-08-17 16:02 G | 47016836.98 | 47016837.17 | 47016837.36 | 0.1715 | 0.0297 |
| Jupiter | 124025-05-04 19:53 G | 47020385.09 | 47020385.33 | 47020385.56 | 0.0484 | 0.0013 |
| Saturn | 124028-12-24 21:19 G | 47021715.22 | 47021715.39 | 47021715.57 | 0.0277 | 0.0196 |
| Saturn | 124030-01-06 19:24 G | 47022093.06 | 47022093.31 | 47022093.57 | 0.0277 | 0.0013 |
| Saturn | 124031-01-19 19:24 G | 47022471.16 | 47022471.31 | 47022471.47 | 0.0277 | 0.0222 |
| Neptune | 124036-10-30 07:53 G | 47024581.76 | 47024581.83 | 47024581.93 | 0.0089 | 0.0083 |
| Jupiter | 124037-05-08 18:12 G | 47024772.06 | 47024772.26 | 47024772.48 | 0.0483 | 0.0234 |
| Neptune | 124037-11-01 11:00 G | 47024948.81 | 47024948.96 | 47024949.16 | 0.0089 | 0.0065 |
| Neptune | 124038-11-04 03:48 G | 47025316.45 | 47025316.66 | 47025316.91 | 0.0089 | 0.0039 |
| Neptune | 124039-11-06 09:48 G | 47025683.68 | 47025683.91 | 47025684.17 | 0.0089 | 0.0021 |
| Pluto | 124040-08-22 17:29 G | 47025974.01 | 47025974.23 | 47025974.48 | 0.0066 | 0.0020 |
| Neptune | 124040-11-07 22:45 G | 47026051.18 | 47026051.45 | 47026051.71 | 0.0089 | 0.0006 |
| Neptune | 124041-11-10 09:05 G | 47026418.65 | 47026418.88 | 47026419.13 | 0.0089 | 0.0025 |
| Neptune | 124042-11-12 15:48 G | 47026785.97 | 47026786.16 | 47026786.39 | 0.0089 | 0.0053 |
| Saturn | 124043-06-29 07:38 G | 47027014.68 | 47027014.82 | 47027014.98 | 0.0283 | 0.0220 |
| Neptune | 124043-11-15 08:07 G | 47027153.70 | 47027153.84 | 47027154.01 | 0.0089 | 0.0070 |
| Saturn | 124044-07-11 17:00 G | 47027392.98 | 47027393.21 | 47027393.45 | 0.0282 | 0.0010 |
| Saturn | 124045-07-24 19:53 G | 47027771.20 | 47027771.33 | 47027771.48 | 0.0282 | 0.0228 |
| Jupiter | 124049-05-13 08:50 G | 47029159.83 | 47029159.87 | 47029159.93 | 0.0483 | 0.0471 |
| Jupiter | 124054-10-23 12:55 G | 47031148.90 | 47031149.04 | 47031149.19 | 0.0545 | 0.0406 |
| Uranus | 124056-11-19 10:17 G | 47031906.75 | 47031906.93 | 47031907.12 | 0.0137 | 0.0094 |
| Uranus | 124057-11-23 15:48 G | 47032275.92 | 47032276.16 | 47032276.41 | 0.0138 | 0.0006 |

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| Uranus | 124058-11-28 11:00 G | 47032645.76 | 47032645.96 | 47032646.19 | 0.0138 | 0.0075 |
| Saturn | 124059-01-01 12:26 G | 47032679.80 | 47032680.02 | 47032680.25 | 0.0276 | 0.0099 |
| Saturn | 124060-01-14 13:53 G | 47033057.86 | 47033058.08 | 47033058.32 | 0.0277 | 0.0115 |
| Jupiter | 124066-10-28 23:14 G | 47035537.23 | 47035537.47 | 47035537.70 | 0.0545 | 0.0099 |
| Saturn | 124073-07-05 19:24 G | 47037979.10 | 47037979.31 | 47037979.54 | 0.0282 | 0.0109 |
| Saturn | 124074-07-19 01:24 G | 47038357.35 | 47038357.56 | 47038357.79 | 0.0282 | 0.0110 |
| Jupiter | 124078-11-03 01:09 G | 47039925.36 | 47039925.55 | 47039925.76 | 0.0545 | 0.0234 |
| Jupiter | 124084-04-25 09:48 G | 47041925.79 | 47041925.91 | 47041926.03 | 0.0484 | 0.0412 |
| Saturn | 124087-12-26 23:14 G | 47043266.31 | 47043266.47 | 47043266.64 | 0.0277 | 0.0199 |
| Saturn | 124089-01-08 03:48 G | 47043644.42 | 47043644.66 | 47043644.90 | 0.0277 | 0.0025 |
| Saturn | 124090-01-21 10:02 G | 47044022.83 | 47044022.92 | 47044023.03 | 0.0278 | 0.0255 |
| Jupiter | 124096-04-29 10:02 G | 47046312.70 | 47046312.92 | 47046313.14 | 0.0484 | 0.0176 |
| Uranus | 124097-05-24 14:50 G | 47046702.99 | 47046703.12 | 47046703.30 | 0.0140 | 0.0114 |
| Uranus | 124098-05-29 13:09 G | 47047072.81 | 47047073.05 | 47047073.29 | 0.0140 | 0.0022 |
| Uranus | 124099-06-03 06:26 G | 47047442.54 | 47047442.77 | 47047443.01 | 0.0140 | 0.0068 |
| Saturn | 124102-07-01 21:19 G | 47048566.23 | 47048566.39 | 47048566.56 | 0.0283 | 0.0216 |
| Saturn | 124103-07-14 22:31 G | 47048944.20 | 47048944.44 | 47048944.69 | 0.0282 | 0.0008 |
| Saturn | 124104-07-27 00:26 G | 47049322.40 | 47049322.52 | 47049322.66 | 0.0282 | 0.0235 |
| Jupiter | 124108-05-05 01:53 G | 47050700.34 | 47050700.58 | 47050700.82 | 0.0483 | 0.0051 |
| Saturn | 124116-12-21 17:43 G | 47053853.21 | 47053853.24 | 47053853.29 | 0.0276 | 0.0272 |
| Saturn | 124118-01-03 14:21 G | 47054230.86 | 47054231.10 | 47054231.34 | 0.0276 | 0.0053 |
| Saturn | 124119-01-16 19:38 G | 47054609.14 | 47054609.32 | 47054609.51 | 0.0277 | 0.0172 |
| Neptune | 124120-05-05 11:29 G | 47055083.90 | 47055083.98 | 47055084.11 | 0.0088 | 0.0081 |
| Jupiter | 124120-05-09 00:12 G | 47055087.31 | 47055087.51 | 47055087.71 | 0.0483 | 0.0248 |
| Neptune | 124121-05-08 03:05 G | 47055451.47 | 47055451.63 | 47055451.82 | 0.0089 | 0.0067 |
| Neptune | 124122-05-10 17:14 G | 47055818.99 | 47055819.22 | 47055819.46 | 0.0089 | 0.0035 |
| Neptune | 124123-05-13 02:50 G | 47056186.37 | 47056186.62 | 47056186.90 | 0.0089 | 0.0021 |
| Neptune | 124124-05-14 21:19 G | 47056554.14 | 47056554.39 | 47056554.64 | 0.0089 | 0.0012 |
| Neptune | 124125-05-17 03:05 G | 47056921.40 | 47056921.63 | 47056921.90 | 0.0089 | 0.0026 |
| Neptune | 124126-05-19 22:45 G | 47057289.28 | 47057289.45 | 47057289.67 | 0.0089 | 0.0058 |

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| Neptune | 124127-05-22 05:14 G | 47057656.59 | 47057656.72 | 47057656.89 | 0.0089 | 0.0071 |
| Pluto | 124128-02-21 09:05 G | 47057931.61 | 47057931.88 | 47057932.15 | 0.0078 | 0.0005 |
| Jupiter | 124132-05-13 14:36 G | 47059475.01 | 47059475.11 | 47059475.22 | 0.0483 | 0.0431 |
| Saturn | 124132-07-08 11:14 G | 47059530.73 | 47059530.97 | 47059531.21 | 0.0282 | 0.0086 |
| Saturn | 124133-07-21 09:19 G | 47059908.69 | 47059908.89 | 47059909.11 | 0.0282 | 0.0151 |
| Jupiter | 124137-10-23 17:43 G | 47061464.09 | 47061464.24 | 47061464.39 | 0.0544 | 0.0397 |
| Uranus | 124140-11-20 15:48 G | 47062587.99 | 47062588.16 | 47062588.37 | 0.0137 | 0.0086 |
| Uranus | 124141-11-25 05:43 G | 47062957.48 | 47062957.74 | 47062958.00 | 0.0138 | 0.0008 |
| Uranus | 124142-11-29 16:31 G | 47063327.01 | 47063327.19 | 47063327.40 | 0.0138 | 0.0085 |
| Saturn | 124146-12-29 08:36 G | 47064817.64 | 47064817.86 | 47064818.08 | 0.0277 | 0.0142 |
| Saturn | 124148-01-11 05:29 G | 47065195.50 | 47065195.73 | 47065195.98 | 0.0277 | 0.0069 |
| Saturn | 124149-01-23 11:57 G | 47065574.00 | 47065574.00 | 47065574.01 | 0.0278 | 0.0277 |
| Jupiter | 124149-10-28 20:07 G | 47065852.11 | 47065852.34 | 47065852.58 | 0.0545 | 0.0082 |
| Saturn | 124161-07-03 09:05 G | 47070117.70 | 47070117.88 | 47070118.08 | 0.0283 | 0.0165 |
| Jupiter | 124161-11-02 20:36 G | 47070240.16 | 47070240.36 | 47070240.57 | 0.0545 | 0.0197 |
| Saturn | 124162-07-16 14:21 G | 47070495.86 | 47070496.10 | 47070496.34 | 0.0282 | 0.0067 |
| Jupiter | 124167-04-26 17:29 G | 47072241.10 | 47072241.23 | 47072241.37 | 0.0484 | 0.0397 |
| Jupiter | 124173-11-08 03:33 G | 47074628.54 | 47074628.65 | 47074628.79 | 0.0545 | 0.0463 |
| Saturn | 124175-12-24 07:24 G | 47075404.68 | 47075404.81 | 47075404.93 | 0.0276 | 0.0236 |
| Saturn | 124177-01-05 03:05 G | 47075782.37 | 47075782.63 | 47075782.88 | 0.0276 | 0.0037 |
| Saturn | 124178-01-18 00:12 G | 47076160.31 | 47076160.51 | 47076160.71 | 0.0277 | 0.0168 |
| Jupiter | 124179-04-30 17:00 G | 47076628.00 | 47076628.21 | 47076628.43 | 0.0484 | 0.0210 |
| Uranus | 124181-05-26 05:29 G | 47077384.57 | 47077384.73 | 47077384.90 | 0.0140 | 0.0106 |
| Uranus | 124182-05-30 18:26 G | 47077754.01 | 47077754.27 | 47077754.52 | 0.0140 | 0.0025 |
| Uranus | 124183-06-04 19:53 G | 47078124.13 | 47078124.33 | 47078124.55 | 0.0140 | 0.0078 |
| Saturn | 124190-06-27 08:21 G | 47080703.78 | 47080703.85 | 47080703.94 | 0.0283 | 0.0264 |
| Jupiter | 124191-05-05 07:53 G | 47081015.58 | 47081015.83 | 47081016.07 | 0.0483 | 0.0025 |
| Saturn | 124191-07-10 18:55 G | 47081082.06 | 47081082.29 | 47081082.52 | 0.0282 | 0.0043 |
| Saturn | 124192-07-22 23:29 G | 47081460.30 | 47081460.48 | 47081460.68 | 0.0282 | 0.0171 |
| Mars | 124195-02-12 07:24 G | 47082394.78 | 47082394.81 | 47082394.84 | 0.1834 | 0.1811 |

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| Neptune | 124201-11-02 22:45 G | 47084849.33 | 47084849.45 | 47084849.61 | 0.0089 | 0.0074 |
| Neptune | 124202-11-05 13:53 G | 47085216.89 | 47085217.08 | 47085217.30 | 0.0089 | 0.0049 |
| Jupiter | 124203-05-10 07:09 G | 47085402.58 | 47085402.80 | 47085403.01 | 0.0483 | 0.0178 |
| Neptune | 124203-11-07 17:57 G | 47085584.03 | 47085584.25 | 47085584.51 | 0.0089 | 0.0030 |
| Neptune | 124204-11-09 11:29 G | 47085951.73 | 47085951.98 | 47085952.24 | 0.0089 | 0.0003 |
| Neptune | 124205-11-11 15:33 G | 47086318.90 | 47086319.15 | 47086319.40 | 0.0089 | 0.0016 |
| Saturn | 124205-12-31 16:45 G | 47086369.00 | 47086369.20 | 47086369.40 | 0.0277 | 0.0149 |
| Neptune | 124206-11-14 06:41 G | 47086686.56 | 47086686.78 | 47086687.03 | 0.0089 | 0.0042 |
| Saturn | 124207-01-13 17:00 G | 47086746.96 | 47086747.21 | 47086747.45 | 0.0277 | 0.0070 |
| Neptune | 124207-11-16 14:36 G | 47087053.95 | 47087054.11 | 47087054.31 | 0.0089 | 0.0061 |
| Neptune | 124208-11-18 00:26 G | 47087421.50 | 47087421.52 | 47087421.61 | 0.0089 | 0.0087 |
| Jupiter | 124215-05-14 20:07 G | 47089790.22 | 47089790.34 | 47089790.48 | 0.0483 | 0.0402 |
| Saturn | 124220-07-05 09:48 G | 47091668.72 | 47091668.91 | 47091669.12 | 0.0283 | 0.0155 |
| Mars | 124220-08-17 07:09 G | 47091711.69 | 47091711.80 | 47091711.91 | 0.1703 | 0.1395 |
| Jupiter | 124220-10-23 13:09 G | 47091778.93 | 47091779.05 | 47091779.17 | 0.0544 | 0.0456 |
| Saturn | 124221-07-18 17:57 G | 47092047.02 | 47092047.25 | 47092047.48 | 0.0283 | 0.0066 |
| Uranus | 124224-11-22 00:26 G | 47093269.32 | 47093269.52 | 47093269.74 | 0.0138 | 0.0080 |
| Uranus | 124225-11-26 17:43 G | 47093638.99 | 47093639.24 | 47093639.49 | 0.0138 | 0.0007 |
| Uranus | 124226-12-01 00:55 G | 47094008.37 | 47094008.54 | 47094008.75 | 0.0138 | 0.0094 |
| Jupiter | 124232-10-28 15:33 G | 47096166.93 | 47096167.15 | 47096167.38 | 0.0545 | 0.0191 |
| Saturn | 124234-12-26 06:55 G | 47096955.67 | 47096955.79 | 47096955.93 | 0.0275 | 0.0229 |
| Saturn | 124236-01-08 09:33 G | 47097333.66 | 47097333.90 | 47097334.14 | 0.0276 | 0.0004 |
| Saturn | 124237-01-20 12:41 G | 47097711.89 | 47097712.03 | 47097712.19 | 0.0276 | 0.0220 |
| Jupiter | 124244-11-03 02:07 G | 47100555.37 | 47100555.59 | 47100555.81 | 0.0546 | 0.0112 |
| Saturn | 124249-06-29 17:29 G | 47102255.16 | 47102255.23 | 47102255.32 | 0.0283 | 0.0268 |
| Jupiter | 124250-04-27 00:26 G | 47102556.46 | 47102556.52 | 47102556.59 | 0.0484 | 0.0463 |
| Saturn | 124250-07-12 20:36 G | 47102633.11 | 47102633.36 | 47102633.60 | 0.0282 | 0.0036 |
| Saturn | 124251-07-26 00:26 G | 47103011.37 | 47103011.52 | 47103011.70 | 0.0282 | 0.0199 |
| Jupiter | 124256-11-08 07:38 G | 47104943.69 | 47104943.82 | 47104943.96 | 0.0545 | 0.0443 |
| Jupiter | 124262-04-30 23:57 G | 47106943.30 | 47106943.50 | 47106943.70 | 0.0484 | 0.0240 |

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| Saturn | 124265-01-01 14:07 G | 47107919.87 | 47107920.09 | 47107920.33 | 0.0276 | 0.0094 |
| Uranus | 124265-05-27 08:50 G | 47108065.71 | 47108065.87 | 47108066.04 | 0.0140 | 0.0104 |
| Saturn | 124266-01-14 18:12 G | 47108298.04 | 47108298.26 | 47108298.47 | 0.0277 | 0.0122 |
| Uranus | 124266-06-01 10:17 G | 47108435.68 | 47108435.93 | 47108436.19 | 0.0140 | 0.0023 |
| Uranus | 124267-06-05 22:31 G | 47108805.26 | 47108805.44 | 47108805.66 | 0.0140 | 0.0086 |
| Jupiter | 124274-05-05 15:05 G | 47111330.88 | 47111331.13 | 47111331.37 | 0.0484 | 0.0008 |
| Saturn | 124279-07-07 18:55 G | 47113220.07 | 47113220.29 | 47113220.53 | 0.0283 | 0.0118 |
| Saturn | 124280-07-19 19:24 G | 47113598.10 | 47113598.31 | 47113598.55 | 0.0283 | 0.0120 |
| Neptune | 124285-05-08 14:36 G | 47115352.00 | 47115352.11 | 47115352.27 | 0.0089 | 0.0077 |
| Jupiter | 124286-05-09 17:29 G | 47115718.03 | 47115718.23 | 47115718.44 | 0.0483 | 0.0223 |
| Neptune | 124286-05-10 21:33 G | 47115719.18 | 47115719.40 | 47115719.63 | 0.0089 | 0.0044 |
| Neptune | 124287-05-13 15:05 G | 47116086.90 | 47116087.13 | 47116087.40 | 0.0089 | 0.0031 |
| Neptune | 124288-05-15 01:53 G | 47116454.33 | 47116454.58 | 47116454.83 | 0.0089 | 0.0002 |
| Pluto | 124288-08-25 14:36 G | 47116556.88 | 47116557.11 | 47116557.38 | 0.0066 | 0.0021 |
| Neptune | 124289-05-17 14:50 G | 47116821.86 | 47116822.12 | 47116822.39 | 0.0089 | 0.0016 |
| Neptune | 124290-05-20 06:26 G | 47117189.58 | 47117189.77 | 47117190.00 | 0.0089 | 0.0048 |
| Neptune | 124291-05-22 14:07 G | 47117556.92 | 47117557.09 | 47117557.30 | 0.0089 | 0.0062 |
| Saturn | 124293-12-27 13:09 G | 47118506.87 | 47118507.05 | 47118507.25 | 0.0275 | 0.0184 |
| Saturn | 124295-01-09 08:07 G | 47118884.59 | 47118884.84 | 47118885.09 | 0.0276 | 0.0018 |
| Saturn | 124296-01-22 11:43 G | 47119262.86 | 47119262.99 | 47119263.13 | 0.0276 | 0.0224 |
| Jupiter | 124298-05-14 04:17 G | 47120105.57 | 47120105.68 | 47120105.80 | 0.0483 | 0.0426 |
| Mars | 124299-08-20 01:09 G | 47120568.37 | 47120568.55 | 47120568.73 | 0.1708 | 0.0309 |
| Jupiter | 124303-10-24 19:38 G | 47122094.26 | 47122094.32 | 47122094.39 | 0.0544 | 0.0518 |
| Saturn | 124308-07-02 01:24 G | 47123806.41 | 47123806.56 | 47123806.73 | 0.0283 | 0.0213 |
| Uranus | 124308-11-23 15:48 G | 47123950.97 | 47123951.16 | 47123951.38 | 0.0138 | 0.0080 |
| Saturn | 124309-07-15 07:24 G | 47124184.56 | 47124184.81 | 47124185.06 | 0.0283 | 0.0013 |
| Uranus | 124309-11-27 21:05 G | 47124320.13 | 47124320.38 | 47124320.64 | 0.0138 | 0.0003 |
| Saturn | 124310-07-28 05:29 G | 47124562.59 | 47124562.73 | 47124562.89 | 0.0282 | 0.0227 |
| Uranus | 124310-12-02 16:17 G | 47124690.03 | 47124690.18 | 47124690.38 | 0.0138 | 0.0099 |
| Jupiter | 124315-10-29 21:33 G | 47126482.18 | 47126482.40 | 47126482.62 | 0.0545 | 0.0183 |

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| Saturn | 124324-01-04 21:19 G | 47129471.16 | 47129471.39 | 47129471.64 | 0.0276 | 0.0099 |
| Saturn | 124325-01-16 17:14 G | 47129848.99 | 47129849.22 | 47129849.45 | 0.0277 | 0.0116 |
| Jupiter | 124327-11-04 07:38 G | 47130870.60 | 47130870.82 | 47130871.03 | 0.0545 | 0.0147 |
| Jupiter | 124333-04-27 07:09 G | 47132871.69 | 47132871.80 | 47132871.93 | 0.0485 | 0.0424 |
| Saturn | 124338-07-09 21:48 G | 47134771.19 | 47134771.41 | 47134771.63 | 0.0283 | 0.0104 |
| Saturn | 124339-07-23 04:31 G | 47135149.46 | 47135149.69 | 47135149.91 | 0.0283 | 0.0117 |
| Jupiter | 124339-11-09 02:36 G | 47135258.47 | 47135258.61 | 47135258.76 | 0.0545 | 0.0425 |
| Jupiter | 124345-05-01 12:26 G | 47137258.82 | 47137259.02 | 47137259.23 | 0.0484 | 0.0214 |
| Uranus | 124349-05-28 19:38 G | 47138747.16 | 47138747.32 | 47138747.50 | 0.0141 | 0.0107 |
| Uranus | 124350-06-02 16:45 G | 47139116.95 | 47139117.20 | 47139117.44 | 0.0140 | 0.0015 |
| Uranus | 124351-06-07 11:00 G | 47139486.75 | 47139486.96 | 47139487.17 | 0.0140 | 0.0087 |
| Saturn | 124352-12-29 20:50 G | 47140058.20 | 47140058.37 | 47140058.56 | 0.0275 | 0.0184 |
| Saturn | 124354-01-11 17:29 G | 47140435.98 | 47140436.23 | 47140436.49 | 0.0276 | 0.0039 |
| Saturn | 124355-01-24 13:38 G | 47140814.02 | 47140814.07 | 47140814.15 | 0.0276 | 0.0267 |
| Jupiter | 124357-05-05 23:14 G | 47141646.23 | 47141646.47 | 47141646.72 | 0.0483 | 0.0023 |
| Neptune | 124365-11-03 13:09 G | 47144749.99 | 47144750.05 | 47144750.18 | 0.0089 | 0.0083 |
| Neptune | 124366-11-05 22:02 G | 47145117.23 | 47145117.42 | 47145117.60 | 0.0089 | 0.0057 |
| Saturn | 124367-07-03 21:19 G | 47145357.26 | 47145357.39 | 47145357.55 | 0.0283 | 0.0223 |
| Neptune | 124367-11-08 07:24 G | 47145484.58 | 47145484.81 | 47145485.06 | 0.0089 | 0.0038 |
| Saturn | 124368-07-16 07:38 G | 47145735.59 | 47145735.82 | 47145736.06 | 0.0283 | 0.0010 |
| Neptune | 124368-11-09 20:36 G | 47145852.12 | 47145852.36 | 47145852.61 | 0.0089 | 0.0013 |
| Jupiter | 124369-05-10 04:17 G | 47146033.47 | 47146033.68 | 47146033.90 | 0.0483 | 0.0164 |
| Saturn | 124369-07-29 12:55 G | 47146113.93 | 47146114.04 | 47146114.17 | 0.0282 | 0.0243 |
| Neptune | 124369-11-12 01:24 G | 47146219.31 | 47146219.56 | 47146219.83 | 0.0089 | 0.0006 |
| Neptune | 124370-11-14 18:12 G | 47146587.04 | 47146587.26 | 47146587.51 | 0.0089 | 0.0033 |
| Neptune | 124371-11-16 21:33 G | 47146954.21 | 47146954.40 | 47146954.63 | 0.0089 | 0.0051 |
| Neptune | 124372-11-18 13:53 G | 47147321.97 | 47147322.08 | 47147322.22 | 0.0089 | 0.0078 |
| Pluto | 124376-02-24 00:12 G | 47148514.42 | 47148514.51 | 47148514.65 | 0.0078 | 0.0069 |
| Jupiter | 124381-05-14 12:12 G | 47150420.85 | 47150421.01 | 47150421.18 | 0.0483 | 0.0356 |
| Saturn | 124381-12-24 00:41 G | 47150644.48 | 47150644.53 | 47150644.59 | 0.0276 | 0.0267 |

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| Saturn | 124383-01-06 01:38 G | 47151022.33 | 47151022.57 | 47151022.80 | 0.0276 | 0.0048 |
| Saturn | 124384-01-19 01:09 G | 47151400.36 | 47151400.55 | 47151400.76 | 0.0276 | 0.0168 |
| Jupiter | 124386-10-24 02:50 G | 47152409.51 | 47152409.62 | 47152409.72 | 0.0544 | 0.0477 |
| Uranus | 124392-11-23 22:02 G | 47154632.24 | 47154632.42 | 47154632.63 | 0.0138 | 0.0084 |
| Uranus | 124393-11-28 11:57 G | 47155001.74 | 47155002.00 | 47155002.26 | 0.0138 | 0.0008 |
| Uranus | 124394-12-02 22:31 G | 47155371.27 | 47155371.44 | 47155371.62 | 0.0138 | 0.0097 |
| Saturn | 124397-07-10 16:45 G | 47156321.97 | 47156322.20 | 47156322.44 | 0.0283 | 0.0074 |
| Saturn | 124398-07-24 00:55 G | 47156700.36 | 47156700.54 | 47156700.74 | 0.0283 | 0.0164 |
| Jupiter | 124398-10-28 17:57 G | 47156797.04 | 47156797.25 | 47156797.47 | 0.0544 | 0.0213 |
| Jupiter | 124410-11-03 06:26 G | 47161185.54 | 47161185.77 | 47161185.99 | 0.0545 | 0.0052 |
| Saturn | 124411-12-31 17:43 G | 47161609.04 | 47161609.24 | 47161609.46 | 0.0275 | 0.0136 |
| Saturn | 124413-01-12 19:53 G | 47161987.10 | 47161987.33 | 47161987.56 | 0.0275 | 0.0066 |
| Saturn | 124414-01-25 22:45 G | 47162365.42 | 47162365.45 | 47162365.51 | 0.0276 | 0.0271 |
| Jupiter | 124416-04-26 16:45 G | 47163187.18 | 47163187.20 | 47163187.24 | 0.0485 | 0.0480 |
| Jupiter | 124422-11-08 06:55 G | 47165573.61 | 47165573.79 | 47165573.97 | 0.0546 | 0.0338 |
| Saturn | 124426-07-05 02:07 G | 47166908.40 | 47166908.59 | 47166908.80 | 0.0283 | 0.0168 |
| Saturn | 124427-07-18 05:00 G | 47167286.48 | 47167286.71 | 47167286.96 | 0.0283 | 0.0059 |
| Jupiter | 124428-04-30 23:14 G | 47167574.29 | 47167574.47 | 47167574.66 | 0.0484 | 0.0282 |
| Saturn | 124428-07-30 09:19 G | 47167664.84 | 47167664.89 | 47167664.95 | 0.0282 | 0.0274 |
| Uranus | 124433-05-29 09:33 G | 47169428.75 | 47169428.90 | 47169429.06 | 0.0141 | 0.0110 |
| Uranus | 124434-06-02 22:02 G | 47169798.16 | 47169798.42 | 47169798.67 | 0.0140 | 0.0004 |
| Uranus | 124435-06-07 23:14 G | 47170168.28 | 47170168.47 | 47170168.68 | 0.0140 | 0.0084 |
| Jupiter | 124440-05-05 06:41 G | 47171961.54 | 47171961.78 | 47171962.02 | 0.0484 | 0.0070 |
| Saturn | 124440-12-25 02:07 G | 47172195.52 | 47172195.59 | 47172195.70 | 0.0275 | 0.0256 |
| Saturn | 124442-01-06 21:48 G | 47172573.18 | 47172573.41 | 47172573.65 | 0.0276 | 0.0055 |
| Saturn | 124443-01-20 01:09 G | 47172951.35 | 47172951.55 | 47172951.74 | 0.0276 | 0.0162 |
| Neptune | 124449-05-08 22:31 G | 47175252.40 | 47175252.44 | 47175252.54 | 0.0088 | 0.0086 |
| Neptune | 124450-05-11 05:29 G | 47175619.53 | 47175619.73 | 47175619.95 | 0.0089 | 0.0054 |
| Neptune | 124451-05-14 01:38 G | 47175987.35 | 47175987.57 | 47175987.82 | 0.0089 | 0.0040 |
| Jupiter | 124452-05-09 16:45 G | 47176348.98 | 47176349.20 | 47176349.42 | 0.0483 | 0.0158 |

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| Neptune | 124452-05-15 08:50 G | 47176354.62 | 47176354.87 | 47176355.13 | 0.0089 | 0.0008 |
| Neptune | 124453-05-18 02:21 G | 47176722.33 | 47176722.60 | 47176722.87 | 0.0089 | 0.0007 |
| Neptune | 124454-05-20 12:55 G | 47177089.81 | 47177090.04 | 47177090.27 | 0.0089 | 0.0038 |
| Neptune | 124455-05-23 00:55 G | 47177457.34 | 47177457.54 | 47177457.77 | 0.0089 | 0.0053 |
| Saturn | 124455-06-29 14:07 G | 47177495.04 | 47177495.09 | 47177495.15 | 0.0284 | 0.0276 |
| Neptune | 124456-05-24 17:00 G | 47177825.15 | 47177825.21 | 47177825.32 | 0.0089 | 0.0084 |
| Saturn | 124456-07-11 20:07 G | 47177873.09 | 47177873.34 | 47177873.59 | 0.0283 | 0.0061 |
| Saturn | 124457-07-24 21:33 G | 47178251.20 | 47178251.40 | 47178251.61 | 0.0283 | 0.0158 |
| Jupiter | 124464-05-13 20:50 G | 47180736.24 | 47180736.37 | 47180736.53 | 0.0483 | 0.0387 |
| Saturn | 124471-01-01 21:19 G | 47183160.17 | 47183160.39 | 47183160.62 | 0.0275 | 0.0131 |
| Saturn | 124472-01-14 17:14 G | 47183537.99 | 47183538.22 | 47183538.45 | 0.0275 | 0.0090 |
| Uranus | 124476-11-24 04:45 G | 47185313.51 | 47185313.70 | 47185313.92 | 0.0138 | 0.0082 |
| Uranus | 124477-11-28 23:57 G | 47185683.25 | 47185683.50 | 47185683.75 | 0.0138 | 0.0019 |
| Uranus | 124478-12-03 05:14 G | 47186052.55 | 47186052.72 | 47186052.93 | 0.0138 | 0.0092 |
| Jupiter | 124481-10-27 23:57 G | 47187112.32 | 47187112.50 | 47187112.69 | 0.0545 | 0.0292 |
| Saturn | 124485-07-06 06:55 G | 47188459.60 | 47188459.79 | 47188459.99 | 0.0283 | 0.0175 |
| Saturn | 124486-07-19 11:00 G | 47188837.71 | 47188837.96 | 47188838.20 | 0.0283 | 0.0060 |
| Jupiter | 124493-11-02 14:21 G | 47191500.86 | 47191501.10 | 47191501.33 | 0.0545 | 0.0031 |
| Saturn | 124499-12-27 10:31 G | 47193746.79 | 47193746.94 | 47193747.11 | 0.0275 | 0.0211 |
| Saturn | 124501-01-09 02:21 G | 47194124.34 | 47194124.60 | 47194124.85 | 0.0276 | 0.0002 |
| Saturn | 124502-01-21 23:14 G | 47194502.32 | 47194502.47 | 47194502.64 | 0.0276 | 0.0209 |
| Mars | 124504-08-19 23:00 G | 47195443.34 | 47195443.46 | 47195443.58 | 0.1697 | 0.1183 |
| Jupiter | 124505-11-08 14:36 G | 47195888.94 | 47195889.11 | 47195889.27 | 0.0545 | 0.0363 |
| Jupiter | 124511-05-02 12:55 G | 47197889.85 | 47197890.04 | 47197890.24 | 0.0484 | 0.0266 |
| Saturn | 124514-07-01 11:14 G | 47199045.88 | 47199045.97 | 47199046.07 | 0.0284 | 0.0256 |
| Saturn | 124515-07-14 23:14 G | 47199424.23 | 47199424.47 | 47199424.71 | 0.0283 | 0.0019 |
| Saturn | 124516-07-27 02:50 G | 47199802.45 | 47199802.62 | 47199802.78 | 0.0283 | 0.0211 |
| Uranus | 124517-05-30 14:36 G | 47200109.96 | 47200110.11 | 47200110.30 | 0.0140 | 0.0103 |
| Uranus | 124518-06-04 10:02 G | 47200479.65 | 47200479.92 | 47200480.18 | 0.0140 | 0.0002 |
| Uranus | 124519-06-09 04:31 G | 47200849.50 | 47200849.69 | 47200849.90 | 0.0140 | 0.0081 |

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| Jupiter | 124523-05-06 14:36 G | 47202276.88 | 47202277.11 | 47202277.36 | 0.0484 | 0.0035 |
| Saturn | 124530-01-04 05:57 G | 47204711.52 | 47204711.75 | 47204711.99 | 0.0275 | 0.0094 |
| Neptune | 124530-11-06 07:38 G | 47205017.67 | 47205017.82 | 47205018.00 | 0.0089 | 0.0064 |
| Saturn | 124531-01-16 23:00 G | 47205089.23 | 47205089.46 | 47205089.70 | 0.0275 | 0.0103 |
| Neptune | 124531-11-08 18:12 G | 47205385.07 | 47205385.26 | 47205385.50 | 0.0089 | 0.0051 |
| Neptune | 124532-11-10 07:38 G | 47205752.58 | 47205752.82 | 47205753.07 | 0.0089 | 0.0019 |
| Neptune | 124533-11-12 13:09 G | 47206119.80 | 47206120.05 | 47206120.31 | 0.0089 | 0.0006 |
| Neptune | 124534-11-15 05:43 G | 47206487.51 | 47206487.74 | 47206487.99 | 0.0089 | 0.0027 |
| Jupiter | 124535-05-11 05:14 G | 47206664.50 | 47206664.72 | 47206664.94 | 0.0483 | 0.0188 |
| Neptune | 124535-11-17 09:19 G | 47206854.67 | 47206854.89 | 47206855.12 | 0.0089 | 0.0039 |
| Pluto | 124536-08-28 14:21 G | 47207140.09 | 47207140.10 | 47207140.17 | 0.0065 | 0.0065 |
| Neptune | 124536-11-19 01:24 G | 47207222.42 | 47207222.56 | 47207222.74 | 0.0089 | 0.0071 |
| Pluto | 124537-08-29 20:50 G | 47207506.14 | 47207506.37 | 47207506.63 | 0.0066 | 0.0020 |
| Neptune | 124537-11-21 07:09 G | 47207589.75 | 47207589.80 | 47207589.91 | 0.0089 | 0.0084 |
| Saturn | 124544-07-08 04:31 G | 47210010.48 | 47210010.69 | 47210010.91 | 0.0284 | 0.0124 |
| Saturn | 124545-07-21 14:21 G | 47210388.88 | 47210389.10 | 47210389.33 | 0.0283 | 0.0096 |
| Jupiter | 124547-05-15 05:29 G | 47211051.59 | 47211051.73 | 47211051.87 | 0.0483 | 0.0385 |
| Mars | 124558-02-18 05:43 G | 47214983.56 | 47214983.74 | 47214983.92 | 0.1836 | 0.0808 |
| Saturn | 124558-12-29 13:24 G | 47215297.91 | 47215298.06 | 47215298.21 | 0.0275 | 0.0213 |
| Saturn | 124560-01-11 10:45 G | 47215675.70 | 47215675.95 | 47215676.20 | 0.0275 | 0.0005 |
| Uranus | 124560-11-25 18:26 G | 47215995.05 | 47215995.27 | 47215995.51 | 0.0138 | 0.0068 |
| Saturn | 124561-01-23 06:12 G | 47216053.61 | 47216053.76 | 47216053.92 | 0.0276 | 0.0217 |
| Uranus | 124561-11-30 06:41 G | 47216364.54 | 47216364.78 | 47216365.03 | 0.0138 | 0.0013 |
| Uranus | 124562-12-04 19:24 G | 47216734.13 | 47216734.31 | 47216734.49 | 0.0138 | 0.0100 |
| Jupiter | 124564-10-28 10:45 G | 47217427.76 | 47217427.95 | 47217428.14 | 0.0544 | 0.0273 |
| Saturn | 124573-07-02 06:55 G | 47220596.68 | 47220596.79 | 47220596.92 | 0.0284 | 0.0247 |
| Saturn | 124574-07-15 19:09 G | 47220975.07 | 47220975.30 | 47220975.53 | 0.0283 | 0.0023 |
| Saturn | 124575-07-29 04:17 G | 47221353.53 | 47221353.68 | 47221353.85 | 0.0283 | 0.0205 |
| Jupiter | 124576-11-02 09:33 G | 47221815.66 | 47221815.90 | 47221816.14 | 0.0544 | 0.0039 |
| Jupiter | 124582-04-27 06:26 G | 47223817.70 | 47223817.77 | 47223817.85 | 0.0486 | 0.0459 |

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| Mars | 124583-08-23 09:19 G | 47224300.77 | 47224300.89 | 47224301.02 | 0.1702 | 0.1280 |
| Jupiter | 124588-11-07 15:33 G | 47226203.98 | 47226204.15 | 47226204.33 | 0.0545 | 0.0339 |
| Saturn | 124589-01-05 08:36 G | 47226262.63 | 47226262.86 | 47226263.10 | 0.0275 | 0.0071 |
| Saturn | 124590-01-18 08:36 G | 47226640.66 | 47226640.86 | 47226641.07 | 0.0275 | 0.0151 |
| Jupiter | 124594-05-01 22:17 G | 47228205.23 | 47228205.43 | 47228205.64 | 0.0485 | 0.0247 |
| Uranus | 124601-05-31 20:21 G | 47230791.17 | 47230791.35 | 47230791.56 | 0.0140 | 0.0090 |
| Uranus | 124602-06-05 23:00 G | 47231161.21 | 47231161.46 | 47231161.72 | 0.0140 | 0.0009 |
| Uranus | 124603-06-10 10:31 G | 47231530.77 | 47231530.94 | 47231531.14 | 0.0140 | 0.0094 |
| Saturn | 124603-07-11 04:16 G | 47231561.46 | 47231561.68 | 47231561.90 | 0.0284 | 0.0118 |
| Saturn | 124604-07-23 12:40 G | 47231939.82 | 47231940.03 | 47231940.24 | 0.0283 | 0.0122 |
| Jupiter | 124606-05-07 00:12 G | 47232592.28 | 47232592.51 | 47232592.74 | 0.0484 | 0.0053 |
| Neptune | 124614-05-12 13:52 G | 47235519.94 | 47235520.08 | 47235520.26 | 0.0089 | 0.0070 |
| Neptune | 124615-05-15 09:19 G | 47235887.67 | 47235887.89 | 47235888.14 | 0.0089 | 0.0043 |
| Neptune | 124616-05-16 17:57 G | 47236255.02 | 47236255.25 | 47236255.51 | 0.0089 | 0.0024 |
| Neptune | 124617-05-19 09:33 G | 47236622.63 | 47236622.90 | 47236623.18 | 0.0089 | 0.0004 |
| Saturn | 124617-12-31 13:24 G | 47236848.87 | 47236849.06 | 47236849.27 | 0.0275 | 0.0159 |
| Jupiter | 124618-05-11 12:40 G | 47236979.80 | 47236980.03 | 47236980.27 | 0.0483 | 0.0132 |
| Neptune | 124618-05-21 23:14 G | 47236990.24 | 47236990.47 | 47236990.73 | 0.0089 | 0.0022 |
| Saturn | 124619-01-13 13:24 G | 47237226.83 | 47237227.06 | 47237227.30 | 0.0275 | 0.0047 |
| Neptune | 124619-05-24 09:19 G | 47237357.67 | 47237357.89 | 47237358.12 | 0.0089 | 0.0049 |
| Saturn | 124620-01-26 15:33 G | 47237605.05 | 47237605.15 | 47237605.26 | 0.0276 | 0.0249 |
| Neptune | 124620-05-26 03:04 G | 47237725.49 | 47237725.63 | 47237725.81 | 0.0089 | 0.0068 |
| Pluto | 124625-02-27 19:24 G | 47239464.04 | 47239464.31 | 47239464.58 | 0.0078 | 0.0004 |
| Jupiter | 124630-05-15 16:45 G | 47241367.03 | 47241367.20 | 47241367.37 | 0.0483 | 0.0325 |
| Saturn | 124632-07-04 12:26 G | 47242147.85 | 47242148.02 | 47242148.21 | 0.0284 | 0.0201 |
| Saturn | 124633-07-17 17:57 G | 47242526.01 | 47242526.25 | 47242526.50 | 0.0283 | 0.0032 |
| Saturn | 124634-07-31 00:40 G | 47242904.44 | 47242904.53 | 47242904.64 | 0.0283 | 0.0254 |
| Uranus | 124644-11-27 06:55 G | 47246676.57 | 47246676.79 | 47246677.02 | 0.0138 | 0.0063 |
| Uranus | 124645-12-01 11:57 G | 47247045.75 | 47247046.00 | 47247046.25 | 0.0138 | 0.0010 |
| Uranus | 124646-12-06 07:52 G | 47247415.68 | 47247415.83 | 47247415.97 | 0.0138 | 0.0113 |

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| Saturn | 124646-12-26 14:50 G | 47247436.04 | 47247436.12 | 47247436.22 | 0.0275 | 0.0257 |
| Jupiter | 124647-10-29 11:28 G | 47247742.79 | 47247742.98 | 47247743.18 | 0.0543 | 0.0285 |
| Saturn | 124648-01-08 08:36 G | 47247813.63 | 47247813.86 | 47247814.11 | 0.0275 | 0.0059 |
| Saturn | 124649-01-20 11:00 G | 47248191.76 | 47248191.96 | 47248192.16 | 0.0275 | 0.0150 |
| Jupiter | 124659-11-03 08:07 G | 47252130.61 | 47252130.84 | 47252131.07 | 0.0545 | 0.0012 |
| Saturn | 124662-07-12 12:40 G | 47253112.79 | 47253113.03 | 47253113.27 | 0.0284 | 0.0087 |
| Saturn | 124663-07-25 14:36 G | 47253490.90 | 47253491.11 | 47253491.34 | 0.0283 | 0.0133 |
| Jupiter | 124671-11-08 23:00 G | 47256519.26 | 47256519.46 | 47256519.66 | 0.0545 | 0.0257 |
| Saturn | 124677-01-01 22:02 G | 47258400.22 | 47258400.42 | 47258400.63 | 0.0275 | 0.0163 |
| Jupiter | 124677-05-02 02:07 G | 47258520.40 | 47258520.59 | 47258520.79 | 0.0485 | 0.0306 |
| Saturn | 124678-01-14 16:02 G | 47258777.93 | 47258778.17 | 47258778.41 | 0.0275 | 0.0057 |
| Jupiter | 124683-11-13 23:00 G | 47260907.44 | 47260907.46 | 47260907.48 | 0.0545 | 0.0542 |
| Uranus | 124685-06-01 06:55 G | 47261472.60 | 47261472.79 | 47261473.00 | 0.0140 | 0.0093 |
| Uranus | 124686-06-06 06:12 G | 47261842.51 | 47261842.76 | 47261843.01 | 0.0140 | 0.0004 |
| Uranus | 124687-06-10 22:02 G | 47262212.25 | 47262212.42 | 47262212.61 | 0.0140 | 0.0099 |
| Jupiter | 124689-05-06 11:43 G | 47262907.77 | 47262907.99 | 47262908.22 | 0.0484 | 0.0109 |
| Saturn | 124691-07-06 21:33 G | 47263699.24 | 47263699.40 | 47263699.57 | 0.0283 | 0.0207 |
| Saturn | 124692-07-19 03:19 G | 47264077.39 | 47264077.64 | 47264077.90 | 0.0283 | 0.0026 |
| Saturn | 124693-08-01 03:19 G | 47264455.56 | 47264455.64 | 47264455.75 | 0.0283 | 0.0261 |
| Neptune | 124694-11-06 20:21 G | 47264918.22 | 47264918.35 | 47264918.47 | 0.0089 | 0.0076 |
| Neptune | 124695-11-09 04:02 G | 47265285.49 | 47265285.67 | 47265285.90 | 0.0089 | 0.0056 |
| Neptune | 124696-11-10 18:55 G | 47265653.07 | 47265653.29 | 47265653.53 | 0.0089 | 0.0031 |
| Neptune | 124697-11-12 23:14 G | 47266020.22 | 47266020.47 | 47266020.73 | 0.0089 | 0.0011 |
| Neptune | 124698-11-15 16:16 G | 47266387.93 | 47266388.18 | 47266388.44 | 0.0089 | 0.0013 |
| Neptune | 124699-11-17 19:52 G | 47266755.12 | 47266755.33 | 47266755.58 | 0.0089 | 0.0034 |
| Neptune | 124700-11-20 11:14 G | 47267122.79 | 47267122.97 | 47267123.19 | 0.0089 | 0.0057 |
| Jupiter | 124701-05-11 16:31 G | 47267294.95 | 47267295.19 | 47267295.43 | 0.0484 | 0.0103 |
| Neptune | 124701-11-22 18:55 G | 47267490.21 | 47267490.29 | 47267490.43 | 0.0089 | 0.0080 |
| Saturn | 124705-12-29 02:50 G | 47268987.51 | 47268987.62 | 47268987.76 | 0.0275 | 0.0236 |
| Saturn | 124707-01-10 18:12 G | 47269365.01 | 47269365.26 | 47269365.52 | 0.0275 | 0.0014 |

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| Saturn | 124708-01-23 14:07 G | 47269742.92 | 47269743.09 | 47269743.25 | 0.0276 | 0.0205 |
| Jupiter | 124713-05-16 03:04 G | 47271682.47 | 47271682.63 | 47271682.80 | 0.0483 | 0.0328 |
| Saturn | 124721-07-14 22:16 G | 47274664.19 | 47274664.43 | 47274664.66 | 0.0284 | 0.0059 |
| Saturn | 124722-07-28 02:36 G | 47275042.41 | 47275042.61 | 47275042.80 | 0.0283 | 0.0180 |
| Uranus | 124728-11-28 13:52 G | 47277357.89 | 47277358.08 | 47277358.31 | 0.0138 | 0.0072 |
| Uranus | 124729-12-02 23:43 G | 47277727.24 | 47277727.49 | 47277727.75 | 0.0138 | 0.0022 |
| Jupiter | 124730-10-29 13:52 G | 47278057.91 | 47278058.08 | 47278058.25 | 0.0544 | 0.0374 |
| Uranus | 124730-12-07 14:36 G | 47278096.98 | 47278097.11 | 47278097.27 | 0.0138 | 0.0109 |
| Saturn | 124736-01-05 10:45 G | 47279951.73 | 47279951.95 | 47279952.18 | 0.0275 | 0.0110 |
| Saturn | 124737-01-17 03:48 G | 47280329.42 | 47280329.66 | 47280329.90 | 0.0275 | 0.0090 |
| Jupiter | 124742-11-03 14:21 G | 47282445.88 | 47282446.10 | 47282446.32 | 0.0544 | 0.0090 |
| Saturn | 124750-07-08 23:43 G | 47285250.30 | 47285250.49 | 47285250.69 | 0.0283 | 0.0151 |
| Saturn | 124751-07-22 11:14 G | 47285628.75 | 47285628.97 | 47285629.21 | 0.0283 | 0.0076 |
| Jupiter | 124754-11-08 21:19 G | 47286834.18 | 47286834.39 | 47286834.61 | 0.0544 | 0.0217 |
| Jupiter | 124760-05-02 04:45 G | 47288835.53 | 47288835.70 | 47288835.89 | 0.0485 | 0.0327 |
| Saturn | 124764-12-30 08:21 G | 47290538.72 | 47290538.85 | 47290539.00 | 0.0276 | 0.0218 |
| Saturn | 124766-01-12 07:09 G | 47290916.56 | 47290916.80 | 47290917.05 | 0.0276 | 0.0015 |
| Jupiter | 124766-11-13 19:52 G | 47291222.30 | 47291222.33 | 47291222.37 | 0.0545 | 0.0537 |
| Saturn | 124767-01-25 03:48 G | 47291294.49 | 47291294.66 | 47291294.84 | 0.0276 | 0.0200 |
| Uranus | 124769-06-02 21:19 G | 47292154.22 | 47292154.39 | 47292154.60 | 0.0140 | 0.0098 |
| Uranus | 124770-06-07 11:28 G | 47292523.73 | 47292523.98 | 47292524.23 | 0.0140 | 0.0010 |
| Uranus | 124771-06-12 12:26 G | 47292893.83 | 47292894.02 | 47292894.22 | 0.0140 | 0.0093 |
| Jupiter | 124772-05-06 19:24 G | 47293223.08 | 47293223.31 | 47293223.54 | 0.0484 | 0.0091 |
| Neptune | 124778-05-12 23:28 G | 47295420.41 | 47295420.48 | 47295420.61 | 0.0089 | 0.0082 |
| Neptune | 124779-05-15 18:26 G | 47295788.07 | 47295788.27 | 47295788.51 | 0.0089 | 0.0050 |
| Saturn | 124779-07-03 15:19 G | 47295837.05 | 47295837.14 | 47295837.24 | 0.0284 | 0.0262 |
| Neptune | 124780-05-17 04:16 G | 47296155.45 | 47296155.68 | 47296155.92 | 0.0089 | 0.0036 |
| Saturn | 124780-07-16 02:21 G | 47296215.36 | 47296215.60 | 47296215.83 | 0.0284 | 0.0044 |
| Neptune | 124781-05-19 17:43 G | 47296522.97 | 47296523.24 | 47296523.51 | 0.0089 | 0.0004 |
| Saturn | 124781-07-29 11:28 G | 47296593.80 | 47296593.98 | 47296594.17 | 0.0283 | 0.0178 |

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| Neptune | 124782-05-22 08:50 G | 47296890.62 | 47296890.87 | 47296891.12 | 0.0089 | 0.0010 |
| Neptune | 124783-05-24 17:00 G | 47297258.00 | 47297258.21 | 47297258.47 | 0.0089 | 0.0043 |
| Jupiter | 124784-05-10 20:36 G | 47297610.13 | 47297610.36 | 47297610.59 | 0.0484 | 0.0136 |
| Neptune | 124784-05-26 12:26 G | 47297625.85 | 47297626.02 | 47297626.25 | 0.0089 | 0.0057 |
| Neptune | 124785-05-28 18:40 G | 47297993.27 | 47297993.28 | 47297993.33 | 0.0089 | 0.0088 |
| Pluto | 124785-09-02 00:12 G | 47298089.26 | 47298089.51 | 47298089.78 | 0.0066 | 0.0013 |
| Mars | 124788-08-22 20:21 G | 47299175.17 | 47299175.35 | 47299175.53 | 0.1691 | 0.0346 |
| Saturn | 124795-01-06 17:00 G | 47301503.00 | 47301503.21 | 47301503.44 | 0.0275 | 0.0104 |
| Saturn | 124796-01-19 17:28 G | 47301881.01 | 47301881.23 | 47301881.46 | 0.0275 | 0.0119 |
| Jupiter | 124796-05-15 10:45 G | 47301997.79 | 47301997.95 | 47301998.12 | 0.0483 | 0.0349 |
| Saturn | 124809-07-10 05:57 G | 47306801.55 | 47306801.75 | 47306801.97 | 0.0283 | 0.0152 |
| Saturn | 124810-07-23 14:36 G | 47307179.89 | 47307180.11 | 47307180.34 | 0.0283 | 0.0084 |
| Uranus | 124812-11-28 18:12 G | 47308039.05 | 47308039.26 | 47308039.48 | 0.0138 | 0.0069 |
| Jupiter | 124813-10-28 10:16 G | 47308372.78 | 47308372.93 | 47308373.09 | 0.0543 | 0.0411 |
| Uranus | 124813-12-03 12:12 G | 47308408.77 | 47308409.01 | 47308409.27 | 0.0138 | 0.0031 |
| Uranus | 124814-12-07 18:55 G | 47308778.14 | 47308778.29 | 47308778.47 | 0.0138 | 0.0103 |
| Saturn | 124824-01-01 11:43 G | 47312089.81 | 47312089.99 | 47312090.19 | 0.0276 | 0.0175 |
| Saturn | 124825-01-13 11:43 G | 47312467.75 | 47312467.99 | 47312468.22 | 0.0276 | 0.0042 |
| Jupiter | 124825-11-02 15:04 G | 47312760.91 | 47312761.13 | 47312761.34 | 0.0543 | 0.0098 |
| Saturn | 124826-01-26 15:19 G | 47312846.06 | 47312846.14 | 47312846.25 | 0.0276 | 0.0253 |
| Jupiter | 124837-11-07 12:55 G | 47317148.82 | 47317149.04 | 47317149.26 | 0.0545 | 0.0215 |
| Saturn | 124838-07-05 06:40 G | 47317388.64 | 47317388.78 | 47317388.93 | 0.0284 | 0.0231 |
| Saturn | 124839-07-18 11:14 G | 47317766.72 | 47317766.97 | 47317767.22 | 0.0284 | 0.0007 |
| Saturn | 124840-07-30 15:48 G | 47318145.05 | 47318145.16 | 47318145.30 | 0.0283 | 0.0238 |
| Mars | 124842-02-19 23:28 G | 47318714.28 | 47318714.48 | 47318714.68 | 0.1845 | 0.0749 |
| Jupiter | 124843-05-02 10:02 G | 47319150.73 | 47319150.92 | 47319151.10 | 0.0485 | 0.0298 |
| Jupiter | 124849-11-12 23:00 G | 47321537.41 | 47321537.46 | 47321537.53 | 0.0545 | 0.0520 |
| Saturn | 124852-12-26 08:36 G | 47322676.79 | 47322676.86 | 47322676.95 | 0.0275 | 0.0259 |
| Uranus | 124853-06-03 06:40 G | 47322835.58 | 47322835.78 | 47322835.97 | 0.0140 | 0.0087 |
| Saturn | 124854-01-07 23:57 G | 47323054.26 | 47323054.50 | 47323054.74 | 0.0275 | 0.0062 |

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| Uranus | 124854-06-07 21:04 G | 47323205.12 | 47323205.38 | 47323205.65 | 0.0140 | 0.0011 |
| Saturn | 124855-01-21 00:12 G | 47323432.31 | 47323432.51 | 47323432.72 | 0.0275 | 0.0138 |
| Jupiter | 124855-05-07 00:12 G | 47323538.27 | 47323538.51 | 47323538.75 | 0.0484 | 0.0089 |
| Uranus | 124855-06-12 20:50 G | 47323575.19 | 47323575.37 | 47323575.55 | 0.0140 | 0.0093 |
| Neptune | 124859-11-09 14:36 G | 47325185.95 | 47325186.11 | 47325186.33 | 0.0089 | 0.0060 |
| Neptune | 124860-11-11 06:55 G | 47325553.58 | 47325553.79 | 47325554.01 | 0.0089 | 0.0046 |
| Neptune | 124861-11-13 10:31 G | 47325920.69 | 47325920.94 | 47325921.20 | 0.0089 | 0.0015 |
| Neptune | 124862-11-16 03:48 G | 47326288.41 | 47326288.66 | 47326288.92 | 0.0089 | 0.0002 |
| Neptune | 124863-11-18 08:21 G | 47326655.62 | 47326655.85 | 47326656.09 | 0.0089 | 0.0030 |
| Neptune | 124864-11-19 22:02 G | 47327023.21 | 47327023.42 | 47327023.67 | 0.0089 | 0.0044 |
| Neptune | 124865-11-22 06:40 G | 47327390.67 | 47327390.78 | 47327390.93 | 0.0089 | 0.0075 |
| Neptune | 124866-11-24 14:50 G | 47327758.11 | 47327758.12 | 47327758.20 | 0.0089 | 0.0088 |
| Jupiter | 124867-05-11 03:04 G | 47327925.41 | 47327925.63 | 47327925.86 | 0.0484 | 0.0104 |
| Mars | 124867-08-26 14:21 G | 47328033.03 | 47328033.10 | 47328033.17 | 0.1696 | 0.1568 |
| Saturn | 124868-07-11 22:31 G | 47328353.21 | 47328353.44 | 47328353.68 | 0.0283 | 0.0095 |
| Saturn | 124869-07-25 00:40 G | 47328731.31 | 47328731.53 | 47328731.76 | 0.0283 | 0.0122 |
| Pluto | 124873-03-01 10:45 G | 47330046.78 | 47330046.95 | 47330047.13 | 0.0078 | 0.0057 |
| Jupiter | 124879-05-15 12:40 G | 47332312.83 | 47332313.03 | 47332313.23 | 0.0484 | 0.0286 |
| Saturn | 124883-01-03 01:09 G | 47333641.36 | 47333641.55 | 47333641.76 | 0.0276 | 0.0171 |
| Saturn | 124884-01-15 18:12 G | 47334019.02 | 47334019.26 | 47334019.51 | 0.0276 | 0.0039 |
| Saturn | 124885-01-27 19:52 G | 47334397.26 | 47334397.33 | 47334397.42 | 0.0276 | 0.0258 |
| Jupiter | 124891-05-19 17:14 G | 47336700.19 | 47336700.22 | 47336700.26 | 0.0484 | 0.0476 |
| Jupiter | 124896-10-27 02:50 G | 47338687.47 | 47338687.62 | 47338687.77 | 0.0543 | 0.0408 |
| Uranus | 124896-11-29 04:16 G | 47338720.46 | 47338720.68 | 47338720.93 | 0.0138 | 0.0055 |
| Saturn | 124897-07-06 20:50 G | 47338940.22 | 47338940.37 | 47338940.54 | 0.0284 | 0.0210 |
| Uranus | 124897-12-03 21:04 G | 47339090.15 | 47339090.38 | 47339090.63 | 0.0138 | 0.0024 |
| Saturn | 124898-07-20 04:45 G | 47339318.45 | 47339318.70 | 47339318.95 | 0.0284 | 0.0011 |
| Uranus | 124898-12-08 05:14 G | 47339459.59 | 47339459.72 | 47339459.89 | 0.0138 | 0.0113 |
| Saturn | 124899-08-02 04:31 G | 47339696.56 | 47339696.69 | 47339696.84 | 0.0283 | 0.0234 |
| Jupiter | 124908-11-02 14:36 G | 47343075.89 | 47343076.11 | 47343076.34 | 0.0544 | 0.0113 |

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| Saturn | 124911-12-29 22:31 G | 47344228.37 | 47344228.44 | 47344228.53 | 0.0275 | 0.0259 |
| Saturn | 124913-01-10 14:50 G | 47344605.86 | 47344606.12 | 47344606.37 | 0.0275 | 0.0039 |
| Saturn | 124914-01-23 08:36 G | 47344983.68 | 47344983.86 | 47344984.06 | 0.0275 | 0.0184 |
| Jupiter | 124920-11-07 13:38 G | 47347463.85 | 47347464.07 | 47347464.29 | 0.0545 | 0.0162 |
| Jupiter | 124926-05-02 17:28 G | 47349466.07 | 47349466.23 | 47349466.39 | 0.0485 | 0.0349 |
| Saturn | 124927-07-15 11:00 G | 47349904.74 | 47349904.96 | 47349905.19 | 0.0283 | 0.0087 |
| Saturn | 124928-07-27 17:28 G | 47350283.03 | 47350283.23 | 47350283.45 | 0.0283 | 0.0151 |
| Jupiter | 124932-11-13 01:52 G | 47351852.45 | 47351852.58 | 47351852.73 | 0.0544 | 0.0428 |
| Uranus | 124937-06-04 11:43 G | 47353516.79 | 47353516.99 | 47353517.21 | 0.0140 | 0.0075 |
| Jupiter | 124938-05-06 23:28 G | 47353853.25 | 47353853.48 | 47353853.72 | 0.0485 | 0.0160 |
| Uranus | 124938-06-09 11:57 G | 47353886.73 | 47353887.00 | 47353887.26 | 0.0140 | 0.0005 |
| Uranus | 124939-06-14 02:07 G | 47354256.43 | 47354256.59 | 47354256.75 | 0.0140 | 0.0107 |
| Saturn | 124942-01-05 13:38 G | 47355192.85 | 47355193.07 | 47355193.29 | 0.0276 | 0.0117 |
| Neptune | 124942-05-13 08:36 G | 47355320.83 | 47355320.86 | 47355320.94 | 0.0088 | 0.0087 |
| Saturn | 124943-01-18 09:19 G | 47355570.65 | 47355570.89 | 47355571.13 | 0.0276 | 0.0095 |
| Neptune | 124943-05-16 01:52 G | 47355688.42 | 47355688.58 | 47355688.80 | 0.0089 | 0.0064 |
| Neptune | 124944-05-17 13:38 G | 47356055.87 | 47356056.07 | 47356056.32 | 0.0089 | 0.0041 |
| Neptune | 124945-05-20 02:07 G | 47356423.33 | 47356423.59 | 47356423.86 | 0.0089 | 0.0018 |
| Neptune | 124946-05-22 18:55 G | 47356791.04 | 47356791.29 | 47356791.55 | 0.0089 | 0.0006 |
| Neptune | 124947-05-25 02:07 G | 47357158.34 | 47357158.59 | 47357158.84 | 0.0089 | 0.0027 |
| Neptune | 124948-05-26 21:48 G | 47357526.21 | 47357526.41 | 47357526.63 | 0.0089 | 0.0051 |
| Neptune | 124949-05-29 03:33 G | 47357893.53 | 47357893.65 | 47357893.82 | 0.0089 | 0.0073 |
| Jupiter | 124950-05-11 09:19 G | 47358240.66 | 47358240.89 | 47358241.12 | 0.0484 | 0.0038 |
| Saturn | 124956-07-09 04:02 G | 47360491.48 | 47360491.67 | 47360491.87 | 0.0284 | 0.0165 |
| Saturn | 124957-07-22 16:02 G | 47360869.94 | 47360870.17 | 47360870.40 | 0.0284 | 0.0071 |
| Jupiter | 124962-05-15 14:21 G | 47362627.90 | 47362628.10 | 47362628.32 | 0.0484 | 0.0248 |
| Saturn | 124970-12-31 04:31 G | 47365779.56 | 47365779.69 | 47365779.85 | 0.0275 | 0.0215 |
| Saturn | 124972-01-13 03:48 G | 47366157.41 | 47366157.66 | 47366157.90 | 0.0275 | 0.0015 |
| Saturn | 124973-01-25 00:40 G | 47366535.36 | 47366535.53 | 47366535.73 | 0.0275 | 0.0189 |
| Jupiter | 124974-05-20 01:52 G | 47367015.54 | 47367015.58 | 47367015.64 | 0.0483 | 0.0472 |

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|---------|----------------------|-------------|-------------|-------------|--------|--------|
| Jupiter | 124979-10-28 06:40 G | 47369002.67 | 47369002.78 | 47369002.90 | 0.0543 | 0.0459 |
| Uranus | 124980-11-30 17:57 G | 47369402.02 | 47369402.25 | 47369402.50 | 0.0138 | 0.0052 |
| Uranus | 124981-12-05 01:38 G | 47369771.33 | 47369771.57 | 47369771.81 | 0.0138 | 0.0023 |
| Uranus | 124982-12-09 19:09 G | 47370141.18 | 47370141.30 | 47370141.41 | 0.0138 | 0.0124 |
| Saturn | 124985-07-03 07:09 G | 47371077.73 | 47371077.80 | 47371077.89 | 0.0283 | 0.0267 |
| Saturn | 124986-07-16 17:28 G | 47371456.00 | 47371456.23 | 47371456.47 | 0.0283 | 0.0045 |
| Saturn | 124987-07-30 03:33 G | 47371834.47 | 47371834.65 | 47371834.84 | 0.0283 | 0.0173 |
| Jupiter | 124991-11-02 15:04 G | 47373390.91 | 47373391.13 | 47373391.35 | 0.0543 | 0.0194 |